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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

OFFICE OF SECRETARY
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In the Matter of)
GEORGIA POWER COMPANY) Docket Nos. 50-424-OLA-3
<i>et al.</i>) 50-425-OLA-3
(Vogtle Electric Generating Plant,) Re: License Amendment
Units 1 and 2)) (Transfer to Southern Nuclear)
)

NRC STAFF PROPOSED FINDINGS OF FACT
AND CONCLUSIONS OF LAW IN THE FORM OF AN INITIAL DECISION

I. INTRODUCTION

Pursuant to the order of the Licensing Board, Tr. 15,479-80, as revised in its Memorandum and Order (Intervenor's Request for Extension of Time), dated November 22, 1995; *see* Tr. 15,550-52, the Staff hereby submits its Proposed Finding of Fact and Conclusions of Law in the Form of an Initial Decision.

II. PROCEDURAL HISTORY AND CASE HIGHLIGHTS

This is the second part of an Initial Decision in the proceeding regarding the application of Georgia Power Company (GPC or Licensee), an owner of the Vogtle plant¹ (and a wholly owned subsidiary of The Southern Company), to transfer the authority to operate the above-captioned facilities to Southern Nuclear Operating Company, Inc. (Southern Nuclear), a subsidiary of The Southern Company created to

¹ Ogelthorpe Power Corporation, the Municipal Electric Authority of Georgia, and the City of Dalton, Georgia, are also co-owners of the Vogtle plant.

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operate the nuclear plants in the Southern Company system.² In LBP-93-5, 37 NRC 96 (1993), we granted the intervention petition of Allen Mosbaugh (Intervenor) and consolidated issues raised in the petition into the following single contention:

The license to operate the Vogtle Electric Generating Plant, Units 1 and 2, should not be transferred to Southern Nuclear Operating Company, Inc., because it lacks the requisite character, competence and integrity, as well as the necessary candor, truthfulness and willingness to abide by regulatory requirements.

37 NRC at 111.³ The admitted bases for the character and integrity contention, as further clarified in subsequent board rulings, are Intervenor's allegations that (1) GPC knowingly misled the NRC about who controlled licensed activities at Vogtle by omission or misstatements of information (thus concealing a *de facto* transfer of Vogtle to Southern Nuclear) and (2) GPC knowingly provided inaccurate, incomplete or misleading information regarding diesel generator (DG) starts and reliability in 1990, as well as April 1991 statements regarding the knowledge and involvement of senior GPC officials with respect to the inaccurate 1990 DG information. *E.g.*, LBP-93-5, 37 NRC at 104-111; LBP-94-37, 40 NRC 288 (1994) (partial summary disposition of illegal transfer issue); LBP-93-21, 38 NRC 143, 148 (1993) (only those 10 C.F.R. § 2.206 petition matters that were specifically discussed in the Amended Petition are within the scope of the proceeding).

² The NRC Staff previously approved the transfer of authority to operate the Farely Nuclear Plant, Units 1 and 2, from Alabama Power Company (a subsidiary of the Southern Company) to Southern Nuclear. 56 Fed. Reg. 64,649 (December 11, 1991).

³ Marvin Hobby, a co-petitioner of Mr. Mosbaugh, was denied intervention because he lacked standing to intervene. Memorandum and Order (Prehearing Conference; Filing of Schedule), dated November 17, 1992.

With respect to the DG reporting issue, the Amended Petition alluded to alleged GPC falsehoods in its April 19, 1990 Licensee Event Report 90-006 (LER) to the NRC (that reported a DG start count after the March 20, 1990 Site Area Emergency (SAE)) and indicated that the matters were being considered by the NRC Office of Investigations (OI). See Amendments to Petition to Intervene and Request for Hearing, dated December 9, 1992 (Amended Petition), at 15-16, 18-19. Intervenor also asserted that in GPC's April 1, 1991, response to Intervenor's 10 C.F.R. § 2.206 petition, R. Patrick McDonald, Executive Vice - Nuclear Operations, knowingly submitted false information concerning (1) the participation of George Hairston, Senior Vice President - Nuclear Operations, in developing the April 19, 1990 Licensee Event Report 90-006 (LER) and (2) when GPC managers became aware of errors in the LER. Amended Petition at 16-19. Intervenor submitted these and other allegations to OI beginning in June 1990 and filed a 10 C.F.R. § 2.206 petition on September 11, 1990, as supplemented September 21 and October 1, 1990, challenging the character, competence and integrity of GPC and the proposed transferee, Southern Nuclear.⁴

⁴ In their 10 C.F.R. § 2.206 petition, Intervenor and Marvin Hobby, another discharged GPC employee, alleged that: (1) GPC illegally transferred its operating license to Southern Nuclear Operating Company (known then as SONOPCO, but has since become Southern Nuclear); (2) GPC knowingly included misrepresentations in its response to concerns of a Commissioner about the chain of command for the Vogtle facility; (3) GPC made intentional false statements to the NRC about the reliability of a diesel generator involved in the Site Area Emergency at Vogtle; (4) a GPC executive submitted perjured testimony during a U.S. Department of Labor (DOL) proceeding under the employee protection provisions of the Energy Reorganization Act, as amended, 42 U.S.C. 5851 (1988); (5) GPC repeatedly abused Technical Specification (TS) 3.0.3 at Vogtle; (6) GPC repeatedly and willfully violated TSs at Vogtle; (7) GPC repeatedly concealed safeguards problems from the NRC; (8) GPC operated radioactive waste
(continued...)

We postponed some discovery and other prehearing matters during the pendency of the OI investigation of Intervenor's allegations so as not to disturb the agency's deliberations on possible enforcement action against GPC. *See e.g.*, LBP-93-22, 38 NRC 189 (1993); CLI-94-05, 39 NRC 190 (1994). OI documented the results of its investigation in a report on OI Case No. 90-020R, dated December 17, 1993 (OI Report), and found that some GPC officials had either deliberately, or with careless disregard, submitted false or misleading information to the NRC in the April 9, 1990 presentation and Confirmation of Action Response (COAR) letter, the April 19, 1990 LER, the June 29, 1990 cover letter to the revised LER, and in an August 30, 1990 letter containing information related to diesel start counts.⁵

⁴(...continued)

systems and facilities at Vogtle in violation of NRC requirements; (9) GPC routinely used nonconservative and questionable management practices at its nuclear facilities; and (10) GPC retaliated against managers who made their regulatory concerns known to GPC or SONOPCO management. *See* DD-93-8, 37 NRC 314, 315 (1993) (no illegal transfer occurred), *vacated and remanded*, CLI-93-15, 38 NRC 1 (1993) (staff determination on the petition should await the outcome of the license transfer proceeding due to some overlap in issues to be decided).

⁵ Mr. Mosbaugh's air quality allegation asserted that George Bockhold, Vogtle General Manager, deliberately misrepresented DG air quality in the April 9 letter by withholding recent (known) out-of-tolerance DG control air dew point readings, as well as erroneously asserting that high readings were due to faulty instruments and air quality was satisfactory. OI Report (Int. Exh. II-39) at 95. OI substantiated this and the other allegations concerning DG start counts and information, concluding that George Bockhold, George Hairston, Kenneth McCoy (Vice President - Vogtle Project) and William Shipman (General Manager - Plant Support) deliberately (or with careless disregard) submitted false and incomplete information to the NRC, but OI did not substantiate that Mr. McDonald deliberately provided false information to the NRC in the GPC response to Intervenor's 10 C.F.R. § 2.206 petition. *See* OI Report at 1-2.

The NRC Staff evaluated Intervenor's allegations and the OI Report and, on May 9, 1994, issued a Notice of Violation and Proposed Imposition of Civil Penalty (NOV) and Demands for Information (DFI) to GPC regarding six GPC employees. After considering the GPC Reply to the NOV, and the GPC and individual responses to the DFIs, the Staff issued a Modified Notice of Violation and Proposed Imposition of Civil Penalties on February 13, 1995.⁶

In LBP-94-15, 39 NRC 245, 255-56 (1994), we ruled that the allegations in the NOV are important to the admitted contention and are within the scope of the proceeding. We also stated that Intervenor could inquire about GPC attempts "to fulfill its safety obligations with respect to the diesel generators" and whether GPC withheld pertinent facts from the NRC, but we indicated that new issues (unrelated to the diesel generators) are not permissible unless, among other things, Intervenor (1) satisfies the late-filed contention requirements and (2) demonstrates that the new issue is necessary for an adequate record on the admitted contention. Memorandum and Order (Scope of Discovery), dated June 2, 1994 (unpublished), at 2-4. Consequently, the Board's

⁶ The NOV (Staff Exh. II-46) found GPC's failure (on April 9, April 19, June 29, and August 30, 1990) to provide information to the NRC that was complete and accurate in all material respects as required by 10 C.F.R. § 50.9 constituted a Severity Level II problem and proposed a \$200,000 civil penalty. In response, GPC generally admitted to each violation except the violation regarding air quality statements in the April 9 letter. See GPC Reply to NOV and DFIs, dated July 31, 1994 (Int. Exh. II-105). The Modified NOV (Staff Exh. II-51) withdrew the violation associated with air quality, but maintained that the remaining violations constituted a Severity Level II problem. GPC paid the civil penalty on March 1, 1995. See Letter from J. Milhoan to K. McCoy, dated March 13, 1995 (Int. Exh. II-60) at 1.

While this adjudicatory proceeding is not to evaluate the merits of the Staff's enforcement action, these events are background to our consideration of the character and integrity issues in this proceeding.

discovery rulings expanded the scope of the proceeding to include other issues raised by communications regarding the DGs in 1990, including the DG air quality issue and the 10 C.F.R. § 50.9 violations identified by the Staff in its NOV and Modified NOV.

In denying a GPC motion for summary disposition of the DG air quality issue, we stated that the issues to be determined are whether GPC officials were willful or recklessly careless of the facts (as opposed to complete and accurate): (1) in the April 9 letter statement that air quality was satisfactory; (2) in the April 9 letter statement that recently obtained high dew point readings resulted from faulty instrumentation; and (3) in other communications with the NRC regarding high dew points. *See Memorandum and Order (Summary Disposition: Air Quality)*, dated April 27, 1995 (unpublished) (*Air Quality Order*), at 6-9. We further indicated that the technical issue of whether air quality was the root cause of the DG failures during the SAE was not relevant to the proceeding. *See Air Quality Order* at 6.

Even though we ruled that the incorporation by reference of the § 2.206 petition was not sufficient to raise all § 2.206 petition matters within the scope of the proceeding, LBP-93-21, 38 NRC at 148, we entertained some of the matters at hearing in order to give Intervenor latitude in establishing that certain communications from GPC to the NRC were false and misleading and, circumstantially, to show evidence of a pattern of deception and falsehood associated with the original representations to the NRC.

Memorandum and Order (Motion to Strike Mosbaugh Testimony), dated May 11, 1995, at 4-6.⁷ Our guiding principles are that:

(1) testimony that is relevant to the motives or extent of the responsibility of Georgia Power officials with respect to alleged misstatements is admissible, (2) testimony related to technical issues that are not part of this proceeding is not admissible with respect to those technical issues, (3) cumulative testimony is not now admissible but may be admissible in the relief stage of the proceeding, and (4) testimony which is in fact a party's argument, not evidence, shall not be admitted.

May 11 Order at 7-8 (footnotes omitted). We permitted Mr. Mosbaugh to provide his opinion of the meaning of events he personally experienced, and viewed his testimony about GPC statements as admissions adverse to the interests of GPC. *Id.* at 8. In an effort to obtain an adequate record, we ruled that GPC witnesses should state: (1) when each, individually, learned or first suspected that particular portions of GPC's communications to the NRC were false or misleading, (2) what steps each took to determine what actually happened, and (3) what personal responsibility, if any, each had for false or misleading statements or for the failure to promptly correct false or misleading statements. *Id.* at 9.

The schedule for commencement of the hearing on the DG issue was initially established in our Memorandum and Order (Scheduling for Phase II), dated January 18, 1995 (unpublished). Hearing days were held in Augusta, Georgia, and in Rockville, Maryland, from April through September 1995, and generated a transcript record of over 12,000 pages. Voluminous prefiled testimony of over 35 witnesses, and nearly 600

⁷ These matters include the FAVA (a radwaste microfiltration system) and Dilution Valve allegations provided to OI prior to the March 20, 1990 SAE and also raised in the § 2.206 petition.

exhibits⁸ were proffered by the parties. Witnesses for GPC, Intervenor and the Staff testified in the proceeding. As we ordered in the illegal transfer phase, GPC witnesses were not permitted to hear the testimony of other GPC witnesses, unless otherwise permitted by the Board. Intervenor's direct case included the testimony of Mr. Mosbaugh and cross-examination of adverse witnesses (present and former employees of GPC). The Staff presented its case after Intervenor and GPC had completed their cases in order that we could benefit from their perspectives about the evidence presented. Except for the filing of miscellaneous motions regarding a limited number of matters, we closed the record on October 6, 1995. *See* Tr. 15,474. Each of the parties submitted proposed findings and fact and conclusions of law. Georgia Power Company's Proposed Findings of Fact and Conclusions of Law on Diesel Generator Reporting Issues, dated November 6, 1995 (GPC Findings); Intervenor's Final Statement of Fact and Conclusions of Law, dated November 30, 1995 (Intervenor Findings); NRC Staff Proposed Findings of Fact and Conclusions of Law in the Form of an Initial Decision, dated December 12, 1995 (Staff Findings).

⁸ Included among these exhibits were the transcripts of audio tape recordings (and two audio tapes) secretly made by Intervenor in February through August 1990 at the Vogtle site. Mr. Mosbaugh gave OI 277 audio tape recordings in connection with his allegations. OI retained 76 tapes, citing conversations on 22 tapes in the OI Report. The Mosbaugh tape recordings have been important as they are a contemporaneous record of some events related to matters before us. They have also been a considerable source of frustration for the Board and parties. When tape excerpts were played in the courtroom, we witnessed that the recordings contain numerous inaudible portions and that the content, context and tone of the remarks recorded was disputable. *E.g.*, Tape 58, dated 4/19/90 (Board Exh. II-12). Unsuccessful or incomplete attempts to arrive at agreements on tape transcripts led to a number of versions of tape transcripts being proffered by the parties.

III. SUMMARY OF DECISION

A. Overview

In ruling on the "illegal transfer issue," we found that there was no *de facto* transfer to Southern Nuclear and that there was not sufficient evidence to conclude that GPC had intentionally misled the NRC in any material respect concerning the operation of Vogtle or lacked the requisite character and integrity contemplated by the regulations to operate the facility.

In this part of our initial decision, we examine the "diesel generator issues" -- the alleged falsehoods or omissions by GPC in written and oral communications to the NRC after the March 20, 1990 SAE during which offsite power was lost concurrent with the failure of the only available Unit 1 DG (DG 1A).⁹ These communications concern GPC's request for NRC approval to restart Vogtle Unit 1 after the SAE, other related communications through August 1990, and GPC statements in its April 1991 response to the § 2.206 petition.

Contrary to Intervenor's assertions, the Board concludes that the evidence does not show that Southern Nuclear (and the GPC employees that would be employed by that entity after the proposed transfer) deliberately provided false or misleading information to the NRC. The record neither demonstrates that Southern Nuclear lacks the requisite character and integrity to be an NRC licensee as required by section 182 of the Atomic

⁹ The other emergency diesel generator, DG 1B, was not available due to maintenance activities.

Energy Act, 42 U.S.C. 2232, and 10 C.F.R. § 50.80, nor that the operation of the facility should be suspended.¹⁰

B. Guiding Principles

In reaching our determination on the character and integrity contention, we have been guided by several principles in addressing the evidence and arguments of the parties.

In *Metropolitan Edison Co. (Three Mile Island Station, Unit 1)*, CLI-85-9, 21 NRC 1118, 1136-37 (1985) (footnotes omitted), the Commission stated:

A generally applicable standard for integrity is whether there is reasonable assurance that the Licensee has sufficient character to operate the plant in a manner consistent with the public health and safety and applicable NRC requirements. The Commission in making this determination may consider evidence regarding licensee behavior [including the acts of licensee employees since all organizations carry out their activities through individuals] having a rational connection to the safe operation of a nuclear power plant. This does not mean, however, that every act of licensee is relevant. Actions must have some reasonable relationship to licensee's character, *i.e.*, its candor, truthfulness, willingness to abide by regulatory requirements, and acceptance of responsibility to protect public health and safety. In addition, acts bearing on character should not be considered in isolation. The pattern of licensee's behavior, including corrective actions, should be considered.

In *Houston Lighting & Power Co. (South Texas Project, Units 1 and 2)*, 12 NRC 281 (1980), the Commission stated that "[e]ither the abdication of knowledge or abdication of responsibility, whether at the construction or operating phase, could form an independent basis for revoking a license or denying a license application on grounds of lack of competence (*i.e.*, technical) or character qualification on the part of a licensee or applicant. 42 U.S.C. 2232a."

¹⁰ See, *e.g.*, Intervenor Findings 25-26, 311.

The Board also recognizes the importance of licensee communications to the NRC and the need for prompt correction of incomplete or inaccurate information whether written or oral as required by 10 C.F.R. § 50.9. In promulgating 10 C.F.R. § 50.9, the Commission emphasized that forthrightness in communications with the NRC is essential if the NRC is to fulfill its responsibilities to ensure that the use of radioactive material and operation of nuclear facilities are consistent with public health and safety. Completeness and Accuracy of Information: Final Rule and Statement of Policy, 52 Fed. Reg. 49,362 (December 31, 1987). A determination of whether information is "complete and accurate in all material respects" is to be judged by whether information has a natural tendency or capability to influence an agency decisionmaker and omissions are actionable to the same extent as affirmative material false statements. 52 Fed. Reg. 49,363. Thus, a statement is material if a reasonable Staff member should consider the information in question in doing his job, but the NRC need not rely on a false statement for it to be material. *Randall C. Orem, D.O* (Byproduct Materials License No. 34-26201-01), CLI-93-14, 37 NRC 423, 427-428 (1993) (whether a statement induced the agency to grant an application has no bearing on materiality) and cases cited therein.

The term "material false statement" (which was often used by Intervenor in this proceeding) is limited "to situations where there is an element of intent," *i.e.*, egregious situations. 52 Fed. Reg. 49,365. The Commission also explained that intent is also indicated by careless disregard as:

[T]he "concept of 'careless disregard' goes beyond simple negligence, as the term has been applied to judicial decisions defining willful conduct as it has been applied by this agency. *See, e.g., Trans World Airlines, Inc.*

v. Thurston, 83 L.Ed.2d. 523, 537 (1985); *Reich Geo-Physical, Inc.*, ALJ 85-1, 22 NRC 941, 962-63 (1985). 'Careless disregard' connotes reckless regard or callous indifference toward's one's responsibilities or the consequences of one's actions."

52 Fed. Reg. 49,365.

In light of the importance of licensee communications and their role in enabling the NRC to discharge its responsibilities, the Board will examine whether GPC acted with candor and displayed an attitude of being sure that all submissions to the NRC are accurate. See *Virginia Electric & Power Co.* (North Anna Power Station, Units 1 and 2), CLI-76-22, 4 NRC 480, 486, 491 (1976) ("nothing less than simple candor is sufficient"), *aff'd*, 571 F.2d 1289 (4th Cir. 1978).

C. Diesel Generator Statements

Intervenor alleges that GPC deliberately or with careless disregard submitted false and misleading information regarding diesel generator starts (1) in an April 9, 1990 presentation and letter to the NRC (seeking permission to restart after the SAE), (2) in an April 19, 1990 Licensee Event Report (LER) 90-006 on the SAE by means of a conspiracy among GPC managers, (3) in a June 29, 1990 cover letter forwarding the revised LER, and (4) an August 30, 1990 letter. Intervenor also alleges that GPC knowingly submitted false or misleading statements (1) concerning diesel generator air quality in the April 9, 1990 letter (and in contemporaneous discussions with the IIT) and (2) in GPC's April 1, 1991 response to Intervenor's 10 C.F.R. § 2.206 petition with respect to Mr. Hairston's involvement in developing the false start information (*i.e.*,

during an April 19 call) and when GPC managers became aware of inaccurate start counts. We disagree.

The repeated failure of GPC to provide accurate and complete information relating to the count of DG starts in April 1990 were due to GPC performance failures that can be corrected and does not reveal a deliberate effort to deceive or mislead the NRC or to avoid regulatory requirements. The evidence supports the conclusion that the erroneous counts for DG 1A and 1B of 18 and 19 respective consecutive successful starts without problems or failures as of April 9 (instead of 27 and 12) was caused by GPC's imprecision in (1) using the successful start terminology in communications surrounding the collection of the start data, and (2) conveying that information to the NRC on April 9, 1990. Intervenor attempts to demonstrate that GPC knew the information to be false are not persuasive.

When informed, on April 19, 1990, of a possible error in the count information, GPC managers did not adequately address the issue and failing (1) to examine the causes of the initial misstatements, (2) to determine accountability and (3) to promptly correct information presented to the NRC. GPC missed this opportunity to identify the April 9 errors and relied instead on (a) revising the statement to insert ambiguous terminology (comprehensive test program), (b) incomplete verification efforts performed on April 19, 1990 with respect to the LER and (c) the verbal assurances of GPC managers that the count was correct and understood by the NRC.

GPC's decision to rely on verbal assurances and incomplete site verification efforts on April 19 when questions were raised about possible DG start count errors did

little to address or identify the imprecision of George Bockhold, the General Manager, in requesting and presenting the start count, and communication failures by Jimmy Paul Cash, the Unit Superintendent, in reporting the start data he collected. Had Mr. Bockhold told Mr. Cash what to count (specifying criteria for what should be considered a "successful start without a problem or failure"),¹¹ when to begin the count, and that he should report a string of consecutive starts, the inaccuracies might have been averted. Mr. Bockhold also failed to assess the count results to determine where the Cash count began and whether it included starts with problems or failures. We found no evidence to support Intervenor's assertion that there was a conspiracy by Messrs. Bockhold, McCoy and Hairston, to submit information they knew to be false.

The June 29 letter was inaccurate in that it did not correctly identify the reasons for the erroneous LER start counts and was incomplete in that it failed to fulfill its stated purpose, *i.e.*, to "clarify" the April 9 start count. The deficiencies in the June 29 letter also resulted from performance failures. The Quality Assurance (QA) Audit requested by Mr. George Hairston, GPC's Senior Vice President - Nuclear Operations, was supposed to establish the correct data for the LER and to determine *why* the errors were made. The QA Audit developed a reasonable definition of the period for the count (*i.e.*, subsequent to the completion of the comprehensive test program commences with the DG operability test), but erroneously asserted that the lack of an up-to-date DG start log maintained by the DG engineer caused the submission of incorrect data. This was, in

¹¹ We learned during the hearing that this term is subject to various interpretations.

part, due to the audit's failure to examine documents used to gather the count (both the Shift Supervisor's Log *and* the Unit 1 Control Log). It was further caused by GPC's failure to identify and examine the personnel errors that led to the submission of inaccurate start count data on April 9.

Even though the QA Audit Report included a list of starts through June 7, 1990, that showed that the April 9 count was wrong, GPC (particularly Messrs. Frederick, Hairston and McCoy who all reviewed the audit start tables) failed to recognize the error and to correct the April 9 start count (as the letter indicated). The Board finds no evidence that Ken McCoy, Vice President - Vogtle Project, or George Hairston knowingly provided false or incomplete information to the NRC on that date. The QA audit, however, should have alerted GPC to the inaccuracy in the April 9 start count for DG 1B and constituted another missed opportunity to correct the error.

In addition, Intervenor had told GPC employees and managers on June 29 that the letter did not correct the COAR count. GPC did not submit a correction until requested by the NRC during an August 1990 inspection that was prompted, in part, by Intervenor allegations and NRC concerns about the attitudes of GPC. The August 30, 1990 letter was (1) inaccurate in that it asserted that the April 9 start count error was, in part, caused by confusion about the distinction between a successful start and a valid test, confusion that did not exist when the count data was gathered, and (2) incomplete in failing to identify the performance failures of the General Manager, George Bockhold, in directing and assessing the count data. Mr. Bockhold again failed to address concerns about the accuracy of information to be presented to the NRC during the August 30 Plant Review

Board (PRB) Meeting, and ultimately to acknowledge his role in count errors. The failure of the PRB to address accuracy concerns demonstrated the questioning attitude we would expect of GPC in assuring the accuracy of communications with the NRC.

The Board is confident, however, that throughout these events, GPC assured that the DGs were reliable and operable. GPC fell short in these instances, however, with respect to the level of importance and diligence accorded communications to the NRC *and* promptly resolving concerns that information provided to the NRC may be inaccurate or incomplete. It can be said that these failures resulted from a "cavalier" attitude about NRC communications and a tendency sometimes to fix the words rather than to check and recheck the facts. It is evident, however, that Mr. Bockhold's management style contributed to an atmosphere where site employees were reluctant to question the accuracy or completeness of communications to the NRC, unless they had information that directly contradicted information to be submitted to the NRC. In addition, subjective assessment of the validity of Intervenor's concerns also clouded GPC's judgment as Messrs. Greene, Horton, Majors, and Frederick were quick to discount (and failed to resolve) concerns raised by Intervenor about accuracy and completeness of the June 29 cover letter to the LER. The reluctance to question correspondence generated or revised by superiors and to determine the accuracy and completeness of information submitted to the NRC contributed (1) to the four month delay before GPC corrected the April 9 count and (2) the four year delay (until the issuance of the NOV) in GPC squarely addressing the failures of the General Manager and others to insure complete and accurate communications to the NRC.

