

**UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION**

In the Matter of:)	Docket No. 50-346-LA
FirstEnergy Nuclear Operating Company)	May 20, 2013
Davis-Besse Nuclear Power Station, Unit 1)	
)	
Regarding the Proposed Amendment to)	
Facility Operating License)	

**PETITION TO INTERVENE AND FOR AN ADJUDICATORY PUBLIC
HEARING OF FENOC LICENSE AMENDMENT REQUEST**

Now come Beyond Nuclear, Citizens Environment Alliance of Southwestern Ontario, Don't Waste Michigan, and the Ohio Sierra Club, hereafter referred to as the "Petitioners," and hereby move to intervene in this proceeding and to request a public hearing.

This Petition is brought pursuant to the Federal Register notice of March 19, 2013, Vol. 78, No. 53, pp. 16883, part of the "Biweekly Notice; Applications and Amendments to Facility Operating Licenses and Combined Licenses Involving No Significant Hazards Considerations," wherein FirstEnergy Nuclear Operating Company *et al.* gave notice of its intention to amend the technical specifications of the operating license of Davis-Besse Nuclear Power Station (Davis-Besse) related to the planned removal of existing steam generator equipment and installation of new steam generator equipment at the plant.

Petitioners bring their petition pursuant to 10 CFR § 2.309, and in support thereof, address the component requirements of the regulation below.

I. Standing

A. Legal Basis

Pursuant to 10 CFR § 2.309, a request for hearing or petition for leave to intervene must address (1) the nature of the petitioner's right under the Atomic Energy Act to be made a party to the proceeding, (2) the nature and extent of the petitioner's property, financial, or other interest in the proceeding, and (3) the possible effect of any order that may be entered in the proceeding on the petitioner's interest. In determining whether a petitioner has sufficient interest to intervene in a proceeding, the Commission has traditionally applied judicial concepts of standing. *See Metropolitan Edison Co.* (Three Mile Island Nuclear station, Unit 1), CLI-83-25, 18 NRC 327, 332 (1983) (citing *Portland General Electric Co.* (Pebble Springs Nuclear Plant, Units 1 and 2), CLI-76-27, 4 NRC 610 (1976)). Contemporaneous judicial standards for standing require a petitioner to demonstrate that (1) it has suffered or will suffer a distinct and palpable harm that constitutes injury-in-fact within the zone of interests arguably protected by the governing statutes (*e.g.*, the Atomic Energy Act of 1954 (AEA), the National Environmental Policy Act of 1969 (NEPA), *etc.*); (2) the injury can be fairly traced to the challenged action; and (3) the injury is likely to be redressed by a favorable decision. *See Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plants), LBP-99-25, 50 NRC 25, 29 (1999). An organization that wishes to intervene in a proceeding may do so either in its own right by demonstrating harm to its organizational interests, or in a representational capacity, by demonstrating harm to its members. *See Hydro Resources, Inc.* (2929 Coors Road, Suite 101, Albuquerque, NM 87120), LBP-98-9, 47 NRC 261, 271 (1998).

To intervene in a representational capacity, an organization must show not only that at

least one of its members would fulfill the standing requirements, but also that he or she has authorized the organization to represent his or her interests. *See Private Fuel Storage, L.L.C.* (Independent Fuel Storage Installation), LBP-98-7, 47 NRC 142, 168, *aff'd on other grounds*, CLI-98-13, 48 NRC 26 (1998). *Pacific Gas & Electric Co.* (Diablo Canyon Power Plant Independent Spent Fuel Storage Installation), LBP-02-23, 56 NRC 413, 426 (2002).

Standing to participate in this proceeding is demonstrated by the declarations of the organizations and individuals provided with this Petition. All of the individual Petitioners live within 50 miles of the Davis-Besse, and each one has designated one of the organizational Petitioners to represent his or her interests in this proceeding.

Because they live near the Davis-Besse site, *i.e.*, within 50 miles, the individually-named Petitioners have presumptive standing by virtue of their proximity to the nuclear power plant. *Diablo Canyon, supra*, 56 NRC at 426-427, citing *Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), LBP-01-6, 53 NRC 138, 146, *aff'd*, CLI-01-17, 54 NRC 3 (2001). In *Diablo Canyon*, the Licensing Board noted that petitioners who live within 50 miles of a proposed nuclear power plant are presumed to have standing in reactor construction permit and operating license cases, because there is an “obvious potential for offsite consequences” within that distance. *Id.* Here, FENOC seeks an operating license amendment for the Davis-Besse nuclear reactor, near Oak Harbor, Ohio. Thus, the same standing concepts apply.

