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NUCLEAR REGULATORY COMMISSION

OFFICE OF SECRETARY
NUCLEAR REGULATORY COMMISSION
Before the Atomic Safety and Licensing Board

In the Matter of)
)
THE CLEVELAND ELECTRIC) Docket Nos. 50-440
ILLUMINATING COMPANY, ET AL.) 50-441
)
(Perry Nuclear Power Plant,)
Units 1 and 2))

APPLICANTS' ANSWERS TO OHIO CITIZENS FOR
RESPONSIBLE ENERGY TWELFTH SET OF INTERROGATORIES
TO APPLICANTS RELATING TO ISSUE NO. 16

Applicants for their answers to Ohio Citizens for Responsible Energy ("OCRE") Twelfth Set of Interrogatories to Applicants, dated May 14, 1984 (served May 15, 1984), state as follows:

All documents supplied to OCRE for inspection will be produced at Perry Nuclear Power Plant ("PNPP"). Arrangements to examine the documents at PNPP can be made by contacting Mr. Bradley S. Ferrell of The Cleveland Electric Illuminating Company ("CEI") at (216) 259-3737, extension 5520. Applicants will provide copies of any of the produced documents or portions thereof which OCRE requests at Applicants' cost of duplication. Arrangements for obtaining copies can be made with Mr. Ferrell.

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On May 21, 1984, Applicants' counsel, Michael A. Swiger, conferred by telephone with OCRE representative Susan L. Hiatt regarding clarification of Interrogatories #12-4, #12-5 and #12-7. Ms. Hiatt clarified that these Interrogatories should be read to exclude commercial considerations involved in the bidding process for the PNPP standby diesel generators.

RESPONSES

12-1. Produce a copy of the contract with TDI for supplying the PNPP standby DGs. (OCRE is willing to accept a copy with monetary amounts deleted.)

Response:

A copy of the contract with Transamerica Delaval, Inc. ("Delaval" or "TDI") to supply standby diesel generators for PNPP, with commercial information deleted, is available for examination at PNPP.

12-2. Identify all documents Applicants intend to offer as exhibits or use in cross-examination during this proceeding pertaining to Issue #16.

Response:

Applicants have not yet determined which documents they will offer as exhibits or use in cross-examination on Issue No. 16.

12-3. List each and every failure, defect, deficiency, nonconformance, or problem occurring in TDI diesel engines; for each occurrence, state the type of application of the diesel engine (e.g., nuclear or other stationary power source or marine propulsion unit); name of the plant, ship or other facility using the diesel engine; the rated capacity of the engine (or generator) the type of diesel engine (e.g., straight-8 or V-16) and all other relevant design information; the number of hours of

operation when the problem occurred; whether the problem occurred during type qualification testing, preservice testing, inservice testing, or actual operation; the cause(s) of the problem; and all other facts, details, and circumstances concerning the problem. Identify all relevant documentation of the problem.

Response:

Applicants do not have a comprehensive list containing the requested information. Considerable information concerning the operating and maintenance histories of Delaval diesel generators, in nuclear and other applications, has already been provided to OCRE through NRC Information Notices and Board Notifications and through previous discovery requests to Applicants. Additional information is contained in the Emergency Diesel Generator Component Tracking System, Perry Nuclear Power Plant, Units No. 1 and 2, which is available for examination at PNPP.

12-4. Identify each and every reason why the bid of Colt Industries for manufacturing the PNPP standby diesel generators was rejected. Specifically: (a) Identify every specification requirement which was not met by Colt, and explain why each such spec requirement could not have been conformed to the Colt bid. (b) Identify whether the rejection of Colt's bid was in any way based on Colt QA, reputation, reliability, or engine performance or operational experience; for each such attribute relied upon, thoroughly explain why it made Colt unacceptable and provide documentation of Colt's unacceptable performance.

Response:

(a) The specification requirements which both the base and alternate bids of Colt Industries ("Colt") failed to meet, and the reasons why the requirements could not be conformed to the bids, are discussed in PY-GAI/CEI-3235 (August 14, 1975). This document was produced for OCRE pursuant to a previous discovery

request. See Applicants' Answers to Ohio Citizens for Responsible Energy Tenth Set of Interrogatories to Applicants Relating to Issue No. 16, dated February 8, 1984 ("Answers to OCRE Tenth Set"), response to Interrogatory #10-9.

