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August 5, 1985

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	)	
	)	
GEORGIA POWER COMPANY	)	Docket Nos. 50-424
et al.	)	50-425
	)	(OL)
(Vogtle Electric Generating Plant,	)	
Units 1 and 2)	)	

NRC STAFF RESPONSE TO APPLICANTS' MOTION FOR SUMMARY DISPOSITION OF CONTENTION 8 (QUALITY ASSURANCE)

I. INTRODUCTION

On June 24, 1985, Applicants filed a Motion for Summary Disposition of Joint Intervenors' Contention 8. Contention 8 raises a variety of broad allegations concerning quality assurance activities at the Vogtle facility. By agreement of all the parties and the Board, the time for responding to Applicants' Motion was extended until August 1, 1985. 1/ The Staff herein files its response. For the reasons presented below and in the attached affidavits of Jerome J. Blake, Virgil L. Brownlee, Edward H. Girard, G.A. Hallstrom, John R. Harris and Joseph J. Lenahan, Louie H. Jackson, William P. Kleinsorge, Wilbert F. Sanders, and Marvin V. Sinkule, the Staff submits that there are no genuine disputes as to any

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1/ The Staff subsequently requested an additional extension until August 5, 1985, to which neither Applicants nor the Joint Intervenors objected; the Board orally granted the Staff's request on August 1, 1985.

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material fact and, accordingly, Applicants' Motion for Summary Disposition should be granted.

II. LEGAL STANDARDS GOVERNING SUMMARY DISPOSITION

The Staff previously set forth the applicable legal standards governing motions for summary disposition in its July 26, 1985 "Response to Applicants' Motion for Summary Disposition of Contention 10.3 (Cables in Multiconductor Configurations)" (at pp. 1-3). In order to avoid unnecessary repetition, that discussion is incorporated by reference herein.

III. APPLICANTS' MOTION

A. Applicable Standards and Overview

In its Memorandum and Order of September 5, 1984, the Licensing Board indicated that it felt an evidentiary inquiry into Applicants' quality assurance program was justified, but agreed with the Staff and Applicants that the originally proposed contentions were not susceptible to focused litigation. LBP-84-35, 20 NRC 887, 900-02. After the parties were unable to agree on the wording of a contention related to quality assurance, the Board admitted the following contention:

> Applicants have not and will not implement a quality assurance program for Plant Vogtle for welding, for properly documenting the placement of concrete, for adequately testing concrete, for the preparation of correct concrete quality test records, for procuring material and equipment that meet applicable standards, for protecting equipment and for taking corrective action as required, so as to adequately provide for the safe functioning of diverse structures, systems and components, as required by 10 C.F.R. Part 50, Appendix B, such

> that reasonable assurance exists that operation of the facility will not endanger the public health and safety.

LBP-84-49,-20 NRC 1457, 1462 (November 5, 1984).

In addressing the merits of the contention, the following general principles should be kept in mind concerning quality assurance at nuclear power plants and tne litigation of quality assurance issues in operating license proceedings. The ultimate purpose of a quality assurance program is to provide reasonble assurance that a nuclear power plant has been constructed in a manner that it can be operated without adversely affecting the public health and safety. The safe operation of a facility is obviously an issue that is at the heart of an operating license proceeding. The Appeal Board has stated the following on the litigation of quality assurance issues in operating license proceedings:

> A recurring issue in reactor operating license proceedings is whether the facility has been properly constructed. In most instances, the focus is upon the execution of the quality assurance program designed to eliminate the possibility that construction deficiencies of potential safety significance will go undetected and therefore unrectified.
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> In any project even remotely approaching in magnitude and complexity the erection of a nuclear power plant, there inevitably will be some construction defects tied to quality assurance lapses. It would therefore be totally unreasonable to hinge the grant of an NRC operating license upon a demonstration of error-free construction. Nor is such a result mandated by either the Atomic Energy Act of 1954, as amended, or the Commission's implementing regulations. What they require is simply a finding of reasonable assurance that, as built, the facility can and will be operated without endangering the public health and safety. 42 U.S.C. §§ 2133(d), 2232(a); 10 C.F.R. § 50.57(a)(3)(i). Thus, in examining claims of quality assurance deficiencies one must look to the

> implication of those deficiencies in terms of safe plant operation.
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> Obviously, this inquiry necessitates careful consideration of whether all ascertained construction errors have been cured. Even if this is established to be the case, however, there may remain a question whether there has been a breakdown in quality assurance procedures of sufficient dimensions to raise legitimate doubt as to the overall integrity of the facility and its safety-related structures and components. A demonstration of a pervasive failure to carry out the quality assurance program might well stand in the way of the requisite safety finding.