The Petitioners’ members seek to protect their lives and health by opposing the license amendment for the steam generators at Davis-Besse. Petitioners seek to ensure that no license extension is issued by the U.S. Nuclear Regulatory Commission unless FENOC demonstrates full compliance with the Atomic Energy Act and NEPA.

Further, *locus standi* is based on three requirements: injury, causation and redressability. Petitioners hereby request to be made a party to the proceeding because (1) continued operation of the nuclear reactor at Davis-Besse continues to present a tangible and particular harm to the health and well-being of members living within 50 miles of the site, (2) the NRC has initiated proceedings for a license amendment, the granting of which would directly affect the named members and other individuals, and (3) the Commission is the sole agency with the power to approve, to deny or to modify an operating license of a commercial nuclear power plant.

A license amendment is authorization from the NRC to continue operation of a nuclear power plant at a specific site under altered conditions. Before issuing the license amendment, the NRC staff must complete safety and environmental reviews of the request. The license amendment must comply with provisions of the Atomic Energy Act, the National Environmental Policy Act, NRC regulations and all applicable laws.

The Petitioners, both individually and organizationally/representationally, seek leave to intervene because they believe their interests, or those of their members, will not be adequately represented absent this course of action and intervention, and without the opportunity to participate as full parties in this proceeding. This proposed amendment calls for installation of new, untested steam generator equipment. The shield building at the plant will be subjected to an unprecedented fourth (4th) wall penetration to allow swapping the old generator components for the new. This raises the potential for additional aggravation of already-existing structural cracks identified in that building in 2011, and could conceivably cause failure of a critical safety component (the building itself or the steel containment structure inside it which houses the reactor). The new steam generator equipment may fail, compromising safety margins for

operation of the nuclear reactor. In short, with the opportunity for a public hearing and independent assessment of the complete plans, Davis-Besse may operate unsafely and pose an undue and unacceptable risk to the environment, and jeopardize the health, safety and welfare of the Petitioners' members who live, recreate and conduct their business in the vicinity of the nuclear power plant.

Attached to this Petition are individual declarations of persons with putative standing, along with declarations from four (4) organizations which are prepared to represent those persons, who are members respectively. Representational standing of the organizational Petitioners is established via these declarations for Beyond Nuclear, Citizens Environmental Alliance of Southwestern Ontario, Don't Waste Michigan, and the Ohio Sierra Club, by their respective leaders or officers, who formally wish to protect the interests of those among their members who reside within 50 miles of Davis-Besse.

B. Named Intervenors

13. Beyond Nuclear (BN) is a not-for-profit organization located at 6930 Carroll Avenue, Suite 400, Takoma Park, Maryland, 20912, Tel. (301) 270-2209, www.beyondnuclear.org. BN has over 20,000 members, of whom a number reside, work and recreate within the fifty (50) mile Emergency Planning Zone for Davis-Besse. Beyond Nuclear provides the declarations of three of its members, Mark Farris, Phyllis Oster, and Joseph DeMare, all of whom live within a 50-mile radius of Davis-Besse. Beyond Nuclear seeks to intervene to protect the interests of Farris, Oster and DeMare, all of whom have safety and environmental concerns about Davis-Besse's operations. Each individual Petitioner expresses the opinion that inadequate information has been disclosed about the steam generator project and further, that lessons about the steam

generator failures at the San Onofre plant have not been adequately explored or incorporated into the Davis-Besse plan. These Petitioners further believe that the steam generator replacement proposal may pose unacceptable risks to the environment and public health and to their personal health and safety. Kevin Kamps represents BN in this proceeding.

