

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of
GEORGIA POWER CO., et al.
(Vogtle Electric Generating Plant,
Units 1 and 2)

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Docket Nos. 50-424 and 50-425

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CPG/GANE'S RESPONSE TO NRC STAFF'S SECOND SET OF INTERROGATORIES

Intervenors respond herein to "NRC Staff's Second Set of Interrogatories to Campaign for a Prosperous Georgia (CPG) and Georgians Against Nuclear Energy (GANE)."

Interrogatory 1: Interrogatory 1 of the Staff's "Interrogatories" dated November 1, 1984, is incorporated by reference herein (with specific reference to Contention 8 as restated in the Board's "Memorandum and Order" dated November 5, 1984).

RESPONSE: Intervenors will rely upon documents cited in "Supplement to Petition for Leave to Intervene and Request for Hearing, Campaign for a Prosperous Georgia" dated April 11, 1984, in "CPG/GANE's Response to NRC Staff's Interrogatories" dated December 10, 1984 and in "CPG/GANE's Response to Applicants' First Set of Interrogatories and Request for Production of Documents" dated December 5, 1984. In addition, Intervenors have filed interrogatories with the Applicants related to this interrogatory and will respond more fully to this interrogatory after reviewing the Applicants' response and documentation thereto.

Interrogatory 2: Interrogatory 2 of the Staff's Interrogatories" [sic] dated November 1, 1984, is incorporated by reference herein (with specific reference to Contention 8 as restated in the Board's "Memorandum and Order" dated November 5, 1984).

RESPONSE: Response to Interrogatory 2 in "CPG/GANE's Response to NRC Staff's Interrogatories" dated December 10, 1984, is incorporated by reference herein.

Interrogatory 3: With respect to Contention 8, please state the specific structures, systems and components you allege have been affected by Applicants alleged failure to implement a quality assurance program within the context of Contention 8.

RESPONSE: The basis of Contention 8, "Supplement to Petition for Leave to Intervene and Request for Hearing, Campaign for a Prosperous Georgia," dated April 11, 1984, is incorporated by reference herein. In addition, Intervenors have filed interrogatories with Applicants relating to this contention and will respond more fully following review of the response thereto and the documentation therefor.

Interrogatory 4: State the specific facts you rely upon to support the general allegations contained in Contention 8 to the effect that Applicants (a) have not properly documented the placement of concrete, (b) have not adequately tested concrete, (c) have not adequately prepared correct concrete quality test records, (d) have not procured material and equipment that meet applicable standards, (e) have not protected equipment, and (f) have not taken corrective action.

RESPONSE: The basis of Contention 8 is incorporated by reference herein.

"CPG/GANE's Reply to Applicant's Motion to Correct ASLB's Memorandum and Order Dated November 5, 1984" dated November 30, 1984, is incorporated by reference herein.

The response to Interrogatory 5 (below) is incorporated by reference into this response. In addition, Intervenors have asked discovery questions of the Applicants and will file a supplement hereto based upon the responses thereto and the documentation therefor.

Interrogatory 5: In regard to Contention 8, fully set forth (a) each document you maintain should have been prepared that was not prepared, (b) the matters those documents should have set forth, (c) each incomplete document, (d) the matters not covered that should have been covered, (e) each test not conducted and what such

tests should have covered, (f) each concrete quality test report inadequately prepared and matters omitted therefrom, (g) each piece of material or equipment that did not meet applicable standards, (h) each standard such material or equipment did not meet and the specific manner in which it did not meet such standards, (i) each piece of equipment not adequately protected, the inadequate protection, adequate protection and every code or standard relied upon setting forth adequate protection relevant to that equipment, and (j) each instance of corrective action that was not taken that should have been taken, a full description of the details of such corrective actions, and each document, code or standard evidencing the "corrective action" that should have been taken.

RESPONSE: The basis of Contention 8 and documents cited therein are incorporated by reference herein. "CPG/GANE's Reply to Applicant's Motion to Correct ASLB's Memorandum and Order Dated November 5, 1984" dated November 30, 1984 and documents cited therein are incorporated by reference herein.

Work was begun although schedules were not prepared for final release of construction and field procedures to assure that their development occurred prior to the construction activity involved.

In 1974, the Georgia Power QA manual did not adequately describe the QA program for design and procurement.

The Georgia Power QA audit planning did not include adequate visibility in that the application of all applicable QA criteria was not clear for design and procurement.

The Southern Services, Inc. QA manual did not reflect the requirements of the then current PSAR Section 17.

The QAE Office Procedures Manual's Procedure QA-04-03 did not include appropriate specification evaluation checklists. At the same time, the QA manual description of organization was inconsistent with functional organization on site.

When, according to the Applicant, in-place compaction tests conducted on-site could not meet the 97% compaction criteria established in the PSAR, the definition of compaction was changed; two versions of the new definition exist.

During concrete placement A-110-003 consisting of a total of 216 yards of concrete at the Unit 2 control building tendon gallery access shaft, it was noted on two different occasions that the concrete was allowed to accumulate at the end of the conveying pipe to a height of approximately 2 feet above the finish elevation. Vibrators were then used to move the pile of concrete to the required elevation. GPC Construction Procedure CD-T-02, Concrete Quality Control, Section 6.1.9 paragraph 3 states "Vibrators shall not be used for transporting or moving concrete inside the form."

The QC inspector at the batch plant documents his surveillance in a daily log which is stored in the vault under daily inspection files. Any problems encountered at the batch plant during the day of a placement are to be entered in the daily log while the other records for the placement are filed by pour cards number. The pour card record file and the daily inspection log files must be reviewed in order to review a completed placement record. Consolidation of concrete placement files is necessary.

