

May 17, 2012

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

In the Matter of:)
)
THE DETROIT EDISON COMPANY) Docket No. 52-033-COL
(Fermi Nuclear Power Plant,)
Unit 3))

* * * * *

**INTERVENORS' RESPONSE IN OPPOSITION
TO APPLICANT'S MOTION FOR SUMMARY DISPOSITION
OF CONTENTION 15**

Now come Intervenors Beyond Nuclear, *et al.*¹ (hereinafter "Intervenors"), by and through counsel, and set forth their response in opposition to "Applicant's Motion for Summary Disposition of Contention 15."

Standard of Evidence

Rigorous quality assurance adherence must begin at the design stage, if QA is to exist, with effect, through the decades of reactor operations. If a critical lack of QA information remains uncorrected at the outset, the early mistakes can

¹In addition to Beyond Nuclear, the Intervenors include: Citizens for Alternatives to Chemical Contamination, Citizens Environmental Alliance of Southwestern Ontario, Don't Waste Michigan, Sierra Club (Michigan Chapter), Keith Gunter, Edward McArdle, Henry Newnan, Derek Coronado, Sandra Bihn, Harold L. Stokes, Michael J. Keegan, Richard Coronado, George Steinman, Marilyn R. Timmer, Leonard Mandeville, Frank Mantei, Marcee Meyers, and Shirley Steinman.

compound until at some point Fermi 3 may become either a less-than-optimally functioning reactor, or perhaps even an unsafe one.

DTE asserts (MSD at 6) that "perfection is not a precondition for a license," and that, instead, Applicant must meet a standard of "reasonable assurance". Reasonable assurance "is not susceptible to formalistic quantification or mechanistic application. Rather, whether the reasonable assurance standard is met is based upon sound technical judgment applied on a case-by-case basis." Compliance with the Commission's regulations is a touchstone for reasonable assurance. *AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), LBP-07-17, 66 NRC 327, 340 (2007), *aff'd*, CLI-09-07, 69 NRC 235, 263 (2009).

If there is evidence "sufficient to raise legitimate doubt as to whether the plant can be operated safely," a ruling in favor of the applicant may be denied. *Pacific Gas & Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 & 2), ALAB-756, 18 NRC 1340, 1344-1345 (1983) (ruling on motion to reopen the record), citing *Union Electric Co.* (Callaway Plant, Unit 1), ALAB-740, 18 NRC 343, 346 (1983); *Louisiana Power & Light Co.* (Waterford Steam Electric Station, Unit 3), ALAB-812, 22 NRC 5, 15 (1985). This standard also applies to an applicant's design quality assurance program. *Pacific Gas & Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 & 2), ALAB-775, 19 NRC 1361,

1366 (1984), *aff'd sub. nom. San Luis Obispo Mothers for Peace v. NRC*, 751 F.2d 1287 (D.C. Cir. 1984), *aff'd on reh'g en banc*, 789 F.2d 26, 29 (1986) (2,000,000 expert engineering hours expended on remediating quality assurance deficiencies at Diablo Canyon nuclear power plant to provide "adequate confidence" the plant could withstand a serious earthquake following discovery that blueprints had been reversed during reactor design and construction).

Expectations of Quality Assurance in Nuclear Licensing

While it is true, as DTE asserts, that the applicant "may delegate to others, such as contractors, agents, or consultants, the work of establishing and executing the quality assurance program, or any part thereof," in the end DTE must "retain responsibility for the quality assurance program." 10 C.F.R. Part 50, App. B. To that end, "[t]he authority and duties of persons and organizations performing activities affecting the safety-related functions of structures, systems, and components shall be clearly established and delineated in writing." *Id.*

Moreover,

The persons and organizations performing quality assurance functions shall have sufficient authority and organizational freedom to identify quality problems; to initiate, recommend, or provide solutions; and to verify implementation of solutions. The persons and organizations performing quality assurance functions shall report to a management level so that the required authority and organizational freedom, including sufficient independence from cost and schedule when opposed to safety considerations, are provided.

