

**BEFORE THE
UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
ATOMIC SAFETY AND LICENSING BOARD**

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In the Matter of

**BALTIMORE GAS
& ELECTRIC CO.,
et al.,**

**(Calvert Cliffs Unit 1 and
Unit 2)**

**Docket Nos. 50-317 and 50-318
License Renewal**

ASLBP No. 98-749-01-LR

October 1, 1998

STATUS REPORT

In conformance with this Board's Memorandum and Order of September 21, 1998 (Scheduling Matters and Electronic Hearing Database) and this Board's Order of September 29, 1998 (Revised Prehearing Conference Schedule), the Petitioner, National Whistleblower Center (hereinafter, "Center" and/or "NWC") hereby files this Status Report. In addition, pursuant to its obligations under 10 C.F.R. Part 2 and the September 21 and 29 orders of this Board, the Center is also filing today a Motion to Vacate and a Reply to NRC Staff and BGE's Answer.

This Status Report is not the Center's supplemental petition to intervene, its list of contentions and/or its list of the basis for the contentions. As a matter of law and controlling regulations, the Center has until fifteen days prior to the first prehearing conference to file these documents. If the Center's motion to vacate is not granted, the current deadline for filing these documents is October 28, 1998. On the basis of this Board's September 29th Order, the Center may file these documents without leave of the Board. 10 C.F.R. § 2.714 and 63 Federal Register 36,966 (July 8, 1998). As a matter of law, this Board must apply these binding regulations.

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Union Electric Co. v. FERC, 890 F.2d 1193, 1199 (D.C. Cir. 1989).

However, the Center is filing this Status Report in order to further demonstrate that this Board should strictly adhere to the deadlines established in 10 C.F.R. Part 2. Since filing its petition to intervene (and before), the Center has been attempting to locate and retain experts who could provide relevant and material information for this proceeding. Given the Center's long-standing relationship with whistleblowers in the nuclear and scientific areas, the Center was in a unique position to solicit this assistance. Significantly, the Center has now been able to obtain the assistance and/or commitments of assistance from some of this nation's leading experts on matters directly related to the re-licensing of Calvert Cliffs.

It is in the public interest to allow the Center adequate time to obtain the assistance its needs and to allow the experts adequate time to review the relevant material and set forth contentions (along with the proper basis for the contentions) which, when litigated, will serve the public interest. Both the applicant and the NRC Staff should welcome the addition of these experts to this health and safety related proceeding.

The following is a list of some of the experts who have agreed to assist in this proceeding , statements of qualifications and the areas of concern they have identified to be raised as contentions and/or basis for contentions. This filing does not represent a filing of contentions. The filing does not set forth all of the concerns of the experts, and does not provide a basis for the concerns.

Experts and Current Areas of Concern

William A. Tobin: Mr. Tobin is the one of the leading metallurgists and materials analysts in the world. Mr. Tobin received a Bachelor of Science, Metallurgy, Case Institute of

Technology, 1967, a Master of Arts, Special Studies, George Washington University, 1983 and took Graduate studies, Materials Science & Engineering, University of Virginia. In addition, he has attended symposia and courses on Physical Metallurgy, Engineering Metallurgy, Principles of Failure Analysis, Fractography, Energy Dispersive X-ray Fluorescence, Statistics, Structure and Properties of materials and Applied Electrochemistry. Mr. Tobin has served as the Chief Forensic Metallurgist for the FBI. While the Chief met he received a personal commendation from the U.S. Attorney General and five personal commendations from the Directors of the FBI (cash compensation). In addition to the FBI, he work as a metallurgist for the Battelle Memorial Institute and NASA. He is a member of every major, relevant professional organization including but not limited to the National Association of Corrosion Engineers, The American Society for Testing and Materials, American Society for Metals, and the International Metallographic Society. He is also a Diplomate of the American Board of Forensic Engineering and Technology. Mr. Tobin has been qualified as an expert witness in 43 states and 199 local, state, and federal courts. He is the author of numerous articles and has worked on numerous high profile cases and has conducted metallurgy and/or materials analysis in many of the most important cases in American history, including but not limited to TWA 800 disaster, Olympic bombing, and the Oklahoma City Bombing.

Areas of Concern:

1. Containment Vessel: Design; Corrosion (uniform corrosion, localized corrosion, stress corrosion cracking, hydrogen assisted cracking;
2. Evaluation of the following matters in order to determine the aging related materials metallurgy issues which will impact the public safety:
 - A. Corrosion resistant or corrosion allowance materials and design materials;

- B. Complete NDT;
 - C. Materials deterioration/degradation or changes;
 - D. Ground water availability;
 - E. Water phase stability;
 - F. Geologic formation and composition;
 - G. Geologic formation changes;
 - H. Ground water chemistry and characteristics;
 - I. Ground water flow rate;
 - J. Thermal output;
 - K. Radiation output;
 - L. Thermal properties of geologic formation;
 - M. Waste package loading;
 - N. Rate and density of waste package emplacement;
 - O. Prior waste aging duration; and
 - P. Repository loading characteristics.
3. Materials Analysis; Radiation induced embrittlement, Anchor bolts, HVAC, Core Shroud.
 4. The issues above apply to Sections 3 of the application including but not limited to (3.1-17);(3.2-7);(3.3A-11);(3.3A-14);(3.3A-19); (4.2-24).
 5. Matters related to the increased risk of an accident should the Renewal application be approved and other NEPA related concerns, including but not limited to matters related to the severe accident mitigation issues contained in chapter 4 of the application, and issues related to the control of plant risks during the Renewal period.