The Citizens Environment Alliance (CEA) of Southwestern Ontario is a non-profit, grassroots, international, education and research organization, located at 1950 Ottawa Street, Windsor, Ontario, Canada N8Y 1P7, Tel. (519) 973-1116, www.citizensenvironmentalliance.org/index.html. CEA is committed to an ecosystem approach to environmental planning and management. A focus of CEA's work for decades has been the questions of toxins in the Great Lakes, as well as air quality throughout the U.S.-Canada boundary area, and raising citizen awareness of various issues related to preservation of the Great Lakes and favoring the increased deployment of environmentally benign energy sources. CEA has about 50 members, some of whom reside, work, and/or recreate within the fifty (50) mile Emergency Planning Zone for Davis-Besse. CEA has designated Derek and/or Richard Coronado, its coordinators, as members on behalf of which the organization seeks to intervene. Derek and Richard Coronado live within a 50-mile radius of Davis-Besse, have safety and environmental concerns about the Davis-Besse plant's operations, do not believe adequate information has been disclosed about the steam generator project and further, that lessons about the steam generator failures at the San Onofre plant have not been adequately explored or incorporated into the Davis-Besse plan. They too believe the proposal may pose unacceptable risks to the environment and public health and to their personal health and safety. Derek Coronado seeks to represent CEA in this proceeding.

Don't Waste Michigan is a federation of environmental organizations with a board of

directors and a membership of around 50 researchers, educators, concerned citizens, and organizational representatives, founded in 1987 to oppose the designation of the state of Michigan as a repository for what was misleadingly termed “low-level” radioactive waste from eight states. Don’t Waste Michigan’s work was ultimately successful and the state of Michigan was eliminated from consideration as a repository for the wastes. Don’t Waste Michigan, with the Lake Michigan Federation (now the Alliance for the Great Lakes) and support from numerous local grassroots organizations, along with Michigan Attorney General Frank Kelly, brought suit in federal court in 1993 to prevent the loading of high-level nuclear waste in casks on the shore of Lake Michigan at the Palisades plant. Don’t Waste Michigan has a number of members who reside, work, and/or recreate within the fifty (50) mile Emergency Planning Zone for Davis-Besse and maintains a website, <http://dwmi.homestead.com> Don’t Waste Michigan seeks to intervene on behalf of its member, Michael J. Keegan, who lives within a 50-mile radius of Davis-Besse. Keegan has safety and environmental concerns about the Davis-Besse plant’s operations, does not believe adequate information has been disclosed about the steam generator project and further, that lessons about the steam generator failures at the San Onofre plant have not been adequately explored or incorporated into the Davis-Besse plan. He also believes the proposal may pose unacceptable risks to the environment and public health and to his personal health and safety. Additionally, Michael J. Keegan represents Don’t Waste Michigan in this proceeding as an officer of the group.

The Ohio Sierra Club is comprised of grassroots activists, environmentalists, advocates for social justice, and regular citizens. The Ohio Chapter, headquartered in Columbus, Ohio, was established 40 years ago and represents more than 16,000 members and supporters. The

Chapter advocates for energy efficiency, renewable energy, and public transit., defends Ohio's forests, state parks, and nature preserves, preserves water resources by advocating for green infrastructure, factory farm regulation, and protections for Lake Erie and watersheds throughout the state; and is working to promote Ohio's transition to a 21st-century economy through the creation of good-paying, long-lasting green jobs. Gary Majeski, Kristina Moazed and Anthony Szilagye have provided declarations as Sierra Club members, and they desire representation in this litigation by the Sierra Club. Each lives within a 50-mile radius of Davis-Besse, have expressed safety and environmental concerns about the Davis-Besse plant's operations, does not believe adequate information has been disclosed about the steam generator project and further, believes that lessons about the steam generator failures at the San Onofre plant have not been adequately explored or incorporated into the Davis-Besse plan. Each individual petitioner further believes the steam generator proposal may pose unacceptable risks to the environment and public health and to his or her personal health and safety. Robert Shields, Chapter Chair, has signed a declaration indicating that the Ohio Sierra Club will represent its individual members.

II. Background

On March 19, 2013, notice was published in the Federal Register of FirstEnergy Nuclear Operating Company's (FENOC's) request to amend its operating license for Davis-Besse:

The amendment would revise DBNPS Technical Specification (TS) 3.4.17, "Steam Generator (SG) Tube Integrity"; TS 3.7.18, "Steam Generator Level"; TS 5.5.8, "Steam Generator (SG) Program"; and TS 5.6.6, "Steam Generator Tube Inspection Report." The proposed revision to these TSs is to support plant operations following the replacement of the original SGs which is scheduled to be completed in April 2014. The proposed changes to TS 3.4.17, TS 5.5.8, and TS 5.6.6 would impose requirements that reflect the analysis and tube materials of the replacement Sgs.