Irrespective of the organizational structure, the individual(s) assigned the responsibility for assuring effective execution of any portion of the quality assurance program at any location where activities subject to this appendix are being performed, shall have direct access to the levels of management necessary to perform this function.

Id., ¶ I.

The purpose of quality assurance activities, then, is to make certain that low-grade parts or materials, inferior work, improper construction of implementation procedures and the like are noticed and resolved, and that the QA professionals have access to levels of corporate management with the power inside the organization to require such fixes:

[C]onditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are [to be] promptly identified and corrected. In the case of significant conditions adverse to quality, the measures shall assure that the cause of the condition is determined and corrective action taken to preclude repetition.

Id., ¶ XVI.

Maintaining consistent and adequate oversight of quality assurance efforts, in the context of the inherently dangerous industrial process of using nuclear fission, is thus of the utmost importance. Intervenors continue to believe that, as the ASLB postulated, "safety-related information in the FSAR is unreliable and should not be used to support the licensing decision because it is based in whole or in part on tests, investigations, or other safety-related activities performed by Black &

Veatch during the period when DTE had neither established nor implemented its own Appendix B QA program to govern those activities." "Ruling on Proposed New Contentions 15 and 16," slip op., ASLBP No. 09-880-05-BD01, p. 15.

**Facts Creating Issues of Material Fact
Which Warrant Denial of Summary Disposition**

*1. DTE's 'Owner's Engineer', Overseeing
Black & Veatch, the QA Contractor,
Is From ... Black & Veatch*

DTE provided a lengthy narrative of pre-COLA activities in 2007-08, and QA steps in the early months following submission of the COLA², because "the principles are important and are discussed to demonstrate the extent to which Detroit Edison's approach met the intent of the guidance." MSD at 25, fn. 81. Among the important benchmarks of the pre-COLA-application period, DTE recounts that about April 2007, it retained an "Owner's Engineer ("OE") to support owner-related activities such as reactor technology selection, project cost estimates, development of a Detroit Edison QA program for the Fermi 3 project, engineering support services, and COL Application contractor oversight." MSD at 17. During this period, Detroit Edison had contractually delegated the responsibility for establishing and executing the QA program to B&V for COL Application development activities, but retained responsibility for and maintained control over the QA

²The COLA was submitted on September 18, 2008.

functions performed by B&V. *Id.* DTE refers to the Owner's Engineer at four (4) additional places in its Motion.³ While touting that it properly delegated QA responsibilities to Black & Veatch, DTE omitted to state, anywhere in its Motion for Summary Disposition, that **the Owner's Engineer function was staffed from the Ann Arbor branch office of the national Black & Veatch Corporation.**

In the Final Safety Analysis Report (FSAR), pp. 17-9 through 17-11 (<http://pbadupws.nrc.gov/docs/ML1106/ML110600471.pdf>), are found these passages:

In June 2007 the Owner's Engineer (OE), Black & Veatch Ann Arbor (referred to as "OE, Black & Veatch Ann Arbor," throughout), observed B&V (Black & Veatch Overland Part

³In April-May 2007, Detroit Edison's OE staff performed and documented surveillances of construction of the monitoring wells for hydrology investigation and core boring activities for geotechnical data collection. MSD at 20.

In June 2007, Detroit Edison's OE observed B&V obtaining core samples and reported to Detroit Edison's Nuclear Development project the status of procedural compliance, including the availability of ASTM standards, compliance with the Hydrogeology Data Collection Plan and the Geotechnical Data Collection Plan, chain of custody processes, control of measurement and test equipment, and handling of corrective actions as a result of B&V Nuclear QA surveillances. MSD at 21-22.

In July 2007 and in August 2007, Detroit Edison's OE observed B&V borings on the Fermi site and reported to the Detroit Edison Nuclear Development project that on-site work was being performed under the B&V Appendix B/NQA-1 QA program and that a copy was available for reference. The OE reported that work was being performed in accordance with the Hydrogeology Data Collection Plan and the Geotechnical Data Collection Plan, that chain of custody processes were being followed, and that corrective actions as a result of B&V Nuclear QA surveillances also had been implemented and continued to be effective. MSD at 23.