Allen Mosbaugh: Mr. Mosbaugh was the highest-level engineer to blow the whistle in the nuclear industry. He has a Masters Degree in chemical and nuclear engineering from the University of Cincinnati. Between 1974-77 he worked as a nuclear engineer for Babcock and Wilcox, and worked on projects related to the Davis Bessie and Oconee nuclear plants. He worked as a nuclear engineer, an engineering supervisor and an engineering superintendent for Cincinnati Gas and Electric. In that capacity, he was responsible for testing of nuclear plant systems and was the nuclear fuel custodian. In 1984 Mr. Mosbaugh started to work for Georgia Power Company as the engineering superintendent. He was promoted and became responsible

for testing all of Plant Vogel's safety-related systems. He then was promoted to the engineering manager, responsible for the entire engineering department, the entire quality control department and had responsibility for drafting and approving all plant procedures. Next, he was promoted to assistant general manager for plant support and was one of the two top managers on-site, with approximately half the plant reporting directly to him. In that capacity he supervised eight separate departments, including engineering, quality control, security, training, emergency planning, personnel, administration, document control and regulatory licensing (with responsibility to act as the main interface with the NRC). He oversaw the plant's deficiency program and was the Vice Chairman of the Plant Review Board. He also served as the emergency director and the duty manager. He received senior reactor operator's license training and was SRO certified. Between 1990-1996 he worked directly on NRC-related safety proceedings, both as an intervener and whistleblower.

Areas of Concern:

6. The failure of BGE to address the effects of operating events, past non-conformances and past deficiencies on its Aging Management Review process. Without proper review BGE cannot provide reasonable assurances that its AMR review is adequate. This demonstrates weaknesses in CCNPP's Aging Management Review process (2.0-45) and QL-2-100 program (6.3.3.2). This concern includes BGE's failure to address important information relevant to AMR such as a comprehensive review of all past 50.59 Safety Evaluations for systems, components, and structures within the scope of the License Renewal.
7. Weaknesses in evaluations performed that affect the AMR review. (Example: 3.3A-27, 28 Boric Acid leakage effects on reinforcing bar and slab strength). BGE can not provide reasonable assurance that its's AMR is adequate without a comprehensive review.
8. Matters related to the increased risk of an accident should the Renewal application be approved and other NEPA related concerns, including but not limited to matters related to the severe accident mitigation issues contained in chapter 4 of

the application, and issues related to the control of plant risks during the Renewal period.

Randy Robarge: Mr. Robarge is an experienced radiation protection supervisor.

Prior to being hired as a full-time radiation protection supervisor for Commonwealth Edison in 1989, Mr. Robarge had numerous years of experience in the radiation protection area. For a short period of time he worked as a Senior Health Physics Technician at the Calvert Cliffs nuclear facility. He also performed radiation protection work at the Palisades Nuclear Station, the Braidwood Nuclear Station, the Kewaunee Nuclear Station, the Turkey Point Nuclear Station, the Dresden Nuclear Station, Byron Nuclear Station and the LaSalle Nuclear Station. Mr. Robarge is an expert in all areas related to radiation protection, including contamination control, shielding, radiation dose levels, utilization of radiation protection instruments and monitors, the conducting of surveillance and the procedures used to protect employees and the public from exposure to radiation.

Areas of Concern:

1. The Application lacks material information in the CCNPP Integrated Plant Assessment (IPA) Methodology Regarding Section 5.14 Radiation Monitoring System.
2. CCNPP's history of Radiation Monitoring System problems and how that will impact on the aging issues.
3. Matters related to the increased risk of an accident should the Renewal application be approved and other NEPA related concerns, including but not limited to matters related to the severe accident mitigation issues contained in chapter 4 of the application, and issues related to the control of plant risks during the Renewal period.

Laxmi Khandelwal: Mr. Khandelwal worked for twenty-three years for Southern California Edison at the San Onofre nuclear plant. He was employed as a senior engineer and a

supervisor within the Nuclear Engineering and Design Organization. His primary area of expertise is in electrical systems.

Areas of Concern:

1. Environmental Qualification of Safety Related equipment and Components. (2.1-3)
2. Weaknesses in the System Functional Inspection. (6.1-2)
3. Electrical Commodities (6.2-1)
4. Matters related to the increased risk of an accident should the Renewal application be approved and other NEPA related concerns, including but not limited to matters related to the severe accident mitigation issues contained in chapter 4 of the application, and issues related to the control of plant risks during the Renewal period.

Edward Dienethal: Mr. Dienethal was a mechanical maintenance supervisor at Plant Zion between 1989-98. He has expertise in preventative maintenance and the identification of maintenance deficiencies. He received his training in corrective and preventative maintenance in the U.S. Navy.