These changes are consistent with Technical Specifications Task Force (TSTF) traveler TSTF-510, Revision 2, "Revision to Steam Generator Program Inspection Frequencies and Tube Sample Selection," which was approved by the U.S. Nuclear

Regulatory Commission on October 27, 2011. The proposed revision to TS 5.5.8 also includes minor editorial changes and eliminates the requirements for special visual inspections of the internal auxiliary feedwater header, since this component will not be part of the replacement SGs.

The proposed changes to TS 3.7.18 would impose inventory limits on the secondary-side that reflect the design characteristics and dimensions of the replacement SGs. The revised limits will ensure that plant operations with the replacement SGs is bounded by the values used in the existing main steam line break analysis presented in the DBNPS updated safety analysis report.

Federal Register, Vol. 78, No. 53, p. 16883.

FENOC further provided its 10 CFR § 50.91(a) analysis of the issue of no significant hazards consideration, which was reproduced in the notice. FENOC has concluded that the technical specifications amendment will not increase the chances of a steam generator tube rupture in the proposed 2014 swapout of the originally-installed 1970's steam generator components for newly-fabricated equipment, custom designed and built by a Babcock & Wilcox subsidiary. *Id.* FENOC further has concluded that the chances of a main steam line break will not increase as a result of installation of the new equipment, nor is there a possibility of a new or different kind of accident from any accident previously evaluated. *Id.* The new steam generators would not affect any existing margin of safety, according to FENOC. *Id.*

FENOC admits at one and the same time that the steam generator changes would both comprise a design modification according to NRC regulation, but “would not affect the method of operation of the” steam generators:

Replacement of the SGs is being performed as a design modification in accordance with the provisions of 10 CFR 50.59, “Changes, tests and experiments.” The proposed changes to TS 3.4.17, TS 5.5.8 and TS 5.6.6 would implement monitoring and inspection requirements appropriate for the design and materials of the replacement SGs, and establish appropriate reporting requirements. These changes would not affect the method of operation of the SGs. The proposed changes to TS 3.7.18 would ensure that the replacement SGs will be operated in accordance with existing analyses. None of the

proposed changes would introduce any changes to the plant design. In addition, the proposed changes would not impact any other plant system or component.

Id. at 16883.

As a consequence of whatever investigation it performed, the NRC Staff concluded as follows:

The NRC staff has reviewed the licensee's analysis and, based on this review, it appears that the three standards of 10 CFR 50.92© are satisfied. Therefore, the NRC staff proposes to determine that the amendment request involves no significant hazards consideration.

Id. at p. 16884.

Petitioners detail below their position that the analysis provided the NRC by FENOC is inadequate; that there is some possibility that significant hazards associated with the steam generator replacement project have not been adequately identified, considered or disclosed; and that the standards of 10 CFR 50.92(c) have not been satisfied.

III. Legal Standards Governing License Amendments

10 CFR §§ 50.90 to 50.92 provide the applicable process when a licensee wishes to request a license amendment. Specifically, § 50.90 authorizes applications to amend existing operating licenses; § 50.91 provides for notice and comment regarding license amendment applications, as well as consultation with the State in which the facility is located; and § 50.92 provides the standard considered by the NRC when determining whether to issue an amendment.

Section 50.59 establishes standards for a licensee to request a license amendment before it may make “changes in the facility as described in the [updated] final safety analysis report [UFSAR36], make changes in the procedures as described in the [UFSAR], and conduct tests or experiments not described in the [UFSAR].” 10 CFR § 50.59(c)(1). Section 50.59 states that a

licensee need not request a license amendment pursuant to § 50.90 if “(I) A change to the technical specifications incorporated in the license is not required, and (ii) The change, test, or experiment does not meet any of the criteria in paragraph (c)(2) of this section.” *Id.* § 50.59(c)(1)(I)-(ii).