(b) The rejection of the Colt bids was not based on QA, reputation, reliability, engine performance or operational history.

12-5. Explain what "alternate bids" were received (see Applicants' answer to OCRE Interrogatory 10-10(a)) for the manufacture of the PNPP standby DGs and explain why they were rejected; especially identify any reasons for rejection based on quality or reliability/experience concerns.

Response:

Only Delaval and Colt submitted alternate bids. Colt's alternate bid was rejected because Colt took numerous exceptions to specification requirements which could not be conformed to the bid. See response to Interrogatory #12-4(a), supra. Delaval's alternate bid was accepted as the basis for awarding the contract to Delaval.

12-6. Identify each and every reason concerning QA, reputation, performance, or operational experience of Cooper Industries relied upon to justify rejection of Cooper's bid. Identify any documentation of such attributes concerning Cooper Industries.

Response:

The rejection of Cooper Industries' bid was not based on QA, reputation, performance or operational experience. Documentation of such attributes is found in PY-GAI/CEI-3235 (August 14, 1975),

which was produced for OCRE pursuant to a previous discovery request. See response to Interrogatory #12-4(a), supra.

12-7. Produce the letter of inquiry and all bids received for the manufacture of PNPP standby DGs.

Response:

The letters of inquiry are available for examination at PNPP. The bids received, with commercial information deleted, also are available for examination at PNPP.

12-8. Produce all corrective action requests issued by Applicants against TDI.

Response:

All Corrective Action Requests issued by Applicants to Delaval are available for examination at PNPP.

12-9. (a) Produce all stop work orders issued by Applicants against TDI.

(b) For each stop work order imposed, state when and why it was imposed, when it was rescinded, what TDI activities were affected, and what corrective actions were achieved.

Response:

(a) All Stop Work Orders issued by Applicants to Delaval are available for examination at PNPP.

(b) The information requested is contained in the documentation package for each Stop Work Order. The documentation packages are available for examination at PNPP.

12-10. Did Applicants ever place a resident inspector at TDI's facilities pursuant to SP-706 Sec. 1.05.3? If so, identify any person(s) so stationed, giving each person's full name, title, employer, and address. Produce any documented findings of any such person.

Response:

A resident inspector was not assigned to Delaval's facility in Oakland, California pursuant to the specification.

12-11. Refer to the 12-21-83 letter from Murray Edelman, CEI to James Keppler, NRC R. III re starting air check valve modifications, in which it is stated that TDI could not perform the modifications at their facility in accordance with ASME requirements.

(a) Explain why TDI could not meet ASME requirements.

(b) Is TDI certified by ASME? If so, explain what areas the ASME certification covers and how such certification is awarded.

Response:

(a) Delaval did possess certification by the American Society of Mechanical Engineers ("ASME") which would have allowed it to perform the modifications to the starting air check valves discussed in the above-referenced letter. However, the check valves were manufactured by a Delaval subvendor. In addition, ASME requirements included post-modification testing for which the subvendor, but not Delaval, had the necessary equipment. It was thus determined that the subvendor should perform the modifications.

(b) Delaval is certified by ASME, and currently possesses the following ASME certifications at its Oakland facility:

- (1) ASME "N" Certificate -- covers fabrication of Class 3 vessels, pumps, valves and storage tanks, and material supplying of ferrous bolting, castings, structural shapes, seamless tubular products and welding material;
- (2) ASME "NA" Certificate -- covers shop assembly of Class 3 components, appurtenances, piping subassemblies and component supports;
- (3) ASME "NPT" Certificate -- covers fabrication of Class 3 piping subassemblies and component supports.

Certification is granted by ASME in accordance with the ASME Boiler and Pressure Vessel Code, § III, NCA-8000. The ASME Code, § III, NCA-8000 is available for examination at PNPP.

12-12. Describe in detail the DR/QR program for the PNPP DGs; specifically, list each component which will receive a design review; detail all inspections to be performed on the DGs; identify all testing to be performed; list all referenced reports or sources of information relied upon to identify components, set acceptance criteria, or otherwise define the scope of the DR/QR for PNPP, and provide a schedule for the completion of the DR/QR for PNPP including scheduled times and locations for conducting all inspections or tests on the DGs.

