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July 31, 1985

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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

APPLICANTS' MOTION FOR SUMMARY DISPOSITION OF CONTENTION 14

Applicants hereby move the Atomic Safety and Licensing Board (the "Board"), pursuant to 10 C.F.R. § 2.749, for summary disposition in Applicants' favor of Joint Intervenors' Contention 14. As grounds for their motion, Applicants state that there is no genuine issue of material fact to be heard with respect to Contention 14, and that Applicants are entitled to a decision in their favor on this contention as a matter of law.

This motion is supported by:

1. Applicants' Statement of Material Facts as to Which There Is No Genuine Issue to Be Heard on Contention 14;

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2. Affidavit of John C. Kammeyer, dated July 24, 1935 ("Kammeyer Affidavit");

3. Affidavit of Larry L. Eppler, dated July 24, 1985 ("Eppler Affidavit"); and

4. Affidavit of Steve A. Phillips, dated July 24, 1985 ("Phillips Affidavit").

I. BACKGROUND

Contention 14 was admitted as a contention in this proceeding in the Board's "Memorandum and Order on Special Prehearing Conference Held Pursuant to 10 C.F.R. 2.715a," September 5, 1984 ("Memorandum and Order"). As admitted by the Board, Contention 14 states:

> There is no reasonable assurance that the emergency diesel generators manufactured by TDI to be used at Plant Vogtle will provide a reliable and independent source of on-site power as required by 10 CFR Part 50, Appendix A General Design Criteria #17, in that inadequate design, manufacture and QA/QC have resulted in substandard engines which are subject to common mode failures.

Memorandum and Order at 37. The bases asserted by Joint Intervenors for the contention are: (1) a defect in the governor lube oil cooler assembly identified by Transamerica Delaval, Inc. ("TDI") in December of 1981;1/ (2) a problem with the air

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1/ The defect was identified by TDI in a 10 C.F.R. Part 21 report. See Phillips Affidavit, ¶ 14. Inspection at the plant revealed that the assembly had been properly installed in the VEGP engines and that no corrective action was necessary. Id.

valve assembly;2/ (3) problems with the piston skirts, reported in October of 1982;3/ (4) a defect in the engine-mounted electrical cables, reported to the NRC by TDI in September of 1983;4/ and (5) Applicants' alleged failure to assess the suitability of the TDI diesel generators for the performance of their safety-related functions.

Discovery on Contention 14 included:

> Intervenors' First Set of Interrogatories and Requests to Produce (October 25, 1984) at 8-9;
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> NRC Staff's Interrogatories to Campaign For a Prosperous Georgia (CPG) and Georgians Against Nuclear Energy (GANE) (November 1, 1984) at 3-4;
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> Applicants' First Set of Interrogatories and Request for Production of Documents (November 5, 1984) at 20-21;
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> Applicants' Response to Intervenors' First Set of Interrogatories and Request for Production of Documents (November 29, 1984) at 45-50;

2/ TDI reported this problem in a 10 C.F.R. Part 21 report in May of 1982. See "Applicants' Response to GANE and CPG Supplements to Petition for Leave to Intervene," May 7, 1984 ("Applicants' Response") at 54-55. Applicants reported the problem as applicable to VEGP in a 10 C.F.R. § 50.55(e) letter. Id.

3/ The problem was reported by TDI in a 10 C.F.R. Part 21 report. See Applicants' Response at 55. Applicants identified the problem as applicable to VEGP in a 10 C.F.R. § 50.55(e) letter. Id.

4/ The problem was reported pursuant to 10 C.F.R. Part 21. See Applicants' Response at 55. Applicants reported the problem as applicable to VEGP pursuant to 10 C.F.R. § 50.55(e). Id.

CPG/GANE'S Response to Applicants' First Set of Interrogatories and Request for Production of Documents (December 5, 1984) at (unnumbered pages) 33-39;

CPG/GANE'S Response to NRC Staff's Interrogatories (December 10, 1984) at 1-3;

Applicants' Third Set of Interrogatories and Request for Production of Documents (January 4, 1985) at 18-19, 27-28;

Campaign for a Prosperous Georgia/Georgians Against Nuclear Energy Third Set of Interrogatories and Requests to Produce (January 9, 1985) at 4-7;

Intervenors Campaign for a Prosperous Georgia and Georgians Against Nuclear Energy Response to Applicants' Third Set of Interrogatories and Request for Production (February 4, 1985) at 6,10;

Applicants' Response to Intervenors' Third Set of Interrogatories and Request for Production of Documents (February 13, 1985) at 14-32;

Applicants' First Supplemental Response to Intervenors' Third Set of Interrogatories and Request for Production of Documents (July 5, 1985) at 2-4.