GPC has recognized its role in providing incomplete and inaccurate information to the NRC and their failure to take steps to insure communications consistent with the requirements of 10 C.F.R. § 50.9. The managers accept responsibility for the mistakes made in 1990. During the hearing, we observed the sincerity and regret shown by a number of GPC employees. We were troubled, however, by the frequent shifting of blame to Intervenor for the DG start count inaccuracies and the inclination to use ambiguous or ill-defined terminology, particularly since Intervenor often alone questioned the accuracy of GPC communications to the NRC and actually compiled the first DG count listing that clearly revealed errors in the COAR and LER. Even though Intervenor was part of incomplete verification efforts and probably should have sought additional time to complete site verification of the LER count (for the period after the comprehensive test program), GPC would have been better served to have addressed Intervenor's concerns and to have raised its standards for accuracy and completeness of communications to the NRC. The repeated involvement of Mr. Bockhold in GPC's submission of incomplete and inaccurate information leads the Board to require the Staff to condition any license transfer authorized on Mr. Bockhold's refraining from line management at a nuclear facility until the completion of appropriate training and 60 days prior notice to the NRC, consistent with the GPC and Southern Nuclear commitment with respect to the enforcement action.

In the end, there is little safety significance to the discrepancy in the start counts conveyed and the accurate numbers. The actual start data do not raise a concern about the readiness of the DGs to perform their function. The incomplete and inaccurate information was material in that it had the ability to influence the NRC in its dealings with GPC. It may have led the NRC to inquire further before authorizing restart in April 1990 and about GPC operations at Vogtle. On the other hand, these events show the need for improvement in communications, both within GPC and with the NRC, and the need to maintain a questioning attitude about explanations and data provided to the NRC.

D. DG Air Quality and Root Cause Statements

Contrary to Intervenor's assertion, the Board finds insufficient evidence to conclude that GPC intentionally misled the NRC or intentionally misrepresented information concerning DG air quality in communications with the NRC. GPC took reasonable steps to determine air quality (including the receiver inspection) and performed blowdowns on the air receivers to remove any moisture that could affect DG performance. While GPC provided incomplete information about the causes of high dew point readings in the April 9 COAR, it was based on the belief that recent out-of-specification readings were not valid. We find no evidence of any attempt to deceive the NRC.

Similarly, the Board finds no basis to conclude that GPC deliberately failed to keep the NRC informed of its efforts to determine the root cause of the DG failures that occurred during the SAE and in May 1990. GPC conveyed information about the causes of these events that it believed to be true when provided. While the Board finds some

GPC root cause investigation efforts to be lacking (due to the absence of sufficiently detailed procedures, documentation of sensor recalibration activities, and records of some air receiver blowdowns), we do not find sufficient evidence to draw negative inferences concerning GPC's character and integrity, as suggested by Intervenor.

E. White Papers, § 2.206 Response and Safety System Performance Indicator Data

The Board finds no evidence to support Intervenor's assertion that GPC knowingly submitted false information regarding Mr. Hairston's participation on the April 19 call about the LER. The misstatements are readily explained by faulty recollection. In addition, we can discern no motive for GPC intentionally to misrepresent Hairston's participation inasmuch as the tape evidence demonstrated that he was not a significant participant in decisions regarding the accuracy of the LER.

Similarly, we find no basis to conclude that Mr. Bockhold displayed deceit in failing to include Safety System Performance Indicator Data in the April 9 letter in that the information, although incomplete, was provided to the NRC Incident Investigation Team (IIT). There is no evidence that the information omitted was requested by the NRC or reasonably should have been included in the letter.

F. Conclusion

The noted shortcomings in determining the accuracy of communications to the NRC, and reluctance to reexamine start data previously submitted, resulted in violations of 10 C.F.R. § 50.9 due to the submission of incomplete or inaccurate information.

These performance failures, while serious, were not intentional and do not rise to the level of intentional deceit or unacceptable character.¹²

Further, we find no matters arising out of the performance failures and resulting misstatements which disturb our previous finding that no illegal transfer (or intentional misrepresentations concerning such transfer) occurred.

The public scrutiny that the organizational and individual performance failures has received as a result of this adjudicatory proceeding and the NRC enforcement action, as well as the reported improvements in licensee's performance at the site, persuade us that we need only condition the license to prohibit Mr. Bockhold's assumption of line management responsibilities for a nuclear power plant consistent with the GPC and Southern Nuclear commitments stated in correspondence associated with the Modified NOV. Therefore, we find that there is no need to hold any further hearings on this matter.

¹² We are cognizant that, as of this date, a number of allegations related to character and integrity, as reported to us in a *ex parte, in camera* session held April 6, 1995, still await OI resolution. The Staff has informed the Board about the status of allegations through publication of Board Notifications (BNs). *E.g.*, BN 93-23 (November 19, 1993); BN 94-07 (March 24, 1994); BN 94-09 (May 13, 1994); BN 95-02 (February 2, 1995); BN 95-05 (March 21, 1995). We expect that the Staff's determination of whether to authorize the proposed transfer will address these matters, and any issues raised by the two Secretary of Labor decisions finding GPC discriminated against Messrs. Mosbaugh and Hobby before acting on the proposed transfer. *See Marvin Hobby v. Georgia Power Co.*, DOL Case No. 90-ERA-30 (August 4, 1995); *Allen Mosbaugh v. Georgia Power Co.*, DOL Case Nos. 91-ERA-1/11 (November 20, 1995). We are aware that the Staff is already considering whether to take enforcement action against GPC with respect to the Department of Labor finding regarding Mr. Hobby, *see* 95-17, dated November 13, 1995, and alleged "discrimination" by GPC, while raised in the 10 C.F.R. § 2.206 petition, is not an admitted issue in this proceeding.

Our decision is based on consideration of the exhaustive record before us, the respective positions of the parties, their respective burdens at hearing,¹³ and the absence of evidence of any deliberate intent by GPC (or Southern Nuclear) to deceive or mislead the NRC. The Board finds itself in general agreement with the many views of Licensee and Staff on issues before us and reject the pejorative inferences drawn by Intervenor.

III. FINDINGS OF FACT

A. Factual Background on DG Reporting Issue

1. Plant Vogtle is located in Waynesboro, Georgia, 26 miles Southeast of Augusta, Georgia. Georgia Power is the licensed operator of Plant Vogtle, which is jointly owned by Georgia Power, Oglethorpe Power Corporation, the Municipal Electric Authority of Georgia, and The City of Dalton, Georgia.

2. The nuclear organization for Plant Vogtle consists of a plant staff at the site and a corporate group located in Birmingham, Alabama. The individuals who held pertinent positions in this organization during 1990 are identified in Appendix C hereto.

3. On March 20, 1990, a worker accidentally backed a truck into a switchyard support column causing a loss of off-site power to Unit 1. At that time, Unit 1 was in a refueling outage, and one of the diesel generators ("1B") had been removed from service for a maintenance overhaul. The other diesel generator ("1A")

¹³ Intervenor has the burden of going forward with evidence on his contention and must give some basis for further inquiry on the matter either by direct evidence or cross-examination. *Metropolitan Edison Co. (Three Mile Island Nuclear Station, Unit 1)*, ALAB-697, 16 NRC 1265, 1271 (1982); *Consumers Power Co. (Midland Plant, Units 1 and 2)*, ALAB-123 6 AEC 331, 345 (1973). Licensee, however, bears the ultimate burden of proof or persuasion on the issue. *TMI*, 16 NRC at 1271.

was available and was called upon to start twice, but on both occasions failed to maintain running speed. On a third attempt, the diesel started, restoring power thirty-six minutes after the loss of off site power. McCoy at 1; ff Tr. 2839 McCoy, Tr. 3234; see Staff Exh. II-46 at 1.

4. Immediately after the site area emergency, the NRC assembled an Augmented Inspection Team ("AIT"), which included Messrs. Ken Brockman from NRC Region II and Richard Kendall from NRC headquarters. The AIT arrived at Plant Vogtle on March 22, 1990. McCoy at 2; see Staff II-46 at 1.¹⁴

5. On March 23, 1990, the NRC issued a Confirmation of Action ("COA") letter to GPC that, among other things, confirmed that GPC had agreed not to return Unit 1 to criticality until the Regional Administrator was satisfied that appropriate corrective actions had been taken, so that the plant could safely return to power operations. COA, GPC Exh. II-4 (McCoy B) at 1. The letter also indicated that equipment involved in the incident may be quarantined (minimizing personnel access to areas and equipment consistent with safety) and that GPC could take any action it deemed necessary to (1) achieve or maintain safe plant conditions, (2) prevent further equipment degradation or (3) test or inspect as required by the plant's Technical Specifications (TSs). *Id*; see also, Quarantine Order (GPC Exh. II-65).

¹⁴ The results of this investigation are documented in NUREG-1410, "Loss of Vital AC Power and the Residual Heat Removal System During Mid-Loop Operations at Vogtle Unit 1 on March 20, 1990," dated June 1990. Staff Exh. II-46 at 1; see, e.g., NUREG-1410, Appendix J (GPC II-167).

6. A quarantine order was subsequently issued by the NRC concerning diesel generator equipment. GPC Exh. II-65.

7. On March 25-26, 1990, the NRC upgraded the AIT to an Incident Investigation Team (IIT), composed of NRC and industry personnel and headed by Mr. Al Chaffee. Mr. Kendall carried over from the AIT to work on the IIT. Mr. Brockman was not an IIT member, but became the NRC Region II point of contact for the IIT. McCoy at 2; see Staff II-46 (NOV core letter at 1).

8. On the same day as the event, Georgia Power conducted several troubleshooting starts on the 1A diesel generator to determine, if possible, the cause of the event. The diesel started and ran without problems each of these times. The plant staff then shifted its attention to the 1B diesel in order to return it to service expeditiously. McCoy at 2.

9. After recovery from the site area emergency, Georgia Power assembled an Event Review Team to identify the root causes of the event and to determine appropriate corrective actions. The team was led by Mr. Ken Holmes, who at that time was Manager of the Training Department. McCoy at 2-3. The other members of the Event Review Team were Charles Coursey, Joe D'Amico, Jimmy Paul Cash, Paul Kochery, George Frederick, Indira Kochery, Tom Webb, and Glen McCarley. Int. Exh. 11-124 at 1.

10. As part of the effort to return the 1B diesel to service, there were a number of post-maintenance starts and tests between March 21 and March 24. During these tests, post-maintenance difficulties were experienced, including two failures to start

on March 21 because of inadequate fuel in the fuel lines after diesel reassembly. In addition, during a run on March 22, the 1B diesel tripped on a high lube oil temperature signal; during a run on March 23, the diesel tripped on low jacket water pressure and low turbo lube oil pressure signals; and during a run on March 24, a high jacket water temperature alarm was received but the diesel continued to run. McCoy at 3.

11. On March 24, Mr. Shipman (General Manager - Plant Support) and Mr. McCoy (Vice President - Vogtle Project) discussed with site personnel, including Mr. Bockhold (Vogtle General Manager) and Mr. Mosbaugh (Acting Assistant General Manager - Plant Support), concerns that these test results had raised about the pneumatic controls. The plant staff described their troubleshooting plan. Mr. McCoy instructed Mr. Bockhold to make sure the NRC and the IIT participated in the troubleshooting and received any documentation, and to obtain NRC concurrence before anything was changed. Mr. Bockhold replied that he would inform Mr. Brockman of the troubleshooting plan later that morning. McCoy at 3-4.

12. The NRC was promptly informed of problems that occurred during the post-maintenance testing of the 1B diesel generator (DG 1B). In a hand-written memorandum, dated March 24, 1990 (GPC Exh. II-5), Mr. Kendall identified the March 23, 1990 trip (low jacket water pressure and low turbo oil pressure -- later designated as start no) as a significant development because these same alarms had actuated when the 1A diesel (DG 1A) tripped during the March 20 event. Mr. Kendall discussed this trip further in a handwritten memorandum, dated March 25, 1990, to Mr. Brockman and Mr. Chaffee. GPC Exh. II-6. Mr. Kendall also drafted an

instruction (GPC Exh. II-7) that was included with maintenance work orders and cautioned against any loss of information concerning the causes of the DG 1A trip on March 20 or the DG 1B trip on March 23. McCoy at 4.

13. After the IIT was briefed concerning the trouble shooting plan, GPC conducted additional testing of both DG 1A and the DG 1B. An NRC Region II Inspector, Milt Hunt, was assigned to monitor and evaluate actions of GPC to return the diesel generators to an operable condition. Hunt, ff. Tr. 4882, at 1; GPC Exh. II-65.

14. Testing on DG 1B was conducted on March 27 and March 28. It included sensor calibration and replacement, testing of the pneumatic logic controls, pneumatic leak testing, an under-voltage test, and an operational surveillance. It resulted in DG 1B being declared operable on March 28. The additional testing for DG 1A, which was similar in scope, was performed between March 29 and April 1, at which time DG 1A was declared operable. Additional starts on both diesels occurred after these tests, in order to establish the reliability of the diesels. McCoy at 4-5.

15. On April 6, a list (compiled by Mr. Kochery) of diesel starts from March 13 through March 23 was later provided to the IIT. This list showed the problem starts on March 22 and March 23. McCoy at 5-6; GPC Exh. II-8.

16. At the NRC's request, Georgia Power also examined whether the diesel's control air system could be the cause of the March 20 DG 1A failure. Georgia Power tested the diesel air system for moisture and conducted a review of the control air filters. Bockhold Supp. at 1. High dew point readings were recorded on the DG 1A on March 29. *Id.* at 2; Briney Rebuttal at 5-8, 10-11. Additional dew point readings were

taken in the April 5-7 time frame, and high dew point measurements were again recorded. The high dew point readings were shared with the NRC. Bockhold at 4; Kitchens Rebuttal at 9; Hunt at 5. Georgia Power eventually decided that most of the high readings were inaccurate. Briney Rebuttal at 7-8; Bockhold Supp. at 3; Kitchens Rebuttal at 9.

B. April 9, 1990 Presentation and Letter

17. In the Modified NOV issued February 13, 1995, the Staff concluded that, contrary to 10 C.F.R. § 50.9:

[I]nformation provided to the NRC by GPC in a Licensee Event Report (LER), dated April 19, 1990, was inaccurate in a material respect. Specifically, the LER states: "Numerous sensor calibrations (including jacket water temperatures), special pneumatic leak testing, and multiple engine starts and runs were performed under various conditions. After the 3-20-90 event, the control systems of both engines have been subjected to a comprehensive test program. Subsequent to this test program, DG1A and DG1B have been started at least 18 times each and no failures or problems have occurred during any of these starts."

These statements are inaccurate in that they represent that at least 18 consecutive successful starts without problems or failures had occurred on the DGs for Vogtle Unit 1 (1A DG and 1B DG) following the completion of the comprehensive test program of the control systems for these Dgs, when, in fact, following completion of the comprehensive test program of the control systems, there were no more than 10 and 12 consecutive successful starts without problems or failures for 1A DG and 1B DG respectively.

The inaccuracy was material in that knowledge by the NRC of a lesser number of consecutive successful starts on 1A DG and 1B DG without problems or failures could have a natural tendency or capability to cause the NRC to inquire further as to the reliability of the DGs.

Staff Exh. II-51 at 1 and 20.

18. Intervenor alleges that GPC, by and through its officers and employees, knowingly, deliberately, and willfully submitted inaccurate information regarding the number of starts of the diesel generators to the NRC. Mosbaugh, Tr. 8313-15, 8412; Mosbaugh at 34. Intervenor contends that (1) GPC submitted the numbers 18 and 19 successful starts with full knowledge that the numbers were incorrect, and (2) the typed "Cash List" was a backup slide that was circulated to corporate offices before the presentation. See Mosbaugh, Tr. 8310, 8313, 8315; Intervenor Findings 85-89.

19. GPC's position in regard to the diesel start counts in the April 9, 1990 presentation and letter of the same date is that the information was incorrect and that it was due to poor GPC internal communications, and personnel mistakes, that it was not due to indifference towards the need for accuracy in that a licensed SRO used plant records to perform a count and develop a listing. GPC Exh. II-8 (August 30, 1990 letter signed by W.G. Hairston); Int. Exh. II-105 (GPC Response to NOV, dated August 2, 1994), at 2.

20. The Staff found that the count errors were caused by performance failures in collecting and reporting the data, but did not find evidence that the errors were caused by deliberate efforts to provide incomplete or inaccurate information. See Vogtle Coordinating Group Evaluation, Conclusions, and Recommendations, dated November 4, 1994, (Staff Exh. II-50) at 1-4; Testimony of David B. Matthews, Pierce H. Skinner, and Darl S. Hood on the Diesel Generator Issue at 11 (Staff DG Panel), ff. Tr. 14,758.

21. Specifically, the errors in the count arose due to the failure of Mr. Bockhold in requesting the count to instruct Mr. Cash as to his criteria for a

successful start (without a problem or failure), the point at which to begin his count, and to assess the count data provided to ensure that it was what he had requested. Staff Exh. II-46 at 2-3; Staff DG Panel at 4-5. The count also resulted from the failure of Mr. Cash in performing and reporting his count to ensure that the data was what Mr. Bockhold had wanted. Staff Exh. II-3, Staff DG Panel at 5.

22. The Staff did not find that any GPC employee deliberately and knowingly submitted, or that any employees conspired to deliberately and knowingly submit, information to the NRC at the April 9 presentation, or in the April 9 letter, that was not complete and accurate in all material respects (*see* 10 C.F.R. § 50.9). *See* Staff DG Panel at 11; Staff Exh. II-51.

23. The Board finds, having reviewed all of the evidence in this proceeding and having considered all reasonable inferences that could be drawn from the evidence, that there is no reliable and probative evidence that will support the position of Intervenor that the submission of 18 and 19 diesel starts to the NRC by GPC in April 9 presentation and letter of the same date, was knowingly and willfully false. Intervenor simply has not carried his burden of coming forward with evidence to sustain his allegations.¹⁵

¹⁵ Intervenor's findings would have us conclude that there were irregularities associated with the preparation of the April 9 letter and that the failure to utilize established review and verification procedures is circumstantial evidence that corporate officials (who were both GPC and Southern Nuclear employees) wanted to keep the DG start information or the air quality information free of meaningful verification. Intervenor Findings 130-50. Intervenor also contends that the failure to subject the letter to PRB review is further circumstantial evidence that GPC intended the numbers escape site scrutiny. Intervenor Findings 151-59. While we agree that such actions may have disclosed problems in the count numbers, we reject the OI findings because no TS requires the letter be processed in the manner requiring PRB review. Mr. Hairston (continued...)

1. GPC Knowledge of Prior DG failures

24. Mr. Bockhold, Mr. McCoy and Mr. Hairston received daily briefings on plant activities and were aware of DG test failures. McCoy at 2843; Hairston, Tr. 3633, 11,531.

25. Mr. Bockhold testified that he intended to present a number of consecutive successful starts as support for the position that the DGs would perform their intended function," Bockhold at 6. Mr. Bockhold instructed Mr. Cash to review the operators' logs and determine how many consecutive successful DG starts had been made with no significant problems, Bockhold at 6, but he testified at hearing that he did not have a current recollection of his instruction to Mr. Cash. Bockhold, Tr. 3422, 3424.¹⁶

26. Mr. Cash obtained the DG information from reviewing the control room's Unit Control Logs and the Shift Supervisor Logs. Bockhold at 7. Mr. Cash testified that Mr. Bockhold requested that he (Cash) review the Operations Department log books, Unit Control Log and Shift Supervisor Log, to determine the number of starts which had occurred without significant problems. Testimony of Jimmy Paul Cash on DG Reporting Issues (Cash), ff. Tr. 4389, at 2 and 3.

¹⁵(...continued)

acknowledged that the PRB often possesses the detailed knowledge to assure accuracy. Hairston, Tr. 11612-13. We accept Mr. McCoy's explanation that the April 9 letter was not handled as routine correspondence in order to expedite the drafting and review process. McCoy, Tr. 2958.

¹⁶ See Int. Exh. 57 (GPC Interrogatory Response, dated August 9, 1993) where Mr. Cash stated he understood Bockhold wanted a count of successful starts without significant problems where the diesel had started properly and reached rated voltage and frequency.) This was Bockhold's definition of a successful start. Bockhold, Tr. 3426.

27. The April 9, 1990 presentation was primarily made by the plant General Manager, Mr. George Bockhold. As part of his presentation, he showed several overhead slides that were prepared at the site addressing DG operability. One (the tenth slide) was entitled "DIESEL TESTING" which set forth a sequence of testing done on DG 1A and 1B and stated at the bottom of the slide, "18 SUCCESSFUL STARTS" for DG 1A and "19 SUCCESSFUL STARTS" for DG 1B. McCoy at 6-7; GPC Exh. II-12.

28. The words "consecutive successful diesel generator starts" were not used at the meeting between NRC and GPC, and they do not appear on the DIESEL TESTING slide or in the April 9 letter from Mr. Hairston to the NRC. GPC, however, intended to convey to the NRC that the 18 and 19 successful starts were "consecutive successful" starts without problems or failures. Bockhold at 6; Bockhold, Tr. 3407-08; McCoy, Tr. 2896-97; McCoy Tr. 3208; Hairston at 4-5. The NRC also understood the presentation and letter in this manner. Matthews, Tr. 14,796.

29. The DG start count statement was intended by GPC and understood by the NRC as being a count of consecutive successful starts without problems or failures after the March 20 SAE. McCoy, Tr. 3208; Hairston at 4.

30. During the presentation, Mr. Matthews asked Mr. Bockhold how the count of successful starts related to "valid" tests terminology of Reg. Guide 1.108 (Staff Exh. II-3). Int. Exh. II-269 (OI Summary of 9/5/91 Interview of Matthews) at 1; Matthews, Tr. 14,791. Mr. Matthews believes that Mr. Bockhold did not give him a responsive answer and that another NRC employee was unsure about the successful start terminology. Int. Exh. II-269.

31. GPC revised the letter on the way back to corporate offices in Birmingham to address issues raised during the presentation. Stringfellow, Tr. 3932; Aufdenkampe, Tr. 4745. Exh. II-269 at 1. Mr. McCoy reviewed the letter before it was signed. McCoy at 8.

32. Mr. Bockhold testified that he did not become aware that the start count information previously submitted on April 9 and April 19 to the NRC was inaccurate until April 30, 1990, when Mr. Allen Mosbaugh gave him a memorandum with an attached listing of 1B DG starts which showed the April 9 presentation and letter to be in error. Bockhold at 14.

33. There is no evidence in the record that NRC persons at the April 9, 1990 meeting knew the number of starts of the diesel generators from March 20, 1990, to date. NRC persons were aware that the diesel generators had been tested. Matthews, Tr. 14,795; Hunt at 3-5. *See also*, Tr. 4949.

34. For example, on Tuesday, April 10, 1990, the day after the meeting between the NRC and GPC, Mr. Rick Kendall, an NRC employee, participating with the informed GPC during a conference call with the ITT that he could not arrive at the same count of successful starts as had been presented on April 9 and requested a complete list of starts. GPC Exh. II-31 at 5; Aufdenkampe at 4-5.

35. Problems in determining a count of successful starts stemmed in part from the imprecision in the term as it was subject to various interpretations and was not

defined by NRC guidance document Regulatory Guide 1.108.¹⁷ GPC witnesses had different interpretations of successful starts as including runs ranging from a few minutes to an hour. Cf. Greene (one hour, Tr. 6875), Bockhold (90 seconds, Tr. 3547) and various interpretations of what constituted a problem start and when to begin the count. Horton, Tr. 5922.

36. Although Mr. Bockhold was aware of problems on the 1B DG during overhaul as were other GPC personnel, he failed to adequately specify the starting point for the count to ensure that the count did not include these problems and failed to ensure that Mr. Cash, an experienced Unit Superintendent understood his criteria for "successful starts" without problems or failures. Mr. Bockhold did not determine the point at which Mr. Cash began his count (*i.e.*, the specific start number, date or time) or whether his data included any starts with problems or failures.

37. There is no evidence in the record that Mr. Bockhold or other GPC personnel had any knowledge as to the number of starts of the diesel generators on April 9, 1990, other than the count by Mr. Cash.

¹⁷ See Chairman Bloch-Jimmy Paul Cash dialogue, Tr. 4521-4525. See Green Tr. 6727, 6773, 6797 for the indefiniteness of the term. Green was not aware whether GPC had a definition of what constituted a successful start on April 19. Tr. 6866. See also Tr. 6873 (Green). By not using precise language, such as "valid test" as defined in Regulatory Guide 1-108, GPC introduced considerable confusion by using the words "successful starts" in the DG testing transparency (GPC Exh. II-21). Mike Horton, Manager - Engineering Support, at the time, testified most graphically, "It [successful starts] could have meant any number of things." Tr. 5922. See also Horton at Tr. 5960 when he states that the industry wants more precision in the use of terms.

2. Cash List as Backup Slide

38. Mr. Bockhold testified that "the materials that were used during the presentation [to the NRC] were assembled on transparencies the weekend prior to the presentation" Bockhold, ff. Tr. 3309, at 5 (hereafter "Bockhold"). Mr. Eckert testified he saw the diesel testing slide on Bockhold's desk on Friday, April 6, 1990 (Tr. 11,215).