On May 13, 2013, the Atomic Safety and Licensing Board presiding over the steam generator debacle at the San Onofre units opined:

Restated, a licensee *must* request a license amendment if the proposed action requires that existing technical specifications be changed (see 10 C.F.R. § 50.59(c)(1)(I)), or if a change, test, or experiment satisfies any of the eight criteria in section 50.59(c)(2). See *id.* § 50.59(c)(1)(ii). The section 50.59(c)(2) criteria require a licensee to seek a license amendment if the proposed change, test, or experiment would:

(I) Result in more than a minimal increase in the frequency of occurrence of any accident previously evaluated in the [UFSAR];

(ii) Result in more than a minimal increase in the likelihood of occurrence of a malfunction of a structure, system, or component (SSC) important to safety previously evaluated in the [UFSAR];

(iii) Result in more than a minimal increase in the consequences of an accident previously evaluated in the [UFSAR];

(iv) Result in more than a minimal increase in the consequences of a malfunction of an SSC important to safety previously evaluated in the [UFSAR];

(v) Create a possibility for an accident of a different type than any previously evaluated in the [UFSAR];

(vi) Create a possibility for a malfunction of an SSC important to safety with a different result than any previously evaluated in the [UFSAR];

(vii) Result in a design basis limit for a fission product barrier as described in the [UFSAR] being exceeded or altered; or

(viii) Result in a departure from a method of evaluation described in the [UFSAR] used in establishing the design bases or in the safety analyses.

Id. § 50.59(c)(2)

Finally, 10 C.F.R. § 2.105 implements the hearing opportunity provision for license amendment procedures that is mandated by section 189a of the AEA, and Subpart C of 10 C.F.R. Part 2 contains the general rules governing hearing requests and subsequent hearing-related activities.

Southern California Edison Co., (San Onofre Nuclear Generating Station, Units 2 and 3),

LBP-13-07, pp. 18-20 (May 13, 2013).

IV. Petitioners' Contention and Supporting Information

A. Statement of Contention

Significant changes to the Replacement Once Through Steam Generator (ROTSG) modification project and to the reactor containment structures, all planned by FirstEnergy Nuclear Operating Company to be made to the Davis-Besse Nuclear Power Station, require that the steam generator replacement project be deemed an “experiment” according to 10 C.F.R. § 50.59, and that an adjudicatory public hearing be convened for independent analysis of the project, before it is implemented. Moreover, FENOC has applied after the fact for a technical specifications license amendment, which comprises an additional, automatic, trigger under 10 CFR § 50.59 and necessitates adjudication of the license amendment request.

B. Brief Explanation of the Bases for the Contention

Arnold Gundersen, a nuclear engineer of 40-odd years' standing and Petitioners' expert, whose recent work has included advice to intervenors in the San Onofre steam generator debacle, has extensively reviewed documents related to the Davis-Besse steam generator replacement project and as well, the public domain maintained by the Nuclear Regulatory Commission, for evidence of FirstEnergy's plan to publicize the replacement effort. He concludes that FENOC has likely deliberately avoided characterization of the project as one which necessitates an adjudicatory hearing. Petitioners' expert reports (attached, along with Gundersen's CV) that 10 CFR § 50.59 was not closely applied to the features of the proposed generator replacement, and that despite significant changes to the original generator component design, it is not considered to be “experimental” within the scope of § 50.59. Gundersen further points to the necessity of FENOC perforating the shield building and reactor containment for an unprecedented fourth (4th) time, plus the lack of adequate uptake of lessons learned from recent shattering failures in steam generator replacement efforts at three other nuclear power plants as evidence of his overarching conclusions: (1) that FENOC is attempting to avoid the more rigorous license amendment process and (2) that the NRC Staff has accepted FENOC's

statement and documents without further independent analysis, just as it did for Southern California Edison on San Onofre's replacement steam generators, which has turned into a regulatory fiasco.

C. Concise Statement of Alleged Facts and Expert Opinion
Upon Which Petitioners Intend to Rely

In the "Expert Witness Report of Arnold Gundersen to Support the Petition for Leave to Intervene and Request for Hearing" (hereinafter Report), which is fully incorporated by reference herein as though rewritten within this Petition, engineer Gundersen articulates many facts and opinions which will comprise the basis for Petitioners' case at trial.