Union Electric Co. (Callaway Plant, Unit 1), ALAB-740, 18 NRC 343, 345-46 (1983) (footnote omitted); accord, Louisiana Power and Light Co. (Waterford Steam Electric Station, Unit 3), ALAB-812, 22 NRC ___ (July 11, 1985) (slip op. at 6).

The fact that various deficiencies may have occurred during construction does not mean that there has been a "pervasive failure" of a plant's quality assurance program. As indicated above, the Appeal Board noted in Callaway that error-free construction for a project as large as a nuclear power plant is unrealistic; the Appeal Board subsequently expanded on this point as follows:

> [A] number of minor welding deficiencies escaped Foley's quality control inspections. But such incidents are not unusual in construction and can be expected, even with qualified and experienced people, until the newly hired workers and inspectors become used to the new conditions, requirements and other aspects of the work environment. The important point is that the problems were recognized and caught by the applicant almost from their inception and it quickly took steps to correct them. The applicant closely monitored the situation and conducted a total of ten audits of Foley's work during this period so as to bring all the work up to acceptable standards. Thus, rather than establishing a

> pervasive failure of the applicant's quality assurance program, this incident demonstrates that the applicant's construction quality assurance program was performing in an acceptable manner.

Pacific Gas and Electric Co. (Diablo Canyon Nuclear Power Plant, Units 1 and 2), ALAB-756, 18 NRC 1340, 1348 (1983).

In examining allegations of quality assurance deficiencies, the Appeal Board has instructed that two issues must be considered: "(1) whether all ascertained construction errors have been cured, and (2) even if so, whether there has nonetheless been so pervasive a breakdown in the QA procedures as to raise legitimate doubt about the overall safety of the facility." Waterford, supra, 22 NRC at ___ (slip op. at 6), citing Callaway, supra, 18 NRC at 1209-11. For the first issue, one must determine if the alleged defect in fact existed, whether it would have affected the safe operation of the facility if it were to remain uncorrected, and (depending on the answers to the first two levels of inquiry) whether proper corrective action has been taken to repair the defect. The second issue requires an examination as to whether the alleged deficiencies, taken together, point to the existence of a breakdown of the quality assurance program. Where a contention asserts an overall breakdown in quality assurance based only upon various instances of construction errors, the contention must be rejected if the examples provided by the intervenors do not show a quality assurance breakdown. In other words, where alleged construction defects and QA program deficiencies have been properly detected and remedied where necessary, in the absence of reason to believe that the defects are

reflective of a pervasive QA program breakdown, a contention alleging a breakdown in quality assurance must fail.

Turning to Joint Intervenors' Contention 8, the Staff submits that Intervenors have failed to raise any genuine issues of material fact warranting the litigation of this contention. True, Joint Intervenors have alleged the existence of numerous construction deficiencies at Vogtle; these allegations are particularized in the bases submitted in support of their proposed quality assurance contentions, in their responses to interrogatories, and in the deposition of Douglas C. Teper taken on April 22 and 26, 1985. However, as Mr. Teper's affidavit makes clear, the allegations raised by Joint Intervenors almost without exception were identified in inspection reports generated by the NRC Staff or in nonconformance reports generate! by the Applicants; these matters have already been detected and reviewed for corrective action, and corrective actions have been or are being undertaken where necessary. Moreover, the Joint Intervenors generally do not challenge, and indeed often accept, the technical resolution of these various alleged deficiencies. In its review of Mr. Teper's deposition, the Staff could find only two instances where he was dissatisfied with the corrective actions taken; for the great majority of the items cited by Joint Intervenors, Mr. Teper appeared willing to accept the NRC Staff's determinations as to whether the items had been or would be properly resolved. See Teper Deposition, pp. 277, 346. The two instances relate to pipe weld cracks and water in the basemat excavation. The primary objection voiced to the resolution of the pipe cracks was the observation that all the cracks had not yet been repaired. See id. at 207. While this matter is still considered by

the Staff to be an open item, the Staff does not see any indication that the matter will not be properly resolved (see page 16, infra), and Mr. Teper provided no basis in his deposition to argue otherwise. With respect to the second matter (water in the basemat excavation), the Staff considers that this matter has been properly resolved (see discussion infra at 21-22). While Mr. Teper does not believe this item has been adequately resolved, his deposition revealed no clear basis or support for this position (See Teper Deposition at 221-225). Accordingly, in terms of the first issue identified by the Appeal Board in Callaway, Joint Intervenors have provided no basis for any assertion that the alleged deficiencies constitute defects in construction which could adversely affect the safe operation of the plant.