Response:

A list of the PNPP standby diesel generator components which will undergo a design review under the Design Review/Quality Revalidation Program ("DR/QR Program") is available for examination at PNPP. Identification of components was based on the TDI Parts Manual, vendor manuals, Delaval and vendor drawings,

Gilbert Associates, Inc. ("Gilbert") drawings, the conformed specification, and site experience data. Inspection and testing plans for PNPP, including identification of inspections and tests to be performed, identification of acceptance criteria, and scheduling of times and locations, still are being developed. A schedule for completion of the DR/QR Program for PNPP has not yet been determined.

12-13. (a) Do Applicants intend to derate the TDI DGs at PNPP?

(b) Is derating the DGs an option in the DR/QR program? If so, explain what factors or findings would influence or favor a decision to derate the DGs.

(c) If the answer to either (a) or (b) above is affirmative, explain in detail how the derating of the PNPP DGs would be accomplished.

Response:

(a) It is not Applicants' present intention to derate the PNPP standby diesel generators.

(b) Derating is not an option in the DR/QR Program.

(c) Not applicable.

12-14. (a) Explain the statement at p. 3 of the Minutes of Diesel Generator Users Group Steering Committee Meeting, Oakland, CA, 11/29/83, i.e.: "No decisions should be made by the User's Group that could affect diesel generator manufacturer competition in the future."

(b) Does this statement mean that the User's Group will never find or proclaim any DG to be unreliable or of poor quality even if this is true?

(c) Explain why the User's Group chose to take this position.

Response:

(a) The statement to which the Interrogatory refers reflected a then-existing concern among steering committee members that an Owner's Group formed to review only one vendor could unfairly effect future competition among diesel engine suppliers. It was subsequently determined that this was not a concern; and the Owner's Group charter was written to limit its scope to Delaval engines.

(b) No. See answer to (a), above.

(c) See answer to (a), above.

12-15. Does the TDI Owners Group have any studies planned or implemented concerning vibration in TDI engines? If so, produce any plans or completed studies; discuss thoroughly any such plans or findings.

Response:

The Owners Group will address engine vibration as part of the DR/QR Program. Detailed plans have not yet been developed.

12-16. Are components supplied by subvendors (e.g., the generators) ever in the custody of TDI or are they shipped directly from the subvendor to PNPP? Identify all components in TDI's custody, and indicate whether TDI performed any tests or inspections on the items.

Response:

Components supplied by subvendors which were required for assembly and factory testing of the PNPP standby diesel generators were shipped to Delaval. Applicants do not have a list of these components. Yes, Delaval inspected and tested components supplied by subvendors.

12-17. Produce Agreement P-1152-S.

Response:

This document is the contract between Applicants and Delaval for the purchase of the standby diesel generators. See response to Interrogatory #1, supra.

12-18. Explain the levels of expediting referred to in the August 10, 1978 Expediting Report; i.e. does Class 4 represent a higher level of expediting than Class 6? Explain why expedition of TDI's work was sought.

Response:

Levels of expediting refer to levels of monitoring vendors for compliance with established schedules for supplying equipment to PNPP. All major equipment for PNPP that is purchased by contract is "expedited," or monitored. Class 6 is a higher level of expediting than Class 4.

12-19. Produce GAI memorandum PY-GAI/CEI-14003.

Response:

Gilbert memorandum PY-GAI/CEI-14003 is available for examination at PNPP.

12-20. Referring to the August 4, 1981 letter from R. M. Bonner, CEI, to P.B. Cudikunst, Gilbert Associates, answer the following (a) Describe in detail the "SWAT Team" referred to; explain its purpose and list all members of the SWAT Team, give each member's full name, title, employer, and address.

(b) Describe in detail the outstanding problems referred to.

(c) Identify the consultant designated to assist in manning at Delaval, and thoroughly explain the consultant's function.

(d) Describe in detail any reports, findings, conclusions, comments, or recommendations of the SWAT Team and the consultant.

Response:

(a) The "SWAT Team" referred to in Mr. Bonner's letter is formally designated the Diesel Generator Task Force ("Task Force"). The Task Force is a team of PNPP personnel designated to coordinate the solution of construction problems associated with the Delaval standby diesel generators. The names, titles, employers and business addresses of team members are listed in Attachment A.

(b) The "outstanding problems" referred to in the letter were Deviation Analysis Reports ("DARs") and Nonconformance Reports ("NRs") relating to the standby diesel generators which had not yet been closed out. These DARs and NRs were produced for OCRE pursuant to a previous discovery request. See Answers to OCRE Tenth Set, response to Interrogatory #10-18.