Gundersen states (Expert Report at 3) that "There is a dearth of technical data in the Nuclear Regulatory Commission (NRC) Public Document Room (PDR) regarding" FENOC's proposed Replacement Once Through Steam Generator (ROTSG) modification to Davis-Besse. Noting that FENOC ordered the steam generators through a subsidiary of Babcock & Wilcox in December 2007, Gundersen explains that "lack of publicly available technical analysis in the NRC PDR suggests that FENOC made a secret determination under 10 C.F.R. § 50.59 that it was not necessary to apply for a license amendment to replace the Davis-Besse steam generators." Report at 4. "The lack of a license application on file with the NRC also implies that Davis-Besse made the determination that the 'fit-form-function' of the replacement steam generators fell within the licensing parameters of the original Davis-Besse license." *Id.* at 4.

Gundersen points out that "[t]he first significant description revealing the true extent of the replacement steam generator modifications appears to be in the 74-page PowerPoint entitled *Davis-Besse Steam Generator Replacement Project: Project Overview/Public Meeting: NRC*

Region III Office: March 20, 2013,¹ that FENOC submitted to the NRC.” Report at 4. From this slide show, Gundersen extrapolated that FENOC “had performed a 10 C.F.R. § 50.59 analysis that found that the RSG is ‘similar’ to the OSG.” *Id.* Gundersen notes that “Being ‘similar’ to the original steam generators without analyzing the impact so many changes from the original D-B technical specifications is an inadequate criterion by which to determine if 10 C.F.R. § 50.59 has been assiduously applied.” *Id.* Reviewing the slide show information further, Gundersen states that the “data reviewed shows that FENOC should have applied for a license amendment with the requisite public review six years ago when the ROTSG was originally designed, ordered, and purchased.” *Id.* at 4-5.

Gundersen then delineates the significant differences between the replacement and original steam generators:

FENOC itself had acknowledged that the ROTSG design had significant modifications in comparison to the original OTSG. More specifically, slides 10 through 13 identify the following significant, experimental modifications to the original OTSG design:

1. The tube inspection lane was removed.
2. An additional tube support plate was added.
3. 150 additional tubes were added.
4. The tube alloy was changed.
5. The tube-to-tube sheet junction was modified extensively.
6. The overall design of the steam generator support structure was changed from a cylindrical skirt to a pedestal cone.
7. The thickness of the pressure retaining walls of the ROTSG is two inches thinner than the pressure retaining wall in the Original Once Through Steam Generator.
8. The 180-degree elbow design will be extensively modified.
9. The alloy of the hot leg nozzles was also changed.

Report at 5. Gundersen opines that “Each and every one of these aforementioned changes is significant individually, and when taken together prove that *the Replacement OTSG contains*

¹ML13078A249.

many experimental parameters, especially in comparison to the Original OTSG.” (Emphasis supplied). Report at 5.

Petitioners’ expert further observes that “the list of experimental changes identified by FENOC does not include the additional modifications applied by FENOC to cut into the Davis-Besse containment for the fourth time since it was constructed. To the best of Fairewinds’ knowledge and belief, no other containment structure has been cut open more than twice, yet Davis-Besse’s fourth containment perforation should have been identified by the 10 C.F.R. § 50.59 process as problematic and therefore requiring a license amendment review and application.” Report at 5-6. At p. 10 of his Report, Gundersen notes: “Additionally, FENOC has failed to include the Crystal River 3 ROTSG experience in its PowerPoint presentation to the NRC. Like Davis-Besse, the Crystal River 3 steam generator replacement is a Babcock & Wilcox design. The Crystal River 3 Containment failed three times in less than one year after being cut open during its ROTSG modification. It is important to compare the upcoming Davis-Besse ROTSG modification to the Crystal River 3 RSG, because the Davis-Besse Containment will also be cut open again during this outage.”

Pointing to the May 13, 2013 San Onofre ASLB ruling, engineer Gundersen asserts that “10 C.F.R. § 50.59 requires a formal license renewal application when a license amendment change is required as a result of such a modification,” *Id.* at 6, because “If a licensee is unable to operate a reactor in strict accordance with its license, it must seek authorization from the NRC for a license amendment (10 C.F.R. §§ 50.59, 50.90 to 50.92), which is a process that triggers a right to request an adjudicatory hearing by persons whose interests may be affected by the proceeding.” *Id.*, quoting *Southern California Edison Co.*, (San Onofre Nuclear Generating

