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NUCLEAR REGULATORY COMMISSION ISSUANCES

March 1997

U.S. NUCLEAR REGULATORY COMMISSION

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Vol. 45, No. 3
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NUCLEAR REGULATORY COMMISSION ISSUANCES

March 1997

This report includes the issuances received during the specified period from the Commission (CLI), the Atomic Safety and Licensing Boards (LBP), the Administrative Law Judges (ALJ), the Directors' Decisions (DD), and the Decisions on Petitions for Rulemaking (DPRM)

The summaries and headnotes preceding the opinions reported herein are not to be deemed a part of those opinions or have any independent legal significance.

U.S. NUCLEAR REGULATORY COMMISSION

Prepared by the
Office of Information Resources Management
U.S. Nuclear Regulatory Commission
Washington, DC 20555–0001
(301–415–6844)

COMMISSIONERS

Shirley A. Jackson, Chairman
Kenneth C. Rogers
Greta J. Dicus
Nils J. Diaz
Edward McGaffigan, Jr.

B. Paul Cotter, Jr., Chief Administrative Judge, Atomic Safety & Licensing Board Panel

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COMMISSION

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Shirley Ann Jackson, Chairman
Kenneth C. Rogers
Greta J. Dicus
Nils J. Diaz
Edward McGaffigan, Jr.

In the Matter of **Docket No. 70-3070-ML**

LOUISIANA ENERGY SERVICES, L.P.
(Claiborne Enrichment Center) **March 21, 1997**

The Commission grants Nuclear Energy Institute's motion for leave to file an *amicus curiae* brief in the appeal of the Atomic Safety and Licensing Board's second Partial Initial Decision, LBP-96-25, 44 NRC 331 (1996), and adjusts the briefing schedule and page limits for responsive and reply briefs. The Commission also grants Louisiana Energy Services' motion for the Commission to defer filing of petitions for review of the third Partial Initial Decision, LBP-97-3, 45 NRC 99 (1997).

RULES OF PRACTICE: *AMICUS CURIAE*

"[A]n *amicus curiae* necessarily takes the proceeding as it finds it. An *amicus curiae* can neither inject new issues into a proceeding nor alter the content of the record developed by the parties." *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), ALAB-862, 25 NRC 144, 150 (1987) (footnote omitted).

ORDER

The Commission has before it two contested motions in the proceeding on Louisiana Energy Services' (LES's) application for construction and operation

of the Claiborne Enrichment Center near Homer, Louisiana. The first is the Nuclear Energy Institute's (NEI's) motion for leave to file an *amicus curiae* brief in the appeal of the Atomic Safety and Licensing Board's second Partial Initial Decision, LBP-96-25, 44 NRC 331 (1996). The second is LES's motion for deferral of the schedule for seeking Commission review of the Board's third Partial Initial Decision, LBP-97-3, 45 NRC 99 (1997). We have decided to grant NEI's motion, and LES's motion in part, and to make appropriate adjustments in the briefing schedule and page limits.

1. Attached to NEI's motion is the *amicus* brief itself. NEI seeks leave to file its brief because it believes that LBP-96-25 rests on "significant legal error which, if allowed to stand, could severely affect the interests of the nuclear energy industry." The Intervenor, Citizens Against Nuclear Trash (CANT), opposes NEI's motion and requests that the Commission deny it. According to CANT, it would be "unduly burdensome" to require CANT, with its "extremely limited resources," to respond to yet another entity's arguments, when the license applicant is "adequately represented by two large law firms with significant resources." In the alternative, CANT requests that it be given sufficient time to respond to the NEI brief.

NEI's motion for leave to file the *amicus* brief is granted. CANT will suffer no substantive prejudice from the *amicus* filing. "[A]n *amicus curiae* necessarily takes the proceeding as it finds it. An *amicus curiae* can neither inject new issues into a proceeding nor alter the content of the record developed by the parties." *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), ALAB-862, 25 NRC 144, 150 (1987) (footnote omitted). We adjust CANT's briefing deadline and page limits as indicated below so that CANT's brief can take account of the NEI filing.

2. LES's motion requests that the Commission defer the filing of petitions for review of the third Partial Initial Decision, LBP-97-3, until after a fourth Partial Initial Decision is issued sometime in the near future. LES states that "this approach will allow LES, and indeed all parties, to evaluate whether to file a petition for review based upon both partial decisions, and would allow the two partial decisions to be addressed simultaneously and therefore most efficiently."

CANT opposes the motion. According to CANT, LES's approach would be "unduly burdensome and unfair" because it might require CANT to simultaneously address both LBP-97-3 and the Board's forthcoming decision. However, a proposed filing schedule submitted by CANT indicates that CANT does not object to delaying the filing of a petition for review of LBP-97-3.

We have decided against mandating simultaneous petitions, because the two decisions likely will address quite separate issues: decommissioning funding (LBP-97-3) and "environmental justice" (the anticipated fourth Partial Initial Decision). However, to the extent that LES's motion requests a delay in filing a petition for review, we grant the motion. We anticipate that the parties can

better evaluate the need for and scope of further petitions after they have the opportunity to review the Board's fourth Partial Initial Decision, which we expect to be issued by May 1, 1997.

3. To accommodate the NEI *amicus* brief, we amend the briefing schedule and page limits with respect to LBP-96-25 as follows:

(1) CAN1 shall file a single responsive brief on or before May 1, 1997. Its brief shall not exceed 55 pages.

(2) The reply briefs shall be filed on or before May 15, 1997.

To accommodate the delay in filing petitions for review of LBP-97-3, we establish the following schedule:

(1) Petitions for Review of LBP-97-3 shall be filed within 7 days after the date of issuance of the fourth Partial Initial Decision.

(2) Responses to any petition for review of LBP-97-3 shall be filed in accordance with 10 C.F.R. § 2.786(b)(3).

Finally, the deadline for filing petitions for review of the fourth Partial Initial Decision is extended by 7 days beyond the deadline established by 10 C.F.R. § 2.786(b)(1).[1] In all other respects, all petitions and responses shall be filed in accordance with 10 C.F.R. § 2.786.

IT IS SO ORDERED.

For the Commission

JOHN C. HOYLE
Secretary of the Commission

Dated at Rockville, Maryland,
this 21st day of March 1997.

[1] We have attempted to devise a schedule that avoids simultaneous filings. However, we recognize that depending on the date of issuance of the fourth Partial Initial Decision this schedule may need to be readjusted. The parties remain free to request an adjustment in this schedule if they believe that circumstances warrant it.

Atomic Safety and Licensing Boards Issuances

LICENSING BOARDS

ATOMIC SAFETY AND LICENSING BOARD PANEL

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James P. Gleason,* *Deputy Chief Administrative Judge (Executive)*
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*Permanent panel members

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Thomas S. Moore, Chairman
Richard F. Cole
Frederick J. Shon

In the Matter of

Docket No. 70-3070-ML
(ASLBP No. 91-641-02-ML)
(Special Nuclear Material License)

LOUISIANA ENERGY SERVICES, L.P.
(Claiborne Enrichment Center)

March 7, 1997

In this Partial Initial Decision in the combined construction permit–operating license proceeding for the Claiborne Enrichment Center, the Licensing Board resolves in favor of the Intervenor a portion of decommissioning funding contention B.1 and environmental contention J.3 concerning the conversion component of the estimated cost of tails disposal.

RULES OF PRACTICE: BURDEN OF PROOF

The Commission's rules of practice for the conduct of formal adjudicatory hearings provide in 10 C.F.R. § 2.732 that the applicant has the burden of proof in the proceeding. Thus, in order for the applicant to prevail on each contested factual issue, the applicant's position must be supported by a preponderance of the evidence. *Philadelphia Electric Co.* (Limerick Generating Station, Units 1 and 2), ALAB-819, 22 NRC 681, 720 (1985); *Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), ALAB-763, 19 NRC 571, 577 (1984). *See* 1 Charles H. Koch, Jr., *Administrative Law and Practice* § 6.44 (1985).

USEC PRIVATIZATION ACT: DEPLETED URANIUM TAILS

The USEC Privatization Act, 42 U.S.C. § 2297h-11(a)(1)(B) now makes the Department of Energy, at the request of an NRC-licensed enricher, responsible for the disposal of depleted uranium tails at DOE's disposal costs, including a pro rata share of any of DOE's capital costs.

PARTIAL INITIAL DECISION
(Resolving Contentions B and J.3)

This Partial Initial Decision addresses contentions B and J.3 dealing with decommissioning funding filed by the Intervenor, Citizens Against Nuclear Trash ("CANT"), in this combined construction permit–operating license proceeding. The Applicant, Louisiana Energy Services, L.P. ("LES"), seeks a 30-year materials license to possess and use byproduct, source, and special nuclear material to enrich uranium using a gas centrifuge process at the Claiborne Enrichment Center ("CEC"). The Applicant intends to build the CEC on a site in Claiborne Parish, Louisiana, adjacent to and between the two unincorporated African-American communities of Center Springs and Forest Grove some 5 miles northeast of the town of Homer, Louisiana. The history of this licensing proceeding may be found in our earlier Partial Initial Decisions, LBP-96-7, 43 NRC 142 (1996), resolving contentions H, L, and M that challenged the Applicant's emergency plan and safeguards measures, and LBP-96-25, 44 NRC 331 (1996), resolving contentions J.4, K, and Q that challenged the need for the facility, the treatment of the no-action alternative in the final environmental impact statement ("FEIS"), and the Applicant's financial qualifications.

I. DECOMMISSIONING FUNDING CONTENTIONS

A. Contentions B and J.3

CANT's contention B, titled "Decommissioning Plan Deficiencies," asserts that "[t]he LES decommissioning [funding] plan does not provide reasonable assurance that the CEC site can be cleaned up and adequately restored upon cessation of operations." Although the Intervenor proffered a number of supporting bases for this contention, the Licensing Board, as then constituted, found three bases supported the contention. In basis B.1, CANT asserts that there is no realistic basis for LES' then estimate (of $9.5 million per year) for the cost of depleted UF_6 tails ("DUF_6") disposal because the Applicant does not have a plan for the offsite disposal of tails. The Intervenor claims in basis B.4 that LES provides no details on how CEC decommissioning costs

were determined. Finally, in basis B.5, CANT declares that the Applicant's summary of decommissioning costs fails to indicate the facilities that will be decontaminated and the extent to which they will be decontaminated. LBP-91-41, 34 NRC 332, 337 (1991). On the strength of these three bases, the Licensing Board admitted contention B "insofar as it challenges the reasonableness of LES' decommissioning funding plan." *Id.*

In admitting contention B, the Board noted that the Commission's hearing notice for the licensing proceeding directed that the Applicant must have a "plausible strategy" for the disposition of DUF_6 tails. 56 Fed. Reg. 23,310, 23,313 (1991). Additionally, the Board stated that the Commission's regulations, 10 C.F.R. § 70.25(a), (e), require that the Applicant submit a decommissioning funding plan containing a cost estimate for decommissioning and the means for adjusting cost estimates and funding levels periodically over the life of the facility. *See also* 10 C.F.R. § 40.36(a), (c)(1), (d), (e)(3). In light of these factors, the Board ruled that, although there was no regulatory requirement that the Applicant have a "concrete plan" for the disposal of depleted uranium tails, LES must have a plausible strategy for tails disposition and, in order for the regulations to have any meaning, the Applicant's "cost estimate should contain reasonable estimates for an adequately described decommissioning strategy." 34 NRC at 338. Thus, the Board ruled that CANT's contention B supported by bases B.1, B.4, and B.5 had satisfied the Commission's contention pleading requirements by alleging that "the decommissioning funding plan does not contain reasonable estimates for decommissioning nor does it adequately describe the underlying decommissioning strategy." *Id.*

CANT's contention J, titled "Inadequate Assessment of Costs Under NEPA," alleges that the Applicant's environmental report ("ER") for the CEC does not adequately describe or weigh the environmental, social, and economic impacts and costs of operating the facility and that the costs of the project far outweigh the benefits of the proposed action. In basis J.3, the Intervenor asserts that LES has not provided a sufficient foundation for its decommissioning cost estimates and incorporates the bases it proffered in support of contention B. The Licensing Board found that bases B.4 and B.5 also supported contention J and admitted the contention. *Id.* at 350. Although CANT contention J.3 is phrased only in terms of a challenge to the Applicant's ER, the contention necessarily encompasses the Staff's later-filed environmental impact statement as well. *See* 44 NRC at 337-38. Further, because the Intervenor's contention J.3 challenges the same decommissioning costs (albeit in the context of the Applicant's ER and the Staff's EIS) that are the subject of contention B, all parties addressed the contentions together in their testimony. Similarly, we do not separately address CANT's contention J.3 and our findings and conclusions on contention B also encompass contention J.3.

B. Witnesses and Exhibits

In support of its position on contentions B and J.3, the Applicant presented the testimony of a panel of witnesses consisting of Peter G. LeRoy, Bernard G. Dekker, Richard W. Dubiel, and John M. A. Donelson. Due to a pretrial procedural ruling the prefiled direct testimony of this panel of witnesses appears in the record in two parts, i.e., that of Mr. LeRoy and Mr. Dekker (LeRoy-Dekker fol. Tr. 1016) and that of Mr. Dubiel, Mr. Donelson, and Mr. LeRoy (Dubiel-Donelson fol. Tr. 1026).

Mr. LeRoy, the Licensing Manager of the CEC, was responsible for compiling the information on decommissioning planning and funding in the LES Decommissioning Funding Plan, the LES Safety Analysis Report, and the Applicant's ER. (LeRoy-Dekker at 2 fol. Tr. 1016.) Mr. Dekker is the Manager of Safety, Safeguards, and Licensing for Urenco Nederland B.V., which operates uranium enrichment facilities at Almelo in the Netherlands. He has held that position since 1984 and, in his over 18 years working for Urenco Nederland, B.V., he has gained extensive experience in the operation, decontamination, and decommissioning of gas centrifuge uranium enrichment facilities. Mr. Dekker was retained by the Applicant to advise LES on various matters with respect to planning and funding for decontamination and decommissioning of the CEC, including the development of the LES Decommissioning Funding Plan. (*Id.*)

Mr. Dubiel holds a bachelor of science degree in physics and a master of science degree in nuclear engineering and he currently is the Director of Special Programs at Applied Radiological Control, Inc. In that capacity he is responsible for overseeing specialty health physics and radiological decontamination services provided to the United States Departments of Energy and Defense and various NRC licensees. He has over 20 years of experience handling NRC-licensed materials, including classifying, packaging, and shipping radioactive waste for disposal. (Dubiel-Donelson at 2 & Attach. 2 fol. Tr. 1026.) Like Mr. Dubiel, Mr. Donelson also has earned a bachelor of science degree in physics and a master of science degree in nuclear engineering. He is an engineer in the Fuel Management Section of the Nuclear Engineering Division of Duke Power Company and his specific area of responsibility is uranium enrichment. Mr. Donelson is knowledgeable about the characteristics and properties of uranium in various physical and chemical forms. (*Id.* at 3.)

The prefiled direct testimony of these witnesses on contentions B and J.3 was admitted into evidence pursuant to a pretrial stipulation of the parties and without further objection at the hearing. (Tr. 1016, 1026.) Because the Applicant did not offer these witnesses as experts and, in light of the parties' admissibility stipulation, the Board did not rule at the hearing on the qualifications of these witnesses as experts. Obviously, however, as the LES official responsible for

compiling the information on decommissioning in the LES license application, Mr. LeRoy is qualified to testify on that information and related submittals. Further, we find that Mr. Dekker is qualified by knowledge and experience and that Mr. Dubiel and Mr. Donelson are qualified by education, knowledge, and experience to testify as expert witnesses on the issues involved in contentions B and J.3.[1]

In support of its contentions B and J.3, the Intervenor presented the testimony of Dr. Arjun Makhijani, President of the Institute for Energy and Environmental Research. (Makhijani at 1 fol. Tr. 1081.) Dr. Makhijani earned his Ph.D. in engineering from the University of California, Berkeley, where his dissertation subject involved controlled nuclear fusion. He currently serves as a consultant to the United States Environmental Protection Agency ("EPA") Science Advisory Board, Radiation Advisory Committee, and he is a member of the Subcommittee on Radiation Cleanup Standards of the EPA National Advisory Council for Environmental Policy and Technology. He has also been a consultant to numerous other institutions such as the Congressional Office of Technology Assessment, Lawrence Berkeley Laboratory, Tennessee Valley Authority, Ford Foundation, and Edison Electric Institute. Dr. Makhijani has extensive experience in the area of nuclear waste classification and disposal and he has published numerous books and reports on these topics, including co-authoring *High-Level Dollars Low-Level Sense: A Critique of Present Policy for the Management of Long-Lived Radioactive Waste and Discussion of an Alternative Approach*, Apex Press, New York (1992). (*Id.* at 1 & Attach.) The prefiled direct testimony of Dr. Makhijani was admitted pursuant to a pretrial stipulation of the parties and the Intervenor offered his testimony as that of an expert in the field of nuclear engineering. (Tr. 1081.) We find that Dr. Makhijani is qualified

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[1] Pursuant to a stipulation of the parties, the following Applicant exhibits were admitted into evidence relating to contentions B and J.3: Applicant's Exhibit 3, SECY-91-019, "Disposition of Depleted Uranium Tails from Enrichment Plants," Jan. 25, 1991 (App. Exh. 3); Applicant's Exhibit 4, correspondence (with attachments) between NRC and LES re decommissioning designated 4(a)-(q) (App. Exh. 4(a)-(q)); Applicant's Exhibit 5, Letter from Frank A. Shallo, Vice President, Market Development, COGEMA, Inc., to W. Howard Arnold, President, LES (Oct. 16, 1991) (App. Exh. 5); Applicant's Exhibit 6, Letter from Frank A. Shallo, Vice President, Market Development, COGEMA, Inc., to W. Howard Arnold, President, LES, Feb. 22, 1995 (App. Exh. 6); Applicant's Exhibit 7, Uranium Enrichment Organization (Oak Ridge, Tenn.), Martin Marietta Energy Systems, Inc., "The Ultimate Disposition of Depleted Uranium," Dec. 1990 (report prepared for U.S. Dep't of Energy [hereinafter Martin Marietta Report] (App. Exh. 7); Applicant's Exhibit 8, Waste Management Technology Division, Science Applications International Corp., "Depleted Uranium Disposal Options Evaluation," May 1994 (report prepared for EG&G Idaho, Inc., and U.S. Dep't of Energy) [hereinafter EG&G Report] (App. Exh. 8); Applicant's Exhibit 9, Bureau of Mines, U.S. Dep't of the Interior, *Minerals Yearbook*, 1992, at 183-89, 194, 202, 208 (App. Exh. 9). Previously, Applicant's Exhibits 1, the CEC License Application; 1(a) the CEC Safety Analysis Report; 1(e), the CEC Proposed License Conditions; and 1(h), the CEC Environmental Report, which are also relevant to these contentions, were previously admitted into evidence. (Tr. 31.)

by education, knowledge, and experience to testify as an expert on the issues involved in contentions B and J.3.[2]

The NRC Staff presented the testimony of a panel of witnesses consisting of Yawar H. Faraz, John W. N. Hickey, and Dr. Joseph D. Price, although only Mr. Faraz and Mr. Hickey presented the Staff's prefiled direct testimony. (Faraz-Hickey fol. Tr. 1106.) Mr. Faraz holds a bachelor of science degree in nuclear and mechanical engineering and he is a nuclear process engineer in the Certification Section, Enrichment Branch, Division of Fuel Cycle Safety and Safeguards, Office of Nuclear Material Safety and Safeguards ("NMSS"). Since April 1994, he has served as the NRC Licensing Project Manager for the CEC. (*Id.* at 1.) Mr. Hickey earned a bachelor of science degree in mechanical engineering and a master of science degree in environmental health. He is the Chief of the Enrichment Branch, Division of Fuel Cycle Safety and Safeguards, NMSS, which has responsibility for all regulatory matters related to uranium enrichment. (*Id.* and Attach. 2.) Dr. Price earned his Ph.D. in chemical engineering and currently he is a senior chemical engineer with Science Applications International Corporation ("SAIC"). As task manager, he directed SAIC's effort to develop under contract to the NRC the Safety Evaluation Report for the CEC and, in over 16 years with SAIC, Dr. Price has had extensive experience in safety, transport, and environmental analyses of nuclear waste facilities as well as chemical process modeling and analysis. (Staff Exh. 4.)[3] Pursuant to the pretrial stipulation of the parties and without further objection at the hearing, the prefiled direct testimony of Mr. Faraz and Mr. Hickey on these contentions was admitted. (Tr. 1104.) We find that Mr. Faraz, Mr. Hickey, and Dr. Price are qualified by education, knowledge, and experience to testify as experts on the issues involved in contentions B and J.3.

As in the case of the other contentions adjudicated in this proceeding, the Commission's rules of practice for the conduct of formal hearings provide in 10 C.F.R. § 2.732 that the Applicant has the burden of proof in the proceeding. Therefore, in order for LES to prevail on each contested factual issue, the Applicant's position must be supported by a preponderance of the evidence. *Philadelphia Electric Co.* (Limerick Generating Station, Units 1 and 2), ALAB-819, 22 NRC 681, 720 (1985); *Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), ALAB-763, 19 NRC 571, 577 (1984). *See* 1 Charles H. Koch, Jr., *Administrative Law and Practice* § 6.44 (1985). In

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[2] Without objection, Intervenor's Exhibit I-AM-70, Sandia National Laboratories, "Performance Assessment of the Proposed Disposal of Depleted Uranium as Class A Low-Level Waste," Dec. 1992 (I-AM-70), was offered into evidence by CANT on these contentions and admitted. (Tr. 1081.)

[3] Without objection, Staff's Exhibit 4 (Staff Exh. 4), a statement of Dr. Price's professional qualifications, was offered into evidence by the Staff and admitted. (Tr. 1106.) Previously, the Staff's Safety Evaluation Report ("SER"), Staff Exh. 1, and the Staff's FEIS, Staff Exh. 2, which are also relevant to these contentions, were admitted into evidence in the proceeding. (Tr. 154, 501.)

accordance with the Commission's burden of proof rule and pursuant to the stipulation of the parties, the Applicant presented its case on these contentions first, followed by the Intervenor, and then the NRC Staff.

II. BOARD FINDINGS ON PARTIES' POSITIONS

Before turning to contention B, a further brief explanation of the applicable standard for judging the Intervenor's challenge to the Applicant's funding plan is helpful. As previously mentioned, the Licensing Board admitted CANT's contention B to the extent that it challenged the reasonableness of the LES Decommissioning Funding Plan. In so ruling, the Board noted that the Commission's hearing notice required the Applicant to have a plausible strategy for the disposal of DUF_6 tails as part of its funding plan and that the Commission's regulations required the funding plan to contain reasonable cost estimates for the components of the plan. Although in its hearing notice the Commission listed a number of possible generic tails disposal strategies such as storage of tails at the plant site as a possible future resource or conversion of tails to uranium oxide for disposal, the Commission did not specifically define what constitutes a plausible strategy. The plain meaning of these terms, however, provides the answer. The dictionary defines "plausible" as "reasonable" or "credible," *Webster's Third New International Dictionary* 1736 (1971), and "strategy" as a "plan." *Id.* at 2256. Thus, in assessing the plausible tails disposal strategy adopted by the Applicant as part of its decommissioning funding plan, we first must determine whether the funding plan contains a reasonable or credible plan to dispose of the DUF_6 tails generated at the CEC and then determine whether the Applicant's cost estimates for the components of the plan are reasonable.

A. LES Tails Disposal Strategy

The Applicant's tails disposal strategy is capsulized in the LES Decommissioning Funding Plan that appears as Exhibit 1 to the LES License Application. In pertinent part, the Applicant's funding plan states:

> The annual tails disposal cost is estimated to be $16.175 million. This is multiplied by 30 years to arrive at the $485.3 million figure. Costs are based on converting UF_6 to U_3O_8 with subsequent disposal in a facility under cognizance of the NRC. U_3O_8 conversion costs are based on estimates by a vendor which could make this service available to LES. Disposal costs are based on NRC recommendations and a study by Martin Marietta. The conversion and disposal costs are added and escalated to 1996 dollars.

(App. Exh. 1, at Exh. 1, at I-4.) Further, the LES funding plan states that the Applicant intends to set aside the annual tails disposal cost component of its overall decommissioning costs in an external trust that meets the requirements of the Commission's funding regulations. (*Id.* at I-2, I-5, I-8 to -9.) Finally, the LES plan states that the Applicant will update its decommissioning cost estimate at least once every 5 years. (*Id.* at I-6.)

At the hearing, the Applicant's witnesses, Mr. LeRoy and Mr. Dekker, provided additional details of the LES tails disposal plan. Their testimony recognizes that there currently are no facilities in the United States to convert DUF_6 to U_3O_8, but they stated that COGEMA, Inc., the American affiliate of a French nuclear fuel company, "has indicated to LES in writing its willingness to consider providing, in the United States, conversion services for DUF_6." (LeRoy-Dekker at 24 fol. Tr. 1016; App. Exhs. 5 & 6.) These LES witnesses asserted that, in its letters to LES, COGEMA indicated that the experience gained by its parent company in successfully operating a commercial-size defluorination facility in France could be used as the basis for employing technology in the United States to convert DUF_6 to U_3O_8. As the COGEMA letter states, the "prudent management of depleted UF_6 should consider conversion to U_3O_8 powder, which is insoluble in water, does not react with external chemical agents, is free of fluorine and is the most compact form for storage." (App. Exh. 5.) Additionally, Mr. LeRoy and Mr. Dekker testified that, in 1991, COGEMA estimated its charge for deconversion services to be in the range of $3-5 per kilogram of uranium and its 1995 updated estimate indicated a range of $4-6. These witnesses stated that these estimates assume the construction and operation of a deconversion facility in the United States under NRC standards. (LeRoy-Dekker at 24 fol. Tr. 1016; App. Exhs. 5 & 6)

After conversion of the DUF_6 tails to U_3O_8, the LES disposal strategy provides for the U_3O_8, as waste, to be shipped to a final disposal site for deep land burial such as in a deep mine. Again, the LES disposal plan recognizes that currently there are no operating deep disposal sites, but Mr. LeRoy testified that it is reasonable to assume such a site will be available in the future because in the United States there are dozens of underground uranium mines and other underground mines. (LeRoy-Dekker at 34 fol. Tr. 1016.)

Although the Applicant's tails disposal strategy calls for LES to convert the CEC tails to U_3O_8 and then ship the U_3O_8 for deep burial as waste, Mr. LeRoy candidly admitted in his testimony that, "[a]s a practical matter, LES is holding open its options for disposition of UF_6." (*Id.* at 19.) He testified that "for purposes of this licensing proceeding, in order to satisfy the Commission's requirement that the CEC license application contain a 'plausible strategy' for disposition of depleted uranium, LES has assessed, and factored into its funding plan the costs of conversion of DUF_6 to DU_3O_8 and land disposal (deep burial) of DU_3O_8 as if it were a waste." (*Id.*) The Applicant's witnesses stated, however,

that LES did not necessarily plan on disposing of the depleted uranium from the CEC by burying it as waste and that there were other potential options for the future disposition of DUF_6. They noted that the Department of Energy ("DOE") is currently analyzing the tails disposition issue and that European enrichers consider depleted uranium tails a resource rather than a waste product. Further, they testified that Urenco's long-term plan for the disposition of depleted uranium is being studied and that, at present, the plan calls only for the offsite conversion of tails to U_3O_8. (*Id.* at 20.) Finally, Mr. LeRoy readily conceded that, as a practical matter, LES will follow the same tails disposition option that DOE selects for its stockpile of tails. (Tr. 1076-77, 1069-70.)

The NRC Staff witnesses, Mr. Faraz and Mr. Hickey, stated in their direct testimony that they found the Applicant's tails disposition plan calling for conversion of DUF_6 to U_3O_8, with subsequent deep subsurface burial, an acceptable plausible strategy. In this regard, the Staff's review of the LES decommissioning plan in the SER states:

> Currently there are no facilities designed and equipped for the disposition of large volumes of depleted uranium originating from enrichment facilities. The Department of Energy (DOE) currently possesses essentially the entire depleted UF_6 inventory in the United States. In July 1993, the United States Enrichment Corporation (USEC) took over from DOE low enriched uranium production activities conducted at the two operating gaseous diffusion plants (GDP) located in Portsmouth, Ohio and Paducah, Kentucky. Currently neither DOE nor USEC has in place a plan concerning final disposition of the DUF_6. The Energy Policy Act of 1992 requires DOE to address this issue. The NRC staff believes that it is premature to require a prescriptive resolution prior to DOE's determination on disposition of DUF_6, which will, to a large extent, determine the disposition options for LES' DUF_6. For the purpose of estimating funding requirements related to the disposition of DUF_6, the NRC staff finds acceptable the applicant's estimates based on conversion of DUF_6 to U_3O_8, which is much more environmentally stable than UF_6 or uranium tetrafluoride (UF_4), and disposition in a deeper than shallow land burial facility (for example, an abandoned mine cavity).

(Staff Exh. 1, at 15-12.)

Additionally, in the FEIS, the Staff modeled the respective doses for both near-surface and deep burial disposal because there currently are no disposal facilities for large quantities of depleted uranium tails. Because the projected drinking water and agricultural doses from a modeled near-surface burial site consisting of an earth-mounded bunker subject to the environmental characteristics of the humid southeastern United States exceeded the 10 C.F.R. Part 61 limits, the Staff concluded that a deep disposal site is most likely to be selected for tails disposal. (Staff Exh. 2, at 4-66 to -67 & Appendix A, at A-9.) The Staff also modeled a hypothetical deep disposal site. It assumed the site would be an existing cavity, such as an abandoned mine, located in the United States and would have geologic characteristics similar to those of two representative sites that previously have been characterized for disposal of radioactive waste,

i.e., a granite formation overlain by a thin layer of glacial till or a sequence of interbedded sandstone and basalt layers. (Staff Exh. 2, at 4-66 to -67 & Appendix A, at A-10.) The Staff's FEIS analysis concluded that all estimated dose impacts for a deep disposal site are less than those set forth in 10 C.F.R. Part 61. (Staff Exh. 2, at 4-67 to -68 & Appendix A, at A-10 to -15.)

The purpose of the Applicant's tails disposal strategy is to enable the computation of reasonable cost estimates for the various essential elements of the decommissioning plan, thereby ensuring compliance with the Commission's regulatory requirement that during the CEC's life LES escrows sufficient funds to cover, *inter alia*, the cost of tails disposal. With this in mind, we find that the Applicant has presented a plausible disposal strategy. The Applicant's plan to convert DUF_6 to U_3O_8 at an offsite facility in the United States and then ship that material as waste to a final site for deeper than surface burial is a reasonable and credible plan for tails disposal. Although no conversion facilities currently exist in the United States, the LES materials license will give the Applicant 15 years before it first must move the accumulated DUF_6 offsite. (App. Exh. 1(e), at 1-2.) The conversion of DUF_6 to U_3O_8, as the COGEMA experience in France demonstrates, is a commercially feasible process using known chemical processes that could be readily employed in the United States by COGEMA or another entity without first having to overcome difficult technical hurdles. (App. Exh. 7, at 18; Staff Exh. 2, at Appendix A, at A-1 to -4.) Thus, contrary to the Intervenor's assertion,[4] the fact that there is no currently operating defluorination facility in the United States or a firm commitment by COGEMA or some other entity to build such a facility does not somehow make it unlikely, or unreasonable to assume, that one will be built here in the future to convert DUF_6 tails to U_3O_8. Similarly, in light of the numerous existing uranium and other mines in the United States, it is reasonable to assume an appropriate site for deep burial of U_3O_8 will be available in the future. Indeed, the reasonableness and credibility of the LES disposal strategy is enhanced by the Department of Energy's clear need to address the disposal options for its huge inventory of DUF_6 that, as of mid-1992, amounted to some 534,000 metric tonnes (App. Exh. 8, at 3) — an amount of depleted uranium tails five times the amount of tails the CEC will produce under its 30-year license.

Further, CANT's legal challenge to that element of the Applicant's disposal strategy calling for deep burial of U_3O_8 is without merit. It argues that pursuant to the Commission's regulations, 10 C.F.R. § 61.55(a)(2)(iv), deeper than surface burial is unavailable for DUF_6 disposal. According to the Intervenor, DUF_6 waste, which CANT claims is closely comparable in radiological properties to transuranic waste, must be disposed of in a geologic repository (with a

[4] Citizens Against Nuclear Trash's Proposed Reply Findings of Fact and Conclusions of Law Regarding Contentions B and J.3 (June 26, 1995) at 21 [hereinafter CANT RF].

consequent order of magnitude increase in cost) unless the Commission first approves and licenses a specific disposal site. The Intervenor claims, therefore, that LES does not have the option of establishing, based on a generic analysis like that in the FEIS, that the tails can be disposed of in some intermediate waste disposal facility.[5] The Intervenor's assertions, however, merely repeat the same arguments CANT made to us in its pretrial "Petition for Waiver of 10 C.F.R. § 61.55(a)(3) and 10 C.F.R. § 61.55(a)(6) and for Classification of Depleted Uranium Tails as Greater Than Class C Radioactive Waste" (Jan. 17, 1995). In a pretrial Memorandum and Order (Mar. 2, 1995) we rejected these same arguments and denied the Intervenor's waiver petition. Our earlier ruling is the law of the case on these issues and forecloses any reexamination here. Thus, in accordance with our earlier ruling, we find that the Applicant's tails disposal strategy is not deficient for failure to treat the CEC tails as greater than class C waste with mandatory disposal in a geologic repository licensed under 10 C.F.R. Part 60.

Although we find that the Applicant's tails disposal plan is a plausible strategy for purposes of estimating LES' tails disposal costs, we note that a recent change in the law by the enactment of the USEC Privatization Act, Pub. L. No. 104-134, 100 Stat. 1321 (1996), will most likely dictate the actual LES disposal strategy.[6] That Act now makes DOE, at the request of an NRC-licensed enricher, responsible for the disposal of depleted uranium tails at DOE's disposal costs,

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[5] Citizens Against Nuclear Trash's Proposed Findings of Fact and Conclusions of Law Regarding Contentions B and J.3 (May 26, 1995) at 28-30, 39-47 [hereinafter CANT PF].

[6] In its entirety, 42 U.S.C. § 2297h-11 provides as follows:

> (a) Responsibility of DOE
>
> (1) The Secretary, at the request of the generator, shall accept for disposal low-level radioactive waste, including depleted uranium if it were ultimately determined to be low-level radioactive waste, generated by—
>
> (A) the Corporation as a result of the operations of the gaseous diffusion plants or as a result of the treatment of such wastes at a location other than the gaseous diffusion plants, or
>
> (B) any person licensed by the Nuclear Regulatory Commission to operate a uranium enrichment facility under sections 2073, 2093, and 2243 of this title.
>
> (2) Except as provided in paragraph (3), the generator shall reimburse the Secretary for the disposal of low-level radioactive waste pursuant to paragraph (1) in an amount equal to the Secretary's costs, including a pro rata share of any capital costs, but in no event more than an amount equal to that which would be charged by commercial, State, regional, or interstate compact entities for disposal of such waste.
>
> (3) In the event depleted uranium were ultimately determined to be low-level radioactive waste, the generator shall reimburse the Secretary for the disposal of depleted uranium pursuant to paragraph (1) in an amount equal to the Secretary's costs, including a pro rata share of any capital costs.
>
> (b) Agreements with other persons
>
> The generator may also enter into agreements for the disposal of low-level radioactive waste subject to subsection (a) of this section with any person other than the Secretary that is authorized by applicable laws and regulations to dispose of such wastes.
>
> (c) State or interstate compacts
>
> Notwithstanding any other provision of law, no State or interstate compact shall be liable for the treatment, storage, or disposal of any low-level radioactive waste (including mixed waste) attributable to the operation, decontamination, and decommissioning of any uranium enrichment facility.

including a pro rata share of any of DOE's capital costs. 42 U.S.C. § 2297h-11(a)(1)(B),(a)(3). As previously indicated, the Applicant's Licensing Manager, Mr. LeRoy, testified that, as a practical matter, LES will follow the same disposal option selected by DOE for the government's DUF_6 stockpile. Similarly, the Staff's witness, Mr. Hickey, testified that the NRC anticipates that LES will use the same tails disposal method that DOE selects. (Tr. 1156-57.) The Intervenor also apparently agrees, for in its proposed findings CANT states that "LES intends to rely on DOE's disposition strategy." CANT PF at 50. Thus, even though the USEC Privatization Act, 42 U.S.C. § 2297h-11(b), provides LES with the option of using other authorized persons for tails disposal, we think it is clear, and all parties apparently agree, that the Applicant's actual disposal method will be to transfer the CEC tails to DOE and pay DOE's disposal charges.[7]

B. Cost Estimates for Tails Disposal

While we recognize that DOE's future charges for tails disposal will ultimately determine the Applicant's tails disposal costs, the Commission's regulations require that the Applicant provide reasonable cost estimates for its tails disposal plan at this time in order to ensure that LES sets aside sufficient funds during the life of the CEC to cover its disposal costs. Accordingly, we must determine whether the Applicant's cost estimates for the components of its chosen plan are reasonable on the basis of the record before us. We turn now to those cost estimates, noting that, because DOE's disposal scheme is likely to be the same as the Applicant's plausible strategy, the current hearing record still is relevant to the issue of whether the Applicant's ultimate tails disposal cost estimate is reasonable.

As earlier indicated, the Applicant's Decommissioning Funding Plan provides that the annual tails disposal cost for the CEC is $16.175 million, totaling $485.3 million for 30 years of operation. (App. Exh. 1, at Exh. 1, at I-4.) At the hearing, Mr. LeRoy's direct testimony stated that the annual tails disposal figure includes $0.8 million for shipment costs, $12.0 million for conversion costs of

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[7] As a practical matter, the enactment of 42 U.S.C. § 2297h-11(a) and (c) making DOE responsible for depleted uranium tails upon the request of the enricher and insulating any state or interstate compact from liability for such wastes, also moots the Intervenor's legal argument that the LES tails disposal strategy is implausible because it fails to provide that the tails from the CEC must be disposed of in Louisiana, or within the states of the Central Interstate Compact of which Louisiana is a member, under the provisions of the Low Level Radioactive Waste Policy Act ("LLRWPA"), 42 U.S.C. § 2021b *et seq.*, and the practical workings of that law. CANT PF at 7-10, 30-34; CANT RF at 15-17. The Applicant already has indicated that its actual disposal method will be to transfer the CEC tails to DOE — a view shared by the Staff and the Intervenor. Therefore, in light of the new federal option available to the Applicant, it is a virtual certainty, for many of the reasons urged by the Intervenor in its argument, that no State or interstate compact will undertake the time-consuming, expensive, and politically difficult task of licensing a facility for depleted uranium tails, thereby further ensuring that the Applicant will request DOE to dispose of the CEC tails. Thus, the Intervenor's elaborate argument under the LLRWPA has been overtaken by the passage of the USEC Privatization Act.

DUF_6 to U_3O_8, and $3.375 million for disposal of U_3O_8. (LeRoy-Dekker at 23 fol. Tr. 1016.) In the SER, the Staff found the Applicant's estimated facility decommissioning funding, which includes the Applicant's annual tails disposal cost of $16.175 million, adequate. (Staff Exh. 1, at 15-21, 15-23.) At the hearing, Mr. Faraz and Mr. Hickey stated in their direct testimony that the LES tails disposal estimates were reasonable and, more specifically, that the Applicant's estimated cost for U_3O_8 burial was reasonable. (Faraz-Hickey at 7, 8 fol. Tr. 1106.) The Intervenor challenges each of the Applicant's component cost estimates.

1. Transportation Costs

In his prefiled direct testimony, Mr. LeRoy stated, without elaboration, that the LES estimate of $800,000 per year transportation costs for depleted uranium tails "is based on conversations with shippers of UF_6 and U_3O_8." (LeRoy-Dekker at 25 fol. Tr. 1016.) The Intervenor's witness, Dr. Makhijani, challenged the validity of the LES estimate, asserting that it implicitly assumes that the conversion facility will be located very close to the disposal site. He opined that, because the location of the disposal site is unknown, such an assumption is rash and that it was unlikely any community would accept both a conversion facility and a disposal site. Dr. Makhijani testified that the Applicant's transportation costs should have provided for the cost of the shipment of U_3O_8 from the conversion facility to the disposal site as well as for packaging the U_3O_8 for shipment. (Tr. 1200.)

The Applicant's testimony setting out the basis for its annual tails disposal cost estimate is sparse, at best. Nevertheless, contrary to Dr. Makhijani's assertion, the reasonable inference from Mr. LeRoy's bare-bones testimony that the LES estimate is based upon information from shippers of UF_6 and U_3O_8 is that the Applicant's estimated shipping costs are based upon the shipment of DUF_6 tails to the converter as well as the shipment of U_3O_8 from the converter to a disposal facility. And, in the end, any weakness in the Applicant's testimony about its transportation costs is rectified by the transportation cost data contained in the 1990 Martin Marietta Report, "The Ultimate Disposition of Depleted Uranium," prepared at Oak Ridge for DOE (App. Exh. 7, at 17-18) and the 1994 EG&G Report, "Depleted Uranium Disposal Options Evaluation," prepared at Idaho Falls also for DOE. (App. Exh. 8, at 48-50.)

The Martin Marietta Report estimated that the rail transportation cost of shipping DUF_6 from Paducah, Kentucky, the location of one of the gaseous diffusion plants then owned by DOE, to an unspecified West Coast location for conversion and disposal was approximately $0.15/kgU. The EG&G Report estimated that the truck transportation cost of shipping U_3O_8 from Piketon, Ohio, the location of another DOE facility, to the Nevada Test Site ("NTS") in Nevada

was approximately $0.18/kgU in 1993 dollars. In addition, the EG&G Report estimated that 55-gallon drum container costs added another $0.11/kgU to the estimate. Obviously, precise transportation cost estimates cannot be obtained at this time because such costs are dependent on the location of the conversion facility and the ultimate disposal site. But the application of this same rail rate from Paducah to the same West Coast location for the CEC UF_6 tails yields transportation costs of less than half the amount to be set aside by LES for annual transportation costs. Even escalating that cost to 1996 dollars yields an amount that is a little over half the LES estimate. Similarly, the application of this same truck and container rate from Piketon to the NTS for the CEC U_3O_8 yields total transportation costs that are about 90% of the amount to be set aside by LES for annual transportation costs. Even escalating that cost to 1996 dollars yields an amount that is approximately the same as the LES estimate. Although Paducah, Kentucky, and Piketon, Ohio, obviously are not Homer, Louisiana, this comparison serves to illustrate the dimensions of the rail transportation costs of UF_6 and the truck transportation costs of U_3O_8 from east of the Mississippi River to the West Coast and the NTS, respectively. Accordingly, we find that the Intervenor's challenge to the Applicant's annual tails disposal transportation cost estimate is without merit and that the LES estimate of the transportation component of its tails disposal estimate is a reasonable one.

2. *Disposal of U_3O_8*

The Applicant's annual tails disposal estimate also includes $3.375 million for the deep disposal by burial of U_3O_8. Mr. LeRoy testified that the LES estimate is based upon a June 18, 1993 letter from the NRC to LES. (LeRoy-Dekker at 25 fol. Tr. 1016.) In part, the NRC letter states that "[u]ntil the specific disposal site and method are identified, the estimated cost is uncertain. However, for financial planning purposes, we believe that it is reasonable to assume a disposal cost of approximately $1.00 per kilogram of U_3O_8." (App. Exh. 4h, at 1-2.) In turn, the Staff's basis for the $1.00/kg U_3O_8 relies upon the 1990 Martin Marietta Report and the Staff's tracking of low-level waste burial charges. (LeRoy-Dekker at 26 fol. Tr. 1016; Faraz-Hickey at 9 fol. Tr. 1106.) The Martin Marietta Report estimates the permanent disposal costs of U_3O_8 utilizing the waste disposal fees for shallow burial at the federal NTS and Hanford, Washington disposal sites. It states that, with efficient packaging, low-density U_3O_8 would cost about $0.25/kgU for NTS disposal and $1.00/kgU at Hanford. The Report concludes that the higher-cost disposal estimate of $1.00/kgU represents the prudent basis for current estimates. (App. Exh. 7, at 17.)

Mr. LeRoy explained that the LES estimate stated in kilograms of U_3O_8 is about 15% higher than the estimates from the Martin Marietta Report stated in

kilograms of uranium because U_3O_8 is about 85% uranium by weight. (LeRoy-Dekker at 27 fol. Tr. 1016.) Additionally, he testified that a 1994 EG&G Report indicates that the LES burial estimate of $1.00/kg U_3O_8 remains valid. (*Id.* at 26.) The EG&G Report estimates the cost of nonretrievable burial of DU_3O_8 by DOE at the NTS to be $0.15/kgU in 1994 dollars and about 19% more, or $0.18, for a non-DOE generator. Further, the EG&G Report estimates the cost of U_3O_8 burial at the Hanford Site at $1.81/kgU. (App. Exh. 8, at 51; LeRoy-Dekker at 26-27 fol. Tr. 1016.) Thus, Mr. LeRoy concluded that the LES estimate of $1.00/kg U_3O_8 in 1993 dollars, which translates to $1.27/kgU in 1994 dollars, falls squarely within the range of estimates in the EG&G Report of $0.18 to $1.81/kgU in 1994 dollars and remains reasonable today. (LeRoy-Dekker at 27 fol. Tr. 1016.)

Dr. Makhijani challenges the reasonableness of the Applicant's U_3O_8 burial cost estimate asserting that the estimate of the Applicant and the NRC Staff is not based on the Applicant's own plausible strategy for tails disposal. Rather, he asserts that while the LES disposal plan calls for deeper than surface burial, the two studies on which the LES and Staff estimates are based deal only with near-surface burial costs, not deep burial. (Makhijani at 4, 20 fol. Tr. 1081.)

While acknowledging that the disposal cost estimates in the Martin Marietta and the EG&G Reports are based on near-surface disposal, Mr. LeRoy testified that deep disposal should be no more costly than near-surface disposal because deep burial of U_3O_8 does not require expenses for engineered barriers and containers that are usually required for near-surface disposal. He stated that lower costs for deep disposal also would result from reduced security expenses based on the decreased likelihood of an intruder entering a deep burial site. (LeRoy-Dekker at 31-32 fol. Tr. 1016.) Similarly, the Staff witnesses, Mr. Faraz and Mr. Hickey, indicated that several factors will tend to decrease the cost of disposal for depleted uranium including the large volume and uniformity of tails; the economies of scale that will be possible if the CEC tails are buried with those from DOE; and savings in construction costs if the tails are disposed of in an existing underground cavity. (Faraz-Hickey at 10 fol. Tr. 1106.)

Based on this Applicant and Staff testimony, we find that it was not unreasonable for the Applicant to base its cost estimate for deep disposal on the near-surface cost estimates in the Martin Marietta and the EG&G Reports. Accordingly, we find that the LES cost estimate for burial of the CEC depleted uranium tails is a reasonable one.[8]

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[8] In its proposed findings, the Intervenor argues that the LES estimate for burial of U_3O_8 is also unreasonable because it fails to take into account the costs of siting, characterizing, and licensing a disposal facility. CANT PF at 36, CANT RF at 19-20. But the argument the Intervenor now makes in its proposed findings is not one it sought to support at the hearing with evidence. In making its evidentiary presentation, the Intervenor sought to demonstrate that neither LES nor the Staff had proposed or provided for the contingency that there

(Continued)

3. *DUF_6 Conversion Costs*

The Applicant's estimate of $12 million annually, or $360 million over 30 years of operation, for the conversion of DUF_6 to U_3O_8 comprises the largest component of the LES tails disposal cost estimate of $16.175 million per year or $485.3 million over 30 years of operation. In their prefiled direct testimony, Mr. LeRoy and Mr. Dekker stated that "[t]he cost of conversion of DUF_6 to depleted U_3O_8 is based on an estimated conversion cost of $4.86 per kilogram of uranium ($1996), which was provided to LES by COGEMA, Inc., the U.S. affiliate of a French nuclear service company." (LeRoy-Dekker at 23-24 fol. Tr. 1016.) The Applicant's witnesses then stated that COGEMA has indicated to LES in writing its willingness to consider providing conversion services for UF_6 in the United States and that, in a 1991 letter (App. Exh. 5), COGEMA estimated that its charge for such services in 1991 dollars would be in the range of $3 to $5/kgU. (*Id.* at 24.) Referring to Applicant's Exhibit 6, they then stated that "[i]n its more recent letter, COGEMA provided an updated estimate of $4 to $6/kgU ($1995), which is in line with LES' conversion cost estimate of $4.86 ($1996) ($4.67 in $1995)."[9] (*Id.*) They also declared that these estimates assume construction and operation of a conversion facility in the United States and are based on COGEMA's actual experience in construction and operation of a commercial facility in France. (*Id.*) Mr. LeRoy and Mr. Dekker asserted that these cost estimates also are comparable to actual costs incurred by Urenco for conversion of UF_6 to U_3O_8 in Europe. Further, they testified that "[t]he estimate provided by COGEMA includes the understanding that COGEMA would assume responsibility [for the] handling of any non DU_3O_8 material produced during conversion (e.g., hydrofluoric acid-HF) [and] LES is responsible for dispositioning the DU_3O_8 only." (*Id.*) Finally, the LES witnesses declared that this practice is consistent with Urenco's actual conversion experience in Europe, where HF remained with the converter. (*Id.* at 25.)