(c) A consultant was not designated to assist in manning at Delaval.

(d) The purpose of the Task Force is not to issue reports, findings, conclusions, comments or recommendations. See answer to (a), above.

12-21. Is the task force mentioned in DAR 139 the same as the SWAT Team referred to above? If not, identify all members of the task force giving each person's name, title, employer, and address; explain the purpose of the task force, and describe any findings, comments, conclusions, and recommendations of the task force.

Response:

The Task Force referenced in DAR 139 is the same as the "SWAT Team" referenced in Interrogatory #12-20, above.

12-22. On July 14, 1978 GAI issued a certificate of inspection with waiver for the shipment of the first diesel engine; attached to the COI is a list of 6 exceptions. (Similar COIs with waiver and with similar exceptions were issued for the other 3 engines as well.) For each exception, demonstrate that resolution has been achieved, giving the date achieved, the disposition of the item, and a reference to appropriate documentation of its resolution.

Response:

The requested information is provided below. The following exceptions were listed on the Certificate of Inspection for one or more of the standby diesel generators.

<u>Item</u>	<u>Resolution Date</u>	<u>Disposition</u>	<u>Documentation Reference</u>
1. Seismic reports			
a. Engine/ Generator and Skid Components	7/11/83	Approved	PNPP Seismic Qualification Report #94Q-300
b. Diesel Control System	1/9/84	Approved	##94Q-587, 590
c. Generation Control and Power Cabinets	4/18/83	Approved	##94Q-260, 261, 567, 693
d. Excitor Regulator Chassis	4/4/84	Approved	##94Q-567, 693, 694
2. "Use-as-is" disposition for welding defects	10/22/79	Approved	PY-GAI/CEI-15781 (June 8, 1984)
3. IEEE 323 test reports			

<u>Item</u>	<u>Resolution Date</u>	<u>Disposition</u>	<u>Documentation Reference</u>
a. Generator	6/27/83	Approved	#94Q-297
b. Diesel Engine Control	6/13/83	Approved	#94Q-587
c. Siemens-Allis Motors	6/3/83	Approved	#94Q-556
4. Documentation Packages	N/A	Approved	Documentation Packages (pages are stamped)
5. Deficient paint condition	7/31/78	Approved	PY-GAI/CEI-15782 (June 8, 1984)
6. Delaval QA program	7/17/78 to 7/19/78	Approved	PY-CEI/VEN-160 QA (July 24, 1978)

12-23. Demonstrate that the crankshaft deficiencies identified in the Documentation Packages for Engines 2816/75053 and 2817/75054 (dents, scratches, machining errors and nonmetallic inclusions) have been properly corrected.

Response:

Documentation of corrective actions taken is included in the documentation packages for these engines. The documentation packages were produced for OCRE pursuant to a previous discovery request. See Answers to OCRE Tenth Set, response to Interrogatory #10-9.

12-24. Describe in detail the attempts Applicants have made to determine the cause of the excessive scuffing of LB #6 cylinder liner and the large compression differences observed in the shop test of the first engine, also describe any findings and corrective actions made.

Response:

It is not known what caused the excessive scuffing of the #6 cylinder liner or the compression differential observed during factory testing of the Unit 1, Division 1 engine. The cylinder liner was subsequently replaced, and the #6 piston was inspected before being placed back into the liner. On retesting of the engine under the same conditions with the new liner, no excessive scuffing of the liner or large compression differential was observed. Subsequent factory testing of the engine has not revealed any compression problems. Compression checking will also be performed on the engine during preoperational testing.

12-25. Describe in detail any inspections Applicants conducted on the fourth engine after the piston assembly/cylinder liner failure during the shop test to ensure that no other components were damaged by the failure; describe any findings of any such inspections. Also describe all attempts Applicants made to determine the root cause of the failure, and any corrective actions taken to avoid recurrence.

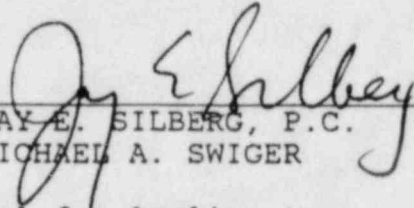
Response

The information requested is contained in PY-GAI/CEI-1380-QA (June 7, 1978), which was produced for OCRE pursuant to a previous discovery request. See Answers to OCRE Tenth Set, response to Interrogatory #10-30.