Slump tests, air tests and temperature measurement were being taken at the concrete lab located beside the batch plant. After testing, the concrete was transported approximately one fourth mile to the pumping equipment. There is not further testing of the concrete. GPC Construction Procedure CD-T-02 references ACI Standards as applicable. The ACI Standards reference ASTM C-172 which makes provisions and requirements for taking samples at the point of placement. This is another example of failure to follow procedures during concrete placement.

There are voids in the auxiliary building concrete. The voids occur in walls which were heavily congested with reinforcing steel, embedment, pipe sleeves and blockouts. Stop work notice number SW-C-13 was issued on 20 Dec. 1979 to to stop

concrete placement.

Fine aggregate test sieves failed to meet requirements of Criterion V of Appendix B to 10CFR50 as implemented by VNP PSAR 17.1.5 GPC Construction Procedure CD-T-02, Concrete Quality Control and referenced ASTM Standard C-136 (which require that sieves used for aggregate tests conform to requirements of ASTM Standard E-11).

The Applicant failed to follow Rebar Procedures, Construction Procedure CD-A-01 Revision 5, "Material and Equipment Receipt, Storage and Handling." Lack of inspection, improper documentation and improper identification of cut rebar appears to be in noncompliance with 10 CFR 50, Appendix B, Criterion V.

Embed assemblies in the Auxiliary Building and the Control Building suffered many defects, including: all of the plate nuts were standard hexagon nuts instead of heavy hexagon nuts; some of the bolts for a given embed plate assembly were not fully engaged with the plate nut; some of the bolts were not tack-welded to the plate nut; some of the bolts in a given embed plated assembly did not have washers; some of the bolts having washers did not have washers tack welded to either the bolt or the end nut; some end nuts were not tack welded to the corresponding bolt; some bolts may have been bent in excess of the design drawing specified thirty degrees; and some bolts may be cracked due to excessive bending.

Three hundred spray nozzles for the containment spray systems, 44 Fisher Control valves and 7 elbows for the reactor coolant piping system were improperly protected. Neither adequate facilities for storing the safety-related equipment nor approved procedures had been provided. The inspector made further investigation and determined that a "QA program is not in operation at Vogtle." Therefore, an evaluation had not been made to assume that the site was prepared to receive, receipt inspect and store safety related equipment. The inspector found that although a procedure "Nonconformance Control," GD-T-01, had been written and approved it was not used in conjunction with the "red hold tags" to prepare a

nonconformance report and to provide for QA records and corrective action. In summary, the inspector determined that the QA program is not effective, audits had not been scheduled or performed on procedures and personnel in advance of activity to assure proper receipt, inspection, storage and handling of safety-related equipment.

Based on NRC inspection No. 79-17, damage to Category I backfill and possible undermining of Class I structure foundations as a result of 2 Nov. 1979 heavy rains was not reported until 14 Nov. 1979 which is an infraction of 10 CFR 50.55 (e). Extensive backfill repair and evaluation of the control building and Unit 1 and 2 reactor building foundations will be required. Moderate to severe erosion and slumping occurred on construction slopes in the backfill. Backfill around the control building and Units 1 and 2 containment building had been severely eroded by washes and gullies with partial undercutting of some mud slabs. Seepage was visible along the south side of the Unit 2 tendon gallery wall, indicating that the foundation may have been damaged by sub-surface erosion. The backfill construction slope north of the auxiliary building was saturated as a result of seepage and showed evidence of partial slumping. Seepage on the backfill slope north of the auxiliary building had been ongoing since Sept. 1979. Stop Work notice SW-C-6 showed backfilling stopped as of 1 Nov. 1979 because of seepage. SW-C-7 issued 9 Nov. 1979. This is compounded by surprise find of limestone area which was to be under the plant later found to have cavities.

The Applicant reported a potential CDR regarding the fabrication and installation of embeds to Region II on 22 Nov. 1978. All concrete work involving embeds had been stopped as of 21 Nov. 1978. However, on 29 Nov. 1978 two QA auditors touring the auxiliary building found that embeds were being installed, a major breakdown in communication.

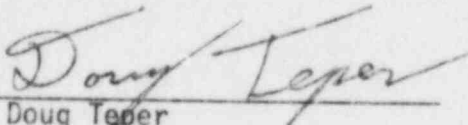
During excavation, "GPC QA or QC personnel had no idea what acceptance criteria was necessary for determining the proper bearing strata until they were enlightened

by this inspector. I feel there is a definite deficiency or lack of interest on the part of GPC, QA-QC personnel toward projecting ahead into the construction schedule and predetermining critical checkoff points in the construction sequence where required acceptance criterion must be met."

In addition, Intervenors have asked discovery questions of the Applicant and will file a supplement hereto based upon the responses thereto and the documentation therefor.

Responses to these interrogatories were prepared by Doug Teper.

Respectfully submitted this, the 19th day of December, 1984,



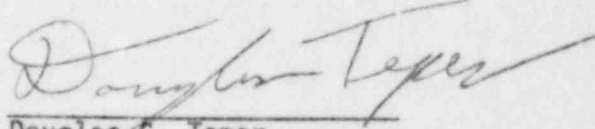
Doug Teper
Georgians Against Nuclear Energy



Tim Johnson
Campaign for a Prosperous Georgia

I hereby affirm that the information I provided for GANE/CPG's response to NRC staff's second set of interrogatories is true to the best of my information and belief.

This, the 19 day of December, 1984.


Douglas C. Teper

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Tim Johnson
Executive Director
Campaign for a Prosperous Georgia
for Intervenors
Campaign for a Prosperous Georgia and
Georgians Against Nuclear Energy

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

(Vogtle Electric Generating Plant,
Units 1 and 2)

Docket Nos. 50-424 and 50-425

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