39. Mr. Cash testified that "I am not sure what numbers I gave [Mr. Bockhold]. I gave him either the numbers 18 and 19 or higher numbers." Cash at 3. Mr. Cash testified during an August 14, 1990 OI interview that he gave Mr. Bockhold 22 or 23 for DG 1B and 27 for DG 1A as the number of diesel starts since March 20, 1990.¹⁸ In that same interview (four months after the events in question), Mr. Cash testified that he made the start count on the day before the meeting between the NRC and GPC which was Sunday, April 8, 1990. Tr. 4408; Int. Exh. 41 (Cash August 14, 1990, OI interview, pgs. 4-5). At the hearing, Mr. Cash could not remember whether he made the start count on April 5, 6, or 7, 1990 (Thursday, Friday, or Saturday). Cash, Tr. 4464. Mr. Cash testified that he worked with Gloria Walker on formatting the transparencies to be used on April 9, 1990. Cash, Tr. 4529.

40. The Affidavit of Douglas Huyck, GPC Exh. II-124, shows that Mr. Cash left the secured area at 3:13 p.m., Friday, April 6, 1990. Cash testified that he went to the Administration Building which is not in the secured area. Tr. 4529, 4559.

¹⁸ Cash, Tr. 4547 and 4548. *See also* Tr. 4463 where Mr. Cash testifies that he gave Mr. Bockhold the number 23 as the number of successful starts for diesel 1B, and Tr. 4464 where he testified that he gave 27 as the number of starts for diesel 1A.

41. Ms. Ester Dixon left her office early, went to the Administration Building, and spent fifteen to thirty minutes with Ms. Gloria Walker to familiarize herself with the work to be done. Tr. 8148.¹⁹

42. The documents typed by Ms. Dixon prior to starting the alleged "Cash List," consists of eleven pages. They were typed on a Xerox Memory Writer which assigns a Base System number to each document. Int. Exh. 158. She testified that she typed fifty words per minute, normal for a good typist. Tr. 8102.

43. Assuming that Ms. Dixon took only ten minutes per page, and started at 4:15-4:30 p.m. as she states, she started typing the "Cash" list about 6:20 p.m., an hour and twenty minutes after Mr. Cash had left the Administration Building and re-entered the secured area. It is not possible to reconcile the internal and external inconsistencies of the witness' testimony and the relevant documents and to determine what actually occurred (and when it occurred) on Friday, April 6, if it was Friday.

44. The Base System documents 005 and 006 were attached to Mr. Cash's prefiled testimony as GPC Exh. II-23 and were alluded to in that testimony at page 3. Mr. Cash there stated, "I believe that my lists were the same as the type-written lists attached hereto as Exhibit B." Under cross-examination, Mr. Cash's certainty waned as

¹⁹ An Affidavit of Mr. Huyck dated July 31, 1995, shows that Ms. Dixon left the secured area at 3:50 p.m. Letter from John Lamberski. This affidavit Mr. Huyck's tracks Ms. Dixon's movements in and out of the secured area. It shows that she left at 3:50 p.m. on Friday, April 6, 1995. Mr. Huyck's Affidavit was sent to all on the Service List on August 2, 1995, in response to a request by Intervenor's Counsel (Tr. 9754). Mr. Huyck's Affidavit regarding Ms. Dixon is NOT a part of the evidentiary record in this proceeding. The Licensing Board has taken account of this fact and has appropriately weighed the information.

he was not certain that the typed lists were his and did not recall having them typed.²⁰
Tr. 4429, 4447, 4454.

45. On April 19, 1990, when questions were raised about the accuracy of his count, Mr. Cash told Messrs. Mosbaugh and Aufdenkampe that he gave Mr. Bockhold "totals" and not information on starts and stops. Tape 58, Tr. (GPC II-2 at 36). During an August 1990 OI, Intervenor Mr. Cash stated he gave Mr. Bockhold both total start numbers and a list of starts. Int. II-190 at 4-5. Mr. Bockhold testified at his OI interview in August 1990, that Cash gave him start numbers. Int. Exh. II-13, OI Exh. 12 at 8. In light of these contradictory statements, it is difficult to determine what information Mr. Cash provided to Mr. Bockhold.

46. Mr. Christopher Eckert testified that he was in Mr. Cash's office on Friday, April 6, 1990, for two to three minutes (Tr. 11,224 and 12,961) and saw a handwritten document (Tr. 11,228) that looked like a bunch of dates that a guy put down trying to find out how many starts there had been, (Tr. 11,223). He testified it looked like a list of starts. Tr. 11,223-4. Mr. Eckert testified that Mr. Cash's handwriting was messy and difficult to read. Tr. 11,225. What makes a list uniquely look like a list of starts was never explained at the hearing.

47. Mr. Eckert testified that there were no papers on Mr. Cash's desk that were distinguishable by color. Tr. 13,039. "I didn't see a yellow back sheet on Mr. Cash's desk that day." Tr. 13,040. This directly contradicts Mr. Cash's testimony

²⁰ The "Cash Lists," GPC Exh. II-23, contain starts prior to April 20, 1990, and starts that began on Friday, April 6, 1990, and a start that ended on April 7, 1990.

that he made his count from the yellow sheets (Cash, Tr. 4526) which were kept in a filing cabinet just outside his office (Cash, Tr. 4418).

48. Mr. Eckert also testified that he was in Mr. Bockhold's office for several minutes (Tr. 12,988) and recognized and read, upside down, a draft of what became GPC Exh. II-21, the Diesel Testing transparency. He could read the numbers on it.

49. Mr. Eckert was cross-examined by Intervenor's counsel for some time separated by only a distance of a few feet. When questioned later, Mr. Eckert could not even vaguely identify a single document on the table between himself and counsel for Intervenor. Tr. 12,992.

50. The Board concludes that Mr. Eckert's ability to recall and describe two documents, documents (important to GPC's position) that he saw upside down for only two to three minutes some five and a half years ago, and inability to describe, even vaguely, documents close to him that had been in his view for a about an hour, renders his testimony concerning the contents of the documents on Mr. Cash's desk and Mr. Bockhold's desk²¹ is not probative or credible.

51. The Licensing Board concludes that the testimony of Ms. Dixon and Mr. Eckerd is of little probative value. This may be attributed to the normal frailty of the human memory (five years) and the lack of objective probative evidence.

²¹ Mr. Eckert testified April 6, 1990, was an ordinary day. Tr. 13,002. Mr. Eckert can identify that certain day because it was three days prior to the presentation to the NRC, April 9, 1990. Tr. 13,003. Given this point of reference, Mr. Eckert can remember nothing that occurred three days after the April 9, 1990 meeting. Tr. 13,003. Mr. Eckert stated, "If I had something to refresh my memory, I might remember something." He did not recall that April 12, 1990, was just another day at Vogtle. (Tr. 13,003) when in fact it was the day Vogtle was authorized to restart.

52. Regardless of when the list was prepared or what if it was, there is no evidence that it was a back-up slide for the presentation which corporate and site personnel reviewed and then determined that the April 9 DG start count was wrong as Intervenor alleges. Mosbaugh at 44.²²

3. Conclusions

53. The actual events occurring on April 5 through 9, 1990, at the site and in the corporate offices in Birmingham, Alabama, in regard to compiling the number of starts of the diesel generators since March 20, 1990, are difficult to determine. It is apparent that Mr. Bockhold's failure to be specific in instructing Mr. Cash (a Senior Reactor Operator and Unit Superintendent who also collected start data for GPC's Event Critique Team) and assessing the results reported and (2) Mr. Cash's failure to take steps necessary to assure that the information he gathered was what Mr. Bockhold wanted, substantially, contributed to the confusion.

54. There is no evidence that any single GPC employee, or that two or more GPC employees conspiring together, deliberately and knowingly presented untrue or incorrect information to the NRC during the April 9, 1990 meeting or in the letter of the same date. The Licensing Board further finds that Mr. Bockhold did assign Mr. Cash to count diesel starts; that Mr. Cash did count diesel starts; that numbers 18 and 19 presented to the NRC on April 9 were not correct; and, that GPC has admitted the

²² Intervenor's question of Mr. Cash, Tr. 4428 and 4432, cast doubt that Mr. Cash composed the "Cash List," GPC Exh. II-23, Base System Number 005 and 006.

foregoing. See Mr. Hairston's letter dated August 30, 1990 (GPC Exh. II-18); Modified NOV (Staff Exh. II 51).

55. The Licensing Board is of the view that serious performance failures by GPC personnel existed in the 1990 time frame. By April 10, 1990, GPC was on notice that the NRC questioned the diesel start numbers. The Acting Assistant General Manager questioned the words "No failures or problems have occurred during any of these starts." We concur with the Staff's conclusions in the Modified NOV (Staff II-51) regarding the number of starts of the diesel generators presented to the NRC on April 9, 1990, and trust that, with careful inspection by the NRC Staff, such performance failures are a matter of the past for GPC and all of its employees and contract personnel who are connected with the operation of the Vogtle facility.

C. April 19, 1990 Licensee Event Report

56. The Site Emergency at the Vogtle site occurred on March 20, 1990, when all offsite power was lost and diesel generator 1B failed to perform its function. NRC regulations, 10 C.F.R. § 50.73(a) (1), require that the licensee submit a Licensee Event Report (LER) within thirty days after discovery of such an event. That section requires a description of the event (10 C.F.R. § 50.73(b) (1)) and a description of corrective action taken (10 C.F.R. § 50.73(b)(3)). The Report is submitted on NRC Form 366A 10 C.F.R. § 50.73(d). Thus, GPC had until April 19, 1990, to submit its LER describing the site emergency and the corrective action taken. Aufdenkampe, Tr. 4762.

57. The Vogtle Nuclear Safety and Compliance Group (NSAC) was primarily responsible for preparing the LER. This group reported to the Technical Support

Manager (Mr. Aufdenkampe), who reported to Mr. Mosbaugh. McCoy at 11. NSAC began working on LER 90-006-00 shortly after the Site Area Emergency (SAE) in March 1990. Aufdenkampe, Tr. 4762; Webb at 3.

58. April 10, 1990, Mr. Rich Kendall of the IIT asked GPC for data supporting the DG start count and GPC committed to provide the data. GPC II-31 at 5, Aufdenkampe at 4-5. Kendall does not recall whether the NRC ever received such a listing. Mr. Aufdenkampe believes that a list was prepared by Herb Beacher and provided to the IIT in May 1990. Such a list did not come to light at the hearing.

59. On April 10, 1990, Mr. Mosbaugh attended a staff meeting at Vogtle in which the April 9 letter and the pending restart decision were discussed. Mosbaugh at 32. Mr. Mosbaugh said he became concerned the GPC may have made a material false statement to the NRC because he was aware of DG failures after the SAE. Id.

60. The PRB reviewed a draft of the LER on April 12, 1990, which included the 18 and 19 start count, which Mr. Webb had taken, as instructed, from the April 9 letter. Webb at 3. The draft was revised a number of times between April 12 and April 19.

61. Mr. Aufdenkampe recalled that he, Mr. Mosbaugh and Mr. Odom had discussed that the start data was suspect. Aufdenkampe, Tr. 4753. During the drafting the number was removed and replaced by the phrase, the DGs "have been started several times and no failures or problems have occurred during any of these starts." Webb at 4; Webb Tr. 13,114.

62. The LER, as opposed to the April 9 letter (GPC Exh. II-13), did not specify a beginning date for the count, but referenced a period beginning with the completion of a "comprehensive test program." See GPC Exh. II-14.

63. Mr. Mosbaugh testified that he understood that GPC intended that the end date of the period for counting starts to be used in the LER was to be April 9, 1990, the same day as used in the April 9 letter as it repeated that start count. Tr. 5319.

64. Tom Webb originally wrote the first draft of the LER and gave it to John Aufdenkampe for comment. Webb at 3. Mr. Aufdenkampe testified that, on April 10 or 11, 1990, that he wanted the LER to include start data consistent with the April 9 letter. Tr. 4763.

65. The same diesel start language that was in the April 9 letter was incorporated in a draft LER. GPC Exh. II-171-B. That draft LER was reviewed by the Plant Review Board (PRB). Webb at 3-4.

66. On or about April 11, 1990, Mr. Mosbaugh informed Mr. Kochery that the DG start count and the statement "without problems and failures" may be inaccurate. GPC Exh. II-108 (Tape 42) Tr. at 22.

67. By April 13, 1990, numerous personnel at the site who were involved in some manner with the reporting to NRC, were concerned that the number of starts presented to the NRC on April 9 were wrong. Aufdenkampe, Tr. 4752-53.

68. Another draft LER was given to Mr. Aufdenkampe on April 13. Webb at 4; GPC Exh. II-171D. Mr. Aufdenkampe commented that the "18 and 19 starts" language in the LER might not be correct. Mr. Webb then inserted the words:

"Since 3-20-90, DG1A and DG1B have been started several times and no failures or problems have occurred during any of these starts." Webb at 4.

69. Due to the unavailability of an up-to-date start log and individual DG start completion sheets filled out by the operators under Procedure 13145, Mr. Webb and another employee reviewed the control room logs for March 20 through April 18. Webb at 6-7. Throughout the afternoon of April 19, Mr. Webb developed a listing of starts, noting problems or failures, and periodically talked to Messrs. Odom and Aufdenkampe who requested his list. Webb at 7. GPC Exh. II-71 is the list he delivered to Mr. Odom, without the information written in red and black ink. Webb at 7-8.

70. On April 18, 1990, the PRB unanimously approved the LER with the comment that the phrase "several starts" should be changed to state the number. PRB Meeting Minutes 90-59 (GPC Exh. II-28) at, 4; Aufdenkampe at 2; Webb at 5. The draft was later revised to state, "Since 3-20-90, DG 1A and DG 1B have been started more than twenty times each and no failure or problems have occurred during any of these starts." Webb at 6. These numbers were arrived at by checking the control room logs (for April 10-18), contacting Kenny Stokes, and adding those starts to the numbers stated on April 9. Webb at 5; Webb, Tr. 13211; Aufdenkampe at 2.

71. After the PRB meeting on April 18, Mr. Webb initiated a review of the diesel generator start data and on the same day concluded that 21 and 23 starts should be used in lieu of 18 and 19, respectively. Webb at 5. Mr. Webb's count added starts from April 9 through the morning of April 19. Webb at 5.

72. The PRB's April 18 instruction to use actual numbers of starts and Mr. Webb's counts²³ resulted in the eighth draft of the LER, which was sent to Messrs. Stringfellow and Bockhold who approved it. That draft contained the statement: "Since 3-20-90, DG 1A and DG 1B have been started more than twenty times each and no failures or problems have occurred during any of these starts." Webb at 5-6. Mr. Stringfellow retyped the LER and circulated it for corporate comments in Birmingham. Stringfellow, ff. Tr. 3930, at 2.

73. Upon reviewing the draft LER, Mr. Hairston asked that the "greater than 20" be verified. Hairston at 6, ff. Tr. 3531; GPC Exh. II-25. Mr. Hairston's request to verify the "greater than 20" numbers were telecopied to the site in the morning of April 19. Stringfellow at 2; Stringfellow, Tr. 4058; Aufdenkampe, Tr. 4786-87; Webb at 6.

74. Mr. Webb testified that he was directed by Mr. Odom on April 19 to verify the "greater than 20" numbers and that he and Herb Beacher reviewed control room logs from March 20 through April 18. Webb at 6.

75. The review of starts of the diesel generators by Messrs. Webb and Odom commenced about noon on April 19 and continued until quitting time around 4 p.m. when Mr. Webb completed his list. Webb at 6-7. Mr. Webb identified the list he developed as GPC Exh. II-71 without the notations in red and black ink that were added later.²⁴

²³ No Webb list of counts of starts made on April 18 has come to light at the hearing.

²⁴ Mr. Mosbaugh testified that the red and black notations were not on the document on April 19 and that he probably annotated the list in red and black ink later. Mosbaugh,
(continued...)

The document also contained a series of log dates that Mr. Webb "crossed-out" in pencil as he located the control log sheets. Webb at 8, Tr. 13,209.

76. At PRB Meeting 90-60 (GPC Exh. II-29), which was held April 19, 1990 from 1:25 to 2:45 p.m., Mr. Aufdenkampe mentioned the comment in the PRB minutes to verify, reword or delete the DG starts sentence in the LER. GPC II-1 (Tape 57 Tr.) at 15. Skip Kitchens, Assistant General Manager - Operations and PRB Chairman, suggested that it might be more appropriate to state that since March 20, there had been 18 consecutive starts of the DG, and instructed Mr. Aufdenkampe to verify the numbers or take the numbers out, or to delete the "no problems or failures" phrase. GPC II-1 at 15-16. Mr. Kitchens indicated that in 20 minutes the site could verify the 20 starts by going through the log, to make sure that GPC did not submit a false statement. *Id.* at 16. The PRB approved the LER (GPC Exh. II-29 at 2), and Mr. Mosbaugh abstained, citing his late arrival to the meeting (GPC II-1 at 17).

77. After the PRB meeting adjourned (2:45 p.m.), Messrs. Aufdenkampe, Mosbaugh, and Stringfellow (in Birmingham) discussed the draft LER. Mr. Stringfellow was informed that the "greater than 20" statement was basically a false statement. GPC Exh. II-1 at 44-45. Mr. Aufdenkampe further said that the site was thinking about taking the statement out of the LER, but that Mr. Webb was in the process of making a count using the operator's log. *Id.*

²⁴(...continued)

Tr. 5253. GPC cross-examined Mr. Mosbaugh at length regarding his failure to produce the list during discovery. (See GPC Proposed Findings, Tr. 125-127).

78. Later Mr. Shipman spoke with Mr. Mosbaugh again by telephone and asked whether they could assure Mr. Hairston that there had been more than 20 starts since March 20 as stated in the draft LER. GPC Exh. II-1 at 58. Mr. Shipman observed that the LER data was what GPC told the NRC on April 9. *Id.* 58.

79. Mr. Mosbaugh informed Mr. Shipman that there were two DG 1B trips (i.e., on March 22 at 12:43 (high lube oil temperature) and on March 23 at 17:31 (low jacket water pressure - turbine lube oil pressure)). GPC II-1 at 59-60.

80. Mr. Shipman's responded that "what we need to do is find out what is correct and make sure we only say what is correct" (*id.* at 61), noting that "if it's not a valid statement, we need to get it the heck out of here regardless of what George [Bockhold] told [Stewart] Ebnetter." *Id.* at 62. Mr. Mosbaugh indicated that the trip data was correct and committed to verify the information. *Id.* at 62-63.

1. Comprehensive Test Program

81. When Mr. McCoy asked if the numbers used in the April 9 presentation were after completion of the "comprehensive test of the control systems of each diesel," Bockhold replied, "That is correct. Those numbers were not before that time." *Id.* Mr. Stringfellow asked, "Are we going to say 'Since 3-20-90, DG1A and DG1B have been subject to a comprehensive test program?'" Mr. Bockhold replied, "Yes, you can say that." Mr. McCoy stated, "That's pretty clear."²⁵

²⁵ Mr. Mosbaugh then stated in a quiet voice, "Gotta look at those logs, friend. They ain't done it." GPC II-2 at 8. The Board could not determine whether Mr. Mosbaugh's comment were audible to others.

82. The Board views Mr. Bockhold's words as strong and clear assurance that the numbers of consecutive successful diesel starts as presented to the NRC on April 9 were correct and that they commenced after completion of the Comprehensive Test Program. See GPC II-2 at 8. He apparently saw no need to await the completion of site verification efforts and led others on the call to conclude that the numbers were not inaccurate.

83. The Board finds that the term "comprehensive test program" was ambiguous and GPC had no agreed definition for what it meant.²⁶ Mr. Shipman believed that the term was first used during a telephone call between Mr. McCoy and Kenneth Brockman of the NRC (Shipman, Tr. 10,973) and that Mr. Brockman understood the term.²⁷

84. The Board notes that even though, Jimmy Paul Cash had made a count for the April 9 letter and presentation and Mr. Webb was making a DG start count through April 18, the record does not show that the participants to the telephone call on April 19 had a copy of either list of starts. No one person on the telephone conversation, including Mr. Bockhold, indicated that they had access to either of those lists, if indeed

²⁶ Mr. Stringfellow did not know when the CTP started or ended: of what its parameters consisted; or even what the terms meant. Tr. 4069-4074 (Stringfellow). Others who did not know what the CTP was, when it started, stopped, or its contents include: Messrs. Cash, Tr. 4471; McCoy, Tr. 6995; Webb, 5696-7; 13,128, and Messrs. Hunt, Tr. 4993, and Kendall, Tr. 5036 of the NRC.

²⁷ See GPC Proposed Findings at 93-95, Tr. 9924-9939. Staff counsel cautioned that a full reading of Mr. Brockman's deposition, Int. Exh. 59, and responses to interrogatories, Int. Exh. 58, may not be as definitive as represented in the transcript pages just cited.

they existed. Mr. Aufdenkampe's comment informed all participants that the site was engaged in counting starts to see if they could verify the "more than 20" language per Mr. Hairston's comment. *See* GPC II-2 at 8.

85. The corporate office stated they would modify the LER consistent with the discussion and call the site back in about 30 minutes for them to determine whether PRB review of the revisions would be necessary. GPC Exh. II-1 at 20.

86. Mr. McCoy testified that he called Ken Brockman, NRC, on April 19 to make sure that Mr. Brockman understood that the numbers presented to the NRC on April 9 had not included problem starts. Prefiled Testimony of Ken McCoy, ff. Tr. 2839. Mr. McCoy believed he "also discussed with Mr. Brockman the reference that would be made in the LER to the comprehensive test program and confirmed that he understood what that meant." McCoy at 16.

87. "Comprehensive Test Program" (CTP), evidently, was first used in the telephone conference on April 19 by Mr. McCoy to describe the period when the LER count of consecutive starts without problems or failures began. *See* GPC Exh. II-2 at 8; GPC Exh. II-14 at 6.

88. Several GPC employees testified that Mr. Brockman, NRC, was informed of GPC's definition of the CTP. Shipman, Tr. 11,261, Shipman at 8-9; Stringfellow at 10. The import of this GPC testimony is that the NRC understood the reporting period for diesel start counts when they received the LER because Mr. Brockman understood

the term.²⁸ Therefore, the NRC could not have been misled when it read the LER. The GPC scenario is flawed.

89. The evidentiary record is clear that GPC personnel at the site on April 19, 1990 did not know the parameters of the CTP when it began or when it ended and, therefore, could not have informed the NRC of information GPC persons themselves did not know.²⁹

90. The matter of the CTP was litigated extensively. The change of wording from "Since March 20" to "Subsequent to this test program" [CTP] does indicate a different reference point from which to start counting diesel starts. GPC created ambiguity in the LER by changing the words without completely verifying the facts, or explaining the time period involved. Mr. Webb was never instructed to collect consecutive successful starts without problems or failures after the CTP. His list merely tallies the total starts he believed to have occurred since March 20 (*i.e.*, 27 and 23). In fact, had the CTP language not been inserted, his list would have shown 18 consecutive starts on DG 1B in that he did not note problem start 136.³⁰

91. GPC reliance on verbal assurances and inadequate verifications demonstrates a lack of attention to the accuracy of information for the NRC. We must

²⁸ See GPC Proposed Findings at 93-95, Tr. 9924-9939. Staff counsel cautioned that a full reading of Mr. Brockman's deposition, Int. Exh. 59, and responses to interrogatories, Int. Exh. 58, may not be as definitive as represented in the transcript pages just cited.

²⁹ See footnote 19.

³⁰ The list also omitted two DG 1B start on April 19. Cf. GPC II-71 and GPC II-15 at Attachment B, page 2.

determine whether GPC's use of the term was a part of a deliberate and intentional effort to present incorrect information to the NRC.

2. Willfulness

92. Mr. Mosbaugh alleges that a part of a conversation he taped late in the afternoon of April 19, 1990, is evidence that a number of GPC vice presidents and plant personnel engaged in a criminal conspiracy intentionally to submit false information to the NRC. He charged that they iterated intentionally those same false statements [the April 9, 1990 information] to the NRC in LER 90-006.³¹ Mosbaugh, Tr. 8411-12, 9982. The disputed tape recorded words on which Intervenor relies to support his theory occur on pages 11-14 of the Tape 58 transcript (GPC Exh. II-2).

Shipman: Let's see. What other questions do we got? We got the start thing straightened out.

Hairston: Interrupting. We got the starts -- [Intervenor's version] So we didn't have no, didn't have no trips?

Shipman: No, not, not . . .

McCoy: Let me explain. I'll testify to that.

Shipman: GPC Exh. II-2 at 11, 14 disavow. What else do we have Jack?³²

³¹ This occurred in statements that Mr. Mosbaugh gave to a Senate Subcommittee. See Tr. 8412.

³² The Staff version states:

Hairston: We got the starts -- so we didn't have no, didn't have no trips.

Shipman: No, not, not . . .

McCoy: [Inaudible] three. I'll testify to that.

(continued...)

That part of the tape recording was played several times at the hearing and the reporter was not able to make out Mr. McCoy's or Mr. Shipman's words. Tr. 3032.