In addition, Applicants deposed Tim Johnson, Executive Director of CPG, on March 12, 1985. Mr. Johnson was identified by Joint Intervenors as having provided information used by them in response to Applicants' discovery requests. See "CPG/GANE's Response to Applicants' First Set of Interrogatories and Request for Production of Documents," December 5, 1984 ("Intervenors' Response to First Set of Interrogatories"), Answer to Interrogatory G-1; "Intervenors Campaign for a Prosperous Georgia and

Georgians Against Nuclear Energy Response to Applicants' Third Set of Interrogatories and Request for Production," February 4, 1985, Answer to Interrogatory G-4. Mr. Johnson was also the only potential witness identified by Joint Intervenors on Contention 14. See, e.g., Deposition of Tim Johnson, March 12, 1985 ("Deposition"), at 160, lines 1-4.

II. STANDARDS FOR SUMMARY DISPOSITION

The admission of a contention for adjudication, under the standards of 10 C.F.R. § 2.714, is not an appraisal of the merits of the contention, but merely a determination that it meets the criteria of specificity, asserted basis and relevance. A hearing on an admitted contention, however, is not inevitable. Licensing boards are authorized to decide an admitted contention on its merits in advance of trial on the basis of pleadings filed. "Any party to a proceeding may move, with or without supporting affidavits, for a decision by the presiding officer in the party's favor as to all or any part of the matters involved in the proceeding." 10 C.F.R. § 2.749(a). The standard embodied in the regulation is that:

> [t]he presiding officer shall render the decision sought if the filings in the proceeding, depositions, answers to interrogatories, and admissions on file, together with the statements of the parties and the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a decision as a matter of law.

10 C.F.R. § 2.749(d).

The Commission and its adjudicatory boards have encouraged the use of the summary disposition process so that evidentiary hearing time is not unnecessarily devoted to issues where the proponent of a contention cannot establish that a genuine issue exists. Statement of Policy on Conduct of Licensing Proceedings, CLI-81-8, 13 N.R.C. 452, 457 (1981); see also Houston Lighting and Power Company (Allens Creek Nuclear Generating Station, Unit 1), ALAB-590, 11 N.R.C. 542, 550 (1980) ("[T]he Section 2.749 summary disposition procedures provide in reality as well as in theory, an efficacious means of avoiding unnecessary and possibly time-consuming hearings on demonstrably insubstantial issues.")

The standards governing summary disposition motions in an NRC proceeding are quite similar to the standards applied under Rule 56 of the Federal Rules of Civil Procedure. Alabama Power Company (Joseph M. Farley Nuclear Plant, Units 1 and 2), ALAB-182, 7 A.E.C. 210, 217 (1974); Tennessee Valley Authority (Hartsville Nuclear Plant, Units 1A, 2A, 1B and 2B), ALAB-554, 10 N.R.C. 15, 20 n. 17 (1979). Where, as here, a motion for summary disposition is properly supported pursuant to the Commission's Rules of Practice, a party opposing the motion may not rest upon the mere allegations or denials of its answers. Rather, an opposing party must set forth specific facts showing that there is a genuine issue of fact. 10 C.F.R. § 2.749(b).

A party cannot avoid summary disposition on the basis of guesses or suspicions, or on the hope that at the hearing the movant's evidence may be discredited or that "something may turn up." Gulf States Utilities Company (River Bend Station, Units 1 and 2), LBP-75-10, 1 N.R.C. 246, 248 (1975).

III. THERE IS NO GENUINE ISSUE OF MATERIAL FACT WITH RESPECT TO CONTENTION 14

The stated bases for Contention 14 were problems with four specific components on the engines identified in TDI Part 21 reports and Applicants' § 50.55(e) letters to the NRC,5/ together with Applicants' alleged failure to make a general assessment of the diesels' suitability for performance of their emergency functions.