As to the broader issue of whether a pervasive quality assurance breakdown has occurred at Vogtle, the various NRC inspection reports and contractor nonconformance reports speak for themselves and demonstrate that each item has received proper documentation and attention, and has been (or will be) adequately resolved to the Staff's satisfaction. 2/ Joint Intervenors' failure to contest the resolution of these items, and their general willingness to rely on the Staff's determination in this regard, demonstrate that these items do not present matters which require

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2/ The Applicants attached a large number of the relevant reports to their Motion for Summary Disposition. Because a large number of the relevant documents are NRC Inspection Reports, the Staff has attached to this Response the Affidavit of Marvin V. Sinkule in order to provide the Board and parties with background information on NRC inspection activities.

litigation. Moreover, as demonstrated below with respect to the specific allegations, these matters do not reveal a pervasive quality assurance breakdown." The Staff inspectors with knowledge of the quality assurance activities at Vogtle within the areas covered by Contention 8 confirm that they have not observed a programmatic breakdown in quality assurance at the site. See, e.g., Blake Affidavit, ¶ 3; Girard Affidavit, ¶ 11; Hallstrom Affidavit, ¶ 12; Harris/Lenahan Affidavit, ¶¶ 23-24, Jackson Affidavit, ¶ 31; Kleinsorge Affidavit, ¶ 8. Moreover, Virgil Brownlee, the Project Branch Chief in the NRC's Region II Office with responsibility for supervising the NRC inspection program at Vogtle, has concluded that Georgia Power Company has an effective quality assurance program providing reasonable assurance that construction of the Vogtle plant will be completed in compliance with regulatory requirements. Brownlee Affidavit, ¶ 2.

Indeed, Joint Intervenors' argument seems to be more philosophical than factual. They appear to believe that construction of nuclear plants should be error-free. See Teper Deposition at 309-10. However, that argument ignores the teachings of Callaway and Diablo Canyon, where the Appeal Board clearly indicated that error-free construction is both unrealistic and, as a matter of law, not a necessary condition for an operating license.

In sum, the items cited by Joint Intervenors neither call into question the safety of the Vogtle facility nor the overall adequacy of Applicants' quality assurance program. Under these circumstances, there are no questions of fact relating to Applicants' quality assurance

program which need to be litigated, and Applicants' Motion for Summary Disposition should be granted.

With the above as background, the Staff now turns to the specific allegations contained in the Contention. The Applicants addressed each allegation seriatim in their Motion; the Staff has applied the same approach below.

B. Specific Allegations

1. Welding

The first area addressed in Contention 8 involves welding at Vogtle. As in the other areas raised in the contention, Joint Intervenors have focused on a limited number of reported events concerning welding activities at the site, and have attempted to draw from these events the conclusion that the Vogtle quality assurance program as it relates to welding has failed to operate adequately. As is shown below, the events cited by Joint Intervenors reveal no safety deficiencies at the plant and demonstrate that the quality assurance program at Vogtle has operated properly and is adequate.

(a) The August 22, 1983 Meeting Regarding Pullman QC Inspectors

On August 22, 1983, a meeting was held between representatives of Georgia Power Company and the NRC Staff to discuss issues relating to a GPC task force which was addressing the QA/QC organization of a contractor for Vogtle, Pullman Power Products. The Staff had previously been aware of the task force's work regarding a reinspection of spool pieces

fabricated by Pullman; the meeting was requested by Applicants to provide information on the status of the reinspection and respond to Staff questions.[3/] The Staff does not agree with Joint Intervenors' characterization of that meeting as "forced" due to poor QA work by Pullman. Sanders Affidavit, ¶¶ 2-5.

One of the issues discussed at the meeting concerned allegations of harassment and intimidation of Pullman quality control inspectors. Prior to the meeting, an investigation of allegations of harassment and intimidation of Pullman QC inspectors which had been provided to the Staff, was performed and documented by the NRC Office of Investigations (OI). Georgia Power also conducted its own broad investigation and its findings were described to NRC management during the August 22 meeting. Girard Affidavit, ¶ 3.

Evidence of harassment and intimidation of QC inspectors by Pullman construction management had been confirmed and documented in the OI investigation. After reviewing both the NRC OI findings and the GPC findings reported in the August 22 meeting, NRC Region II management determined that additional NRC followup inspection of the concerns should be undertaken. Prior to initiation of this followup, the Pullman manager, who had allegedly been the primary source of the harassment and intimidation, was removed from the project. Girard Affidavit, ¶¶ 4 & 5.

The NRC followup inspection included interviews with a number of Pullman QC inspectors. The QC personnel interviewed generally indicated

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3/ The technical adequacy of the spool pieces is discussed at p. 25, infra.

that they no longer felt intimidated or harassed by the Pullman management or other personnel. No evidence of any hardware deficiencies attributed to the harassment and intimidation was found during this followup inspection or in extensive related followup inspections. The results of the followup inspection are reported in NRC Inspection Report No. 50-424, 425/84-05. Girard Affidavit, ¶¶ 5-7. The Staff inspector responsible for the followup inspection does not believe that there has been a programmatic breakdown in the quality assurance program at Vogtle. Id., ¶ 11.