Mr. Mosbaugh testified, "I remember feeling disgusted after this exchange because I knew that the top executives were going to ignore my notification of the false statements." Mosbaugh at 50.

93. The evidence, viewed most favorably to Intervenor, does not support the charge that these words demonstrate a criminal conspiracy by high officials in GPC to present false information to the NRC. The words themselves connote no sinister meaning nor does such a meaning arise out of the circumstances. Our playing of Tape 58 and reading of the transcript reveal multiple, disjointed and jumbled conversations. We do not conclude that the conversation are evidence of a criminal conspiracy or any conspiracy intentionally to provide inaccurate information to the NRC.

94. In the last recorded LER conversation between the site and corporate (Messrs. Mosbaugh, Shipman, and Aufdenkampe), the site approved the insert of the phrase, CTP in the LER. GPC Exh. II-2 at 8. Mr. Mosbaugh questions the accuracy of the count after the CTP, and suggests that it might not end until the UV test just before DGs are declared operable and is told by Mr. Aufdenkampe and Mr. Shipman Mr. Bockhold's reasons for believing the count was accurate. GPC II-58 at 22-23.

³²(...continued)

Shipman: [Inaudible] disavow. What else do we have Jack? GPC II-2 at 11, 13-14.

95. Mr. Mosbaugh joined an April 19 telephone call in-progress with Messrs. Aufdenkampe, Bockhold, McCoy, and Shipman. GPC II-2 (Tape 58 Tr.).³³ When Mr. McCoy stated that "we need to be sure that we know the number of starts after we've completed the comprehensive control test program," GPC Exh. II-2 at 8,³⁴ Mr. Aufdenkampe stated the he had people going through the reactor operator's log. GPC Exh. II-2 at 8. Mr. Bockhold quickly stated that the numbers he presented at the April 9 conference with the NRC "were verified correct by Jimmy Paul Cash who went through the operator's logs." *Id.* As the Board observed in paragraph number 97, this is strong and clear assurance by the General Plant Manager that the April 9, 1990 start count numbers are accurate.

96. Mr. Mosbaugh and Mr. Aufdenkampe begin to discuss the "Webb-Odom list" after the call with Shipman ends. *See* GPC Exh. II-2 at 34; GPC II-71. We find the Webb-Odom list clearly shows that the April 9 letter and presentation DG1B start count (18 consecutive successful starts) was in error. We find that the list failure to reference the CTP and a description of the problem associated with start 136. It is apparent that the list was not read until shortly after the telephone call with Mr. Shipman.

³³ Due to the many disputes concerning the contents of the Tape 58, we received that tape (microcassette and the FBI enhanced full-size cassette) (Board Exh. 12) as well as a transcript of the tape (GPC II-2) in evidence. *See* Tr. 2832; Tr. 15,554. We also played portions of the tape during the hearing to determine its contents.

³⁴ We agree with the Staff that use of the term failed to adequately identify when LER count of successful DG starts without problems or failures began. *See* Staff DG Panel at 5.

See Mosbaugh, Tr. 5141-5248, 5270, 5294, 5308 GPC Exh. II-2 at 34, line 16, (Mr. Mosbaugh and Mr. Aufdenkampe refer to the Webb-Odom List start count).

97. GPC questioned Mr. Mosbaugh in an attempt to show that he knew late in the afternoon that the numbers to be put in the LER 90-006 were incorrect. Mr. Mosbaugh testified, "At that point, it was impossible for me to state with certainty that the final statement was inaccurate The authors, I believe that they knew that statement was an incorrect statement and they put it in anyway . . . [I]t was a new sentence But no starting point And I didn't know how to define it." Mosbaugh, Tr. 5164. We agree that Mr. Mosbaugh could not use the information which was inaccurate based on a review of the Webb-Odom list since it erroneously had 18 consecutive DG 1B starts and contained no reference to the CTP.³⁵

98. It is disingenuous for Mr. Mosbaugh to accuse GPC officers and personnel as being guilty of criminal conduct and deliberately submitted to the NRC information which they knew to be false in the LER when he acknowledges that at that time he himself could not conclude that the number of DG starts in the LER was incorrect based on the information he had before him. The Webb-Odom list also did not convince Mr. Aufdenkampe that the LER was wrong.³⁶ There is no evidence that either Mr. Mosbaugh or Mr. Aufdenkampe informed site or corporate personnel about the

³⁵ We note that the list did not include two starts on April 19 (starts). See August 30 letter (GPC II-18) at Table 2.

³⁶ The list did not surface until December 1994 when Mr. Mosbaugh went through documents in the OI case file at NRC's Region II office during discovery. Mosbaugh, Tr. 5218-19.

Webb-Odom list after April 19 even though it clearly showed that the start count for DG1B was incorrect for the April 9 presentation.

99. The Board finds insufficient evidence that GPC's (and Mr. Mosbaugh) incomplete efforts to verify the LER start count and its submittal of erroneous information on April 19 resulted from intentional or reckless acts to deceive the NRC. The evidence shows that GPC inserted the words CTP with the intent to exclude the problem starts identified and relied on incorrect, verbal assurances that the count statement "at least 18 times each" was correct. The evidence is also clear that GPC made inadequate and inept efforts to ascertain the correct information prior to submitting the LER to the NRC.

D. June 29, 1990 Cover Letter and Revised LER

100. In the Modified NOV, the NRC found that, contrary to the requirements of 10 C.F.R. § 50.9, the LER cover letter, dated June 29, 1990, was inaccurate and incomplete in material respects as evidenced by the following examples:

The letter states that: "In accordance with 10 CFR 50.73, Georgia Power Company (GPC) hereby submits the enclosed revised report related to an event which occurred on March 20, 1990. This revision is necessary to clarify the information related to the number of successful diesel generator starts as discussed in the GPC letter dated April 9, 1990...."

1. The LER cover letter is incomplete because the submittal did not provide information regarding clarification of the April 9, 1990 letter.

The incompleteness was material in that the NRC subsequently requested GPC to make a submittal clarifying the April 9, 1990 letter.

The letter states that: "If the criteria for the completion of the test program is understood to be the first successful test in accordance with Vogtle Electric Generating Plant (VEGP) procedure 14980-1 "Diesel Generator Operability Test,"

then there were 10 successful starts of Diesel Generator 1A and 12 successful starts of Diesel Generator 1B between the completion of the test program and the end of April 19, 1990, the date the LER-424/1990-06 was submitted to the NRC. The number of successful starts included in the original LER (at least 18) included some of the starts that were part of the test program. The difference is attributed to diesel start record keeping practices and the definition of the end of the test program."

2. The last sentence in the above paragraph is inaccurate because diesel record keeping practices were not a cause of the difference in number of diesel starts reported in the April 19, 1990 LER and the June 29, 1990 letter. The difference was caused by personnel errors unrelated to any problems with the diesel generator record keeping practices.

The inaccuracy was material in that it could have led the NRC to erroneously conclude that the correct root causes for the difference in the number of diesel starts reported in the April 19, 1990 LER and the June 29, 1990 letter had been identified by GPC.

3. The last sentence in the above paragraph is also incomplete because it failed to include the fact that the root causes for the difference in the number of diesel starts reported in the April 19, 1990 LER and the June 29, 1990 letter were personnel errors. First, the Vogtle Plant General Manager who directed the Unit Superintendent to perform the start count (which formed the basis for the April 19, 1990 LER) failed to issue adequate instructions as to how to perform the count and did not adequately assess the data developed by the Unit Superintendent. In addition, the Unit Superintendent made an error in reporting his count. Second, the [Acting Assistant General Manager-Plant Support³⁷], Plant General Manager, the General Manager for Plant Support and the Technical Support Manager failed to clarify and verify the starting point for the count of successful consecutive DG starts reported in the April 19, 1990 LER.

The incompleteness was material in that, had correct root causes for the difference in the number of diesel starts reported in the April 19, 1990 LER and the June 29, 1990 letter been presented, this information could have led the NRC to seek further information.

³⁷ The NRC corrected this position designation of Mr. Bockhold with that of Mr. Mosbaugh. Letter from J. L. Milhoan, NRC, to C. K. McCoy, GPC, dated March 13, 1995.

Staff Exh. II-51 at NOV pp. 2-3.

101. Intervenor alleges that the GPC deliberately submitted false information in this submittal concerning the reasons for the error in the LER in that (1) Messrs. Hairston and McCoy knew that the information was false, (2) neither Mr. Bockhold nor Mr. Cash informed Mr. Mosbaugh that there was a listing of the April 9 start data when Mr. Mosbaugh questioned the count, (3) there were different reasons for the error stated in the various drafts of the cover letter, (4) the audit was narrow in scope and did not review all pertinent information and (5) GPC was on notice that the reason stated in the letter was false. Intervenor Findings 350-51.

102. GPC asserts that the incomplete and inaccurate statements regarding the reasons for the errors in the LER (and April 9 letter) were based on reasonable attempts to provide an explanation based on the results of the GPC audit report (GPC Findings at 140-163) and admits and accepts responsibility for the incompleteness of the letter (GPC Finding 285, 347). GPC maintains, that DG record keeping practices contributed to the reporting of erroneous counts (noting that the Staff acknowledged that those practices may have contributed to violations as events unfolded). GPC Findings 286-291.³⁸

103. The Staff viewed the performance failures as serious, but found that there was not sufficient evidence to conclude that GPC intentionally provided inaccurate or misleading information. *See* Staff DG Panel at 6-11.

³⁸ Both Mr. Hairston and Mr. McCoy acknowledge that the error in the LER and April 9 letter was also due to personnel errors. McCoy at 21; Hairston, Tr. 3685.

1. Concerns About Accuracy of LER Statements

104. On April 20, 1990, Mr. Webb was surprised by the language in the final LER in terms of the statement "subsequent to the test program" and thought the language might make the LER inaccurate because on April 19 he had identified only about 10 or 11 starts after operability of the DGs. Webb at 8-9. Mr. Mosbaugh later generated his own list of DG 1B starts using the Unit 1 Control Log, the Shift Supervisor's Log and the Diesel Start Completion Sheets. Mosbaugh Tr. 5211-12.

105. On April 27, 1990, Mr. Mosbaugh discussed the LER start statement with Mr. Aufdenkampe and indicated that he believed the statement was inaccurate and that it needed to be verified. Tape 71 Tr. (GPC Exh. II-32 (Aufdenkampe F) and Staff Exh. II-32). Mr. Mosbaugh argued that the LER count words were "weasely" because there was no stated criteria as to what was considered a problem or failure, but Aufdenkampe disagreed, admitting that the wording could have been better. GPC II-32 and Staff II-32; Aufdenkampe at 14-15.

106. On April 30, 1990, Mr. Mosbaugh showed Mr. Aufdenkampe his handwritten DG 1B start list derived from control room logs and conversations with Ken Stokes (and Mr. Aufdenkampe acknowledged that, if the information was good, the LER start count was false). Tape 75 Tr. (GPC Exh. II-34 (Aufdenkampe H) and Staff Exh. II-38) at 31.

107. On April 30, 1990, Mr. Mosbaugh informed Mr. Bockhold that he had determined that the April 9 letter and the April 19 LER were incorrect and gave him a written Memo attaching his list. Mosbaugh at 36; Int. Exh. II-29. Mr. Mosbaugh

decided that the "UV Test" was the point to begin the count for April 19 and that there were only 11 starts on DG 1B after that point. Int. Exh. II-29; Tape 90 Tr. (Staff Exh. II-14) at 8. Mr. Bockhold asked Mr. Mosbaugh to have Operations (Mr. Cash) and Engineering verify his start data and then have Technical Support change the documents. GPC Exh. II-107; Mosbaugh at 36.

108. Mr. Mosbaugh obtained a handwritten list of DG 1A starts from Mr. Stokes (Int. Exh. II-150; Staff Exh. II-12) and on May 2, 1990, informed Mr. Bockhold that the start information in the April 9 letter and LER was incorrect. Mosbaugh at 37; Tape 90 Tr. (Staff Exh. II-14) at 1-2. Mr. Bockhold instructed Mr. Mosbaugh to see that the LER was revised and indicated he would decide how to correct the April 9 start count, indicating that the correction could be included in a submittal planned for mid-May 1990. *Id.* at 23; Bockhold at 15.

109. Mr. Aufdenkampe and Mr. Mosbaugh directed Mr. Odom to correct the statements in the LER. Aufdenkampe at 15; Tape 89 Tr. (GPC Exh. II-89 (Aufdenkampe I)) at 4, 17. Mr. Webb was given the two DG start lists handwritten by Messrs. Stokes (Int. Exh. II-150; Staff Exh. II-12) and Mosbaugh (GPC Exh. II-70) and prepared a draft revision. Webb at 9. On May 8, 1990, the PRB approved a draft of a revision to the LER prepared by Mr. Webb that included the statement:

After the 3-20-90 event, the control systems of both engines were subjected to a comprehensive test program which culminated in control logic tests on 3-30 for DG1A and 3-27-90 for DG1B. Subsequent to this test program, DG1A and DG1B had been started 11 times each (through 4-19-90) and no failures or problems have occurred during any of these starts.

Webb. at 9-10; PRB Meeting 90-66, GPC Exh. II-37; Tape 98 Tr. (GPC Exh. II-36; Staff Exh. II-38). Mr. Webb was directed by Mr. Mosbaugh to clarify what is meant by the comprehensive test program so that it would be factually correct to address Mr. Frederick's comments. Aufdenkampe at 16; Webb at 10; *see* Frederick at 3-4.

110. During a May 10, 1990 PRB meeting (PRB Meeting 90-67, GPC II-39: Aufdenkampe M), Mr. Mosbaugh (as acting Chairman of the PRB) assigned Mr. Bockhold the action of determining how the April 9 letter would be corrected. Aufdenkampe at 17. Mr. Aufdenkampe believes that he was instructed to use the cover letter for the LER to correct the April 9 letter. *Id.* Mr. Bockhold, on May 24, 1990, closed the action item without correcting the April 9 letter. Mosbaugh at 38; Int. Exh. II-33.

111. On May 10, 1990, Mr. Mosbaugh was removed from the PRB and received notice that he would not be reassigned to the position he held before serving as Acting Assistant General Manager - Plant Support. Mosbaugh at 38. Mr. Greene, who had previously been attending Senior Reactor Operator training and who had "shadowed" Mr. Mosbaugh for the last week, resumed his the position as Assistant General Manager - Plant Support. Greene at 1; Greene, Tr.

112. Mr. Mosbaugh provided revised wording for the draft LER Revision (GPC Exh. II-170) and, on or about May 14, 1990, Mr. Bockhold asked that the draft be revised to include successful starts as of April 19 and May 14. Webb at 10. A draft containing the statement that the DG 1A and DG 1B had been successfully started 15 and

14 times as of May 14 was transmitted to Jack Stringfellow at the corporate office. Webb at 10; GPC Exh. II-171Q.

113. Mr. Stringfellow (corporate office) became responsible for the drafting of the revised LER on May 15, 1990 and signed off on a draft of the LER on May 31, 1990. Stringfellow, Tr. 4047-50; Int. Exh. II-77 at 4-5. He did not treat it as a high priority item. Stringfellow at 11.

114. On June 8, 1990, Mr. Aufdenkampe and Mr. Mosbaugh discussed the delay in approval of the LER revision, Mr. Stringfellow's busy schedule, and Hairston's ire that the site could not get the count right. Tape 157 Tr. (GPC II-40, Staff Exh. II-35; Int. Exh. II-63). During a phone call with the corporate office, Messrs. Mosbaugh and Aufdenkampe also shared with Messrs. Bailey and Rushton in Birmingham what little they knew about how Mr. Bockhold had developed his April 9 count and why the LER was wrong. *Id.* Aufdenkampe suggested that Mr. Rushton tell Mr. Hairston that site had "just plain old screwed up" in that the site thought it had data to support the number in the LER and the April 9 letter, but under further scrutiny, it was determined that the information was incorrect. Tape 157 Tr. (Staff Exhs. II-35 and II-35A) at 10. Mr. Aufdenkampe also remarked that "the majority of the verification was done via hearsay" due to the time constraints involved. *Id.* at 13.

115. During a June 8, 1990 call with the site, Mr. Rushton stated (1) that he believed Hairston was concerned because he had attested to the information later found to be inaccurate, and (2) that Mr. Hairston planned to explain in the cover letter to the revised LER or somewhere else why the LER was wrong and what corrective action was

taken to prevent recurrence in the future. Tape 157 Tr. (Staff Exhs. II-35 and II-35A) at 12.

116. Around May 18, 1990, Mr. Hairston became aware that the LER start counts were inaccurate. Hairston at 9. He was "irritated" by the performance of his staff since the number had twice been reported to the NRC and, on May 24, 1990, called the Regional Administrator, Stewart Ebnetter, to inform him of the error and report that the correct number was 14 and 15. Hairston at 9. Mr. Hairston also told Mr. Ebnetter that GPC planned to submit two revisions to the LER -- one to correct the DG start count and one to document the conclusions of the Wyle Laboratory test program regarding the Calcon sensors. Hairston at 9-10. Mr. Hairston further directed Mr. McCoy to inform Ken Brockman, NRC, about the count error, and the site was to inform the NRC residents. Hairston at 10. Mr. McCoy then informed Mr. Brockman that erroneous information had been provided to the NRC and that a correction would be submitted. McCoy, Tr. 3214.³⁹

117. On June 14, 1990, Mr. Hairston telephoned Mr. Ebnetter that the count had been revised and that he would send only one revised LER and would have a QA Audit completed before submitting the revision. Hairston at 12-13. He also gave instructions for GPC to contact the Region about the revised start count. Hairston at 13.

³⁹ Intervenor asserted that this testimony was erroneous as the call was too short to convey the information cited and due to an event at another facility. Intervenor Findings 339-346. We do not find these arguments sufficient to rebut Mr. Hairston's testimony regarding these calls.

118. On June 15, 1990, Mr. Aufdenkampe and Mosbaugh discussed the status of the draft LER revision and Mr. Aufdenkampe said that he had told the NRC resident inspectors about the error, told them that the correct numbers depended on when you start counting, and told them that the latest count was 16 and 11. Aufdenkampe at 18.

119. In seven drafts of the revised LER, the start number continued to be updated by GPC and, ultimately, the standard practice of reporting DG failures in terms of valid tests and failures pursuant to Reg. Guide 1.108 was adopted instead of referring to starts without problems or failures. Webb at 9-13; GPC Exhs. II-171L through 171T. The count of valid test and failures extended through June 7, 1990. GPC Exh. II-171T. It was also standard practice for an LER to update information previous provided to the NRC. Webb, Tr. 13137.

120. One of the last drafts of the cover letter to the revised LER stated that the revised LER was being submitted "to correct information related to the number of successful Diesel Generator starts subsequent to the comprehensive test program as discussed in the LER and the April 9 letter." GPC Exh. II-171T.

121. After Mr. Brockman and Ebnetter received calls that the DG start information was incorrect, the NRC met to discuss whether the erroneous count was cause to reconsider the restart decision. Reyes, Tr. 15319-20, 15330-31, 15332. Mr. Reyes recalled having the opinion that eight starts would have been sufficient. Tr. 15336-37. Mr. Reyes believed that GPC's testing, corrective actions and confirmatory testing after the event provided assurance that problems with the DGs during the SAE had been resolved. Reyes, Tr. 15322-23.

1. Quality Assurance Audit

122. On June 8, 1990, Mr. Hairston saw a draft of the LER with the cover letter that that forwarded the LER without providing an explanation as to why the data was different. Hairston at 11. Mr. Hairston spoke to the Safety Audit and Engineering Review (SAER) representative at the site because the corporate supervisor was not available and directed that a QA Audit be performed to find out the right start count and why GPC couldn't get the number straight. Hairston at 12; Hairston, Tr. 3631.

123. Around June 8, 1990, Mr. Frederick was instructed by Mr. Ajluni to conduct an audit to determine an accurate number for the count that was included in the LER. Frederick at 4. Mr. Norman Mosley was the lead auditor and reviewed DG Completion Sheets, the Shift Supervisor's Log which is kept in the control room. Frederick at 5. The Audit began on June 11 and was completed June 29. Frederick at 5; QA Audit Report, GPC Exh. II-15 (McCoy M). Completion of the audit was delayed because of difficulty in locating the pertinent records (the set in the vault were not complete and up-to-date) and some records, the DG Completion Sheets, which are routed through the plant mail system, were not all located until the end of the audit. Frederick at 5-6.

124. The QA auditors also found it difficult to determine what the term "comprehensive test program" (CTP) meant as no one knew the definition or gave a specific definition. Frederick at 6. The audit defined the CTP as being completed with the completion of the operability run pursuant to Vogtle surveillance procedure No.

14980, reasoning that the test program ended once the machine was declared operable. Frederick at 6-7.

125. The QA Audit was narrow in scope and did not identify a specific cause for the LER error. GPC Exh. II-15 at 4; Frederick at 10. The QA audit reviewed DG Test Data Sheets, the Shift Supervisor's Log, and Diesel Generator Start Log to verify the number of DG starts, but failed to look at all of the information that was available on site in April 1990 - i.e., the Unit 1 Control Log where start information was also recorded. GPC Exh. II-15.⁴⁰ The audit did not identify a specific cause for the April 19 count errors, but inferred that the LER error was due to the failure to specify a starting point for the count and the lack of up-to-date DG recordkeeping practices. GPC Exh. II-15 at 4. The audit also noted that there apparently was some confusion about the specific point at which the test program was completed. *Id.* The DG Start Log, compiled from completion sheets filled out by operation personnel and reviewed by the DG Engineer, Mr. Stokes, was not up-to-date on April 19. Frederick at 7. There were delays in the routing of the Completion Sheets from the operators to the Engineering Support Department (headed by Mr. Horton) and operators had not filled out a sheet every time the DG was started. Frederick at 7.

126. On June 29, 1990, the draft cover letter for the LER revision was being reviewed at the site. The draft had originated in GPC corporate headquarters and

⁴⁰ The audit was insufficient in scope, as it did not examine the performance of the Mr. Bockhold and Mr. Cash in collecting the initial data. Thus, it did not identify their inadequate performance as the causes for the erroneous information reported on April 9 and in the April 19 LER.

included language personally developed by the Senior Vice President - Nuclear Operations and the Vice President - Vogtle Project. During the site review, Mr. Mosbaugh noted that the letter was incomplete and challenged the accuracy of the reasons stated in the draft cover letter in conversations with Mr. Frederick (Supervisor - SAER), Mr. Greene (Assistant General Manager - Plant Support), Mr. Horton (Manager - Engineering Support), and Mr. Majors (Licensing Engineer - Vogtle Project). Tape 187 Tr. (GPC Exh. II-44; Greene B; Int. Exh. II-32; Staff Exh. II-18).

127. During polling of PRB members before the June 29 PRB review of the letter, Mr. Mosbaugh stated that: (1) the letter failed to clarify the DG starts reported on April 9, (2) DG record keeping practices were not a cause of the difference in the DG starts reported in the April 19 LER because adequate information was available when the counting errors were made, and (3) the erroneous counts resulted from personnel errors in developing the count. Tape 187 Tr. (Staff II-18) at 2-28. Messrs. Majors, Fredericks and Horton heard these assertions, but as the Board finds below, failed to adequately resolve these concerns. *Id.*

128. On June 29, 1990, Mr. Hairston, Mr. McCoy (and possibly William Shipman and Mark Ajluni) sat down with the audit tables and using the definition of the comprehensive test program, counted the starts on the tables to ensure that the correspondence was correct. Hairston at 14. Mr. Hairston also instructed that the QA Audit be provided to the Resident Inspector at Vogtle and that an explanation of the differences in the count numbers between the LER and the revised LER be explained in the transmittal letter to the revised LER. Hairston at 14-15.

129. Various GPC witnesses testified that they believed that the lack of availability of a DG Start Log, which would be a single source document setting forth the DG start history and include the start completion sheets would have made it easier and allowed site personnel to be more questioning of the April 9 data. Aufdenkampe at 19-20; McCoy at 19-21. As one witness stated, "The lack of the Diesel Start Log may not have been the cause of the error, but it would have been the cure for it." Aufdenkampe at 19-20. Mr. Aufdenkampe relied on Mr. Bockhold's statement and the data collected to approve the LER. Aufdenkampe at 20.

130. Mr. Majors, a corporate licensing engineer who worked for Jim Bailey, Vogtle Project Licensing Manager, was given the task of completing the LER revision (in lieu of Mr. Stringfellow) and was instructed to assure that the DG start counts were consistent with the QA Audit results. Majors at 1; *see* Mosbaugh at 56.

131. The QA auditor's belief that the control room logs were not accurate or complete convinced Mr. Frederick that the documentation made it "very difficult" to get an accurate count of starts. Frederick at 8. Frederick was aware that Mr. Cash had prepared the information for the Bockhold presentation, and had assumed that a separate count had not been made for the LER. Frederick at 8. Frederick testified that he did not contact Cash during the audit to avoid biasing the results that the audit report assumptions about DG recordkeeping were reasonable, and that Mr. Mosbaugh did not fully explain the basis for his concerns about the June 29 letters. Frederick at 9-12.

132. When the revised LER was submitted, GPC viewed the correction of the April 19 LER was sufficient to clarify the April 9 count as they did not realize that the

numbers for, and interval of, the counts were different. Majors at 6-8; Hairston at 17-18. Some also viewed the count of valid starts through June 7 as clarifying the previous "successful start counts in the April 9 letter and April 19 LER because it used defined terms (Reg. Guide 1.108 terminology). Majors at 6-8; Hairston at 17-18. The Board finds that this reliance on a different types of starts for a different interval highlights GPC's failure to adequately investigate the basis for the information originally conveyed on April 9 and to determine why errors were made.