During discovery, Joint Intervenors cited additional problems with TDI diesels in nuclear service. See Intervenors' Response to First Set of Interrogatories, Answers to Interrogatories 14-1, 14-2, 14-3. The problems cited by Joint Intervenors

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5/ No corrective action was necessary at VEGP for the first item, involving the location of the engines' governor lube oil coolers. Visual inspection at VEGP verified that the governor lube oil coolers which had already been installed were properly located. See Phillips Affidavit, ¶ 14. The other three items cited as bases for the contention, the problems with the airstart valve capscrews, piston skirts, and engine-mounted electrical cable, were determined to be applicable to VEGP. Id. Corrective action either has been or will be taken to address these problems on both the Unit 1 and Unit 2 diesels, as discussed below.

had occurred on components at San Onofre, Shoreham, and Grand Gulf nuclear plants. See id. Joint Intervenors did not identify any problems unique to VEGP. Id. In his deposition, Tim Johnson, Executive Director of CPG, repeatedly stated that the basis for Joint Intervenors' belief in the unacceptability of the TDI diesel generators at VEGP is not specific problems that have been identified with engine components, but the overall pattern of problems experienced with these types of engines. See Deposition at 167, lines 13-24; at 170-71, lines 18-25, 1-5; at 172, lines 8-15.

Accordingly, this motion will address the comprehensive efforts undertaken by Applicants and other utilities to evaluate and ensure the adequacy of the TDI engines. VEGP's active participation in the TDI Diesel Generator Owners Group Program has resulted in correction of the "pattern of problems" associated with the diesels, as alleged by Joint Intervenors. The Owners Group Program, as implemented at VEGP, has comprehensively evaluated the suitability of the TDI diesel generators as a source of emergency on-site power and has provided assurance that they will reliably perform their intended functions.

A. Background on the VEGP TDI Diesel Generators

VEGP is supplied with four TDI diesel generators, two for each Unit. Eppler Affidavit, ¶ 3. The diesels are DSRV-16-4 models which are four-cycle, V-type engines with 16 cylinders.

Id. TDI diesels were widely used in non-nuclear applications at the time the VEGP engines were procured in 1976. See Kammeyer Affidavit, ¶ 5.6/ Additionally, orders for 42 emergency standby diesel generators at twelve other nuclear sites had already been placed with TDI by the time the VEGP engines were procured. Id.

B. The TDI Diesel Generator Owners Group Program

In late 1983, Applicants became aware of problems encountered at the Grand Gulf Nuclear Power Plant during preoperational testing of TDI diesel generators. Phillips Affidavit, ¶ 3. In November of 1983, Applicants established an Emergency Diesel Generator Resolution Program ("EDG Resolution Program") for VEGP. Id. Working with information obtained from other nuclear plants on their TDI engines' operating experience, VEGP identified potential engine problems for inspection and technical evaluation. Id., ¶ 3-4. In March of 1984, VEGP began the complete disassembly of its Unit 1 diesels, as the first step in its EDG Resolution Program. Id., ¶ 4.

At the time VEGP was initiating its EDG Resolution Program, other utilities were also becoming concerned about diesel

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6/ In admitting Contention 14, the Board noted Joint Intervenors' assertion that Applicants were aware of problems with TDI engines "as early as December 1981." Memorandum and Order at 37. Applicants, however, had purchased TDI engines much earlier, in 1976. See Kammeyer Affidavit, ¶ 5.

generator problems. On December 21, 1983, following a technical information exchange meeting, the TDI Diesel Generator Owners Group was formally organized by Georgia Power Company ("GPC") and eleven other U.S. utilities. Kammeyer Affidavit, ¶¶ 6, 7. A Program was established by this Owners Group to provide an in-depth assessment of the adequacy of the TDI diesel generators to perform their intended safety-related functions through a combination of component design reviews and quality revalidations, engine testing, and the establishment of maintenance and surveillance requirements. Id., ¶¶ 8, 9. The Program elements included: (1) resolution of known generic problems (Phase I); (2) systematic design review and quality revalidation of all components important to reliability and operability of each owner's engines (Phase II); (3) appropriate engine inspections and testing, as identified by the results of Phases I and II; and (4) appropriate maintenance and surveillance programs, as indicated by the results of Phases I and II. Id., ¶ 9. The NRC Staff evaluated the Owners Group Program and concluded that it incorporated the essential elements needed to resolve the outstanding concerns relating to the reliability of the TDI diesel generators for nuclear service, and to ensure that the TDI diesel generators comply with General Design Criteria ("GDC") 1 and GDC 17. See id.; "Safety Evaluation Report-Transamerica Delaval, Inc. Diesel Generator Owners Group Program Plan," August 13, 1984. VEGP's EDG Resolution Program

was subsequently encompassed within the framework of the Owners Group Program. See generally Phillips Affidavit.