(b) Walsh Allegations

The Walsh allegations were initially reported to GPC by a Walsh employee in July 1983. In August 1983, GPC advised NRC Region II of the allegations, which dealt with alleged poor welding of the fuel pool liner and improper bending of the fuel pool liner bed plate studs. Subsequently, GPC investigated the allegations and provided Region II with a report of their findings. In its review of GPC's report, the NRC Staff found that the report provided sufficient detail to determine that a conservative and technically sound approach had been taken during the investigation and resolution of the identified concerns, and that further NRC investigation of the matter was not warranted. The Walsh allegations do not indicate the existence of a programmatic breakdown in Vogtle quality assurance. Blake Affidavit, ¶¶ 2-3.

(c) Coolant and Containment Systems

Joint Intervenors have stated as part of their basis for Contention 8 that construction sheets for examinations of reactor coolant pressure boundary welds did not specify the liquid penetrant examination required and that grit blasting of the closure head weld cladding was performed after liquid penetrant examination. See Joint Intervenors' Response to Applicants' Second Set of Interrogatories at ¶ 8.2-6; CPG Supplement to Petition to Intervene at 15.

With respect to GPC's failure to specify the liquid penetrant examination for reactor coolant pressure boundary welds, the NRC Staff found the omission and documented it as a violation in Inspection Report 83-15; the violation was closed in Report 84-12. No evidence of any widespread or serious deficiency in the GPC QA program was indicated by the penetrant examination omission. Other inspection requirements were satisfactorily specified and the omission appeared to be the result of a relatively isolated error. Based on its review, the Staff found that GPC had promptly corrected the identified omission and that GPC had investigated the item to assure that it was not indicative of a generic problem. Girard Affidavit, ¶¶ 8-9.

The unrelated issue of grit blasting of the closure head involved an incident in which Liquid Penetrant Examinations (LPE) were performed on the closure head internal weld metal cladding after it was received at the site. Although this examination was previously performed at the pressure vessel manufacturer's, it was repeated at the site at the Staff's request because of indications that the original examination may not have been performed adequately. Sanders Affidavit, ¶¶ 7-8.

This reexamination did reveal surface discontinuities which exceeded the allowance of the ASME code. A Notice of Violation was subsequently issued to GPC (Inspection Report 83-18); GPC acknowledged the violation, provided an explanation, and the NRC Staff closed the item (Report 84-21). Sanders Affidavit, ¶¶ 9-11. Although these defects should have been discovered and repaired by the manufacturer, the Staff found the violation to have only minor safety significance. After the examination at the site revealed unacceptable indications, proper repair work was performed. The Staff concluded that appropriate corrective actions were taken. Sanders Affidavit, ¶¶ 12-15.

(d) Radiographic Procedures

Intervenors allege that GPC has failed to establish adequate radiography procedures, but cite as their only example a Chicago Bridge and Iron (CB&I) ASME Section VIII Radiography procedure which did not designate that the heat affected zone be examined with the same film density required by ASME. CPG Supplement to Petition at 19. The problem with the CB&I procedure was identified as a violation in NRC Inspection Report 83-16. GPC did not agree with the Staff's interpretation of the ASME Code, and requested clarification from the responsible ASME Committee. The ASME Committee did not support GPC's interpretation of the Code, and the CB&I procedure was revised accordingly. Kleinsorge Affidavit, ¶¶ 3-6.

The particular weld area in question was removed to allow for the installation of a penetration assembly, thus removing any possible safety concern about the weld's uninspected heat affected zone (HAZ). Because

it takes a particular repair sequence to cause the thickness conditions which resulted in the unacceptable radiographs, there is reasonable assurance that the finding was an isolated incident. Kleinsorge Affidavit, ¶¶ 3-4.

The issue of radiography procedure technical adequacy and compliance with regulatory requirements has been inspected by the NRC Staff on several occasions during routine inspections, and is addressed in NRC Reports 82-23 and 84-36 with no inadequacies noted. Based on those inspections, the Staff has concluded that GPC's radiography procedures are adequate to protect the public health and safety and that there has been no programmatic quality assurance breakdown with respect to radiographic procedures at Vogtle. Kleinsorge Affidavit, ¶¶ 7-8.