Station, Units 2 and 3), LBP-13-07, p. 18 (May 13, 2013). Drawing from his involvement in the San Onofre licensing amendment litigation, Gundersen finds that in the Davis-Besse case, “changing technical specifications determine that the 50.59 criteria have not been met, and that a formal license amendment is required. This point is so essential that the [San Onofre] ASLB emphasized it by restating the requirement for a formal license amendment review process if a technical specification change were to be required. A review of the FENOC PowerPoint presentation submitted to the NRC contains an extensive list of changes to the D-B Technical Specifications that clearly identifies the necessity for complete technical review by the NRC via the formal 10 C.F.R. § 50.59 license amendment processes. It is evident that the formal license amendment review is required due to the numerous and unreviewed proposed changes to the D-B Technical Specifications.” Report at 6.

Gundersen then turns to recent industry experiences - mostly bad - with other steam generator replacement projects.² “In an effort to avoid the participatory public review aspect of the 50.59 license amendment process,” the expert states, “the nuclear power licensees and their parent corporations have made an alleged strategic choice to avoid the license amendment process by manipulating loopholes in the 50.59 processes.” Report at 7. Gundersen notes that “[t]he last three steam generator replacement projects orchestrated by licensees sought to avoid the 10 C.F.R. § 50.59 license amendment process. . . . By avoiding the 50.59 license amendment processes for Crystal River 3 in Florida, and San Onofre 2 and San Onofre 3 in California, the

²Gundersen points out that the FENOC slide show even admits these problems: “FENOC acknowledges these problems in its PowerPoint, *Davis-Besse Steam Generator Replacement Project: Project Overview/Public Meeting: NRC Region III Office: March 20, 2013*, slides 18 through 25. Significant problems have arisen at Oconee (slide 19), ANO (slide 20), TMI (slide 21), and San Onofre (slide 24).” Gundersen Report at 7.

owners, Progress Energy (Crystal River) and Edison (San Onofre Units 2 and 3) caused all three units to experience total mechanical failures.” *Id.* Moreover, he points out, problems “were not identified at these nuclear power plants until significant damage to both the steam generators and the plants themselves had already occurred. Ratepayers were stuck with millions of dollars in payments for flawed equipment.” *Id.* As a result, Gundersen maintains:

All five replacement steam generator equipment failures can be attributed to failure of these licensees to apply the appropriate 10 C.F.R. § 50.59 screening criteria. Evading the 10 C.F.R. § 50.59 license amendment processes allowed design errors to reach through fabrication and into plant operation before regulators even began examining these significant design and fabrication failures.

Report at 7.

Gundersen describes how the timing of the discovery of steam generator failures at San Onofre is important to review and discuss in order to determine the likelihood of failure for the Davis-Besse ROTSG project. That is, the question becomes, has FENOC taken up the lessons learned from San Onofre? From the material he reviewed, Gundersen finds, “it appears that FENOC most likely completed the new design for the D-B ROTSGs during 2008, and fabrication appears to have begun in 2009. FENOC now claims that lessons learned from the San Onofre failures have been incorporated into the D-B ROTSG design and fabrication.” This claim is “impossible,” Gundersen concludes, since “the San Onofre RSGs failed in 2012, well after the D-B ROTSGs were already in fabrication. Quite simply, the Davis-Besse ROTSG could not have been modified to reflect any lessons learned from the technical failures at San Onofre Units 2 and 3.” Gundersen Report at 8.

Gundersen then turns to the eight (8) criteria of 10 C.F.R. § 50.59. The criteria, he says, “require that the license be amended unless none of these eight criteria are triggered by any

change made by a nuclear power plant licensee like FENOC's Davis-Besse. If a single criterion is met, then the regulation requires that the licensee pursue a license amendment process."

Report at 9. He continues:

By claiming that the steam generator replacements were a *like-for-like* design and fabrication, ***FENOC, like Edison at San Onofre Units 2 and 3, is attempting to avoid the more rigorous license amendment process. From the evidence reviewed, it appears that the NRC has accepted FENOC's statement and documents without further independent analysis, just as it did for Edison on San Onofre's RSGs.***

(Emphasis supplied). Report at 9.