133. Mr. Frederick admitted that the starts with problems and/or failures (Starts 132, 134 and 136) were all recorded in the Unit 1 Control Log (Staff Exhs. II-23 and II-24), but wasn't sure that the problems associated with each start were recorded there. Frederick, Tr. 4232.⁴¹ Mr. Frederick learned during an August 1990 Operational Safety Team Inspection by the NRC, that the April 9 count included tests before the operability test was conducted. Frederick at 7. He also acknowledged that the listing in the DG Start Log (updated by Mr. Stokes on May 2, 1990) (Staff Exh. II-22) did not record the problem during DG 1B start 136 and had recorded it a successful start. Frederick, Tr. 4230.

134. The Unit 1 Control Log should contain the start time, stop time and any significant status changes for each DG start. See Staff Exh. II-31 at 2. Mr. Horton was able to get an accurate count of successful starts through April 19 using the August 30

⁴¹ Counsel for GPC stipulated that a skilled persons could determine from the Unit 1 Control Log that DG 1B starts 132, 134 and 136 were problems starts. Blake, Tr. 4232. GPC also stipulated that the four DG 1B starts missing from the control log (Starts 128-131) were before the problem starts. Blake, Tr. 4235; see Frederick, Tr. 4232.

letter definition and the Unit 2 Control Log. Horton, Tr. 6098. GPC maintained, however, that the delays in updating the DG start log (or the lack of a single source document) as another cause of the errors. Greene, Tr. 6908-09. Mr. Greene admitted that the updated DG start log would not have prevented the April 9 error since the problem starts (132, 134, and 136) had been logged as by the DG engineer, Kenny Stokes, as successful starts (failing to indicate the problem that occurred on Start 136, was not consistent with GPC's later determination that all starts were unsuccessful as stated in the August 30 letter (GPC Exh. II-18, at Table 2). Greene, Tr. 6879-80.

135. The term "successful start" is not defined in Reg. Guide 1.108 in that the document describes valid successful test and failures. Horton, Tr. 5960-62; Cash, Tr. 4521-24; *see* Staff Exn. 34 at 2. GPC acknowledged, however, that a count of successful starts without problems or failures was dependent on having a definition for what constituted a successful start and the point at which to begin the count. Greene, Tr. 6875-76; Horton, Tr. 5920-22; *see* 5975-99, 5962. GPC witnesses testified that they did not know the causes of the April 9 or JER errors, but they believed that DG record keeping was a reasonable explanation when they reviewed the June 29 cover letter. *E.g.*, Greene, Tr. 6913; McCoy at 19-21; Hairston at 16-17.

136. The Board finds that while DG record keeping practices (i.e., delays in routing start completion sheets, failure of operators to complete sheets and the lack of an up-to-date DG Start Log (with starts numbered) would have made that information easier to retrieve, it is clear that previous erroneous start counts were caused by the performance failures of Messrs. Bockhold and Cash in initially collecting and reporting

the data (particularly with respect to the ambiguity in the term "successful start" and the period for the count). GPC did not define "successful start" in the audit and did not agree on a definition until the August 30 letter. *See* Hairston, Tr. 3756. Board finds no evidence that Messrs. Hairston and McCoy were specifically aware of this cause of the errors as there was no evidence that Mr. Mosbaugh's reasons for believing the letter was inaccurate were ever communicated to them.

137. While the Board would not expect these senior managers to be intimately familiar with site activities, we expect them to manage others such that adequate care and attention is given to NRC communications. We also expect that when they do become personally involved and have information made available to them (i.e., the audit table showing the April 9 start count was wrong) that they will take steps necessary to assure that inaccurate information is promptly corrected. It was also unreasonable for them to rely on the QA audit assumptions for the reasons of the errors as GPC made no effort to contact the individuals who initially collected and reported the data to determine what went wrong and, consequently the audit failed to consider all of the information available (the Unit 1 control Log) when the April 9 count was made.

138. On the other hand, Messrs. Horton, Frederick, Greene, and Majors were specifically notified about Mr. Mosbaugh's concerns regarding the accuracy and completeness of the letter, but failed to resolve them. Mr. Frederick unreasonably relied on his narrow scope audit and discounted concerns raised by Mr. Mosbaugh. *See* Tape 187 Tr. (Staff II-18). Mr. Horton became less assertive in objecting to record keeping statement once he became aware of Mr. Hairston's personal involvement in drafting the

language in the letter. *Id.* at 1-8. Mr. Majors and Mr. Greene too quickly dismissed the concern that the letter was incomplete in that it did not "clarify" the April 9 count, and Mr. Greene, faced with a unit down, adopted the corporate view rather than resolving the concerns of an individual who had expended considerable effort in researching the issue and personally involved in the development of the LER (even if Mr. Mosbaugh was slow to offer solutions to correcting the letter). *See id.* at 2-28.

139. Mr. Majors was to work closely with the site to ensure that the submittal was accurate and complete, but failed to address the site comment that the draft cover letter to address the April 9, and that the reasons for the errors was not accurate. He asserts that DG record keeping was a reasonable statement based on the audit and he did not view the letter as addressing April 9 information. Majors at 6-8.

140. Mr. Horton was responsible for the Diesel Start Logs and agreed with the audit report findings regarding deficiencies in their condition. Given that his logs had not been used to collect the DG start data, he pointed out that it was wrong to state that the condition of his logs caused errors in the information initially provided to the NRC. Tape 187 Tr. (Staff II-18) at 2-5. Mr. Horton indicated that Mr. Hairston knew more than he did about whether DG record keeping practices were the cause of the difference in the DG starts reported in the LER and the June 29 cover letter, approved the erroneous draft as a voting member of the Plant Review Board (PRB) without resolving the problems identified in the draft. *See id.* at 2-7. Mr. Horton explained he believed the letter to be accurate, but resisted accepting Mr. Frederick's statement because he was defensive about negative statements about his department. *See Horton* at 7. Mr. Horton

accepted responsibility as a PRB member for the inaccuracy in the June 29 cover letter (Tr. 5897) and admitted that he had not adequately addressed Mr. Mosbaugh's concerns (Tr. 5942).

141. Mr. Frederick was (1) aware that the audit (that formed the basis for the reasons stated in the June 29 letter) was narrow in scope and did not identify a specific cause for the error in the number of 18 starts reported in the LER, (2) aware of the concern that record keeping had not caused the errors, and (3) had been told by Mr. Mosbaugh on June 12, 1990, that to identify the root cause of the error in the LER (i.e., personnel errors), the audit scope would need to include an assessment of the performance of Mr. Cash and Mr. Bockhold, the individuals that developed the initial count. See Tape 187 Tr. (Staff Exh. II-18); Tape 160 Tr. (Staff Exh. II-16). The audit report did not include either of these individuals in the list of persons contacted during the QA audit. See GPC Exh. II-15. Despite this knowledge, Mr. Frederick failed to adequately address these concerns prior to issuance of the June 29, 1990 letter.

142. Under cross-examination, Mr. Frederick stated that he still believes record keeping was one of the major "problems" for the April 9 errors, but recognized that the personnel errors of Mr. Cash in making his count and Mr. Bockhold in instructing him also contributed to the error. Tr. 4270.⁴² He stated that he was not aware of these reasons on June 29. *Id.* He was not aware of Mr. Hairston's instruction

⁴² Mr. Frederick was confident that Mr. Cash, a licensed Senior Reactor Operator, could get an accurate count of consecutive successful starts without problems or failures through April 9 if properly instructed and the Shift Supervisor's Log and the Unit 1 Control Log were accurate. Tr. 4280.

that the audit also determine why mistakes were made and explained that root cause determinations (*e.g.*, inadequate training, inadequate procedures) are usually left to management after an audit determines the conditions that exist. Frederick, Tr. 4270-71, 4274.

143. The Board finds that (1) GPC was clearly aware, as early as May 2, that the April 9 letter and April 19 LER were incorrect and (2) GPC failed to take sufficient actions to correct the April 9 letter and to determine the reasons for the errors it contained. While GPC undertook efforts to correct the LER, it narrowly focused on that submittal. The QA audit was limited in scope to and did not review the Unit 1 control log DG records and to correct the LER. Also, while GPC referred to both the April 9 letter and the LER in the June 29 cover letter, it attempted to explain only the reasons for the error in the LER. Even though Messrs. Hairston and McCoy were directly involved in the development of the June 29 letter, they missed the opportunity to discover the error in the April 9 letter and to determine the cause for the error in that they relied on Mr. Bockhold's erroneous assumption that the count information in the LER and the April 9 letter was the same.

144. The Board finds that Mr. Bockhold, Mr. McCoy and Mr. Hairston also failed in their review of the document to ensure that information provided to the NRC in the June 29 cover letter was complete due to their failure to "clarify" the April 9 letter and to provide a relevant discussion of the start count. GPC's repeated use of the word "clarify" apparently made it difficult for these managers and their subordinates to realize that a count through April 9 and a count through April 19 (evening assuming that both

counts were after the CTP) would be different. GPC's apparent reluctance to admit its mistake and to simply state "correct" the April 9 count, GPC's inadequate investigation of why errors were made, and Mr. Bockhold's inability to recognize his own performance failures, contributed to GPC's failure to correct the April 9 information. In addition, the apparent reluctance of PRB members to question information developed at the corporate office (unless they had direct information to the contrary) further impaired GPC's ability to provide accurate and complete information.

145. The actions of Messrs. Frederick, Greene, Majors, and Horton can be characterized as "careless disregard" since Mr. Mosbaugh's told them of his concerns and they did not resolve the. Their performance failures, however, appear to have resulted from their subjective views of Mr. Mosbaugh's concerns. *See, e.g.*, Frederick at 11; Horton at 5-6; Majors at 4-8; Greene at 6-8. While we don't expect perfection, the Board does not condone this "blame shifting" as each GPC employee had a responsibility to ensure information is accurate and complete, regardless of their views about the source of the concerns. Had they taken more time to address the matters raised and to verify whether Mr. Mosbaugh was correct in his belief that a correction of the April 9 letter and more direct reasons for GPC performance failures, the correction submitted to the NRC might have occurred months earlier.

146. The Board finds no evidence, however, that Mr. Hairston and Mr. McCoy knew that the record keeping statement was false or incomplete or that the failure to address concerns about accuracy and completeness were the result of deliberate efforts to conceal information from the NRC. We draw no negative inferences from the

various reasons appearing in drafts of the revised LER, the failure to disclose the Cash list or the scope of the audit. Each of these demonstrate ways in which GPC root cause determinations were inadequate.

E. August 30, 1990 Letter

147. In the Modified NOV, the NRC cited GPC for two instances in which inaccurate and incomplete information was provided in the August 30, 1990 letter:

The letter states that: "The confusion in the April 9th letter and the original LER appear to be the result of two factors. First, there was confusion in the distinction between a successful start and a valid test... Second, an error was made by the individual who performed the count of DG starts for the NRC April 9th letter."

1. These statements are inaccurate in that confusion between a successful start and a valid test was not a cause of the error regarding DG start counts which GPC made in its April 9, 1990 letter to the NRC.

The inaccuracy was material in that it could have led the NRC to erroneously conclude that the correct root causes for the error in the April 9, 1990 letter had been identified by GPC.

2. The statements are also incomplete. While an error was made by the Unit Superintendent who performed the count of diesel starts for the April 9, 1990 letter, the root causes of the error in that letter were not completely identified by GPC. Specifically, the Vogtle Plant General Manager who directed the Unit Superintendent to perform the start count failed to issue adequate instructions as to how to perform the count and did not adequately assess the data developed by the Unit Superintendent. In addition, the Unit Superintendent did not adequately report his count to the Vogtle Plant General Manager.

The incompleteness was material in that, had the correct root causes for the error in the April 9, 1990 letter regarding DG start counts been reported, this information could have led the NRC to seek further information.

148. Intervenor contends that GPC deliberately (or with careless disregard) provided inaccurate or incomplete information in the August 30, 1990 letter in an effort to "cover up" problems in developing the April 9 letter, in particular the (1) "top down" drafting of the letter (2) contradictory public statements by Mr. McCoy, and (3) the steering of the August 30, 1990 PRB meeting that approved the letter. Mosbaugh at 59-60; Mosbaugh, Tr. 10394-95; Intervenor Findings at 213-220.

149. GPC contends that the letter inaccuracies in the letter did not result from wrongdoing on the part of any GPC employee, and acknowledges that Mr. Bockhold should have taken greater care with respect to the letter and allowed greater involvement by his Staff. GPC contends that any misstatements or omissions were unintentional. See GPC Findings 398-400.

150. The NRC Staff did not find evidence to conclude that GPC deliberately provided inaccurate and incomplete information in the letter, but found that Mr. Bockhold's actions and inactions as a senior manager contributed to the perpetuation and escalation of errors and omissions, and used his stature to render the performance of others ineffective. Staff II-51 (cover letter) at 2-3; Staff Exh. II-49 (DFI regarding Bockhold) at 9-10.

1. "Top Down" Drafting of August 30 Letter

151. During the Operational Safety Team Inspection conducted, August 6-17, 1990, to examine the technical validity and safety significance of the allegations submitted to the NRC, *see* Int. Exh. II-83, the NRC informed GPC that the June 29, 1990 submittal

failed to address the April 9, 1990 data and requested that GPC clarify DG starts reported on April 9, 1990.

152. As of August 17, 1990, Mr. McCoy was aware of NRC concerns regarding the errors in, and the misleading nature of, the April 9 letter. Tape 258 Tr. (Staff Exh. II-17) at 1. Mr. McCoy committed during the August 17 meeting with the NRC special inspection team to provide clarification to the NRC regarding the April 9 letter. Based on the evidence of Licensee discussions subsequent to this meeting with the NRC, Mr. McCoy was aware of the seriousness of the NRC concerns regarding the possible errors in the April 9 letter, including concerns that the errors in the information provided to the NRC may have been intentional. Tape 258 Tr. (Staff Exh. II-19) at 1. The evidence also shows that GPC understood that the NRC was looking for an explanation for the error. *Id.*; Greene, Tr. 6860.⁴³

153. Despite this knowledge, no root cause evaluation was initiated. Rather, GPC forwarded a submittal regarding the April 9 letter on August 30 that was drafted at corporate headquarters under the direction of Mr. McCoy without an assessment of the actions of Mr. Bockhold (General Manager) and Mr. Cash who developed the erroneous information for the April 9 letter. As a result, no adequate evaluation of the root causes of the error in the April 9 letter was available to GPC at the time of the August 30 submittal.

⁴³ Mr. Greene stated that the purpose of determining a root cause is to prevent recurrence of a problem. Green, Tr. 6861-62.

154. The Board finds that Mr. McCoy failed to exercise sufficient oversight of the preparation of the August 30 letter to assure that serious NRC concerns were accurately addressed. The August 30 letter was inaccurate and incomplete with respect to the root causes for the error in the April 9 letter.

155. The Board finds no evidence to suggest that the initiation of a draft at corporate was an effort to conceal information from the NRC. Site approval was sought as evidenced by Intervenor's tapes. *See e.g.*, Tape 258 Tr. (Staff II-19). Thus, those who were most knowledgeable about the information and the causes of the error were involved in approving the correspondence. The performance of Mr. Bockhold during the meeting, however, is of concern.

2. Steering of PRB Meeting

156. The August 30 letter was the first time that GPC defined what they meant by successful start to the NRC and an attempt to be responsive to concerns received from the NRC. *See* Horton, Tr. 6137.; *see* Frederick, Tr. 4283.

157. During the August 30, 1990 PRB meeting, Mr. Bockhold changed the word "error" to "confusion" in the phrase explaining the reason for errors in the April 9 letter and April 19 LER to state that it was caused by "the *confusion* between the distinction between a successful start and a valid test." Tape 184 Tr. (Staff Exh. II-19) at 1-3 (emphasis added). When Mr. Aufdenkampe questioned whether Mr. Cash (the individual who originally collected the April 9 DG start data) was confused in the distinction between a successful start and a valid test, Mr. Bockhold admitted that Mr. Cash was not confused about the distinction when he collected the data that were used

to prepare the April 9 letter, but Mr. Bockhold stated that the sentence was not in error because other people were confused, citing confusion subsequent to the count. *Id.* at 6-8.

158. Mr. Bockhold also made several comments indicating that he wanted unanimous approval and discouraged some PRB members from suggested revised wording for the letter. Staff Exh. II-19 at 3, 9-11. Mr. Aufdenkampe testified that Mr. Bockhold was "forceful" and at times "overbearing." Tr. 5776. Mr. Aufdenkampe did not have a present recollection of the meeting, and stated that he was not aware of anyone being confused about the difference between a successful start and a valid test. Tr. 5769-70.⁴⁴ The QA audit report also shows that there were only two valid test (as defined by Reg. Guide 1.108) on the diesel during this period. GPC Exh. II-15 at Attachment B; McCoy, Tr. 3279-80.

159. The Board finds that confusion after April 9 was not relevant to the reasons for the error in the April 9 letter. By urging this wording, Mr. Bockhold did not create an environment where the PRB members who were reviewing the draft letter could adequately resolve the concern that had been raised about the accuracy of the "confusion" statement. His actions also failed to recognize the role he played in the reporting of erroneous information. Mr. Bockhold's precipitancy in addressing comments on the

⁴⁴ Intervenor would have us find that Mr. Aufdenkampe believed that Mr. Bockhold's conduct at August 30 PRB meeting almost led Mr. Aufdenkampe to call a point of order because Mr. Bockhold was making it difficult for the PRB to advise him. Intervenor Finding 388 *citing* Tr. 4840, 4843. These pages do not support his position in that Mr. Aufdenkampe indicated it may have been a May 8 meeting regarding revising the LER and he had no present recollection of the August 30.

letter, while not totally irrational, leave the Board with the impression that comments would not be tolerated unless something was "totally incorrect."⁴⁵

160. We find that the inaccuracy was material in that it could have led the NRC to erroneously conclude that the correct root causes for the error in the April 9 letter had been identified by GPC. It is also evidence that GPC had difficulties fostering an environment where employees could question superiors and have their concerns addressed with respect to the accuracy and completeness of communications with NRC.

3. Inaccurate Public Statements by Mr. McCoy

161. Intervenor asserts that because Mr. McCoy's press release (Int. Exh. II-67A) statement gave a different reason for the LER start count errors (*i.e.*, employees did not use all of the available data and use operator logs only) than he did in the August 30 letter (*i.e.*, "confusion" between a successful start and a valid test and a personnel error by the individual who performed the count) without referencing the previous public statement, the Board should infer that GPC lacked the willingness to seek the truth. Mosbaugh at 60; Intervenor Findings at 399-400.

162. The mere fact that a GPC officer stated more than one reason why GPC had submitted erroneous information provides no basis for the Board to determine that GPC attempt to avoid truthfulness. The press release has scattered quotes from Mr. McCoy and it is difficult to determine whether any statements have been taken out of context. Further, Intervenor provides no cite to testimony to bolster his views.

⁴⁵ It is interesting to note that Mr. Mosbaugh did not make any comments during the meeting. We draw no negative inferences regarding Mr. Mosbaugh's silence.

Consequently, we do not reach any conclusions from a document that was not presented to the NRC and that may contain statements taken out of context.⁴⁶

F. OSI White Papers, Response to § 2.206, and SSPI Data

1. White Papers to Inspection Team

163. Intervenor asserts that, during the OSI Inspection conducted in August 1990 (*see* Int. Exh. II-83, GPC intentionally provided false information (1) by excluding Messrs. Hairston and McCoy from the listed participants in the April 19 phone call that added the words "subsequent to the test program," (2) by stating that all revisions of the LER were reviewed by the PRB and (3) by indicating that Mr. Cash and Bockhold sat together in Bockhold's office to work on the DG testing slide, (4) by omitting Mr. Burr from the list of individuals who wrote the April 9 letter. Intervenor Findings 357-76.

164. GPC contends that no negative inference should be drawn from any inaccuracies in the White Papers as they resulted from honest attempts to respond to questions posed by the NRC. GPC Findings 403-415.

165. The OSI team was onsite in August 1990 to address concerns about GPC's operating philosophy and allegations about inaccurate information being supplied to the NRC, and included personnel from OI. McCoy at 22-23. Messrs. Mosbaugh, Bockhold and Cash were interviewed during the inspection and GPC also responded to questions posed by the NRC in various "White Papers." *See* GPC Exh. II-126; Int. Exhs. II-131 and Int. Exh. II-95.

⁴⁶ In light of the apparent reference to the 10 C.F.R. § 2.206 petition filed in September 1990, the press release apparently post-dates the August 30 letter.

166. The Board finds no evidence to support that the inaccuracies in the documents resulted from deliberate efforts to mislead the NRC and conceal the participation of senior GPC officials. As evidenced by the discussion on Tape 253 Tr. (GPC Exh. II-122; Int. II-148) the recollections of various GPC employees were cloudy as to who participated in decision making and who prepared documents. GPC employees freely stated their opinions as to who participated in various decisions and there was nothing to put GPC on notice that the information to be submitted was inaccurate. In addition, the statements are frequently couched in terms of GPC's belief. Thus, we do not find any indication that the mistakes were intentional.

2. Statements in Response to § 2.206 Petition

167. Intervenor also contends that GPC intentionally tried to conceal Mr. Hairston's participation in the April 19 call regarding the LER when he signed GPC's response to the § 2.206 petition and later clarifications.

168. The Board has reviewed the evidence and concludes that there is insufficient evidence to persuade us that Intervenor is correct in his belief that GPC intentionally provided inaccurate information. There is no evidence that Mr. McDonald was specifically aware of Mr. Hairston's participation on the April 19 call and our review of Tape 58 (GPC Exh. II-2) shows that he joined the call after the wording regarding the comprehensive test program was added and did not part in "Call B" when the Messrs. Aufdenkampe and Mosbaugh finalized the LER language. See Tape 58 Tr. (GPC Exh. (II-2); Staff Exh. II-45 (VCG Report)). We cannot find sufficient evidence to draw negative inferences about the failure to identify various participants on the calls

as our proceeding has shown us that GPC made numerous mistakes in providing information on the DG issue, but performance failures, not deception, appears to be the likely cause.

3. SSPI Data

169. Intervenor asserts that GPC's failure to give the NRC and the IIT 1990 Safety System Performance Indicator (SSPI) data is evidence of a pattern of willfulness by GPC. Intervenor Findings 44-73; Mosbaugh at 99-104. GPC contends that the circumstances surrounding the data did not exclude relevant and material information concerning the Vogtle DGs. GPC Findings at 191-198.

170. In a conversation taped by Mr. Mosbaugh on or about April 2, 1990, Mr. Bockhold discussed with Mr. Mosbaugh a document containing SSPI data for Vogtle DGs and indicated the data was intended to be given to the IIT and Mr. Brockman of the NRC. Mosbaugh at 101; Int. Exh. II-89. That the IIT received the data is evidenced by its subsequent appearance among the package of documents collected by the IIT after the SAE, see IIT Document No. 143 (Int. Exh. II-89).

171. Intervenor alleges that a draft of GPC's April 9, 1990, letter that contained the SSPI data was telecopied to GPC and the NRC. Cf. Int. Exhs. II-65 and II-91. This draft appears not to have been telecopied to the NRC in advance of the meeting of April 9 inasmuch as the records of the NRC Staff reflect that four pages indicated on telecopy cover sheets to have been transmitted to Messrs. Brockman and Matthews on April 5 and 6, 1990, did not contain the data. See Blake, Tr. 3287. Based on his conversation on April 4, 1990, with Mr. Gus Williams that Mr. Mosbaugh tape

recorded, Mr. Mosbaugh contends that the SSPI data for 1990 was not given to NRC because it looked really bad. Mosbaugh, Tr. 10369; Int. Exhs. II-94, II-94A, and II-94B.

172. The fact that the data was not included in the final version of the April 9 letter is not significant. The SSPI data given to the IIT addressed the years 1978, 1988, and 1989. The data did not address any portion of 1990. Int. Exhs. 89 and 91. The record shows that the NRC asked GPC to address the reliability of the DGs as part of the April 9 presentation.

173. It is clear to the Board that the NRC's interest associated with restart was to understand the basis for GPC's position that the DGs were operable and that GPC's corrective actions had been effective. Moreover, the NRC was not seeking a numerical value of reliability, either historically or current, as part of its restart decision.

174. Plant Technical Specifications recognize DG reliability by means of a requirement that increases the frequency of DG testing if a specified number of failures occur during the last 20 or 100 valid tests. Technical Specifications also require special reporting of diesel generator test results. The requirements of the Technical Specification are totally unrelated to SSPI data, which is an industry data point used to represent the time that a given unit, on average, is unavailable.

175. SSPI data for individual DGs are calculated by dividing the unavailable hours (planned, unplanned and estimated) by the total number of hours the DG is required to be operational during the SSPI assessment period. GPC II-140. Such data basically constitute an expression of the length of time the DG was unavailable and would

appear to have little or no value with respect to DG operability and the effectiveness of corrective actions to allow restart.