(e) Welding in Light Misting Rain

On November 18, 1982, the NRC Senior Resident Inspector at Vogtle (Wilbert Sanders) observed welding being performed on the No. 2 primary containment dome sections after a very light misting rain had commenced. In Mr. Sanders' opinion, the weather conditions dictated that welding should be halted; although GPC personnel disagreed, they did stop welding work for the day. The incident raised a concern on the part of the Staff that the welding procedure related to ambient conditions was overly broad. Discussions were held with GPC personnel, and GPC issued a letter clarifying welding requirements. The issue was resolved to the Staff's satisfaction, and no further similar incidents have been observed. Sanders Affidavit, ¶¶ 33-37.

(f) Embed Assemblies in Auxiliary Building

This problem was initially reported to the NRC verbally on November 21, 1978, and formally on December 20, 1978, in accordance with the reporting requirement of 10 C.F.R. 50.55(e), to identify various fabrication and installation deficiencies related to embed assemblies in the auxiliary building. The deficiencies were separated into ten categories by GPC, and each category was examined for either rework, pull testing, or engineering evaluations. 127 defective embeds were found and were either abandoned or reworked. The Staff monitored the evaluations and corrective actions and found them to be appropriate. Sanders Affidavit, ¶¶ 38-41; Hallstrom Affidavit, ¶¶ 3-4.

GPC subsequently discovered that four of the abandoned embeds and 46 derated embeds were used on the site. GPC thereupon performed engineering evaluations which indicated that these embeds would not have affected the safe operation of the plant. The Staff performed a detailed review of this matter and concluded that adequate corrective actions were taken. Hallstrom Affidavit, ¶¶ 4-5. With respect to quality assurance, the events surrounding the embed assemblies reveal that GPC identified problems, reported them to the NRC, and took adequate corrective measures to assure that the embeds are in compliance with design requirements. The events do not reveal a programmatic quality assurance breakdown. Id., ¶¶ 7, 12.

(g) Cracking in Pipe Rack Welds

The problem of cracks in pipe racks in Unit 1 Containment was first reported by GPC to NRC Region II on July 20, 1984. A subsequent Staff inspection resulted in an NRC finding of three violations, which were primarily caused by the unusual complexity of the design drawings involved. Assessment of the underlying cause of crack initiation is not complete, although the Staff believes inadequate condsideration of welding sequencing may be responsible. Consideration of the need for such sequencing has now been implemented. There has been frequent interaction between the NRC and GPC on this issue. Two of the violations have been closed by the NRC; the Staff considers the corrective actions outlined in response to the third violation to be acceptable, but has not yet reviewed the implementation of the corrective actions. All known deficient welds have been incorporated into a corrective action plan. While the NRC considers this matter to be open until all corrective actions have been completed, the Staff considers the planned and completed corrective actions to be adequate to resolve all concerns. The Staff does not believe this incident is indicative of a programmatic quality assurance breakdown. Hallstrom Affidavit, ¶¶ 8-12.

(h) Conclusion on Welding

As indicated above, the Staff considers all the problems cited by Intervenors to be resolved, with the exception of the cracking in containment pipe rack welds; in this latter area, the Staff anticipates that with proper implementation of remaining corrective actions, the remaining open item will be satisfactorily resolved. Corrective actions

have been adequate, and no programmatic breakdown in quality assurance has been observed.

2. Concrete Construction and Records

Mr. Teper, in his deposition, made a number of allegations concerning the adequacy of concrete at the Vogtle facility. The Staff responds to each of these allegations as follows:

(a) Tests Taken at Batch Plant

This allegation, which appears on pages 232-35 of Mr. Teper's deposition, is taken from findings in NRC Inspection Reports 78-09 and 79-14. In these reports, the Staff noted that various sampling was performed at the concrete laboratory instead of at the point of placement as required by procedures. As a response to this finding, Applicants' quality control inspectors were retrained in procedural requirements, and subsequent tests were performed at the point of placement. The Staff reviewed this response and found it appropriate. The variance from procedures did not affect the quality of the concrete as the travel time and distance (one-fourth of a mile) from the lab to the placement were too short to cause changes in the properties of the concrete. Harris/Lenahan Affidavit, ¶¶ 3-4.

(b) Fine Aggregate Test Sieves

This allegation, stated on pages 225-27 of Mr. Teper's deposition, was taken from a Notice of Violation in NRC Inspection Report 79-01. The noncompliance related to GPC's failure to calibrate the sieves used in

gradation testing of concrete aggregate and soils as required by industry standards. In response to this Notice of Violation, GPC developed a calibration instruction procedure. The Staff has reviewed the implementation of the procedure and the calibration data for the sieves that have been generated. These data indicate that the sieves previously used in gradation testing did in fact meet industry standards. The quality of the concrete was thus not affected by the initi. to comply with industry calibration standards. Harris/Lenahan Affidavit, ¶¶ 5-6.