At the hearing, the Intervenor's witness, Dr. Makhijani, challenged the validity of the Applicant's conversion cost estimate of $4.86/kgU asserting, in

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may be no disposal site available in 15 years or even 30 years at the end of the CEC license term. The Intervenor thus argued that a careful analysis of the safety and durability of UF_6 storage cylinders was necessary. (Makhijani at 22-23 fol. Tr. 1081.) There is ample evidence in the record about the safe useful life of UF_6 cylinders that addresses the Intervenor's concern about cylinders. (App. Exh. 7, at 9-11.) The Applicant and the Staff are not required to counter an evidentiary case that the Intervenor never made.

[9] The Applicant did not explain further the derivation of the LES conversion cost "estimate" provided to LES by COGEMA of a rather exact $4.86/kgU in 1996 dollars or $4.67 in 1995 dollars when the 1991 COGEMA letter (App. Exh. 5) and the subsequent 1995 letter (App. Exh. 6) referred, respectively, to a charge in the range of $3-5/kgU and $4-6. In responding to a June 18, 1993 Staff request for revised tails disposal cost estimates (App. Exh. 4h), however, the Applicant informed the Staff that "[t]he cost of conversion of DUF_6 to depleted uranium oxide (DU_3O_8) is based upon an estimate of $4.00 per kilogram uranium. This estimate was provided to LES by COGEMA." (App. Exh. 4o.) It appears that the $4.00 is merely the mid-range of COGEMA's 1991 estimate of $3-5 escalated from 1991 to 1995 and 1996 dollars using the Applicant's standard 4% per year escalator yielding $4.67 in 1995 dollars and $4.86 in 1996 dollars.

effect, that the Applicant's failure to break the estimate into constituent parts precludes any evaluation of the estimate or its reasonableness. (Tr. 1205-06.) Specifically, he testified that the Applicant's $4.86 figure understates the cost of conversion because it fails to include the considerable cost of approximately $1.50/kgU for neutralizing to calcium fluoride ("CaF_2") the hydrofluoric acid ("HF") byproduct that is produced during the conversion of UF_6 to U_3O_8. (Tr. 1206-09.) Such neutralization costs were necessary he asserted because his past evaluation of the demand in the United States for hydrofluoric acid showed that it was a declining market. According to Dr. Makhijani, a very large use of HF is in the production of ozone-depleting chlorofluorocarbons ("CFCs") that now are being phased out pursuant to federal law and international agreements. Although recognizing that HF is used in the initial production of UF_6, Dr. Makhijani testified that large purchases of Russian high-enriched uranium for reactor fuel and the additional release of American stockpiles of high-enriched uranium will further drive down the domestic demand for HF by limiting the need for enrichment services. He further stated that a 1990 Oak Ridge report, "The Ultimate Disposition of Depleted Uranium" (DE 91-006414), that was published before the establishment of any firm deadlines for phasing out CFCs or the American purchase of Russian high-enriched uranium, concluded that there may be no market for contaminated hydrofluoric acid in the United States. Finally, Dr. Makhijani testified that converting high-enriched uranium in the form of uranium metal to reactor fuel can be done using conversion methods that either use or do not use HF and that the process for conversion in this country has yet to be selected.

On the basis of the evidentiary record in this proceeding, we cannot find that the Applicant's estimated cost of $4.86/kgU (totaling $12 million annually and $360 million over 30 years of operation) is a reasonable estimate for converting DUF_6 to U_3O_8. The LES estimate is deficient because it fails to include the significant cost of neutralizing the hydrofluoric acid byproduct of the conversion process. The evidentiary record is clear that the Applicant's cost estimate for converting DUF_6 to U_3O_8 does not include any provision for incurring the additional substantial cost of neutralizing the byproduct HF from the primary conversion process. (LeRoy Tr. 1055, 1049. *See also* App. Exh. 7 at 17.)[10] Instead the Applicant's position assumes that the COGEMA operation

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[10] The EG&G Report establishes that the conversion costs of neutralizing HF to CaF_2 are significant and contribute about $1.50/kgU to the total conversion cost of $8.40 in 1992 dollars. (App. Exh. 8, at 47; Hickey Tr. 1133-35.) This HF neutralization cost estimate in 1992 dollars is derived from the EG&G Report and excludes any construction or other miscellaneous fees. It also assumes that the disposal cost for CaF_2 is minimal due to its slight contamination and likelihood of disposal as ordinary waste. (Hickey Tr. 1134-35.) The Staff's witness, Mr. Hickey, agreed that the estimate of $1.50/kgU for the neutralization of byproduct HF to CaF_2 was reasonable and that he had no other estimate to offer. (Tr. 1135.) Adding the conservative $1.50 cost of HF neutralization to the Applicant's estimated costs for converting DUF_6 to U_3O_8 results in a more than 30% increase to the LES

(Continued)

in France, in which HF is recycled as part of COGEMA's extensive nuclear fuel cycle manufacturing activities or otherwise marketed, will be replicated in the United States. It has not, however, provided any supporting evidence that there will be a sufficient market in the United States for the byproduct HF allowing it to be economically recycled or otherwise sold. Without evidence to show that there will be a sufficient market for the byproduct HF in the United States, we can only conclude that a domestic conversion facility, regardless of whether it is ultimately built and operated by COGEMA or some other entity, will have to neutralize the HF as an additional step in the conversion process and that the additional cost must be included in the cost of conversion. Thus, contrary to the assertions of the Applicant's witness that the conversion of HF to CaF_2 is not the Applicant's concern because COGEMA's cost estimate for UF_6 conversion includes the understanding that COGEMA would assume responsibility for all conversion byproducts except U_3O_8 (LeRoy at Tr. 1050), the reasonableness of the LES conversion cost estimate component is not "converter specific" and is not dependent upon COGEMA performing the service.[11]

In making this finding, we are aware that the Applicant's witness, Mr. LeRoy, testified that in "the conversations we have had with COGEMA and in the SECY paper [SECY-91-019 (App. Exh. 3)], it is stated that COGEMA, after converting the DUF_6 to U_3O_8 uses the HF that is produced either for the forward process of converting natural U_3O_8 to natural UF_6 or the HF is sold on the industrial market." (Tr. 1049. *See also* Tr. 1050, LeRoy-Dekker at 29 fol. Tr. 1016.) But this proffer of the COGEMA model in France, with its extensive nuclear fuel reprocessing, manufacturing, and waste disposal activities under one government umbrella, is not sufficient to establish, without significant additional evidence, the feasibility or likelihood that a conversion facility in the United States could economically recycle or otherwise market the byproduct HF from the conversion of the CEC tails.

This failure of proof is especially significant in the circumstance where the domestic chemical market also will be faced with the byproduct HF from the conversion of the huge DOE stockpile of tails as well as the ever-increasing

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conversion costs, increasing the Applicant's annual conversion costs from $12 million to $15.7 million and, over 30 years of operation, from $360 million to $471 million. The addition of this increase in conversion costs to the LES total tails disposal cost estimate increases it from $485.3 million over 30 years of operation to almost $600 million.

[11] Indeed, for this same reason we rejected the Intervenor's assertion in considering the Applicant's transportation cost estimate that the Applicant's disposal strategy was not plausible because LES did not have a firm commitment from COGEMA, Inc., to build a conversion facility in the United States. The Applicant offered no evidence that COGEMA, Inc., actually would build and operate a conversion facility in the United States. Rather, it only offered an expression of interest letter stating "COGEMA Inc.'s willingness to consider the possibility of providing, in the United States, conversion services." (App. Exh. 6.) Because the Applicant had no such commitment, the Intervenor asserted that the LES transportation estimate would have to include the costs of shipping the DUF_6 to France and returning the U_3O_8 to the United States. CANT RF at 21-22. The record indicates those costs would add some $4-5 million a year to the LES transportation costs. (App. Exh. 40 at Appendix E, at E-2; LeRoy Tr. 1059-60.)

accumulation of tails from the United States Enrichment Corporation. Indeed, Mr. LeRoy indicated that the Applicant's cost projections for disposal did not include any analysis of the future market for conversion byproducts and he acknowledged that there could be a glut of such byproducts on the market in the future from tails conversion. (Tr. 1051.) He further conceded that the question of the cost of neutralization of HF is not irrelevant to the LES cost estimate. (Tr. 1055-56.) He thus provided nothing to counter effectively the testimony of the Intervenor's witness, Dr. Makhijani, that his past analysis showed the domestic market for HF was shrinking due to the phase out of CFCs and the decrease in demand for enrichment services from the introduction of Russian and American high-enriched uranium, *see* LBP-96-25, 44 NRC at 352-60, a conclusion he further buttressed with the 1990 Oak Ridge report indicating that there may be no market in the United States for byproduct HF.

Further, we note that in assessing the environmental impacts from the conversion of UF_6 to U_3O_8, the Staff's FEIS assumes that the byproduct HF will be neutralized to CaF_2. (Staff Exh. 2, at A-2 to -4.) More important, however, is the Staff's response in the FEIS to public comments on the draft environmental impact statement concerning the decline in the American market for HF. The Staff described the sale of HF as merely a "possibility" (Staff Exh. 2, Vol. 2, at 1-198) and went on to state in responding to comments about the impacts of transporting HF that "[c]onversion operations would likely result in production of calcium fluoride." (*Id.* at 1-199.) Similarly, the 1994 EG&G Report introduced by the Applicant that evaluates the disposal options and costs for DOE's depleted uranium and estimates $8.40/kgU as the cost of conversion assumes that all byproduct HF from the conversion of UF_6 to U_3O_8 is neutralized by converting it to CaF_2 and disposing of it in that form. (App. Exh. 8, at 43, 47.) Accordingly, on the basis of this evidentiary record, we cannot find that the Applicant has met its burden of proof and demonstrated by a preponderance of the evidence that the LES cost estimate for the conversion of DUF_6 to U_3O_8 is a reasonable one because it fails to include the substantial costs for neutralizing the byproduct HF from the conversion process.[12]

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[12] In this regard, we note that the Staff's witness, Mr. Hickey, testified that the Applicant's "estimate of $4.86 per kilogram [of uranium] for conversion, we believe, includes the possibility that the option of converting to calcium fluoride will be exercised." (Tr. 1130-31.) Besides being contradicted by the Applicant's testimony (LeRoy Tr. 1055), Mr. Hickey's assertion to the effect that the LES conversion cost estimate covers both the conversion of DUF_6 to U_3O_8 and the conversion of HF to CaF_2 is not supported by the record as a whole.

Further, Mr. Hickey opined that the Applicant's conversion cost estimate of $4.86 nevertheless was adequate to cover the additional cost of converting byproduct HF to CaF_2, stating

> [t]he prices that were quoted to us from LES that came from COGEMA, we believe were over-inflated and included a lot of profit on the part of COGEMA. And, in fact, a conversion facility could be built in the United States, and they could dispose of the hydrogen fluoride in the form of calcium for less than $5 a kilogram.

(Continued)

Finally, we note that, in contrast to the detailed final decommissioning plan that LES must submit near the end of the license term, the Applicant's Decommissioning Funding Plan is required only to provide a reasonable cost estimate to ensure that the Applicant sets aside adequate funds to cover, *inter alia*, the cost of tails disposal. The reasonableness of the Applicant's cost estimate is necessarily dependent upon all the circumstances and the Commission has indicated that "the plan must contain essential elements sufficient to ensure that a reasonable estimate of decommissioning costs can be made." *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), CLI-88-10, 28 NRC 573, 587 (1988). Here, the largest component of the Applicant's estimate for tails disposal is that for the conversion of DUF_6 to U_3O_8. As we have found, however, the Applicant's estimate has not properly accounted for neutralizing the byproduct HF as part of its estimate. This additional cost is substantial and it is not the type of expense, like an increase for inflation or the development of a new technology (*see* 50 Fed. Reg. 5600, 5604 (1985)), that merely should be added sometime in the future after one of the Applicant's periodic decommissioning funding reviews that the Applicant is committed to performing at least once every 5 years. (App. Exh. 1(e), at 7-1.) Rather, the neutralization of the byproduct HF produced as part of the conversion of DUF_6 to U_3O_8 is clearly an essential element of the conversion cost (and hence the tails disposal cost) that reasonably can be estimated at this time.

Further, because the depleted uranium tails are created as the Applicant performs enrichment services, the Applicant's tails disposal funds must come from a portion of the price charged by LES for the separative work units ("SWUs") it performs. (Arnold Tr. 672-73; App. Exh. 4n, at 4; App. Exh. 1(a), at 11.8-15; Staff Exh. 1, at 15-21.) In order to provide reasonable assurance that there are adequate funds set aside to cover tails disposal, the Applicant must factor the realistic reasonable cost estimate of tails disposal into its market price for SWUs from the initiation of operations. (App. Exh. 4n at 4.) This is especially important in light of the nature of the enrichment market and the Applicant's financial structure. As we found in LBP-96-25, 44 NRC at 355-56, 359-60, 361,

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(Tr. 1131.) Mr. Hickey then used the conversion cost estimate in the EG&G Report of $8.40 that includes byproduct HF neutralization to illustrate his assertion. (Tr. 1131, 1135-36; App. Exh. 8, at 47.) According to Mr. Hickey, after 5 years of operation of the hypothetical conversion facility in the EG&G Report, the initial plant costs would have been recovered and, thereafter, the cost per kilogram for conversion would amount to about $4.80. (Tr. 1136.) But Mr. Hickey attempts to prove too much. He not only failed to escalate his estimate from the 1992 dollars of the EG&G Report to the 1996 dollars of the LES estimate — a step that raises his estimate considerably — but his assumptions about the EG&G Report estimate (assumptions that are not explicit in the EG&G Report) raise more questions than are answered regarding such things as return of capital, depreciation, carrying costs, taxes, decontamination costs, and profit margins. Because the record provides no corroborating support for the proposition that a future domestic conversion facility is to be built and operated without a healthy regard for profits, we are unable to accept Mr. Hickey's assertions regarding the cost of conversion of depleted uranium tails, including the neutralization of byproduct HF. In so concluding we are not unmindful of Mr. Hickey's candid appraisal that the Staff's forecasting accuracy of disposal costs has been "very poor." (Tr. 1153.)

the enrichment market .: a fiercely competitive, international one in which the supply of enrichment production capacity and the supply of enriched uranium far exceeds demand and this situation will prevail for the foreseeable future. In such a competitive market, a significant shortfall in the funds set aside to pay for tails disposal cannot simply be remedied by a price increase without harming the Applicant's competitive position and future market prospects. Moreover, unlike a utility reactor operator that can rely upon a public utility commission to set a rate structure adequate to recover all decommissioning costs even after the shutdown of a facility (*see* 53 Fed. Reg. 24,018, 24,031 (1988)), the Applicant's tails disposal funds can only be collected from its charges for enrichment services on an ongoing basis.

In other words, LES must be totally self-reliant in paying for tails disposal. As we detailed in LBP-96-25, 44 NRC at 378-80, LES is a newly formed entity created to build and operate the CEC. It is structured as a limited partnership and LES has no significant independent assets. *Id.* at 398-99. Similarly, none of the LES general or limited partners are corporations of worth. *Id.* Further, under the LES Partnership Agreement, as well as general principles of corporate and partnership law, the corporate parents and other affiliates of the LES general and limited partners have no liability for the obligations of the partnership. *Id.* at 402 n.30. In these circumstances, we cannot conclude that the Applicant's tails disposal estimate need only be a rough approximation that can be adjusted in the future upon periodic reviews by the Applicant. Rather, for the LES tails disposal estimate to be a reasonable one, it must include the substantial cost of neutralizing the HF from the conversion of DUF_6 to U_3O_8. Our finding in this regard is without prejudice to the Applicant acting to amend the LES Decommissioning Funding Plan consistent with this Decision and the Commission's regulations.

C. Intervenor's Other Challenges

In addition to its direct challenge to the Applicant's tails disposal cost estimate,[13] the Intervenor also challenges the Staff's FEIS alleging that a number of technical deficiencies and other shortcomings undermine its validity, thereby discrediting the LES tails disposal estimate for deep burial of the CEC tails. According to the Intervenor, these various deficiencies so eviscerate the Staff's analysis that the FEIS cannot support the conclusion that deep burial of the

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[13] At the hearing, the Intervenor did not pursue the specific assertions set forth in CANT's original bases B.4 and B.5 and the Intervenor did not include findings on these bases in filing its proposed findings. Hence, the Intervenor has waived these claims and, pursuant to 10 C.F.R. § 2.754(b), is in default as to these claims. In any event, the Applicant and the Staff presented testimony and other evidence on these matters. (LeRoy-Dekker at 15-18, 43-47 fol. Tr. 1016; App. Exh. 1(a), at 11.8-10 to -16; Faraz-Hickey at 11-12 fol. Tr. 1106) and the Applicant has met its burden of proof on these claims. Hence, the claims in Intervenor's bases B.4 and B.5 cannot be sustained.

CEC depleted uranium tails will provide adequate protection to the public and the environment. Consequently, the Intervenor asserts that the CEC tails must be disposed of in a licensed geologic repository at a cost likely to be no less than \$10/kg U_3O_8 and perhaps much more. (Makhijani at 4-7, 16-17, 20-21 fol. Tr. 1081.)[14] We summarily address below the deficiencies in the FEIS alleged by the Intervenor and find them without merit.

1. Use of Inappropriate pH, Retardation Factor, and Redox Potential Values

Dr. Makhijani asserts that the values chosen by the Staff for groundwater regarding pH, retardation factor, and redox potential for use in its FEIS analysis of the environmental impacts of deep disposal of depleted uranium tails at two representative sites (*see supra* pp. 107-08) could result in a serious underestimation of the doses to the public. (Makhijani at 8-13 fol. Tr. 1081.) Specifically, Dr. Makhijani claims that the pH value — an important factor governing uranium solubility and subsequent uranium transport — of 7.8 that was used by the Staff came from near-surface water data from a location in New York. (*See* Staff Exh. 2, Appendix A, at A-12.) According to Dr. Makhijani, the pH of groundwater in the basalt rock formations for repository locations has been found to be greater than 9. (Makhijani at 9-10 fol. Tr. 1081.) Contrary to Dr. Makhijani's assertion, however, we find that the Staff's use of a pH value of 7.8 based on New York data was not unreasonable in light of the reference literature for groundwater showing a pH range of 7.2 to 8.5. (Price Tr. 1115; LeRoy Tr. 1164-65.) Thus, the Staff's use of a pH value falling within the reference range was appropriate and reasonable.

Dr. Makhijani also argues that a retardation factor of 1200 should not have been used by the Staff in the FEIS (Staff Exh. 2, Appendix A, at A-13) because it is considerably higher than the retardation factors for granite and basalt rock formations recommended in a report of the National Academy of Sciences. (Makhijani at 10 fol. Tr. 1081.) The retardation factor is determined by dividing the ratio of water velocity by the radionuclide transportation velocity. Radionuclides dissolved in groundwater are adsorbed and exchanged through contact with the surrounding solid phase and thus travel at a lower velocity than

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[14] The Applicant argues that its tails disposal cost estimate was developed before the environmental impact statement was prepared and was not based on any information in the FEIS. It implies, therefore, that the Intervenor's challenges to the technical underpinnings of the FEIS are irrelevant to the LES disposal cost estimate for deep burial. (Tr. 1066; Applicant's Proposed Findings of Fact and Conclusions of Law (May 26, 1995) at 402-03.) But the Applicant's position ignores the thrust of the Intervenor's argument that because of numerous deficiencies in the Staff's analysis deep burial of U_3O_8 has not been shown to protect the environment thereby mandating disposal in a geologic repository at a much higher cost. The Applicant's witnesses also testified, however, that on the basis of their review of the Staff's analysis of deep disposal in the FEIS they found the analysis satisfactory. (Dubiel-Donelson at 11-15 fol. Tr. 1026.)

the groundwater. (Staff Exh. 2, Appendix A, at A-13.) The Staff's witness, Dr. Price, as well as the Applicant's witness, Mr. Dubiel, both testified that the value used by the Staff, which was based on a Swedish study, was appropriate because the data were from actual experimental observation for a comparable medium and were corroborated by a second study using such data. (Price Tr. 1115-17, 1235; Dubiel Tr. 1164-65.) Based on this testimony, we cannot find that the Staff's use of a retardation factor of 1200 drawn from actual experimental data, in contrast to theoretical evaluations, was unreasonable.

Dr. Makhijani next claims that the redox potential value ("eH") of minus 100 millivolts used by the Staff in its FEIS analysis (Staff Exh. 2, Appendix A, at A-12) is outside the range of values that the Staff otherwise lists in the FEIS for uranium mines and the FEIS contains no other comparative groundwater eH values. He asserts that the solubility of uranium is critical to the determination of the amount of uranium in groundwater and that the Staff has made arbitrary assumptions that tend to minimize the amount of uranium in solution. (Makhijani at 10-12; Tr. 1081.)

Redox potential, measured in volts or millivolts ("mV"), is a measure of the potential of groundwater to oxidize or reduce (i.e., to change chemically materials disposed of in groundwater). An increased redox potential increases the potential for uranium to dissolve in water. (*Id.* at 11; Price Tr. 1118.) Although the Staff's comparative table of eH values in the FEIS and the Staff's choice of an eH value of minus 100 mV certainly could have been more clearly explained in the FEIS (Price Tr. 1148-49), we find Dr. Makhijani's criticism without merit. As Dr. Price testified, the Staff chose an eH value of minus 100 mV because it was representative of deep groundwater from experimental observations showing redox potentials of minus 26 mV to minus 210 millivolts, with some reference data going even lower. (Tr. 1118-19.) He stated that the data set forth in the FEIS for uranium mines are not fully representative of deep groundwater and the conditions that will be chosen and prevail for the deep burial of depleted uranium tails will be a reducing environment. (Tr. 1145-49.) The Applicant's witness, Mr. Dubiel, also testified that the reference literature supported the Staff choice of eH value for the groundwater depths involved in the FEIS evaluation. (Tr. 1165-66.) Based on this testimony, we find that the eH value used by the Staff in its analysis is a reasonable one.

2. *Failure to Perform Uncertainty Analysis, Consider Range of Geologic Settings, and Fully Analyze Appropriate Chemical Form of Tails for Disposal*

Dr. Makhijani next asserts that, contrary to sound scientific practice, the Staff failed to perform an uncertainty analysis of deep burial as part of its environmental impact analysis so that upper and lower bounds for estimated

doses could be obtained. Because of this failure, he asserts that the resulting Staff analysis fails to meet the minimal test of sound science. (Makhijani at 13-16 fol. Tr. 1081.)

In response to this criticism, Dr. Price testified that an uncertainty analysis was impractical and unnecessary here because an actual deep burial site was not being characterized. Rather, he stated that the objective of the Staff's analysis in the FEIS was not to support a licensing position on a disposal site but merely to determine the plausibility of deep burial of depleted uranium as a disposal strategy. Indeed, Dr. Price noted that the analogous NRC branch technical position for low-level waste facilities requires significant site-specific data for the performance of an uncertainty analysis. (Tr. 1120-21.) In these circumstances, we cannot find that an uncertainty analysis was necessary for the Staff's evaluation of the impacts from two representative hypothetical disposal sites.

Further, the Intervenor's witness claimed that the FEIS analysis is deficient for considering only two geologic settings, a granite formation and a basalt formation, instead of considering a wide range of potential geologic settings. Dr. Makhijani indicated that the Staff first should have performed a preliminary screening of all potential geologic settings for their respective advantages and disadvantages and only then selected particular rock types for study. (Makhijani at 9 fol. Tr. 1081.) The Staff witnesses, Dr. Price and Mr. Faraz, both testified that the use of two representative geologic settings was appropriate because the objective of the FEIS analysis was to determine whether deep burial of depleted uranium tails was plausible. (Tr. 1112-13.) All of the Applicant's witnesses concurred in this same view. (Tr. 1163.) Contrary to Dr. Makhijani's charge, we find that the Staff's use of two representative geologic settings was reasonable in light of the purpose of the FEIS evaluation.

Finally, Dr. Makhijani asserts that the Staff's analysis is deficient for failing to consider the appropriateness of converting UF_6 to UO_2 instead of U_3O_8 for disposal. Although he concedes that both uranium oxide forms are insoluble in water, Dr. Makhijani asserts that the complexes they form with other chemicals in specific geologic environments could be different, depending on the particular conditions. Therefore, he claims the Staff should have considered UO_2 in addition to U_3O_8 and presented a comparative analysis showing the legitimacy of its choice of U_3O_8. (Makhijani at 7-8 fol. Tr. 1081.)

Dr. Makhijani's assertion is without merit. The record evidence overwhelmingly demonstrates that U_3O_8 is the preferred form of uranium oxide for disposal. (App. Exh. 4*l*, at 18-19 & Appendix D, at D-1; App. Exh. 7, at 14-15; App. Exh. 8, at 11-13; LeRoy-Dekker at 30 fol. Tr. 1016.) Further, as Dr. Price testified, it is also necessary to consider how to manage and handle the uranium oxide as it is produced, stored, and transported for burial, and U_3O_8 is more stable upon exposure to the atmosphere than UO_2. (Tr. 1111.) Indeed, as Applicant's

Exhibit 7 states "UO_2 will ignite spontaneously in heated air and burn brilliantly." (App. Exh. 7, at 36.)

Finally, in addition to the foregoing findings, we have carefully considered all of the other arguments, claims, and proposed findings of the parties relative to contentions B and J.3 and find that they are either without merit, immaterial, or unnecessary to this Decision.

D. Concerns of the State of Louisiana

Pursuant to 10 C.F.R. § 2.715(c) of the Commission's Rules of Practice, the State of Louisiana has participated in this proceeding as an interested State. In its proposed findings, the State has requested that we condition any LES license for the CEC to ensure that Louisiana does not have to take responsibility for any radioactive waste from the CEC. Additionally, the State requests a number of corollary conditions designed to ensure that no financial obligations fall on Louisiana from any of the CEC radioactive waste.[15]

The State's concern that any LES license authorization be conditioned so that the State cannot be held responsible for any radioactive waste from the CEC has now been resolved by the recent enactment of the USEC Privatization Act. The Act specifically provides that "[n]otwithstanding any other provision of law, no State or interstate compact shall be liable for the treatment, storage, or disposal of any low-level waste . . . attributable to the operation, decontamination, or decommissioning of any uranium enrichment facility." 42 U.S.C. § 2297h-11(c). With the enactment of this federal statute, no further consideration of the State's request for license conditions is necessary.

III. CONCLUSION

For the reasons detailed in Part II.B.3, we conclude that the Applicant's cost estimate of $12 million annually for the conversion of DUF_6 to U_3O_8 is not a reasonable one given its failure to include the substantial costs of neutralizing the conversion process byproduct hydrofluoric acid. Thus, to this extent, the Intervenor's contention B.1 is sustained. For the same reason and to the same extent, the Intervenor's contention J.3 is sustained and, pursuant to 10 C.F.R. § 51.102, the FEIS is hereby supplemented by the discussion of the economic costs of tails disposal in this Decision and the underlying adjudicatory record. *See Philadelphia Electric Co.* (Limerick Generating Station, Units 1 and 2), ALAB-819, 22 NRC 681, 706 (1985).

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[15] Louisiana's Proposed Findings of Fact and Conclusions of Law in the Form of an Initial Decision Relative to DUF_6 Waste Generated at the Proposed LES Facility (June 23, 1995) at 3-5.

Pursuant to 10 C.F.R. § 2.760 of the Commission's Rules of Practice, this Partial Initial Decision will constitute the final Decision of the Commission on these contentions forty (40) days from the date of its issuance unless a petition for review is filed in accordance with 10 C.F.R. § 2.786, or the Commission directs otherwise. Within fifteen (15) days after service of this Partial Initial Decision, any party may file a petition for review with the Commission on the grounds specified in 10 C.F.R. § 2.786(b)(4). The filing of a petition for review is mandatory in order for a party to have exhausted its administrative remedies before seeking judicial review at the appropriate time. Within ten (10) days after service of a petition for review, any party to the proceeding may file an answer supporting or opposing Commission review. The petition for review and any answers shall conform to the requirements of 10 C.F.R. § 2.786(b)(2)-(3).

It is so ORDERED.

THE ATOMIC SAFETY AND
LICENSING BOARD

Thomas S. Moore, Chairman
ADMINISTRATIVE JUDGE

Richard F. Cole
ADMINISTRATIVE JUDGE

Frederick J. Shon
ADMINISTRATIVE JUDGE

March 7, 1997
Rockville, Maryland

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

G. Paul Bollwerk, III, Chairman
Peter B. Bloch
Thomas D. Murphy

In the Matter of **Docket No. 50-461-OLA**
(ASLBP No. 97-725-01-OLA)

ILLINOIS POWER COMPANY and
SOYLAND POWER COOPERATIVE
(Clinton Power Station, Unit 1) **March 11, 1997**

In this proceeding regarding the proposed transfer of the ownership share of Clinton Power Station minority owner Soyland Power Cooperative to majority owner Illinois Power Company, the Licensing Board grants the unopposed request of Petitioner Southwestern Electric Cooperative, Inc., to dismiss its protective intervention petition and terminate the proceeding.

RULES OF PRACTICE: INTERVENTION PETITION

Simply because a filing is labeled a petition to intervene does not prevent the presiding officer from treating it as a request to initiate a hearing if this, in fact, is what the petitioner is seeking. *See Yankee Atomi Electric Co.* (Yankee Nuclear Power Station), CLI-96-1, 43 NRC 1, 5 (1996).

MEMORANDUM AND ORDER
(Terminating Proceeding)

Responding to a January 23, 1997 notice of opportunity for hearing, *see* 62 Fed. Reg. 4437 (1997), in a February 28, 1997 filing entitled "Petition for Leave to Intervene," Petitioner Southwestern Electric Cooperative, Inc. (Southwestern), sought leave to participate in any adjudicatory proceeding convened in connection with an October 17, 1996 application (as supplemented and modified by letter dated December 31, 1996) for agency approval of an operating license amendment for the Clinton Power Station, Unit No. 1 (CPS). The proposed license revision would permit the transfer of Soyland Power Cooperative's (Soyland) minority ownership in CPS to Illinois Power Company (Illinois Power), the facility's majority owner and operator. On March 7, 1997, this Licensing Board was established to rule on Southwestern's petition. *See* 62 Fed. Reg. 11,933 (1997).

Subsequently, on March 11, 1997, Petitioner Southwestern filed a letter addressed to the Licensing Board requesting that this proceeding be terminated. In support of its motion, Southwestern asserts that its original petition was intended only to preserve its interests in the event that Illinois Power, Soyland, or some other party sought and was granted a hearing.[1] No other party apparently having filed a timely hearing request, Southwestern now wishes to have this proceeding terminated.[2]

Under the circumstances, we grant Southwestern's request.

For the foregoing reasons, it is, this 11th day of March 1997, ORDERED that:

1. The March 11, 1997 motion of Southwestern to terminate this proceeding is *granted*; and

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[1] Although Southwestern's February 28 filing was labeled as a "petition to intervene," this would not prevent us from treating it as a request to initiate a hearing if this, in fact, was what Southwestern was seeking. *See Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-96-1, 43 NRC 1, 5 (1996).

[2] By telephone this date, we were advised by counsel for Southwestern that neither Illinois Power nor Soyland objects to the termination of this proceeding. Also, upon inquiry, counsel for the NRC Staff advised the Board that the Staff has no objection to termination of this proceeding.

2. Southwestern's February 28, 1997 petition for leave to intervene is *dismissed* and this proceeding is *terminated*.

THE ATOMIC SAFETY AND
LICENSING BOARD[3]

G. Paul Bollwerk, III, Chairman
ADMINISTRATIVE JUDGE

Thomas D. Murphy
ADMINISTRATIVE JUDGE

Rockville, Maryland
March 11, 1997

[3] Administrative Judge Bloch was not available to sign this Memorandum and Order. He was, however, advised of its contents and approved its issuance.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD PANEL

Before Administrative Judges:

G. Paul Bollwerk, III, Presiding Officer
Jerry R. Kline, Special Assistant

In the Matter of **Docket No. 30-02764-MLA**
(ASLBP No. 97-722-01-MLA)

UNIVERSITY OF CINCINNATI
(Denial of License Amendment) **March 27, 1997**

MEMORANDUM AND ORDER
(Dismissing Proceeding)

In this proceeding, Licensee University of Cincinnati (University) has challenged the December 12, 1996 action of the NRC Staff denying the University's January 5, 1996 application for an amendment to its 10 C.F.R. Part 30 byproduct materials license. The requested amendment would allow specified visitors of radiation therapy patients to receive a dose of up to 500 millirem (mrem) total effective dose equivalent (TEDE) per year instead of the current public dose limit of 100 mrem per year provided for in 10 C.F.R. § 20.1301(a)(1).

Now pending before me is the March 13, 1997 motion of the University requesting that I dismiss this proceeding. In its motion, the University declares that on February 14, 1997, the NRC Staff issued Amendment No. 80 to the University's license (NRC License No. 34-06903-05), a copy of which was provided on March 20, 1997. *See* Presiding Officer Memorandum (Mar. 26, 1997), attachs. 1-2. Under License Condition 27 provided for by that amendment, an individual visiting a patient is permitted to receive 500 mrem during the patient's confinement period provided:

(1) the visitor has been determined by a physician to be necessary for the emotional and/or physical support of the patient;

(2) the visitor is 18 years of age or older and, if female, is not pregnant;

(3) the visitor (a) is instructed to maintain exposures as low as is reasonably achievable (ALARA), emphasizing the basic radiation safety precautions of time, distance, and shielding, and (b) is advised (i) that the exposures received may exceed the general public's regulatory limit, and (ii) of the risks of radiation exposure; and

(4) a visitor's exposures received under the license condition are estimated by appropriate means to ensure the 500 mrem dose limit is not exceeded, with records documenting compliance maintained for three years.

The University's motion also states that the Staff has no objection to the University's dismissal request.

The controversy in this proceeding has been mooted by the issuance of the February 14, 1997 license amendment. Accordingly, the University's dismissal request is granted and this proceeding is terminated.

For the foregoing reasons, it is, this 27th day of March 1997, ORDERED that:

1. The March 13, 1997 motion of the University to dismiss this proceeding is *granted.*

2. This proceeding is *dismissed.*

G. Paul Bollwerk, III, Presiding Officer
ADMINISTRATIVE JUDGE

Rockville, Maryland
March 27, 1997

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD PANEL

Before Administrative Judges:

Peter B. Bloch, Presiding Officer
Peter Lam, Special Assistant

In the Matter of

Docket No. 55-20726-SP
(ASLBP No. 96-721-01-SP)
(Re: Operator License)

RALPH L. TETRICK
(Denial of Application for Reactor Operator License)

March 27, 1997

The Presiding Officer denied the Staff's motion for reconsideration. He ruled that the Staff should reasonably have forseen the importance of whether or not to round up applicant's examination score. Consequently, Staff should have raised this question earlier and it was untimely to do so in a Motion for Reconsideration. Since the Presiding Officer also concluded that there was no important safety issue involved, he used his discretion to deny the untimely motion.

CORRECTED COPY OF MEMORANDUM AND ORDER
(Denial of Reconsideration, Stay)

On March 10, 1997, the Staff of the Nuclear Regulatory Commission filed a motion, "NRC Staff's Request for Issuance of an Order Staying the Effectiveness of the Presiding Officer's Initial Decision (LBP-97-2)" (Motion for a Stay). The Staff asked that the Presiding Officer issue an order staying the effectiveness

of his Initial Decision in this proceeding,[1] pending the Presiding Officer's review and consideration of the Staff's Motion for Reconsideration (Motion for Reconsideration), filed simultaneously. Ralph L. Tetrick filed his response to the Staff motions on March 17, 1997.

Because the Motion for Reconsideration has been filed, we retain jurisdiction over this case. *See* 10 C.F.R. § 2.771; *Consumers Power Co.* (Midland Plant, Units 1 and 2), ALAB-235, 8 AEC 645 (1974).

I have decided that the Motion for Reconsideration shall be denied because it improperly raises an argument based on evidence that should have been incorporated in the record earlier in this case. The Motion for a Stay also shall be denied. The Motion for a Stay stated, in part, that it was pending "the Presiding Officer's review and consideration of the Staff's Motion for Reconsideration." Upon denial of the Motion for Reconsideration, I no longer have jurisdiction of this case, so it would be inappropriate to grant a stay "pending consideration by the Commission," as the Staff also requests.

With respect to the Motion for Reconsideration, I note that:

> *A motion for reconsideration should not include new arguments or evidence unless a party demonstrates that its new material relates to a Board concern that could not reasonably have been anticipated.*

Texas Utilities Electric Co. (Comanche Peak Steam Electric Station, Units 1 and 2), LBP-84-10, 19 NRC 509, 517-18 (1984). (Emphasis added to the quoted paragraph by the Staff. *See* "NRC Staff's Response to Memorandum and Order of March 21, 1997," March 25, 1997 [Staff Response] at 2.) In this case, Staff opposed Mr. Tetrick's challenges to three questions on its Senior Reactor Operator's examination. It now argues that it could not anticipate that one of these three questions might be struck, forcing the Presiding Officer to decide whether or not a score of 79.59% should be considered passing or failing.[2] NRC Response at 3-4. We reject Staff's argument that it "did not yet have any reason to anticipate that the Presiding Officer would strike Question 96. . . ." (NRC Response at 4.) The key question being litigated was the validity of each of the challenged questions and whether or not Mr. Tetrick would pass the examination. I conclude that the Staff should have anticipated this contingency and presented arguments about how it should be resolved. In the interest of finality in decision making, I do not consider it appropriate to permit the Staff to raise this argument at this stage of the proceeding.

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[1] *Ralph L. Tetrick* (Denial of Application for Reactor Operator License), LBP-97-2, 45 NRC 51 (1997) (Initial Decision).

[2] It was necessary to the decision in this case for the Presiding Officer to determine whether or not to round off the examination score. The Staff suggestion that this decision was "*sua sponte*" is frivolous.

In making this ruling, I recognize that Mr. Tetrick will be granted a license while other candidates, with scores between 79.5% and 80.0%, were denied a license. NUREG-1021, "Operator Licensing Examiner Standards," sets forth that "80% of the questions must be correctly answered." Motion for Reconsideration at 5. Only recently, the Staff has amended its NUREG to require a passing score of "80.00" percent, changing the number of significant digits in the NUREG itself from a whole percentage to 1/100th of a percentage point. Motion for Reconsideration, attached Supplemental Affidavit of Brian Hughes at 5, ¶10. At the time that Mr. Tetrick took his examination, the revised NUREG was not in effect and there was no published guidance, other than the NUREG itself, concerning the number of significant digits in an examination score or how a score should be rounded. I find, as the Staff suggests, that the Staff had an established practice — *first presented to the Presiding Officer only after issuance of the Initial Decision.* The Staff practice, which may be inconsistent with the use of a whole percentage point standard ("80%") in the NUREG,[3] has required applicants to achieve a grade of 80% or greater — without rounding off — in order to pass their written examination. Staff Motion for Reconsideration at 5; Supplemental Affidavit of Brian Hughes at 8-10.

If this matter seriously affected public safety, I would consider this evidentiary point even though it is untimely. *See Midland, supra.* However, I have no reason to believe that a 0.41% difference in the score of a candidate on one portion of his examination is a valid reason for concern that his performance will be inadequate.

This decision also will have little effect on the Staff's use of a uniform passing grade. It is necessary to establish and consistently apply a passing grade for examinations, and the Staff has clarified the precise passing grade by amending the NUREG. Candidates whose scores fall even a fraction of a point below the passing grade should fail, even though they are not measurably inferior to candidates who pass by a fraction of a point. In this case, I have not decided the merits of the Staff argument about the interpretation of "80%" *in a NUREG that is no longer current.* My decision is based on the untimeliness of the argument and does not affect future cases. There is no reason to suspect a substantial negative effect on public safety because Mr. Tetrick had a written examination score of 79.59%, rounded off to 80% through a permissible interpretation of the language of the applicable version of NUREG-1021. I am confident that Mr. Tetrick, who has capably and respectfully conducted himself in this proceeding, will continue to improve his skills and that he will not permit his marginal score

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[3] There is a strong presumption that the plain language of a statute or, by analogy, of regulatory guidance expresses the intent of its drafters. *Ardestani v. INS*, 112 S. Ct. 515, 116 L. Ed. 2d 496 (1991). It is appropriate to look to an extrinsic aid, such as Staff practice, only if the language of the regulatory guidance is unclear or if its apparent clarity leads to absurd results. *Blue Cross and Blue Shield of Alabama v. Weitz*, 913 F.2d 1544, 1548, *reh'g denied*, 921 F.2d 283 (1990).

on the written examination to interfere with his being an outstanding Senior Reactor Operator.

ORDER

For all the foregoing reasons and upon consideration of the entire record in this matter, it is, this 27th day of March 1997, ORDERED that:

1. The "NRC Staff's Motion for Reconsideration," March 10, 1997, is denied.

2. The "NRC Staff's Request for Issuance of an Order Staying the Effectiveness of the Presiding Officer's Initial Decision (LBP-97-2)," March 10, 1997, is denied.

3. The Staff of the Nuclear Regulatory Commission may issue to Mr. Ralph L. Tetrick a Senior Reactor Operator License for Turkey Point Nuclear Generating Plant, Units 3 and 4.

4. Because of the issuance of housekeeping stays in this case, March 27, 1997, shall be considered the date of issuance of the Initial Decision (LBP-97-2) for the purpose of calculating parties' rights and obligations concerning an appeal.

5. Pursuant to 10 C.F.R. § 2.1251, this Initial Decision constitutes the final action of the Commission thirty (30) days after March 27, 1997, unless any party petitions for Commission review in accordance with section 2.786 or the Commission takes review of the Decision sua sponte. If there is no petition for review, the date on which this decision will become final is Monday, April 28, 1997.

6. Pursuant to 10 C.F.R. § 2.786, a petition for review must be filed within fifteen (15) days after service of this Memorandum and Order, which is considered served on the date it is mailed, pursuant to 10 C.F.R. § 2.712(e). However, since service of this Decision is by mail, five days shall be added to the prescribed period of response, pursuant to 10 C.F.R. § 2.710, which governs the computation of time. Consequently, the date the petition for review must be served is Wednesday, April 16, 1997. Service of the petition for review must, pursuant to this Order, be made by express mail.

7. A petition for review and a response to a petition for review must meet the requirements of 10 C.F.R. § 2.786.

8. If a petition for review is filed, the answer must be filed within 10 days. Since the petition for review shall be filed by express mail, two days shall be added to the period of response pursuant to 10 C.F.R. § 2.710, which governs the computation of time. Consequently, the date the answer must be served is

Monday, April 28, 1997. Service of the answer must, pursuant to this Order, be made by express mail.

Peter B. Bloch, Presiding Officer
ADMINISTRATIVE JUDGE

Rockville, Maryland

Directors' Decisions Under 10 CFR 2.206

DIRECTORS' DECISIONS

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

OFFICE OF NUCLEAR REACTOR REGULATION

Samuel J. Collins, Director

In the Matter of

CONSUMERS POWER COMPANY (Palisades Nuclear Plant)	Docket Nos. 50-255 72-7
ENTERGY OPERATIONS, INC. (Arkansas Nuclear One, Units 1 and 2)	Docket Nos. 50-313 50-368 72-13
WISCONSIN ELECTRIC POWER COMPANY (Point Beach Nuclear Plant, Units 1 and 2)	Docket Nos. 50-266 50-301 72-5 March 4, 1997

The Director of the Office of Nuclear Reactor Regulation denies the request by Petitioner Fawn Shillinglaw, filed pursuant to 10 C.F.R. § 2.206, that the NRC take action to prohibit loading of VSC-24 casks at any nuclear site until the multiassembly sealed basket #4 at the Palisades nuclear plant has been unloaded and the experience evaluated for potential safety improvements. The Director concludes that the NRC will not permit unloading of any casks until it obtains reasonable assurance, through a variety of means, of each licensee's ability to do so safely, and therefore need not suspend any licensee's use of the general license for dry cask storage until the multiassembly sealed basket at Palisades has been unloaded.

DIRECTOR'S DECISION UNDER 10 C.F.R. § 2.206

I. INTRODUCTION

On November 17, 1995, Ms. Fawn Shillinglaw (Petitioner) filed a petition pursuant to section 2.206 of Title 10 of the *Code of Federal Regulations* (10 C.F.R. § 2.206) requesting that the U.S. Nuclear Regulatory Commission (NRC) take action to prohibit loading of VSC-24 casks at any nuclear site until the multiassembly sealed basket (MSB) #4 at the Palisades plant has been unloaded and the experience evaluated for potential safety improvements. In addition to Consumers Power Company, the Licensee for Palisades, other licensees that use the VSC-24 cask system are Wisconsin Electric Power Company at its Point Beach Nuclear Plant, Units 1 and 2, and Entergy Operations, Inc., at Arkansas Nuclear One, Units 1 and 2.

The petition has been referred to me pursuant to section 2.206. The NRC letter to the Petitioner dated January 18, 1996, acknowledged receipt of the petition. Notice of receipt was published in the *Federal Register* on January 25, 1996 (61 Fed. Reg. 2269).

On the basis of the NRC Staff's evaluation of the issues and for the reasons given below, the Petitioner's request is denied.

II. BACKGROUND

NRC regulations contain a general license that authorizes nuclear power plants licensed by the NRC to store spent nuclear fuel at the reactor site in storage casks approved by the NRC. (*See* 10 C.F.R. Part 72, Subpart K.) In regard to dry cask storage of spent nuclear fuel at Palisades, Point Beach, and Arkansas Nuclear One, the Licensees opted to use the VSC-24 Cask Storage System designed by Sierra Nuclear Corporation. The VSC-24 Cask Storage System was added to the list of NRC-certified casks in May 1993 (58 Fed. Reg. 17,948). The associated certificate of compliance, Certificate No. 1007, specifies the conditions for use of VSC-24 casks under the general license provisions of Part 72. Section 1.1.2, "Operating Procedures," in the certificate of compliance for the VSC-24 casks requires that licensees prepare an operating procedure related to cask unloading. Specifically, the condition states:

> Written operating procedures shall be prepared for cask handling, loading, movement, surveillance, and maintenance. The operating procedures suggested generically in the SAR [safety analysis report] are considered appropriate, as discussed in Section 11.0 of the SER [safety evaluation report], and should provide the basis for the user's written operating procedures. The following additional written procedures shall also be developed as part of the user operating procedures:

1. A procedure shall be developed for cask unloading, assuming damaged fuel. If fuel needs to be removed from the multi-assembly sealed basket (MSB), either at the end of service life or for inspection after an accident, precautions must be taken against the potential for the presence of oxidized fuel and to prevent radiological exposure to personnel during this operation. This activity can be achieved by the use of the Swagelok valves, which permit a determination of the atmosphere within the MSB before the removal of the structural and shield lids. If the atmosphere within the MSB is helium, then operations should proceed normally, with fuel removal, either via the transfer cask or in the pool. However, if air is present within the MSB, then appropriate filters should be in place to permit the flushing of any potential airborne radioactive particulate from the MSB, via the Swagelok valves. This action will protect both personnel and the operations area from potential contamination. For the accident case, personnel protection in the form of respirators or supplied air should be considered in accordance with the licensee's Radiation Protection Program.

In July 1994, the Licensee for Palisades discovered radiographic indications of possible defects in a weld in MSB #4. MSB #4 had been loaded with spent fuel earlier that month and placed inside a ventilated concrete cask on the independent spent fuel storage installation (ISFSI) storage pad. The Licensee evaluated the flaw indications and determined that the MSB continued to meet its design basis and was capable of safely storing spent fuel for the duration of the certificate (20 years). Nevertheless, the Licensee stated that MSB #4 would be unloaded to support additional inspections and evaluations related to its future use.[1] In preparation for the unloading of MSB #4, the Licensee reviewed the unloading procedure issued in May 1993 (Revision 0) and identified several technical deficiencies. A revision of the unloading procedure (Revision 1) was subsequently developed to resolve the identified technical deficiencies. The revised unloading procedure is the subject of an ongoing NRC inspection.[2]

Through inspections at Palisades and other facilities, the NRC Staff identified a number of concerns regarding licensees' procedures for unloading spent fuel from dry storage casks. The NRC Staff identified examples of procedural

[1] The unloading of MSB #4 was originally planned for several months after the discovery of the radiographic indications of possible weld defects in July 1994. However, the unloading has been delayed several times and in its letter of January 17, 1997, the Licensee informed the NRC Staff that the unloading has been postponed until the fuel in MSB #4 can be reloaded into a certified storage and transportation cask. The Licensee also indicated it intends to pursue development and licensing of such a cask, has solicited and received bids from vendors, and plans to award a contract before the end of the first quarter of 1997.