During site investigation and COL Application development activities, "there was a substantial degree of oversight - under the B&V QA program and by the Detroit Edison OE." MSD at 25.

referred to as "B&V" throughout) obtaining core samples at the Fermi site and reported to Nuclear Development the status of procedural compliance, ASTM standards availability, status of compliance with the Hydrogeology Data Collection Plan and the Geotechnical Data Collection Plan, that chain of custody processes were being followed, status of control of measurement and test equipment, and how corrective actions as a result of B&V Nuclear Quality Assurance surveillances were being handled.

Also in July 2007 the **OE, Black & Veatch Ann Arbor**, observed B&V boring at the Fermi site and reported to Nuclear Development that on-site work was being performed under the B&V 10 CFR 50 Appendix B/NQA-1 QA program and that a copy was available for reference. It was also reported that work was being performed in accordance with the Hydrogeology Data Collection Plan and the Geotechnical Data Collection Plan and that copies of these documents were available, chain of custody processes were being followed, and the status of compliance with ASTM standards, specifically ASTM D 5079-02(2006).

In August 2007, the **OE, Black & Veatch Ann Arbor**, observed B&V boring at the Fermi site and reported to Nuclear Development that on-site work was being performed under the B&V 10 CFR 50 Appendix B/NQA-1 QA program and that a copy was available for reference. It was also observed that work was being performed in accordance with the Hydrogeology Data Collection Plan and Geotechnical Data Collection Plan and that copies of these documents were available, that chain of custody processes were being followed, and how corrective actions as a result of B&V Nuclear Quality Assurance surveillances were being handled. Later in August, the **OE, Black & Veatch Ann Arbor**, observed B&V boring, split spoon sampling, and performing vacuum excavation at the Fermi site. The **OE, Black & Veatch Ann Arbor**, reported to Nuclear Development that on-site work was being performed under the B&V 10 CFR 50 Appendix B/NQA-1 QA program and that a controlled copy was available for reference. They also reported that work was being performed in accordance with the Hydrogeology Data Collection Plan, Hydrogeology Work Plan, and Geotechnical Data Collection Plan and that copies of these documents were available, that chain of custody processes were being followed, and that corrective actions associated with B&V corrective action program continued to be effective.

The conflicting interests between B&V the QA contractor, design contractor, pre-application activity contractor and B&V the "Owner's Engineer" which appear to have characterized the 2007-08 period - some of which is post-submission of the COLA is very considerable.⁴ If this arrangement was meant to comply with the 10 C.F.R. Part 50 App. B mandate that DTE "retain responsibility for the quality assurance program," Intervenors urge that it fell well short of regulatory expectations.

*2. Inconsistent Role Assignments
Between COLA and RAI Responses*

Intervenors' expert, Arnold Gundersen, a nuclear engineer with considerable industry experience, submitted a declaration in June 2010 with an ill-fated motion by Intervenors to amend their as-yet undetermined motion to admit Contention 15. The ASLB denied the motion, without prejudice, owing to its supposedly becoming moot by virtue of the ASLB's contemporaneous order admitting Contention 15. DTE maintains (MSD at 14) that "[t]he specific issues raised in the Motion to Amend therefore remain outside the scope of Contention 15 now before the Licensing

⁴Underscoring the conflict of B&V overseeing B&V-QA on behalf of DTE, Applicant described its "Project Engineer" for the period September 2007 - March 2008 as "An engineer with twenty plus years of engineering, licensing and quality assurance experience (previous QA manager at Fermi 2) **working with the OE, Black & Veatch Ann Arbor**, developed the Nuclear Development Quality Assurance Program Document (ND QAPD) and implementing procedures for those elements of the ND QAPD associated with the activities planned to be performed by Detroit Edison at the time (e.g., review of B&V COLA work product)." DTE Responses to RAI No. 26, ML101320254, <http://adamswebsearch2.nrc.gov/webSearch2/main.jsp?AccessionNumber='ML101320254'>, Att. 2, p. 3.