Gundersen points out a glaring omitted detail from the information FENOC provided in its March 2013 slide presentation: that "FENOC's PowerPoint presentation does not address the fact that Davis-Besse's containment integrity issues are compounded by the damage its containment already suffered during the blizzard of 1978, allegedly resulting in all of the cracking that now compromises D-B's containment integrity." Report at 10-11. Gundersen continues:

Of all the nuclear plants in the world, the Davis-Besse containment is the only one that has such a complicated history of storm damage and being split open repeatedly. These facts alone require a thorough NRC license application review and public hearing. While FENOC acknowledges that three containment incisions have occurred, it also claims that in this fourth containment incision:

- "Laminar cracking is not expected..."
- And that if the containment were to crack, "Any deficiencies will be documented in the Corrective Action program."

Waiting for cracks to occur and then entering them into the corrective action program is the very definition of a 10 C.F.R. § 50.59-trigger for NRC licensing review. It appears that cutting the Davis-Besse containment for the fourth time will in fact be an "experiment" as defined under 10 C.F.R. § 50.59.

(Emphasis in original). Report at 11.

Gundersen's concluding opinion is that "Replacement Once Through Steam Generator modifications at Davis-Bessie require a full NRC license application under the rules of 10 C.F.R.

§ 50.59 because (1) there are extensive experimental modifications to both the ROTSGs and to the containment structures; and (2) there are extensive modifications to the Davis-Besse technical specifications. Report at 11.

V. Conclusion: Petitioners should be granted an adjudicatory hearing

It is imperative that the terms of a reactor operating license be clear and unambiguous, and also that a licensee scrupulously adhere to those terms, because section 101 of the Atomic Energy Act makes it “unlawful . . . for any person within the United States to . . . use . . . any utilization . . . facility except under and in accordance with a license issued by the Commission.” 42 U.S.C. § 2131.34. Section 182a of the AEA states that a reactor operating license must include “technical specifications” that include, *inter alia*, “the specific characteristics of the facility, and such other information as the Commission may, by rule or regulation, deem necessary in order to enable it to find that the utilization . . . of special nuclear material . . . will provide adequate protection to the health and safety of the public.” 42 U.S.C. § 2232(a).

The Commission is empowered to issue an order amending any license as it deems necessary to “effectuate the provisions of [the AEA]” (42 U.S.C. § 2233) -- that is, to “promote the common defense and security or to protect health or to minimize danger to life or property.” *Id.* § 2201; see also *id.* § 2237. Additionally, the Commission “may at any time . . . before the expiration of the license, require further written statements [from the licensee] to determine whether . . . a license should be modified.” *Id.* § 2232(a).

Finally, section 189a of the AEA states that “[i]n any proceeding under [the AEA], for the . . . amending of any license . . . , the Commission shall grant a hearing upon the request of any

person whose interest may be affected by the proceeding, and shall admit any such person as a party to such proceeding.” 42 U.S.C. § 2239(a)(1)(A).

Petitioners have demonstrated their particularized interest in the outcome of the license amendment request, and further, have provided factual details along with regulatory and legal authority as anticipated by 10 CFR § 2.309. For all these reasons, Petitioners pray the Nuclear Regulatory Commission grant them leave to intervene in the license amendment proceeding, and to schedule discovery and an adjudicatory hearing at a time and place convenient to the Commission and the parties.

/s/ Terry J. Lodge
Terry J. Lodge (OH #0029271)
316 N. Michigan St., Ste. 520
Toledo, OH 43604-5627
(419) 255-7552
Fax (419) 255-7552
Tjlodge50@yahoo.com
Counsel for Intervenors

**UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION**

In the Matter of)	Docket No. 50-346-LA
FirstEnergy Nuclear Operating Company)	May 20, 2013
Davis-Besse Nuclear Power Station, Unit 1)	
Regarding the Proposed Amendment to)	
Facility Operating License)	

* * * * *

CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing “PETITION TO INTERVENE AND FOR A ADJUDICATORY PUBLIC HEARING OF FENOC LICENSE AMENDMENT REQUEST” were deposited in the NRC’s Electronic Information Exchange this 20th day of May, 2013.

/s/ Terry J. Lodge
Terry J. Lodge (OH #0029271)
316 N. Michigan St., Ste. 520
Toledo, OH 43604-5627
(419) 255-7552
Fax (419) 255-7552
Tjlodge50@yahoo.com
Counsel for Intervenors