[2] In regard to the original (Revision 0) unloading procedure at Palisades, the NRC Staff concluded that, had the Licensee attempted to unload a cask using the original unloading procedure, the Licensee would have needed to suspend activities at one or more times during the unloading process in order to implement revisions to the procedure. The NRC Staff found that this was a violation of requirements that all activities affecting quality be prescribed by procedures appropriate for the circumstances and that procedures are reviewed for adequacy. However, given the limited safety significance of the procedural deficiencies and the fact that the Licensee identified and corrected the deficiencies, the NRC dispositioned the violation as a Non-Cited Violation in accordance with the NRC Enforcement Policy. (*See* NRC Inspection Report 50-255/96014 and Director's Decision DD-97-1, 45 NRC 33 (1997).)

inadequacies and quality assurance shortcomings experienced during preoperational tests and actual cask loading operations at several facilities. In addition, the Staff observed that some unloading procedures implemented by licensees neglected to consider contingencies and assumptions on possible fuel degradation, gas sampling techniques, cask design issues, radiation protection requirements, and the thermal-hydraulic behavior of a cask during the process of cooling and filling it with water from the spent fuel pool. To address these concerns, the following item titled "Cask Loading and Unloading," was included in the NRC dry cask storage action plan implemented in July 1995.[3]

> Issue: Cask Loading and Unloading
>
> As licensees have implemented their ISFSI plans, several issues have been identified related to the loading and unloading of casks. Loading issues have centered on procedural inadequacies and quality assurance shortcomings. The unloading procedures developed by licensees tend to be simplistic. This has resulted in neglecting to consider contingencies and assumptions on failed fuel, air sampling techniques, disassembly requirements, design problems, and radiation protection requirements. The importance of these procedures should be emphasized to licensees, and technical issues related to unloading problems resolved. This issue should also be addressed for shipping casks.

The NRC action plan developed for dry cask storage was formulated to manage the resolution of a variety of technical and process issues associated with the expanding use of that technology for the storage of spent nuclear fuel. The item related to the loading and unloading of dry storage casks was added to the action plan, in part, to ensure that the importance of the unloading procedures was emphasized to licensees and technical issues related to unloading problems were resolved.

To implement the plan, the NRC Staff formed a working group to identify issues associated with loading and unloading processes for dry storage casks and to propose means of informing the industry and the NRC Staff of those issues. The working group considered industry experiences, concerns identified during reviews and inspections, and other issues related to loading and unloading procedures. The working group completed its reviews in April 1996. The concerns related to unloading procedures reviewed by the working group were found to involve either (1) isolated occurrences that had been adequately resolved by site-specific corrective actions or (2) generic issues that were addressed by incorporating remedial measures into ongoing Staff activities, such as the preparation of revised inspection procedures or other guidance documents.

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[3] Action plans are used by the NRC Staff to manage the resolution of significant generic issues. Such plans are prepared when the anticipated resources that will be required to resolve generic or potentially generic issues exceed certain thresholds or when the NRC Staff determines that an action plan would improve its efficiency and effectiveness.

In May 1996, an event occurred at the Point Beach plant involving the ignition of hydrogen gas during the loading of a VSC-24 cask.[4] Completion of the NRC inspection of the revised unloading procedure for Palisades was postponed following the event at Point Beach in order to allow licensees and the NRC Staff to identify the cause of the hydrogen ignition and implement appropriate corrective actions. Following the event, the NRC issued confirmatory action letters (CALs) to those licensees using or planning to use VSC-24 casks for the storage of spent nuclear fuel (i.e. Licensees for Point Beach, Palisades, and Arkansas Nuclear One). The CALs documented the Licensees' commitments not to load or unload a VSC-24 cask without resolution of material compatibility issues identified in NRC Bulletin 96-04, "Chemical, Galvanic, or Other Reactions in Spent Fuel Storage and Transportation Casks," and subsequent confirmation of corrective actions by the NRC.

On December 3, 1996, the NRC Staff informed the Licensee for Arkansas Nuclear One that it had completed its reviews and inspections associated with that facility and found that the Licensee had satisfactorily completed the commitments documented in the CAL. Shortly thereafter, the Licensee initiated cask-loading activities. The review of responses to the bulletin related to Palisades and Point Beach is ongoing and cask operations at those facilities continue to be limited by the Licensees' commitments described in CALs.

III. DISCUSSION

In support of the Petitioner's request that VSC-24 casks not be loaded until MSB #4 at Palisades has been unloaded and the unloading process has been evaluated, the Petitioner cites the action plan prepared by the NRC Staff that included the Staff's observation that some unloading procedures developed by licensees tended to be simplistic. The Petitioner asserts that because problems are discovered through experience, the proper way to unload casks will not be known until a cask is actually unloaded. The Petitioner also claims that the unloading procedures should not be left to the Licensees to develop and implement but should be the subject of detailed NRC evaluations.

The NRC Staff's concerns about the quality of Licensees' unloading procedures led it to include the issue in the dry cask storage action plan. The action plan provided a framework for the identification and resolution of various technical and administrative issues related to the use of dry storage casks. The previously mentioned actions taken by the NRC Staff and Licensees adequately

[4] On May 28, 1996, a hydrogen gas ignition occurred during the welding of the shield lid on a VSC-24 cask at the Point Beach Nuclear Plant. The hydrogen was formed by a chemical reaction between a zinc-based coating (Carbo Zinc 11) and the borated water in the spent fuel pool.

resolved the identified issues pertaining to cask unloading procedures. In the specific case of the unloading procedure at Palisades, the Licensee's revised procedure addressed many of the generic Staff activities on cask unloading and is currently the subject of a thorough NRC inspection that will be completed in the near future.

To fulfill some of the goals included in the action plan, the NRC Staff has emphasized the importance of unloading procedures and shared observations with licensees using or considering dry cask storage during opportunities such as the Spent Fuel Storage and Transportation Workshop held in May 1996 and meetings with individual licensees. On the basis that these discussions with the industry and other Staff actions had conveyed important operating experiences to NRC licensees, the Staff deferred issuance of an NRC information notice on the subject of loading and unloading of dry storage casks. The Staff revised inspection procedures to specifically instruct NRC inspectors to review unloading procedures developed by licensees and to identify those issues that warrant particular attention. Guidance included in NRC Inspection Procedure 60855, "Operation of an ISFSI," issued February 1, 1996, states:

> For unloading activities, attention should be paid to how the licensee has prepared to deal with the potential hazards associated with that task. Some potential issues may include: the radiation exposure associated with drawing and analyzing a sample of the canister's potentially radioactive atmosphere; steam flashing and pressure control as water is added to the hot canister; and filtering or scrubbing the hot steam/gas mixture vented from the canister, as it is filled with water.

Similar guidance was included in NUREG-1536, "Standard Review Plan for Dry Cask Storage Systems, Draft Report for Comment," issued in February 1996 and will be included in the final version of the standard review plan that is currently being prepared. The revised guidance documents ensure that recent and future reviews will address the adequacy of unloading procedures developed by licensees.

The NRC Staff also reviewed the inspection history for existing ISFSIs to determine if unloading procedures were reviewed with due consideration given to the potential complications that may arise during the unloading process. The NRC Staff performed audits or inspections of those licensee programs for which the inspection record did not document whether the unloading procedures adequately addressed the major issues included in the action plan. In regard to the users of the VSC-24 cask system, inspections of unloading procedures at Arkansas Nuclear One (NRC Inspection Report 50-313/96-16, 50-368/96-16, 72-13/96-01 and Notice of Violation, dated July 31, 1996) and Point Beach (NRC Inspection Report 50-266/95011, 50-301/95011, dated November 15, 1995) considered the concerns included in the NRC action plan.

As previously mentioned, the revised unloading procedure at Palisades is the subject of an ongoing inspection, completion of which was delayed as a result of the hydrogen ignition event at Point Beach. The NRC inspection of the revised unloading procedure at Palisades is being coordinated with the Staff's review of the Licensee's response to NRC Bulletin 96-04 and is expected to be completed in the near future, notwithstanding the Licensee's decision to postpone unloading MSB #4 pending the availability of a certified storage and transportation cask.[5] Further, the NRC has committed to state officials and members of the public that the exit meeting for the inspection of the revised unloading procedure at Palisades will be open to the public, the meeting will be noticed sufficiently in advance to allow interested parties to attend, and the NRC Staff will allocate time to discuss issues with the public following the meeting with the Licensee.

The NRC Staff agrees with the Petitioner that learning from experience is an essential part of improving the safety of nuclear power plant activities, including those associated with dry cask storage of spent nuclear fuel. This principle is reflected in the regulatory requirements pertaining to preoperational testing of dry cask storage activities, as well as various provisions of NRC-approved quality assurance programs. The issuance of Bulletin 96-04 and the CALs for licensees using VSC-24 casks is another example of the NRC Staff's efforts to ensure that applicable operating experience is incorporated into procedures at facilities licensed by the NRC. In this case, the licensees using the VSC-24 cask revised procedures to address the technical concerns identified after the event at Point Beach and agreed to defer cask operations pending the NRC's review of responses to the bulletin and confirmation of corrective actions.

As previously mentioned, the Licensee for Arkansas Nuclear One loaded VSC-24 casks following the NRC Staff's determination that the Licensee had satisfactorily completed the commitments documented in the CAL. On the basis of reviews and inspections performed to verify corrective actions associated with the bulletin, in combination with reviews performed for cask certification and previous inspections of preoperational testing and other aspects of the Licensee's dry cask storage program, the NRC Staff determined that the Licensee for Arkansas Nuclear One could perform either cask loading or unloading operations without undue risk to the health and safety of the public or its own personnel. The NRC Staff, through reviews and inspections to verify corrective actions associated with NRC Bulletin 96-04, must have confidence in the procedures implemented by the Licensee for Point Beach before the NRC permits that Licensee to resume loading or unloading of VSC-24 casks. The Staff must also obtain the necessary confidence that the Licensee for Palisades has implemented

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[5] The Licensee for Palisades responded to NRC Bulletin 96-04 by letters dated August 19 and November 12, 1996. The NRC Staff is awaiting the Licensee's response to a request for information that was issued on February 12, 1997.

the corrective actions related to NRC Bulletin 96-04 as well as the issues included in the NRC action plan before permitting the Licensee to resume loading or unloading VSC-24 casks.

Thus, only after resolution of the issues identified in NRC Bulletin 96-04 and other questions that may arise during the inspections of the Licensees' revised procedures at Point Beach and Palisades, will the NRC permit them to unload casks. As part of its review, the NRC Staff will consider matters such as the dry-run exercises licensees performed to verify key aspects of unloading procedures, as well as licensees' actual experience in the loading and unloading of transportation casks, loading of storage casks, handling of spent fuel assemblies under various conditions, and performing relevant maintenance and engineering activities associated with reactor facilities. Given that the NRC Staff will not permit unloading of any casks unless it obtains reasonable assurance of each licensee's ability to do so safely, the NRC does not have reason to require unloading of MSB #4 at Palisades before allowing resumption of normal activities under the general licenses at Arkansas Nuclear One, Point Beach, or Palisades.

The Petitioner's request is, therefore, denied.

IV. CONCLUSION

The Petitioner requested that the NRC prohibit loading of VSC-24 casks at any nuclear site until MSB #4 at the Palisades plant has been unloaded and the experience evaluated for potential safety concerns. Each of the claims by the Petitioner has been reviewed. I conclude that, for the reasons discussed above, no adequate basis exists for granting Petitioner's request for suspension of the licensees' use of the general licenses for dry cask storage of spent nuclear fuel at Palisades, Point Beach, or Arkansas Nuclear One until the MSB at Palisades has been unloaded and the experience evaluated for potential safety improvements.

A copy of this Decision will be filed with the Secretary of the Commission for the Commission to review in accordance with 10 C.F.R. § 2.206(c).

As provided by this regulation, this Decision will constitute the final action of the Commission 25 days after issuance, unless the Commission, on its own motion, institutes a review of the decision within that time.

FOR THE NUCLEAR
REGULATORY COMMISSION

Samuel J. Collins, Director
Office of Nuclear Reactor
Regulation

Dated at Rockville, Maryland,
this 4th day of March 1997.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

OFFICE OF NUCLEAR REACTOR REGULATION

Frank J. Miraglia, Jr., Acting Director

In the Matter of **Docket Nos. 50-321**
50-366
50-424
50-425

GEORGIA POWER COMPANY, *et al.*
(Vogtle Electric Generating Plant,
Units 1 and 2; Hatch Nuclear Plant,
Units 1 and 2) **March 18, 1997**

The Acting Director, Office of Nuclear Reactor Regulation, has granted in part and denied in part a petition filed by Michael D. Kohn, Esquire, on behalf of Messrs. Marvin B. Hobby and Allen L. Mosbaugh requesting action regarding the Vogtle and Hatch nuclear facilities operated by Georgia Power Company and allegedly by the Southern Nuclear Operating Company (SONOPCO or Southern Nuclear). The petition raised concerns about the management practices of GPC and Southern Nuclear with respect to operation of the facilities, treatment of employees who raise concerns, provision of information to the NRC, and alleged false testimony before the Department of Labor. Petitioners requested the NRC to take immediate steps to determine if GPC's current management has the requisite character, competence, fundamental trustworthiness, and commitment to safety to continue operating a nuclear facility.

Some concerns raised by the petition were partially substantiated. Violations of regulatory requirements occurred. The petition was granted to the extent that: the NRC issued three Notices of Violation and civil penalties to GPC for certain violations, the NRC issued letters to GPC (and GPC and SONOPCO employees) regarding the requirements of 10 C.F.R. §§ 50.7 and 50.9, the license transfer amendment proceeding evaluated many of the concerns, and the license transfer amendments issued for the facilities were conditioned to address concerns about

management. The petition was denied to the extent that the Acting Director determined that no unauthorized transfer of the Vogtle operating licenses has occurred, and concluded that none of the issues call into question the Licensee's character, competence, fundamental trustworthiness, or commitment to safety in the operation of its nuclear facilities. Therefore, further action with respect to the issues raised in the petition was denied.

ATOMIC ENERGY ACT: LICENSING STANDARDS

The general standard for integrity is whether there is reasonable assurance that the licensee has sufficient character to operate the plant in a manner consistent with public health and safety and applicable NRC requirements. The Commission may consider the acts of the licensee (and its employees) that have a rational connection to safe operation of a nuclear power plant.

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DIRECTOR'S DECISION UNDER 10 C.F.R. § 2.20

I. INTRODUCTION

This is the final Director's Decision on the petition of Messrs. Marvin B. Hobby and Allen L. Mosbaugh (Petitioners) dated September 11, 1990, as supplemented October 1, 1990, and July 8, 1991, pursuant to 10 C.F.R. § 2.206 (petition). In CLI-93-15, 38 NRC 1 (1993), the Commission vacated and remanded a partial decision on the petition, DD-93-8, 37 NRC 314 (1993), dated April 23, 1993, and directed that the NRC Staff consider the outcome of a pending license transfer proceeding on the Vogtle facility before acting on the petition, due to the overlap in issues. After closure of the evidentiary record and before issuance of a decision, the Licensing Board terminated the Vogtle license transfer proceeding based upon a settlement agreement between Georgia Power Company (GPC or the Licensee) and the sole intervenor, Mr. Mosbaugh. Consistent with the Commission's guidance in CLI-93-15, this Director's Decision addresses the matters considered in the partial Director's Decision and the balance of the petition in light of the information disclosed in the license transfer amendments proceeding, in NRC inspections, investigations, and enforcement actions, and decisions by the Department of Labor.

Although Mr. Mosbaugh has withdrawn his interest in the section 2.206 petition,[1] Mr. Hobby's request is still pending before the NRC. Inasmuch as the petition was jointly filed by Messrs. Mosbaugh and Hobby and it is difficult to segregate their concerns, this Director's Decision addresses all matters raised in the petition, as supplemented by the hearing record.[2]

II. BACKGROUND

A. NRC Staff and Commission Action on the Petition

On September 11, 1990, Michael D. Kohn, Esquire, on behalf of Messrs. Hobby and Mosbaugh, filed with the U.S. Nuclear Regulatory Commission (NRC) a "Request for Proceedings and Imposition of Civil Penalties for Improperly Transferring Control of Georgia Power Company's Licenses to the SONOPCO Project and for the Unsafe and Improper Operation of Georgia Power Company Licensed Facilities" (petition). The Petitioners were formerly employed by GPC, which operates and is part owner of the Vogtle Electric Generating Plant and the Hatch Nuclear Plant. The petition was referred to the Director, Office of Nuclear Reactor Regulation (NRR), for the preparation of a Director's Decision in accordance with section 2.206. The NRC received exhibits to support the petition on September 21, 1990, and a supplement to the petition on October 1, 1990.

The Petitioners made a number of allegations concerning the management of the GPC nuclear facilities.[3] Specifically, the Petitioners alleged that (1) GPC illegally transferred its operating licenses to Southern Nuclear Operating Company (SONOPCO);[4] (2) GPC knowingly made 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 (DG) whose failure had resulted in a Site Area Emergency at Vogtle; (4) a GPC executive submitted perjured testimony during a U.S. Department of Labor (DOL) proceeding under section 210 of the Energy Reorganization Act; (5) GPC repeatedly abused Technical Specification

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[1] By letter dated August 2, 1996, Mr. Mosbaugh withdrew from the 2.206 petition, including "all requests for further proceedings and imposition of penalties relating to Georgia Power Company and Southern Nuclear Operating Company, as well as their directors, officers, employees, and affiliates." *See* Withdrawal of Allen L. Mosbaugh, dated August 2, 1996.

[2] Since this Director's Decision primarily addresses events that occurred prior to Mr. Mosbaugh's withdrawal, the term "Petitioners" refers to both he and Mr. Hobby. (However, the term "Intervenor" refers only to Mr. Mosbaugh).

[3] Petitioners' concerns about Southern Nuclear and GPC management practices are primarily based on Vogtle-specific information. The Petitioners offered no allegations based on observations of operations at the Hatch facility.

[4] Before its incorporation on January 1, 1991, Southern Nuclear Operating Company was known as "SONOPCO Project." Afterwards, it was commonly referred to as "Southern Nuclear."

(TS) 3.0.3 at the Vogtle facility; (6) GPC repeatedly and willfully violated TS at the Vogtle facility; (7) GPC repeatedly concealed safeguards problems from the NRC; (8) GPC operated radioactive waste systems and facilities at Vogtle in gross 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.[5] Petitioners requested that the NRC institute proceedings and take swift and immediate action based on these allegations.

On October 23, 1990, Dr. Thomas E. Murley, who was then Director of NRR, acknowledged receipt of the petition and concluded that no immediate action was necessary regarding these matters. This determination was based on completed and continuing NRC inspections and investigations of the Licensee, particularly those related to the operation of the Vogtle facility.

On February 28, 1991, the NRC requested the Licensee to respond to the petition. The Licensee responded on April 1, 1991 (response).

On July 8, 1991, the Petitioners submitted to the NRC "Amendments to Petitioners Marvin Hobby's and Allen Mosbaugh's September 11, 1990 Petition; and Response to Georgia Power Company's April 1, 1991 Submission by Its Executive Vice President, Mr. R.P. McDonald" (supplement). In the supplement, the Petitioners alleged that GPC's Executive Vice President (1) made material false statements in GPC's April 1, 1991 submittal to the NRC regarding the participants in an April 19, 1990 telephone conference call, and that the submittal attempts to cover up the improper conduct by shifting blame to Petitioner Mosbaugh; and (2) made false statements to the NRC at a transcribed meeting on January 11, 1991, discussing the formation and operation of Southern Nuclear. The supplement also contained a request for a variety of relief, including that the NRC take immediate steps to determine if GPC's current management has the requisite character and competence to continue operating a nuclear facility. On August 26, 1991, Dr. Murley acknowledged receiving the supplement and informed the Petitioners that no immediate action was required and that the specific issues raised in the supplement would be addressed in his Director's Decision. On August 22, 1991, the NRC requested the Licensee to respond to the supplement. The Licensee submitted its response on October 3, 1991 (supplemental response).

On September 18, 1992, GPC filed an application to amend its licenses to transfer to Southern Nuclear its authority to operate the Vogtle units.[6] In response to notices of the proposed issuance of amendments and opportunity to request a

[5] Petitioner Mosbaugh had informed NRC's Office of Investigations (OI) of some of these allegations beginning in January 1990.

[6] By separate application dated September 18, 1992, GPC also requested license amendments to transfer operating authority for the Hatch facility to Southern Nuclear.

hearing that were published in the *Federal Register* (57 Fed. Reg. 47,127, 47,135 (Oct. 14, 1992)), Messrs. Mosbaugh and Hobby filed, on October 22, 1992, a petition for hearing and leave to intervene. In a Memorandum and Order issued November 17, 1992, the Atomic Safety and Licensing Board (Board) denied Mr. Hobby intervenor status for lack of standing. On February 18, 1993 (LBP-93-5, 37 NRC 96, 111 (1993)), the Board granted the intervention petition of Mr. 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.

The admitted bases for the character and integrity contention were Intervenor's allegations that (1) GPC knowingly misled the NRC about who controlled licensed activities at the Vogtle facility by omission or misstatements of information (thus concealing a *de facto* transfer of control of the Vogtle facility to SONOPCO Project) and (2) GPC knowingly provided inaccurate, incomplete, or misleading information regarding diesel generator (DG) starts and reliability in 1990 statements, as well as in April 1991 statements regarding the knowledge and involvement of senior GPC officials with respect to the inaccurate 1990 DG information.[7] LBP-93-5, 37 NRC at 104-11; LBP-94-37, 40 NRC 288 (1994) (partial summary disposition of illegal transfer issue); LBP-93-21, 38 NRC 143, 148 (1993). Some of the issues raised by the petition, as supplemented, were also considered in this proceeding concerning GPC's application to transfer authority to operate the Vogtle facility to Southern Nuclear (license transfer amendments proceeding).

In a partial decision on the petition, dated April 23, 1993, DD-93-8, 37 NRC 314 (1993), *vacated and remanded*, CLI-93-15, 38 NRC 1 (1993), the Director, NRR, addressed each issue raised in the petition except for the allegations of discrimination and perjured testimony that were pending before the Department

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[7] With respect to the DG reporting issue, Intervenor alluded to alleged falsehoods in GPC's 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 a related OI investigation. *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 section 2.206 petition, Mr. R. Patrick McDonald, Executive Vice President–Nuclear Operations, knowingly submitted false information (1) concerning the participation of Mr. W. George Hairston, III, 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. In the amended petition, Intervenor noted that these and other allegations were submitted to OI beginning in June 1990 and were the subject of a section 2.206 petition filed on September 11, 1990, and supplemented September 21 and October 1, 1990, challenging the character, competence, and integrity of GPC and the proposed transferee, Southern Nuclear.

of Labor[8] and the allegedly false GPC statements to the NRC about the DG starts. The NRC Staff determined that certain concerns raised by the Petitioners were partially substantiated, and Notices of Violation and a civil penalty were issued in response to these issues. The Director declined to take further action with respect to the matters resolved and concluded that (1) there was no unauthorized transfer of the Vogtle operating licenses, (2) GPC facilities "are now being operated in accordance with NRC regulations and do not endanger the health and safety of the public," and (3) the information available as of that date did not "call into question the Licensee's character, competence, fundamental trustworthiness, and commitment to safety with respect to operation of its nuclear facilities." 37 NRC at 345.

On July 14, 1993, the Commission vacated and remanded to the NRC Staff "those portions of the section 2.206 petition decided [in DD-93-8] for the Staff's further evaluation and final decision in conjunction with the Staff's resolution of the other remaining matters in the petition and in light of the outcome of the transfer proceeding." CLI-93-15, 38 NRC at 3. The Commission indicated that its decision was based on the "overlap and similarity of some issues between the section 2.206 petition and the transfer proceeding" which warranted that "the Staff's final determination of the common issues should take into account the Licensing Board's findings and the outcome of the transfer proceeding." The Commission further indicated that the common concern raised by the allegations that GPC or Southern Nuclear officers (and the corporate organization responsible for operation of the Hatch and Vogtle facilities) lack integrity should not be addressed in a piecemeal fashion, but determined in an integrated manner after consideration of the remaining matters in the petition and the outcome of the transfer proceeding. The Commission, however, did not express any view on the soundness of the NRC Staff's analysis of the issues addressed in DD-93-8 and did not bar the NRC Staff from taking prompt enforcement action at any time during the ongoing review of the matters raised in the petition. *Id.* at 3-4. Inasmuch as the hearing record supplements issues raised in the petition, and consistent with Commission guidance, these matters are addressed as part of this Director's Decision.

B. DG Enforcement Actions

The NRC Office of Investigations (OI) documented the results of its investigation of the DG issues in a report on OI Case No. 90-020R, dated December 17, 1993 (OI Report). OI found that some GPC officials had either deliberately, or with careless disregard, submitted false or misleading information to the NRC

[8] *Marvin B. Hobby v. Georgia Power Co.*, DOL Case No. 90-ERA-30; *Allen Mosbaugh v. Georgia Power Co.*, DOL Case Nos. 91-ERA-001 and 91-ERA-011.

during an April 9, 1990 presentation and in a related April 9, 1990 letter; in an April 19, 1990 LER; in a June 29, 1990 cover letter to the revised LER; and in an August 30, 1990 letter regarding DG start-count information.

The NRC Staff evaluated Intervenor's allegations and information in the OI Report and, on May 9, 1994, issued a Notice of Violation and Proposed Imposition of Civil Penalties (NOV) and Demands for Information (DFIs) to GPC and six GPC employees. After considering the GPC reply to the NOV, and the GPC and individual responses to the DFIs, the NRC Staff issued a Modified Notice of Violation and Proposed Imposition of Civil Penalties (Modified NOV) on February 13, 1995.[9] In the Modified NOV, the NRC Staff concluded, among other things, that subject to commitments made by GPC and Mr. George Bockhold (Vogtle General Manager during 1990), the NRC "has no present concerns with the character and integrity of GPC or the individuals identified in Demands for Information."

C. Licensing Hearing

In January 1995, after completion of the discovery period concerning the illegal transfer issue, evidentiary sessions of the amendment proceeding on the proposed license transfer were held. Intervenor's case consisted of (1) his own prefiled testimony; (2) the testimony of Messrs. Marvin Hobby, William Shipman (who in October 1988 was the Vogtle General Manager for Support and became General Manager in January 1991), Fred D. Williams (GPC Vice President of Bulk Power Markets); (3) excerpts of prior testimony (e.g., DOL proceedings *Hobby v. GPC* and *Yunker and Fuchko v. GPC*), *see* Transcript (Tr.) 10,134-66, 10,170-99, 2757-58; and (4) deposition excerpts. Evidence received addressed (1) control of daily nuclear operations; (2) the development and implementation of nuclear policy decisions; (3) the employment, supervision, and dismissal of nuclear personnel; and (4) responsibility for nuclear costs. The hearing was to determine whether GPC, either through omissions or misrepresentations, misled the NRC about who was in control of the Vogtle facility. LBP-94-37, *supra*.

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[9] 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 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 (Intervenor 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 Mr. J. Milhoan to Mr. C.K. McCoy, dated March 13, 1995 (Intervenor Exh. II-60), at 1.

Hearings on the DG issues were held from April through September 1995, and generated a transcript record of over 12,500 pages, prefiled testimony of over 35 witnesses, and nearly 600 exhibits.[10]

The Board ruled that (1) the allegations in the NOV were important to the admitted contention and were within the scope of the license amendments proceeding, and (2) Intervenor could inquire as to whether GPC withheld pertinent facts from the NRC with respect to the DGs. LBP-94-15, 39 NRC 254, 255-56 (1994). The Board allowed evidence on 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 dewpoint readings resulted from faulty instrumentation; and (3) in other communications with the NRC regarding high dewpoints.[11] *See* Memorandum and Order (Summary Disposition: Air Quality), dated April 27, 1995 (unpublished), at 6-9.

Some of the issues raised in the section 2.206 petition were also heard during the hearing to give Intervenor latitude in establishing that certain communications from GPC to the NRC were false and misleading and, circumstantially, to show 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.[12]

Intervenor's direct case included his written testimony and cross-examination of adverse witnesses (present and former employees of GPC). GPC's case included the testimony of site and corporate management regarding the Vogtle facility, including Messrs. R. Patrick McDonald (GPC Executive Vice President–Nuclear Operations), W. George Hairston, III (GPC Senior Vice President–Nuclear Operations), C. Kenneth McCoy (GPC Vice President–Vogtle Project),

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[10] Included among these exhibits were the transcripts of audio tape recordings (and two audio tapes) secretly made by Mr. Mosbaugh 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 were akin to a contemporaneous record of some events related to matters in the hearing, but some tape excerpts played in the courtroom contained numerous inaudible portions and the content, context, and tone of the remarks recorded were disputed, *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 different versions of some tape transcripts being proffered by the parties.

[11] Mr. Mosbaugh's air quality allegation asserted that Mr. George Bockhold, Vogtle General Manager, deliberately misrepresented DG air quality in the April 9 letter by withholding then recent (known) out-of-tolerance DG control air dewpoint readings, as well as erroneously asserting that high readings were due to faulty instruments and that air quality was satisfactory. OI Report (Intervenor Exh. II-39) at 95. OI substantiated this and the other allegations concerning DG information and concluded that Messrs. George Bockhold, George Hairston, Kenneth McCoy (Vice President–Vogtle Project) and William Shipman (General Manager–Plant Support) deliberately (or with careless disregard) had submitted false and incomplete information to the NRC. OI did not substantiate, however, that Mr. McDonald deliberately provided false information to the NRC in the GPC response to Intervenor's section 2.206 petition. *See* OI Report at 1-2.

[12] These matters included the FAVA (a radwaste microfiltration system) and "Dilution Valve" allegations provided to OI prior to the March 20, 1990 Site Area Emergency and also raised in the section 2.206 petition. The technical matters raised by the allegations were not admitted into the license transfer proceeding. May 11 Order at 7-8.

Bockhold, John G. Aufdenkampe (GPC Manager of Technical Support), Jimmy Paul Cash (a Unit Superintendent for the Vogtle facility and a degreed Senior Reactor Operator), Georgie R. Frederick (Supervisor–Safety Audit and Engineering Review),[13] and the testimony of two former NRC employees.[14] The NRC Staff witnesses were Messrs. David B. Matthews (NRR Project Director for the Hatch and Vogtle facilities from 1988 through 1995), Pierce H. Skinner (Region II Section Chief of Reactor Projects since 1991), Darl S. Hood (NRR Licensing Project Manager for the Vogtle facility from August 1990 through 1995), Edward B. Tomlinson (an NRR Senior Reactor Engineer for DGs and supporting systems since 1981), Luis A. Reyes (Region II Director of Division of Reactor Projects from 1987 to 1992, and Deputy Regional Administrator for Region II through 1997), and Roy P. Zimmerman (NRR Associate Director for Projects since June 1994).

After proposed findings of fact and conclusions of law were filed in the proceeding,[15] Mr. Mosbaugh and GPC filed a joint motion requesting that the Board dismiss the proceeding and refrain from issuing an Initial Decision. On August 19, 1996, the Board issued a Memorandum and Order (LBP-96-16, 44 NRC 59) terminating the license amendments proceeding based on Mr. Mosbaugh's withdrawal as the sole intervenor pursuant to a settlement agreement with GPC.[16] In LBP-96-16, the Board recognized that the Commission encourages settlements and stated:

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[13] Among the other witnesses that testified for GPC were Thomas V. Greene, Jr. (Assistant General Manager–Plant Support), Michael W. Horton (Manager–Engineering Support), Harry W. Majors (Licensing Engineer–Vogtle Project), Thomas E. Webb (Licensing Engineer–Vogtle site), Kenny C. Stokes (a Senior System Engineer in the Engineering Support Department with primary responsibility for the DGs), Lewis A. Ward (Manager of Nuclear Maintenance and Support), and W.F. "Skip" Kitchens (Assistant General Manager–Operations and Chairman of the Vogtle Plant Review Board), and Mark Briney (an acting Instrumentation and Control (I&C) superintendent in March-April 1990).

In 1990, Mr. Milton D. Hunt was an NRC Inspector, and Mr. Richard A. Kendall was a member of the NRC Incident Investigation Team (IIT).

[15] Georgia Power Company's Proposed Findings of Fact and Conclusions of Law on Diesel Generator Reporting Issues, dated November 6, 1995; Intervenor's Final Statement of Fact and Conclusions of Law, dated November 30, 1995; NRC Staff Proposed Findings of Fact and Conclusions of Law in the Form of an Initial Decision, dated December 12, 1995; Georgia Power Company's Reply to Intervenor's and the NRC Staff's Proposed Findings of Fact and Conclusions of Law, dated December 22, 1995.

[16] Although the settlement agreement was not made available to the Board or NRC, both Mr. Mosbaugh and GPC assured the Board that nothing in the settlement agreement would prohibit, restrict, or otherwise discourage Mr. Mosbaugh from raising safety concerns to the NRC in the future. Mr. Mosbaugh also stated that all of his safety or regulatory issues had been presented to the NRC. Joint Motion of Termination, dated August 2, 1996, at 10.

Mr. Mosbaugh also withdrew his complaint before DOL. On August 23, 1996, a DOL Administrative Review Board issued a "Final Order Approving Settlement and Dismissing Complaint" after reviewing the confidential settlement agreement regarding the discrimination suit of Mr. Mosbaugh (DOL Case Nos. 91-ERA-1, 91-ERA-11), finding the agreement to be "a fair, adequate and reasonable settlement of the complaints." On August 29, 1996, the DOL Administrative Law Judge (to whom the suit had been remanded by the Secretary of Labor on November 20, 1995, for a determination regarding Mr. Mosbaugh's damages) took note of the Order by the Administrative Review Board and issued an "Order of Dismissal."

> We are satisfied, based on our analysis of the record, that the Staff has been an active guardian of the public interest at Plant Vogtle and, to the extent that they may have not already done so, that the Staff will take the record we have developed into account in exercising its continuing authority. *See* Notice of Violation and Proposed Imposition of Civil Penalty (NOV) and Demands for Information (DFI), May 9, 1994; Modified Notice of Violation and Proposed Imposition of Civil Penalties, February 13, 1995; Notice of Violation (Department of Labor Case Nos. 90-ERA-30, and 91-ERA-011), May 29, 1996.

44 NRC at 66.

D. Standards for Character and Integrity

In reaching this decision on the character and integrity contention, I have considered the following Commission guidance and precedent. In *Metropolitan Edison Co.* (Three Mile Island Nuclear 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 and Power Co.* (South Texas Project, Units 1 and 2), CLI-80-32, 12 NRC 281, 291 (1980), the Commission stated that

> [e]ither abdication of responsibility or abdication of knowledge, whether at the construction or operating phase, could form an independent and sufficient 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 the licensee or license applicant. 42 USC 2232a.

Licensee communications to the NRC, whether written or oral, must be complete and accurate as required by section 50.9. In promulgating section 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 (Dec. 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. *See Randall C. Orem, D.O.*, CLI-93-14, 37 NRC 423, 427-28 (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 the license amendments 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. at 49,365.

In light of the importance of licensee communications and their role in enabling the NRC to discharge its responsibilities, this Director's Decision examines whether GPC acted with candor and endeavored to ensure that submissions to the NRC were accurate. *See Virginia Electric and 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 sub nom. Virginia Electric and Power Co. v. NRC*, 571 F.2d 1289 (4th Cir. 1978).

III. DISCUSSION

A. Alleged Unsafe Operating Practices (Petition §§ III.5-.8)

The petition included several concerns regarding unsafe operating practices at the Vogtle facility. These concerns were initially addressed in the vacated partial Director's Decision (DD-93-8) and are presented below with supplementation based on the license amendments hearing record and minor editing.

1. Alleged Routine Entering into "Motherhood"

The Petitioners allege (*see* Petition § III.5) that GPC routinely threatens the safe operation of GPC's nuclear facilities by allowing them to enter TS 3.0.3,

referred to in the petition as "motherhood." Specifically, the Petitioners state that (1) GPC repeatedly allowed the Vogtle facility to enter TS 3.0.3 by rendering both trains of safety-related load sequencers for the DGs inoperable, and (2) GPC did not make the required notifications to the NRC when TS 3.0.3 was entered.

Vogtle TS 3.0.3 requires that, when a limiting condition for operation (LCO) is not met, except as provided in the associated action requirements, action shall be taken within 1 hour to place the unit in a mode in which the TS do not apply by placing it in hot standby within the next 6 hours, in hot shutdown within the following 6 hours, and at least in cold shutdown within the subsequent 24 hours.

The NRC established TS 3.0.3 to ensure that the reactor plant is shut down in a timely and orderly manner when the LCO in the TS for the specific component or system is exceeded or when a condition exists that is not addressed by TS requirements. The Licensee has satisfied the TS if it performs the final action within the time specified in the TS. If the condition requiring entry into TS 3.0.3 is corrected before commencing or completing the shutdown, the Licensee need not initiate a shutdown, or if a shutdown is already initiated, may end the shutdown and return the plant to the previous conditions.

In accordance with 10 C.F.R. § 50.72, Immediate Notification Requirements for Operating Nuclear Power Reactors, licensees are required to make immediate (i.e., within 1 or 4 hours, depending on the circumstances) reports to the NRC of any declaration of an emergency class specified in the Emergency Plan, and certain non-emergency events. Non-emergency events include such items as the initiation of any nuclear plant shutdown required by the TS, any deviation from the TS authorized by 10 C.F.R. § 50.54(x), any condition where the nuclear power plant (including its principal safety barriers) becomes seriously degraded, and any natural phenomenon or other external condition that poses an actual threat to the safety of the nuclear plant or significantly hampers site personnel in the performance of duties necessary for the safe operation of the plant. In 10 C.F.R. § 50.73, Licensee Event Report System, events are identified for which written reports will be made to the NRC within 30 days. These events include several of the events requiring immediate reports pursuant to section 50.72, plus additional events such as any event or condition that alone could have prevented the fulfillment of the safety function of certain structures or systems. The NRC's notification and reporting regulations do not contain an explicit requirement that an entry into TS 3.0.3, in and of itself, be reported. Licensees are required by section 50.72 to notify the NRC within 1 hour of the initiation of any plant shutdown required by the plant's TS. Thus, the NRC is promptly notified of entries into TS 3.0.3 if the plant initiates a shutdown as a result of the problem that caused entry into the TS. However, there is no requirement to notify the NRC of entries into TS 3.0.3 if a shutdown is not initiated. The NRC Staff has

no basis to conclude that the Licensee's activities constituted unsafe practices or that these activities indicated that the character of the Licensee, including those GPC individuals employed by Southern Nuclear in conjunction with the transfer of operating licenses to Southern Nuclear, is unsuitable for operating a nuclear power plant.

The NRC Staff has reviewed GPC's entry into TS 3.0.3 through various inspections conducted by region-based inspectors and through the observations of the permanently assigned resident inspection staff and concludes that GPC does not routinely enter TS 3.0.3.

In Inspection Report 50-424, 425/90-19, January 11, 1991, the NRC Staff documented that GPC management indicated that actions for an orderly shutdown would not be initiated until at least 3 hours after entry into TS 3.0.3. GPC management also indicated that it could perform an orderly, controlled shutdown within 1 hour, if necessary. GPC interpreted the action statement of TS 3.0.3 to allow 7 hours to be in hot standby, and to accomplish this, the shift crew could wait for at least 3 hours after entering the LCO before commencing a shutdown. It was also GPC's position that no notifications to the NRC were required under these circumstances. GPC's actions in this area did not differ significantly from those of other licensees, except that GPC did not immediately notify the load dispatcher[17] and did not provide written guidance to the operations personnel. In Inspection Report 50-424, 425/90-19, the NRC Staff identified the lack of immediate notification as a weakness. On February 28, 1991, GPC responded to this finding by providing written guidance for the operators to use upon entering TS 3.0.3.[18] The NRC Staff reviewed this guidance and, as noted in Inspection Report 50-424, 425/91-14 dated July 19, 1991, found it acceptable.

The specific example identified by the Petitioners regarding this issue concerned GPC's practice in the area of safety-related load sequencers for Vogtle's DGs. The Petitioners claim that the Licensee failed to recognize that the loss of a load sequencer resulted in the entry into TS 3.0.3 and thus required notification of the NRC.

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[17] The NRC confirmed that, while GPC did not follow the actions recommended in Generic Letter 87-09 (i.e., notification of the load dispatcher within the first hour and performance of a controlled shutdown throughout the next 6 hours), the NRC could find no instance of GPC ever exceeding the 7-hour time limit to be in hot standby.

[18] The Licensee's written guidance for TS 3.0.3 entry was issued as TS Clarifications, which are additional pages that the Licensee maintains with the TS in the main control room. The guidance provided that upon entry in TS 3.0.3, the Unit Shift Supervisor should evaluate plant conditions and formulate a course of action, including actions to prepare for and complete a safe and controlled shutdown. In cases where a high degree of confidence exists that the technical issues can be resolved or repairs made promptly to restore component operability, an immediate power reduction is not advisable. However, actions are to be taken to ensure that an orderly shutdown will be completed within the allowable time while repairs or attempts to resolve operability are under way. Within the first hour, notifications to the load dispatcher and management should be made. If the condition still exists, power reduction should begin no later than 4 hours into the action (i.e., 3 hours of the allowable time remaining). In those cases where it is apparent that resolution of the condition will not occur within the allowable time, an orderly shutdown will begin immediately.

Each unit at Vogtle has two Engineering Safety Feature Actuation Systems (ESFASs) sequencers and both must be operable during Modes 1, 2, 3, and 4. NRC and GPC personnel determined that removing the load sequencers from service could result in entering the LCO for TS 3.0.3 or in entering TS Table 3.3-2, depending on which portion of the sequencer system was removed. Some of the circuits were included in Table 3.3-2, but the TS did not address the remainder of the system. The Operations Department had historically linked load sequencer outages to the emergency DG LCO of TS 3.8.1.1.b (78 hours to hot standby). During the NRC's special team inspection documented in Inspection Report 50-424, 425/90-19, GPC determined that TS Table 3.3-2 and TS 3.0.3 should have applied to sequencer outages. When this determination was made, GPC informed the NRC Staff that it had not reviewed past work orders for load sequencers.

At that time, the NRC Staff reviewed both the completed maintenance work orders that were performed on the sequencers on Units 1 and 2 and the related surveillance tests by the Instrumentation and Control Engineering and the Operations Departments. The NRC Staff found several instances where the work performed would have required the load sequencers to be de-energized. However, the associated unit was found not to have been in Modes 1, 2, 3, or 4 at the time this work was performed and therefore, no TS LCO applied.

Similar to the maintenance work order review, the NRC Staff reviewed related Instrumentation and Control Engineering and the Operations Departments' surveillance tests. This review did not reveal any examples of the load sequencers having been de-energized while in Modes 1 through 4 at the time the work was performed and thus no TS LCOs applied.

Accordingly, I conclude that GPC does not routinely threaten the safe operation of the Vogtle facility by allowing entry into TS 3.0.3. The Petitioners' claim that NRC notification requirements were violated upon entry into TS 3.0.3 was not substantiated.

2. *Alleged Ignoring of Technical Specifications*

The Petitioners claim (*see* Petition § III.6) that GPC routinely endangers the public's safety by ignoring TSs and that this is illustrated by seven cited examples.

Example (1): Opening Dilution Valves When Required to Be Locked Closed (Petition § III.6a)

The Petitioners state that the Licensee willfully and knowingly violated Vogtle Unit 1 TSs by opening dilution valves required to be locked closed by TSs. The

Petitioners claim that the valves were opened while the reactor coolant system (RCS) was at mid-loop, and that this placed the plant in an unanalyzed condition and created the risk of an uncontrolled boron dilution accident and an inadvertent reactor criticality. The Petitioners allege that the valves were opened to expedite an outage so that the plant could be placed back on line according to the outage schedule.

OI investigated this event, which occurred in October 1988 during the first refueling outage for Vogtle Unit 1. The results of that investigation are documented in OI Report 2-90-001. The OI investigators concluded that TS 3.4.1.4.2 was knowingly and intentionally violated by Vogtle Operations shift supervisors, with the express knowledge and concurrence of the Operations Manager.[19] In its Report, OI also concluded that a violation of the reporting requirements of section 50.73 occurred, but that the evidence was insufficient to conclude that this was a deliberate violation of reporting requirements.

On June 3, 1991, after reviewing the OI findings, the NRC Staff issued a Notice of Enforcement Conference and Demands for Information to GPC and the Operations Manager at the time of the incident. The NRC Staff also issued Demands for Information to the Operations Superintendent and the Shift Supervisor at the time of the incident.

After reviewing the responses to the four Demands for Information (Demands), the NRC Staff held an Enforcement Conference on September 19, 1991, with GPC and the Operations Manager. Subsequently, the NRC Staff sent letters to the Operations Manager, the Operations Superintendent, and the Shift Supervisor stating that no additional actions would be taken regarding their individual NRC licenses. The NRC Staff also stated that, although the actions of these individuals did not meet NRC expectations, there was insufficient evidence to support a conclusion that their actions in 1988 constituted a deliberate attempt to disregard and intentionally circumvent the requirements of the TSs.

On December 31, 1991, after consultation with the Commission, the NRC Staff issued a Notice of Violation and Proposed Imposition of Civil Penalty of $100,000 (Notice) to GPC. The Notice set out several violations identified during the NRC investigation conducted between February 1, 1990, and March 19, 1991, including a violation that, contrary to the requirements of TS 3.4.1.4.2, on October 12 and 13, 1988, with Unit 1 in Mode 5, loops not filled, reactor makeup water storage tank valves 1208-U4-176 and 1208-U4-177 were opened in order to add chemicals to the RCS. On January 30, 1992, the Licensee responded to the Notice, denied the violations, and protested the proposed imposition of the

[19] Mr. William F. "Skip" Kitchens, the Operations Manager and a PRB chairman, and Mr. Jimmy P. Cash, a Senior Reactor Operator serving as the Operations Superintendent on Shift, are also mentioned in this Director's Decision in the discussions of the DG issue. *See also* Section III.D herein regarding a January 1990 meeting between Messrs. Bockhold, Kitchens, and Mosbaugh.

civil penalty.[20] The NRC Staff reviewed GPC's response and, on June 12, 1992, issued an Order Imposing Civil Monetary Penalty of $100,000 (Order). On July 9, 1992, GPC responded to the Order, submitted payment of the penalty, and noted that it did not plan to appeal this action.

The NRC Staff has also evaluated the Petitioners' concern that the plant was placed in a condition that could have resulted in an uncontrolled dilution event and inadvertent reactor criticality. The NRC Staff reviewed an analysis of this event that Westinghouse subsequently performed and GPC provided on November 21, 1989, to support proposed license amendments to change Vogtle TS 3.4.1.4.2. The change would allow the valves to be opened under administrative control to enable nonborated chemical additions to be made to the RCS during Mode 5b (cold shutdown with coolant inventory reduced to the extent that the reactor coolant loops are not filled) and Mode 6 (refueling), using a flow path via the reactor makeup water storage tank. The results of the Westinghouse analysis indicated that the minimum acceptable operator action times of 15 minutes for Mode 5b and 30 minutes for Mode 6, as specified in the NRC's Standard Review Plan (NUREG-0800), would be met. On the basis of this analysis, the NRC Staff concluded that the opening of these valves under administrative controls with the RCS in a loops-not-filled condition, including the mid-loop condition, would not result in an unsafe condition. This conclusion formed the basis for the NRC Staff's approval of License Amendment No. 28 for Vogtle Unit 1 and License Amendment No. 9 for Vogtle Unit 2, each dated February 20, 1990. The responses by GPC and specific individuals indicated that precautions were taken when the valves were opened in 1988 to ensure that the valves would remain open for no more than 5 minutes. While the NRC Staff is unable to conclude that these undocumented controls were in place, the NRC Staff does find that the actual amount of time the valves were open was of insufficient duration to create a criticality event. Therefore, the NRC Staff concludes that, although the TSs in effect at the time were violated, the actual opening of the valves in 1988 did not endanger the health and safety of the public.

Thus, to the extent that Petitioners allege that a violation associated with the operation of these dilution valves occurred, the allegation is substantiated and the NRC has taken appropriate enforcement action. However, the evidence does not substantiate that this action was willful. Rather, as indicated by the responses of the Operations Manager, the Operations Superintendent, the Shift Supervisor, and GPC to the NRC's Demands for Information and during the

[20] It was GPC's position that the Action Statement in the TS stating that the valve should be closed immediately if found open meant that the valve could be opened for about 5 minutes. GPC based this position upon earlier correspondence between NRC and the nuclear industry which had explored potential definitions for "immediate" actions.

Enforcement Conference, the action resulted from an incorrect interpretation of the TS requirement by the Operations Manager in 1988.

Example (2): Failure to Secure Dilution Valves as Required by TSs (Petition § III.6b)

On February 26, 1990, the NRC Staff found that the dilution valves, identified in Example 1 above, were required to be locked closed, but were not locked while at mid-loop, in violation of TSs. The Petitioners assert that this is another example of a willful violation of TSs by Vogtle senior management.

On February 26, 1990, while Unit 1 was in Mode 5 with reactor coolant loops not filled (mid-loop), the NRC Staff found that discharge valve 1-1208-U4-176 of the refueling makeup water storage tank was closed but was not secured in position as required by Action Statement (c) of TS 3.4.1.4.2. Instead of installing a mechanism to mechanically secure this valve, the Licensee placed a "hold tag"[21] on the valve, which provided only administrative control to preclude valve operation. When the NRC Staff described this condition to the Licensee, Vogtle personnel contended that the administrative controls were acceptable to fulfill the requirements of the TS that the valve be secured in position. GPC later agreed that this method was an unacceptable interpretation of the TS and took action to install a mechanical locking device. On April 26, 1990, the NRC Staff issued Notice of Violation, 50-424, 425/90-05-01, "Failure to Mechanically Secure Valve 1-1208-U4-176 During Mode 5 as Required by TS 3.4.1.4.2.C."