Respectfully submitted,

SHAW, PITTMAN, POTTS & TROWBRIDGE

By:



JAY E. SILBERG, P.C.
MICHAEL A. SWIGER

Counsel for Applicants
1800 M Street, N.W.
Washington, D.C. 20036
(202) 822-1000

Dated: June 11, 1984

ATTACHMENT A

DIESEL GENERATOR TASK FORCE *

<u>Name</u>	<u>Title</u>	<u>Employer</u>
E. C. Christiansen	Engineer	The Cleveland Electric Illuminating Company ("CEI")
E. M. Root	Senior Design Engineer	CEI
L. K. Routzan	Junior Engineer	CEI
D. Jacobson	Project Scheduler	Raymond Kaiser Engineer ("Kaiser")
A. P. Pusateri	Associate Engineer	Kaiser
L. A. Kilpeck	Senior Construction Specialist	CEI
D. E. Stephens	Test Engineer	Gilbert Associates, Inc.
T. J. Gaydos	Construction Analyst	CEI
J. E. Barron	Senior Buyer	CEI
W. E. Coleman	Senior Engineer	CEI
G. K. Luciano	Project Scheduler	Kaiser
D. G. Phillips	Junior Operations Engineer	CEI
H. L. Hrenda	Associate Engineer	CEI
J. E. Magoon	Associate Engineer	CEI

* The business address of all members of the Task Force is
10 Center Road, Perry, Ohio 44081

THE CLEVELAND ELECTRIC ILLUMINATING COMPANY

CLEVELAND, OHIO

Edward C. Christiansen, being duly sworn according to law, deposes that he is Engineer, Nuclear Construction Department, of The Cleveland Electric Illuminating Company, and that the facts set forth in the answers to Ohio Citizens for Responsible Energy Interrogatories 12-1 through 12-7, 12-11 through 12-15, and 12-17 through 12-25 in the foregoing "Applicants Answers to Ohio Citizens for Responsible Energy Twelfth Set of Interrogatories to Applicants Relating to Issue No. 16," dated June 11, 1984, are true and correct to the best of his knowledge, information, and belief.

Edward C. Christiansen

Sworn to and subscribed before me
this 8th day of

June, 1984

Caroline M. Wilde

CAROLINE M. WILDE
Notary Public, State of Ohio
My Commission Expires April 17, 1985
(Recorded in Lake County)

THE CLEVELAND ELECTRIC ILLUMINATING COMPANY

CLEVELAND, OHIO

Thomas G. Swansiger being duly sworn according to law, deposes that he is Supervisor, Procurement Quality Unit, Nuclear Quality Assurance Department, of The Cleveland Electric Illuminating Company, and that the facts set forth in the answers to Ohio Citizens for Responsible Energy Interrogatories 12-8 through 12-12, 12-16, and 12-22 in the foregoing "Applicants Answers to Ohio Citizens for Responsible Energy Twelfth Set of Interrogatories to Applicants Relating to Issue No. 16," dated June 11, 1984, are true and correct to the best of his knowledge, information, and belief.

Thomas G Swansiger

Sworn to and subscribed before me
this 8th day of
June, 1984.

Caroline M. Wilde

CAROLINE M. WILDE
Notary Public, State of Ohio
My Commission Expires April 17, 1985
(Recorded in Lake County)

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UNITED STATES OF AMERICA '84 JUN 13 A11:13

NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

OFFICE OF SECRETARY
DOCKETING & SERVICE
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In the Matter of)
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THE CLEVELAND ELECTRIC) Docket Nos. 50-440
ILLUMINATING COMPANY, ET AL.) 50-441
)
(Perry Nuclear Power Plant,)
Units 1 and 2))

CERTIFICATE OF SERVICE

This is to certify that copies of the foregoing "Applicants' Answers to Ohio Citizens for Responsible Energy Twelfth Set of Interrogatories to Applicants Relating to Issue No. 16" were served by deposit in the United States Mail, First Class, postage prepaid, this 11th day of June, 1984, to all those on the attached Service List.

Michael A. Swiger
Michael A. Swiger

Dated: June 11, 1984

UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

In the Matter of)
)
THE CLEVELAND ELECTRIC)
ILLUMINATING COMPANY)
)
(Perry Nuclear Power Plant,)
Units 1 and 2))

Docket Nos. 50-440
50-441

SERVICE LIST

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