(c) Cadweld Testing Procedures

This allegation, stated on pages 217-220 of Mr. Teper's deposition, is based upon findings in NRC Inspection Reports 82-17 and 82-26. During these inspections, the NRC inspector noted that the sampling frequency for cadweld testing was not following the proper procedure, and the Staff therefore issued a Notice of Deviation. In response, Applicants established test cycles in accordance with the procedure. A review and examination of cadweld test data indicated that the cadwelds were being made in accordance with site requirements and generally exceeded tensile requirements. The rate of cadweld tensile failures at the site has been very low (approximately 0.3%); defective cadwelds have been removed and replaced. This deviation did not impact on the quality of the cadwelds, and the matter was closed out in Inspection Report 83-04. Harris/Lenahan Affidavit, ¶¶ 7-8.

(d) Alleged Falsification of Concrete Records

This allegation, contained on pages 240-42 of Mr. Teper's deposition; was taken from Inspection Report 81-09. This report summarizes the NRC's investigation of seven allegations, four dealing with falsification of concrete records, the other three dealing with backfill records. Of the allegations dealing with concrete, two were found to be partially correct (the other two were not substantiated at all). The portions of the allegations that were substantiated involved a problem with aggregate gradation and the use of a small amount of high slump concrete in the basemat; these matters were detected by the Applicants' QA program. In neither case did the Staff find that concrete records had been falsified, and in neither case did the Staff find that the strength or quality of the concrete had been adversely affected. Harris/Lenahan Affidavit, ¶ 9; Inspection Report 81-09 (Attachment 34 to Applicants' Motion, p. I-2.

Of the three allegations pertaining to backfill, only one allegation was found to be substantiated. This allegation involved errors in the calculation of backfill gradation tests. The errors were minor in nature and were corrected; they had no impact on the acceptability of the backfill materials. Harris/Lenahan Affidavit, ¶ 10.

In sum, those portions of the seven allegations that were substantiated had no safety significance. The Staff investigation did not find that any records had been falsified. Harris/Lenahan Affidavit, ¶ 11.

(e) Failure to Correctly Prepare Test Records

This allegation, stated on pages 239-40 of Mr. Teper's deposition, is taken from Inspection Report 81-09. The violation reported therein

was identified during the course of the investigation of the allegations mentioned in paragraph (d) above. The violation, which was not related to the other allegations, concerned the failure of certain records to identify inspectors who had performed certain concrete tests/inspections. The violation was minor in nature, corrective action was taken, and subsequent records were found to be properly prepared. Harris/Lenahan Affidavit, ¶¶ 12-13.

(f) Improper Consolidation of Concrete

This allegation, stated on pages 235-36 of Mr. Teper's deposition, is based upon Inspection Report 79-01. This report identified a violation involving the improper use of vibrators for transporting concrete which had been allowed to accumulate in place. A similar violation was reported in Report 79-13. Reinstruction of personnel and training sessions were subsequently conducted to demonstrate the proper use of vibrators. Observation of subsequent concrete placements indicated that proper consolidation practices were being followed, and the two earlier violations are considered to be isolated occurrences. Harris/Lenahan Affidavit, ¶¶ 14-15.

(g) In Place Compaction Tests

On pages 236-38 of his deposition, Mr. Teper raised an allegation involving compaction criteria related to in-place compaction of concrete. The compaction criterion is used to control placement and compaction of backfill, not concrete. The Staff is aware of two instances in which

changes to the backfill compaction criteria are discussed. Both instances are discussed in the Harris/Lenahan Affidavit. See Harris/Lenahan Affidavit, ¶¶ 16-17. Neither raises a safety problem; neither appears to have anything to do with the adequacy of the quality assurance program as it pertains to concrete activities at the Vogtle facility. Id.

(h) Voids in the Auxiliary Building Concrete

This allegation is stated on pages 220-25 of Mr. Teper's deposition, and is based upon findings in Inspection Report 79-19. That report discusses a report submitted to the NRC pursuant to 10 CFR § 50.55(e) involving honeycomb voids in concrete. Upon discovery of the voids, Applicants stopped concrete placement in the affected area and modified their placement procedures so as to minimize the potential for additional honeycombing. Voids which have occurred in concrete structures have been repaired in accordance with applicable procedures, while the placement modifications have minimized the occurrence of voids. Harris/Lenahan Affidavit, ¶¶ 19-20.

(i) Damage to Category 1 Backfill and Possible Undermining of Class 1 Structure Foundations

This allegation, stated on pages 220-35 of Mr. Teper's deposition, is drawn from Inspection Report 79-17. A severe storm on November 2, 1979 had aggravated ongoing moisture problems and eroded part of the backfill. A Notice of Violation was issued because Applicants failed to file a report to the NRC pursuant to 10 CFR §50.55(e). Further backfill placement and concrete placement on affected structures was halted; it

was agreed that the halted work would not resume without the concurrence of the NRC. After a series of meetings, corrective measures were taken. NRC inspectors observed the corrective measures being taken and examined records documenting the measures; the results showed that the backfill problem was properly resolved. Harris/Lenahan Affidavit, ¶¶ 21-22.