During a subsequent NRC inspection (Inspection Report 50-424, 425/91-14), the NRC Staff reviewed the Licensee's associated actions in connection with this issue and closed this violation. The inspectors reviewed the locked-valve procedure, 10019-C, which had been revised to eliminate using a hold tag on valves that are required by TSs to be secured in position. To secure the valve, the Licensee routed a steel cable through drilled holes in the valve handle and mechanically secured the cable to prevent personnel from operating the valve. GPC conducted a comprehensive review of all remaining valves required by TSs to be secured to ensure that each had a locking mechanism in place. GPC committed to providing an appropriate locking mechanism for any valve secured by a hold tag and required to be secured by TSs. However, GPC found no other valves in that category.

The NRC Staff concludes that, although a violation was issued, it resulted from the Licensee's erroneous belief that use of a hold tag was an acceptable

[21] A "hold tag" is a 3-inch by 5-inch red tag that is attached to a piece of equipment to indicate that it is not to be operated. The intent of the "hold tag" is indicated by Vogtle's Administrative Procedure 304-C, "Equipment Clearance and Tagging Procedure," which states that "A hold tag, when attached to a piece of equipment, prohibits the operation of that equipment in all circumstances."

means of satisfying the TS requirement that the valve be secured. No evidence was found of a willful violation of TSs by Vogtle senior management or other personnel. Therefore, the allegation was not substantiated.

Example (3): Miscalculation of Shutdown Margin (Petition § III.6c)

The Petitioners allege that in January 1989, two shifts of licensed operators miscalculated, because of procedural errors, the shutdown margin for Vogtle Unit 1, which was shut down at the time, and consequently that the RCS boron concentration became "dangerously low" and that the Licensee did not write a deficiency report, conduct a critique, review its actions for conformance to TSs, or submit a report to the NRC.

Vogtle TS 3.1.1.2 requires that a specified minimum shutdown margin be maintained when the reactor is in Mode 3 (Hot Standby), 4 (Hot Shutdown), or 5 (Cold Shutdown). The required minimum value is specified by graphs of shutdown margin as a function of RCS boron concentration. The minimum shutdown margin specified in TS 3.1.1.2 is sufficient to ensure, as a most restrictive condition, that if a boron dilution accident were to occur during the beginning of core life, the operator would have at least 15 minutes to take corrective action after the initiation of an alarm caused by source range high flux to avoid total loss of shutdown margin. An operator reaction time of at least 15 minutes is consistent with the associated accident analyses of the boron dilution event in the Final Safety Analysis Report (FSAR). The corresponding surveillance requirement in TS 4.1.1.2 requires that the shutdown margin be determined to be greater than or equal to the required value at least once every 24 hours by considering several factors, including RCS boron concentration, RCS average temperature, and xenon concentration.

At 5:35 p.m. on January 19, 1989, control room operators at Vogtle manually tripped the Unit 1 turbine and reactor to enter a planned outage to repair a leaking socket weld for the drain line in the loop seal downstream of the pressurizer safety relief valve. After the unit was shut down, an extra shift supervisor on shift completed Procedure 14005-1, "Shutdown Margin Calculation," which must be completed every 24 hours when the plant is in Mode 3, 4, or 5. He signed the procedure at 7:13 p.m. on January 19, 1989. However, the extra shift supervisor incorrectly completed Data Sheet 2, which applies to conditions where the average RCS temperature is equal to or greater than 557 degrees Fahrenheit (°F). This action was incorrect because he should have completed Data Sheet 4, which applies to conditions related to entering Cold Shutdown (Mode 5). The shutdown margin calculation that was completed by the shift supervisor was based upon the wrong data sheet, and resulted in a calculated

shutdown margin of 6.6% reactivity (i.e., delta *k/k*)[22] and a required shutdown margin of 2.58% delta *k/k*. These results indicated to the operators that no boron addition to the RCS was required in order to enter Cold Shutdown.

On January 20, 1989, at approximately 9:00 a.m., a reactor engineer questioned the apparently low RCS boron concentration of 1333 parts per million (ppm). His concern prompted the Licensee to stop the unit cooldown until the shutdown margin calculation was verified. At 10:22 a.m., the reactor engineer completed a shutdown margin calculation that assumed an RCS temperature of 68°F and 0% reactivity for xenon worth. His calculation, which did not take into account xenon worth, showed that 1800-ppm boron concentration was necessary to obtain a shutdown margin of 4.015% delta *k/k* compared to a required shutdown margin of 3.47% delta *k/k*. This calculation failed to include credit for xenon worth, which would have added approximately 3.8% delta *k/k* to the shutdown margin and provided more than an adequate margin above TS requirements without further boration. Since no TS limit was exceeded, GPC was not required to submit, and did not submit, a written report to the NRC.

On January 20, 1989, at 1:38 p.m., the on-shift operations supervisor recalculated the shutdown margin that had been incorrectly calculated at 7:13 p.m. on January 19, 1989. The new calculation relied upon plant data in effect on January 19 and was based upon Data Sheet 4. The new calculation determined that the shutdown margin was 4.185% delta *k/k* while the required shutdown margin was 1.92% delta *k/k*.

The NRC Resident Inspectors reviewed Procedure 14005-1, Data Sheets 2 and 4, the calculations concerning the data sheets dated January 19 and 20, 1989, and control room logs for that period. The NRC Staff discussed the inspection findings in Inspection Report 50-424, 425/91-20, dated September 12, 1991. The NRC Staff found that the shutdown margin calculation performed at 7:13 p.m. on January 19, 1989, was incorrect in that the wrong Data Sheet of Procedure 14005-1 was used. However, the inspector found no evidence that the TS limits on shutdown margin were ever exceeded or that an inadvertent criticality could have occurred because the wrong data sheet was used. The confusing instructions on Data Sheet 2 of Procedure 14005-1 contributed to this error. On March 26, 1989, the Licensee revised this procedure to simplify, consolidate, and clarify the data sheets. The NRC Staff also confirmed that GPC failed to write a Deficiency Card for this event which would have prompted the Licensee to perform a followup review of the error. The inspectors reviewed

[22] Reactivity is defined as the fractional change in neutron population from one neutron generation to the subsequent generation. Reactivity is expressed mathematically as $(K_{effective} - 1)/K_{effective}$, or as delta *k/k*, where $K_{effective}$ is the multiplication factor in a nuclear system expressing the change in the fission neutron population per generation.

GPC's Deficiency Card program and found it to be adequate. They could find no other instances of a failure to write a Deficiency Card.

Thus, the NRC Resident Inspectors determined that violations occurred. The extra shift supervisor failed to follow procedures in selecting the data sheet. Additionally, a shift supervisor made an error and failed to write a Deficiency Card.

Based on its review of Inspection Report 50-424, 425/91-20, the NRC Staff has determined that these violations meet the criteria contained in sections V.A and V.G.1 of the then-in-effect General Statement of Policy and Procedure for NRC Enforcement Actions (10 C.F.R. Part 2, Appendix C) for violations for which a Notice of Violation need not be issued. Section V.A allowed the NRC to exercise discretion in issuing a Notice of Violation for isolated Severity Level V violations, regardless of who identified them, provided the Licensee had initiated appropriate corrective actions before the end of the inspection. Under section V.G.1, the NRC need not issue a Notice of Violation if the violation was identified by the Licensee, is normally classified at a Severity Level IV or V, was reported if required, was or will be corrected (including measures to prevent recurrence) within a reasonable time, was not a willful violation, and was not a violation that could reasonably be expected to have been prevented by the Licensee's corrective action for a previous violation. This practice of not requiring the issuance of a Notice of Violation when a violation meets the aforementioned criteria was adopted by the NRC as a means of encouraging licensees to identify and correct violations and to avoid expenditure of limited resources for both the NRC and the licensee — resources that could be better used in improving safety.

In summary, the Licensee identified and corrected the shutdown margin calculation error, which did not result in the violation of a TS limit and did not require a written report to the NRC. Moreover, the corrected calculations of the shutdown margin do not support the allegation that the error resulted in "dangerously low" boron concentrations in the RCS or that it endangered the health and safety of the public. The NRC inspectors determined that, even though a Deficiency Card was not written, the Licensee's followup review of the error was prompt and had been completed before the end of the inspection.

Example (4): "Taking" LERs (Petition § III.6d)

The Petitioners claim that GPC employees were told, on March 22, 1990, to keep planned shutdowns on schedule by "taking" LERs.[23] The Petitioners

[23] "Taking" LERs implies that personnel intentionally do not perform actions required by a TS at the specified time required by the TS action. At a later time, they subsequently acknowledge this action was not performed and *(Continued)*

also contend that pressure to remain on schedule would necessarily result in an intentional violation of TS and "taking" LERs in order to remain on schedule.

This issue was reviewed as part of OI's investigation of an alleged intentional TS violation with regard to a mode change with an inoperable neutron source range monitor (*see* Example 6 hereinafter). OI's review and findings in this area are documented in OI Report 2-90-012. The OI investigation did not substantiate the alleged "taking" of LERs. The personnel interviewed stated that they had never been instructed to do "whatever it takes" to stay on schedule.

On the basis of this investigation, the NRC Staff was unable to conclude that Vogtle personnel either had a deliberate practice of, or were instructed to, "take" LERs to stay on schedule. Similarly, statements made by the Petitioners that SONOPCO's philosophy would necessarily result in managers intentionally violating TS and "taking" LERs to remain on schedule were not substantiated by the NRC Staff's review. Therefore, the allegation was not substantiated.

Example (5): Surveillance Testing of Containment Isolation Valves (Petition § III.6.e.i)

The Petitioners claim that the Licensee knowingly concealed a violation which, if uncovered, would have resulted in a safety-related shutdown of Vogtle Unit 1. The violation allegedly concerned the failure to properly test approximately thirty-nine containment isolation valves in violation of TS surveillance requirement 4.6.1.1.a.

In February 1990, after operations personnel performed a monthly TS surveillance on containment isolation valves and turned in their paperwork, the Shift Supervisor recognized an error in that only two of thirty-nine valves had been checked. The Shift Supervisor directed that all necessary surveillances be performed immediately. The Shift Supervisor then examined previous records and found that the same error had also been made the previous month, and therefore, that another violation of TS 4.6.1.1.a had occurred. The Shift Supervisor then informed the Work Planning Group of the error and this group prepared and delivered a Deficiency Card to the control room. Since the missed surveillances had already been completed by this time, no action was initiated under the TS's LCO (shutdown within 1 hour). The Petitioners state that the Deficiency Card should have been initiated earlier by the individual discovering the deficiency and that the event was mishandled to conceal the discovery time and to avoid the shutdown requirement of the LCO.

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then write a report (LER) to the NRC as specified in section 50.73. Thus, this "taking" LERs would allegedly be done in order to forgo performing the activity required by a TS at a time that would cause a schedule delay.

GPC reported this issue in a timely LER 50-425/90-01, dated March 27, 1990. NRC resident inspectors reviewed the LER, as documented in Inspection Report 50-424, 425/90-10, and found that the task sheet contained in the procedure for performing this surveillance was inadequate. The format of the task sheet resulted in cognitive personnel errors because the task sheet was unclear as to the number of valves required to be tested. The NRC Staff categorized this event as a noncited violation because the criteria for exercising discretion specified in section V.G.1 of the then-in-effect Enforcement Policy (10 C.F.R. Part 2, Appendix C) were met (NCV 50-425/90-10-01).

An OI investigation did not substantiate that this violation was willful. OI concluded in OI Report 2-90-012, that the missed surveillance had been reported in an LER and resulted from an inadequate Surveillance Task Sheet that had listed equipment identification numbers of only two valves for the monthly containment integrity check. OI noted that the NRC resident inspectors had reviewed the LER and documented the event without issuing a Notice of Violation. OI also noted that the circumstances of this event were reviewed during the NRC's special team inspection at Vogtle in August 1990, which found that the Shift Supervisor did not conceal the true discovery time of the missed surveillance in order to avoid a unit shutdown and that the Shift Supervisor's actions to initiate an investigation into the adequacy of the previous month's surveillance and to concurrently perform the missed surveillances were appropriate. Since the surveillance test is of short duration, it was completed before the determination was made that the previous test had not been completed correctly. Since the surveillance test had already been repeated once the inadequacy of the previous test became known, a shutdown of the unit at that point was not required.

On the basis of the NRC Staff's inspections and the OI investigation, the Petitioners' claim that the Licensee knowingly concealed a technical violation was not substantiated.

Example (6): Changing Modes with Required Equipment Inoperable (Petition § III.6.e.ii)

The Petitioners claim that the Licensee knowingly concealed another violation on March 1, 1990, when a change from Mode 5 to Mode 6 occurred even though required equipment was not operable. Petitioners assert that the failure to comply with the TS translated into a 12-hour schedule enhancement at a critical juncture and was a willful violation.

The NRC resident inspectors, an NRC special inspection team, and OI investigators reviewed this issue. Results of these efforts are documented in NRC Inspection Report 50-424/90-10 dated June 14, 1990, and OI Report 2-90-012. GPC also documented this event in LER 424/90-004 dated May 11, 1990.

This LER described the Licensee-identified violation of TS 3.0.4 on March 1, 1990, when Unit 1 entered Mode 6 from Mode 5 with an LCO in effect for a neutron source range channel. The LER attributed the root cause to cognitive personnel error by the Shift Superintendent who failed to review the back side of the relevant LCO Status Sheet that noted the mode change was prohibited while the source range monitor was inoperable. Moreover, the Shift Superintendent had not otherwise recognized the prohibition before authorizing the mode entry.

The NRC Staff interviewed various personnel involved in the review of plant conditions and involved with documentation necessary to change modes. The interviews indicated that the Shift Superintendent and the Unit Shift Supervisor were aware of an active LCO at the time of the mode change, but neither had connected the LCO to a mode restriction. Both of these individuals indicated that there had been no unreasonable emphasis on the critical path schedule. Both denied that they had ever been given any indication or instruction to do whatever it takes to stay on schedule. They also indicated that they did not feel undue pressure to stay on schedule or any pressure to compromise plant safety even though the mode change resulted in a reduction of the critical path outage time.

The NRC Staff expressed concern that the format of the LCO status sheet contributed to the problem. Because the status sheet is a two-sided form with the remarks section on the back of the form, a cursory review of the sheet could result in any remarks entered on the back of the form being overlooked. On the basis of the NRC resident inspectors' review, the NRC determined that a violation occurred as discussed in Inspection Report 50-424/90-10. This violation was categorized as a noncited violation because the criteria for exercising discretion specified in section V.G.1 of the then-effective Enforcement Policy (10 C.F.R. Part 2, Appendix C) were met (NCV 50-424/90-10-03).

On the basis of evidence developed during the NRC inspections and OI investigation, the allegation of an intentional violation was not substantiated.

Example (7): Failure to Declare RHR Pump Inoperable and Enter LCO (Petition § III.6.e.iii)

The Petitioners allege that GPC knowingly concealed a TS violation when the "B" residual heat removal (RHR) pump was not declared inoperable after cracking of the nuclear service cooling water (NSCW) line. Specifically, the Petitioners allege that, during the second refueling outage at Unit 1 (1R2), with RHR train "A" out of service for maintenance, the RHR train "B" pump experienced excessive vibration and the NSCW motor cooler experienced a leak at its outlet. TS 3.9.8.1, "RHR and Coolant Circulation," was allegedly

violated because the Operations Department chose not to declare RHR pump "1B" inoperable in an effort to mitigate the effect on the critical work path.

The NRC Staff addressed this item in the Special Team Inspection documented in Supplement 1 to NRC Inspection Report 50-424, 425/90-19, dated November 1, 1991. In section 2.2 of the Inspection Report, the NRC Staff concluded that the Vogtle Operations Department had an adequate engineering basis for accepting operability of the RHR pump even with the pump's high vibration and the NSCW leak.

The inspection team also concluded that declaring the pump inoperable would not have affected the critical work path. The LCO actions would not have been restricted because the containment, except for ventilation, had been isolated as required by TS 3.9.4. The LCO actions would not have prevented the Licensee from continuing refueling activities in that the actions to close all containment penetrations providing direct access from the containment atmosphere to the outside atmosphere would have required only closing the containment ventilation purge valve, which has an automatic closure signal. Thus, there is no evidence that schedule considerations motivated the Licensee in this matter.

On the basis of evidence developed during NRC inspections, the allegation that GPC knowingly concealed a TS violation when the "B RHR" was not declared inoperable was not substantiated.

3. Alleged Concealment of Safeguards Problems

The Petitioners allege (*see* Petition §§ III.7a and III.7b) that GPC personnel, including a Vice President and General Manager, and a Southern Company Services Manager, knowingly and repeatedly hid safeguards problems from the NRC and willfully refused to comply with mandatory reporting requirements. The Petitioners further allege that the GPC Vice President made false statements to the NRC during an Enforcement Conference about the status of safeguards materials in Birmingham, Alabama, and that the alleged false statements probably influenced a subsequent civil penalty action taken by the NRC. The Petitioners claim that the false and misleading information presented at the Enforcement Conference and other information withheld from the NRC were highly significant. The Petitioners assert that, if the NRC had the benefit of complete, factual information, the NRC would likely have increased the Notice of Violation and Proposed Imposition of Civil Penalty in the amount of $50,000 issued to the Licensee on June 27, 1990, into the hundreds of thousands of dollars.

The Petitioners also allege that on July 23, 1990, plant and SONOPCO senior management prevented the Site Security Manager from making a Red Phone[24] notification within 1 hour as required by section 73.71. The Petitioners allege that the manager was prevented from making the call in order to delay or defuse the NRC's knowledge of programmatic problems on the part of the Licensee regarding the handling of safeguards documents.

OI investigated the allegation that (1) GPC knowingly and repeatedly hid safeguards problems from the NRC and willfully refused to comply with mandatory reporting requirements, and (2) the GPC Vice President made false statements to the NRC in an Enforcement Conference concerning the status of safeguards material in Birmingham, Alabama. The results of these investigations are documented in OI Report 2-91-003. The OI investigations did not substantiate that GPC withheld pertinent information from the NRC at the time of the Enforcement Conference on May 22, 1990, or that GPC management impeded the reporting of safeguards events. On the basis of the OI investigations, the NRC Staff concluded that the Notice of Violation and Proposed Imposition of Civil Penalty of $50,000 were appropriate.

OI also investigated the allegation that on July 23, 1990, plant and SONOPCO senior management prevented the Site Security Manager from making a Red Phone notification within 1 hour as required by section 73.71. The results of this investigation are also documented in OI Report 2-91-003. Specifically, the concern was that the Site Security Manager was allegedly prevented from making a Red Phone notification for two events. The first event was that a safeguards container had been found open and uncontrolled for half an hour in Birmingham, Alabama, in November 1989. The second event involved fourteen safeguards documents that had been found uncontrolled in the SONOPCO offices on June 15, 1990.

The first event constituted a violation of the reporting requirements of section 73.71, in 1989, when the uncontrolled container was discovered and not reported to the NRC within 1 hour. In 1990, as part of its corrective actions in response to an NRC enforcement action, GPC identified the fact that a required report for this event might not have been made in 1989.

GPC's corrective actions in response to the NRC enforcement action also identified the second event. GPC's consideration of the reporting requirements for the first event was subsequently combined with a similar consideration of the need to report the second event. The second event also was not reported within 1 hour as required by section 73.71.

After reviewing OI's investigation results, the NRC Staff concluded that the failure to make a timely report on the second event and the delay in informing

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[24] A Red Phone refers to a Licensee's Emergency Notification System and is used for immediate telephone notifications to the NRC's Operations Center in accordance with 10 C.F.R. §§ 50.72 and 73.71.

the NRC Staff of the discovery of the failure to report the first event were due to the GPC's cumbersome system for evaluating corporate security findings through the site security organization, rather than any willful attempt to impede the reporting process.

The NRC Staff decided to take no additional enforcement action for these two issues. The decision to refrain from issuing a Notice of Violation for the delay in reporting the first event was based upon section V.G.5 of the then-in-effect Enforcement Policy (10 C.F.R. Part 2, Appendix C). This provision of the policy allowed the NRC Staff to forego a Notice of Violation when a violation is discovered as the result of corrective action for a previous enforcement action. The NRC Staff considered the violation for the delay in reporting the second event to be an additional example of a violation that the Licensee had identified previously and for which it was, at the time, taking corrective actions. Therefore, as provided by the aforementioned section V.G.5, the NRC Staff issued no Notice of Violation.

Based on the OI investigation and NRC Staff review, the allegation was not substantiated.

4. Alleged Operation of Radioactive Waste Systems and Intimidation of Plant Review Board Members

The Petitioners assert (*see* Petition § III.8) that GPC endangered the public's health and safety by operating radioactive waste systems and facilities known to be in gross violation of NRC requirements. The Petitioners also state that Vogtle's General Manager, Mr. George Bockhold, intimidated members of the Plant Review Board (PRB) when they attempted to consider if the use of the waste system should be resumed.

The NRC's Special Inspection Team reviewed this item and discussed its findings in Supplement 1 to Inspection Report 50-424, 425/90-19, dated November 1, 1991. The alleged improper installation and operation of the radioactive waste system is discussed in section 2.1 of the Inspection Report and the alleged intimidation of PRB members is discussed in section 2.7 of the Inspection Report.

The Petitioners allege that GPC installed and operated a radioactive waste microfiltration system without performing an adequate engineering and safety evaluation in accordance with 10 C.F.R. § 50.59.[25] This specific system is known as the FAVA system because it is supplied by FAVA Control Systems (FAVA).

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[25] Title 10 of the *Code of Federal Regulations*, section 50.59, allows licensees to make changes in the facility and procedures, or conduct tests or experiments, as described in the safety analysis report, without prior Commission approval, unless the proposed changes involve a change in the Technical Specifications or an unreviewed safety question.

The Petitioners further alleged that the material configuration, fabrication, and quality of the system did not meet the guidance of Regulatory Guide (RG) 1.143, "Control of Stainless Steel Weld Cladding of Low-Alloy Steel Components," and the requirements of the American Society of Mechanical Engineers (ASME) Code.

In late 1988, GPC temporarily installed and operated a system at Vogtle for removing niobium-95. GPC planned to replace this temporary modification with a permanent system in the future.

In February 1988, GPC experienced difficulty in removing colloidal niobium-95 with the temporary system following a reactor shutdown for maintenance work. GPC contracted FAVA to help rectify this problem. The Licensee corrected the situation by installing a 0.35-micron filter system downstream of the existing prefilters. However, a large volume of radioactive waste was generated because the 0.35-micron filters rapidly exhibited high differential pressure and had to be changed frequently. The need to change filters frequently also resulted in Radwaste Department personnel receiving additional radiation exposure.

Upon evaluating the performance of the 0.35-micron filter system, the Radwaste Department determined that the best approach to the problem was to install a backflush, precoat filter system. However, no operational data were available for a system of this type in this specific application. FAVA supplied a proprietary Ultra Filtration System (Model No. 5FD/E) for testing to evaluate whether this was a practical and effective solution to the problem. GPC installed the temporary FAVA system before the Unit 1 refueling outage and operated it under Test Procedure T-OPER-8801. The test system kept liquid effluent releases well below the TS limits. The Radwaste, Chemistry, and Engineering Departments evaluated the test results, and GPC issued a general work order to purchase a permanent system.

In the early part of 1989, the Quality Assurance (QA) Department performed an audit and identified a significant finding involving a programmatic breakdown in the procurement of the temporary FAVA system and a failure to meet commitments of the FSAR. That finding prompted the Licensee to remove the temporary FAVA system from service.

In late 1989, the Licensee sought to reinstall the FAVA system under a temporary modification because colloidal cobalt-59 and cobalt-60 had to be removed. The PRB reviewed this temporary modification and several members expressed strong objections to it based on the previous QA audit finding.

These objections prompted the Licensee to submit a Request for Engineering Assistance (REA) and perform a safety evaluation in accordance with section 50.59 in November 1989. The Licensee's engineering staff subsequently reviewed the November 1989 safety evaluation and found it to be adequate, except that it did not properly address the guidance of RG 1.143 regarding

the use of polyvinyl chloride (PVC) piping. GPC performed another safety evaluation in February 1990 to address this issue and the vulnerability of the PVC pipes to radiation degradation. In the February 1990 safety evaluation, the Licensee specifically stated that the FAVA system did not conform to the criteria of RG 1.143. However, this deviation was found to be technically acceptable for several reasons: (1) The design of the FAVA system had been previously evaluated and found to be adequate in the REA response of November 1989, except for the PVC pipes; (2) the location of the FAVA system was inside a shielded watertight vault, which provided adequate assurance that any system failures would be contained and would not create the potential for offsite releases; and (3) the presence of PVC pipe in the FAVA system, although contrary to RG 1.143, was acceptable based on subsequent design reviews because the radiation exposure of the plastic was found to be within acceptable limits.

Although the testimony of one of the PRB members indicated that the temperature effects on the use of PVC in the FAVA system were not adequately evaluated before the system was installed, the testimony of the corporate system engineer indicated that GPC had considered this before installing the system, although it was not specifically documented in the safety evaluation.

Vogtle management subsequently consulted the NRC resident inspector to seek an NRC position on placing the FAVA system back in service. The inspector was also provided additional information by other Vogtle management personnel documenting reasons why it should not be placed in service. The Licensee forwarded this package to Region II and NRR for review. In March 1990, following Region II and NRR concurrence during a telephone conference, the Licensee placed the FAVA system in service with the following NRC stipulations:

(1) That procedures for operating the FAVA system require that an operator be present any time the system is in operation;

(2) That all hoses to and from the FAVA system be verified to conform to RG 1.143;

(3) That the cover over the FAVA system be securely fastened when the system is in operation to ensure that if a spraying leak developed, it would be contained in the concrete vault; and

(4) That the design of the walls of the auxiliary radwaste building be evaluated to determine if a design change was needed to reduce the possibility of wall leakage if a hose develops a leak and sprays its contents on the walls.

The Licensee complied with these stipulations upon returning the system to operation.

The review by the NRC indicated that the FAVA system was originally installed and operated by the Licensee without an adequate safety evaluation

and did not meet the guidance in RG 1.143 in that PVC piping was used in this system. However, this deficiency was of limited duration and the Licensee, upon performing subsequent safety evaluations that were forwarded to and accepted by the NRC Staff, concluded that the system was acceptable for use. The NRC's extensive review developed no facts to support a conclusion that the Licensee willfully violated NRC requirements or willfully operated the facility in a manner to endanger the public health or safety.

The Petitioners also contend that Vogtle's General Manager intimidated and pressured PRB members during a PRB meeting. The meeting occurred in February 1990 and was for the purpose of determining the acceptability of the safety analysis for installing the FAVA microfiltration system.

As previously discussed, the Licensee performed several safety evaluations for the temporary modification to install the FAVA microfiltration system. The NRC Special Inspection Team found, through its discussions with PRB members, that, while reviewing these safety evaluations, various PRB members had expressed reservations on several occasions concerning the acceptability of the FAVA system.

Although various PRB members may have expressed reservations, the inspection team, in reviewing the PRB meeting minutes regarding this temporary modification, identified few instances of the PRB members documenting their dissenting opinions. Specifically, the minutes of PRB meeting 90-15, on February 8, 1990, documented one PRB member's negative vote and dissenting opinions regarding the acceptability of exempting the temporary modification from regulatory requirements and the adequacy of the system's safety evaluation. The only other example of a dissenting opinion was in the minutes for PRB Meeting 90-32, on March 6, 1990. This dissenting opinion related to the acceptability of voting on the FAVA system installation when the PRB member who raised the initial questions and concerns on the operation of the FAVA system was not present.

During discussions with NRC inspectors, PRB members indicated that, during the various PRB meetings concerning installing the FAVA system, they felt intimidated and pressured by the presence of the General Manager at the PRB meeting. On one occasion, an alternate voting member felt intimidated and feared retribution or retaliation because the General Manager was present at the meeting and the PRB member knew the General Manager wanted to have the temporary modification approved. However, the PRB member stated that he did not alter his vote and felt comfortable with how he had voted. This PRB member also stated that he was not aware of any occasions where he or any other PRB member succumbed to intimidation or any other occasions where he or they feared retribution.

The PRB members informed the General Manager following the meeting (PRB 90-15) that several of them viewed his presence as intimidating. On March

1, 1990, the General Manager addressed this concern by meeting with all PRB members to reiterate each member's duties and responsibilities. He specifically told the members that his presence at PRB meetings must not influence them and that alternates should be selected who would feel comfortable with this responsibility. He also addressed the difference between professional differences of opinion and safety or quality concerns, and methods for resolving each.

Thus, the NRC Staff has found that, in one case, a PRB voting member felt intimidated and feared retribution because the General Manager was present at the PRB meeting. However, this member stated that he did not change his vote in response to the General Manager's presence.[26] He stated that the General Manager was informed of this issue and met with the PRB to allay fears. The information obtained by the NRC Staff indicated that retribution did not occur against any PRB member for revealing a concern about intimidation. The inspection found that the instance involving a member fearing retribution was confirmed, and the absence of dissenting opinions in the PRB meeting minutes called into question the openness of discussions at PRB meetings. Further discussions with PRB members, however, indicated that the lack of dissenting opinions was due to items being discussed and reviewed until all members were comfortable with PRB decisions.

NRC resident inspectors at Vogtle frequently attend PRB meetings and have found that the subjects are candidly discussed and the issues resolved without apparent intimidation.

In summary, the allegation that GPC endangered the public health and safety by operating the FAVA system in gross violation of NRC requirements was not substantiated. The allegation that a PRB member felt intimidated by the General Manager during the meeting on the FAVA system was substantiated, but the reaction did not affect the PRB member's decision regarding safety.[27]

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[26] During the license amendments hearing on the DG issue, the Board heard evidence on the FAVA issue in the proceeding to determine whether or not intimidation of PRB members occurred. The PRB member who felt intimidated was not called as a witness and provided no testimony. The interview notes of Mr. Bill Lyon of the Quality Concerns Program for the Vogtle facility on February 23, 1990, confirm that at the time of the PRB's vote on FAVA, the PRB member felt undue pressure to vote early, and probably would have voted "no" had Mr. Bockhold not been present because he thought that FAVA did not meet Regulatory Guide criteria, but that, given his PRB role as a health and safety reviewer, and considering the placement of impingement barriers, there was no health and safety problem. He also stated that he would be willing to meet with the Vogtle General Manager to discuss the matter further. Intervenor Exh. II-231 at 8-9 (marked but not received in evidence).

The notes of the interview are consistent with the NRC inspection finding regarding intimidation.

[27] The incident, however, is another example of how the management style of the Vogtle General Manager could result in discouraging individuals from voicing concerns. *See, e.g.*, Section III.C of this Director's Decision regarding the role of the Vogtle General Manager in the inaccurate and incomplete reporting of DG information to the NRC.

B. Alleged Illegal Transfer of Licenses (Petition § III.1 with Supplement Dated October 1, 1990; July 8, 1991 Supplement § IV; License Amendment Proceeding on Illegal Transfer Issue)

The Petitioners allege that GPC improperly transferred control of its licenses to operate the Hatch and Vogtle facilities to SONOPCO. The Petitioners contend that Mr. Joseph M. Farley — who was an officer of GPC's parent company, The Southern Company, and its subsidiary, Southern Company Services — was really the Chief Executive Officer (CEO) of SONOPCO and was, in fact, responsible for operating the GPC nuclear facilities, beginning with the first of three phases in the planned transition to Southern Nuclear. Petitioners contend that Mr. McDonald, GPC Executive Vice President–Nuclear Operations, received management direction from Mr. Farley regarding Vogtle facility matters and that numerous oral and written statements regarding the organization were intentionally false to conceal Mr. Farley's role from the NRC.

The Petitioners contend that during Phase I of the transition to Southern Nuclear, GPC, in effect, transferred control of its NRC licenses to the SONOPCO Project. They base their claim, in part, on Mr. Mosbaugh having witnessed the daily operation of GPC's nuclear facilities at the site and Mr. Hobby at GPC's corporate offices. The Petitioners alleged that (Petition at 6):

> The actual chain of command [was Vogtle] General Plant Manager George Bockhold to SONOPCO Vice President McCoy; McCoy to SONOPCO's Senior Vice President, George Hairston; Hairston to SONOPCO's Executive Vice President and Chief Operations Officer, R. Patrick McDonald; McDonald to SONOPCO's Chief Executive Officer, Mr. Farley.

In a supplementary filing of October 1, 1990, the Petitioners further contended that Mr. Farley, "chose the GPC Corporate Officers which would be staffing the SONOPCO Project even though he is not an officer or employee of GPC." In the July 8, 1991 Supplement (at 20), the Petitioners asserted that Mr. McDonald reported to Mr. Farley on administrative matters since the formation of the SONOPCO Project.

The focus of the license amendment proceeding on the illegal transfer issue was whether GPC, either through omissions or misrepresentations, misled the NRC about who was in control of the Vogtle facility, particularly in the context of the extensive communications with the NRC. LBP-94-37, 37 NRC at 291.

A review of the history and background of the formation of Southern Nuclear will assist in understanding this issue.

1. Background: Formation of Southern Nuclear

The Southern Company is the parent firm of five electric utilities: Alabama Power Company (APC), GPC, Gulf Power, Mississippi Power, and Savannah

Electric. Two of these utilities are associated with nuclear facilities at three different sites. GPC is the principal owner and the holder of licenses from the NRC to operate the Vogtle nuclear facility near Augusta, Georgia, and the Hatch nuclear facility near Baxley, Georgia. APC owns the Farley nuclear facility near Dothan, Alabama. The Southern Company also includes Southern Company Services, Inc., a wholly owned service organization.

In 1988, The Southern Company established the SONOPCO Project for the long-term purpose of establishing an operating company to eventually operate the nuclear power generating plants that were then operated by GPC and APC.[28] The establishment of a single operating company was to be accomplished in three phases. During Phase I, SONOPCO — which had not yet received the approval of the Securities and Exchange Commission (SEC) — was formed by The Southern Company as a "project" to provide support services to the operating companies (GPC and APC). In Phase II, which is now in effect for the Vogtle and Hatch facilities, SONOPCO (now called Southern Nuclear) continues to provide support services to the operating companies, but has become a legal entity, having obtained the approval of the SEC, and thereafter being incorporated by The Southern Company. Phase III begins for the Vogtle and Hatch facilities (and is currently in effect for the Farley facility) when Southern Nuclear acquires NRC licenses to operate the nuclear facilities.

Because of delays associated with reaching agreement with one of the co-owners, the transition occurred more slowly than first anticipated, and Phase I of the project lasted for approximately 2 years (1989 and 1990). During this phase, Mr. Farley was responsible for the administrative aspects of forming the new operating company. On February 24, 1989, Mr. Farley was elected Executive Vice President–Nuclear of The Southern Company and Executive Vice President of Southern Company Services, Inc. Before these elections, he had been President and Chief Executive Officer (CEO) of APC for almost 20 years.

Until Southern Nuclear acquired the NRC licenses, the GPC nuclear facilities were to remain under the direction of GPC President, Mr. A. William Dahlberg, III, with a reporting chain downward of Executive Vice President–Nuclear Operations (Mr. R.P. McDonald), Senior Vice President–Nuclear Operations

[28] In March 1988, GPC and APC met with NRC to discuss their plans to form a separate operating company, SONOPCO. On July 25, 1988, NRC met with GPC to discuss the corporate organization of SONOPCO and GPC, including the generic activities and initiatives involving the Vogtle and Hatch facilities. Enclosure 3 to the meeting summary prepared by NRC Region II, August 11, 1988, a Nuclear Operations–Transition Organization chart, shows the Vice President–Nuclear (Hatch), and the Vice President–Nuclear (Vogtle) reporting to Mr. W.G. Hairston, the Senior Vice President–Nuclear Operations and Mr. W.G. Hairston reporting to Mr. R.P. McDonald, the Executive Vice President–Nuclear Operations. On March 1, 1988, Mr. McDonald was elected a senior officer of GPC and named Executive Vice President–Nuclear, effective April 25, 1988. On May 4, 1988, Mr. W.G. Hairston was elected Senior Vice President–Nuclear Operations of GPC and Mr. C.K. McCoy was elected Vice President–Nuclear of GPC (GPC submittal, April 1, 1991, Attachment 1, Exh. 4).

(Mr. W.G. Hairston, III), and the vice presidents for the Vogtle and Hatch facilities (Messrs. C.K. McCoy and T.J. Beckham, respectively). The APC plants were to remain under the direction of the APC President, with a similar chain downward of Mr. McDonald, Mr. Hairston, and the vice president for the Farley facility. Mr. McDonald and Mr. Hairston were officers of both APC and GPC.

During Phase I, which began on or about November 1, 1988, technical support was provided to all three nuclear facilities by a common Technical Services Group under a Vice President of Southern Company Services, Inc., who reported to the Executive Vice President, Mr. McDonald. Administrative support to all three facilities was provided by a common Administrative Services Group under another Vice President of Southern Company Services, Inc., who also reported to Mr. McDonald. Phase I was to be effective until the SEC approved the creation of Southern Nuclear. Mr. Farley was not identified as having any responsibility for operating the GPC nuclear facilities during this phase. He was responsible for providing administrative services through Southern Company Services, Inc., and was also responsible for the formation of SONOPCO. Although not in effect during Phase I, Mr. Farley had been designated to become the President and CEO of Southern Nuclear when it was established.

Phase II began on December 14, 1990, with SEC's approval of The Southern Company's request of June 22, 1988, to form Southern Nuclear, and the election of officers on December 18, 1990; the Southern Nuclear organization was effectively implemented January 1, 1991. As part of Phase II, GPC's Executive Vice President (Mr. McDonald) and Senior Vice President–Nuclear Operations (Mr. Hairston) became officers of Southern Nuclear and reported administratively to the President and CEO of Southern Nuclear, Mr. Farley. The vice presidents of each nuclear facility also became officers of Southern Nuclear. The Vice President of Technical Services and the Vice President of Administrative Services, respectively, for Southern Company Services, Inc., became officers of Southern Nuclear, rather than officers of Southern Company Services, Inc. During this phase, GPC and APC retained their NRC licenses and the responsibility for operating their respective nuclear facilities.

In Phase III, Southern Nuclear has operating responsibility for the Hatch and Vogtle facilities in accordance with the provisions of the NRC operating licenses for those facilities.[29]

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[29] The NRC approved license amendments on November 22, 1991, that authorized the transfer of licenses for the Farley facility from APC to Southern Nuclear.

2. *Illegal Transfer Hearing and Petition Issues*

"Intervenor's Prehearing Statement of Issues" (Statement of Issues), dated December 12, 1994, raised twenty-eight issues to support Intervenor's illegal transfer issue for the license amendments proceeding.[30] The issues were submitted in support of Intervenor's contention that the Vogtle operating license should not be transferred to Southern Nuclear because it lacks the requisite character and integrity. The twenty-eight issues repeat and further supplement assertions in the petition regarding an illegal transfer of control of GPC nuclear facilities. These issues are summarized below based upon the more detailed discussion of each issue in the Appendix to this Director's Decision.

The gravamen of Intervenor's twenty-eight issues, like the related issues in the petition, as supplemented, is that the nuclear officers in SONOPCO Project reported to Mr. Farley, rather than to Mr. Dahlberg, GPC's CEO, and that Mr. Farley controlled the Vogtle facility based upon his involvement in (1) controlling daily operations; (2) establishing and implementing nuclear policy decisions; (3) employing, supervising, and dismissing nuclear personnel; and (4) controlling costs. Intervenor also asserts that numerous documents and statements provided to the NRC regarding the organizational structure and responsibilities for managerial control of the Vogtle facility were inaccurate or incomplete because they do not show Mr. McDonald reporting to Mr. Farley or Mr. Farley functioning as the *de facto* Chief Executive Officer of the SONOPCO Project.

Issues 1, 3-5, 7, 10, 11, 15, 16, 18, and 20-24 in Intervenor's Statement of Issues assert Mr. Farley's role with daily operations of the Vogtle facility and allege that GPC concealed this role and a *de facto* organization by providing the NRC inaccurate and incomplete information. As discussed in the Appendix to this Director's Decision, Intervenor's assertion that Mr. Farley functioned as the *de facto* Chief Executive Officer of the SONOPCO Project is not supported by the hearing record. Mr. McDonald did not report to Mr. Farley regarding GPC licensed activities. The items cited do not demonstrate that Mr. Farley exercised control over licensed activities at GPC's nuclear facilities during his involvement in the SONOPCO Project. Rather, the record shows that GPC controlled the daily operations of the Vogtle facility in accordance with a chain of command extending from the Vogtle General Manager, through the Vice President of the Vogtle facility, through the Senior Vice President–Nuclear Operations, through the Executive Vice President–Nuclear Operations, to the President and CEO of GPC. A Nuclear Operations Overview Committee of the GPC Board of Directors

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[30] Although Intervenor identified 28 issues in his Statement of Issues, two issues were both numbered 14A and 14B, and Intervenor presented no evidence or proposed findings on Issue 25.

conducted periodic reviews of the regulatory and operational performance of GPC's nuclear plants.

Issues 1, 9, 15, 17, and 20 of Intervenor's Statement of Issues (and page 4 of the October 1, 1990 Supplement to the Petition) include allegations that Mr. Farley controlled the Vogtle facility based upon his involvement with establishing and implementing nuclear policy decisions. As discussed in the Appendix to this Director's Decision, the hearing record shows that nuclear policy decisions for the Vogtle facility were established and implemented by GPC, and there was no evidence that Mr. Farley established the outage philosophy or any other operational policies for the Vogtle facility. Mr. Farley's limited involvement in a 1989 rate case matter before the Georgia Public Service Commission (i.e., his review of draft testimony regarding alternative performance standards) did not indicate any control of GPC's nuclear operations or licensed activities. Intervenor also provided no information that The Southern Company Management Council acted as the SONOPCO Project board of directors until the Project was incorporated.

Issues 1, 6, 8, 14A, 14B, 15, 19, 21, 27, and 28 of Intervenor's Statement of Issues (and pages 1-3 of the October 1, 1990 Supplement to the Petition), include assertions that Mr. Farley exercised control over nuclear personnel matters for the Vogtle facility because he (1) selected and approved GPC's management staff, (2) reviewed nuclear personnel in 1989 as evidenced by GPC Management Council's exclusion of nuclear personnel from its 1989 companywide review of management; (3) decided that Mr. Michael Barker, a GPC employee, would not be transferred from the SONOPCO Project to the Nuclear Operations Contract Administration (NOCA) group in Atlanta; (4) prepared Mr. McDonald's annual performance appraisal; and (5) implemented changes in Vogtle personnel evaluations and pay. As discussed in the Appendix to this Director's Decision, the record does not show that Mr. Farley controlled GPC nuclear facilities by employing, supervising, and dismissing nuclear personnel, or that GPC provided inaccurate information to the NRC regarding Mr. Farley's involvement with personnel matters.

Issues 1, 6, 12, 14A, 14B, and 17 of Intervenor's Statement of Issues allege that Mr. Farley's control of GPC nuclear facilities is shown through budget and personnel pay matters in that (1) Southern Nuclear, its predecessor, and The Southern Company controlled GPC's nuclear budget since November 1988; (2) Mr. Farley implemented changes in personnel evaluations and pay for Vogtle nuclear operations personnel; and (3) the GPC Management Council did not review GPC's 1990 nuclear operating budget. Intervenor asserts that inaccurate and incomplete information was provided to the NRC regarding GPC's control of budget and personnel pay matters. As discussed in the Appendix to this Director's Decision, the hearing record does not support a conclusion that GPC misrepresented its budgets affecting the operation of GPC licensed facilities.

There is no indication in the hearing record that the particular process GPC used to develop its budget is dispositive to Intervenor's assertion that Mr. Farley, The Southern Company, or SONOPCO Project controlled the operation of the Vogtle facility. Rather, the record shows that GPC was responsible for the costs of the Vogtle facility. After review by GPC's Management Council, the operating and capital budgets were approved by GPC's President and CEO, and the capital budget was also approved by the GPC Board of Directors. The record does not support that Messrs. Farley and Edward L. Addison, the President and CEO of The Southern Company, approved GPC's nuclear budgets. As an Executive Vice President of The Southern Company, Mr. Farley was involved in reviewing the nuclear budgets as part of the normal process for preparing annual budgets in the Southern system. Given The Southern Company's holding company status, Mr. Addison's involvement in reviewing and providing guidelines and requirements for adequate earnings and reasonable capital needs was appropriate, and did not constitute control of operations at GPC facilities.

Issues 1, 2, 12, 13, 18, 19, and 26-28 in Intervenor's Statement of Issues contain assertions that GPC managers provided inaccurate or incomplete information to the NRC when describing its organization and plans to form Southern Nuclear, and when responding to the petition. The alleged misrepresentations or omissions regard statements about (1) the Vogtle chain of command, (2) Mr. Dahlberg's relationship with Vogtle site management, (3) Mr. Farley's responsibilities as Executive Vice President–Nuclear of The Southern Company, (4) the 1989 title of Mr. Dahlberg, (5) SONOPCO Project's control over the Vogtle facility since November 1988, (6) the composition of the GPC Management Council, and (7) Mr. Farley's title in 1988. As discussed in the Appendix to this Director's Decision, the record shows that GPC provided some inaccurate or incomplete information to the NRC when describing its organization and plans to form Southern Nuclear, and when responding to the petition. This information involved (1) the omission of Mr. Hairston when Mr. McDonald described the Vogtle chain of command during a March 30, 1989 meeting (which was later corrected by GPC after reviewing the meeting transcript and was already accurately depicted in the FSAR); (2) a 1989 FSAR organizational chart showing the position of Mr. Dahlberg as "Chairman and CEO" rather than "President and CEO"; and (3) GPC's April 1991 written response to the petition indicating that the GPC Management Council included all senior vice presidents (which was inaccurate because Mr. Hairston was not a member), and indicating Mr. Farley's title in 1988 to be Executive Vice President–Nuclear of The Southern Company (a position he did not assume until March 1, 1989). While the NRC expects licensees to provide complete and accurate information, the inaccurate or incomplete information at issue here was of minor safety significance in terms of the NRC Staff's understanding of the proposed license transfers, did not mislead the NRC, and was not sufficient to warrant NRC enforcement action

or conclusions that (1) GPC concealed an unauthorized role of Mr. Farley or a *de facto,* unauthorized organization for control of GPC nuclear facilities; or (2) GPC lacks the requisite character and integrity to be a licensee.

3. NRC Staff Testimony During Hearing on Illegal Transfer Issue

NRC Staff testimony (hereafter, "Staff") regarding the alleged illegal transfer of control issue was jointly presented by Messrs. Frederick R. Allenspach, an NRR technical reviewer who reviewed the Administrative Controls section of the Vogtle Technical Specifications in 1987; Darl S. Hood, the Licensing Project Manager for the Vogtle facility; and John F. Rogge, Jr., formerly the Senior Resident Inspector at the Vogtle site during the time SONOPCO and Mr. Farley are alleged to have taken operating control of the Vogtle facility. These individuals provided evidence based upon their own personal knowledge and based upon their institutional knowledge derived from their work and their relation to other members of the NRC Staff who perform activities relating to the Vogtle facility encompassing the period 1987 to 1995.

The former Senior Resident Inspector's observation that GPC officials operated the Vogtle facilities was particularly significant in that he and Mr. Allenspach participated in the December 1988 inspection of the SONOPCO Project offices, interviewed GPC management, including Messrs. McDonald, Hairston, and McCoy concerning the management chain of command through Mr. McDonald, along with the organizational structure and supporting role of the SONOPCO Project. Mr. Rogge concluded that GPC was in control of Vogtle operations and that the changes in management personnel and organization beginning in 1988 did not affect GPC's control over Vogtle. He also concluded that the control and direction of daily operations at the Vogtle facility were performed by the onsite GPC employees under the direction of Mr. McCoy. Staff, ff. Tr. 2620, at 4-6. Mr. Rogge's conclusions were based on the Vogtle FSAR statements, the Vogtle TSs, and his interviews of Licensee personnel. Tr. 2159, 2716-17 (Rogge).

While the NRC did not inspect, or require to be reported, the number of times that GPC's Executive Vice President–Nuclear communicated with the President of GPC, the NRC Staff's focus regarding the conduct of operations is where nuclear safety has its immediate and greatest impact, i.e., on the nuclear power plant itself and its immediate management. Based on frequent visits and dealings with Vogtle staff at the level of Vice President–Vogtle and the Vogtle General Manager, plant operations appeared consistent with the organization described in the FSAR. Tr. 2656-57, 2664 (Hood).

The NRC Staff witnesses' visit at the Vogtle facility and corporate offices in Birmingham, Alabama, in September 1994 confirmed the accuracy of the Updated Final Safety Analysis Report (UFSAR) descriptions and figures, and

determined that GPC controlled operation of the Vogtle facility. Their conclusions were based upon discussions with numerous managers of GPC, SNC, and Southern Company Services, regarding their organizational responsibilities and structure, including details of their respective employment and their involvement with respect to the Vogtle facility, and discussions with the NRC's Resident Inspectors stationed at the Vogtle facility regarding their observations of the day-to-day control of the facility by GPC managers and the support services of SNC and Southern Company Services employees. Staff at 9.