176. The Board finds no evidence on which to conclude that the data should have been included in the April 9 letter and finds Mr. Bockhold's decision not to include the data for the first few months of 1990 was not unreasonable. Intervenor has made no showing that the information was necessary for a decision on whether the short term corrective actions were sufficient to provide reasonable assurance to permit restart. It is clear, however, that the information was made available to the NRC. Consequently, we draw no negative inferences from GPC's decision not to include industry data in April 9, 1990 letter.

G. Statements Concerning Air Quality

1. Background

a. DG Starting Air System⁴⁷

177. There are two emergency diesel generators ("DGs") for each unit at Vogtle. An air supply is needed both to start the diesel engine and to operate the engine controls. See Intervenor Exh. II-10. This air is supplied to each diesel engine by an independent, redundant starting air system. Board Exh. II-4, Vogtle SER section 9.5.6, at 9-68.

178. Each starting air system consists of two separate, full-capacity starting air subsystems having sufficient air capacity to provide a minimum of five consecutive cold-engine starts. Each starting air subsystem has an air compressor, after cooler,

⁴⁷ This description is largely the same as that given in GPC Findings at 200-01.

refrigerant air dryer, air receiver, intake air filters, starting valves, air distributors, instrumentation, controls, alarms, and the associated piping to connect the equipment. Alarms annunciate on the local control panel in the diesel building and in the Unit's main control room to enable operators to monitor the DG starting air system. *Id.*

179. The control air is supplied by the starting air system from a point downstream from the air receivers. Control air is used by the pneumatic logic components and sensors to control and protect the diesel engine. The control air passes through a five micron filter and then through a pressure regulator that maintains control air pressure at 60 psig. *See* Int. Exh. II-10 (NUREG-1410 diagram).

180. The air dryer at Vogtle is a refrigerant-type dryer. Located upstream of the air receiver, the dryer removes water vapor from the compressed air before the air reaches the receiver. The air dryer is designed to run continuously, *i.e.*, it does not cycle on and off with the air compressor. Board Exh. II-3 (FSAR section 9.5.6) at 9.5.6-4; Board Exh. II-4 at 9-68.

181. Compressed ambient air, saturated with water vapor, enters the dryer. The air is pre-cooled by the outgoing refrigerated air by an air-to-air heat exchanger. The pre-cooled air then enters the air-to-refrigerant heat exchanger (*i.e.*, the refrigeration evaporator) where it is cooled by the dryer's refrigeration system. As the air cools, water vapor condenses into liquid droplets which are separated out of the air stream by a moisture separator, and is automatically discharged by a draintrap. Board Exh. II-3 at 9.5.6-4.

182. The air receivers for each diesel engine are maintained at operating pressure by the compressors. The compressors start when air receiver pressure drops to 225 psig and stop when pressure is increased to 250 psig. Board Exh. II-3 at 9.5.6-3.

183. The temperature range of acceptable dew points at Vogtle is 32-50F. See Int. Exh. II-78, at 5-10. The dew point is measured at the air receiver by attaching the dew point testing equipment at a pressure gauge fitting on the air receiver. The results of all the dew point measurements made at Plant Vogtle on the diesel generator air system are documented in the maintenance work orders (MWO's). The MWO's are used to perform the Preventive Maintenance (PM) checks of the diesel air dew points. See Mosbaugh at 69-70; Int. Exh. II-169.

b. Prior Staff Actions

184. The VCG initially concluded in February 1994 that GPC failed to provide complete information regarding control of DG air quality (*i.e.*, dew points) in the April 9, 1990 letter to the NRC by only stating that initial reports of high dew points were attributed to faulty instrumentation. The VCG found that the letter failed to state that high dew points for Vogtle Unit 1 were also attributable to system air dryers occasionally being out of service for extended periods and to system repressurization following maintenance. Staff DG Panel at 7. On May 9, 1994, the NRC issued the NOV to GPC, which included a Violation B on air quality. Staff Exh. II-46, at 3-4.

185. After reviewing GPC's response to the NOV, the VCG on November 4, 1994, concluded that as of April 9, 1990, GPC had an adequate technical basis to support a finding that air quality was acceptable, and that dew point information of a historical

nature, *i.e.*, from before the SAE, was not necessary for the April 12, 1990 restart decision. Staff Exh. II-50, at 5-6; *see also* Staff DG Panel at 9. In the Modified NOV, dated February 13, 1995, the NRC withdrew Violation B. Staff Exh. II-51, Appendix at 2-3.

2. Accuracy and Completeness of April 9 Letter

186. The April 9, 1990, letter stated with respect to air quality:

GPC has reviewed air quality of the D/G air system including dew point control and has concluded that air quality is satisfactory. Initial reports of higher than expected dew points were later attributed to faulty instrumentation. This was confirmed by internal inspection of one air receiver on April 6, 1990, the periodic replacement of the control air filters last done in March, 1990 which showed no indication of corrosion and daily air receiver blowdowns with no significant water discharge.

GPC Exh. II-13 at 3.

187. The letter was apparently revised by Messrs. McCoy and Bailey on the plane ride back to their offices from the April 9 oral presentation in Atlanta. *See* GPC Exh. II-122 (Tape 253 Tr.) at 6-7, 10. Mr. Bockhold reviewed the letter's air quality language for accuracy prior to submittal of the letter to the NRC, but did not know who drafted the language. Bockhold, Tr. 6668-69, 6672, 6700-01.

188. The letter conveyed GPC's judgment that as of April 9, 1990, the diesel control air quality relative to moisture or humidity was satisfactory. *See* Supplemental Testimony of George Bockhold On Air Quality Statements, ff Tr. 6397, ("Bockhold AQ") at 5. This statement addressed the current status of the diesel control air quality; it was not intended to describe all past maintenance issues. *Id.* The statement "initial

reports of higher than expected dew points" was not meant to refer to any dew point readings taken after March 29, 1990. *Id.*; Bockhold, Tr. 6582.⁴⁸

189. The remainder of the April 9 statement was intended to say that GPC's conclusion that air quality was satisfactory was supported by the April 6 air receiver inspection and the daily air receiver blowdowns, which did not indicate a high humidity environment in the starting air system. *See* GPC Exh. II-55A (Tape 41 Tr.), at 2; *see also* Bockhold AQ, at 5-6.

190. Intervenor asserts that the air quality statement in the April 9 letter is materially false and misleading, and that the circumstances surrounding the insertion of this language demonstrates willfulness in that high dew points were not due to "faulty instrumentation." Intervenor Findings, at 285. The Intervenor further states that the letter does not set forth a sound technical basis to conclude that air quality was satisfactory. The results of the April 6, 1990 inspection of the air receiver, the inspection of air filters, and the daily air receiver blowdowns did not support a conclusion that air quality was satisfactory. Intervenor Findings, at 306-09.

191. At the hearing, Mr. Matthews of the NRC Staff stated that based on testimony during the course of the hearing the Staff panel concluded that the air quality portion of GPC's April 9 letter was incomplete in that it did not reference the fact that

⁴⁸ The Tape 41 transcript (GPC Exh. II-55A), at 2, contains a statement by Mr. Bockhold on April 11, 1990, regarding the April 9 letter. His statement is unclear as it references a work order dated either March 29, 30, or 31 associated with "instruments." Mr. Mosbaugh testified that this statement of Mr. Bockhold's referred to the March 29, 1990 high dew point readings on the EDG 1A receivers, but that GPC elsewhere claimed it could refer to other dew point readings in April 1990. *See* Mosbaugh at 73.

the I&C technicians were not familiar with the use of the VP-1114 instrument, and initially misused it, in taking dew point measurements in early April 1990. Matthews, Tr. 14,756-57. Mr. Matthews also stated that the April 9 letter's reference to "initial reports" should be read as including all high dew point measurements taken in April 1990, prior to April 9. *Id.* at 15,111.

a. Air Quality Satisfactory

192. The Board finds that as to the statement in GPC's April 9, 1990 letter that air quality was satisfactory, the relevant inquiry is whether GPC knew about water in the diesel air system when the letter was sent to the NRC.

i. Lack of evidence of water or corrosion

193. The diesel vendor representatives, Messrs. Sheldon OwYoung and Robert Johnston, were present during the March-April 1990 disassembly of most of the diesel sensing lines. Rebuttal Testimony of Sheldon OwYoung and Robert Johnston On Air Quality Statements, ff. Tr. 12,428, ("OwYoung-Johnston"), at 5. During this time they performed the diesel logic functional testing, including the disconnection of all of the protective trip lines within the engine control panel. OwYoung, Johnston, Tr. 12,471.

194. Messrs. OwYoung and Johnston did not recall observing or hearing about any water or moisture problems in the diesel starting or control air in March-April 1990. OwYoung-Johnston at 4-5. They had no doubt they would have heard about water being drained from trip lines had that happened. OwYoung, Johnston, Tr. 12,758-59.

195. If any water had ever formed in the pneumatic control air system, Mr. OwYoung would expect to see water in the bowl of the control air filter in the diesel engine control panel.⁴⁹ He has never seen any evidence of water in that filter at Vogtle, including his inspection of the control air filter made during the March 1990 outage, prior to March 13. OwYoung-Johnston at 5-6; *see also* OwYoung, Johnston, Tr. 12,495-502.

196. Mr. Stokes testified that had corrosion been a problem in the diesel air start system in 1990, there would have been degradation due to corrosion or corrosion products. Such degradation would have been obvious during the inspection and testing of the diesels. GPC did not find evidence of corrosion during the inspection and testing of the diesels following the SAE. Testimony of Kenneth Stokes On Air Quality Statements, ff Tr. 6962, ("Stokes"), at 4.

197. Mr. Stokes testified about the removal and replacement of the logic board subsequent to the 1B diesel start on March 24, 1990 (Start 136). There was no indication that the logic board had any problem associated with water or moisture. Stokes, Tr. 7704.

198. Mr. Stokes stated that the control air filter, depicted in GPC Exh. II-87, was removed and replaced by the vendor every 18 months. He testified that he received reports from the vendor on what was found in these inspections and that the vendor did not find anything unusual. He would have expected to be told if water or corrosion indications had been found in the filter. Stokes, Tr. 7685-86.

⁴⁹ A review of the filter bowl specifications indicates that it is designed to trap water in the bottom of the bowl where a baffle creates a "quiet zone" to prevent air turbulence from re-entraining separated liquid into the air stream. GPC Exh. II-87 at 2.

199. Mr. Stokes' initial testimony about his interactions with the Vogtle I&C technicians left the Board with the impression that if water or water-induced corrosion products were discovered in the diesel air system, this would not necessarily be reported to Mr. Stokes. Stokes, Tr. 7427; *see also* Tr. 7635-36.

200. Mr. Stokes later testified that "I just believe that they would report that," an apparent reference to both a corrosion problem and water. Stokes, Tr. 7428. In response to further Board questioning the next day on the same topic, the following exchange with Mr. Stokes took place:

Q: Okay, during the discussion, I guess, I asked something to the effect, "Well, if they wouldn't report particles do you have any basis for believing that they'd report water?"

A: Yes, I think I recall that.

Q: And at that point, put that way, I think you said, "I really have no basis." Do you have anything to say to clarify that answer?

A: Well, I -- I don't know if I said I have no . . .

Q: That's my memory of it. If you -- if it means something else, just say what the truth is. I mean, that's what's important.

A: Yeah. I believe -- I believe what I -- at least I thought I said or -- was that I believed that they would have reported water or corrosion because that's -- to me, I mean, that's -- that's something they're familiar, and I believe this is the way I stated it. I may be wrong. But they're used to working with air systems in -- in general, and they've been working with diesel air systems, and they do dew point checks on the system, they do -- they assist sometimes the vendor in -- in, you know, his -- his works with the static -- I mean, with the logic control test. You know, I would just -- and this is obviously speculation, but I would just expect that if they saw water or -- or some -- some corrosion products

inside of a sensor that they would let me know. Now, whether they've gone inside the sensor or not I don't know. That's another question.

Stokes, Tr. 7710-11 (emphasis added).

201. In May 1994, the Staff investigated whether water had been in the diesel control air system in 1990. The Staff reviewed Vogtle maintenance documentation, specifically the work orders associated with the troubleshooting activity in 1990, and did not identify evidence of water in the pneumatic lines. Staff Exh. II-5 at 1, 6-7. While the Staff's review of dew point documentation identified numerous examples of out-of-specification dew points in 1990, the Staff found no evidence of actual water formation in the diesel control air system lines. GPC's feed and bleed corrective actions to reduce the high dew points were appropriate, and the Staff concluded that there was no evidence showing the existence of water in the pneumatic control and protection system lines in 1990. *Id.* at 8; *see also* Testimony of Edward B. Tomlinson and Pierce H. Skinner On Air Quality, ff Tr. 14497, ("Staff AQ"), at 10-11.

202. The Staff further determined in May 1994 that if water was inside the control modules and pneumatic lines, there would be corrosion or other indications caused by the water contamination. Review of Vogtle documentation did not identify corrosion or other indications of water having been present in these components in 1990. Staff Exh. II-5 at 7; *see also* Staff AQ, at 10-11.

203. The Board finds that Mr. Mosbaugh failed to rebut the evidence summarized above, and failed to produce evidence showing that GPC knew (or even

should have known) about water in the diesel air system when the April 9, 1990 letter was sent to the NRC.

ii. The jar of water in Mr. Kochery's office

204. The main support of the allegation that there was water in the diesel air system prior to April 9, 1990, is Mr. Mosbaugh's memory of walking into Mr. Kochery's office on March 30, 1990, and seeing a jar containing about 8 ounces of yellowish fluid. Mosbaugh at 93-94.⁵⁰ Messrs. Chenault, Stokes, Kochery, and Burr were in Mr. Kochery's office. *Id.* Mr. Mosbaugh asked about the fluid and states he was told it came from the diesel pneumatic tubing known as the air system "trip lines", which had been disassembled the night of March 29 to fix air leaks. Mr. Mosbaugh stated he was told that the fluid had poured out of the lines. *Id.*

205. Evidence regarding the alleged incident on March 30, 1990 is the portion of Tape 24 transcribed on Intervenor Exhs. II-84, II-84B, II-85, and GPC Exh. II-91. The transcripts make reference to leaks, but no reference to a jar, water or fluid. The transcripts are thus consistent with the report that air leaks in six pneumatic lines of the diesel air system were discovered on March 29, 1990 during functional testing of the pneumatic logic. *See* NUREG-1410, Appendix J (GPC Exh. II-167), at J-10 to J-12.⁵¹

⁵⁰ If Mr. Mosbaugh's recollection were accurate, and GPC withheld this information from the NRC, the Board would have serious doubts as to GPC's character and integrity. The Board notes that this allegation is not discussed in the Intervenor Findings. Due to its potential importance, the Board finds it necessary to briefly evaluate Mr. Mosbaugh's testimony on this matter.

⁵¹ Transcripts of meetings at which Mr. Mosbaugh was present, held on and shortly after March 30, 1990, contain no evidence of discussions about water in the trip lines.
(continued...)

206. Given the time and context in which the footnoted discussions took place, the Board finds it unlikely that Mr. Mosbaugh would have remained silent had he known about water in the diesel trip lines. Mr. Mosbaugh stated that it was not until he listened to Tape 24 in 1994 that he remembered the March 30, 1990 meeting in Mr. Kochery's office. Mosbaugh, Tr. 10456-57. Regarding the April 11, 1990 discussion, Mr. Mosbaugh was unable to adequately explain why he did not mention the alleged jar of water at that time, testifying that "it seems as if I forgot about it. And I don't understand that." Mosbaugh, Tr. 10329-30; *see also id.*, at 10456-57.

207. The Board also finds it significant that Mr. Mosbaugh is the only person at the March 30, 1990 meeting in Mr. Kochery's office who believes that water was found in the diesel control air trip lines on March 29, 1990. Messrs. Chenault and Stokes

⁵¹(...continued)

See Int. Exh. 19A, Tape 25 Tr., at 1-3 (Messrs. Mosbaugh and Bockhold on March 30 discuss air quality, and air leakage in the diesel trip lines); *GPC Exh. II-66, April 2 IIT Tr.*, at 2, 54-60 (discussion among Messrs. Burr, Kochery, Chaffee, and Kendall referring to air leaks having been fixed in the diesel pneumatic lines); *Int. Exh. 110A, Tape 34 Tr.*, at 2 (April 4 discussion among Messrs. McCoy, Burr, Kochery, and Bockhold, in which Mr. Mosbaugh suggested doing an air blow to check for debris in the lines); *GPC Exh. II-178, April 5 IIT Tr.*, at 17, 27, 31 (Mr. Chaffee mentioned moisture in the Catawba diesel system in discussion with Messrs. Burr, Mosbaugh, Kochery and Bockhold); and revised *Staff Exh. II-15, Tape 41 Tr.*, at 13-14 (April 11 discussion among Messrs. Bockhold, Kochery, Stokes and others, in which Mr. Bockhold recognized that water-induced corrosion and rust in the diesel lines would be a big problem).

listened to the pertinent segment of Tape 24 and disputed Mr. Mosbaugh's version of the March 30, 1990 conversation.⁵²

208. The Board finds there is no evidence that a jar of fluid was drained from the trip lines on March 29, 1990, and that no such fluid was discussed during the March 30, 1990 meeting in Mr. Kochery's office.⁵³

iii. The April 6, 1990 air receiver inspection

209. In furtherance of his allegation that GPC knew there were significant amounts of water in the DG air system, but falsely reported to the NRC on April 9, 1990 that air quality was satisfactory, Mr. Mosbaugh pointed to the corrosion seen during the April 1990 inspection of an air receiver. See Mosbaugh at 82-83.

210. One DG 1A air receiver tank (K02) was inspected by GPC and NRC Staff representatives on April 6, 1990. See Affidavit of Milton D. Hunt, dated March 1, 1995,

⁵² Mr. Stokes testified that the leakage being discussed on Tape 24 was air leakage that was discovered the previous night, March 29, 1990. Tr. 7552-53 (Stokes). He did not hear anything about a jar of water. He stated that the tape was very garbled and he did not hear Mr. Burr say "poured out," but thinks Mr. Burr may have said "for the outage" or "before the outage." *Id.* at 7568-70. Mr. Chenault listened to Tape 24 and also concluded that he and Messrs. Burr and Mosbaugh were talking about air leakage from the diesel trip lines. Rebuttal Testimony of William H. Chenault On Air Quality Statements, at 3-4 (ff Tr. 14020) ("Chenault Rebuttal"); see also Tr. 14076 (Chenault). Mr. Chenault stated that during discussions years later, neither Mr. Burr, Mr. Stokes, nor himself could remember finding any water in March 1990. *Id.* at 14071-73.

⁵³ It is plausible that Mr. Mosbaugh has confused in his mind the memory of the jar of fluid with other events at Vogtle. On August 8, 1995, during cross examination of Mr. Mosbaugh, GPC introduced into evidence two deficiency cards, 1-90-0087 and 1-90-307 (GPC Exh. II-141 and 142, respectively), which documented two separate incidents in which leaks were found in the 1A diesel intercooler on March 10, 1990 and in the 1A diesel combustion air cylinder on July 24, 1990, respectively.

ff Tr. 4882, ("Hunt Aff."), at 5; Stokes at 2-3; Rebuttal Testimony of Harvey Handfinger, ff Tr. 11,346, ("Handfinger"), at 2; Handfinger, Tr. 11,450-56. The metal was clearly visible inside the receiver. Handfinger, Tr. 11,483. No loose rust particles were observed in the tank during the inspection. *Id.* at 11,455. No water droplets were on the walls of the tank, *Id.*, and Mr. Handfinger saw no moisture at all during his inspection of the tank. *Id.* at 11,37^A.

211. NRC inspector Hunt recalled that there were rust spots on the welds inside the tank but that was normal and to be expected. Hunt Aff. at 5. Mr. Hunt recalled there was possibly a light oil film inside the tank but that was not unusual or of concern in Mr. Hunt's opinion.⁵⁴ *Id.*

212. Mr. Shipman took notes on April 11, 1990 (GPC Exh. II-147), which indicate, among other things, that he was aware that minor "flash" corrosion or rust was observed on the weld seams of the air receiver tank. He testified that this was to be expected because the tank is carbon steel and the welded joints quickly form a thin "rust" or corrosion film immediately after welding. Rebuttal Testimony of William B. Shipman, at 14 (ff Tr. 10,890) ("Shipman Rebuttal"); *see also* Tr. 10,921 (Shipman).

213. On April 11, 1990, Mr. Bockhold read to a group of Vogtle engineers the air quality statement from the April 9, 1990 letter (GPC Exh. II-13), and stated his belief that the statement was valid. *See* Staff Exh. II-15, at 1-2, 6 (Tape 41 transcript).

⁵⁴ Mr. Hunt also inspected all of the control system air filters with each one appearing to be in a "like new" condition. Hunt Aff. at 6. *See also* Tr. 4930 (Hunt). Upon the completion of these inspections, Mr. Hunt concluded that there was no air quality problem that would cause the diesels not to start. *Id.*

Mr. Mosbaugh did not appear to take issue with the letter's statement, except to note that GPC's generic letter response and FSAR require that dew points be kept below 50 degrees. *Id.* at 5. Mr. Kochery appeared to agree with Mr. Bockhold that diesel air quality is satisfactory because the air receiver was good. *Id.* at 6-7. Mr. Stokes agrees with Mr. Bockhold "based on what we've seen on the filter and everything else no corrosion," even though the 50 degree dew point requirement is not always met. *Id.* at 7.

214. Later in the same discussion, Mr. Mosbaugh acknowledged that no corrosion problem had been detected during the receiver inspection. *Id.* at 13.⁵⁵

215. The Board finds that there was no significant corrosion in the air receiver inspected on April 6, and that the inspection results supported GPC's statement in the April 9 letter that air quality was satisfactory.

216. Based on the evidence set forth above in Section G.2(a), the Board finds that the statement in GPC's April 9, 1990 letter that air quality was satisfactory was accurate. GPC reasonably concluded that the high dew point readings taken between March 29, 1990 and April 8, 1990 were not evidence of water in the diesel air system in sufficient amounts to make air quality unsatisfactory. The Board rejects Mr. Mosbaugh's allegation that a significant amount of water, *i.e.*, the alleged jar of fluid in Mr. Kochery's office, was drained from the DG starting air system on March 29,

⁵⁵ The tape 41 transcript does not contain any explicit references to the "April 6" air receiver inspection, but the Board infers this is what is being referred to in the taped discussion, which took place only five days after that inspection. Moreover, there is no evidence of any other air receiver inspections performed in April 1990.

1990. The April 6, 1990 inspection showed no significant corrosion in the air receiver. There is insufficient evidence to conclude that water-induced corrosion was a problem in the Vogtle diesel systems in 1990.

b. April 9 Letter's High Dew Point Statement Incomplete

217. The Board finds that GPC's April 9, 1990 letter to the NRC, specifically the statement "Initial reports of higher than expected dew points were later attributed to faulty instrumentation," is incomplete.⁵⁶ As background for this finding, we set forth the following chronology.

i. Dew point chronology

218. There were out-of-specification dew point readings taken on DG 1A on March 9, 1990. GPC believes that the readings of 61 F for receiver K01 and 66 F for receiver K02 were actual high readings. Prefiled Testimony of Lewis A. Ward On Air Quality Statements, ff Tr. 7740 ("Ward AQ"), at 3.⁵⁷ The DG 1A air receivers had been depressurized and opened to the atmosphere. Ward, Tr. 7878-80.

219. After the overhaul maintenance, the air receivers must be recharged, which may require multiple "bleed and feed" cycles until the dew point is brought back within the acceptable range. GPC Exh. II-62 indicates that the dew point readings were within

⁵⁶ The Intervenor asserted that Georgia Power provided incomplete air quality information to the NRC in its April 9, 1990 letter. The Board agrees, but for reasons which differ from Mr. Mosbaugh's allegations. Cf. Mosbaugh at 72-82, with paragraphs xx-xx, *infra*.

⁵⁷ Mr. Ward attributed the high readings to an actual high humidity condition as a result of DG 1A, including its air start system, being out of service and disassembled from March 1 to March 13, 1990 for overhaul maintenance and testing. *Id.* at 4.

specification on March 12, 1990. The diesel generator was declared operable on March 13, 1990. Ward AQ at 4.

220. On March 28, 1990, air quality, including the possibility of small debris or moisture in the diesel air system, was discussed at a meeting with the Staff's IIT. Mr. Bockhold stated that GPC would find out what the last recorded dew point was for the 1A diesel, and that GPC would take another dew point reading. Both the IIT and Georgia Power were attempting to identify the cause of the 1A diesel spurious trips on March 20, 1990. *See* GPC Exh. II-49 (IIT transcript), at 95-96; *see also* Bockhold AQ, at 1. Mr. Bockhold also stated to the IIT that GPC would "run a battery of tests on the air system for the diesel." *See* GPC Exh. U-49 at 97.

221. GPC I&C technicians performed the monthly preventative maintenance dew point check for DG 1A on March 29, 1990. *See* GPC Exh. II-155, at 1. The readings recorded were out-of-specification high at 80F and 60F. *Id.* The MWO reflects that on March 29, 1990, Mr. Stokes was aware of the high reading. *Id.*

222. Mr. Stokes had no memory of this specific high reading, and could not state when this high reading was reported to others. Stokes, Tr. 7004-06. Mr. Stokes stated that normally, high dew point readings would be communicated by operations personnel to management in morning meetings, but that he generally did not attend meetings of this type. *Id.* at 7006-08.