1. Phase I - Resolution of Sixteen Generic Problems

a. Owners Group Review and Analysis of the Sixteen Phase I Components.

In the Phase I effort, sixteen components with problems potentially generic to TDI diesel generators were reviewed and the specific design and/or manufacturing concerns identified resolved through analyses, testing, documentation reviews, and recommendations to the owners regarding preventative maintenance and surveillance.7/ Kammeyer Affidavit, ¶¶ 10, 11. A wide array of experience, as well as basic technical data, went into the database governing selection of the sixteen components which received a detailed design review in the Phase I effort. TDI engine/component operational experiences were documented using input from both nuclear (i.e., 10 C.F.R. Part 21 Reports, Licensing Event Reports, etc.) and non-nuclear sources (both marine8/ and stationary diesel engines), as well as information

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7/ These sixteen components were the pistons, wiring and termination, air start valve capscrews, turbocharger, fuel oil injection tubing, pushrods, jacket water pump, cylinder heads, cylinder head studs, crankshaft, connecting rod bearing shells, cylinder block, connecting rods, rocker arm capscrews, engine base and bearing caps, and cylinder liner.

8/ TDI diesel generator problems experienced in marine applications were among the concerns expressed by Joint Intervenors. See Intervenors' Response to First Set of Interrogatories, Answer to Interrogatories 14-1, 14-2.

obtained as a result of feedback from the utilities' own inspection and testing conducted as part of the Owners Group Program. Id., ¶¶ 10, 76.9/ Using this information, the Owners Group technical staff determined that only a limited number of components warranted consideration as significant problems with potentially generic applicability. Id., ¶ 10. These components were subjected to a detailed design review by the Owners Group's consultants. Id., ¶ 11. Inspection and maintenance requirements were also prepared as part of the Phase I effort. Id.

While TDI drawings and certain TDI information were used as input to the Phase I design review, the actual technical evaluations were performed independent of TDI. Id., ¶ 12. The methodology for verification of the critical attributes was established and the sixteen components were evaluated by analyses performed by the Owners Group, not by a review of TDI analyses. Id. The Phase I effort, therefore, provided an independent verification of all critical design aspects of each of the sixteen components. Id.

The Owners Group Program achieved independence from TDI's quality assurance program by inspection and testing of

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9/ This same comprehensive database was utilized in the selection of components for Phase II (Design Review/Quality Revalidation ("DR/QR") of Selected Engine Components) of the Owners Group Program. Kammeyer Affidavit, ¶ 76.

the diesel generator equipment at each plant, including VEGP. Id., ¶ 13. The inspections recommended by the Owners Group provide a specific means of verifying critical aspects of each component. Id.

Results and conclusions of the Owners Group evaluation of the sixteen Phase I components are contained in thirty-six reports which were submitted to the NRC Staff for review.10/ Id., ¶ 14. An overview of the Owners Group analysis and conclusions, with regard to each of the Phase I components, is contained in ¶¶ 15-74 of the Kammeyer Affidavit.

b. Problems Cited as Bases for Contention 14 Which Were Resolved in the Phase I Program.

The problems with the airstart valve capscrews, piston skirts, and electrical cable cited by Joint Intervenors as bases for this contention, were among the problems addressed in

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10/ The Staff recently issued Safety Evaluation Reports for three of the Phase I components. See "Safety Evaluation Report (SER) Transamerica Delaval, Inc. (TDI) Diesel Generator Owners Group Analysis of the R-4 and RV-4 Series Emergency Diesel Generator Engine and Auxiliary Module Wiring and Termination," June 25, 1985; "Safety Evaluation Report (SER) Transamerica Delaval, Inc. (TDI) Diesel Generator Owners Group Analysis of the R-4 and RV-4 Series Emergency Diesel Generator Air Start Valve Capscrews," June 17, 1985; "Safety Evaluation Report (SER) Transamerica Delaval Inc. (TDI) Diesel Generator Owners Group Analysis of the R-4 and RV-4 Series Emergency Diesel Generator Rocker Arm Capscrews," June 17, 1985. In all cases, the Staff concluded that the components are adequately designed for their intended service, provided that Owners Group recommendations, and proper installation and maintenance procedures are followed.