The NRC Staff witnesses were present throughout the hearing regarding the illegal transfer issue, heard the evidence presented by all of the witnesses, and Mr. Hood was present during most of the depositions regarding illegal transfer. In their opinion, the hearing record disclosed no evidence to indicate that the operating licenses for the Vogtle facility had been transferred by GPC to SONOPCO Project or Southern Nuclear, or to otherwise alter the conclusion in the partial Director's Decision, DD-93-8, that GPC controls operations at the Vogtle facility. Tr. 2734 (Allenspach, Hood, Rogge).

In summary, the observations and testimony of key NRC Staff personnel involved with regulatory oversight and technical review of Vogtle's conduct of operations at the time of the alleged transfer of control indicate that GPC has maintained control of Vogtle operations and licensed activities. The testimony shows that the conduct of operations and support at the Vogtle facility has proceeded, and is proceeding, consistent with the phased reorganizations that were described at the outset to the NRC whereby Southern Nuclear will eventually become the sole operator of the GPC nuclear facilities.

4. Conclusion

On the basis of the foregoing, I conclude that GPC has not transferred control of the operating license for the Vogtle facility without the prior consent of the NRC. While Intervenor identified some inaccurate or incomplete information to the NRC by GPC, this inaccurate or incomplete information was either corrected or not significant in the context of the numerous communications regarding the three-phased transfer and the NRC's focus on areas that directly impacted plant operations and licensed activities. The inaccuracies identified do not show a pattern to deceive the NRC regarding the control of the Vogtle facility. Thus, there is no basis to conclude that GPC either misled the NRC or lacks the requisite character and integrity to be a licensee.

C. Diesel Generator Reporting and Reliability Issues (Petition § III.3; License Amendments Proceeding on DG Issue)

Petitioners allege in the section 2.206 petition, and Mr. Mosbaugh contended in the license amendments proceeding, that GPC knowingly provided inaccurate, incomplete, or misleading information regarding DG testing results and reliability (including the number of starts and the moisture content (i.e., "air quality") of DG starting and control air)[31] in 1990, as well as in April 1991 statements regarding the knowledge and involvement of senior GPC officials with respect to inaccurate 1990 DG information.[32] The alleged inaccurate, incomplete, or misleading information was provided in GPC's April 9, 1990 presentation and letter to the NRC (seeking permission to restart); in the April 19, 1990 LER on the Site Area Emergency (SAE); in a June 29, 1990 cover letter forwarding the revised LER and addressing GPC's QA audit and DG recordkeeping practices; in an August 30, 1990 letter; in GPC's Petition Response of April 1, 1991, as to Mr. Hairston's involvement in developing false DG start information during the April 19, 1990 telephone call and as evidenced by the actions of GPC managers when they became aware of inaccurate start counts. Petition at 10-11; Intervenor Findings at 78-235 and 263-311.

Petitioners also claim that the inaccurate, incomplete or misleading information was conveyed in GPC's "White Paper" response during the August 1990 special team inspection in that it (1) excluded Messrs. Hairston and McCoy from the list of participants on the April 19, 1990 telephone call; (2) stated that all revisions were reviewed by the Plant Review Board (PRB); (3) indicated that Messrs. Jimmy Paul Cash (a Unit Superintendent) and George Bockhold worked together on the DG testing slide prepared for the April 9, 1990 presentation to NRC; and (4) omitted Mr. Kenneth Burr, a Southern Nuclear corporate engineer, from the list of individuals who wrote the April 9, 1990 letter. At hearing, Intervenor Mosbaugh also cited GPC's failure to include Safety System Performance Indicator Data in GPC's April 9, 1990 letter as another attempt to mislead the NRC.

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[31] The air quality issues considered during the licensing hearing concerned GPC's March-April 1990 statements to the NRC, including the NRC's Incident Investigation Team (IIT), was whether GPC officials were willful or recklessly careless of the facts (as opposed to complete and accurate): (a) in the statement in the April 9 letter that air quality was satisfactory; (b) in the statement in the April 9 letter that recently obtained high dewpoint readings resulted from faulty instrumentation; and (c) in other communications with the NRC regarding high dewpoints. Memorandum and Order (Summary Disposition: Air Quality), dated April 27, 1995 (unpublished), at 6-9. Intervenor's claim that poor air quality was the root cause of the DG failures that caused the SAE was not within the scope of the hearing contention and is not considered in this Director's Decision. *See id.* at 6.

[32] The petition stated that SONOPCO provided inaccurate false information; however, only corporate managers at Mr. George Hairston's level (Senior Vice President–Nuclear Operations) and above are officers of both GPC and SONOPCO/Southern Nuclear.

OI conducted an investigation and issued a report in December 1993.[33] OI concluded that: (1) the Vogtle General Manager deliberately presented incomplete and inaccurate information to NRC in the April 9, 1990 meeting and letter with respect to DG starts and air quality measurements; (2) a group of GPC senior managers conspired to submit a false statement in the April 19, 1990 LER; (3) the GPC Senior Vice President–Nuclear Operations, with at least a minimum of careless disregard, submitted a false statement in the June 29, 1990 letter transmitting a revision to the LER; (4) the Vice President–Vogtle Project, with at least careless disregard, submitted a false and misleading statement in an August 30, 1990 letter explaining why the April 9 letter was inaccurate; and (5) the GPC Executive Vice President–Nuclear Operations deliberately provided inaccurate information in an April 1, 1991 letter discussing participants in a late afternoon conference call on April 19, 1990.

The NRC Staff evaluated the results of the OI investigation of the DG issues and concluded that, contrary to section 50.9, GPC had provided inaccurate and incomplete information to the NRC on four separate occasions as a result of an inadequate regard, individually and collectively, by a number of senior GPC officials for complete and accurate communications with the NRC. The performance failures involved in the violations constituted a Severity Level II problem as cited in the May 9, 1994 Notice of Violation and the February 13, 1995 Modified Notice of Violation (wherein the NRC imposed a $200,000 civil penalty).[34]

1. March 20, 1990 Site Area Emergency

On March 20, 1990, a worker accidentally backed a truck into a switchyard support column causing a loss of offsite power at Vogtle Unit 1. At that time, Unit 1 was in a refueling outage, and one of the DGs (DG-1B) had been removed from service for a maintenance overhaul. The other DG (DG-1A) 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 36 minutes after the loss of offsite power. This event prompted the declaration of an SAE.

On the same day as the event, GPC conducted several trouble-shooting starts on DG-1A 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 DG-1B in order to return it to service expeditiously. As part

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[33] The allegation concerning SSPI data was not submitted to OI until after the report on DG statements was published. OI did not complete activities on this issue due to the staleness of the issue and the airing of the matter at hearing before settlement was reached.

[34] In LBP-94-15, 39 NRC at 255-56, the Board ruled that allegations in the NRC's NOV issued May 9, 1994, were important to the admitted contention and within the scope of the proceeding.

of the effort to return the DG-1B to service, GPC performed 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 of the diesel to start on March 21 because of inadequate fuel in the fuel lines after diesel reassembly. In addition, during a run on March 22, DG-1B 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.

Immediately after the SAE, the NRC assembled an Augmented Inspection Team (AIT), which arrived at the Vogtle facility on March 22, 1990. On March 23, 1990, the NRC issued a Confirmation of Action Letter (GPC Exh. II-4) 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. 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 TSs. A quarantine order was subsequently issued by the NRC concerning DG equipment. GPC Exh. II-65.

On March 24, Mr. William Shipman (General Manager–Plant Support) and Mr. C. Kenneth 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 site was instructed to make sure the NRC and the AIT participated in the troubleshooting activities and received any documentation, and to obtain NRC concurrence before anything was changed. Prefiled Testimony of C. Kenneth McCoy on Diesel Generator Reporting Issues, ff. Tr. 2839, "McCoy DG," at 3-4.

On March 25, 1990, the NRC upgraded the AIT to an Incident Investigation Team (IIT),[35] composed of NRC and industry personnel and headed by the NRC.

After recovery from the SAE, GPC assembled an Event Review Team to identify the root causes of the event and to determine appropriate corrective actions. The Event Review Team included Messrs. Jimmy Paul Cash (Unit Superintendent), Paul Kochery (Vogtle Engineering Supervisor–Operations Modifications),

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[35] 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 Exh. II-167).

Georgie R. Frederick (onsite Supervisor of the Safety Audit and Engineering Review (SAER) group), and Tom Webb (Senior Licensing Engineer).

The NRC was informed of problems that occurred during the post-maintenance testing of DG-1B as indicated by a March 24, 1990 memorandum by Mr. Kendall (an AIT and IIT member) that identified the March 23, 1990 trip (low jacket water pressure and low turbo oil pressure, also called start number 134) as being significant.[36] The NRC was briefed on GPC's troubleshooting plan for additional testing of DG-1A and DG-1B. Testing on DG-1B was conducted on March 27 and March 28, and included sensor calibration and replacement, testing of the pneumatic logic controls, pneumatic leak testing, an undervoltage 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.

At the NRC's request, GPC also examined whether the diesel control air system could be the cause of the March 20 DG-1A failure. GPC tested the diesel air system for moisture and conducted a review of the control air filters. High dewpoint readings were recorded on DG-1A on March 29 and additional high dewpoint measurements were recorded on or about April 5-7, 1990. GPC eventually decided that most of the high readings were inaccurate.

On April 9, 1990, GPC gave an oral presentation to the NRC in support of GPC's request to return Vogtle Unit 1 to power operations after the SAE. In response to an NRC request that GPC address DG reliability at the meeting, Mr. Bockhold, the Vogtle General Manager, presented information on DG starts since the SAE using a viewgraph slide, which listed the sequence of testing on DG-1A and DG-1B and stated that there were "18 SUCCESSFUL STARTS" for DG-1A and "19 SUCCESSFUL STARTS" for DG-1B. GPC intended to convey to the NRC in the April 9 presentation (and the NRC understood) that there were eighteen and nineteen "consecutive successful" starts without problems or failures after the March 20 SAE. A written summary of the April 9 presentation was provided to the NRC in an April 9, 1990 letter, "Vogtle Electric Generating Plant Confirmation of Action Letter," signed by Mr. Hairston and reviewed by corporate managers and Mr. Bockhold. The summary, the Licensee's troubleshooting efforts, and the NRC's inspection activities were among the bases for the NRC's decision to authorize the restart of the facility on April 12, 1990.[37]

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[36] An April 6, 1990 GPC list of diesel starts from March 13 through March 23, which showed the problem starts on March 22 and 23, was also provided to the IIT.

[37] NRC conditions regarding the quarantine of equipment involved in the SAE and other measures to facilitate the IIT's investigation of the event that were stated in the March 23, 1990 Confirmation of Action Letter remained in effect.

2. *Diesel Generator Statements*

a. April 9, 1990 Presentation and Letter

Intervenor alleged that GPC, by and through its officers and employees, knowingly, deliberately, and willfully submitted inaccurate information to the NRC in an April 9, 1990 oral presentation and letter regarding the number of starts of the DGs. Intervenor contended that (1) GPC submitted the numbers eighteen and nineteen successful starts with full knowledge that the numbers were incorrect, and (2) a typed "Cash List" that showed the inaccuracies was a backup slide that was circulated to corporate offices before the presentation. *See* Tr. 8310, 8313-15 (Mosbaugh); Prefiled Testimony of Allen L. Mosbaugh, ff. Tr. 8263, "Mosbaugh," at 43-44; Intervenor Findings 85-89.

In the Modified NOV issued February 13, 1995, the NRC Staff concluded that, contrary to section 50.9:

> [I]nformation provided to the NRC Region II Office by Georgia Power Company (GPC) in an April 9, 1990 letter and in an April 9, 1990 oral presentation to the NRC was inaccurate in a material respect. Specifically, the letter states that: "Since March 20, the 1A DG has been started 18 times, and the 1B DG has been started 19 times. No failures or problems have occurred during any of these starts."
>
> These statements are inaccurate in that they represent that 19 consecutive successful starts without problems or failures had occurred on the 1B Diesel Generator (DG) for the Vogtle facility as of April 9, 1990, when, in fact, of the 19 starts referred to in the letter associated with the 1B DG at the Vogtle facility, three of those starts had problems. Specifically, Start 132 tripped on high temperature lube oil, Start 134 tripped on low pressure jacket water and Start 136 had a high temperature jacket water trip alarm. As of April 9, 1990, the 1B DG had only 12 consecutive successful starts without problems or failures rather than the 19 represented by GPC. The same inaccuracy was presented to the NRC at its Region II Office during an oral presentation by GPC on April 9, 1990.
>
> The inaccuracy was material. In considering a restart decision, the NRC was especially interested in the reliability of the DGs and specifically asked that GPC address the matter in its presentation on restart. The NRC relied, in part, upon this information presented by GPC on April 9, 1990 in the oral presentation and in the GPC letter in reaching the NRC decision to allow Vogtle Unit 1 to return to power operation.

GPC asserts that the April 9, 1990 presentation and letter contained incorrect DG start-count information due to poor GPC internal communications and personnel mistakes, including by Messrs. Cash and Bockhold, and it was not due to indifference as to the need for accuracy. GPC August 30, 1990 Letter (GPC Exh. II-18); GPC Response to NOV, dated August 2, 1994 (Intervenor Exh. II-105), at 2; Letter from C.K. McCoy to Mr. James Lieberman, dated February 1, 1995 (GPC Supplemental Reply to NOV).

The NRC Staff found that the count errors were caused by performance failures in collecting and reporting the data, and found no evidence that GPC

employees deliberately and knowingly submitted, or conspired to submit, 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 (Staff DG Panel), ff. Tr. 14,758, at 11; May 1994 NOV (Staff Exh. II-46); Modified NOV (Staff Exh. II-51). The Staff found that the errors were caused by (1) Mr. Bockhold's failure in requesting the count to instruct Mr. Cash as to his criteria for a successful start (without a problem or failure),[38] the point at which to begin his count, and to assess the count data provided to ensure that it was what he had requested; and (2) Mr. Cash's failure in performing and reporting his count to ensure that the data provided were what Mr. Bockhold had requested. NOV (Staff Exh. II-46) at 2-3; Staff DG Panel at 4-5, 11.

The hearing record does not support Intervenor's position that the submission of eighteen and nineteen successful DG starts reported to the NRC by GPC in the April 9 presentation, and letter of the same date, were knowingly and willfully false.[39] While recollections were not clear about events occurring 5 years earlier, Mr. Bockhold testified that he intended to present a number of consecutive successful starts as support for GPC's position that the DGs would perform their intended function, and instructed Mr. Cash to review the operators' logs and determine how many consecutive successful DG starts had been made with no significant problems. Prefiled Testimony of George Bockhold, Jr., on Diesel Generator Reporting Issues, ff. Tr. 3309, "Bockhold DG," at 6; Tr. 3422, 3424 (Bockhold). Mr. Cash (an experienced Unit Superintendent and member of GPC's Event Review Team for the SAE) recalled that he was to determine the number of starts after the event that were without significant problems.[40] Prefiled Testimony of Jimmy Paul Cash on DG Reporting Issues, ff. Tr. 4389, "Cash," at 2, 3.

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[38] The term "successful start" was ambiguous in that it was subject to various interpretations and is not defined by NRC in guidance documents such as Regulatory Guide 1.108. A count of successful starts without problems or failures was dependent upon having a definition for what constituted a successful start and the point at which to begin the count. Tr. 6875-76 (Greene); Tr. 5920-22 (Horton), *see* Tr. 5975-99, 5962. GPC witnesses had various interpretations of (1) "successful starts," (2) what constituted a problem start, and (3) when to begin the count. Tr. 6875 (Greene); Tr. 3547 (Bockhold); Tr. 5922 (Horton).

[39] Intervenor asserts that (1) the failure to utilize established review and verification procedures for the April 9 letter and (2) the failure to subject the letter to PRB review 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 130-159. While such actions may have disclosed problems in the count data, GPC's explanation that the April 9 letter was not handled as routine correspondence in order to expedite the drafting and review process is reasonable given that the TS do not require PRB review and its desire to expedite restart. *See* Tr. 2958 (McCoy). The mistakes exhibited, however, are of regulatory concern as cited in the Staff's enforcement action.

[40] In his June 14, 1993 OI interview, Mr. Cash stated that he viewed a "significant proolem" as something that would have prevented the DG from running in an emergency. OI Exh. 10, at 11. At hearing, Messrs. Cash and Bockhold considered a start successful without significant problems to be one where the diesel had started

(Continued)

NRC personnel at the April 9, 1990 meeting were aware of DG testing, but did not know the number of consecutive successful starts of the DGs after March 20, 1990. Tr. 14,795 (Matthews); Hunt at 3-5. *See* Tr. 4949.[41]

Although Mr. Bockhold (and other GPC personnel) were aware of problems on the DG-1B during overhaul, 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. The hearing disclosed no evidence that Mr. Bockhold or other GPC personnel had any knowledge as to the number of starts of the DGs on April 9, 1990, other than the Cash count that was among the materials assembled quickly over the weekend prior to the April 9 presentation.[42]

There is no evidence that a "Cash List" was a backup slide for the presentation or that corporate and site personnel otherwise knew that the April 9 DG start count was wrong.[43] Mr. Bockhold assigned Mr. Cash to count diesel starts; Mr. Cash did count diesel starts, and the numbers eighteen and nineteen presented to the NRC on April 9 were incorrect (i.e., they should have been twenty-nine and twelve on DG-1A and DG-1B, respectively).[44] GPC has admitted that the violation occurred and Mr. Bockhold's role and responsibility in the underlying events. *See* Letter from Hairston to NRC, dated August 30, 1990 (GPC Exh.

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properly and reached rated voltage and frequency. Intervenor Exh. 57 (GPC Interrogatory Response, dated Aug. 9, 1993); Tr. 3426 (Bockhold). These definitions, however, were not used in any of GPC's April-August 1990 correspondence regarding the DG start-count information.

[41] For example, on Tuesday, April 10, 1990, the day after the meeting between the NRC and GPC, Mr. Rick Kendall of the NRC's IIT informed GPC that he could not duplicate the April 9 start count and asked for the start data. GPC Exh. II-31, at 5; Prefiled Testimony of John Gilbert Aufdenkampe, Jr., on Diesel Generator Reporting Issues (Aufdenkampe), ff. Tr. 4651, at 4-5.

[42] While it is clear that the April 9 start count was derived from Mr. Cash's efforts, there is conflicting evidence as to exactly what information Mr. Cash provided to Mr. Bockhold. On April 19, 1990, Mr. Cash told Messrs. Mosbaugh and Aufdenkampe (GPC Manager of Technical Support) that he gave Mr. Bockhold "totals" and not information on starts and stops. Tape 58 Transcript (GPC Exh. II-2) at 36. Mr. Bockhold testified during his OI interview on August 14, 1990, that Cash gave him start totals. OI Exh. 12 (Intervenor Exh. II-13) at 8. Mr. Cash stated in his August 1990 OI Interview (Intervenor Exh. 190), however, that he gave Mr. Bockhold both total start numbers and a list of starts. In his June 1993 OI interview, he said that although he could not recall specific numbers, he gave Mr. Bockhold the numbers greater than 18 and 19. OI Exh. 10, at 48-50. At the hearing he could not remember exactly what count he gave Mr. Bockhold, but believed he gave him the numbers 18 and 19 for DG-1A and DG-1B, respectively, or possibly 23 starts for DG-1B and 27 for DG-1A as was apparent from a typed listing of starts located by GPC in 1993 (Intervenor Exh. 41 and GPC 23). *See* Tr. 4547-48, 4541, 4463-64 (Cash). Even though Mr. Cash stated that GPC Exh. II-23 was a typed version of his list for April 9, he was uncertain during cross-examination and he could not recall having his handwritten list typed or including starts prior to March 20, 1990, that were recorded on the listing. In light of these statements, it is difficult to determine what information Mr. Cash provided to Mr. Bockhold.

[43] For example, Mr. Bockhold was not specifically told that the April 9 (and April 19) start counts were wrong until April 30 and May 2, 1990, when Mr. Mosbaugh gave him a listing of DG starts that showed the errors. *See* Bockhold at 14; Mosbaugh April 30, 1990 Memo (Intervenor Exh. II-29).

[44] *See* August 30, 1990 Letter (GPC Exh. II-18), Tables 1 and 2. The underreporting of the DG-1A start count was not relevant to the enforcement action.

II-18); Modified NOV (Staff Exh. II-51); GPC Supplemental Reply to the NOV, dated February 1, 1995.

In sum, the assertion that GPC deliberately provided false DG start information in the April 9 letter and presentation was not substantiated.

b. April 19, 1990 Licensee Event Report

Mr. Mosbaugh alleged that a disputed portion of a taped conversation from the afternoon of April 19, 1990 (Tape 58 Transcript (GPC Exh. II-2)) regarding the draft LER, is evidence that a number of GPC vice presidents and plant personnel engaged in a criminal conspiracy to intentionally submit false information to the NRC in that GPC intentionally iterated the same false April 9 count information to the NRC in LER 90-006. Tr. 8411-12, 9982 (Mosbaugh). His assertion is based on his version of the following excerpt:

> Shipman: Let's see. What other questions do we got? We got the start thing straightened out.
>
> Hairston: [Interrupting]. We got the starts — 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: disavow. What else do we have Jack?

GPC Exh. II-2, at 11-14.

Mr. Mosbaugh also asserts that GPC tried to exclude him from the telephone conversation taped on April 19, 1990.

In the Modified NOV issued February 13, 1995, the NRC Staff concluded that, contrary to section 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.

Under 10 C.F.R. § 50.73(a)(1), GPC was required to submit an LER, including 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)) by April 19, 1990 (30 days after the SAE).

The evidence does not support the claim that the above words from Tape 58 demonstrate a criminal conspiracy by high officials in GPC to present false information to the NRC. Tape 58 contains multiple, disjointed, jumbled, and often inaudible conversations which do not demonstrate conspiracy to intentionally provide inaccurate information to the NRC. The NRC Staff found that the taped statements were not sufficient to establish an intention to deceive or mislead the NRC.[45] Further, there was no evidence to support Mr. Mosbaugh's claim that Mr. Mosbaugh joined the call late because GPC tried to keep him off the call with corporate managers about the accuracy of the LER. *See* Mosbaugh at 35, 48; Shipman at 5; Tr. 10,932-33, 10,976-77 (Shipman); and Tr. 4794-4801, 5428 (Aufdenkampe).

On April 10, 1990, Mr. Mosbaugh became aware of the April 9 letter and he and other site personnel (particularly Mr. Aufdenkampe) became concerned that the statement that the "starts were without problems or failures" may have been a material false statement to the NRC because of known DG failures after the SAE. Mosbaugh at 32; Tr. 4752-53 (Aufdenkampe). Mr. Richard Kendall of the IIT also asked GPC for data supporting the April 9, 1990 DG start count because he could not get the same numbers. IIT Teleconference Transcript, dated April 10 (GPC Exh. II-31).[46]

Mr. Webb, an engineer in the group that reported to Mr. Aufdenkampe (who reported to Mr. Mosbaugh), used the same diesel start language for the draft LER that was in the April 9 letter. McCoy DG at 10-11; Prefiled Rebuttal Testimony of Thomas E. Webb on Diesel Generator Reporting Issues, ff. Tr. 13,096, "Webb," at 2-3; GPC Exh. II-171-B. Concerns about the accuracy of the count led the site to delete the start numbers from the draft LER and state

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[45] The NRC Staff version of the transcript 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.
Shipman: [Inaudible] disavow. What else do we have Jack?

GPC also offered a transcript version of this exchange. The tape excerpt was played several times at the hearing in attempts for the Board and the reporter to discern the inaudible portions, which proved unsuccessful.

[46] No listing of start counts through April 9 was ever located among the voluminous records and documents collected by the IIT.

that the diesels had been "started several times and no failures or problems have occurred during any of these starts." Webb at 4. In response to a Plant Review Board (PRB) comment on April 18, 1990, the phrase "several starts" was replaced with "more than twenty times each" by adding April 10-18 starts in the control room logs to the numbers reported April 9. Webb at 5-7.[47] PRB Meeting Minutes 90-59 (GPC Exh. II-28) at 4; Webb at 5-6; Tr. 15,211 (Webb); Aufdenkampe at 2.

The site received notice on the morning of April 19, 1990, that Mr. Hairston wanted the phrase "greater than twenty" to be verified. Prefiled Testimony of W. George Hairston, III, on Diesel Generator Reporting Issues, ff. Tr. 3531, "Hairston DG," at 6; GPC Exh. II-25; Stringfellow at 2; Tr. 4058 (Stringfellow); Tr. 4786-87 (Aufdenkampe); Webb at 6. The April 19 PRB, which was chaired by Mr. Kitchens, Assistant General Manager–Operations and held that afternoon, similarly advised that the phrase be verified, reworded, or deleted based on verification efforts. Tape 57 Transcript (GPC Exh. II-1) at 15-16; PRB Meeting 90-60 Minutes (GPC Exh. II-29).

After the PRB meeting, Messrs. Aufdenkampe and Mosbaugh discussed the draft LER by phone with corporate personnel and informed them that efforts to verify the count were ongoing. Mr. Mosbaugh told Mr. Shipman (General Manager–Plant Support for Vogtle Project) 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)) which he believed rendered the statement inaccurate. Tape 57 Transcript (GPC Exh. II-1) at 59-60. Mr. Shipman emphasized the need to provide accurate information to the NRC, regardless of what George [Bockhold] told [Stewart] Ebneter. *Id.* at 62.

During another phone call regarding the LER between site and corporate managers (Messrs. McCoy, Stringfellow, Bockhold, Aufdenkampe, Mosbaugh, and Bockhold),[48] Mr. McCoy also emphasized the need to be certain about the number after completion of the comprehensive control test program (hereafter "comprehensive test program" or "CTP"). Tape 58 Transcript (GPC Exh. II-2) at 8. Mr. Bockhold strongly stated that his April 9 start counts were subsequent to completion of a comprehensive test program and were "verified correct" by Mr. Cash. GPC Exh. II-2, at 8. Mr. Bockhold's statement implied that GPC need not await the completion of site verification efforts that Mr. Aufdenkampe reported were under way to confirm the accuracy of the draft LER.[49]

The term "comprehensive test program," however, was ambiguous in that GPC had not agreed upon definition of what it meant. Neither GPC personnel

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[47] Mr. Webb developed the list of starts using control room logs knowing that an up-to-date start log with numbered starts was not available. Webb at 6-7.

[48] This call is often referred to as "Call A" on the April 19 LER.

[49] Mr. Webb's effort to verify the count was accomplished from noon to around 4 p.m. on April 19 and was in progress during the call.

at the site on April 19, 1990, nor the NRC inspection staff present during troubleshooting, knew the parameters of the comprehensive test program (i.e., when it began or ended).[50] The change of the start-count wording from "since March 20" to "subsequent to this test program" [the CTP] defined a different starting point for counting diesel starts and created ambiguity in the LER. The LER word... changed without completely verifying the facts, or defining the time period involved as Mr. Webb (the individual who performed the count for the LER) was never instructed to collect consecutive successful starts without problems or failures after the comprehensive test program.[51] GPC's reliance on verbal assurances and inadequate verifications is a second instance cited in the violation of inadequate verification of information to be provided to the NRC.[52] While it is unclear whether GPC site personnel realized that the list compiled on April 19, 1990, showed that the April 9 start count of eighteen consecutive starts on DG-1B was inaccurate, it is clear that the list neither confirmed nor disputed the accuracy of the April 19 LER in that Mr. Webb was not told to get consecutive successful starts or starts after completion of the CTP. *See* Webb List (GPC Exh. II-71); Webb at 6-8.

Even though Mr. Mosbaugh questioned the accuracy of the count after the CTP, and suggested that it might not end until the undervoltage (UV) test just before the DGs were declared operable, site and corporate personnel (Messrs. Mosbaugh, Shipman, and Aufdenkampe), approved the LER with the "comprehensive test program" language included. Tape 58 Transcript (GPC Exh. II-2) at 8, 22-23.[53] The record shows that GPC's (including Mr. Mosbaugh's) incomplete efforts to verify the LER start count caused erroneous DG start information to be submitted in the April 19 LER. GPC inserted the words "comprehensive test program" with the intent to exclude the problem starts identified and relied on incorrect, verbal assurances that the count statement "at least eighteen times each" was correct. *Id.* at 8-34. Although they acknowledged during discussions of the draft LER that they did not know the

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[50] Among those who did not know what the CTP was, what its parameters were, or when it started or stopped were Messrs. Cash (Tr. 4471), McCoy (Tr. 6995), Webb (Tr. 5696-97, 13,128), and Stringfellow (Tr. 4069-74) of GPC, and Messrs. Hunt (Tr. 4993), and Kendall (Tr. 5036), the NRC employees who monitored diesel testing and other activities in 1990.

[51] A copy of Mr. Webb's list (with notations in black and red ink that were written by Mr. Mosbaugh at a later date) was admitted as GPC Exh. II-71. *See* Webb at 6-7. The list contained some information on stops and starts, and noted that the total starts identified through March 20–April 18 were 32 for DG-1A and 27 for DG-1B. The totals shown were not an accurate count of *consecutive successful starts without problems or failures*, but merely totaled all starts identified after March 20. For example, the list did not identify the problem on start 136 or two starts on the morning of April 19. *See* GPC Exh. II-71 ("Webb List"). August 30, 1990 Letter (GPC Exh. II-18), Attachment B; June 29, 1990 QA Audit Report (GPC Exh. II-15).

[52] The audio tape recording of conversations on that date shows that Mr. Mosbaugh and Mr. Aufdenkampe did not examine Mr. Webb's list until after the site had approved the revised language in the LER. *See* Tape 58 Transcript at 8-34. The list did not contain a notation as to when a UV test was run on either diesel.

[53] This conversation (i.e., when the site approved the last revision of the LER, is often referred to as "Call B" regarding the LER.

starting point for the count (i.e., the first start following completion of the CTP), Messrs. Mosbaugh, Aufdenkampe, and Shipman failed to clarify and verify the starting point for the count of successful consecutive DG starts reported in the LER. There is no evidence, however, that any GPC or SONOPCO employee involved knew the exact number of starts following the CTP on April 19 or had a listing of starts (whether prepared by Mr. Cash or Mr. Webb) before the LER was approved.[54] The inadequate verification efforts were geared toward defending information already provided to the NRC by changing the description of the period for the count (the CTP actually identified a subset of the consecutive successful starts without problems or failures after the SAE). GPC's lax verification efforts were caused in part by unjustified assurances by Mr. Bockhold that information (which was assembled quickly using ambiguous definitions) had been verified before being presented. As a result, GPC did not identify inaccuracies in the April 9 and April 19 start counts and the mistakes of Messrs. Bockhold and Cash in collecting and reporting the initial count. This failure was among those cited as a basis for the Severity Level II violation against GPC.

Therefore, the allegation that GPC employees, either individually or collectively conspired deliberately to provide inaccurate information was not substantiated.

c. June 29, 1990 Cover Letter and Revised LER

The Petitioners allege, as supplemented by Intervenor in the licensing hearing, that GPC deliberately submitted false information to the NRC in a June 29, 1990 cover letter to a revised LER, 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 Quality Assurance (QA) audit (which was the basis for some of the statements in the cover letter to the LER Revision) 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 350-351; *see* Petition at 10-11.

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

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[54] Accurate information was available in the Unit 1 Control Log which recorded the time and date of DG starts and stops, and noted alarms and other pertinent information. Mr. Cash had used this log and the Shift's Supervisor's Log for the April 9 counts.

The letter states that: "In accordance with 10 C.F.R. 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 Support[55]], 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

[55] The NRC corrected Mr. Mosbaugh's position designation in a letter from Mr. J.L. Milhoan, NRC, to Mr. C.K. McCoy, GPC, dated March 13, 1995.

June 29, 1990 letter been presented, this information could have led the NRC to seek further information.

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

GPC asserts that the incomplete and inaccurate statements regarding the reasons for the errors in the LER (and April 9 letter) were based or reasonable attempts to provide an explanation based on the results of the QA audit report (GPC Findings at 140-63) and admits and accepts responsibility for the incompleteness of the letter (GPC Findings 285, 347). GPC maintains that DG record-keeping practices contributed to the reporting of erroneous counts (noting that the NRC Staff acknowledged that those practices may have contributed to violations as events unfolded). GPC Findings 286-291.

The NRC Staff viewed the performance failures of GPC site and corporate personnel, particularly by those who were on notice of Mr. Mosbaugh's concerns that the cover letter to the LER Revision was inaccurate and incomplete (i.e., Thomas Greene, the Vogtle Assistant General Manager–Plant Support; Michael Horton, the Vogtle Manager–Engineering Support; Mr. Frederick, the Supervisor–SAER; and Harry Majors, a Licensing Engineer for the Vogtle Project) as serious, but found that there was insufficient evidence to conclude that GPC intentionally provided inaccurate or misleading information. *See* Staff DG Panel at 6-11; NOV (Staff Exh. II-46); and Modified NOV (Staff Exh. II-51).

(1) "PRIOR" KNOWLEDGE OF MESSRS. HAIRSTON AND McCOY AND NARROW-SCOPE AUDIT

Petitioners are correct that the QA audit was narrow in scope. There is no evidence, however, that either Mr. Hairston or Mr. McCoy knew that incomplete and inaccurate reasons were stated in the June 29, 1990 LER Revision cover letter as to why the LER contained erroneous start-count information[56] or that they intended to deceive the NRC. On the contrary, as described below, the events leading to the development of the letter show that these GPC officials and other GPC employees, endeavored, albeit unsuccessfully, to provide correct information.

On April 20, 1990, Mr. Webb was surprised by the LER phrase "subsequent to the test program" and thought the LER could be inaccurate because, on April 19, he had identified only about ten or eleven starts after operability of

[56] For example, both Mr. Hairston and Mr. McCoy acknowledged during the hearing — as GPC conceded in its response to the enforcement action — that errors in the April 9 letter and presentation and the April 19 LER were also due to inadequate performance by GPC personnel, including Messrs. Cash and Bockhold. *See* McCoy DG at 21; Tr. 11,557-59 (Hairston); GPC Supplemental NOV Reply at 2-3.

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, and, on April 30 and May 2, 1990, he informed Mr. Bockhold and Mr. Aufdenkampe that the April 9 and April 19 counts were wrong and for different reasons.[57] Tr. 5211-12 (Mosbaugh); Tape 75 Transcript (GPC Exh. II-34 and Staff Exh. II-38) at 31. Mr. Bockhold instructed Mr. Mosbaugh to see that the LER was revised and indicated he might correct the April 9 start count in a planned mid-May 1990 submittal on DG component testing. Mosbaugh at 37; Tape 90 Transcript (Staff Exh. II-14) at 1-2; Bockhold at 15.

By May 8, 1990, when Mr. Mosbaugh chaired the PRB in his capacity as Acting Assistant General Manager–Plant Support,[58] the PRB approved a draft revised LER which stated that:

> 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.

PRB Meeting 90-66, GPC Exh. II-37. Other revisions followed that updated the consecutive successful starts through May 14, 1990,[59] and were transmitted to the corporate office licensing engineer who was responsible for drafting the revised LER. Webb at 9-10; Tr. 4047-50 (Stringfellow).

The site's inability to come up with a firm count number frustrated Mr. Hairston, however, in that he had to report to the NRC Regional Administrator, Mr. Stewart Ebneter, on May 14, 1990, and on June 14, 1990, that the start-

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[57] Mr. Mosbaugh gave Mr. Bockhold a handwritten list of DG-1B starts that confirmed that there were only 11 DG-1B starts after the "UV Test" (the end of the CTP in his opinion). Mosbaugh at 36; Intervenor Exh. II-29; Tape 90 Transcript (Staff Exh. II-14) at 8. He also told Mr. Bockhold that the April 9 and April 19 counts were wrong for different reasons.

[58] During a May 10, 1990 PRB meeting (PRB Meeting Minutes 90-67 (GPC Exh. II-39)), Mr. Mosbaugh (acting as Chairman of the PRB) assigned Mr. Bockhold the action of determining how the April 9 letter would be corrected, but on May 24, 1990, Mr. Bockhold closed the action item without correcting the April 9 letter. Aufdenkampe at 17; Mosbaugh at 38; Intervenor Exh. II-33. Mr. Mosbaugh believes he was removed from the PRB due to his concerns about false statements to the NRC. Mosbaugh at 37-38. The hearing record revealed only that, on May 10, 1990, Mr. Mosbaugh was removed from the PRB and became a Technical Assistant to Mr. Bockhold because Mr. Greene resumed his positions as Assistant General Manager–Plant Support after attending Senior Reactor Operator training. Prefiled Testimony of Thomas V. Greene, Jr., on Diesel Generator Reporting Issues, ff. Tr. 6716 (Greene), at 1.

[59] It was standard practice for an LER to update information previously provided to the NRC. Tr. 13,137 (Webb). GPC ultimately decided to forego the term successful start and report valid tests and failures, as defined in RG 1.108, extending through June 7, 1990. Revised Prefiled Rebuttal Testimony of Thomas E. Webb on Diesel Generator Reporting Issues, "Webb Revised," ff. Tr. 13,168 (Webb), at 9-13. *See* LER Revision and Cover Letter (GPC Exh. II-16); GPC Exhs. II-171L through 171T. This approach, while providing unambiguous information regarding DG starts, did little to correct the statement of consecutive starts without problems or failures through April 9 or 19 in that it reported starts using a different criterion and over a different period than stated in the prior documents. The cover letter only corrected the April 19 start count (10 and 12 for DG-1A and DG-1B, respectively) based on the nar ow-scope audit.

count numbers were revised. Mr. Hairston directed Mr. McCoy to keep the NRC informed of efforts to correct the count.[60] Hairston DG at 9-13; Tr. 3214 (McCoy).[61] When he saw that the draft LER revision and cover letter contained no explanation as to why the start data were different, Mr. Hairston directed that a QA audit be conducted to determine (1) the correct start count and (2) the reason GPC could not get the number straight. Hairston DG at 11-12; Tr. 3631 (Hairston). He also informed Mr. Ebneter that he would submit a revised LER after completion of the QA audit. Hairston DG at 12-13.

There is no basis to conclude that either Mr. Hairston or Mr. McCoy knew that the information provided in the June 29 cover letter was false. Mr. Hairston's actions demonstrated a concern for accuracy and an attempt to discern why erroneous information was given to the NRC. He and Mr. McCoy read the audit report and the table of starts appended to it to ensure that the count information was correct. Hairston DG at 14. Mr. Hairston also instructed that the QA audit results be provided to the Resident Inspector at the Vogtle site 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 DG at 14-15. Mr. Hairston and Mr. McCoy adopted the implied finding in the audit report that DG record-keeping practices were the source of the erroneous information provided on April 19. Hairston DG at 16-17; McCoy DG at 19-21.

Unfortunately, (1) the narrow scope of the QA audit resulted in GPC selecting an incorrect or incomplete reason for the LER error; and (2) neither Mr. Hairston, Mr. McCoy, nor the other GPC employees involved noticed that the QA audit showed that the April 9 start count was wrong.

The audit's failure to examine the performance of site personnel in collecting and reporting the initial counts rendered GPC unprepared to reach a complete assessment of the causes of the April 9 start-count errors. There was no evidence that the narrow scope of the audit was part of an effort to deceive the NRC.

The QA audit report specifically stated that the audit was narrow in scope and did not identify a specific cause for the LER count errors, but implied they were caused by the failure to specify a starting point for the count and

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[60] On June 15, 1990, Messrs. Aufdenkampe and Mosbaugh told the NRC resident inspectors about the errors and that the correct numbers depended on when you start counting. Aufdenkampe at 18. After Messrs. Brockman and Ebneter received calls that the DG start information was incorrect, the NRC met to discuss whether the erroneous count was cause to reconsider the April 12 restart decision. Tr. 15,319-20, 15,330-31, 15,332 (Reyes). Mr. Reyes, the Deputy Regional Administrator for Region II, recalled that eight starts would have been sufficient in his opinion. Tr. 15,336-37 (Reyes). 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. Tr. 15,322-23 (Reyes).

[61] Intervenor asserted that the phone call was too short to convey DG information and, instead was about an event at Hatch occurring on that date. Intervenor Findings 339-346. Such speculation is not sufficient to rebut GPC's testimony regarding these calls.

the lack of up-to-date DG record-keeping practices.[62] The QA audit report however, alluded to this faulty conclusion without confirming that accurate start data were not otherwise available in April 1990 (i.e., from the Unit 1 Control Log that Mr. Cash had also used, which, unlike the Shift Supervisor's Log, contained sufficient information to derive accurate count data).[63] The audit was also inadequate in scope because it did not examine the performance of Mr. Bockhold and Mr. Cash in collecting and reporting the initial April 9 data (the failure to define the criteria for "successful start" and the period for the count), the assurances of Mr. Bockhold that deterred site verification efforts, or the failure of site and corporate personnel to define the CTP.[64] Thus, the audit failed to identify their inadequate performance as causes for the erroneous information reported on April 9 and in the April 19 LER.

While better DG record-keeping practices (i.e., no delays in routing or completing start completion sheets, and an up-to-date DG Start Log with starts numbered) would have made count information easier to retrieve, it is clear that previous erroneous start counts were caused by (1) the performance failures of Messrs. Bockhold and Cash in initially collecting and reporting the data (particularly with respect to the ambiguous term "successful start" and the undefined period for the count)[65] and (2) GPC's decision to reiterate the count (as modified by the term CTP) without completing adequate verification efforts. There is 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. Thus, there is no basis to support Mr. Mosbaugh's assertion that GPC intended to mislead the NRC.[66]

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[62] The DG Start Log, compiled from completion sheets filled out by operations personnel and reviewed by the DG Engineer, Mr. Stokes, was not up to date on April 19 as there were delays in the routing of the Completion Sheets from the operators to the Engineering Support Department (headed by Mr. Michael W. Horton) and operators had not filled out a sheet every time the DG was started. Prefiled Testimony of Georgie R. Frederick on Diesel Generator Reporting Issues, ff. Tr. 4125, "Frederick," at 7.

[63] Pursuant to GPC procedures, the Unit 1 Control Log was to contain the start time, stop time, and any significant status changes for each DG start. Procedure 10001-C, Logkeeping (Staff Exh. II-31) at 2; Tr. 4232 (Frederick). 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, II-24); Tr. 4232 (Frederick). The counts reported in the April 19 LER (and the April 9 letter start count) included starts before the operability test was conducted.

[64] Mr. Frederick was aware that Mr. Cash had prepared the information for Mr. Bockhold's presentation, and had assumed that a separate count had not been made for the LER. Mr. Frederick had not contacted Mr. Cash during the audit to avoid biasing the results of the audit. Frederick at 9-12. This approach, while reasonable from an auditor's perspective, was not prudent given the performance problems associated with collecting the DG start counts and Mr. Mosbaugh's statements to Mr. Frederick early in the audit period that he should examine the role of personnel errors in the erroneous counts. Tape 160 Transcript (Staff Exh. II-16) at 24.

[65] GPC did not define what constituted a "successful start without problems or failures" in the audit report and did not agree on a definition until the August 30, 1990 letter that submitted accurate DG-1A and DG-1B start counts for April 9.

[66] Messrs. Bockhold, McCoy, and 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.

Even though senior managers may not be intimately familiar with site activities, the NRC expects that they will ensure that adequate care and attention are given to written and verbal communications with NRC. 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), they should take necessary steps to ensure that inaccurate information is promptly corrected.

(2) GPC NOTIFIED THAT THE LER COVER LETTER WAS FALSE AND INCOMPLETE

Petitioners are correct that GPC was on notice that the draft LER was inaccurate and incomplete. Statements made by Mr. Mosbaugh in conversations with a number of GPC employees substantiate this claim. This fact, however, does not dictate a conclusion that GPC intended to submit false information to the NRC. Rather, it is another example of inadequate performance whereby GPC failed to correct erroneous and incomplete information.

On June 29, 1990, during a phone call with corporate personnel, and polling PRB members, on the LER Revision and transmittal letter, Messrs. Frederick, Greene, Horton, and Harry W. Majors (a corporate licensing engineer for the Vogtle Project)[67] did not fully consider and resolve the concerns raised by Mr. Mosbaugh during the polling of the PRB members 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 Transcript (Staff Exh. II-18) at 2-28. Their actions played a part in GPC submitting incomplete and inaccurate information in the revised LER.

Site personnel were aware, as of June 15, 1990, that (1) Mr. Hairston was concerned about the erroneous start counts because he had attested to the information later found to be inaccurate, (2) site verification efforts had been inadequate and relied primarily on hearsay, and (3) Mr. Hairston planned to explain in the cover letter to the revised LER or elsewhere why the LER was wrong[68] and what corrective action was taken to prevent recurrence in the future. Tape 157 Transcript (Staff Exhs. II-35, II-35A) at 10-13.

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[67] Mr. Majors was to complete the LER revision package and ensure that the DG start counts were consistent with the QA audit results. Prefiled Testimony of Harry W. Majors on Diesel Generator Reporting Issues, ff. Tr. 6212, "Majors," at 1.

[68] 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. The statement was not in the final cover letter.

Mr. Frederick, the onsite Supervisor of the SAER group, who reported to a corporate manager in Birmingham, supervised the audit conducted June 11-29, 1990, which he understood was to determine accurate numbers for the LER start counts.[69] His staff reviewed DG test data sheets generated during troubleshooting, maintenance, and surveillance testing, as well as the Unit 1 Shift Supervisor's Log kept in the control room and the Diesel Start Log (with numbered starts) maintained by the DG system engineer. Frederick at 4-5; QA Audit Report, dated June 29, 1990 (GPC Exh. II-15).[70] Unable to identify a GPC definition of "CTP," the report concluded that the CTP ended upon completion of the operability run pursuant to Vogtle surveillance procedure No. 14980. In reaching this definition, Mr. Frederick reasoned that the test program ended once the machine was declared operable. Thus, the report concluded that there were ten and twelve consecutive successful starts on DG-1A and DG-1B, respectively, as of April 19. Frederick at 6-7; GPC Exh. II-15.

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 knew the audit was narrow in scope, that the audit had not identified the specific cause of the error in the LER, and had been notified that he should examine the personal errors of Messrs. Cash and Bockhold, but unreasonably relied on his narrow-scope audit and dismissed the concerns raised by Mr. Mosbaugh.[71] Mr. Horton, a voting PRB member, thought the June 29 cover letter statement about DG record-keeping practices was inaccurate because the DG Start Log was not used, but abandoned this argument when informed that Mr. Hairston drafted the language.[72] Messrs. Majors and Greene too quickly dismissed the concern that the letter was incomplete in that it did not "clarify" the April 9 count. Further, Mr. Greene, faced with a unit down, adopted the corporate view rather than resolving the concerns of an individual who had been personally involved in the development of the LER. *See* Tape 187 Transcript (Staff Exh. II-18) at 1-28.

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[69] This was the stated purpose of the audit and did not implement Mr. Hairston's instruction that the reasons for the error also be determined.

[70] The Petitioners assert that delays in completing the revised LER are evidence that GPC tried to mislead the NRC. There was no record evidence to support this proposition. Rather, the record revealed inept and protracted GPC efforts to arrive at updated counts and Mr. Hairston's decision to have the revision await the results of the QA audit. Completion of the audit was delayed due to difficulty in locating the pertinent records (the set in the vault was not complete and up to date) and some records (e.g., 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; QA Audit Report, GPC Exh. II-15 (McCoy M). Both documents were issued on June 29, 1990.

[71] Mr. Frederick later stated that (1) record keeping and the personal errors of Mr. Cash in making his count and Mr. Bockhold in instructing him also contributed to the error and (2) as he was unaware of Mr. Hairston's instruction for the audit to determine why mistakes were made, he had limited the root-cause determinations (e.g., inadequate training, inadequate procedures). Tr. 4270-71, 4274 (Frederick).

[72] In his DFI response and during the hearing, Mr. Horton accepted responsibility as a PRB member for the inaccuracy in the June 29 cover letter (e.g., Tr. 5897) and admitted that he had not adequately addressed Mr. Mosbaugh's concerns (Tr. 5942).

The hearing record and DFI responses indicate that Messrs. Horton, Frederick, Greene, and Majors failed to resolve the concerns of accuracy and completeness that were raised by Mr. Mosbaugh due to a combination of factors, including the fact that (1) Mr. Mosbaugh challenged language that was personally drafted by Messrs. Hairston and McCoy, (2) Mr. Frederick held strongly to his belief based upon a narrow-scope audit that DG record-keeping caused the errors, (3) the DG record-keeping practices explanation appeared reasonable,[73] and (4) they believed Mr. Mosbaugh's opinions were entitled to little weight. *See* Staff Exh. II-18; Frederick at 11-12; Horton at 5-6; Majors at 4-8; Greene at 4-8; Tr. 6913 (Greene); DFI Responses: Frederick at 8-10, Horton at 2-5, Majors at 4-11, Greene at 5-13.

The actions of the individuals involved did not meet NRC expectations for ensuring that information communicated to the NRC is complete and accurate in all material respects. Their actions show a reluctance to question information developed at the corporate office (unless they had direct information to the contrary). They do not show, however, a concerted effort to mislead the NRC.[74]

(3) MULTIPLE EXPLANATIONS FOR DG START-COUNT ERRORS

Petitioners claim that the various explanations regarding the DG start-count information that appeared in drafts of the cover letter to LER revision indicate that GPC endeavored to mislead the NRC. Petition at 11-12. The record shows that the drafts were part of GPC attempts to defend or explain previous DG start-count information without fully understanding what caused the errors. The allegation of intentional deception was not substantiated.