223. Mark Briney, the acting I&C superintendent during March-April 1990, reviewed MWO 1-90-01513 (GPC Exh. II-155), and testified that the I&C technician who took the March 29 high dew point readings on the 1A diesel initiated a deficiency card.

See Rebuttal Testimony of Mark Briney On Diesel Generator Reporting Statements, ff Tr. 12,075 ("Briney"), at 5. Mr. Briney testified that the I&C technician was told by the Operations Shift Supervisor to handle the matter with a MWO instead.⁵⁸ As a result, MWO 19001651 (Int. Exh. II-143) was initiated on March 30, 1990. See Briney at 5.

224. Mr. Briney further stated that he could not recall exactly when the March 29 high dew point readings were brought to the attention of Mr. Bockhold. All he could recall in this regard is that at some point after March 29 he was directed by someone to take dew point readings on all of the diesels. Briney, Tr. 12,158-60. The evidence establishes that dew point readings were not taken on the Unit 2 diesels until the early morning hours of April 7, 1990. The direction to take dew point readings on all of the diesels probably came from Mr. Bockhold, because Mr. Briney recalled receiving numerous calls from Mr. Bockhold on dew point issues. Briney, Tr. 12,162-63.

225. On April 3, 1990, Georgia Power representatives participated in a telephone conference with IIT and Region II personnel. Mr. Bockhold stated that the air quality was satisfactory, but dew point readings are not mentioned by anyone. See GPC Exh. II-50 (IIT transcript), at 59-60; see also Bockhold AQ, at 2.

⁵⁸ The Shift Supervisor's instructions appear to be consistent with the Vogtle Deficiency Control procedure (Board Exh. II-6). The procedure was revised November 3, 1989, and does not require a deficiency card when an equipment malfunction or failure is to be corrected with an MWO. This is because the MWO sufficiently documents the condition for evaluation and trending purposes. *Id.* at e 4.2.1; see also Briney, Tr. 12128-30. Earlier in the hearing Mr. Bockhold testified that a deficiency card was not required because the air dryers are not safety-related equipment. Bockhold, Tr. 6466. It is not clear whether Mr. Bockhold knew when he testified about the November 1989 change in procedure. *Id.* at 6469-70.

226. Mr. Bockhold testified at the hearing that on April 3, 1990 he did not yet know about the March 29 high reading. He stated that he may have been assuming the dew points were good since he had not heard anything to the contrary. He was focused during the April 3 IIT discussion on the clean condition of the air filters. Mr. Bockhold admitted that some of his responses to the IIT that day may, in retrospect, have been misleading. Bockhold, Tr. 6460-63, 6507-08.

227. NRC Region II inspector Milt Hunt reviewed prior MWOs on the diesels and discovered the March 29, 1990 high dew point readings on the 1A diesel air receivers. *See* Hunt Aff. at 5.⁵⁹

228. Mr. Bockhold first learned about the March 29 high readings as the result of Mr. Hunt or another NRC representative having brought those readings to the Vogtle plant management's attention. Bockhold, Tr. 6566.

229. On April 5, 1990, GPC initiated a blow down on the DG 1A air receivers to check for the presence of moisture, a feed-and-bleed cycling of the DG 1A air receivers to lower the dew point, and a check of all the diesel control system air filters for the presence of moisture. *See* Briney at 5-6; GPC Exh. II-156. Dew point readings

⁵⁹ The MWO Mr. Hunt found which had the high dew point reading was 1-90-01513. *See* GPC Exh. II-155; *see also* Briney at 5. Exactly when Mr. Hunt discovered the unsatisfactory dew point reading for EDG 1A is not known.

of 84 and 82 degrees were obtained on the 1B DG.⁶⁰ See GPC Exh. II-156, at 1; Int. Exh. II-169, at 3.

230. It is not clear when GPC began to bleed and feed the DG 1A receivers. It appears that activity was underway by at least 6:45 p.m. on April 5, see Int. Exh. II-80 at 3, and continued throughout the night. Int. Exh. II-217 at 1.

231. Beginning at 6 p.m. on April 5, running until 3:30 p.m. on April 6, a series of high dew point readings on DG 1A were obtained using the Alnor VP-2466 dew point instrument. See Int. Exh. II-143 at continuation sheets 1-3; Int. Exh. II-169 at 2.

232. At about 10:15 a.m. on April 6, 1990,⁶¹ the IIT leader, Mr. Chaffee, asked Mr. Bockhold "about this dew point situation." See GPC Exh. II-51 (IIT transcript) at 1, 4. Mr. Bockhold informed the IIT of the March 29, 1990 high dew point reading for the 1A diesel, and explained that on the afternoon of April 5 he had first learned about it. *Id.* at 4.⁶² Mr. Bockhold told the IIT that he thought the dew point sensor instrument was bad,⁶³ that there was only one onsite, and another one was being

⁶⁰ The April 5 high dew point measurements on DG 1B led to a deficiency card, initiated at 2:00 a.m. on April 6, 1990. Int. Exh. II-79 at 6. The Unit 1 shift supervisor accepted the DC and assigned it a DC tracking number, 1-90-186. *Id.*; see also Briney at 10.

⁶¹ At this point, the April 6 inspection of the air receiver apparently had not yet taken place, since Mr. Bockhold does not refer to it. Int. Exh. II-207, the relevant MWO dated April 6, 1990, does not show when on April 6 the inspection was done.

⁶² The Intervenor contends that Mr. Bockhold was made aware of the March 29 high readings on or about March 29. See Intervenor's proposed finding 533. The evidence does not support such a finding. See Findings xx-xx, *supra*.

⁶³ Mr. Bockhold stated at the hearing that Mr. Briney first told him about the Alnor VP-2466 being defective on either April 4 or 5, 1990. Bockhold, Tr. 6505-06.

obtained. *Id.* at 5. Mr. Bockhold referenced a bad test result on the B diesel, informed the IIT about plans to test one of Unit 2's diesels, and reiterated his belief that the dew point instrument was bad. *Id.* at 6. Mr. Bockhold stated that GPC was "going to find another instrument, so we can do this test with a different instrument and see what that tells us." *Id.* He added that the instrument to be obtained might not be exactly like the one onsite, but "we'll get something that's equivalent." *Id.* at 7. Mr. Chaffee stated in response that the replacement dew point instrument should be properly calibrated and pedigreed. *Id.* at 7-8.

233. The Board finds that Mr. Bockhold's reference in the above discussion to a bad test result on the B diesel was to the April 5 readings of 84 and 82 degrees taken on the DG 1B diesel. *See* Int. Exh. II-169, at 3.

234. On the afternoon of April 6, following the series of high readings on DG 1A, GPC shifted into a troubleshooting mode to determine whether there was an actual high dew point condition or faulty instrumentation. Briney, Tr. 12,081. As part of this effort, Mr. Briney decided to use the back-up EG&G dew point instrument (VP-1114) to verify the accuracy of the Alnor VP-2466 readings. *Id.* at 12,081-82.

235. The vendor's instruction manual for the VP-1114 could not be located and the I&C technicians taking the measurements lacked training on the VP-1114.⁶⁴ *Id.* at 12,082-83; *see also* Hammond, Tr. 12,784.

⁶⁴ Intervenor established at the hearing that the EG&G Model 911 instrument had been used by I&C technicians on one occasion in March 1989. *See* Tr. 12216-17 (MWO 18900822 reflects dew point readings taken by I&C technician using an EG&G instrument).

236. Georgia Power first used the VP-1114 instrument at 5 p.m. on April 6, when I&C technician Thames obtained a 75 degree reading on the DG 1A. *See* Int. Exh. II-143, at continuation sheet 3; *see also* Int. Exh. II-169, at 2. The I&C Outage Log for April 6 reveals that Georgia Power was to receive an additional dew point instrument from General Electric at 5:30 p.m. that afternoon. *See* Int. Exh. II-217 at 2.

237. At 4:25 a.m. on Saturday, April 7, 1990, Georgia Power took dew point measurements for Unit 1 and Unit 2 diesel generator air receivers. *See* Int. Exh. II-217, at 3. All of the readings were taken by the same I&C technician who used three different instruments: (1) the Alnor VP-2466, (2) the EG&G VP-1114, and (3) the G.E. rental Alnor Model 7000 instrument which by then had been received. The VP-2466 and VP-1114 readings were out-of-specification high while the G.E. rental instrument readings were low. *Id.*; *see also* Int. Exh. II-169.

238. The list of readings in Intervenor Exh. II-217, at 3, appears to be the basis for the dew point readings on GPC Exh. II-52 (Bockhold F). This is Mr. Briney's handwritten list of high dew point readings taken on all of the diesels, which Mr. Briney gave to Mr. Bockhold. Bockhold, Tr. 6522-23. The list is headed "D/G starting Air Dewpoints taken 4/6/90." This heading is incorrect in that the readings were actually taken early in the morning (4:25 a.m.) of April 7. *See* Int. Exh. II-217, at 3.⁶⁵

⁶⁵ The correct date of April 7 is also reflected in the MWO continuation sheets, which show that the dew point readings were taken pursuant to the following MWOs: for DG 1A, *see* MWO 19001651 (Int. Exh. II-143); for DG 1B, *see* MWO 19001770 (GPC Exh. II-156); for DG 2A, *see* MWO 29000964 (Int. Exh. II-146); and for DG 2B, *see* MWO 29001021 (GPC Exh. II-157).

239. Mr. Briney could not draw any definitive conclusions from the dew point results obtained on April 6-7. Mr. Briney and his I&C technicians taking the measurements were convinced that eight independent air systems could not suddenly, without explanation, fail to provide satisfactory air to the receivers. Briney at 7-8; *see also* Bockhold, Tr. 6554-55.

240. Mr. Bockhold testified that the dew point issue was one of high visibility once the problem was brought to his attention on about April 5, after it had become a concern of the NRC. At this time, Mr. Bockhold was giving daily reports to corporate headquarters in Birmingham, Alabama about the plant's status, including any information on high dew points that he gave to the IIT. Bockhold, Tr. 6633-35.

241. The calibration due date for the Alnor VP-2466 had been extended one month on March 8, 1990, so that this extension expired on April 7, 1990. *See* GPC Exh. II-159; *see also* Briney at 13.

242. Mr. Hunt left Vogtle about noon on Saturday, April 7, 1990. Hunt, Tr. 4935. Prior to leaving, Mr. Hunt recalled seeing a hand-written list of dew point measurements which was similar to Mr. Briney's hand-written list (GPC Exh. II-52) of high dew point measurements. Hunt Aff. at 5; Hunt, Tr. 4924-25, 4935. Mr. Hunt testified that he spoke to Mr. Bockhold about the high dew point readings before Mr. Hunt left Vogtle. *Id.* at 4924-25, 4930-31. Mr. Hunt was aware of GPC's position that the high readings were due either to faulty dew point equipment or operator error. *Id.* at 4933-36.

243. Mr. Bockhold recalled giving a list of high dew point measurements to Mr. Hunt. Bockhold, Tr. 6537, 6563. Mr. Hunt suggested that Mr. Bockhold borrow dew point test equipment from the V.C. Summer Nuclear Plant in order to accurately measure dew point readings and verify the condition of the air. Hunt Aff. at 5; Hunt, Tr. 4924-25, 4935.

244. Mr. Briney directed his staff to contact the I&C department at the V. C. Summer plant and borrow one of their dew point instruments. In addition, Mr. Briney specifically requested that instructions on how to use the loaned instrument be provided as well. Briney at 7-9; Briney, Tr. 12,084-85.

245. Georgia Power received the V.C. Summer dew point instrument, an EG&G Model 911 instrument (FS-3529), some time on April 7 or 8, along with an instruction manual. Briney at 8-9. Mr. Briney immediately noticed that the borrowed instrument had a flow meter attached to it to precisely monitor and control the air flow rate through the instrument. *Id.* at 9.⁶⁶

246. Mr. Briney testified that the initial readings taken with the VP-1114 instrument were before the I&C Department knew that use of a flow meter is required to use the VP-1114 correctly, since it was not until the FS-3529 instrument arrived from the Summer plant that they learned about the flow meter. Briney, Tr. 12,088; 12,340.

⁶⁶ During the hearing, Staff witness Pierce Skinner contacted an EG&G representative who stated that it would have been extremely difficult for an I&C technician to throttle flow to the correct level without a flow meter. Skinner, Tr. 14644-45. Insufficient flow causes higher dew point readings. *Id.*

247. Air quality was indeterminate during the time on April 6-7, 1990 that high readings were taken using the VP-1114 instrument. Bockhold, Tr. 6513; Int. Exh. II-169.

248. The first dew point readings using the FS-3529 instrument were taken sometime on April 8, 1990⁶⁷ on the Unit 1 and Unit 2 air receivers. See Int. Exh. II-217 at 5-6.

249. The April 8 readings obtained with the two EG&G instruments (VP-1114 and FS-3529) were in close agreement with each other and all of the readings were in

⁶⁷ The Vogtle dew point documents do not reflect when on April 8 these readings were taken.

specification except on the DG 2A K02 receiver, whose dryer was found to be turned off. See Briney at 9; Briney, Tr. 12,203, 12,206; see also Int. Exh. II-169.⁶⁸

250. Mr. Briney did not recall telling Mr. Bockhold that the dryer had been found turned off. Briney, Tr. 12,289.

251. Based on the April 8 readings, taken after GPC had learned how to properly use the VP-1114 instrument, GPC concluded that the prior Alnor readings from the VP-2466 instrument were not valid. Briney, Tr. 12,166. Mr. Briney recalled that I&C technician, Scott Hammond, agreed with this conclusion. *Id.*

252. Mr. Hammond recalled speaking to Mr. Briney about VP-1114 being a new piece of equipment which they needed to get used to using. Hammond, Tr. 12,859. Mr. Hammond also testified that he was in close touch with Mr. Bockhold on April 8, 1990, regarding high dew point readings. *Id.* at 12,857-59, 12,904; see also Intervenor Exhs. II-217 and II-217A.

⁶⁸ The April 8 readings (Int. Exh. II-169) compare the results between the two EG&G instruments, measured in F, as follows:

	<u>VP-1114</u>	<u>FS-3529</u>
DG 1A:		
K01	34.2, 35.5	40.3, 39.2
K02	33.2, 34	42.3, 42.8
DG 1B:		
K01	44.5	45.9
K02	36.6	40.8
DG 2A:		
K01	43.9	39.7
K02	60.9	61.4
DG 2B:		
K01	33.7	39.5
K02	44.4	44.6

253. On the morning conference call with the IIT on April 9, 1990, Mr. Ward told the IIT that Georgia Power had obtained a dew point instrument from the V.C. Summer plant, and that all of the April 8 dew point readings were between 36 and 45 degrees. *See* GPC Exh. II-61, at 4.

254. Skip Kitchens, Assistant Plant General Manager-Operations, then advised the IIT members that the latest dew point measurements indicated that all of the air receivers were in specification except for the high DG 2A receiver K02 dew point reading of 60.9 F (taken on April 8, *see* Int. Exh. II-169, at 5).⁶⁹ *See* GPC Exh. II-61, at 4-5. Mr. Kitchens told the IIT that this receiver was being blown down. *Id.* at 4.

255. Messrs. Ward and Kitchens explained to the IIT that the high reading on the DG 2A was attributed to the associated air dryer being inadvertently turned off, most likely on Friday, April 6. *Id.* at 5.

256. During the IIT call Mr. Kitchens made reference to a bad instrument, but did not say anything about I&C technician errors. *Id.* at 7-8.

257. In response to a request for a history of dew point data, Mr. Kitchens told Mr. Chaffee that he would try to provide the NRC with the monthly post-maintenance results that show dew points for the last year. *Id.* at 7-9.

258. Notes taken by Mr. Bockhold during the April 9 meeting with the NRC in Atlanta (Int. Exh. II-71) indicate that the NRC was told there that air quality was good,

⁶⁹ The notes of Mr. Bailey, taken during GPC's April 9, 1990 meeting with NRC Region II in Atlanta, also reflect that this high dew point reading was reported to the NRC. *See* Int. Exh. II-70, at 5.

and that high readings were attributed to a faulty dew point instrument. *Id.* at Project No. 006214. Mr. Bockhold's notes also reference the April 6 inspection of an air receiver, as well as inspections of the control air filters and daily air receiver blowdowns, all of which confirmed that air quality was acceptable. *Id.* The notes do not reflect the I&C technicians' initial inability to correctly use the VP-1114 instrument.

259. At the hearing, Mr. Briney reviewed the April 9, 1990 letter. He testified that the letter's statement attributing the initial reports of high readings to faulty instrumentation was based on information he provided to Mr. Bockhold. Briney, Tr. 12,284-86. The earlier testimony of Mr. Bockhold confirms that Mr. Bockhold accepted Mr. Briney's conclusion that the high dew point readings were due to a faulty instrument. Bockhold, Tr. 6504.

260. When questioned as to what dew point readings the "initial reports" language referred to, Mr. Briney stated that it encompassed readings taken on April 6 and 7. Briney, Tr. 12,286-87.

261. Mr. Bockhold testified that the April 9 letter's reference to "initial reports" was not meant to refer to any dew point readings taken after March 29, 1990. Bockhold AQ at 5; Bockhold, Tr. 6582.

262. On April 11, 1990, the IIT received from GPC a table of dew point measurements (GPC Exh. II-57) for the 1A diesel generator going back to March 1989. This was in response to the IIT's April 9 request for dew point data. Rebuttal Testimony of W. F. Kitchens, ff Tr. 13,590, ("Kitchens"), at 9; *see also* GPC Exh. II-56, at 2.

Mr. Kitchens believed the dew point data provided to the IIT was responsive to the IIT's request. Kitchens at 10.

263. Referring to GPC Exh. II-57, Mr. Bockhold told the IIT during the April 11 teleconference that air quality had been and remained satisfactory. Among other factors he cited was the results of the April 6 air receiver inspection, which showed only light corrosion around the welds and a minor amount of oil on the bottom. See GPC Exh. II-56, at 6-7.

264. The data in GPC Exh. II-57 did not include the high dew point readings from April 5-7, 1990. These high readings were not given to the IIT because (1) GPC did not believe those readings were accurate; (2) GPC believed that all eight air receivers could not be outside the acceptable dew point range at the same time; (3) Mr. Kitchens thought it was pointless to give the NRC dew point information that Georgia Power did not believe to be correct; and (4) Mr. Kitchens had "some concern" as to whether the dew point instruments were being used correctly. Kitchens at 9.

265. Mr. Kitchens stated that he thought the NRC already knew about the high dew point readings, due to the presence of NRC personnel at Vogtle following the SAE. Kitchens, Tr. 13,749.⁷⁰

266. DC 1-90-186 and its attached root cause determination worksheet contain Mr. Briney's April 19, 1990 conclusion that the Alnor VP-2466 instrument was defective. See Intervenor Exh. II-79 at 6-8. Mr. Briney also concluded then that subsequent retesting using the VP-1114 provided incorrect readings attributable to the initial

⁷⁰ There is evidence supporting this view. See Section G.3(i), *infra*.

improper use of the EG&G instrument due to the I&C technician's unfamiliarity with it. *Id.*; see also Briney Rebuttal at 10-11.⁷¹

ii. Conclusions

267. The Board finds that the April 9 letter was incomplete, as it did not discuss the problems the I&C technicians initially had on April 6-7 in using the VP-1114 instrument correctly. The reference in GPC's April 9, 1990 letter to "initial reports" is ambiguous. However, the Board finds that the April 9 letter's reference to "initial reports" should be read as including all high dew point measurements taken in April 1990, prior to April 9. This is in accordance with Mr. Briney's testimony that the "initial reports" language in the April 9 letter encompassed dew point readings taken on April 6 and 7. Briney, Tr. 12,286-87.

268. Mr. Kitchens testified that he would be told of high dew point readings within a day or two of their occurrence, and that he recalled I&C staff telling him that they were not using the dew point instrument properly. Kitchens, Tr. at 13,706-08; 13,725. In follow-up questioning by the Board, Mr. Kitchens recalled consulting with

⁷¹ In January, 1991 (the reason for delay remains unexplained), Georgia Power sent the Alnor VP-2466 instrument to Alnor to have its calibration status checked, and to change the radioactive source from RA-226 to AM-241. See GPC Exh. II-201 (Affidavit of Michael D. Duncan), at 2. Alnor determined that the appropriate service required for the instrument was "repair/calibrate," and the instrument was repaired before calibration services were performed. *Id.* Since the instrument was determined by Alnor to be in disrepair, no "as found" calibration data was taken. See GPC Exh. II-201, Attachment B, at 3. Alnor sent to Georgia Power a "Certificate of Traceability," dated May 15, 1991, documenting that VP-2466 was repaired and calibrated by Alnor. See GPC Exh. II-201, Attachment A, at 2. No "as found" data was taken by Alnor. See GPC Exh. II-201 (Duncan Affidavit), at 2. The Alnor documents caused Mr. Duncan to retract his earlier testimony (Duncan, Tr. 8198-8200) that the VP-2466 instrument had been found in calibration by Alnor. See GPC Exh. II-201 (Duncan Affidavit), at 1-2.

the I&C personnel to solve the problem about how to use the dew point instruments correctly, and that it was a topic of discussion. *Id.* at 13,733-34.

269. Mr. Ward testified that at the time the high dew point readings were taken they were not believed, in part because the dew point instrument was not being used correctly. Ward, Tr. at 7901-02. Mr. Ward recalled discussing this problem with Mr. Bockhold on April 8, 1990. *Id.* at 7932. In response to further Board questioning, Mr. Ward recalled learning from the site that this problem of incorrect usage of a dew point instrument was being handled by Mr. Briney. *Id.* at 7940.

270. The contemporaneous diary kept by Mr. Ward confirms that during a telephone call with the site on the morning of April 8, 1990, Mr. Ward noted that "backup instruments were being used wrong." Int. Exh. II-17, at 92 Project page 048000. In this note, the dew point instrument Mr. Ward was referring to was the EG&G VP-1114 instrument. Ward, Tr. 7948-49.

271. Mr. Bockhold testified that he knew from Mr. Briney about the problems the I&C technicians initially had in using the EG&G instrument. Bockhold, Tr. 6498, 6509-10, 6560.

272. Accordingly, the Board finds that by April 9, 1990, senior GPC management at Vogtle (Messrs. Bockhold and Kitchens) and in Birmingham (Mr. Ward) knew about the problems the I&C technicians initially had in using the VP-1114 instrument correctly. The April 9 letter was incomplete in not describing these measurement problems to the NRC.

3. Insufficient Evidence To Find Willful Misconduct

273. Intervenor's air quality allegations that GPC made willful or recklessly careless misrepresentations to the NRC are discussed below. The Board finds that there is not sufficient evidence to substantiate these allegations, and they are accordingly rejected.⁷²

a. Concealing evidence of March 29 high dew points

274. Intervenor alleges (Intervenor Findings 605-06) that the March 29 rejection of a Deficiency Card shows that GPC had the

"intent to conceal the high dew points readings from NRC and that, but for Mr. Hunt's accidental discovery, NRC would never have been advised of the high dew point readings and a subsequent DC would not have been issued."

If GPC had such an intent, GPC likely would have taken steps to remove the incriminating evidence from the plant records to prevent Mr. Hunt or other NRC personnel from thereafter discovering the March 29 high readings. Or, taking the unproven conspiracy theory a step further, GPC would have made sure the incriminating evidence never got into the records in the first place. The evidence, taken as a whole, does not support the above allegation and the Board rejects it.⁷³

⁷² The Board finds notes that neither the IIT transcripts nor the Mosbaugh tapes did not contain all communications with NRC personnel. Therefore, the absence of a discussion on transcripts is not proof that no oral communication occurred. For example, the IIT leader, Mr. Chaffee, asked Mr. Bockhold on April 6, 1990 "about this dew point situation." See GPC Exh. II-51 (IIT transcript) at 1, 4. Some communication not in evidence must have taken place to alert Mr. Chaffee of the situation.

⁷³ A further allegation of a willful omission concerns the GPC critique report's exploration of what caused the SAE. See Intervenor's proposed findings 613-17. The
(continued...)

b. Withholding dew point data from IIT on April 3

275. Intervenor alleges that Mr. Bockhold was made aware of the March 29, 1990 high readings on or about March 29, and that he deliberately withheld this information from the IIT during an April 3, 1990 teleconference. See Intervenor Findings 533, 536. The evidence does not support such a finding. As plant manager, Mr. Bockhold had many priorities other than dew point readings following the SAE. Bockhold, Tr. 6543, 6645-47. The evidence, as discussed further below, establishes that as of March 29, news of high dew point readings on one of the diesels would not necessarily have made its way up to Mr. Bockhold, since at that time there was no reported evidence of water or moisture in the diesel air system. See Section G.2(a), *supra*.

276. Mr. Hunt recalled speaking with the diesel manufacturer about the impact on operability high dew points could have, and being told that the diesel would function with moisture contents higher than those that would exist with dew points between 32 and 50 degrees. Hunt, Tr. 4898-99.

277. In 1990 Mr. Bockhold had a similar understanding as to the significance of high dew points. He told the IIT on April 6, 1990 that elevated dew points would be a long-term problem, but that the operability of the diesels over the short term would not be affected. See GPC Exh. II-51 at 6-8. The IIT appeared to agree that the diesel would not be damaged by high dew point air. *Id.* at 8.