the Owners Group's Phase I analysis. See id., ¶¶ 29, 34, 49. Corrective action taken, or to be implemented by VEGP, with regard to each of these components, meets with the approval of the Owners Group. See id. ¶¶ 29-31, 34-37, 48-52. VEGP replaced the original "AN-type" pistons on its engines with "AE-type" pistons.11/ Phillips Affidavit, ¶ 14, Ex. 2. The "AE" design is not susceptible to the types of problems reported for the "AN" skirts and is adequate for unlimited life under full-load conditions. Kammeyer Affidavit, ¶ 52, Phillips Affidavit, ¶ 14. Owners Group-recommended nondestructive examinations have also been performed on replacement pistons. See Phillips Affidavit, Ex. 2. VEGP replaced the original 3"-long airstart valve capscrews on its engines with 2-3/4" capscrews. Id. ¶ 14, Ex. 2. The Owners Group evaluation of this capscrew concluded that it was adequately designed and suitable for nuclear service. Kammeyer Affidavit, ¶ 36. Finally, VEGP will replace the engine-mounted electrical cable which failed the IEEE-383 requirements. Phillips Affidavit, ¶ 14. Based on its independent analysis, the Owners Group concluded that the replacement cable is satisfactory for its intended service.

11/ Joint Intervenors made much of the fact that the original corrective action contemplated for this component would not have been completed until December, 1986. See, e.g., Intervenors' Response to First Set of Interrogatories, Answers to Interrogatories 14-4, 14-7. Since Applicants have chosen to replace the pistons, instead of reworking them, corrective action is now complete.

Kammeyer Affidavit, ¶ 31.12/

Over one-half of the components cited by Joint Intervenors as contributing to the "pattern of problems" with TDI diesels were included among the Phase I components subjected to a detailed design review. See Intervenors' Response to First Set of Interrogatories, Answers to Interrogatories 14-1, 14-2; Kammeyer Affidavit, ¶ 10.13/ Based on its independent evaluations, as well as the implementation of applicable inspection, testing, and maintenance and surveillance recommendations (which have been or will be performed at VEGP), the Owners Group concluded that each of the Phase I components were acceptable for their intended nuclear service. See id., ¶¶ 15-74. See generally Phillips Affidavit.

12/ As previously noted, the other item cited by Joint Intervenors as a basis for the contention involved the location of the governor lube oil coolers. If the coolers were improperly located above the governor lube oil level, air could have been trapped in the system when lube oil level was low. Phillips Affidavit, ¶ 14. Visual inspections at VEGP verified that the coolers were properly located below the lube oil level shown on the sight gauge, precluding the possibility of air being trapped. Id.

13/ The remaining generalized component problems identified by Joint Intervenors are either known to be inapplicable to VEGP, resolved, or are being resolved through an engineering review. See Phillips Affidavit, ¶ 14.

2. Phase II - Design Review/Quality Revalidation of Selected VEGP Engine Components.

Phase II of the Owners Group Program, the DR/QR effort, examined the components of each owner's particular engines which were not reviewed in Phase I from the standpoint of both design and quality attributes. Kammeyer Affidavit, ¶ 75. These components did not have a history of problems associated with them. Id. The critical nature of the component, based upon the effect its failure would have on engine performance, was also analyzed, and components categorized accordingly. Id., ¶ 77. Components were selected for design review and/or quality revalidation on the basis of past nuclear and non-nuclear engine experience, site-specific experience, etc., as entered into the comprehensive database discussed supra., as well as other factors, including component criticality. Id., ¶¶ 75, 76, 78.

Design review and/or quality revalidation requirements for each component were reflected in specific task descriptions (Component Revalidation Checklists) which were implemented by the Owners Group technical staff and either have been, or will be implemented by VEGP site personnel. Id. ¶ 82; Phillips Afffidavit, ¶¶ 5, 7, 8. The critical attributes of a given component, and how best to verify that attribute (i.e., analysis, inspection, or both), dictated the nature of the required

review. Kammeyer Affidavit, ¶ 79. 171 components were reviewed for the VEGP engines. Id., ¶ 85.