GPC's failure to resolve concerns raised about the accuracy of DG start-count information both prior to and on June 29, 1990, resulted in site and corporate personnel believing that 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. GPC had not yet defined what constituted "a successful start without a problem or failure" and did not recognize that the LER Revision

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[73] A single source document like a DG Start Log with completion sheets and numbered starts would have made the task of assembling and examining the start data easier. Aufdenkampe at 19-20; McCoy at 19-21. The hearing revealed that the updated DG Start Log (through May 2, 1990) (Staff Exh. II-22) did not record the problem during DG-1B start 136 and recorded it and starts 132 and 134 as successful starts. Tr. 4230 (Frederick) and Tr. 6879-80 (Greene).

[74] In hearing testimony and in DFI responses, GPC employees often asserted that GPC failed to meet its obligations under section 50.9 due to Mr. Mosbaugh's actions. *E.g.*, DFI Responses (Frederick at 9-10; Greene at 8, 10-13; Majors at 7-10; Bockhold at 8-9; GPC at 4-6, 12). While the enforcement action identified Mr. Mosbaugh as being among the employees who contributed to the Severity Level II problem, blaming Mr. Mosbaugh detracts from meaningful examinations of the source of GPC's errors and discourages accountability and responsibility. Also, if GPC had adequately resolved Mr. Mosbaugh's claims, in June 1990, that an examination of actions by GPC personnel was necessary to understand and correct errors, it might not have taken until August 30, 1990, to get an accurate count for April 9.

count of valid starts through June 7 did not clarify the start data presented in the April 9 letter and April 19 LER. The reliance on different types of starts for a different interval and the various explanations set forth in the drafts epitomize GPC's failure to adequately investigate the basis for the information originally conveyed on April 9 and to determine why errors were made. The use of the term "clarify" in the cover letter to the LER revision and ignorance regarding the cause of misinformation made it difficult for various GPC managers and their subordinates to provide a consistent explanation for the mistakes. The DG record-keeping explanation adopted was based on the QA audit that was not adequate to explain the causes of the count errors. The record contains no evidence of intentional efforts to deceive the NRC, but ample evidence of evolving explanations showing GPC's reluctance to admit its mistake, promptly correct the misinformation, and identify the multiple performance problems of senior GPC personnel before April 9 and April 19.

(4) SUMMARY

The record shows 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 determine the reasons for the errors in the two submittals. While GPC undertook efforts to correct the LER, it narrowly focused on that submittal and did not examine the actions of the individuals involved or determine whether accurate information was available from plant records.

The failure of GPC to correct the DG start counts in the April 9 letter and to provide complete reasons for the inaccurate DG start counts in the LER, was in part due to the erroneous belief that the two submittals addressed the same count information given that the April 19 start count was derived from the April 9 presentation. There is no evidence that any GPC employee knew the record-keeping statement was false or incomplete and no evidence of any deliberate efforts to conceal information from the NRC.

d. August 30, 1990 Letter

Intervenor contends that GPC deliberately (or with careless disregard) provided inaccurate or incomplete information in an August 30, 1990 letter to the NRC 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, Tr. 10,394-95 (Mosbaugh); Intervenor Findings at 213-20.

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.

GPC contends that the inaccuracies in the letter did not result from wrongdoing on the part of any GPC employee, but 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.

The NRC Staff found no evidence that showed 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 that Mr. Bockhold's management style rendered the performance of others ineffective. *See* Staff Exh. 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

During an Operational Safety Team Inspection conducted from August 6 to 17, 1990, to examine the technical validity and safety significance of the allegations submitted to the NRC, *see* Intervenor 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.

Mr. McCoy, aware of NRC concerns that erroneous start-count information was intentionally provided in the April 9 letter, committed, during an August 17 meeting with the NRC special inspection team, to correct the DG start data and explain the errors in the April 9 letter. Tape 258 Transcript (Staff Exh. II-19) at 1. Despite this knowledge, no root-cause evaluation or other investigation of the DG start-count errors was initiated. Instead, GPC's August 30 letter (which was drafted at corporate headquarters under the direction of Mr. McCoy and provided correct data for April 9) was dispatched without an assessment of the actions of Mr. Bockhold and Mr. Cash who developed the erroneous information contained in the April 9 letter. As a result, Mr. McCoy failed to exercise sufficient oversight and GPC again failed to identify its mistakes and take steps to ensure that the deficient conduct was not repeated.

There is no evidence to substantiate the claim that the initiation of a draft at the corporate offices was an effort to conceal information from the NRC. Site approval was sought as evidenced by Intervenor's tapes. *See, e.g.*, Tape 258 Transcript (Staff Exh. II-19). Those who were most knowledgeable (albeit somewhat uninformed) about DG start data and the causes of the error were involved in reviewing and approving the correspondence.

(2) STEERING OF PRB MEETING

The August 30 letter was the first time that GPC defined the term "successful start" and attempted to explain why the April 9 start counts were erroneous. The actions of Mr. Bockhold, the Vogtle General Manager, significantly hampered efforts to provide accurate information about why errors were made.

The PRB functions as an advisory group to the General Manager. During the August 30, 1990 PRB meeting that was reviewing a draft of the August 30 letter to the NRC, Mr. Bockhold changed the word "error" to "confusion" in the phrase explaining the reason for errors in the April 9 letter and the April 19 LER. As revised, the erroneous information was due to "the *confusion* between the distinction between a successful start and a valid test." Tape 184 Transcript (Staff Exh. II-19) at 1-3 (emphasis added). When questioned whether Mr. Cash (who had collected the April 9 DG start data) was confused about the distinction between a successful start and a valid test, Mr. Bockhold admitted that Mr. Cash was not confused when he collected the data, but claimed that the sentence

was accurate because other people were confused afterward. *Id.* at 6-8.[75] 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 1-11. His forceful, overbearing, and, at times, precipitous demeanor, (*see* Tr. 5769-76 (Aufdenkampe)) and failure to examine his own role and responsibility, contributed significantly to misinformation being provided to the NRC throughout April-August 1990.[76]

Confusion after April 9 (whether by GPC or NRC personnel) could not have caused the erroneous count information provided on April 9. This example of Mr. Bockhold's forceful management style shows an environment where the PRB reviewing the draft letter could not adequately resolve a concern about the accuracy of the "confusion" statement or inquiry as to the role played by a superior in the development and reporting of misinformation on April 9. Mr. Bockhold's failure to encourage his staff to have a questioning attitude thwarted efforts to ensure the accuracy and completeness of communications with NRC. There is insufficient evidence to conclude that this defensive posture was part of efforts by Mr. Bockhold to deceive the NRC.

(3) INACCURATE PUBLIC STATEMENTS BY MR. McCOY

Intervenor asserted that because the reasons for LER errors stated in a 1990 press release by Mr. McCoy (Intervenor Exh. II-67A) (i.e., employees did not use all of the available data and used operator logs only) were different than those stated in the August 30 letter (which stated that "confusion" between a successful start and a valid test and a personnel error by the individual who performed the count caused the error) shows that GPC lacks the willingness to seek the truth. Mosbaugh at 60; Intervenor Findings at 399-400.

The mere fact that a GPC officer stated more than one reason why GPC had submitted erroneous information is not a basis for concluding that GPC was unwilling to seek the truth given what the record shows about GPC's inadequate attempts to determine why erroneous information was submitted. Inasmuch as the press release contains scattered quotes from Mr. McCoy, it is difficult

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[75] Given that the QA audit report showed that there were only two valid tests (as defined by RG 1.108) on the diesel during this period (GPC Exh. II-15, Attachment B; Tr. 3279-80 (McCoy)), this was not the likely source of count errors.

[76] This incident and the PRB meeting on the FAVA system, *see* Section III.A.4, *supra*, are both examples of Mr. Bockhold's forceful management style. On April 30, 1990, senior officials of the NRC met with Messrs. McDonald, Hairston, McCoy, and others to express NRC concerns about the "cowboy" or "cavalier" attitude that Mr. Bockhold (and GPC) exhibited in dealings with the NRC. Tr. 14,850-65; Tr. 14,955-56 (Matthews). GPC and Mr. Bockhold have since acknowledged the role Mr. Bockhold's management style played in GPC communicating inaccurate and incomplete information and Mr. Bockhold has accepted responsibility for his mistakes. Letter from G. Bockhold to J. Lieberman, NRC, dated February 1, 1995. The NRC Staff also noted that GPC communications substantially improved after Mr. Shipman assumed Mr. Bockhold's position in the Fall of 1990. Tr. 15,194 (Matthews).

to determine whether any statements are quoted in context. Consequently, it is difficult to draw negative conclusions about GPC's character based on the statements.

e. OSI White Papers, Response to Section 2.206 Petition, and SSPI Data

(1) WHITE PAPERS TO NRC INSPECTION TEAM

Intervenor asserted that, during the NRC's special team inspection on operating practices and allegations (the "OSI" Inspection) conducted at the Vogtle facility in August 1990 (*see* Intervenor Exh. II-83), GPC intentionally provided false information (1) by indicating that Messrs. Cash and Bockhold sat together in Mr. Bockhold's office to work on the DG testing slide, (2) by omitting Mr. Burr from the list of individuals who wrote the April 9 letter, (3) 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," and (4) by stating that all revisions of the LER were reviewed by the PRB. Intervenor Findings at 357-376.

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.

During the August 1990 special team inspection addressing NRC concerns about GPC's operating philosophy and allegations about inaccurate information being supplied to the NRC, GPC responded to questions posed by the NRC in various "White Papers." McCoy DG at 22-23; *see* GPC Exh. II-126; Intervenor Exhs. II-131, II-95.

There is no evidence to support the claim that the inaccuracies in the documents resulted from deliberate efforts to mislead the NRC and conceal the participation of senior GPC officials. As is evident from the discussion on the Tape 253 Transcript (GPC Exh. II-122; Intervenor Exh. 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 White Paper expressly conveyed "GPC's belief" at the time when (based upon information developed during the licensing hearing and enforcement proceeding) GPC's investigation of issues was incomplete. Thus there is no indication that the mistakes were intentional.

(2) STATEMENTS IN RESPONSE TO SECTION 2.206 PETITION

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

There is insufficient evidence to show 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 Tape 58 (GPC Exh. II-2) shows that Mr. Hairston joined the call after the wording regarding the Comprehensive Test Program was added and did not participate in "Call B" when Messrs. Shipman, Aufdenkampe, and Mosbaugh finalized the LER language. *See* Tape 58 Transcript (GPC Exh. II-2; Staff Exh. II-45 (Vogtle Coordinating Group Report). The failure to identify various participants on the calls indicates faulty recollection of GPC employees (shown to be inaccurate by the Intervenor's recordings) and is among the numerous mistakes GPC made in providing information on the DG issue. Performance failures, not deception, appear to be the likely cause.

(3) SSPI DATA

Intervenor asserts that GPC's failure to include "bad" 1990 Safety System Performance Indicator (SSPI) data in the April 9, 1990 letter to the NRC and to give such data to the IIT is evidence of a pattern of willfulness by GPC and argues that the data should have been included in the April 9, 1990 letter. Intervenor Findings 44-73; Mosbaugh at 99-104; Tr. 10,369 (Mosbaugh). GPC contends that exclusion of the 1990 data, which was based upon only a few months rather than a full year, did not represent a relevant and material omission concerning the Vogtle DGs. GPC Findings at 191-98.

The fact that the data were not included in the final version of the April 9 letter is not significant. The record shows that the NRC asked GPC to address the reliability of the DGs as part of the April 9 presentation. The SSPI data given to the IIT addressed the years 1987, 1988, and 1989 and was incomplete for 1990. Intervenor Exhs. II-89, II-91.

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 were to be given to the IIT and Mr. Brockman of the NRC. Mosbaugh at 101; Intervenor Exh. II-89. Contrary to Intervenor's assertion that it was hidden from the IIT, a document containing the SSPI data was among the documents collected by the IIT after the SAE. *See* IIT Document No. 143 (Intervenor Exh. II-89).

Intervenor's allegation that a draft of GPC's April 9, 1990 letter that contained the SSPI data was telecopied to the GPC corporate office and the NRC was not

proven. NRC Staff records show that draft information transmitted to Messrs. Brockman (Region II) and Matthews (NRC Headquarters) on April 5 and 6, 1990, did not contain the data. *See* Intervenor Exhs. II-65, II-65A; *see* Tr. 3287-90.

The NRC's interest relative to restart was to understand the basis for GPC's position that the DGs were operable and that GPC's corrective actions had been effective. The NRC was not seeking a numerical value like SSPI (which represents the time that a given unit, on average, annually is unavailable), either historically or currently, as part of its restart decision and does not normally rely on such data.[77] *See* NRC Staff's Reply to Intervenor's First Set of Interrogatories, dated September 15, 1993, at Interrogatory 11.

There is no basis to conclude that the data should have been included in the April 9 letter in order to address the NRC's inquiry about DG reliability and operability. Mr. Bockhold's decision not to include the data for the first few months of 1990 was not unreasonable. Intervenor has not shown that the information was necessary for a decision on whether the short-term corrective actions were sufficient to provide reasonable assurance to permit restart, and it is clear that the information was made available to the NRC.

(4) CONCLUSIONS REGARDING WHITE PAPERS, SECTION 2.206 RESPONSE AND SSPI DATA

There is 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, and do not indicate that GPC intentionally misrepresented Mr. Hairston's participation. The audio recording made on that date shows that he was not a significant participant in discussions about the accuracy of the LER.

Similarly, there is no basis to conclude that Mr. Bockhold was deceitful in failing to include Safety System Performance Indicator Data in the April 9 letter in that the information, although incomplete, was provided to the IIT. There is no evidence that the information omitted was requested by the NRC or reasonably should have been included in the letter.

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[77] The Vogtle TSs address DG reliability by requiring increased frequency of DG testing if a specified number of failures occurred during the last 20 or 100 valid tests. The TSs also require special reporting of DG test results. These requirements of the TSs are totally unrelated to SSPI data. 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 Exh. II-140. Such data have little or no value with respect to DG operability and the effectiveness of corrective actions to allow restart.

f. Statements Concerning Air Quality in the April 9 Letter and to the IIT

(1) INTRODUCTION

A sufficient air supply is needed both to start the diesel engine and to operate the engine controls. This air is supplied to each diesel engine by an independent, redundant starting air system that includes an air compressor, an after-cooler, a refrigerant air dryer,[78] an 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. Vogtle SER § 9.5.6 (Board Exh. II-4) at 9-68.

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 5-micron filter and then through a pressure regulator that maintains control air pressure at 60 psig. *See* NUREG-1410, at 3-47 (Intervenor Exh. II-10).

One of the ways of monitoring the quality of DG starting air is through dewpoint measurements taken by attaching the dewpoint testing equipment at a pressure gauge fitting on the air receiver. The temperature range of acceptable dewpoints at the Vogtle facility is 32-50°F. Dewpoint measurements obtained at the Vogtle facility on the DG air system are documented in Maintenance Work Orders (MWOs), which are used to perform the Preventive Maintenance (PM) checks of the DG air dewpoints. *See* Intervenor Exh. II-78, at 5-10; *see* Mosbaugh at 69-70; Intervenor Exh. II-169.

The April 9, 1990 letter submitted to the NRC to support GPC's request for restart stated the following 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.

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[78] The air dryer at Vogtle is located upstream of the air receiver; the dryer removes water vapor from the compressed air before the air reaches the receiver and is designed to run continuously. FSAR § 9.5.6 at 9.5.6-4 (Board Exh. II-3); Board Exh. II-4 at 9-68. Compressed ambient air, saturated with water vapor, enters the dryer and is precooled by the outgoing refrigerated air by an air-to-air heat exchanger. The precooled 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 automatically discharged by a drain trap. Board Exh. II-3 at 9.5.6-4.

GPC Exh. II-13, at 3. On May 9, 1994, the NRC issued the NOV to GPC, which included a Violation B on air quality based on (1) GPC's failure to provide complete information regarding control of DG air quality (i.e., dewpoints) in the April 9, 1990 letter by only stating that initial reports of high dewpoints were attributed to faulty instrumentation and (2) GPC's failure to state that high dewpoints 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; Staff Exh. II-46, at 3-4.

After reviewing GPC's response to the NOV, the NRC Staff concluded that as of April 9, 1990, GPC had an adequate technical basis to support a finding that air quality was acceptable, and that dewpoint 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.

Intervenor asserted that the air quality statement in the April 9 letter is materially false and deliberately misleading in that (1) high dewpoints were not due to "faulty instrumentation" (Intervenor Findings at 285) and (2) 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).[79] *See also* Petition at 9. Intervenor also alleged that GPC was recklessly careless in communications regarding high dewpoints and concealed high dewpoint readings from the IIT. *See* Mosbaugh at 66-92.

GPC maintains that the letter conveyed its judgment that, as of April 9, 1990, the diesel control air quality relative to moisture or humidity was satisfactory based upon the April 6 air receiver inspection and the daily air

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[79] Intervenor also alleged that water was collected from the diesel air system prior to April 9, 1990, in that (1) he saw a jar of 8 ounces of yellowish fluid in Mr. Kochery's office on March 30, 1990; and (2) a taped (and partially inaudible) conversation indicates that the water came from diesel pneumatic tubing (air system "trip lines") that were disassembled on March 29. Mosbaugh at 93-94.

DG vendor representatives who were present during the March-April 1990 disassembly of most of the diesel sensing lines and performed the diesel logic functional testing, including the disconnection of all protective trip lines within the engine control panel, did not recall observing or hearing about any water or moisture problems in the diesel starting or control air in March-April 1990. Rebuttal Testimony of Sheldon OwYoung and Robert Johnston on Air Quality Statements, ff. Tr. 12,428, "OwYoung-Johnston," at 4-5; Tr. 12,741, 12,758-59 (OwYoung, Johnston). Others present in Mr. Kochery's office had no recollection of the incident and even disputed Mr. Mosbaugh's transcribed version of the March 30, 1990 tape segment. Tr. 7552-53, 7568-70 (Stokes); Chenault Rebuttal at 3-4 (ff. Tr. 14,020); *see also* Tr. 14,071-73, 14,076 (Chenault).

In addition, in May 1994, the NRC Staff inspectors examined whether water had been in the diesel control air system in 1990. The Staff identified numerous examples of out-of-specification dewpoints, but found no evidence of actual water formation in the diesel control air system lines or corrosion. Staff Exh. II-5, at 1, 6-8; *see also* Testimony of Edward B. Tomlinson and Pierce H. Skinner on Air Quality, ff. Tr. 14,497, "Staff AQ," at 10-11. Thus, there is no evidence to substantiate the claim that water was in the trip line.

receiver blowdowns, which did not indicate a high-humidity environment in the starting air system. *See* GPC Exh. II-55A (Tape 41 Transcript), at 2; Supplemental Testimony of George Bockhold on Air Quality Statements, ff. Tr. 6397, "Bockhold AQ," at 5-6. The statement that "initial reports of higher than expected dewpoints" was not intended to describe all past maintenance issues or to refer to any dewpoint readings taken after March 29, 1990. *Id.*; Tr. 6582 (Bockhold).

The NRC Staff concluded, based on the hearing record, that (1) the air quality portion of GPC's April 9 letter was incomplete in that it did not reference the fact that the Instrumentation and Control (I&C) technicians were unfamiliar with the use of the VP-1114 instrument, and initially misused it, in taking dewpoint measurements in early April 1990; and (2) the reference in the April 9 letter to "initial reports" should reasonably include high dewpoint measurements taken prior to April 9. Tr. 14,756-57, 15,111 (Matthews). The NRC Staff found that out-of-specification dewpoint readings identified by Intervenor during the hearing (Intervenor Exh. II-169) did not show that air quality was unsatisfactory since inspection of the receivers and controls showed no evidence of corrosion or a long-term water problem. Tomlinson and Skinner at 12-13.

(2) ACCURACY OF STATEMENT THAT AIR QUALITY WAS SATISFACTORY

Mr. Mosbaugh alleges that corrosion seen during the April 1990 inspection of an air receiver is evidence that air quality was not satisfactory, as stated in the April 9 letter. *See* Mosbaugh at 82-83.

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, ff. Tr. 4882, "Hunt Affidavit," at 5; Prefiled Testimony of Kenneth Stokes on Diesel Generator Air Quality Statements, ff. Tr. 6962, "Stokes," at 2-3; Rebuttal Testimony of Harvey Handfinger, ff. Tr. 11,346, "Handfinger," at 2; Tr. 11,450-56 (Handfinger).[80] The metal was clearly visible inside the receiver and there were no loose rust particles in the tank,[81] water droplets on the tank walls, or other signs of moisture during the inspection. Tr. 11,374, 11,450-56, 11,483. The fact that there were normal rust spots on the welds inside the tank and that the control system air filters appeared "new" also indicated that air quality was not a problem. Hunt Affidavit at 5-6; Tr. 4930 (Hunt).

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[80] Mr. Harvey Handfinger was GPC's Manager of Maintenance, reporting to Mr. Kitchens (Assistant General Manager–Operations). Mr. Mark Briney, as the acting Instrumentation and Control Superintendent, reported to Mr. Handfinger.

[81] Mr. Shipman's April 11, 1990 notes (GPC Exh. II-147) showed that there was minor "flash" corrosion or rust observed on the weld seams of the air receiver tank, as expected, given that welded joints on the carbon steel tank form a thin "rust" or corrosion film immediately after welding. Rebuttal Testimony of William B. Shipman (ff. Tr. 10,890), "Shipman Rebuttal," at 14.

Mr. Mosbaugh did not dispute the statement from the April 9 letter that air quality was satisfactory when that statement was read to the IIT on April 11, 1990, and Messrs. Kochery and Stokes indicated that the statement was correct, even though the 50-degree dewpoint requirement had not always been met. Tape 41 Transcript (Staff Exh. II-15) at 1-2, 5-7.

Based on the evidence set forth above, particularly the absence of significant rust, corrosion, or moisture,[82] the statement in the April 9, 1990 letter that air quality was satisfactory was not inaccurate.

(3) INCOMPLETE REASONS FOR HIGH DEWPOINT READINGS

The record shows that GPC's statement that "initial reports of higher than expected dewpoints were later attributed to faulty instrumentation" is incomplete in that it failed to indicate that high readings were also obtained after the SAE due to technicians being unfamiliar with backup equipment, but there is no basis to conclude that GPC intended to mislead the NRC.

On March 9, 1990, there were out-of-specification dewpoint readings of 61°F and 66°F taken on DG-1A air receivers K01 and K02, respectively. GPC believed the high readings were valid since humidity would have risen while DG-1A was out of service and disassembled from March 1 to March 13, 1990, for overhaul maintenance and testing in that the receivers had been depressurized and opened to the room atmosphere. Prefiled Testimony of Lewis A. Ward on Air Quality Statements, ff. Tr. 7740, "Ward AQ," at 3-4; Tr. 7878-80 (Ward).[83] After overhaul maintenance, air receivers are recharged using multiple "bleed-and-feed" cycles, as necessary, until the dewpoint is within the acceptable range. The dewpoint readings were within specification on March 12, 1990, and the DG was declared operable on March 13, 1990. Ward AQ at 4; GPC Exh. II-62.

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 IIT where GPC stated it would determine the last recorded dewpoints for DG-1A and take another dewpoint reading in an effort to identify the cause of the March 20, 1990

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[82] If any water had ever formed in the pneumatic control air system, water would likely accumulate in the bowl of the control air filter in the diesel engine control panel, but there was no evidence of water in that filter before or during the March 1990 outage. OwYoung-Johnston at 5-6; *see also* Tr. 12,495-502 (OwYoung, Johnston). Moisture corrosion problems in the diesel air start system in 1990 would have also caused degradation due to corrosion or corrosion products which would have been obvious during the inspection and testing of the diesels, but there was no 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. For example, the logic board, which was removed and replaced subsequent to the DG-1B start on March 24, 1990 (Start 136), showed no signs of a water or moisture problem and inspections during each 18-month replacement of the control air filters revealed no moisture problem. Tr. 7704, 7685-86 (Stokes).

[83] 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. Ward AQ at 4.

spurious trips on DG-1A. *See* GPC Exh. II-49 (IIT Transcript), at 95-96; *see also* Bockhold AQ at 1. GPC Instrumentation and Control (I&C) technicians performed the monthly preventative maintenance dewpoint check on DG-1A on March 29, 1990, recorded out-of-specification high readings of 80°F and 60°F, and documented them on an MWO for evaluation and trending purposes.[84] *See* GPC Exh. II-155, at 1; MWO 1-90-01513 (GPC Exh. II-155); Rebuttal Testimony of Mark Briney on Diesel Generator Reporting Statements, ff. Tr. 12,075, "Briney," at 5; MWO 1-90-01651, dated March 30, 1990 (Intervenor Exh. II-143).

During an April 3, 1990 telephone conference with IIT and Region II personnel, GPC (Mr. Bockhold) stated that the air quality was satisfactory, but did not mention dewpoint readings. *See* GPC Exh. II-50 (IIT Transcript) at 59-60; *see also* Bockhold AQ at 2. Mr. Bockhold testified that he was not aware of the March 29 high reading on that date and probably focused on the clean condition of the air filters.[85]

On April 5, 1990, GPC initiated a blowdown on the DG-1A air receivers to check for the presence of moisture, a feed-and-bleed of the DG-1A air receivers to lower the dewpoint, 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. Dewpoint readings of 84°F and 82°F were obtained on DG-1B. *See* GPC Exh. II-156, at 1; Intervenor Exh. II-169, at 3.

On April 5 through April 6, a series of high dewpoint readings on DG-1A was obtained using the Alnor VP-2466 dewpoint instrument. *See* Intervenor Exh. II-143 at continuation sheets 1-3; Intervenor Exh. II-169, at 2. On April 6, Mr. Bockhold informed the IIT that he was aware (on April 5) that there were high dewpoint readings for the DG-1A on March 29,[86] and that GPC

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[84] Intervenor's allegation that the March 29 rejection of a Deficiency Card shows that GPC intended to conceal the high dewpoints readings from NRC (Intervenor Findings 605-606), was not substantiated. The problem was adequately documented by means of a Maintenance Work Order, an act inconsistent with an intent to keep information from the NRC.

[85] Mr. Bockhold admitted that some of his responses to the IIT that day may, in retrospect, have been misleading. Tr. 6460-63, 6507-08 (Bockhold).

Intervenor's allegation 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), however, was not supported by the evidence. Mr. Bockhold could not recall being aware of the high readings prior to April 5. *See* IIT Transcript (GPC Exh. II-51) at 1, 4-5; Tr. 6566 (Bockhold). Messrs. Hunt and Bockhold understood that dewpoints above 32-50°F were not of immediate concern for operability of the diesels but could cause parts in the diesel air system to corrode if they occurred over the long term. Tr. 4898-99 (Hunt); GPC Exh. II-51, at 6-8; Tr. 6466-67, 6558-59, 6608-09 (Bockhold). There is no evidence that any GPC employee, including Mr. Mosbaugh, believed the diesels were inoperable due to poor air quality or shared such a view with Mr. Bockhold. *See* Tr. 6697 (Bockhold). Therefore, there is insufficient evidence to conclude that, by April 3, 1990, Mr. Bockhold knew about the March 29 dewpoint readings or withheld that information from the NRC's IIT.

[86] An NRC Region II inspector, Milton Hunt, reviewed MWOs on the diesels and discovered the March 29, 1990 high dewpoint readings on DG-1A air receivers in early April 1990 and informed GPC. *See* Hunt Affidavit at 5; Tr. 6566 (Bockhold). *(Continued)*

thought the dewpoint sensor instrument was bad and was trying to obtain a backup instrument.[87] *See* GPC Exh. II-5; (IIT Transcript) at 1, 4-5. On the afternoon of April 6, following the series of high readings on DG-1A, GPC tried to determine whether there was an actual high dewpoint condition or faulty instrumentation and used a backup EG&G dewpoint instrument (VP-1114) to verify the accuracy of the Alnor VP-2466 readings on DG-1A. Tr. 12,081-82 (Briney). *See* Intervenor Exh. II-143 at continuation sheet 3; Intervenor Exh. II-169, at 2. The vendor's instruction manual for the VP-1114, however, could not be located and the I&C technicians taking the measurements lacked training on the VP-1114.[88] *Id.* at 12,082-83; *see also* Tr. 12,784 (Hammond).

On April 7, 1990, an I&C technician took dewpoint measurements on the Unit 1 and Unit 2 air receivers using three different instruments — the Alnor VP-2466, the EG&G VP-1114, and the recently acquired General Electric (G.E.) rental Alnor Model 7000. The VP-2466 and VP-1114 readings were out-of-specification high while the G.E. rental instrument readings were out-of-specification low. *See* Intervenor Exh. II-217, at 3; *see also* Intervenor Exh. II-169.

GPC's acting I&C Superintendent could not draw any definitive conclusions from the out-of-specification dewpoint results obtained on April 6-7, but was convinced that eight independent air systems would not simultaneously fail to provide satisfactory air to the receivers. Briney at 7-8; *see also* Tr. 6554-55 (Bockhold).[89]

The then NRC inspector believed that he saw a listing of dewpoint readings taken April 6-7 before he left the site on April 7, 1990,[90] and was aware

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Intervenor alleged during the hearing that GPC, in its 1994 NOV response and in the 1995 prefiled air quality testimony of Mr. Bockhold, intentionally falsely asserted that GPC self-reported the March 29 high dewpoint readings to the NRC (Intervenor Findings 537-538, 540-541). While Mr. Hunt's subsequent testimony shows GPC's statement to be in error since Mr. Hunt testified he discovered the March 29 high dewpoint readings, no evidence was presented to substantiate the claim that the error was intentional.

[87] Although Intervenor is correct that Mr. Bockhold's April 6, 1990 statements to the IIT that there was not a backup dewpoint analyzer at the plant was inaccurate (Intervenor Findings 543-544), there is no basis to conclude that the statement was intentionally false, particularly since the backup instrument (VP-1114) was used subsequent to the telephone conference with the IIT.

[88] 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. 12,216-17 (MWO 18900822 reflects dewpoint readings taken by I&C technician using an EG&G instrument).

[89] Intervenor's allegation that GPC engaged in intentional willful conduct in claiming that the VP-2466 dewpoint instrument was defective (Intervenor Findings 547-550, 578-579, 583, and 604) was not substantiated. By April 6, 1990, GPC had a reasonable basis to suspect the Alnor VP-2466 instrument was faulty in that: (1) the extended calibration due date for the instrument was about to expire; (2) the last in-specification reading was on March 29, 1990, for DG-1B; and (3) all of the April 5 dewpoint readings on the DG-1A and DG-1B using the VP-2466 instrument were out-of-specification high. *See* GPC Exh. II-159, *see also* Briney at 13; *see also* Exh. II-169, at 2-3.

[90] Mr. Bockhold had provided a list of high dewpoint measurements to Mr. Hunt, and Mr. Hunt suggested that GPC borrow dewpoint test equipment from the V.C. Summer Nuclear Plant in order to accurately measure dewpoint readings and verify the condition of the air. Tr. 6537, 6563 (Bockhold); Hunt Affidavit at 5; Tr. 4924-25, 4935 (Hunt).

of GPC's opinion that the high readings were due either to faulty dewpoint equipment or operator error. Affidavit of Milton D. Hunt, ff. Tr. 4882, "Hunt Affidavit," at 5; Tr. 4924-25, 4930-31, 4933-36 (Hunt). *See* GPC Exh. II-52.

GPC later determined (based on an EG&G instrument borrowed from V.C. Summer around April 8 with its instruction manual) that the initial readings taken with the VP-1114 instrument had been used improperly (without the required flow meter) on April 6-7, 1990.[91] Briney at 8-9; Tr. 12,088, 12,340 (Briney); Tr. 6513 (Bockhold); Intervenor Exh. II-169. By April 8, 1990, readings on both units that were taken using the flow meter (VP-1114 and FS-3529) were in specification (and in close agreement) except readings on the DG-2A K02 receiver (where the dryer was found to be turned off).[92] GPC concluded that the prior Alnor readings from the VP-2466 instrument were not valid. Tr. 12,166 (Briney), 12,857-59 (Hammond). *See* Briney at 9; Tr. 12,203, 12,206 (Briney); Intervenor Exh. II-169.

During a morning conference call on April 9, 1990, Mr. Lewis A. Ward, Manager of Nuclear Maintenance and Support located in the corporate office, told the IIT that with the borrowed instrument, all of the April 8 dewpoint readings were within specification. *See* GPC Exh. II-61, at 4. Mr. Skip Kitchens, Assistant Plant General Manager–Operations, then stated that a high DG-2A dewpoint reading believed to be caused by an air dryer being inadvertently turned off (probably on April 6) was being addressed by blowing down the air receiver. There was no mention of I&C technician errors.[93] *See* IIT Transcript (GPC Exh. II-61) at 4-8. In response to an IIT request, GPC committed to provide a history of dewpoint data for the past year. *Id.* at 7-9.

During the April 9 meeting with the NRC in Atlanta, the NRC was told that air quality was good, that high readings were attributed to a faulty dewpoint instrument, and that an April 6 inspection of an air receiver, as well as inspections of the control air filters and daily air receiver blowdowns, confirmed that air quality was acceptable. Intervenor Exh. II-71, Project No. 006214.

During the April 11 teleconference with the IIT, Mr. Bockhold (referencing the table of dewpoint measurements dating back to March 1989 that had been prepared to address the NRC's request for data) stated that air quality had been and remained satisfactory for a number of reasons, including the April 6 air receiver inspection, which showed only light corrosion around the welds and

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[91] During the hearing, an NRC Staff witness, Mr. Pierce Skinner, contacted an EG&G representative who told him that it would have been extremely difficult for an I&C technician to throttle flow to the correct level without a flow meter. Tr. 14,644-45 (Skinner). Incorrect flow causes errors in dewpoint readings. *Id.*

[92] Intervenor's claim that all eight air receivers had experienced high, out-of-specification dewpoints due to personnel inadvertently or intentionally turning off the air dryers (Intervenor Finding 581) was not substantiated. Intervenor provided no evidence to support his claim and Mr. Hunt recalled that the dryers were out of service or off only a few times. Tr. 5008-10 (Hunt).

[93] The notes of Mr. Bailey, taken during GPC's April 9, 1990 meeting with NRC in Atlanta, also reflect that this high dewpoint reading was reported to the NRC. *See* Intervenor Exh. II-70, at 5.

a minor amount of oil on the bottom. *See* GPC Exh. II-56, at 6-7; Rebuttal Testimony of W.F. Kitchens, ff. Tr. 13,590, "Kitchens," at 9; *see also* GPC Exh. II-56, at 2. The data provided to the IIT (GPC Exh. II-57) did not include the high dewpoint readings from April 5-7, 1990, because GPC did not believe the readings were accurate or reliable. Kitchens at 9.[94]

(4) CONCLUSIONS

The April 9 letter was incomplete, as it did not indicate that high readings were also caused by technicians being unfamiliar with a dewpoint instrument. By April 9, 1990, senior GPC management at the Vogtle facility (Messrs. Bockhold and Kitchens) and in Birmingham, Alabama (Mr. Ward), knew about the problems the I&C technicians had in using the VP-1114 instrument correctly. While the letter's reference to "initial reports" is ambiguous, all high dewpoint measurements taken near the time of the SAE and prior to April 9 could have influenced an NRC decision on restart.

The evidence does not establish that GPC acted with reckless disregard for the truth, intentionally misrepresented information, or conspired to mislead the NRC in communications regarding DG air quality. GPC took reasonable steps to determine air quality (including the receiver inspection), performed blowdowns on the air receivers to remove any moisture that could affect DG performance, and generally kept the NRC informed about their activities. While GPC provided incomplete information about the causes of high dewpoint readings based on the belief that recent out-of-specification readings were not valid, and there may have been some delays in sharing information about dewpoints with the NRC, the evidence considered as a whole falls short of demonstrating that GPC engaged in making willful or recklessly careless misrepresentations, and does not otherwise show that GPC lacks the requisite character and integrity to operate a nuclear plant.

g. Conclusions Regarding Diesel Generator Statements

Petitioners allege that GPC, deliberately or with careless disregard, submitted false and misleading information regarding DG 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

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[94] Intervenor's allegation that GPC intentionally concealed the VP-1114 "confirmatory readings" (Intervenor Findings 555-565, 575, 590-596) was not substantiated. VP-1114 readings were among those given to the NRC, but questions about the accuracy of those readings were resolved by FS-3529 readings taken on April 8. Given that the NRC was interested in dewpoint readings (and not necessarily the particular equipment used to obtain them) and that VP-1114 readings were included on the listing provided to the IIT, there is insufficient evidence to support Intervenor's claim. *See* GPC Exh. II-51, at 7-8; GPC Exh. II-57; Intervenor Exh. II-169, at 2.

means of a conspiracy among GPC managers; (3) in a June 29, 1990 cover letter forwarding the revised LER; and (4) in an August 30, 1990 letter. Petitioner also alleges that GPC knowingly submitted false or misleading statements (1) concerning DG air quality in the April 9, 1990 letter (and in contemporaneous discussions with the NRC's IIT); and (2) in GPC's April 1, 1991 response to Intervenor's section 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. These claims were not proven.

Although Petitioners are correct that misinformation was provided to the NRC in various communications related to DGs, the weight of evidence fails to show that GPC knew the information was false or incomplete. The repeated failure of GPC to provide accurate and complete information relating to the count of DG starts in April 1990 stemmed from GPC performance failures that do not amount to deliberate efforts to deceive or mislead the NRC or to avoid regulatory requirements. The erroneous counts of eighteen and nineteen consecutive successful starts without problems or failures for DG-1A and DG-1B, respectively, as of April 9 (instead of twenty-nine and twelve) were caused by GPC's use of ambiguous terminology to show diesel reliability during a poorly defined period. When questions arose about the accuracy of the data, GPC managers relied primarily on verbal assurances that defended the information and revised the count description without (1) examining the causes of the initial misstatements, (2) determining accountability, and (3) promptly correcting erroneous information that was presented to the NRC. The reliance on verbal assurances and incomplete site verification efforts on April 19 did little to address or identify mistakes by the General Manager in requesting and presenting the start count, and the Unit Superintendent in reporting the start data he collected. Consequently, the count reported included problems or failures and was not a count after the CTP (which GPC later determined commenced with the surveillance test where a DG is declared operable).

There was no evidence that any of the current GPC or Southern Nuclear personnel who were involved (Messrs. Bockhold, Cash, Shipman, Aufdenkampe, McCoy, Hairston, Frederick, Greene, Horton, Majors, Kitchens, and Ward) conspired, or acted individually, to submit information they knew to be false from March 20 through August 30, 1990, regarding DG testing or air quality. Clearly, these statements reflect only a portion of the many exchanges between the NRC and GPC concerning efforts to determine the causes of the SAE. The failure of GPC personnel, individually and collectively, to take steps to ensure that the NRC was provided with complete and accurate information during this period nonetheless is a very significant regulatory concern that constituted a Severity Level II problem at the facility — conduct far below NRC expectations.

Based on observations of NRC Headquarters and Regional inspection staff throughout April through August 1990, GPC took sufficient actions to ensure that the DGs were reliable and operable. GPC's performance fell short, however, with respect to the level of importance and diligence afforded some communications to the NRC *and* prompt resolution of concerns about the accuracy and completeness of information provided to the NRC. This sometimes "cavalier" GPC attitude led GPC to fix the words (rather than to verify and reverify facts) in communications to the NRC. Mr. Bockhold's management style contributed to an atmosphere whereby site employees were reluctant to question the accuracy or completeness of communications to the NRC, unless they specifically knew that the information was wrong.

It is unreasonable that it would take over 4 months (until August 1990) to get an accurate start count for April 9 and take 4 years (until GPC's 1994 NOV Response) to understand why errors were made. Nevertheless, GPC now recognizes its role in providing incomplete and inaccurate information to the NRC and its failure to take steps to ensure communications that satisfy the requirements of section 50.9.[95] GPC site and corporate managers and GPC employees (including members of the PRB) have accepted responsibility for the mistakes made in 1990 as indicated in responses to the NOV and Demands for Information, and in testimony during the hearing. GPC no longer asserts that Mr. Mosbaugh and Mr. Cash, alone, are responsible for incorrect DG start counts.

In the end, whether the start counts were twenty-nine and twelve (instead of the eighteen and nineteen reported on April 9), or whether all causes of high dewpoint readings were reported, did not affect the soundness of the decision that the DGs were ready 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. Correct and complete information may have led the NRC to inquire further before authorizing restart in April 1990

[95] Corrective action taken by GPC management in response to the NOV included: (1) making the NOV available to all employees and committing to post an NRC Order if one were to be issued; (2) emphasizing the importance of thorough record keeping during off-normal hours in a letter from GPC's Senior Vice President–Nuclear Operations to the Vice Presidents for the Hatch and Vogtle facilities; (3) stressing the importance of effective communications and the effective resolution of concerns in letters from the Executive Vice President–Nuclear Operations to nuclear operations employees; (4) posting copies of section 50.9 for all employees to read; (5) discussing GPC's policy of open, complete, and accurate communications with the NRC in meetings between the Senior Vice President–Nuclear Operations and employees at the Hatch and Vogtle sites, and distributing letters to all employees on the same subject; (6) observing communications with the NRC to ensure that the enforcement action does not adversely affect the completeness of statements; (7) making GPC's reply to the NOV available for all GPC employees to read; (8) counseling the Unit Superintendent and Vogtle General Manager by GPC's Senior Vice President–Nuclear Operations; (9) issuing an "Oral Reminder" to the Unit Superintendent pursuant to the Positive Discipline System; and (10) prohibiting the 1990 Vogtle General Manager from resuming a line management position with GPC or Southern Nuclear nuclear facilities through February 1, 1998, pending completion of personal training and 60 days prior notice to the NRC. *See* GPC Reply to NOV and DFIs, dated July 31, 1994, as supplemented February 1, 1995.

and about GPC operations, in general, at Vogtle. These events illustrate the need for improvement in communications, both within GPC and with the NRC, and the need for Licensee personnel to maintain a questioning attitude about explanations and data provided to the NRC.

The repeated involvement of Mr. Bockhold in GPC's submission of incomplete and inaccurate information to the NRC is significant. Mr. Bockhold ably handled technical issues, but his sometimes overbearing and forceful management style, his reliance on rewrites rather than reverifications, and his failure to examine his own inadequate performance contributed in no small measure to the Severity Level II problem. GPC, Southern Nuclear, and Mr. Bockhold himself acknowledged his deficient conduct and, by letters dated August 5, 1994, as supplemented February 1, 1995, made commitments that he would not resume line management responsibilities at GPC or Southern Nuclear plants unless he had satisfactorily completed training in management communications and responsibilities, and the NRC received 60 days prior notice of the assignment.[96] This commitment was reiterated in correspondence regarding the applications to transfer the authority to operate the Vogtle and Hatch facilities to Southern Nuclear and was included in the orders authorizing those transfers.

D. Management Attitudes and GPC Credibility (Intervenor's Proposed Findings for Hearing on DG Issue at 68-78, 225-60)

Intervenor argues (Intervenor's Proposed Findings at 68 78, 225-60) that evidence of the bad character of the proposed transferee, includes: (1) GPC's operating philosophy of power generation above safety,[97] (2) intimidation of Mr. Mosbaugh in the January 1990 meeting where Mr. Bockhold had written the word "backstabbing" on the board after Mr. Mosbaugh's allegations that Mr. Kitchens had violated TS requirements by opening dilution valves,[98] (3)

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[96] Mr. Bockhold further committed that he would not assume a line management position at any nuclear power plant prior to February 1988 without satisfying the conditions stated.

[97] Intervenor asserts that Mr. Hairston's statement that he has two goals in operating a nuclear plant, i.e., "staying on the line and short refueling outages," Tr. 9387-88 (Hairston), indicates that Mr. Hairston places continued operation and short outages over safety. Intervenor Proposed Findings at 69. Mr. Hairston testified that safety is not a goal, but a foundation for generating power. These opinions are not evidence of a poor attitude toward safety.

[98] While Mr. Mosbaugh's perception of the "backstabbing" incident may have led him to believe that GPC suspected him of prompting inquiries by the NRC, Messrs. Bockhold and Kitchens both testified that they were not aware at that time that Mr. Mosbaugh had given any allegation to the NRC, and Mr. Bockhold believed that the word referred to an undesirable working relationship between Mr. Mosbaugh's organization and Mr. Kitchen's organization that needed to be resolved. Bockhold Rebuttal at 2-4; Kitchens Rebuttal at 2-4; Tr. 13,597-601 (Kitchens); Tr. 13,347-48. Thus, it appears that the incident is an example of Mr. Bockhold's forceful and sometimes overbearing management style.

Mr. Bockhold's emphasis on a "yes sir" attitude,[99] (4) the GPC employee survey results,[100] (5) Mr. Bockhold's apparent disdain for regulatory involvement and attitude about conveying information to the NRC.[101] (6) Mr. Bockhold's handling of the FAVA microfiltration system concern, and (7) the selective memory and opinions of Mr. Hairston.[102] Intervenor's Findings at 69-78, 225-60.

I am not persuaded that any of these events are evidence of a lack of character. The intensity with which Mr. Mosbaugh pursued his concerns for over 5 years is an indication of the isolation he felt in an organization that did not adequately resolve his concerns. Mr. Mosbaugh's deeply held belief that GPC suspected either he or his department was relaying concerns to the NRC led him to tape surreptitiously conversations at the Vogtle facility.

The NRC Staff also held serious concerns about corporate and site management which, in addition to the allegations received by that time, led the NRC to convene a meeting with senior GPC officials on April 30, 1990, to candidly discuss these concerns, particularly with respect to the performance and attitude of

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[99] Mr. Mosbaugh asserts that, during a February 7, 1990 meeting on reorganization and personnel downsizing, Mr. Bockhold mentioned his training in saying "yes sir" and told Mr. Mosbaugh if you "can't conform and accept, then you need to get out." Mr. Mosbaugh interpreted the remarks to mean that he should conform to management's view of the "dilution valve" matter during his upcoming OI interview. Intervenor's Proposed Findings at 39-43. Mr. Bockhold could not recall the remarks, but believed the meeting was about accepting upper management's directions regarding reorganization philosophy or the elimination of particular positions in the organization. Bockhold Rebuttal at 5-6. Whether or not Mr. Mosbaugh is correct about the reason for the statement, the statement, if made, would exemplify Mr. Bockhold's overbearing management style.

[100] In his proposed findings (at 235), Intervenor states that the results of a survey of nuclear personnel taken in the spring of 1990 showed that 73% of Vogtle employees agreed with the statement "employees are afraid to voice an opinion that management does not want to hear" and 52% of Vogtle employees agreed with the statement "I am afraid to voice an opinion that my management does not want to hear." GPC's response to these survey results and the problems revealed by the issues in DG information disclosed by the NOV was to remind employees that conditions adverse to nuclear safety should be brought to management's attention and are to be addressed and resolved. Hairston Rebuttal (ff. Tr. 13,439) at 2-6; GPC NOV Reply at 6.

[101] Intervenor asserts that GPC's (1) untimely recognition of the NRC's 1990 onsite problems with Mr. Bockhold's attitude and communications, (2) failure to acknowledge personnel errors as a root cause in the NOV Response, and (3) Mr. Hairston's testimony regarding Mr. Bockhold's performance is evidence that GPC management still shows a lack of concern for completeness and accuracy of information submitted to the NRC. Intervenor's Proposed Findings at 244-47. Mr. Hairston's 1990 actions (including telephone calls to Mr. Ebneter) and his testimony that Mr. Bockhold's management style sometimes caused him (Mr. Bockhold) to miss opportunities, does not indicate a lack of concern for accurate and complete communications with NRC. NRC Staff has observed improved communications and performance once Mr. Bockhold was no longer in a Vogtle line management position. Tr. 15,194 (Matthews). These improvements, the corrective actions taken, and GPC's Response to the Modified NOV (including the commitments regarding Mr. Bockhold), provide reasonable assurance that the problems of the past have been addressed.

[102] Intervenor asserts that it is incredible that Mr. Hairston (1) did not recall the discussion about DG starts during the April 19, 1990 telephone call ("Call A") between GPC corporate and site personnel, but did remember his prior call that same day with reactor operators, and (2) had a limited understanding of dewpoints. Intervenor Proposed Findings at 253-54. Tape 58 shows that Mr. Hairston had limited involvement in "Call A" and merely asked if the absence of trips in the count had been verified. GPC Exh. II-2, at 11-14. By contrast, he spoke at length with an operator about whether he had correctly described his observations and actions in the DG room during the SAE. Thus, it is not unreasonable that Mr. Hairston might have a more vivid recollection of one incident occurring on that date.

the Vogtle General Manager, George Bockhold. During the succeeding months, Mr. Bockhold 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.[103]

The NRC Staff concluded that problems experienced by GPC have been addressed and that GPC has accepted responsibility for its performance failures in its response to the NOV and in testimony during the license amendments proceeding. Corrective actions have included corporate statements to employees emphasizing 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. These corrective actions and improvements in performance indicate that GPC or Southern Nuclear do not lack the requisite character and attitude to be an NRC licensee. Consequently, I do not conclude that these events are evidence of bad character.