Areas of Concern:

1. Material and relevant information regarding age of components and whether they meet the safety standards is not contained in the Application:
 - Q. Environmental requirements for and age of the many miles of wiring within all the cabinets or the control room for operation of safety and non-safety related systems. (3.1-10)
 - R. Environmental requirements for and age of the protective coating. (3.1-13 to 14).
 - C. Examination methods for the tightness or stretch for bolts or fasteners should include an evaluation of thread engagement to ensure proper design criteria is met in an event. (3.1-15 and 3.1-42).

- D. Manufacturer data on all CCNPP vibration isolators (Elastomer type). (3.1-29)
 - E. The engineering analysis for determination of whether Spring-type vibration isolators should be used on safety related equipment. (3.1-31 Baseline Walkdowns) and (3.1-45(Table 3.1-4 “Plant Modification”)
 - F. The information regarding the broken and corroded wires found during the 20 year Technical Specification tendon surveillance on Unit 1 containment structure. (3.3A-5 to 15).
 - G. Testing to ensure no in-leakage of radioactive particles and smoke occurs and to ensure that upon activation the damper that switch over to the high efficiency and charcoal filters are bubble-tight. 5.11C.1.1
 - H. Manufacturer’s data as to the life span of the cooling coils of the control room and diesel generator buildings’ heating, ventilation, and air conditioning systems. (5.11C-3).
 - I. Application states “Corrosion is not plausible for subcomponents constructed of aluminum, bronze, or neoprene sponge material because these materials are generally resistant to corrosion.” 5.11C-11. The application lacks information as to whether the neoprene sponge material is porous or nonporous. Application also lacks information about the frequency with which components such as dampers actuators with neoprene diaphragms are re-built or replaced. Section of the Application, first paragraph states “...filter inspections, which are currently scheduled every 12 weeks.”
 - J. Frequency or cleaning and criteria for inspection of filters. (5.11C-13).
2. Matters related to the increased risk of an accident should the Renewal application be approved and other NEPA related concerns, including but not limited to matters related to the severe accident mitigation issues contained in chapter 4 of the application, and issues related to the control of plant risks during the Renewal period.
 3. Inability of applicant’s maintenance and surveillance program to provide the reliance claimed.

Syed Hasan: Mr. Hasan has twenty-three years experience as a civil and structural

engineer within the nuclear industry. He has a degree in civil engineering, physics and mathematics from the highly-respected Karachi University in Pakistan. He worked for the nuclear industry throughout the United States, including work with Stone & Webster at the Beaver Valley and North Anna nuclear stations, work for Burns & Roe at the Clinch River Breeder Reactor, work for Nuclear Power Services at the Catawba, South Texas and Comanche Peak nuclear stations, and most significantly, work for the Bechtel Corporation (the company responsible for much of the civil design and structural engineering at Calvert Cliffs). At Bechtel Mr. Hassan worked on projects related to the South Texas Project, Brown's Ferry, Watts Bar, Grand Gulf and Palisades nuclear stations. Although he did not work directly at Calvert Cliffs, he is well aware of many of the generic design issues related to that facility.

Areas of Concern:

1. Whether design issues within the current operation basis will hold up in the Renewal period.
2. Whether the plant's design and construction (especially in the area of plant supports) will meet safety standards during the period of the license renewal.
3. Matters related to the increased risk of an accident should the Renewal application be approved and other NEPA related concerns, including but not limited to matters related to the severe accident mitigation issues contained in chapter 4 of the application, and issues related to the control of plant risks during the Renewal period.

Lenard Trimmer: Mr. Trimmer has over twenty years experience in non-destructive testing and inspection procedures applicable at nuclear facilities. At the Los Alamos National Laboratory (where he worked for over twenty years), he worked directly at its radioactive waste and nuclear weapons program, certified to perform radiography, ultrasonic sound testing, Eddy

Current testing and penetrant testing. He is qualified to review the procedures used to perform testing the safety and integrity of key safety-related components at Calvert Cliffs, including welds and the containment vessel. He is also qualified, as an expert, to conduct or oversee the performance of independent tests of various critical safety components of the plant.

Areas of Concern:

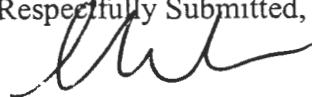
1. The Application demonstrates weaknesses in its (Appendix A, Section 2.0) Integrated Plant Assessment Methodology and Time-Limited Aging Analysis.
2. Matters related to the increased risk of an accident should the Renewal application be approved and other NEPA related concerns, including but not limited to matters related to the severe accident mitigation issues contained in chapter 4 of the application, and issues related to the control of plant risks during the Renewal period.

The Center is also receiving the assistance from additional experts. However, the review of these persons is still ongoing and it would not be appropriate to discuss these matters at this time.

CONCLUSION

The above-referenced list of experts, preliminary identification of qualifications and preliminary outline of issues is not intended to be a filing of contentions or basis for the contentions. The Center reserves the right to file its contentions within fifteen days of the prehearing conference.

Respectfully Submitted,



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