(j) Conclusions on Concrete Allegations

Joint Intervenors challenged the adequacy of concrete at the Vogtle facility in the nine areas discussed above. In the Staff's view, the quality assurance program for control of civil construction activities (including concrete) at the site has been adequate. The violations noted in NRC Inspection Reports are considered minor violations, they were corrected by the Applicants in an expeditious manner, and they have had no effect on the quality of civil construction work at the site. In the Staff's view, there is ample evidence that the quality assurance program at Vogtle in the civil area has been effective. Harris/Lenahan Affidavit, ¶¶ 23-24.

3. Procurement

Joint Intervenors have raised various allegations concerning procurement activities at the Vogtle site. The Staff responds to each allegation seriatim.

(a) QA Manual in 1974

Joint Intervenors have alleged that the Applicants' QA Manual in 1974 was inadequate in its description of procurement practices. CPG

Response to NRC Staff's Second Set of Interrogatories, p. 4. This problem was documented in Inspection Report 74-01. As the attached Affidavit of Louie Jackson points out, the inadequate description in the manual did not mean an adequate QA program was not implemented, and sufficient revisions to the manual were made and verified in Inspection Report 74-04. This allegation raises no safety concerns. Jackson Affidavit, ¶¶ 4-9.

(b) Vendor QA Programs

Joint Intervenors have not identified any specific deficiencies in the QA programs of any vendors supplying materials to the Vogtle facility. Vendor inspections have been routinely performed by the NRC Staff's Vendor Inspection Program Branch throughout preconstruction and construction activities at Vogtle. In the absence of any specific allegations, the Staff has assessed the overall adequacy of the vendor QA program in Vogtle. In this regard, the Staff has determined that problems which have been identified have generally been resolved, and there are no outstanding problems with vendor activities which would indicate a programmatic breakdown of quality assurance at Vogtle. Jackson Affidavit, ¶¶ 10-14.

(c) Procurement Office Letters

Joint Intervenors have alleged, without providing any specificity, that Applicants do not have appropriate QA letters from various (unspecified) vendors. Again, without the provision of specific information concerning the allegedly improper letters, the Staff can only

respond in a general way. As architect/engineer for Vogtle, Bechtel Power Corporation evaluates supplier QA programs and maintains an evaluated supplier list. Georgia Power Company also maintains such a list, and has accompanied Bechtel on audits of venders. Both Bechtel's and GPC's evaluated supplier lists are maintained in accordance with the appropriate industry standard (ANSI N45.2.13). The Staff has routinely reviewed both Bechtel's and GPC's supplier lists and has followed up on any identified problems; the NRC is not aware of any improper placement of vendors on either list. Jackson Affidavit, ¶¶ 15-22.

(d) Inferior Materials

Finally, Intervenors have alleged the use at Vogtle of various "inferior materials." The only materials identified have been 239 allegedly inadequate circuit breakers and, possibly (see Teper Deposition at 278), 15,000 piping spool pieces. Neither allegation has any significance either for the safe operation of the plant or for the adequacy of quality assurance at Vogtle.

The problem with circuit breakers was identified by General Electric (GE) in a letter to the NRC in 1982. GPC subsequently reported the matter to the NRC in accordance with 10 C.F.R. § 50.55(e). Most of the circuit breakers were returned to GE for modification; the few remaining breakers will be scheduled for modification in the near future. The NRC will verify the corrective actions taken. Sanders Affidavit, ¶¶ 23-28. The problem is being addressed in a manner to correct any potential defects; the NRC has been kept apprised of the situation. There is no reason to believe that either a safety problem or a programmatic quality assurance breakdown is involved.

The problem with piping spool pieces was discussed at the August 22, 1983 meeting regarding Pullman. Various welding deficiencies involving 1500 piping spool pieces were discovered at the site. In response, GPC stopped work at Pullman; conducted an audit and training session at Pullman; increased surveillance inspection; started a reinspection program for spool pieces in storage and for spool pieces already installed; started a sampling program for future spool pieces received; and engaged a radiographer contractor to reexamine all radiography for shop fabricated welds for all contractors. This extensive program satisfactorily resolved the problem with spool pieces to the Staff's satisfaction. The response shown by GPC demonstrated that its quality program was effective in identifying and resolving quality problems. Sanders Affidavit, ¶¶ 16-22.