E. Discriminating Against Employees for Engaging in Protected Activities (Petition §§ II.a, III.4; July 8, 1991 Supplement § II)

Petitioners assert that Mr. Hobby, who was GPC's General Manager of Nuclear Operations Contract Administration (NOCA) from December 1988 to April 1990,[104] was discharged from GPC after attempting to bring to GPC management's attention his concern that it had improperly transferred control of its nuclear licenses to SONOPCO. Petitioners state that Mr. Hobby had earlier been instructed by GPC Vice President of Bulk Power, Fred R. Williams, to destroy all copies of the confidential memorandum dated April 27, 1989, that had been written by Mr. Hobby and co-signed by GPC Senior Vice President–Fossil and Hydropower, George F. Head, expressing concern for the perception that GPC may have improperly transferred control of its nuclear facilities. Petitioners also assert (Petition § III.9.d) that GPC and SONOPCO management retaliated against managers who make their regulatory concerns known to them.[105]

On February 6 and 28, 1990, Mr. Hobby filed complaints with the Department of Labor (DOL) contending that he had been discharged for engaging in protected activity in violation of section 210 (now 211) of the Energy Reorganization Act (42 U.S.C. § 5851) of 1974, and the regulations promulgated by DOL at 29 C.F.R. Part 24. Each of the above issues that Mr. Hobby identified

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[103] 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. Tr. 11,551-54 (Hairston).

[104] Mr. Hobby was also Assistant to GPC Senior Vice President, Mr. George Head, until Mr. Head retired in May 1989. Mr. Head's position was then filled by Mr. Kerry Adams.

[105] Although not expressly stated in the petition, the complaints of both Messrs. Hobby and Mosbaugh in their respective DOL discrimination suits are pertinent to this concern.

in the petition to the NRC with respect to his discharge was included in the complaints. *See* DOL Case 90-ERA-30.

On August 4, 1995, the Secretary of Labor (Secretary) issued a Decision and Remand Order, finding that in 1990, senior managers of GPC discriminated against Mr. Hobby when his position was eliminated and he was forced to resign from GPC.[106] The Secretary determined that GPC terminated Mr. Hobby for engaging in protected activities, which included raising safety concerns related to the operation of the Vogtle facility in the April 27, 1989 memorandum. This Decision and Remand Order rejected the DOL Administrative Law Judge's Recommended Decision and Order that had been issued on November 8, 1991, which found that actions taken against Mr. Hobby were not motivated by his engaging in protected activities. The Secretary remanded the complaint to the Administrative Law Judge to determine a complete remedy.[107]

On October 4, 1995, the NRC conducted a predecisional enforcement conference regarding the Secretary's Decision and Remand Order to discuss the apparent violation, the root cause, and GPC's corrective actions to preclude recurrence (*see* Conference Summary dated October 11, 1995). The Conference was open to the public in accordance with section V of the NRC Enforcement Policy, NUREG-1600, and written comments were subsequently submitted by Mr. Hobby for NRC consideration in reaching its enforcement decision.

The Commission's regulations in section 50.7, "Employee Protection," prohibit discrimination by a Commission licensee against an employee for engaging in protected activities. On May 29, 1996, the NRC issued a Notice of Violation to GPC for two separate violations of section 50.7 — one in accordance with the Secretary's finding regarding Mr. Hobby, and the other in accordance with the Secretary's finding that Mr. Mosbaugh had been discriminated against by being discharged for making audio tape recordings that constituted evidence gathered in support of a nuclear complaint, and for engaging in other protected activities. The Notice of Violation regarding Mr. Mosbaugh was in accordance with the Secretary of Labor's Decision and Remand Order in DOL cases 91-ERA-001 and 91-ERA-011 on November 20, 1995, finding that Mr. Mosbaugh's sus-

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[106] The Secretary also found that other acts of discrimination occurred such as relocation of Mr. Hobby's office, restrictions of his access to the building, and revocation of his executive parking privileges.

[107] This DOL case (90-ERA-30) also considered Petitioners' assertion (*see* Section 2.206 Petition § III.4, July 8, 1991 Supplement § II) that Mr. McDonald knowingly submitted false testimony in another DOL proceeding ("*Yunker/Fuchko*") in an attempt to demonstrate that Messrs. Gary Yunker and John Fuchko were not improperly kept out of a GPC position that would participate in the SONOPCO Project. Petitioners claim that Mr. Hobby advised GPC's counsel before the DOL hearing that Mr. McDonald's proposed testimony was false and that GPC's counsel responded by advising Mr. Hobby that his testimony would have to be changed. In his Decision and Remand Order of August 4, 1995, the Secretary stated, in relevant part: "Because I found other evidence sufficient to establish that Complainant [Mr. Hobby] engaged in protected activity on January 2, [1989 (the prehearing meeting),] it was unnecessary to consider at that juncture whether counsel attempted to suborn Complainant to perjury. Even if counsel did, that evidence would not alter this decision." Decision and Remand Order at 13. *See also id.* at 5, 9-13.

pension and discharge were acts of retaliation for engaging in protected activity. The NRC stated that these violations were of very significant regulatory concern because they involved acts of discrimination by senior corporate management, and the NRC categorized each of the two violations as Severity Level I. Because the 5-year period provided in the Statute of Limitations for imposing a civil penalty had expired, no civil penalty was proposed for the violations. The NRC took this enforcement action to emphasize the importance of ensuring that employees who raise real or perceived safety concerns shall not be subject to discrimination for raising those concerns and that every effort will be made to provide an environment in which all employees may freely identify safety issues without fear of retaliation, harassment, intimidation, or discrimination.

The NRC also issued separate letters to each of the senior corporate managers the Secretary identified to be involved with the discriminatory actions.[108] In these letters, the NRC recognized that the discrimination found by the Secretary occurred over 5 years ago, prior to implementation of 10 C.F.R. § 50.5, "Deliberate Misconduct," and that the NRC, therefore, was taking no enforcement action against these senior managers. The NRC expressed concern that the discriminatory actions found by the Secretary could have had a chilling effect on other GPC employees; emphasized that harassment, intimidation, and discrimination against a licensee's employees for their engaging in protected activities is unacceptable; and provided official notice as to the enforcement actions against individuals that the NRC is authorized to take under section 50.5.

During the enforcement conference and in a written reply dated June 27, 1996, GPC denied the violations, objected to the NRC's reliance on the Secretary's decisions that were not yet final agency action, and acknowledged its right to appeal the Secretary's decisions once they become final.

Mr. Hobby's allegation that he was unlawfully dismissed because of a concern about the improper transfer of control of licensed activities is substantiated by the Secretary's decision of August 4, 1995. Mr. Hobby's regulatory concern regarding transfer of control constituted a protected activity.[109] Therefore, Mr. Hobby's dismissal because he expressed this regulatory concern is a violation of section 50.7. I am satisfied that the NRC has taken appropriate enforcement action to prevent the recurrence of violations of section 50.7 in the future, and to ensure a proper environment in which employees can express regulatory concerns without fear of retaliation, harassment, intimidation, or discrimination. To the extent that Petitioners' request for NRC involvement relates to matters

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[108] In the *Hobby* case, the Secretary identified Messrs. Fred Williams, Dwight Evans, H.G. (Grady) Baker, Jr., and Thomas Boren. In the *Mosbaugh* case, the Secretary identified Messrs. A.W. Dahlberg and Ken McCoy.

[109] As I discuss in Section III.B of this Director's Decision, I am satisfied that the alleged transfer of control of licensed activities for GPC nuclear facilities did not, in fact, occur. This fact does not, however, alter the finding that Mr. Hobby engaged in a protected activity.

properly within the jurisdiction of the NRC, the request has been granted by means of these enforcement actions.

I find no reason to withhold my Decision on this 2.206 petition because of GPC's right to appeal the Secretary's decision when it becomes final. Further NRC action in the event of a successful appeal is not precluded by my Decision at this time.

F. Conclusions Regarding GPC's Character

The NRC reviews, inspections, and investigations related to the issues in the petition, as supplemented by the license transfer amendment proceeding, revealed a number of instances where the NRC was given incomplete and inaccurate information associated with the proposed license transfer to Southern Nuclear and DG reporting. The allegations that there was an illegal transfer of authority to control operations at the Vogtle and Hatch facilities and that GPC and Southern Nuclear otherwise lacked the character and competence to operate a nuclear power plant were not substantiated.

With respect to Petitioners' claim that GPC and Southern Nuclear routinely engaged in unsafe operating practices, the NRC found instances where GPC had violated NRC requirements, but the matters identified do not support Petitioners' allegation that GPC or Southern Nuclear (1) praised managers for taking risks, (2) did not take any adverse action against managers or employees who engage in nonconservative and questionable compliance practices, and (3) refused to critically investigate events or practices resulting in LERs.

With respect to GPC communications related to the proposed license transfer to Southern Nuclear, the NRC Staff found that there were instances where the NRC was provided inaccurate or incomplete information about the existing and proposed organizational structure in the formation of Southern Nuclear during an oral presentation to the Commission in March 1989 while discussing the chain of command for the Vogtle facility, in GPC's written response to the petition, and in licensing correspondence supporting the applications for transfer. These inaccuracies, when considered in the context of the extensive interactions between GPC and the NRC, were not significant and are not evidence of an intent to misrepresent or deceive the NRC. Thus, the misstatements do not warrant NRC enforcement action.

The NRC Staff did confirm that significant violations of Commission regulations have occurred at the Vogtle facility since 1987 and these violations have resulted in escalated enforcement actions by the NRC. The violations involved (1) opening "dilution valves" required to be locked closed; (2) providing inaccurate or incomplete information to the NRC regarding DG testing after the March 20, 1990 SAE; and (3) discriminating against Messrs. Mosbaugh and Hobby for engaging in protected activities.

The Staff's review of the boron dilution violation revealed that the GPC employee did not meet TS requirements or NRC expectations, but there was not a sufficient basis to conclude that the individual had intentionally violated a TS requirement. GPC and the individual admitted the mistaken TS interpretation.

Based on the findings of the DOL, the Staff concluded that GPC had discriminated against the Petitioners because they engaged in protected activities, which was a Severity Level I problem. This NRC enforcement action was taken to emphasize GPC's obligation to ensure that employees who raise real or perceived safety concerns are not subjected to discrimination and that assiduous efforts are required in order for employees to have an environment where they may freely identify safety issues without fear of retaliation, harassment, intimidation, or discrimination. GPC has taken corrective action consistent with these goals.

The failure of GPC to provide the NRC with complete and accurate information relative to DGs throughout 1990 that were cited in the Modified NOV were serious. The significance of the performance failures of GPC stems not from the effect such inaccuracies had on the safety of plant operation, but because the circumstances surrounding the communications demonstrate an inadequate regard by a number of senior Licensee officials, and by GPC management as a whole, for providing complete and accurate information to the NRC. Information about the DGs and GPC's determinations about the causes of errors were important for the NRC to determine whether GPC was fulfilling its responsibilities as a licensee.

GPC was clearly aware of the NRC's interest in the DGs because the NRC specifically asked GPC to address DG reliability as part of its restart presentation of April 9, 1990. GPC should have taken steps to ensure the completeness and accuracy of its submittals, but instead, at times, engaged in poorly defined efforts to obtain information to satisfy the NRC on an issue having a direct bearing on the NRC's decision to allow restart. This performance is not acceptable.

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 subsequent explanations about inaccurate information. Even though senior GPC management became involved, GPC did not recognize the need to correct the April 9 start data until the NRC's request during the August 1990 inspection. Further, GPC continued to submit information that was inaccurate and incomplete and did not recognize the implications of its performance failures until they were identified by the NRC in the enforcement action almost 4 years later.

The NRC Staff has concluded, however, that the performance problems exhibited throughout these events are not sufficient to establish that Southern Nuclear, and the GPC employees who would work for that company as a result of a transfer of the Hatch and Vogtle operating licenses to Southern Nuclear,

lack the requisite character to be a licensee. GPC's overall performance in keeping the NRC informed of post-repair and troubleshooting activities, GPC's technical competence in addressing those matters, Mr. Hairston's efforts to keep the NRC informed about errors identified as GPC became aware of them, and the corrective actions taken by GPC management in response to the NOV (which include measures to ensure effective communications and resolution of employee concerns, and measures emphasizing open, complete, and accurate communications with the NRC), are among the indications of GPC's diligence, competence, and character. Testimony of Messrs. Roy P. Zimmerman and Luis A. Reyes on the Character and Integrity Contention, ff. Tr. 15,256, "Zimmerman-Reyes," at 5-7. The NRC Staff's evaluation of GPC's response to the May 9, 1994 NOV on the DG issue and GPC and individual responses to the DFIs issued to Messrs. Bockhold, McCoy, Greene, Horton, Frederick, and Majors revealed that GPC officials have accepted responsibility for, and regret, their part in GPC's deficient performance. The NRC Staff remained concerned, however, about whether GPC, Southern Nuclear, and Mr. Bockhold fully understood the ramifications of the DG enforcement action and the future performance of Mr. Bockhold in line management positions at nuclear power facilities. Staff Exh. II-51 (cover letter).

I find that GPC's tendency to defend information provided during the restart presentation, rather than to verify the accuracy of the data, was inconsistent with the simple candor upon which the NRC relies to discharge its responsibility for ensuring public health and safety. *See North Anna*, CLI-76-22, 4 NRC at 491. There is not a sufficient basis, however, to conclude that GPC endeavored to intentionally mislead the NRC or otherwise engaged in a pattern of deception and falsehood in its licensing communications. The failures can be traced to (1) the collective performance of senior GPC managers, including the management style of the General Manager who repeatedly failed to ensure that complete and accurate information was provided to the NRC; (2) the reluctance of site and corporate personnel to question the views of superiors; and (3) the inadequate efforts to verify information submitted to the NRC.

Based on a review of the facts set forth above, including the evidentiary record of the adjudicatory proceeding, the enforcement actions taken against GPC (i.e., regarding opening "Dilution Valves," DG reporting, and section 50.7 violations), and the favorable performance of GPC (and corrective action taken) since 1990, there is no basis to conclude that Southern Nuclear lacks the requisite character, integrity, and competence necessary to operate the Vogtle and Hatch facilities 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 GPC communications to the NRC were due

to the failures of certain individuals to take steps necessary to ensure the accuracy and completeness of information and to promptly correct such misinformation. In recognition of the role, management style, and repeated performance failures of the former General Manager, the license transfers for the Vogtle and Hatch facilities have been conditioned to limit his involvement in line management activities consistent with commitments of GPC and Southern Nuclear.

IV. CONCLUSION

As discussed above, NRC has conducted several inspections, investigations, and technical reviews regarding the concerns in the petition, and proceedings before NRC and DOL have been conducted regarding most of the concerns. Some of the concerns raised by the Petitioners were substantiated. Violations of regulatory requirements have occurred in the operations of the Vogtle facility. Notices of Violation and civil penalties have been issued to the Licensee, letters have been issued to several individuals, and certain conditions regarding one individual are being imposed by the NRC in conjunction with the license transfers. To this extent, the Petitioners' request for action pursuant to section 2.206 had been granted.

On the basis of the NRC Staff's review and the license amendments hearing record, I conclude that no unauthorized transfer of the Vogtle operating licenses occurred, and that the GPC nuclear facilities are being operated in accordance with NRC regulations and do not endanger the health and safety of the public. On balance, the evidence does not support the conclusion that GPC, the SONOPCO Project, or Southern Nuclear deliberately provided false or misleading information to the NRC or that Southern Nuclear or GPC (including the GPC employees that would be employed by Southern Nuclear as a result of the license transfer) lack the requisite character and integrity to be an NRC Licensee as required by section 182 of the Atomic Energy Act, 42 U.S.C. § 2232, and 10 C.F.R. § 50.80. Thus, there is no basis upon which to grant Petitioners' request that the operation of the facility be suspended.

With respect to Petitioners' request that the NRC institute proceedings and impose civil penalties based on the matters addressed in the petition, the issues in the petition that give rise to substantial health and safety issues have, in fact, been the subject of a lengthy proceeding and escalated enforcement actions by the NRC. Also, based upon the findings of the DOL, the NRC has addressed both Petitioners' specific concerns that they were discriminated against for engaging in protected activities (and the associated issue that GPC retaliates against managers who make their regulatory concerns known) by taking escalated enforcement actions against GPC. Based on actions already taken by the NRC Staff, there is reasonable assurance that the GPC facilities operate with

adequate protection of the public health and safety. Therefore, I decline to take any further action with respect to matters raised in the petition. To this extent, the Petitioners' request for action pursuant to section 2.206 is denied.

A copy of the Director's Decision will be filed with the Secretary of the Commission for the Commission's review in accordance with 10 C.F.R. § 2.206(c) of the Commission's regulations. As provided by this regulation, the Director's Decision will constitute the final action of the Commission 25 days after the date of issuance unless the Commission, on its own motion, institutes a review of the Director's Decision in that time.

FOR THE NUCLEAR
REGULATORY COMMISSION

Frank J. Miraglia, Jr., Acting
Director
Office of Nuclear Reactor
Regulation

Dated at Rockville, Maryland,
this 18th day of March 1997.

APPENDIX

ALLEGED ILLEGAL LICENSE TRANSFER ISSUES

"Intervenor's Prehearing Statement of Issues" (Statement of Issues), dated December 12, 1994, raised twenty-eight issues to support Intervenor's illegal transfer issue for the license amendments proceeding.[110] The issues were submitted in support of Intervenor's contention that the Vogtle operating license should not be transferred to Southern Nuclear because it lacks the requisite character and integrity. The twenty-eight issues repeat and further supplement assertions in the petition regarding an illegal transfer of control of GPC nuclear facilities.

[110] Although Intervenor identified 28 issues in his Statement of Issues, two issues were both numbered 14A and 14B, and Intervenor presented no evidence or proposed findings on Issue 25.

I. ALLEGED INACCURACIES ABOUT MR. FARLEY'S ROLE IN THE CONTROL OF THE VOGTLE FACILITY

The gravamen of Intervenor's twenty-eight issues and related issues in the petition, as supplemented, is that the nuclear officers in SONOPCO Project reported to Mr. Farley, rather than to Mr. Dahlberg, GPC's CEO, and to demonstrate that Mr. Farley controlled the Vogtle facility based upon his alleged involvement in (1) controlling daily operations; (2) establishing and implementing nuclear policy decisions; (3) employing, supervising, and dismissing nuclear personnel; and (4) controlling costs. Intervenor also asserts that numerous documents and statements provided to the NRC regarding the organizational structure and responsibilities for managerial control of the Vogtle facility were inaccurate or incomplete because they do not show Mr. McDonald reporting to Mr. Farley or Mr. Farley functioning as the *de facto* Chief Executive Officer of the SONOPCO Project.

A. Controlling Daily Operations

Intervenor asserts in Issue 1 that GPC misled the NRC about the corporate management structure over the Vogtle facility during a March 30, 1989 meeting in that Mr. McDonald's description of the chain of command ignored Mr. Farley's role as the chief executive over the Southern Company's nuclear division, which commenced exercising operating responsibility over GPC's nuclear plants in November of 1988. Intervenor asserts that Mr. McDonald inaccurately stated that he solely reported to GPC's CEO, Mr. Dahlberg. Intervenor claims that Mr. McDonald reported to Mr. Farley who reported to Mr. Edward L. Addison, the President and CEO of The Southern Company. Similarly, in Issue 10, Intervenor alleges that GPC's April 1, 1991 Petition response falsely stated that certain organizational charts filed with the SEC and included with a May 15, 1989 memorandum from Mr. Fred Williams to Mr. Hobby, accurately depicted GPC's organizational structure before the incorporation of Southern Nuclear in that they do not show that Mr. McDonald reported to Mr. Farley or that Mr. Farley functioned as the *de facto* Chief Executive Officer of the SONOPCO Project.

The hearing record does not support Intervenor's claim that Mr. Farley exercised control over GPC's nuclear facilities beginning in November 1988. Mr. Farley testified that he had neither the authority, nor attempted to control management decisions about licensed activities or personnel matters concerning the Vogtle facility. Prefiled Testimony of Joseph M. Farley, ff. Tr. 1749, "Farley," at 17-18, 22; Tr. 1801-02 (Farley). Mr. Shipman (who in October 1988 was the Vogtle General Manager for Support and in January 1991 became the Vogtle General Manager), Mr. McCoy (GPC Vice President–Plant Vogtle), and Mr.

Hairston testified that Mr. Farley did not issue orders or instructions regarding the operation of the Vogtle facility or any aspects of the facility or otherwise become involved in the management of personnel or activities at the Vogtle facility. Tr. 1976 (Shipman); Prefiled Testimony of C. Kenneth McCoy, ff. Tr. 1560, "McCoy," at 9; Prefiled Testimony of W. George Hairston, III, ff. Tr. 1688, "Hairston," at 47-48; Tr. 1726-28, 17[illegible] (Hairston). In addition, Mr. McDonald testified that Mr. Farley never influenced him regarding operation of the Vogtle facility. Prefiled Testimony of R. Patrick McDonald, ff. Tr. 1249, "McDonald," at 25; Tr. 1550-51 (McDonald).

The record of the *Hobby* DOL proceeding indicates that GPC President, Mr. Dahlberg, testified that the operation of GPC's nuclear facilities is his direct responsibility; that Mr. McDonald takes his management direction from Mr. Dahlberg regarding the operation of GPC's nuclear plants; and that Mr. McDonald reports to Mr. Dalhberg for management operations dealing with GPC plants (*Hobby* DOL Transcript at 305, 307, 309). Mr. Farley stated that he did not have any responsibility for operating GPC's nuclear facilities and that Mr. McDonald did not report to him with respect to the operation of Hatch and Vogtle (*id.* at 567, 568). Mr. McDonald stated that he reported to Mr. Dahlberg regarding the operation of GPC's nuclear facilities (*id.* at 613, 614).

In a deposition of May 5, 1990, taken in the same *Hobby* DOL proceeding, at 13 and 14, Mr. McDonald stated that he had no reporting responsibilities to Mr. Farley. A May 15, 1989 memorandum from Mr. Fred D. Williams, the GPC Vice President for Bulk Power Markets, to Mr. Hobby, forwarded a copy of the most recent published organization chart which showed that Mr. McDonald reported to Mr. Dahlberg for operation and support activities of the Vogtle and Hatch facilities, and that Mr. Hairston reported to Mr. McDonald.

While the record shows that Mr. Farley received verbal reports from Messrs. McDonald, Hairston, McCoy, Louis B. Long (SCS Vice President–Technical Services), and Charles McCrary (SCS Vice President–Administrative Services) concerning the performance of GPC's nuclear units, and attended staff meetings (Issue 15), this does not support a determination that Mr. Farley was part of the management structure over the Vogtle facility. As the future CEO of Southern Nuclear and as manager over certain support services provided to the Vogtle facility, Mr. Farley periodically briefed The Southern Company Board of Directors, received information, and attended meetings. Such activities do not amount to control of operations or other licensed activities at the Vogtle facility.

Intervenor asserts that, during a deposition, Mr. Shipman stated that Mr. McDonald and Mr. Hairston reported to Mr. Farley. Mr. Shipman testified during the license amendments hearing that he understood Mr. McDonald reported to Mr. Farley for certain things and there were certain things that Mr. McDonald did not report to Mr. Farley on. Tr. 1966 (Shipman). This is consistent with Mr. Farley's testimony that Mr. McDonald would informally report to him

with regard to governmental affairs, such as congressional proceedings, and administrative matters unrelated to the operation of the plants. Such activities do not indicate that Mr. Farley had line management responsibilities or that Mr. McDonald reported to Mr. Farley with respect to any licensed activities involving the Vogtle facility.

The Petitioners claim that control of operating the nuclear facilities is based upon Mr. Hobby having witnessed the day-to-day operation at GPC's corporate offices (Petition at 5-6). During the hearing, however, no direct evidence was offered to support the claim that Mr. McDonald reported to Mr. Farley regarding the operation of the Hatch or Vogtle facilities. Messrs. Hobby and Mosbaugh both acknowledged that they had no personal knowledge that Mr. McDonald received direction from Mr. Farley regarding the operation of the Vogtle or Hatch facilities. Tr. 2157-58 (Mosbaugh) and Tr. 2377 (Hobby); *Hobby* DOL Transcript at 239). Mr. Mosbaugh admitted that he had no first-hand knowledge of the day-to-day interaction among Messrs. McCoy, Hairston, McDonald, and GPC officers, and had never been in the Birmingham, Alabama offices of SONOPCO. Tr. 2128 (Mosbaugh).

Intervenor also asserts (Issue 1) that Mr. Dan Howard Smith, a Department Manager with Oglethorpe Power Corporation (a co-owner of the Vogtle facility), had observed that Mr. Farley was the chief executive of the SONOPCO Project, that Mr. McDonald reported to Mr. Farley who reported to Mr. Addison (the President and CEO of The Southern Company), and that Mr. Farley's control over nuclear operations might violate the terms of the operating licenses for GPC's nuclear facilities.[11] However, Mr. Smith testified at his deposition that after reading the transcript of the March 30, 1989 meeting on the Vogtle Unit 2 full-power license, during an April 1989 co-owner's committee meeting, GPC provided a chart, at his request, that clarified the reporting chain. Smith Deposition at 22-23, 36-37.

Intervenor's reference to Mr. Hobby's memorandum of April 27, 1989, which alluded to concerns about Mr. McDonald's reporting relationship (Issue 1), does not establish that there was an improper exercise of control by Mr. Farley and The Southern Company. Mr. Rogge, the NRC Senior Resident Inspector, testified that "No one to my knowledge ever expressed a concern that GPC was not in control of operations at Vogtle." Testimony of Frederick R. Allenspach, Darl S. Hood, and John F. Rogge on the "Illegal Transfer" Issue, ff. Tr. 2620, "Allenspach, Hood, and Rogge," at 6.

In Issue 3, Intervenor asserts that 1988 amendments to FSAR Chapter 1 inaccurately depicted the corporate organization for the operation of the Vogtle facility because FSAR § 1.4.1.2, "Description of Corporate Organization," did

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[11] Mr. Hobby's Memorandum of April 27, 1989 (Exhibit A of the September 21, 1990 Supplement to the Petition) refers to Mr. Smith's concern about control of GPC facilities.

not state that "The Southern Company had newly established a nuclear division with responsibility for operating GPC's nuclear plants."

The NRC was given timely notification of the plans to form a separate operating company by virtue of the meetings held on February 16 and May 3, 1988, with the Commissioners and others to brief the NRC about The Southern Company's tentative plans to form a separate nuclear operating company and to review the several phases that would have to be involved, pending SEC approval, and ultimate license amendments, as well as by meetings held March 2 and 18, 1988, and July 25, 1988, with NRC personnel. Farley at 11-12. Therefore, its omission from FSAR § 1.4.1.2 by the 1988 amendments was not significant in terms of NRC awareness.

In Issue 4, Intervenor claims that the 1988 amendment to FSAR Chapter 13 (i.e., Vogtle FSAR Amendment 39, dated November 23, 1988) was inaccurate because it described the Executive Vice President–Nuclear Operations (Mr. McDonald) as an officer of both GPC and APC who is "responsible to the chairman and CEO of each company for all aspects of operation of the nuclear generating plants in the Georgia Power and Alabama Power systems, as well as technical and administrative support activities provided by SCS," but did not indicate that Mr. Farley was the functioning chief executive of SONOPCO Project. Intervenor claims that the amendment was also misleading because technical and administrative services reported to an executive officer of the SONOPCO Project, with Mr. Farley serving as chief executive officer.

As President and CEO of APC in November 1988, Mr. Farley was not part of Vogtle line management, and he exercised no line management responsibility over licensed activities at the Vogtle facility. A September 21, 1988 memorandum by Mr. Addison noted that Mr. Addison had asked Mr. Farley to guide the formation of the new company (Southern Nuclear) and that Mr. McDonald was serving as Executive Vice President of GPC and APC and was responsible for the operation of the Hatch, Vogtle, and Farley nuclear facilities. Thus, the absence of Mr. Farley from the Chapter 13 organizational charts and descriptions submitted by Vogtle FSAR Amendment 39 is not an inaccuracy.

Services by SCS to GPC were provided in accordance with a January 1, 1984 services agreement between them. Messrs. Louis Long, SCS Vice President of Technical Services, and Charles McCrary, SCS Vice President of Administrative Services, reported to Mr. McDonald with respect to the Vogtle facility, not to Mr. Farley. On April 24, 1989, the arrangement was made formal by a letter of agreement between Messrs. McDonald and H. Allen Franklin, the President of SCS at the time. McCoy at 8; Hairston at 21 and Tr. 1712; Deposition of Meier at 40-41. Therefore, Intervenor's claim of inaccuracy is not supported by the record.

In Issue 5, Intervenor states that the organizational chart, Figure 13.1.1-1, was inaccurate in the Vogtle FSAR amendment, dated March 28, 1990, because

it failed to depict Mr. McDonald's reporting relationship to Mr. Farley and it showed the Administrative and Technical Services Vice Presidents reporting to Mr. McDonald and then to Mr. Dahlberg. The hearing record does not support Intervenor's assertions.

Figure 13.1.1-1, as revised March 28, 1990, accurately shows that the Executive Vice President–Nuclear Operations, an officer of both APC and GPC, reported to the President and CEO of GPC on Vogtle matters since Mr. Farley was not involved in the operation of the Vogtle facility or activities authorized by the Vogtle licenses. Figure 13.1.1-1 also accurately depicted the Vice President for Administrative Services and the Vice President for Technical Services reporting to Mr. McDonald and then to Mr. Dahlberg. Under a services agreement between SCS and GPC, Mr. Dahlberg had the authority to direct activities of these SCS officers for the functions they were performing in support of plant operation (Hairston at 35). The fact that Mr. McCrary reports to Mr. Farley concerning certain administrative matters unrelated to plant operations, including the formation of Southern Nuclear and general industry activities (*see* Farley, ff. Tr. 1749, at 16; Hairston at 33; McCoy at 11), is not relevant to Vogtle licensed activities and does not indicate that Mr. Farley controlled operations at the Vogtle facility.

In Issue 18, Intervenor alleges that, during a January 11, 1991 meeting with the NRC, Mr. McDonald falsely stated that Mr. Farley had no responsibilities for administrative matters related to the SONOPCO Project. *See also* July 8, 1991 Supplement to Section 2.206 Petition, § IV. Based on the meeting transcript and Mr. McDonald's testimony, the January 11, 1991 statement was not inaccurate.

Mr. McDonald testified during the hearing that his statement on page 42 of the meeting transcript[112] was that prior to Phase II (the incorporation of Southern Nuclear), Mr. Farley had been performing a job as a Vice President of The Southern Company, had been providing certain services to Mr. McDonald under a contract with SCS, and had no responsibility for certain administrative support that was depicted on organization charts discussed during the meeting. Administrative support was being performed by Mr. McCrary for Mr. McDonald pursuant to an April 24, 1989 agreement. While Mr. McCrary provided administrative services to support Mr. Farley's responsibility to guide the formation of Southern Nuclear and Mr. Farley's general industry activities, Mr. McCrary did not report to Mr. Farley with respect to the administrative support function for the Vogtle facility. McDonald at 9.

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[112] The meeting transcript, at page 42, shows that Mr. McDonald (referring to an organizational chart) states:

> Yes. A month ago there was no line here. Mr. Farley was performing his job as a Vice President of the Southern Company. He had no responsibilities for this administrative support. That administrative support that we had basically was being done, and he was a part of a contract — it was a contract to me from Southern Services for providing essentially much the same support we have here now.

In Issue 7, Intervenor states that the March 1991 FSAR amendment revising Figure 13.1.1-1 is false because it shows the Executive Vice President–Nuclear Operations, Mr. McDonald, reported to the President and CEO of Southern Nuclear, Mr. Farley, for Southern Nuclear matters only, and because it shows that Mr. McDonald reported to the President and CEO of GPC for GPC matters. Intervenor claims that (1) Mr. McDonald reported to Mr. Farley on matters pertaining to Vogtle, (2) both Messrs. McDonald and Farley reported to Southern Nuclear Board of Directors on matters pertaining to GPC's nuclear operations, and (3) Mr. Farley reported to The Southern Company CEO, Mr. Addison, and to The Southern Company Management Council. Intervenor similarly alleges in Issue 22 that GPC's April 1, 1991 response to the petition falsely asserts that during Phase II (after incorporation of Southern Nuclear), all Southern Nuclear management in the reporting chain above the Vogtle Plant General Manager were officers of GPC because Mr. Farley stated during his deposition that he was never an officer of GPC.

Once Southern Nuclear was incorporated, Mr. Farley became its President and CEO and Mr. McDonald, who retained his positions as Executive Vice President of GPC and APC, became the Southern Nuclear Executive Vice President. Hairston at 37-38. Thus, Mr. McDonald reported to Mr. Farley, and they both reported to the Southern Nuclear Board of Directors, regarding Southern Nuclear matters. However, for licensed activities at the Vogtle facility, Mr. McDonald continued to report directly to GPC President and CEO, Mr. Dahlberg. Farley at 17-19; McDonald at 4; McCoy at 13. Since Mr. Farley was CEO of Southern Nuclear during Phase II, and was not part of the management chain for the Vogtle facility,[113] Intervenor's assertions that Figure 13.1.1-1 and GPC's petition response were inaccurate were not substantiated.

In Issue 11, Intervenor alleges that in the April 1, 1991 response to the petition, GPC falsely represents that Mr. Farley did not have management control over GPC licensed activities or GPC personnel matters.

The record shows that Mr. Farley did not have control over GPC's licensed activities. Mr. McDonald, who signed the April 1, 1991 response, testified that Mr. Farley did not exercise any management control over GPC's licensed activities, and that he (McDonald) was not aware of a single instance where Mr. Farley controlled, or made, a GPC staffing or operating decision. McDonald at 10. Neither the hearing record nor results of NRC's regulatory oversight

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[113] The agreement executed by GPC and Southern Nuclear (GPC Hearing Exhibits 20 and 21) expressly stated that Southern Nuclear would not perform any activities in connection with the nuclear plants that were required by the operating licenses to be performed by the Licensee, GPC. Hairston at 36-38. As part of his responsibilities as Executive Vice President–Nuclear of The Southern Company, Mr. Farley briefed the Southern Company Board and Mr. Addison on nuclear developments. Farley at 21. This responsibility to provide information does not constitute control of licensed activities at the Vogtle facility.

support Intervenor's assertion that Mr. Farley had management control over GPC licensed activities or GPC personnel matters.

In Issue 20, Intervenor claims that statements by Mr. Stephen H. Chesnut (a GPC manager-in-training in August 1990), recorded on Mr. Mosbaugh's Tape No. 260, and statements during Mr. Shipman's August 1994 deposition, show that SONOPCO Project managers observed that Mr. Farley, rather than Mr. Dahlberg, controlled GPC's nuclear operations.[114] *See also* October 1, 1990 Supplement to Petition at 4-5.

Given that (1) Intervenor's testimony concerning Mr. Chesnut's statements on Tape No. 260 was stricken from the record, (2) Intervenor subsequently withdrew the tape transcript, (3) Intervenor did not call Mr. Chesnut as a witness (*see* Tr. 1909-11, 2047), and (4) Mr. Shipman, a SONOPCO Project manager, testified that he never had any doubt that the responsibility for the licensing and operation of the GPC nuclear facilities rested with Mr. Dahlberg (Tr. 1982-83),[115] there is no basis to conclude that these SONOPCO Project managers believed that Mr. Farley controlled GPC's nuclear operations or other licensed activities.

In Issue 23, Intervenor alleges that GPC's April 1, 1991 response to the petition falsely asserts that Mr. Dahlberg is contacted on a daily basis by GPC nuclear operating officers concerning the status of GPC nuclear plants in that "phone records" showed differently. Intervenor did not submit any "phone records" or other evidence to support his assertion.

The testimony of Mr. Dahlberg and Mr. McDonald established that Mr. Dahlberg or his staff received daily reports from a GPC nuclear officer concerning the status of GPC's nuclear plants and was contacted if some unusual or unexpected operational event occurred. Dahlberg at 16-17. McDonald at 3, 22. *See also* Tr. 1135, 1154 (Dahlberg).

Accordingly, the hearing record does not support Intervenor's allegation in Issue 23 that GPC's April 1, 1991 statement is inaccurate.

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[114] Similarly, in Issue 21, Intervenor alleges that in its April 1, 1991 response to the petition, GPC falsely asserts that (1) Vogtle project management does not assume that Mr. Farley, rather than Mr. McDonald, controls Vogtle's operations, and (2) Mr. McDonald reports to Dahlberg on all matters concerning the operation of GPC's nuclear facilities.

Mr. McDonald testified that he was confident that Vogtle managers understood that he, and all other GPC officers, managers, and employees, reported to Mr. Dahlberg on all matters pertaining to the operation of GPC's nuclear facilities as specified in the FSAR, and Intervenor's assumption that Mr. Farley was in control was based on statements by Mr. McCoy that had been taken out of context. McDonald at 17, 20-21.

[115] Mr. Shipman said he had corrected his deposition statement (Intervenor Exh. 10) that, in April 1990, Mr. Hairston reported to Mr. Farley through Mr. McDonald to correctly indicate that Mr. Hairston reported to Mr. Dahlberg through Mr. McDonald. Tr. 1992-95; Licensee Exh. 25. Mr. Shipman explained that his initial deposition statement was in the context of information customarily provided to Mr. Farley by the SONOPCO Project executives and he thought at the time of his 1994 deposition that Messrs. Hairston and McDonald were officers of SCS as well as GPC and APC and, as such, reported to Mr. Farley with respect to SCS matters. Tr. 1965-67, 1983-85, 1993-95 (Shipman).

In Issue 15, Intervenor contends that GPC failed to tell the NRC, during a December 1988 inspection of the corporate offices in Birmingham, Alabama, that Mr. Farley was involved with the SONOPCO Project as CEO of the SONOPCO Project, and failed to inform the NRC about Mr. McDonald's "reporting relationship" to Mr. Farley.[116] Intervenor claims that: (1) Mr. Farley reported to Mr. Addison and The Southern Company Management Council which served as a board of directors for the SONOPCO Project; (2) Mr. Farley was involved with the operation and management of The Southern Company's nuclear plants, presiding over weekly staff meetings; and (3) GPC's letter of December 29, 1988, to NRC continued to mislead the NRC about Mr. Farley's role by stating that, "as shown on FSAR Figures 13.1.1-2 and 13.1.1-3, the Executive Vice President, the Senior Vice President–Nuclear Operations and the Vice President–Nuclear do provide line management direction for the operation of the Plant."

The record shows that Mr. Farley was President of APC during the December 1988 inspection, and he did not become Executive Vice President of The Southern Company and SCS until March 1, 1989. Farley at 1. The announcement that he would be the CEO of Southern Nuclear upon its incorporation was not made until March 1989. Farley at 11; Tr. 1723 (Hairston).

Intervenor's assertion that Mr. Farley presided over weekly staff meetings designated as "Farley staff meetings" is not supported by the hearing record. Although SONOPCO Project staff meetings were held beginning in November 1988, Mr. Farley did not attend these meetings until he relocated to the SONOPCO Project offices, after his election to Executive Vice President of The Southern Company and SCE, effective March 1, 1989, and he provided no management oversight or direction at those meetings. Farley at 21; McDonald at 21; Hairston at 24. Consistent with providing support services to the SONOPCO Project and his future position as CEO of Southern Nuclear, Mr. Farley's attendance was to keep abreast of system plant developments and, as Executive Vice President–Nuclear of The Southern Company, the meetings enabled him to provide periodic reports to The Southern Company Board of Directors. McCoy at 17-18; Farley at 11, 21; McDonald at 21; Tr. 1341-42 (McDonald), Tr. 1848-51 (Farley), Tr. 1989-90 (Shipman); McCrary Deposition at 38. The fact that Mr. Farley was kept informed and periodically briefed The Southern Company Board

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[116] From December 19 through 21, 1988, the NRC conducted an inspection of the corporate organization, responsibilities, and functions of SONOPCO at Birmingham, Alabama, during Phase I of the Southern Nuclear transition (Inspection Report Nos. 50-321/88-41, 50-366/88-41, 50-424/88-60, 50-425/88-77, 50-348/88-33, and 50-364/88-33) and observed, in Part 3 of the report, that:

> In preparation for combining the management of Vogtle, Hatch, and Farley into one organization, GPC has reorganized and moved the corporate nuclear operations to Birmingham. . . . Currently, the Executive Vice President and Senior Vice President for Nuclear operations are officers of both GPC and APC. . . . The Vice Presidents for each of the three projects (Vogtle, Hatch, and Farley) report to the Senior Vice President of Nuclear Operations.

of Directors does not warrant the conclusion that he was part of the management structure for the Vogtle facility or exercised control over its operation or its other licensed activities.

The hearing record does not support Intervenor's assertion that Mr. Hairston's letter of December 29, 1988, that referenced organizational charts shown in FSAR Chapter 13, misled the NRC about Mr. Farley's role in the operation of the Vogtle facility (*see also* Issues 4, 5, and 7 herein). Mr. Farley had no such role.

Accordingly, there is no basis to conclude that the NRC was misled during its December 1988 inspection or by subsequent submittals regarding the organization in control of GPC's licensed activities.

In Issue 16, Intervenor contends that during a July 25, 1989 meeting with the NRC, GPC failed to accurately portray the actual configuration of the SONOPCO organization by not revealing that Mr. Farley had management responsibility over the Vogtle facility. Since the record does not support that Mr. Farley had management responsibility over the Vogtle facility, this contention is not substantiated.

In Issue 24, Intervenor alleges that GPC omitted from the Vogtle Emergency Plan any discussion of Farley's management functions and responsibilities as they related to the Corporate Emergency Plan described in Appendix 7 of the Vogtle Emergency Plan (Revision 12, effective April 1990). Intervenor's bases for this allegation are that (1) the Vogtle emergency procedures demonstrate that Mr. Farley had an emergency plan responsibility because he was listed in the On-Call Project Manager's telephone list as "Georgia Power Corporate Management"; and (2) Messrs. McDonald, Hairston, and McCoy as well as the rest of the corporate emergency organization were controlled from a practical standpoint by Mr. Farley.

Mr. McCoy testified that Revision 12 (dated April 1990) of the Corporate Emergency Plan accurately indicated that Mr. Farley had no role in the Corporate Emergency Organization, and that Mr. Farley was not part of the "Senior Corporate Management" identified in the Corporate Emergency Notification Tree (Figure C-1 of the Corporate Emergency Plan for the Vogtle Electric Generating Plant, Revision 12). McCoy at 18-19; *see also* Tr. 1597 (McCoy); Supplemental Prefiled Testimony of C. Kenneth McCoy, ff. Tr. 1560, "McCoy Supplemental," at 1. Even though Mr. Farley was accurately identified as Executive Vice President-Nuclear of The Southern Company, his name was listed under the heading "Georgia Power Corporate Management" in the On-Call Project Manager's telephone list. The heading was incorrect and, beginning in 1991, the section was renamed "Corporate Management" and included the designated title for each individual. McCoy Supplemental at 1; *see also* Tr. 1574-76, 1588-89 (McCoy).

The On-Call Project Manager's telephone list does not identify who is to be called in the case of a significant event at the Vogtle facility, is not part of a procedure, and is not intended to be used by the On-Call Project Manager (corporate) to identify who is to be notified in the event of an emergency. Administrative procedure VNS-EP-04, entitled "Duties of the On-Call Project Manager" (GPC Exh. 9), identifies who is to be notified by the On-Call Project Manager, in what order,[117] and Mr. Farley was not required to be notified by the On-Call Project Manager as a part of the emergency call-out procedures.[118] McCoy Supplemental at 2-3; Tr. 1580-92 (McCoy).

The record does not support Intervenor's assertion that Messrs. McDonald, Hairston, McCoy, and the rest of the corporate emergency organization in Birmingham, Alabama, were controlled by Mr. Farley. Messrs. McDonald and McCoy both testified that there was no attempt by Mr. Farley to control the operation of the Vogtle facility and that line management authority over licensed activities at the Southern Nuclear offices was very clear — through Mr. McCoy to Mr. Hairston, Mr. McDonald, and Mr. Dahlberg. McCoy at 19; McDonald at 25. GPC's response to the March 20, 1990 Vogtle SAE also demonstrates that Mr. Farley did not participate in the emergency response, but only listened to discussions regarding the event consistent with his need to know information. Tr. 1825-29 (Farley).

Accordingly, the allegation in Issue 24 is not supported. The hearing record does not support that Mr. Farley had emergency plan responsibilities indicative of a control over GPC's nuclear facilities or that he exercised control over GPC managers and personnel involved with GPC's emergency response. Therefore, the claim that Mr. Farley was omitted from the Vogtle emergency plan in order to mislead the NRC is unwarranted.

In summary, Intervenor's assertion that Mr. Farley functioned as the *de facto* Chief Executive Officer of the SONOPCO Project is not supported by the record. Mr. McDonald did not report to Mr. Farley regarding GPC licensed activities. The items cited do not demonstrate that Mr. Farley exercised control over licensed activities at GPC's nuclear facilities during his involvement in the SONOPCO Project. Rather, the record shows that GPC controlled the daily operations of the Vogtle facility in accordance with a chain of command extending from the Vogtle General Manager, through the Vice President of the

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[117] If a significant event occurred at the Vogtle facility, Administrative Procedure VNS-EP-04, as it existed in 1990, required that the appropriate GPC corporate management be notified and briefed on the emergency. If any one of those to be notified were not available, the On-Call Project Manager would go to the next person up the line. On occasions, Mr. McCoy was unable to reach Mr. McDonald or Mr. Hairston, and he called Mr. Dahlberg. McCoy Supplemental at 3-4.

[118] The administrative procedure did not *require* that Mr. Farley be contacted for significant events at the Vogtle facility, but in practice, both Mr. Farley and Mr. Dahlberg would be called. *Id.*

Vogtle facility, through the Senior Vice President–Nuclear Operations, through the Executive Vice President–Nuclear Operations, to the President and CEO of GPC. A Nuclear Operations Overview Committee of the GPC Board of Directors conducted periodic reviews of the regulatory and operational performance of GPC's nuclear plants.

B. Establishing and Implementing Nuclear Policy Decisions

Intervenor's Statement of Issues and the petition, as supplemented, include allegations that Mr. Farley controlled the Vogtle facility based upon his involvement with establishing and implementing nuclear policy decisions. (Issues 1, 9, 15, 17, and 20; October 1, 1990 Supplement at 4).

In Issue 15, Intervenor claims that, in 1987, Messrs. Addison and Farley met privately and agreed Mr. Farley would serve as "chief executive of Southern Company's nuclear division" and decided to locate Southern Nuclear in Birmingham without the knowledge of senior GPC officials.

Intervenor's assertion that Messrs. Addison (CEO of The Southern Company) and Farley agreed in 1987 that Mr. Farley would become the chief executive of a Southern Company nuclear operating subsidiary is not supported by the hearing record. Although he did not recall the exact date, Mr. Addison believed that his discussions with Mr. Farley about Mr. Farley heading the Southern Nuclear Operating Company occurred "when the decision was made to go forward." Addison Deposition at 36-37. The hearing record shows that Mr. Addison did not make the decision unilaterally, that Mr. Farley was elected to the position of President and CEO of Southern Nuclear by the Board of Directors, which included GPC's CEO (Mr. Dahlberg) and GPC's Executive Vice President–Nuclear Operations (Mr. McDonald) after Southern Nuclear was incorporated on December 17, 1990. Hairston at 37. The fact that Mr. Addison, the CEO of the holding company, discussed with a senior officer the possibility of that officer heading a new subsidiary, does not violate any Commission regulation and does not support a conclusion that Mr. Farley directed GPC licensed activities.

There is no basis in the record to conclude that Messrs. Addison and Farley decided where SONOPCO would be located, or that this information was withheld from GPC management. While Mr. Farley told Mr. Addison that he would consider heading up Southern Nuclear if the corporate offices were in Birmingham, Mr. Addison discussed the merits of the location with GPC, the issue was examined by task forces, and Southern Nuclear was located in Birmingham, Alabama, due to its proximity to the engineering support staff and the economics of that location. Addison Deposition at 80-81, 83; Tr. 1821, 1823 (Farley). Mr. Thomas McHenry, the GPC Manager–Nuclear Support, represented GPC on the implementation task force, and Mr. H.G. "Grady" Baker, GPC Senior Executive Vice President, was on the steering committee. Tr. 1331

(McDonald). Mr. Farley believed that the decision as to location was made by the Board of Directors in May 1988. Tr. 1822-23 (Farley).

In Issues 15 and 17, Intervenor alleges that by 1989 the Southern Company Management Council began functioning as the SONOPCO Project Board of Directors. Intervenor states in Issue 17 that (1) GPC's April 1, 1991 response to the petition falsely stated that The Southern Company Management Council was not involved in operating issues pertaining to GPC's nuclear plants;[119] and (2) the functioning of the Management Council was omitted from the April 1 response and the FSAR.

The record shows that there was no Board of Directors for the SONOPCO Project and no Board of Directors for Southern Nuclear until it was incorporated at the end of 1990. Tr. 1773-75 (Farley); Farley (ff. Tr. 1061) at 13-14; Dahlberg at 8. Individuals who later became members of the Board of Directors of Southern Nuclear informally discussed the status of efforts to form Southern Nuclear, and other issues of common interest, as representatives of The Southern Company Management Council. Farley at 13-14.