The VEGP DR/QR Report for Unit 1, prepared by the Owners Group, was issued in December of 1984 and transmitted to the NRC on January 18, 1985. Phillips Affidavit, ¶ 6. This report incorporated the information contained in the 12-volume report prepared by VEGP on its engine revalidation effort. Kammeyer Affidavit, ¶ 82. See also Phillips Affidavit, ¶ 6. Each of the diesel generators at VEGP was disassembled, inspected, repaired or modified, as necessary, and reassembled as part of VEGP's EDG Resolution Program and its implementation of the Owners Group Program. Id., ¶¶ 4, 6-8.14/ This significant effort was conducted by Nuclear Operations under the supervision of VEGP Site Quality Control and Quality Assurance. Id., ¶ 4. Components were visually inspected for signs of damage or wear and to verify proper installation and preloading, as necessary. See id., Ex. 2. Nondestructive examinations, including eddy current and liquid penetrant testing were performed. Id. In some cases, testing of component material and/or hardness was conducted. Id. Certain components were modified to conform to current TDI specifications or were replaced while the engines were disassembled. Id.

14/ In some cases, VEGP's EDG Resolution Program exceeded the number of Owners Group recommended inspections and component testing. See Phillips Affidavit, ¶ 5.

The Phase II DR/QR effort is nearly completed at VEGP for both Units. Id., ¶¶ 7-8.15/ With two exceptions, VEGP is implementing all applicable recommendations resulting from Phases I and II of the Owners Group Program.16/ Eppler Affidavit, ¶¶ 7-8, Phillips Affidavit, ¶¶ 23-24.

15/ Because VEGP initiated its engine revalidation effort early, prior to the Owners Group's development of plant-specific inspection and testing requirements, certain Owners Group-required component inspections and tests on the Unit 1 diesels were not performed when they were originally disassembled. See Phillips Affidavit ¶ 5. These engines will be disassembled a second time to complete the revalidation effort. Id., ¶7. A few inspections also remain to be performed on the Unit 2 diesels. Id., ¶ 8. A select group of components will be re-inspected, per Owners Group recommendations, after operation of each Unit's engines. Id., ¶ 22.

16/ As discussed at ¶ 7 of the Eppler Affidavit, VEGP is unable to add a Dresser coupling to its engines at the location specified by the Owners Group in the VEGP DR/QR Report. Therefore, Bechtel Power Corporation ("Bechtel"), VEGP's architect/engineer, performed a stress analysis for the piping and calculated nozzle loads. Id., ¶ 7. The loads were reviewed and found acceptable. Id. Addition of this coupling is, therefore, unnecessary at VEGP. Id.

Bechtel also reviewed the Owners Group recommendation concerning the replacement of certain slip joints. Id., ¶ 8. A review of the VEGP engine drawings indicated that only some of the joints needed to be replaced. Id. This will be verified by a walkdown. Id.

3. Applicants Have Committed to Perform the Enhanced Engine Maintenance and Surveillance and Testing Recommended by the Owners Group.

The final elements of the Owners Group Program involve the implementation of a maintenance and surveillance program and an enhanced testing program coupled with specific component inspections. Phillips Affidavit, ¶¶ 9-11, 22, Kammeyer Affidavit, ¶ 88. The Owners Group technical staff, in evaluating specific engine components, provided technical recommendations regarding special tests and component inspections which would be appropriate to ensure the adequacy of the engines. Kammeyer Affidavit, ¶ 88. These recommendations, along with maintenance and surveillance requirements, were conveyed in each owner's DR/QR Report. Id. VEGP is committed to implementing these recommendations. See Phillips Affidavit, ¶¶ 11, 15, 22. "Ongoing" maintenance and surveillance recommendations obtained from the Owners Group will supplement those of TDI as well as standard VEGP procedures on a day-to-day basis. Id., ¶ 11. It is estimated that nearly 3800 man hours per year will be expended performing the required maintenance and surveillance on each diesel generator. Id.