4. Storage of Equipment

Joint Intervenors have raised three challenges to the measures taken by Applicants to protect equipment while in storage. These challenges involve the alleged failure to have storage procedures for certain safety-related equipment in 1977, the failure to provide for adequate storage of reinforcing concrete, and the failure to provide for adequate storage of electrical cabinets in 1982. We address each challenge seriatim.

(a) Storage Procedures in 1977

This issue relates to a finding in a 1977 NRC Inspection Report (77-03). At that time, the Applicants had not yet assigned a QA manager

to Vogtle, and instead relied on audits performed by GPC personnel from the Hatch facility. No necessary implementing procedures for storage requirements had been developed. The NRC notified GPC of this infraction in Report 77-03; the Applicants implemented appropriate corrective action (vendors were told warehousing facilities were not yet available at Vogtle, the senior QA field representative from Hatch was transferred to Vogtle, and implementing procedures were written for controlling storage, handling, and receipt inspection of safety-related equipment). The Staff considered this action an appropriate resolution to the problem. The material (valves) in storage which prompted this concern had in fact been stored in a warehouse, and no deleterious effects had occurred. In sum, nothing was identified which raises an unresolved safety concern for which proper corrective action was not taken, or which constitutes a threat to the public health and safety. Jackson Affidavit, ¶¶ 23-30.

(b) Storage of Reinforcing Steel

This problem was also identified as an infraction found during an NRC inspection (Report 79-02). The Staff determined that some cut reinforcing steel was improperly stored on the ground. The licensee responded by providing proper storage off the ground, scrapping the bars that showed deterioration, and revising their storage procedures to preclude recurrence of the problem. The Staff approved these corrective measures; subsequent frequent Staff observations have indicated that the problem has not recurred. Sanders Affidavit, ¶¶ 29-32.

(c) Storage of Electrical Cabinets

In an inspection performed in December of 1982 (Report 82-29), an NRC inspector identified a violation in the storage of electrical control cabinets. Upon reporting of this problem, GPC took immediate corrective actions to assure the integrity of the cabinets. Several followup inspections revealed no permanent problems; the Staff concluded that the early identification of the problem and prompt corrective actions precluded potential problems with the electrical control cabinets. Sanders Affidavit, ¶¶ 42-45.

(d) Conclusion on Storage Allegations

In conclusion, the three instances of inappropriate storage measures which Joint Intervenors have culled from NRC inspection reports were all adequately resolved, and no recurrence of the problems has been identified. The three specific items have been corrected as necessary, and do not indicate the existence of a programmatic breakdown of the quality assurance program.

5. Corrective Actions

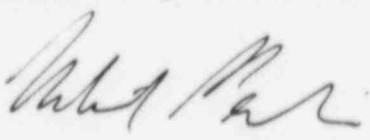
Finally, Joint Intervenors allege in their contention that inadequate corrective actions have been taken at Vogtle. It is not clear exactly what Joint Intervenors mean by this assertion. For each deficiency alleged by Joint Intervenors, the Staff has described the corrective actions which were taken to resolve the problem. These descriptions clearly show that appropriate corrective actions in fact have been taken in virtually every instance; for those few instances in

which corrective actions have not yet been completed, the Staff is satisfied that appropriate corrective actions will be taken. Joint Intervenors have provided no basis to challenge any of the corrective actions taken, nor have they provided any reason to believe that future corrective actions will not be appropriate. Accordingly, there is no genuine dispute as to any material fact with regard to corrective actions at Plant Vogtle.

IV. CONCLUSION

As the Staff has shown above, all the deficiencies asserted by Joint Intervenors with respect to the quality assurance program at Vogtle have been or will be adequately resolved in a manner that does not call into question the safe operation of the facility, and the items identified by Joint Intervenors do not indicate the existence of a programmatic breakdown in the quality assurance program at Vogtle. The Joint Intervenors have not identified any genuine dispute as to material facts that warrant litigation of Contention 8. For these reasons, as more fully set forth in the affidavits attached hereto, the Staff submits that Applicants' Motion for Summary Disposition of Contention 8 should be granted.

Respectfully submitted,



Robert G. Perlis
Counsel for NRC Staff

Dated at Bethesda, Maryland
this 5th day of August, 1985

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	)	
	)	
GEORGIA POWER COMPANY, et al.	)	Docket Nos. 50-424
	)	50-425
	)	(OL)
(Vogtle Electric Generating Plant, Units 1 and 2)	)	

CERTIFICATE OF SERVICE

I hereby certify that copies of "NRC STAFF RESPONSE TO APPLICANTS' MOTION FOR SUMMARY DISPOSITION OF CONTENTION 8 (QUALITY ASSURANCE)" and Supporting Documents in the above-captioned proceeding have been served on the following by deposit in the United States mail, first class or, as indicated by an asterisk, through deposit in the Nuclear Regulatory Commission's internal mail system, this 5th day of August, 1985.

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