Mr. McCoy testified that The Southern Company Management Council is not described in the Vogtle FSAR because the Council is not the licensee of the Vogtle facility or an organization with responsibilities regarding the operation of the Vogtle facility. The Southern Company Management Council only reviewed GPC's budget in connection with The Southern Company's obligations to its stockholders. McCoy at 16. Neither 10 C.F.R. § 50.33 nor 10 C.F.R. § 50.34 requires that such budget review activities be included in an FSAR. Thus, there was no misrepresentation to the NRC and Intervenor's allegations in Issues 15 and 17 are without merit.

In Issue 1, Intervenor asserts that key negotiations between GPC and Oglethorpe Power Corporation were conducted by Mr. Farley.

Mr. Farley testified that he conducted certain negotiations with Mr. Stacey of Oglethorpe Power Corporation at the request of Mr. Dahlberg, but the major part of the negotiations were through Mr. Grady Baker and Mr. Fred Williams. Farley at 33; *see also* Dahlberg at 11-12. Mr. Williams confirmed that he was in charge of negotiating the agreement, and that in his view, Mr. Farley merely provided Oglethorpe Power Corporation information and comfort about setting

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[119] Intervenor mischaracterizes GPC's April 1 response. The response stated, at 4:

> The Southern System Management Council provides a forum for the exchange of information among subsidiary companies that will aid the Companies' daily operations, it reviews system performance and it provides strategic and policy guidance to the system. However, day-to-day management of policy and operating issues pertaining solely to an individual subsidiary company is the exclusive responsibility of the subsidiary company's CEO.

Intervenor offered no evidence that showed the statement to be inaccurate.

up nuclear operating companies. Tr. 2482-83 (Williams). Thus, Mr. Farley's participation does not indicate control of GPC licensed activities.

Intervenor claims in Issue 1 that Mr. Farley reviewed data requests and testimony before the Georgia Public Service Commission in support of GPC's 1989 rate case. Mr. Farley testified that he had no responsibility for GPC's rate case and did not direct Mr. McDonald's activities related to the 1989 rate case. Tr. 1803 (Farley); Farley at 34-35. Mr. Farley's monitoring of data requests to make sure that the SONOPCO Project was providing expeditious support (Tr. 1803-11 (Farley)) does not reflect control over licensed activities.

In Issue 9, Intervenor alleges that GPC's April 1, 1991 response to the petition falsely stated that the resolution of a dispute between Messrs. Dwight Evans (GPC Executive Vice President–External Affairs) and McDonald by Mr. Dahlberg's direction to McDonald regarding the presentation of performance indicators to the Georgia Public Service Commission was evidence of the reporting relationship and indicative of who was in control of nuclear operations at the Vogtle and Hatch facilities. Intervenor claims that this statement is false because Mr. McDonald, after an August 10, 1989 meeting, did not follow Mr. Dahlberg's instructions, and Messrs. McDonald and Farley reviewed and approved testimony that did not include alternative performance indicators.

The hearing record does not support Intervenor's assertion that Mr. McDonald did not follow Mr. Dahlberg's instructions. Messrs. McDonald and Dahlberg both testified that a decision was made at the August 10, 1989 meeting to be prepared to propose alternative performance standards, if necessary, and that this strategy was carried out in the handling of the 1989 rate case. Prefiled Testimony of A. William Dahlberg, III, ff. Tr. 1061, "Dahlberg," at 17; McDonald at 15-17; Tr. 1102-22, 1137-41 (Dahlberg); Tr. 1504 (McDonald). Mr. Farley received copies of the draft testimony to be submitted to the Georgia Public Service Commission, but he neither approved nor disapproved it. Farley at 34. He was in agreement with Mr. Dahlberg's decision that GPC should be prepared to propose alternative performance standards, if necessary. Tr. 1108-09 (Dahlberg). Such actions do not indicate control of nuclear operations or budget policy.

In Issue 20, Intervenor claims that in its April 1, 1991 response to the petition (at 12, Attachment I), GPC inaccurately states that Mr. Farley did not create the outage philosophy[120] for the Vogtle facility. Intervenor asserts that the response is inaccurate because (1) Mr. Farley was involved in the establishment of the outage philosophy at the Vogtle facility, (2) Mr. McCoy referred to Mr. Farley's

[120] As used here, "outage philosophy" refers to outage scheduling. Specifically, the "philosophy" was to use an "optimum" schedule — a schedule without the inclusion of time for contingencies. McCoy at 14-15.

role as indicated by an audio tape (Tape No. 236) recorded in August 1990,[121] and Mr. Farley testified during a deposition that "Farley staff meetings" were held every week.

The record shows that GPC's April 1, 1991 response to the petition was accurate because Mr. McDonald established and implemented the outage philosophy and Mr. Farley was not involved in overseeing the establishment of the outage philosophy. McDonald at 13; Tr. 1518-20 (McDonald); McCoy at 14; Farley at 30. Mr. McCoy's statements on Tape No. 236 referred only to "discussions" about the outage philosophy that included Mr. Farley, and do not show that Mr. Farley set, established, directed, or created the outage philosophy at the Vogtle facility. McCoy at 14. Mr. Farley testified that he (1) did not direct the operating philosophy and other executive matters concerning operation of the Vogtle facility in the weekly staff meetings, (2) did not have any authority to control, and (3) did not attempt to exercise any control over management decisions affecting licensed activities or personnel matters concerning the Vogtle facility. Farley at 22. Moreover, Mr. Mosbaugh admitted that he had no personal knowledge to support his claim that the outage philosophy came from Mr. Farley. Tr. 2129-35.

Accordingly, the hearing record does not support Intervenor's allegation in Issue 20 that GPC's April 1, 1991 statement is inaccurate or that Mr. Farley controlled operation of the Vogtle facility by establishing or implementing the Vogtle outage or other operational philosophy.

In summary, the hearing record shows that nuclear policy decisions for the Vogtle facility were established and implemented by GPC, and there was no evidence that Mr. Farley established the outage philosophy or any other operational policies for the Vogtle facility. Mr. Farley's limited involvement in a 1989 rate case matter before the Georgia Public Service Commission (i.e., his review of draft testimony regarding alternative performance standards) does not indicate any control of GPC's nuclear operations or licensed activities. Intervenor also provided no information that The Southern Company Management Council acted as the SONOPCO Project board of directors until the Project was incorporated.

C. Employing, Supervising, and Dismissing Nuclear Personnel

In his Statement of Issues and the petition, as supplemented, Intervenor asserts that Mr. Farley exercised control over the Vogtle facility because he (1) selected and approved GPC's management staff; (2) reviewed nuclear personnel in 1989 as evidenced by GPC Management Council's exclusion of nuclear personnel

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[121] This issue is also raised in the October 1, 1990 Supplement to the Petition at 4. Petitioners claim that Mr. McCoy's taped statement, that the outage philosophy was created by Mr. Farley and others, supports their assertion that Vogtle project management assumed that Mr. Farley, not Mr. Dahlberg, controlled Vogtle's operations.

from its 1989 companywide review of management; (3) decided that Mr. Michael Barker, a GPC employee, would not be transferred from the SONOPCO Project to the Nuclear Operations Contract Administration (NOCA) group in Atlanta; (4) prepared Mr. McDonald's annual performance appraisal; and (5) implemented changes in Vogtle personnel evaluations and pay. (Issues 1, 6, 8, 14A, 14B, 15, 19, 21, 27, and 28; October 1, 1990 Supplement to Petition at 1-3.)

The hearing record fails to support Intervenor's allegation (Issues 6 and 15; October 1, 1990 Supplement to Petition at 1-2) that Mr. Farley selected and approved GPC management staff. The decision to select the individual officers responsible for GPC's nuclear operations was made by GPC management with the approval of the GPC Board of Directors. GPC's Vice President, Grady Baker, and not Mr. Farley, recommended that Messrs. McDonald and Hairston become officers of GPC. Mr. Farley's involvement in the selection of Messrs. McDonald and Hairston was limited to concurring as President of APC that they could take on the additional responsibilities associated with managing GPC's nuclear facilities. Farley at 25-26.

Mr. Farley's involvement in the hiring of Mr. McCoy consisted of discussing Mr. McDonald's proposal to hire him. McDonald at 10-11; Farley at 25-26; McCoy at 5-6; Tr. 1349-50 (McDonald) and Tr. 1727 (Hairston). GPC's CEO, Mr. Robert W. Scherer, interviewed Mr. McCoy before he was appointed, and the GPC Board of Directors subsequently appointed Mr. McCoy to his current position. McCoy at 1, 5, and 6.

Mr. Farley was involved in the selection of Messrs. McCrary and Long as Vice Presidents in SCS. As President of APC, Mr. Farley was consulted on the appointments of Messrs McCrary and Long because the Farley nuclear facility was being supported by the SONOPCO Project and SCS officers. Hairston at 24. Mr. Farley was a member of a selection committee, including GPC and APC representatives, to make recommendations for the Vice President of Administrative Services position.[122] Mr. McDonald and Mr. Jack Causey of GPC were also members. Tr. 1276 (McDonald).

Thus, the hearing record supports the conclusion that Mr. Farley did not make decisions regarding the hiring of any of the officers reporting to Messrs. McDonald and Hairston. Mr. Farley's limited involvement with SCS officers within the SONOPCO Project (such as Messrs. McCrary and Long) does not appear inappropriate since the SONOPCO Project and its SCS officers were also providing support to the APC nuclear plant.

Intervenor's assertion (Issues 1 and 14A) that the GPC Management Council's exclusion of nuclear personnel from its 1989 companywide review of management was evidence that nuclear operations were reviewed by Mr. Farley was

[122] Typical of the selection process for SCS senior personnel, no selection committee was convened for Mr. Long because his functions and position in the SONOPCO Project were similar to his position in SCS. Farley at 22-24.

not supported by the hearing record. Mr. Dahlberg testified that the nuclear management was not included because the nuclear officers had just been reviewed as part of the recent formation of the SONOPCO Project. Tr. 1185-88 (Dahlberg).

Intervenor asserts (Issue 8) that GPC's August 24, 1994, response to a Licensing Board question[123] was inaccurate because it failed to identify the NOCA group as an organization that had oversight responsibilities within GPC, failed to state that SONOPCO Project personnel refused to cooperate with NOCA, and that SONOPCO personnel, including Mr. Farley, interfered with the operation, staffing, and existence of NOCA.[124]

The hearing record indicates that NOCA never performed the type of oversight functions identified by the Board's question. NOCA did not perform any oversight function regarding licensed activities and the people assigned to NOCA were not qualified to perform oversight of licensed activities. Tr. 2565-76, 2579, 2588-89, 2596 (McCoy); Tr. 1238 (Dahlberg); McCoy Rebuttal at 3. While NOCA was, in part, formed by Mr. Dahlberg to monitor the performance of GPC's nuclear plants, it was later determined that its data-gathering function duplicated activities of SONOPCO Project personnel reporting directly to Mr. Dahlberg. Dahlberg at 13; Tr. 1193 (Dahlberg).

Mr. Hobby, who was General Manager of NOCA, testified that employees in the SONOPCO Project refused to cooperate in supplying him information regarding the plants, and prevented him from hiring the employees needed to perform NOCA's intended function. Mr. McDonald viewed NOCA as an impedance in the GPC chain of command and admitted that he did not cooperate with NOCA because he felt Mr. Hobby was attempting to act as an intermediary between Mr. McDonald and Mr. Dahlberg. Tr. 1483 (Dahlberg); *see also* Tr. 1485 (McDonald). Mr. McDonald's concern as a GPC official regarding the GPC chain of command does not constitute transfer of control of licensed activities at GPC nuclear facilities. Furthermore, Mr. Hobby lacked any personal knowledge that Mr. Farley directed or otherwise influenced Mr. McDonald's actions regarding NOCA. Tr. 2352-57 (Hobby).

Intervenor's claim that Mr. Farley interfered with the staffing of NOCA by deciding that Mr. Michael Barker, a GPC employee, could not be transferred from the SONOPCO Project to the NOCA group in Atlanta (Issue 8; October 1, 1990 Supplement to Petition at 3-4), was not substantiated. Mr. Hobby admitted that only GPC employees attempted to prevent him from interviewing

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[123] Question 2 in the Board's Memorandum and Order, dated May 25, 1994, asked what organizational units or executive personnel of GPC had any form of oversight activity over the SONOPCO Project, such as "managerial control, audits, investigation, personnel, quality assurance or control, or root cause assessments."

[124] Petitioners assert that Mr. William Evans, a GPC Corporate Concerns investigator, told Mr. Hobby that Mr. Farley would be "making the call" as to whether Mr. Hobby could interview a SONOPCO candidate for the NOCA performance engineer position. October 1, 1990 Supplement to Petition at 3-4.

Mr. Michael Barker for the NOCA performance engineer position. Tr. 2360-61 (Hobby). The hearing record shows that Messrs. Hairston and McDonald, both GPC officers, opposed this transfer because they believed that the NOCA position had been assigned an inflated rating. Tr. 1737-38 (Hairston); Tr. 1490-94 (McDonald). Mr. Barker discussed his transfer directly with Mr. Dahlberg. Tr. 1222-23 (Dahlberg). Neither Mr. Farley nor Mr. Grady Baker could recall any discussion of Mr. Barker on May 5, 1989, with Mr. Dahlberg regarding Mr. Hobby's proposed additions to the NOCA staff. Tr. 1759-60, 1820-21 (Farley); Baker DOL Deposition at 41. Mr. Hobby's belief about Mr. Farley's interference was based on information from individuals who did not attend the May 5, 1989 meeting. Hobby at 41; Evans Deposition at 17-18. Accordingly, the assertion that Mr. Farley "made the call" is not supported by the record.

Mr. Farley did tell Mr. Dahlberg on or about May 5, 1989, that some organizations in The Southern Company system, such as NOCA, were duplicative (Farley at 32-33; Tr. 1756 (Farley)), but Mr. Dahlberg came to the same conclusion without Mr. Farley's input. Dahlberg at 13; Tr. 1228 (Dahlberg); Tr. 2461, 2497-2504 (Williams). Thus, Mr. Farley's action did not convey a command, or constitute control, over GPC personnel matters.

Intervenor's claim (Issue 1) that Mr. Farley prepared Mr. McDonald's annual performance appraisal was not substantiated. The record shows that Mr. McDonald's annual performance appraisal was prepared by Messrs. Harris and Dahlberg, the respective CEOs of APC and GPC. Although Messrs. Harris and Dahlberg gave Mr. Farley a chance to comment on the review, Mr. Farley did not know what was finally done. Tr. 1861-62 (Farley).

The record does not substantiate Intervenor's claims (Issues 1 and 6) that Mr. Farley implemented changes in personnel evaluations and pay with respect to Vogtle nuclear operations. The record shows that Mr. Farley did not implement changes to personnel evaluations or pay policy for Vogtle nuclear operations personnel. Mr. Farley explained the new Southern Company systemwide policies and answered questions on them. Farley at 31. This involvement was appropriate for his position as a Southern Company officer and did not constitute control over licensed activities of GPC's nuclear facilities.

As an Executive Vice President of The Southern Company, Mr. Farley addressed nuclear plant employees to brief them on the systemwide changes being made to the incentive pay programs of all of the operating companies. At that time, he also polled employees about any concerns they had with their employment situation. Such systemwide activities are typically performed by a representative of The Southern Company. McDonald at 17-18. These activities do not constitute improper control of GPC personnel or NRC-licensed activities.

In summary, the record does not show that Mr. Farley controlled GPC nuclear facilities by employing, supervising, and dismissing nuclear personnel,

or that GPC provided inaccurate information to the NRC regarding Mr. Farley's involvement with personnel matters.

D. Controlling Costs

In his Statement of Issues, Intervenor alleged that Mr. Farley's control of GPC nuclear facilities is shown through budget and personnel pay matters in that (1) Southern Nuclear, its predecessor, and The Southern Company controlled GPC's nuclear budget since November 1988; (2) Mr. Farley implemented changes in personnel evaluations and pay for Vogtle nuclear operations personnel; and (3) the GPC Management Council did not review GPC's 1990 nuclear operating budget. Intervenor asserts that inaccurate and incomplete information was provided to the NRC regarding GPC's control of budget and personnel pay matters. (Issues 1, 6, 12, 14A, 14B, and 17.)

Intervenor alleged in Issue 6 (*see also* Issues 1 and 12) that GPC's budget had been under the control of Southern Nuclear since November 1988, and thus the March 28, 1991 Vogtle FSAR amendment revising Chapter 13 inaccurately states that (1) the GPC Executive Vice President–Nuclear Operations reports to GPC's President and CEO with respect to all matters concerning budgets, and (2) Southern Nuclear matters are currently limited to operational support activities.

Intervenor's allegation regarding budget control is based upon his opinion that GPC's 1990 budget was approved by Mr. Farley and later by Mr. Addison over Mr. Dahlberg's objection. Testimony of a number of witnesses about GPC's 1990 budgeting process, and subsequent nuclear budgets, shows that GPC retained control of its nuclear budgets. GPC's 1990 (and later) nuclear budgets were reviewed by the Presidents of APC (Mr. Harris), GPC (Mr. Dahlberg), SCS (Mr. Franklin), The Southern Company (Mr. Addison), The Southern Company Executive Vice President–Nuclear (Mr. Farley), the Executive Vice President–Nuclear Operations of GPC and APC (Mr. McDonald), probably the Senior Vice President–Nuclear Operations of GPC and APC (Mr. Hairston), probably the nuclear plant project Vice Presidents (Messrs. McCoy, Beckham, and Woodard), and probably the SONOPCO Project Assistant Comptroller (Mr. Gilbert). Dahlberg at 9. The SONOPCO group presented the 1990 budgets recommended by Messrs. Hairston and McDonald for all three GPC nuclear facilities to Mr. Addison and his staff during a December 1989 meeting in Birmingham, Alabama. Mr. Addison then visited each of the operating groups and received a report on their budgets from Mr. McDonald, Mr. Hairston, and the project vice presidents. Farley at 28-29; Tr. 1392-94, Tr. 1405-06 (McDonald). The proposed budgets for the three nuclear facilities were then submitted to the operating companies, APC and GPC. Mr. Dahlberg received, from the GPC Management Council, the portion reflecting GPC's nuclear plants

for incorporation into the overall GPC budget and for approval. Budget approval was then given by GPC's CEO for the GPC capital and operating budgets, and by the GPC Board of Directors for the capital budget. After approval by GPC, the total GPC budget was submitted to The Southern Company. Dahlberg at 9; Tr. 1240-41 (Dahlberg); McDonald at 14-15. GPC Management Council reviewed the 1990 GPC nuclear budgets, as part of the total GPC budget, before they were approved by Mr. Dahlberg. The capital budget was also approved by the GPC Board of Directors. Dahlberg at 10.

Mr. Farley's involvement was limited to reviewing the budgets as an Executive Vice President of The Southern Company and advising Mr. Addison, who was responsible for the review of all operating company budgets. Dahlberg at 10; Tr. 1779-83, 1795 (Farley). Mr. Dahlberg determined whether the 1990 budget was acceptable. Farley at 27. Mr. Addison had never, however, approved or disapproved GPC's budget over Mr. Dahlberg's objection. Dahlberg at 11.

The review of budgets of subsidiaries by holding companies (e.g., The Southern Company) to ensure that the budgets of the operating companies were reasonable and appropriate is not unusual or indicative of a transfer of control.[125]

Accordingly, the hearing record does not support Intervenor's assertion that Southern Nuclear controlled GPC's budget. Therefore, there is no support for Intervenor's claim that GPC inaccurately stated that (1) the GPC Executive Vice President–Nuclear Operations reports to GPC's President and CEO with respect to all matters concerning budgets, and (2) Southern Nuclear matters are currently limited to operational support activities. The record supports a conclusion that Southern Nuclear matters are limited to operational support activities.

Intervenor asserts in Issue 14A that GPC's April 1, 1991 response to the petition is false in stating that the GPC Management Council functioned as a policy-setting body and made corporate resource allocation decisions because, in late 1989, the GPC Management Council did not participate in the review of GPC's 1990 nuclear operating budget. The hearing record, however, showed that Intervenor's assertion was incorrect in that the GPC Management Council did review the 1990 nuclear budget as part of the total GPC budget review before approval by Mr. Dahlberg. *See* Tr. 1396-98, 1403; Dahlberg at 10.

Intervenor claims in Issue 14B that in the April 1, 1991 response to the petition, GPC misrepresents that Mr. McDonald reported periodically to the

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[125] The review of GPC's budget by The Southern Company Management Council in connection with The Southern Company's obligations to its stockholders is not an activity that need be described in the Vogtle FSAR, and its omission does not warrant the conclusion that GPC's April 1, 1991 response to the petition was inaccurate as Intervenor asserts in Issue 17.

GPC Management Council regarding matters such as budgets and organizational goals.

Mr. McDonald testified that he reported to the GPC Management Council on nuclear operating matters, including budget matters, with the qualification that "reported" meant "provided budgets for their review."[126] Organizationally, he reported only to the GPC CEO. McDonald at 14. In view of Mr. McDonald's testimony, the hearing record does not support a conclusion that GPC's April 1, 1991 response was inaccurate.

In summary, the hearing record does not support a conclusion that GPC misrepresented its budgets affecting the operation of GPC licensed facilities. There is no indication in the hearing record that the particular process GPC used to develop its budget is dispositive to Intervenor's assertion that Mr. Farley, The Southern Company, or SONOPCO Project controlled the operation of the Vogtle facility. Rather, the record shows that GPC was responsible for the costs of the Vogtle facility. After review by GPC's Management Council, the operating and capital budgets were approved by GPC's President and CEO, and the capital budget was also approved by the GPC Board of Directors. The record does not support the conclusion that Messrs. Farley and Addison approved GPC's nuclear budgets. As an Executive Vice President of The Southern Company, Mr. Farley was involved in reviewing the nuclear budgets as part of the normal process for preparing annual budgets in the Southern system. Given The Southern Company's holding company status, Mr. Addison's involvement in reviewing and providing guidelines and requirements for adequate earnings and reasonable capital needs was appropriate.

II. OTHER ALLEGED INACCURACIES COMMUNICATED TO NRC

Intervenor's Statement of Issues and the petition contain assertions that GPC managers provided inaccurate or incomplete information to the NRC when describing its organization and plans to form Southern Nuclear, and when responding to the petition. The alleged misrepresentations or omissions regard statements about (1) the Vogtle chain of command, (2) Mr. Dahlberg's

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[126] Meeting minutes show that Mr. McDonald participated in Management Council meetings about the 1989 and 1990 budgets on September 23 and October 14, 1988, and presented organizational goals for the Vogtle and Hatch facilities during a December 7, 1988 meeting. Intervenor Exh. 135 (meeting minutes) at 27, 29-30, 42-43. Mr. McDonald attended a July 25, 1989 meeting during which the 5-year capital budget targets were approved, and the schedule for budget reviews, including Management Council review and Mr. Addison's review, was agreed upon. Intervenor Exh. 135 at 71-73. The Management Council also considered nuclear budgets during meetings on November 6 and 14, and December 4, 1989. Intervenor Exh. 135, at 90, 93-96, 97 (capital budget), 98, 104-16 (nuclear update).

relationship with Vogtle site management, (3) Mr. Farley's responsibilities as Executive Vice President–Nuclear of The Southern Company, (4) the 1989 title of Mr. Dahlberg, (5) SONOPCO Project's control over the Vogtle facility since November 1988, (6) the composition of the GPC Management Council and (7) the title held by Mr. Farley in 1988. (Issues 1, 2, 12, 13, 18, 19, and 26-28.)

The hearing record regarding the alleged illegal license transfer issue does not support that GPC concealed an unauthorized role of Mr. Farley or a *de facto*, unauthorized organization for control of GPC nuclear facilities.

In Issue 1 (*see also* Section 2.206 Petition § III.2; and July 8, 1991 Supplement § III), Petitioners stated that GPC misled the Commission about the chain of command from the Vogtle Project's Plant Manager (i.e., the General Manager) to its CEO before the NRC issued the operating license for the facility.

On March 30, 1989, the Commissioners met to discuss and possibly vote on the full-power operating license for Vogtle Unit 2. Commissioner Carr expressed concern about the hierarchy between the Vogtle Plant Manager and the Chief Executive Officer (CEO), noting that it "looked to me like he was a long way from the CEO." Mr. R.P. McDonald, GPC Executive Vice President–Nuclear Operations, responded that (1) he (Mr. McDonald) reported to Mr. A. William Dahlberg, the GPC CEO; (2) that Mr. Ken McCoy, Vice President of Vogtle, reported to Mr. McDonald; and (3) that Mr. George Bockhold, then Vogtle General Manager, reported directly to Mr. McCoy. At the conclusion of the meeting, the Commissioners voted unanimously in favor of the license, and the license was issued the following day.

On May 1, 1989, Mr. W.G. Hairston, III, Senior Vice President for Nuclear Operations, sent the NRC a letter of correction of the transcript, noting that Mr. McDonald had "inadvertently left out the Senior Vice President of Nuclear Operations. The organization is as described on figures 13.1.1-1 and 13.1.1-2 of the Vogtle Final Safety Analysis Report."

The Petitioners claim that Mr. McDonald knowingly made false statements to the NRC Commissioners in the presence of Messrs. Dahlberg, McCoy, and Bockhold during his response to then Commissioner Carr in that he "eliminated one entire level of management between the plant manager and the CEO." Moreover, the Petitioners asserted (Petition at 8) that:

> Messrs. Dahlberg, McCoy and Bockhold should have known that Mr. McDonald's statements were false and should have brought this to the immediate attention of the Commission and otherwise corrected the record *before* the Commission acted on the Vogtle full-power license request.

In its Response to the Petition of April 1, 1991, GPC noted that the Commission had been apprised of the Company's organization before the meeting on March 30, 1989, including the Senior Vice President position, by

an amendment to the Vogtle FSAR that was submitted November 23, 1988. The amendment described the reporting chain as being from Mr. McCoy to Mr. Hairston to Mr. McDonald. GPC's Response also indicated that the NRC had reviewed the organizational structure in December 1988 and issued an inspection report.[127] In the inspection report, the NRC stated that the vice presidents of the Farley, Hatch, and Vogtle facilities reported to the Senior Vice President, who reported to the Executive Vice President, and that the organization for Vogtle was consistent with the Vogtle FSAR amendment submitted in November 1988.

In its April 1, 1991 Response, GPC also noted that, during the March 30 meeting, Commissioner Rogers stated that he had reviewed the Company's organizational chart during his visit to the plant site. In addition, GPC noted that it had submitted the letter of correction to the transcript approximately 2 weeks after receiving the NRC transcript.

The NRC Staff has reviewed this issue and concludes that Mr. McDonald's reply to then Commissioner Carr was inaccurate in that the transcribed record clearly contradicted other documents of record, including the FSAR and NRC inspection reports. The inaccuracy was material in that the reply (1) was in direct response to the Commissioner's stated concern regarding an organizational structure in which the plant manager appeared to be "a long way from the CEO," (2) could have influenced the Commission's decision, and (3) could have been considered by the Commission in reaching its decision.

There was no apparent motive for Licensee and its employees to attempt to deliberately mislead the Commissioners since the Licensee had previously provided correct information, and NRC Staff members were present who knew the correct information.[128] The NRC Staff does not view Mr. McDonald's inaccurate statement or omission as intentional or significant in that it is unlikely the statement would have caused the Commission to reach a different decision. No enforcement action was taken regarding the omission of Mr. Hairston in the organizational structure.

In summary, while inaccurate information was initially given to the Commissioners, it appears to have been inadvertent, it was corrected by the Licensee upon discovery, and the NRC Staff was already aware of the correct information. Under the NRC's Enforcement Policy (NUREG-1600), unsworn oral statements that are unintentionally inaccurate are not normally acted upon unless they involve significant information by a licensee official. While the Licensee should have corrected the material omission either during or immediately following the meeting, further action regarding this omission is not warranted due to its mi-

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[127] NRC Inspection Report Nos. 50-321/88-41, 50-366/88-41, 50-424/88-60, 50-425/88-77, 50-348/88-33, and 50-364/88-33, dated February 7, 1989.

[128] Mr. John Rogge, the NRC's Senior Resident Inspector for the Vogtle facility at the time, attended the meeting with the Commissioners in Washington, DC, and testified during the Phase 1 hearing that at that meeting he was aware that Mr. Hairston was in the Vogtle chain of command. Tr. 2731 (Rogge).

nor significance and because no information other than the Petitioners' opinion exi[illegible] to support the position that the omission was intentional.

In[illegible]venor also alleges (*see* Issue 1) that GPC falsely stated during the March 30, 1989 meeting with NRC that Mr. Dahlberg had a "personal hands on" relationship with the management at the plant site. The meeting transcript (Inter[illegible]enor Hearing Exh. 17), at page 5, indicates that Mr. Dahlberg described GPC's upp[illegible]agement as being accessible. The record shows that Mr. Dalhberg visited plants periodically and the Vogtle facility at least twice in 1989, and was involved in nuclear operations. His "hands-on" management style referred to his oversight, his daily communications with the nuclear management, his plant visits, and his willingness to take calls periodically from the site. Intervenor Hearing Exh. 32, at 4, 15; McCoy at 6-7; Tr. 1153-59 (Dahlberg). Therefore, the record does not support the allegation that the statement was inaccurate.

In Issue 2, Intervenor states that Mr. Hairston's letter of May 1, 1989, to the NRC correcting the Unit 2 full-power license hearing transcript was inaccurate in asserting that an attached FSAR Figure 13.1.1-1 as amended November 23, 1988, accurately depicted the corporate management structure for the Vogtle facility since the figure did not portray Mr. Farley's role, and indicated that Mr. McDonald (the "Executive Vice President–Nuclear Operations" position) reported to Mr. Scherer ("Chairman and CEO"), rather than to Mr. Dahlberg ("President").

In December 1988, Mr. Scherer relinquished his position as CEO and Mr. Dahlberg became CEO, but not Chairman. Thus, Intervenor is correct inasmuch as FSAR Figure 13.1.1-1 had not been updated to reflect this change of title. Moreover, the figures attached to the May 1, 1989 letter should have shown the Executive Vice President–Nuclear reporting to the "President and CEO," which was Mr. Dahlberg's correct title.

Mr. Hairston testified during the transfer hearing that the only purpose of the May 1, 1989 letter was to correct Mr. McDonald's omi[illegible]n of Mr. Hairston's role during the Unit 2 full-power hearing. Mr. Hairsto[illegible]nd others did not notice the outdated title in the CEO box. Hairston at 29.

Messrs. Allenspach and Rogge, who participated in NRC Staff's review of the organizational structure for the full-power licensing of Vogtle Unit 2 and the related inspection of the organizational structure in December 1988, testified that the focus of the NRC Staff's review of the organization in control of the Vogtle facility was at Mr. Hairston's level and lower and they attached no particular significance to the organizational structure represented at levels above Mr. Hairston. Tr. 2678-80, 2698.

There is no evidence that Mr. Hairston's explanation regarding the outdated title in the CEO box was inaccurate or that the NRC was misled in any significant manner by this oversight. In addition, as discussed in Section III.B.1.a of this Director's Decision, Mr. Farley was not in the Vogtle chain of command.

In summary, while Intervenor is correct that FSAR Figure 13.1.1-1 did not accurately reflect Mr. Dahlberg's title of "President and CEO," the error was not a significant factor in the NRC Staff evaluation of the information, and there is no evidence that it misled the NRC. The record does not support Intervenor's assertion that the figure is also inaccurate because it failed to reflect Mr. Farley's role in the control of the Vogtle facility.

In Issue 12, Intervenor claims that in the April 1, 1991 response to the petition, GPC misstated Mr. Farley's responsibilities as Executive Vice President–Nuclear as including:

> (1) overseeing the formation of Southern Nuclear, (2) acting as spokesman for Southern Nuclear among chief executive officers of the other Southern Company affiliates,[129] and (3) representing the Southern Company on the national scene concerning generic nuclear power issues.

Mr. McDonald testified that this description is an accurate reflection of Mr. Farley's duties as described in Mr. McDonald's letter agreement dated April 24, 1989, with Mr. Franklin of SCS. The description is consistent with the NRC Staff's historical knowledge of Mr. Farley's activities and duties. The hearing record provides no substantive evidence to the contrary.

In Issue 13, Intervenor asserts that, because Mr. Hairston was a GPC Senior Vice President in April 1991 and had never been a member of the GPC Management Council, GPC's April 1, 1991 response to the petition falsely states that the "GPC Management Council is made up of all the Executive and Senior Vice Presidents of GPC."

Intervenor is correct with respect to Mr. Hairston and the error was admitted in the hearing testimony. McDonald at 13-14; Tr. at 1075-77 (Dahlberg); Tr. 1442-43 (McDonald). There is no evidence that the error was anything other than a simple oversight. The primary focus of the statement, that Mr. McDonald was on the Management Council and Mr. Farley was not, is correct. The NRC was not significantly misled by the error with respect to Mr. Hairston.

In Issue 28, Intervenor alleges that the April 1, 1991 GPC response to the petition falsely states that Mr. Farley's role in the selection of personnel for the SONOPCO Project was proper in that "Mr. Addison requested such assistance from Mr. Farley and such assistance fell within his duties as Executive

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[129] The response to the petition stated that this function refers to Mr. Farley's membership on the Southern System Management Council.

Vice President–Nuclear of The Southern Company." Intervenor claims that this statement is false because the staffing selections were made in 1988 and Mr. Farley did not become Executive Vice President–Nuclear of The Southern Company until March 1, 1989.

Intervenor is correct. Mr. McDonald admitted that, technically, the April 1, 1991 response to the petition was inaccurate in stating that staffing selections made in 1988 were within Mr. Farley's duties as Executive Vice President–Nuclear of The Southern Company since Mr. Farley had not yet assumed that position in 1988. McDonald at 12.

The error was not significant or intentional because the same page of the April 1, 1991 response (Intervenor Exh. 48, at 9) indicated Mr. Farley's correct title in 1988, i.e., President of APC.

In Issue 26, Intervenor alleges that in a September 4, 1992 license amendment application, GPC omitted facts pertaining to the actual configuration and operation of the Vogtle facility in stating that in January 1991, Southern Nuclear began providing nuclear support services, technical services, and administrative services but omitting reference to the SONOPCO Project's "control over the nuclear operations of plants Vogtle, Hatch, and Farley [which] began in November 1988" prior to Southern Nuclear's incorporation. Mr. Hairston testified that the September 4, 1992 statement regarding Southern Nuclear was accurate and that Southern Nuclear was incorporated on December 17, 1990, and became effective January 1, 1991. Hairston at 46.

The license amendments application is consistent with information received by the NRC during the late 1990–early 1991 time frame and the NRC was well informed of the phased approach employed by GPC to establish a nuclear operating company through various meetings, inspections, and discussions. Intervenor provided no evidence that the services provided by SONOPCO Project from November 1988 until Southern Nuclear's incorporation constituted control over operations or licensed activities for GPC or APC nuclear facilities. Accordingly, there is no evidence that the license amendments application of September 4, 1992, was inaccurate or misled the NRC.

In Issue 19, Intervenor states that in its October 3, 1991 response to the section 2.206 petition as revised July 8, 1991, GPC falsely states that (1) the selection process used in 1988 for the staffing of SONOPCO was not completed during the two-day meeting of SONOPCO Project executives, and (2) Mr. McDonald "never purported to give an unqualified or rigid top-down characterization of how the organization was staffed."

Messrs. McCoy and McDonald testified that while a number of individuals were identified as the most likely candidates for positions within the SONOPCO Project during that two- or three-day meeting, the selection process continued beyond the meeting. McCoy at 16; McDonald at 11; Tr. at 1301 (McDonald).

Mr. McDonald testified that the selection process involved Mr. McCoy and Mr. J.T. Beckham (Vice President of the Hatch facility) starting at the top of the organization and, using a blank organization chart, identifying prospective candidates who were most qualified for positions in the organization. Selected managers then participated in selecting those individuals who would be working for them. He only recalled that they settled on the top tier during the meeting, although they may have penciled in other names, and the other candidates were shuffled around for a couple of weeks. Tr. at 1301, 1304-08 (McDonald).

Given Mr. McDonald's description of the selection process, the hearing record does not support the conclusion that the statement regarding GPC's October 3, 1991 statement is inaccurate or misleading.

In Issue 27, Intervenor alleges that GPC's October 3, 1991 response to the petition inaccurately states that Mr. McDonald's testimony concerning the selection of Messrs. McCrary and Long given in the *Yunker and Fuchko* DOL proceeding was not inconsistent with his testimony in the *Hobby* DOL proceeding.

During the licensing transfer hearing, Mr. McDonald testified that his answers were different, and were not contradictory, because the questions were different. In the *Yunker and Fuchko* proceeding, when he was asked who selected Messrs. McCrary and Long for their positions in the SONOPCO Project, he understood the question to be who was ultimately responsible for referring them to the Board of Directors, and he replied he was not sure but assumed it was the President of Southern Company Services. In the *Hobby* case, he was asked if he was "involved" in selecting them and, since he had been involved with recommending them, gave an affirmative reply. McDonald at 11-12.

In light of the differences in the questions posed, the evidence does not support the conclusion that GPC's response of October 3, 1991, is inaccurate.

III. CONCLUSION

The record shows that GPC provided some inaccurate or incomplete information to the NRC when describing its organization and plans to form Southern Nuclear, and when responding to the petition. This information involved (1) the omission of Mr. Hairston when Mr. McDonald described the Vogtle chain of command during a March 30, 1989 meeting; (2) a 1989 FSAR organizational chart showing the position of Mr. Dahlberg as "Chairman and CEO" rather than "President and CEO"; and (3) GPC's April 1991 written response to the petition indicating that the GPC Management Council included all Senior Vice Presidents (which was inaccurate because Mr. Hairston was not a member), and indicating Mr. Farley's title in 1988 to be Executive Vice President–Nuclear of The Southern Company (a position he did not assume until March 1, 1989).

This inaccurate or incomplete information was not significant in terms of NRC focus on nuclear operations and licensed activities or in the context of the overall correct information provided to the NRC, and did not mislead the NRC. Thus the inaccuracies and omissions are not sufficient to warrant NRC enforcement action or conclusions that (1) GPC concealed an unauthorized role of Mr. Farley or a *de facto*, unauthorized organization for control of GPC nuclear facilities; or (2) GPC lacks the requisite character and integrity to be a licensee.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

OFFICE OF ENFORCEMENT

James Lieberman, Director

In the Matter of

WESTINGHOUSE ELECTRIC CORPORATION
(Madison, Pennsylvania)

March 20, 1997

The Director, Office of Enforcement, has taken action with regard to a petition filed by Shannon Doyle requesting that the Commission take action with regard to Westinghouse Electric Corporation. The Petitioner requested that the Commission investigate allegations that Westinghouse willfully provided false information to the Department of Labor (DOL), institute a show-cause proceeding pursuant to 10 C.F.R. § 2.202, and/or impose a civil penalty upon Westinghouse. The Petitioner had asserted, as a basis for his request, that Westinghouse had failed to correct the DOL record and provided material false statements to the DOL Administrative Law Judge in a case arising under the Energy Reorganization Act. In denying the petition, the Director determined that the matter should be referred to the DOL Administrative Review Board for its consideration.

TECHNICAL QUALIFICATIONS: REQUIREMENTS

The NRC generally does not have specific requirements for qualification and training of health physics technicians.

NRC: JURISDICTION

The NRC and DOL have complementary responsibilities in the area of employee protection.

DIRECTOR'S DECISION UNDER 10 C.F.R. § 2.206

I. INTRODUCTION

On May 30, 1996, Mr. Shannon Doyle (Petitioner) filed a petition pursuant to 10 C.F.R. § 2.206 requesting that the Nuclear Regulatory Commission (NRC) take immediate action against Westinghouse Electric Corporation (Westinghouse). Specifically, the Petitioner requested that the NRC investigate allegations that Westinghouse has willfully provided false information to the Department of Labor (DOL), and institute a show-cause proceeding pursuant to 10 C.F.R. § 2.202 and/or impose a civil penalty upon Westinghouse.

As a basis for his request, the Petitioner asserted, among other things, that Westinghouse had failed to correct the record and, through its counsel, had provided material false statements to the DOL Administrative Law Judge (ALJ) in a case arising under the Energy Reorganization Act (ERA), 89-ERA-022. Specifically, the Petitioner asserted that Westinghouse: (1) "knowingly let remain the false impression of the Administrative Law Judge that registration with the National Registry of Radiation Protection Technologists (NRRPT) is a requirement for the holding of the position of health physics technician in the nuclear power industry"; and (2) "purposely maintained this false impression by providing through its counsel false material statements in maintaining that an NRRPT filing to the USNRC 'establishes that a passing score on the registration test is required for the position of health physics technician.' "

By a letter dated August 16, 1996, I informed the Petitioner that, pursuant to section 2.206, the petition had been referred to me. I also informed the Petitioner that his request for immediate action had been denied, but that as provided by section 2.206, action would be taken on his request within a reasonable time. To address the concerns in the petition, I also requested in my August 16, 1996 letter that the Petitioner provide further information supporting the petition. In addition, by a separate letter to Westinghouse dated August 16, 1996, I requested from Westinghouse a response to certain questions, including, among other things, whether testimony by Westinghouse before the DOL ALJ in this case asserted that registration with the NRRPT or a passing grade on an NRRPT registration examination was required before gaining employment with Westinghouse as a radiation technician.

By letter dated October 8, 1996, the Petitioner responded to my August 16th letter. By letter dated November 8, 1996, Westinghouse submitted its response to my August 16, 1996 letter.

II. DISCUSSION

Westinghouse is a contractor that provides services at various nuclear power plants that hold licenses from the NRC. Hydro Nuclear Services, Inc. (Hydro), was incorporated on January 23, 1985, as Westinghouse's nuclear decontamination service business, in part, providing workers to perform decontamination services at nuclear power plants. Hydro was a contractor for the Indiana & Michigan Power Company, which holds Facility Operating License Nos. DPR-58 and DPR-74, issued by the NRC pursuant to 10 C.F.R. Part 50 on March 30, 1976, and December 23, 1977, respectively. The licenses authorize the Licensee to operate the D.C. Cook Nuclear Power Plants in accordance with the conditions specified therein.

On December 9, 1988, the Petitioner filed a complaint with the DOL asserting that Hydro had violated section 210 of the Energy Reorganization Act (now section 211) when it failed to hire him as a decontamination technician to work at the D.C. Cook plants during an outage in the fall of 1988.

On March 30, 1994, the Secretary of Labor issued a Final Decision and Order in this case, 89-ERA-22, finding that Hydro had discriminated against the Petitioner.[1] Hydro petitioned the Court of Appeals for the Third Circuit for review of the Secretary's Final Decision and Order; however, on August 24, 1994, pursuant to a motion by the Secretary of Labor and Westinghouse, the court remanded the case to DOL for consideration of damages.

On December 14, 1994, a hearing on damages was held before a DOL ALJ. One of the issues raised at the hearing by the Petitioner was that he was entitled to damages for lost promotional opportunities as a result of his wrongful discharge. Specifically, he argued that he would have been promoted from decontamination technician to a position as health physics technician had he not been wrongfully discharged. With regard to this issue, on December 12, 1994, a deposition concerning the DOL complaint was taken. During the deposition, Mr. William Burns, Westinghouse Manager of Steam Generator Field Services and Field Readiness Operations, stated, in response to a question concerning the requirements for qualification to work as a health physics technician: "In the industry, the certain amount of hours would be given credit for, but there are also requirements of certain amount of education plus a national testing program to qualify as a radiation protection technician." (Tr. 17-18.) In addition, during the hearing, Mr. Burns, in response to questions concerning education or testing requirements to become a health physics technician, stated:

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[1] On June 28, 1995, the NRC issued a Notice of Violation in Enforcement Action No. 95-080, to Westinghouse, categorizing the discrimination against Mr. Doyle as a Severity Level III violation.

> Well, to be more or less board certified and receive certificates [of] education or testing, the National Registry of Radiation Protection Technicians semi-annually conduct [*sic*] testing seminars at the American Nuclear Society summer and winter meetings. The Health Physics Society also conducts certain amounts of school and testing to become a health physics technician, or a certified technician.

(Tr. 255.)

On March 28, 1995, Hydro filed "Post-Hearing Memorandum of Law Relating to the Assessment of Damages" in connection with the above matter. In this filing, Hydro stated, in part: "Doyle understood that to become a health physics technician, he had to log a certain number of hours of experience, pass a national test, and obtain the required educational background." (*Id.* at 25-26.)

On April 7, 1995, Hydro filed "Respondent's Proposed Findings of Fact and Conclusions of Law" concerning the above matter. In this filing, Hydro stated, in part: "Moreover, at no time during this job with Alabama Power did Doyle take or pass the national qualifying test needed for promotion to a board-certified health physics technician." (*Id.* at 2.)

On November 7, 1995, the ALJ issued his Recommended Decision and Order on Damages (Decision on Damages). In his Decision on Damages, apparently relying on the above, the ALJ stated, in part:

> To establish lost promotions, Complainant must show: 1) that Complainant had the particular skills or other job-related qualifications required by Respondent to be promoted to health physics technician; 2) that the health physics technician position was in a line of progression upward from the decontamination technician position, that is, the decontamination technician would normally be promoted to health physics technician after some interval of acceptable performance; and 3) that the prerequisite service as a decontamination technician is not itself justified by business necessity aside from the skills or other qualifications to perform the health physics technician job. [Citation omitted.]
>
> The Complainant has not fulfilled the first part of the analysis since he did not acquire the hours or the necessary passing grade on the health physics technicians exam.

(Decision on Damages at 17.)

Therefore, the ALJ denied the Petitioner's claim that he would have attained a position as health physics technician had he not been wrongfully discharged, and determined that the Petitioner was not entitled to damages for lost promotions.

Subsequently, the Petitioner appealed the ALJ's Decision on Damages and also attempted to supplement the record. In his appeal and motions to supplement the record, he argued that he was entitled to lost promotional benefits. As part of his Second Motion to Supplement the Record, the Petitioner submitted a filing by the NRRPT in a Petition for Rulemaking proposing an amendment to 10 C.F.R. Part 35, docketed by the NRC on November 24, 1995, purportedly to prove that the position of health physics technician did not require the passing of a national certification test.

On April 17, 1996, Hydro submitted a "Memorandum of Law in Opposition to Complainant Shannon T. Doyle's Second Motion to Supplement the Record." In this filing, Hydro stated, among other things: "At the damages hearing and at various depositions, . . . Mr. Burns clearly testified that in order to become a health physics technician, one was required to . . . (3) pass a national qualifying test." (*Id.* at 10.)

In his petition, the Petitioner indicates that these statements, which imply that passing a national qualifying test was required in order to obtain or hold the position of heath physics technician at Westinghouse,[2] constitute the false statements provided by Westinghouse's counsel. In his October 8, 1996 response to my August 16, 1996 letter, the Petitioner further asserts that the ALJ was misled by Mr. Burns' testimony concerning schooling and testing requirements, which resulted in the ALJ's determination that natural progression would not have enabled him to attain the position of health physics technician.

Notwithstanding Hydro's position in its "Memorandum of Law in Opposition to Complainant Shannon T. Doyle's Second Motion to Supplement the Record," in its November 8, 1996 response to my August 16, 1996 letter, Westinghouse stated, in part:

> No Westinghouse witness testified that NRRPT registration or passing an NRRPT registration exam was a prerequisite to gaining employment with Westinghouse as an HP [Health Physics] technician. In fact, the testimony is so general that it says nothing at all about specific Westinghouse or Hydro Nuclear hiring requirements or, for that matter, the specific requirements of any other employer.

In addition, Westinghouse asserted that its witness, Mr. Burns, provided the testimony concerning the NRRPT or similar requirements or certification. However, Westinghouse further asserted:

> [T]aken in context, this testimony indicates only that HP technicians can and sometimes do obtain this type of board certification and that national organizations, such as the NRRPT, provide testing for individuals to obtain such certification. The inference can not be drawn from this testimony that such certification was an absolute prerequisite to employment as a HP technician at Westinghouse or elsewhere . . . .

(*Id.* at 4.)

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[2] The NRC generally does not have specific requirements for qualification and training of health physics technicians.

III. ANALYSIS

It appears that Westinghouse, in its November 8, 1996 response to the NRC, characterized the evidence presented to DOL differently from that actually provided to the DOL in Westinghouse's submittals, as described above.

The NRC and DOL have complementary responsibilities in the area of employee protection.[3] After considering the petition and the documents submitted by both the Petitioner and Westinghouse, I have determined that the petition raises matters that fall within the jurisdiction and authority of the DOL, rather than the NRC. For this reason, I have concluded that this matter should be referred to the DOL Administrative Review Board for its consideration.

IV. CONCLUSION

For the reasons set forth above, the petition is denied. In accordance with 10 C.F.R. § 2.206(c), a copy of this Decision will be filed with the Secretary of the Commission for the Commission's review. As provided by this regulation, this decision will constitute the final action of the Commission 25 days after issuance unless the Commission, on its own motion, institutes a review of the Decision within that time.

FOR THE NUCLEAR
REGULATORY COMMISSION

James Lieberman, Director
Office of Enforcement

Dated at Rockville, Maryland,
this 20th day of March 1997.

[3] As noted in Section II, the NRC has taken enforcement action for the underlying violation of the applicable Commission discrimination regulation.