Surveillance programs presently in place at VEGP will continue to identify, monitor, and resolve any problems with TDI-supplied equipment in the future. Id., ¶¶ 12-14. These

programs include those established pursuant to 10 C.F.R. Part 21 and 10 C.F.R. § 50.55(e). Id., ¶¶ 13, 14.17/

C. Pre-Operational Testing of the VEGP Diesel Generators Will Be Conducted

Prior to plant licensing and operation, the VEGP TDI diesel generators will undergo a full pre-operational test program. Id., ¶¶ 18, 21. The testing program will be conducted in accordance with Regulatory Guides 1.9 and 1.108, and IEEE Standard 387-1977, as committed to in the VEGP FSAR. See id., ¶ 21. The tests include diesel generator control logic and auxiliary systems tests, diesel generator load and load rejection tests, and diesel generator reliability tests. Id. Additional tests, including those recommended by the Owners Group, will also be performed. Id., ¶¶ 19, 20, 22. Among these will be a torsiograph test to confirm the adequacy of the crankshaft, and an engine vibration survey conducted at full load. Id., ¶ 22. Cylinder imbalance testing will also be conducted on the engines. Id. Equipment inspections, recommended by the Owner Group, will also be performed at this time, as applicable. Id. For example, seven components will receive special

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17/ Of the components not addressed as generic concerns in the Phase I effort, at least three problems identified by Joint Intervenors (governor lube oil cooler assembly, starting air sensing line and governor drive coupling material) were addressed by VEGP as a result of its monitoring of 10 C.F.R. Part 21 reports. See Phillips Affidavit, ¶ 14.

inspections at various intervals beyond 100 hours of engine operation. Id.

The extensive pre-operational testing which has already been conducted on the TDI DSRV-16-4 engines at Comanche Peak (in excess of 100 hours) and Catawba (which alone has over 1,600 hours of operation), as well as that to be conducted at VEGP, provide additional assurance of the capabilities of the TDI DSRV-16-4 model engines at VEGP. Id., ¶¶ 16, 17, 25.

D. The Owners Group Program, as Implemented at VEGP, Has Assessed and Demonstrated the Adequacy of VEGP's Diesel Generators

The Owners Group Program was unprecedented in its approach and analytical detail, in many instances incorporating analyses beyond the detailed engineering effort which originally went into the design of the diesel generator components. Kammeyer Affidavit., ¶ 91. It was likewise unprecedented in its scope, spanning over a year's time, drawing upon the input from a variety of highly qualified technical consultants, and involving more than a hundred engineers and technicians. Id., ¶¶ 8, 14.

The Owners Group Program provided an independent design verification of important diesel engine components' attributes. Id., ¶ 12. All technical evaluations were performed independent of TDI. Id. The Owners Group program of component inspections and testing of diesel generator equipment at each plant assures that independence from TDI's quality assurance program has been achieved. Id., ¶ 13.

The TDI Diesel Generator Owners Group Program, as implemented at VEGP through its EDG Resolution Program, has assessed the suitability of TDI diesel generators to perform their intended safety-related functions, and provides assurance that they will perform reliably.18/ Phillips Affidavit, ¶¶ 23-24, Kammeyer Affidavit, ¶¶ 90-91. The Owners Group Program, as implemented at VEGP, has been conducted independently of TDI and its manufacturing and quality programs; it has revalidated the diesel generators on-site. See Kammeyer Affidavit, ¶ 13, Phillips Affidavit, ¶¶ 4-8.

IV. CONCLUSION

The Owners Group Program, as implemented at VEGP through its EDG Resolution Program, has addressed and resolved each of the generic problems formerly associated with TDI engines. This includes over one-half of the problems identified by Joint Intervenors. VEGP's on-site disassembly, inspection and testing of its engines, and ongoing program of engine maintenance and surveillance (including the monitoring and resolution of problems identified in Part 21 reports) have addressed each of the remaining problems identified with engine components. This includes all of the remaining problems with the

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18/ As previously noted, one of the stated bases for Contention 14 was that Applicants had failed to make a general assessment of the suitability of the diesels to perform their emergency functions.

engines raised by Joint Intervenors. The Owners Group Program, as already implemented at VEGP, VEGP's ongoing maintenance and surveillance program, and future engine testing assure that the TDI diesel generators will provide an adequate source of emergency on-site power.

Because there is no genuine issue of material fact to be heard on Contention 14, and because Applicants have demonstrated that the bases of CPG's and GANE's contention concerning the adequacy and reliability of the VEGP TDI diesel generators are insubstantial, Applicants' Motion for Summary Disposition of Contention 14 should be granted.

Respectfully submitted,

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DATED: July 31, 1985