⁷³(...continued)

Board does not address this allegation further, based on our Finding that it is outside the scope of issues in this proceeding.

278. Mr. Bockhold reiterated this in his 1995 testimony. He stated that if actual high dew points are left uncorrected for a long period of time there is a potential of corrosion developing on parts within the diesel air system, but over a short period of time high dew points would not adversely impact operation of the diesel generators. Bockhold, Tr. 6466-67, 6558-59, 6608-09.

279. In late March of 1990, Mr. Mosbaugh had not stated either to Mr. Stokes or Mr. Bockhold, that the diesels were inoperable due to poor air quality. Bockhold, Tr. 6697.

280. The Board therefore finds that it cannot presume, in the absence of evidence to the contrary, that Mr. Bockhold would have been closely monitoring the I&C department's activities in the last days of March 1990. Furthermore, the evidence does not establish that, by April 3, Mr. Bockhold knew about the March 29 dew point readings.

c. Concealing presence of a back-up dew point instrument

281. Intervenor alleges (Intervenor Findings 543-44) that Mr. Bockhold falsely stated to the IIT on April 6, 1990 "that there was not a back-up dew point analyzer at the plant." The Board rejects this allegation.

282. The Intervenor is correct that Mr. Bockhold's statements to the IIT on April 6, 1990 (GPC Exh. II-51) were not accurate regarding the lack of another onsite dew point instrument. But there is no evidence that Mr. Bockhold intentionally misinformed the IIT in this regard, and the Intervenor provides no motive explaining why Mr. Bockhold would have lied to the IIT about this.

283. In a matter of hours following the April 6 teleconference, the I&C department first used the VP-1114 instrument to measure dew points on the 1A diesel. See Section G.2(b), *supra*. If for some reason Mr. Bockhold wanted to conceal the fact that GPC did have another dew point instrument onsite, he would have had ample opportunity to instruct Mr. Briney on April 6 not to use the VP-1114, and instead have Mr. Briney wait for the GE rental instrument to arrive. The VP-1114 instrument was used extensively beginning on April 7. See Section G.2.(b), *supra*. The Board finds no evidence of falsehood here.

d. Mr. Bockhold's false testimony about April 6 data

284. Intervenor alleges (Intervenor Findings 552-54) that Mr. Bockhold falsely testified at the 1995 hearing about the dew point information he was referring to during the April 6, 1990 teleconference with the IIT. The Board finds that Mr. Bockhold was misled by the erroneous heading on GPC Exh. II-52 into thinking that he had this dew point data in front of him on the morning of April 6, 1990. See Board Findings xx-xx, *supra*. In fact, the dew point data on GPC Exh. II-52 was not compiled until the early morning hours of April 7. See Section G.2(b), *supra*.

285. While the initial 1995 hearing testimony of Mr. Bockhold on this matter--see Tr. 6522, 6529-31 -- Bockhold is clearly in error, he later corrected this testimony. *Id.* at 6539, 6581. Moreover, Intervenor established no motive for Mr. Bockhold to have lied about what dew point data he was referring to, or that he intentionally misrepresented the data. The IIT transcript of the April 6, 1990 teleconference reflects that

Mr. Bockhold reported bad dew point results to the IIT. The Board finds that Mr. Bockhold did not intentionally provide incorrect hearing testimony.

e. Concealing VP-1114 readings from Mr. Hunt

286. Prior to leaving the plant site on April 7, 1990, Mr. Hunt recalled seeing a hand-written list of dew point measurements which was similar to Mr. Briney's hand-written list (GPC Exh. II-52) of high dew point measurements. Hunt Aff. at 5; Hunt, Tr. 4924-25, 4935. The Intervenor sees the evidence as supporting the inference that the list given to Mr. Hunt excluded readings taken with the VP-1114 instrument. See Intervenor Findings 545-46. The Board finds this inference to be implausible, and therefore rejects it. At this point in time, GPC did not know it was using the VP-1114 instrument incorrectly, and would thus have had no reason to hide the VP-1114 readings while providing other out-of-specification readings. See Section G.2, *supra*.

f. Falsely claiming VP-2466 instrument was defective

287. Intervenor alleges (Intervenor Findings 547-50, 578-79, 583, and 604) that during the April 6, 1990 teleconference with the IIT, and in the April 9, 1990 letter to the NRC, GPC engaged in intentional willful conduct in claiming that the VP-2466 dew point instrument was defective.

288. The Board finds that by April 6, 1990, GPC had a reasonable basis to suspect the Alnor VP-2466 instrument was faulty. The calibration due date for this instrument had already been extended one month, and expired on April 7, 1990. See GPC Exh. II-159; see also Briney at 13. Additionally, the last in-specification reading from the VP-2466 instrument was on March 29, 1990 for the DG 1B. See Exh. II-169,

at 3. All of the April 5 dew point readings on the 1A and 1B diesels using the VP-2466 instrument were out-of-specification high. *Id.* at 2-3.

289. After April 5, the VP-2466 instrument continued to give high readings on all of the Vogtle diesels until its use was discontinued on April 7, 1990. *See* Int. Exh. II-169. The last of the VP-2466 readings, taken early in the morning of April 7, were among those given to Mr. Hunt before he left the site on April 7. *See* Section 6.2(b), *supra*.

290. Accordingly, the Board finds that GPC did not engage in intentional willful conduct on April 9 in writing to the NRC that there was a faulty dew point instrument. The dew point data taken on April 6-7 with the VP-2466 dew point instrument cannot be read as weakening GPC's initial belief, expressed to the IIT on April 6, that they had a defective dew point instrument.

g. Concealing the VP-1114 "confirmatory readings"

291. Intervenor alleges (Intervenor Findings 555-65, 575, and 590-96) that GPC concealed the VP-1114 "confirmatory readings." Intervenor states that "the record as a whole supports the conclusion that the repeated failure to advise NRC of confirmatory VP-1114 readings was intentional." Intervenor Finding 565.

292. While the initial reason to use the VP-1114 instrument on April 6, 1990 was to verify the accuracy of the Alnor VP-2466 readings, by April 9 GPC was not relying on the VP-2466 readings. The accuracy of the VP-1114 readings was confirmed by the FS-3529 readings taken on April 8. *See* Section 6.2(b), *supra*.

293. Intervenor's focus on the VP-1114 readings being "confirmatory" ignores the role of the FS-3529 readings, which are not specifically mentioned anywhere in the Intervenor's Findings. The important factor for GPC's April 9 representations that air quality was satisfactory was the April 8 dew point readings obtained using the VP-1114 instrument, not the readings of the VP-2466 instrument which by then was beyond its calibration date. *See* Section G.2(b), *supra*.

294. No evidence was introduced showing that the NRC was interested either in the equipment numbers or the types of dew point instruments being used at Vogtle. For whatever dew point instrument being used, the NRC only required that the instrument be properly calibrated and pedigreed. *See* GPC Exh. II-51, at 7-8. The VP-1114 instrument met these qualifications. The important data to demonstrate satisfactory air quality was the dew point readings, not the instrument number of the equipment used to obtain those readings. The evidence does not establish that GPC had an obligation to specifically identify readings as being from the VP-1114 instrument. The April 8, 1990 readings of 34 and 33F on the 1A diesel, taken with the VP-1114 instrument, are on the list of dew point readings given to the IIT on April 11, 1990. *See* GPC Exh. II-57; Int. Exh. II-169, at 2.

295. Accordingly, the Board finds that GPC did not intentionally conceal the VP-1114 readings from the NRC.

h. All the dryers were turned off

296. Intervenor alleges (Intervenor Finding 581):

"that all eight air receivers were experiencing high, out-of-specification dew points as a result of personnel inadvertently or intentionally turning off the air dryers. In this respect, Mr. Hunt testified that he was personally aware that diesel generator air dryers were out of service."

Regarding the air dryers, Mr. Hunt testified that "they were out of service a couple of times;" and that "they were off while I was there at one time." Hunt, Tr. 5008-5010. The Board finds that the testimony of Mr. Hunt does not establish a basis for finding that Vogtle personnel intentionally turned off all the dryers. The Board rejects this allegation.

i. Willful omission of data from April 11 dew point list

297. Intervenor alleges (Intervenor Findings 566-71) that GPC willfully omitted the April 5-7 out-of-specification dew point data from the April 11, 1990 dew point list provided to the IIT. The Board rejects this allegation because there is evidence that this dew point data was known to NRC representatives prior to April 9, 1990.

298. On April 6, 1990, the IIT leader, Mr. Chaffee, asked Mr. Bockhold "about this dew point situation." See GPC Exh. II-51 at 1, 4. By April 9 Mr. Chaffee knew about the efforts to get a dew point instrument from another plant, although his comments suggest he had only been told about out-of-specification low readings ("negative numbers"). See GPC Exh. II-61 at 3-4.

299. However, Mr. Hunt, who in 1990 was an NRC Region II inspector, testified that he had spoken to Mr. Bockhold about the high dew point readings before Mr. Hunt left Vogtle on April 7, 1990. Hunt, Tr. 4924-25, 4930-31. Mr. Hunt was aware of GPC's position that the high readings were due either to faulty dew point equipment or operator error. *Id.* at 4933-36.

300. Accordingly, the Board finds that GPC had a reasonable basis for believing that the NRC was aware of the April 5-7 dew point data, and that the omission of these readings (which GPC believed were unreliable) from the April 11 list, GPC Exhibit II-57, does not constitute a willful misrepresentation to the NRC.

j. The "self-reporting" allegation

301. Intervenor alleges (Intervenor Findings 537-38, and 540-41) that GPC in its 1994 NOV response, and in the 1995 pre-filed air quality testimony of Mr. Bockhold, falsely asserted that GPC self-reported the March 29, 1990 high dew point readings to the NRC. The Board rejects this allegation. Mr. Hunt's affidavit was submitted into evidence by GPC on May 18, 1995, and Mr. Hunt testified about his discovery of the March 29 high dew point readings. *See* Hunt Aff. at 5; *see also* Section G.2(b), *supra*. This evidence was part of the record before Mr. Bockhold's 1995 pre-filed air quality testimony was admitted on June 1, 1995. The Board finds that any lack of precision in the wording of GPC's 1994 NOV response was cured by the subsequent filing of Mr. Hunt's affidavit.

k. Willful failure to identify VP-1114 as faulty equipment

302. Intervenor alleges (Intervenor Findings 572-73) that GPC engaged in a "systematic attempt" to misrepresent the status of its dew point equipment in failing to identify VP-1114 as faulty equipment in its answers to Intervenor interrogatories filed in this proceeding. Regarding the VP-1114 instrument, the evidence establishes that the I&C technicians operating the instrument, rather than the instrument itself, were the reason for the initial high readings taken by the instrument on April 7, 1990. Thereafter,

the VP-1114 instrument worked properly. See Section G.2(b), *supra*. Thus, it was proper for GPC not to have identified the VP-1114 as faulty equipment in its answers to Intervenor interrogatories. The Board rejects this allegation.

4. Air Quality Conclusions

303. The Board finds that the evidence presented does not establish that GPC acted with careless disregard, willfully made misrepresentations, conspired to, or intentionally misled the NRC regarding air quality issues. While GPC's April 9, 1990 letter to the NRC was incomplete regarding the I&C technician errors, the evidence considered as a whole falls short of demonstrating that GPC engaged in making willful or recklessly careless misrepresentations. The Board concludes that while GPC failed to exercise reasonable care with respect to the April 9 letter, the air quality evidence as a whole does not show that GPC lacks the requisite character and integrity to operate a nuclear plant.

I. Management Attitudes and GPC Credibility

304. Intervenor contends that (1) GPC's operating philosophy of power generation above safety, (2) GPC's intimidation of Mosbaugh in the meeting where Mr. Bockhold had written the word "backstabbing" on the board as a result of his allegations regarding Mr. Kitchen having violated TS requirements for dilution valves, (3) Mr. Bockhold's emphasis on a "yes sir" attitude, (4) the GPC employee survey results, (5) the problems in conveying information to the NRC residents, (6) Mr. Bockhold's handling of the FAVA microfiltration system concern, and (6) the

selective memory and opinions of Mr. Hairston and others show bad character of the proposed transferee. Findings at 69-78, 225-60.

305. The Board is not persuaded that any of these events are evidence of a lack of character by the proposed transfer. We understand the intensity with which Mr. Mosbaugh pursued his concerns and often felt isolated in an organization that he believed did not adequately resolve his concerns. It is clear from the record that Mr. Mosbaugh was sincere in his belief that GPC suspected either he or his department was raising concerns to the NRC. It is also clear that the management style of Mr. Bockhold contributed in large part to NRC concerns raised during the April 30, 1990 meeting with senior GPC officials, and played a major role in the failure of GPC to submit complete and accurate information to the NRC. GPC's communication record improved once Mr. Shipman replaced Mr. Bockhold in October 1990.⁷⁴

306. The Board is confident that problems (perceived or actual) with GPC's attitude have been addressed by GPC accepting responsibility for its performance failures, company statements about the need for open and frank communications at the facility and the Southern Nuclear and GPC commitments with respect to management training for Mr. Bockhold. Consequently, we decline to conclude that these events are evidence of bad character.

⁷⁴ Mr. Hairston testified that Mr. Bockhold's management style sometimes led Mr. Bockhold to miss opportunities and that, although qualified, it was unlikely that Mr. Bockhold would return to line management at a nuclear power facility. Hairston, Tr. 11,551-11,554.

J. Conclusions Regarding GPC's Character

307. The above identified failures of GPC to provide the NRC with complete and accurate information related to DGs throughout 1990 were serious. The deficient actions of GPC are not significant because of the effect that the inaccuracies had on the safety of plant operation, but because the circumstances surrounding the communications with the NRC demonstrate an inadequate regard by a number of senior Licensee officials, and collectively by GPC management, for complete and accurate communications with the NRC. Information about the DGs and GPC's determinations about the causes of errors was important for the NRC to determine whether GPC was fulfilling its responsibilities as a licensee.

308. GPC was clearly aware of the NRC's interest in the DGs, in that the NRC specifically asked GPC to address DG reliability as part of its restart presentation for April 9, 1990. GPC should have engaged in a concerted effort to assure the completeness and accuracy of its submission, but instead sometimes engaged in informal, unstructured, and not-well-defined efforts to obtain information to satisfy the Commission on an issue having a direct bearing on the NRC's decision to allow restart. This performance is not acceptable.

309. It is also significant that GPC missed repeated opportunities to ensure completeness and accuracy of information and to promptly correct information when its own staff questioned the accuracy of the April 9 information and the subsequent efforts to explain and correct the inaccurate information. Even the involvement of senior management did not enable GPC to recognize the deficiency in the April 9 letter until the

NRC's request during the August 1990 inspection and GPC continued to submit information that was inaccurate and incomplete and did not recognize the significance of such inaccuracies until they were identified by the NRC almost four years later.

310. The NRC Staff has concluded that GPC's performance problems exhibited throughout these events is not sufficient to establish that Southern Nuclear (and the GPC employees who will work for that company if a transfer were granted) lack the requisite character to be a licensee. Zimmerman-Reyes at 5-7. They cite GPC's overall performance in keeping the NRC informed of post-repair and trouble shooting activities, GPC's technical competence in addressing those matters and Mr. Hairston's efforts to keep the NRC informed about errors identified as GPC became aware of them. *Id.*

311. The Staff's evaluation of GPC's response to the NOV and the GPC and individual responses to the DFIs issued to Messrs. Bockhold, McCoy, Greene, Horton, Frederick, and Majors only left the NRC concerned about the future performance of Mr. Bockhold in line management positions at nuclear power facilities. Staff II-51 (cover letter).

312. The Board finds that GPC's actions were sometimes concerned with defending the information provided in the restart presentation without an adequate understanding of the basis for the information. Such an approach was inconsistent with the simple candor upon which the NRC relies to discharge its responsibility for public health and safety. *See North Anna*, CLI-76-22, 4 NRC at 491. We do not find sufficient evidence, however, to conclude that GPC endeavored to intentionally mislead the NRC and reject Intervenors contention that there was a pattern of willful conduct. *See*

Intervenor Findings at 235-258. The record before us supports that the failures can be traced primarily to the myopia of the General Manager in assuring the submission of complete and accurate information to the NRC, the reluctance of site and corporate personnel to question the views of superiors, and the incomplete efforts to verify information submitted to the NRC.

IV. CONCLUSION OF LAW

Based on a review of the facts set forth above and a review of the filings of the parties in this proceeding, the Board concludes that GPC has demonstrated by a preponderance of the evidence that there is no basis to conclude that Southern Nuclear lacks the requisite character, integrity and competence necessary to operate Vogtle in accordance with the Commission's rules and regulations. The individuals employed by GPC and Southern Nuclear have not been shown to have intentionally submitted to the NRC information that was inaccurate, incomplete or misleading in a material respect. Rather, the performance problems exhibited in communications within GPC and with the NRC were due to the failures of certain individuals to take steps necessary to assure the accuracy and completeness of information and to promptly correct such misinformation. Inasmuch as the former General Manager, George Bockhold, repeatedly failed in this regard, we are directing the Staff to condition the license to limit his involvement in line management activities consistent with the commitment of GPC and Southern Nuclear.

V. ORDER

WHEREFORE, on the basis of the foregoing, in accordance with 10 C.F.R. § 2.760, it is this ____ day of _____, 1996, ORDERED:

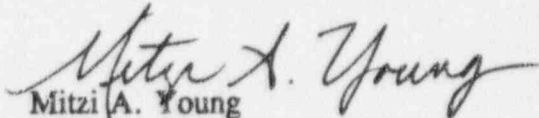
The Director, Office of Nuclear Reactor Regulations, is authorized, upon making the requisite findings with respect to 10 C.F.R. §§ 50.80 and 50.90 matters not at issue in this Initial Decision, to authorize the proposed transfer of authority to operate Vogtle to Southern Nuclear, provided such transfer is conditioned to preclude the participation of George Bockhold in line management responsibilities for nuclear operations until satisfactory completion of training, which focuses and develops his abilities to perform line management responsibilities as to accurate and complete communications, and 60 days notice to the NRC prior to the assumption of such a position.

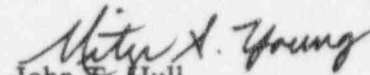
In accordance with 10 C.F.R. §§ 2.760, 2.762, 2.763, 2.785, and 2.786 of the Commission's Rules of Practice, this Initial Decision shall become effective immediately and shall constitute with respect to the matters decided herein the final action of the Commission thirty (30) days after the date of issuance hereof, subject to any review pursuant the Commission's Rules of Practice.

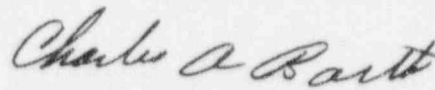
A notice of appeal may be filed by any party within (10) days after service of this Initial Decision. Within thirty (30) days after service of a notice of appeal (forty (40) days in the case of the Staff), any party filing a notice of appeal shall file a brief in

support thereof. Within thirty (30) days of service of the brief of the appellant (forty (40) days in the case of the Staff), any other party may file a brief in support of, or in opposition to, the appeal.

Respectfully submitted,


Mitzi A. Young
Counsel for NRC Staff


for John F. Hull
Counsel for NRC Staff


Charles A. Barth
Counsel for NRC Staff

Dated at Rockville, Maryland
this 12th day of December 1995

APPENDIX A

GEORGIA POWER COPY OF PLANT VOGTLE ORGANIZATION AND KEY PLAYERS

1. In 1990, the Plant Vogtle organization consisted of an on-site plant staff, headed by the General Manager, Mr. George Bockhold, Jr., who reported to Mr. C. Kenneth McCoy, Georgia Power Vice President - Vogtle Project, located in Georgia Power's Birmingham corporate office. Bockhold at 1; McCoy at 1. Mr. McCoy reported to Mr. W. George Hairston, III, Georgia Power Senior Vice President - Nuclear Operations, and Mr. Hairston reported to Mr. R. Patrick McDonald, Georgia Power Executive Vice President - Nuclear Operations. Hairston at 1-2. In 1990, Mr. McDonald reported to Georgia Power President and CEO, Mr. A. William Dahlberg. ILT Finding N.J.s. 18, 24 and 33.

2. The Vogtle on-site organization below the General Manager, Mr. Bockhold, consisted of two Assistant General Managers reporting to Mr. Bockhold: Mr. W.F. ("Skip") Kitchens, Assistant General Manager, Operations, and Mr. Thomas V. Greene, Jr., Assistant General Manager, Plant Support. Kitchens Rebuttal at 1, Greene at 1. At the beginning of 1990, until the beginning of May, Mr. Greene attended senior reactor operator ("SRO") training school, during which time Mr. Allen Lee Mosbaugh became the Acting Assistant General Manager, Plant Support. Greene at 1.

3. Mr. Harvey Handfinger was Manager of Maintenance, reporting to Mr. Kitchens, and a voting member of the Plant Review Board. Handfinger Rebuttal at 1. The Instrumentation and Control ("I&C") Superintendent reported to

Mr. Handfinger. Tr. 11431 (Handfinger). Mr. Michael Hobbs held the title of I&C Superintendent in March-April 1990, but was assigned to a special task force at the time in Mr. Hobbs' absence, Mr. Mark Briney served as the acting I&C Superintendent. Briney Rebuttal at 1.

4. Mr. Jimmy Paul Cash was a Unit Superintendent for Plant Vogtle and a degreed SRO. He worked in the Operations Department which reported to Mr. Kitchens. Cash at 1; Kitchens Rebuttal at 2.

5. Reporting to the Assistant Plant Manager, Plant Support, was Mr. John G. Aufdenkampe, Manager of Technical Support, and Mr. Michael W. Horton, Manager of Engineering Support. Aufdenkampe at 1; Horton at 1.

6. Mr. Ken C. Stokes was a Senior System Engineer in the Engineering Support Department with primary responsibility for the diesel generators. Stokes at 1. Mr. Stokes reported to Mr. Paul Kochery (Tr. 7283) who reported to Mr. Horton.

7. The Vogtle Nuclear Safety and Compliance ("NSAC") group, supervised by Mr. Rick Odom, reported to Mr. Aufdenkampe. Aufdenkampe at 1. Mr. Thomas E. Webb was a Senior Engineer in the NSAC group. Webb at 1.

8. Mr. George R. Frederick was the Vogtle on-site Supervisor of the Safety Audit and Engineering Review ("SAER") group. He reported to Mr. Mark J. Ajluni, the Manager of SAER, located in the Birmingham corporate office, who reported directly to Mr. McCoy. Frederick at 1.

9. In 1990, Mr. Kitchens was Chairman of the Vogtle Plant Review Board ("PRB") (Kitchens Rebuttal at 6) which, pursuant to the Plant Vogtle Technical

Specifications ("Tech Specs"), § 6.4.1, served to advise the Vogtle General Manager on all matters related to nuclear safety. Staff Exh. II-20, p. 6-7. The responsibilities of the PRB are listed in Tech Spec § 6.4.1.6 (Staff Exh. II-20, p. 6-8 and 6-9) and include such things as review of procedures, proposed tests and experiments, proposed changes to the Tech Specs, and violations of the Tech Specs. In April 1990, the voting members of the PRB were Messrs. Mosbaugh, Aufdenkampe, Horton, Handfinger, Jim Swartzwelder, and Ron LeGrand. GPC Exh II-28. Prior to Mr. Greene's return from SRO school, Mr. Mosbaugh was the Vice Chairman of the PRB by virtue of his acting position. Following Mr. Greene's return from SRO school, Mr. Greene assumed the Vice Chairmanship of the PRB and, Mr. Mosbaugh no longer on the PRB. Bockhold Rebuttal at 12-14.

10. In the corporate office, Mr. McCoy had a Vogtle support staff headed by Mr. William B. Shipman, General Manager - Plant Support. Shipman at 1. Other members of the corporate Vogtle support staff were Mr. Lewis A. Ward, Manager, Nuclear Maintenance and Support (Ward at 1) Mr. Paul D. Rushton, Manager, Nuclear Engineering and Licensing (GPC Exh. 11-200) and Mr. James A. Bailey, Manager, Nuclear Licensing (GPC Exh. II-199).

11. Mr. N. Jackson ("Jack") Stringfellow and Mr. Harry J. Majors were project licensing engineers in the corporate office reporting to the Manager, Nuclear Licensing, Mr. Bailey. Stringfellow at 1; Majors at 1.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

'95 DEC 13 A7:47

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

OFFICE OF SECRETARY
DOCKETING & SERVICE
BRANCH

In the Matter of)	
GEORGIA POWER COMPANY, <i>et al.</i>)	Docket Nos. 50-424-OLA-3
)	50-425-OLA-3
(Vogtle Electric Generating Plant)	Re: License Amendment
Units 1 and 2))	(Transfer to Southern Nuclear)
)	

CERTIFICATE OF SERVICE

I hereby certify that copies of "NRC STAFF PROPOSED FINDINGS OF FACT AND CONCLUSIONS OF LAW IN THE FORM OF AN INITIAL DECISION" 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; or as indicated by double asterisk, hand delivered; this 12th day of December 1995.

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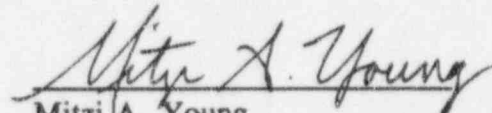
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Office of the Secretary** (2)
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