Board;" but then, from pp. 46-53, DTE itself puts the issues raised by Mr. Gundersen in the "Second Declaration of Arnold Gundersen" (which Intervenors have filed contemporaneously with this Reply) at issue, doing so at considerable length. Intervenors therefore offer their rebuttals *seriatim*.

A. *Nuclear Development QA Manager*

Mr. Gundersen is accused by DTE of misunderstanding the circumstances in his statement that, although Detroit Edison states that the Nuclear Development QA Manager held that position as of March of 2008, the "COLA makes no reference to that role." DTE attempts to argue (MSD at 47) that "The Nuclear Development QA Manager was a position that existed only while the ND QAPD was in effect" and that "The ND QAPD was in effect prior to submission of the COL Application for Fermi 3" (the COLA was submitted on September 18, 2008). But DTE's explicit response to NRC RAI No. 26, ML101320254, <http://adamswebsearch2.nrc.gov/webSearch2/main.jsp?AccessionNumber='ML101320254'>, Att. 2, p. 3, clearly reflects that person was on staff as "Nuclear Development QA Manager, March 2008 - April 2009" and that he or she was there "to independently plan and perform activities to verify the development and effective implementation of the QAPD for those activities that support the COLA" and "to ensure that vendors providing quality services to Detroit Edison in support of the COLA are meeting the requirements of 10 CFR 50 Appendix B." *Id.*

The NRC Staff was understandably confused, and so asked for a narrative explanation from DTE because it appeared that the utility had violated 10 C.F.R. Part 50, App. B's requirement (¶ I) that "The authority and duties of persons and organizations performing activities affecting the safety-related functions of structures, systems, and components shall be clearly established and delineated in writing."

B. QA Personnel

DTE's critique of Mr. Gundersen's assertion that "there is a three-month long gap from April 2009 through June 2009 during which Detroit Edison admits that it had no personnel in charge of Quality Assurance" actually *admits* the truth of his finding: "The response identified ND QA Manager employment dates between March 2008 and April 2009. . . ." MSD at 48. Instead of providing proofs tending to show that in April, May and June 2008 there was, indeed, a live person serving as ND QA Manager, DTE argues that in June 2009 the manager to whom a ND QA Manager was to report was changed. Gundersen's essential conclusion remains unchanged. Applicant offers merely an unsworn, undocumented and unverified allegation at ¶ 68 of its "Statement of Material Facts" that "The Director, Quality Management, position was filled prior to the QA Manager position being vacated. There was continuous QA oversight during the relevant period and no 'gap' in QA oversight."

C. Separation and Independence of QA Organization

Intervenors' expert Gundersen also found that "DTE's new description of reporting relationships for the Nuclear Development QA Manager as defined in the DTE May 10, 2010 Reply Response does not provide the Quality Assurance mission with adequate functional separation. It is critical in nuclear QA that there be complete separation and independence between QA and other line functions, and this separation . . . does not seem to exist within the Fermi 3 organization." Second Declaration of Arnold Gundersen, ¶ 17.2.1. Gundersen was troubled by the statement in DTE's response to RAI No. 26 that if the QA manager could not bring about resolution of quality assurance matters, he or she could "bring the matter to the attention of the executive in charge of the MEP organization who will determine the final disposition." This appears to grant a veto by the head of Major Enterprise Projects, which Mr. Gundersen states is "a business development arm of DTE, not a QA or Engineering division,"⁵ over the fixing of quality discrepancies. Apart from denying that the alleged lack of independence for the QA function is a correct conclusion, and its assertions that it is following the NEI quality assurance template, DTE offers no factual evidence to support its position.

⁵Second Declaration of Arnold Gundersen, fn. 7.

*D. Alleged Failure to Notify NRC
of Departure from QAPD Template*

Mr. Gunderson points out (Second Declaration ¶ 17.3) that DTE "should have alerted the NRC that it had taken exception to the NEI approved reporting relationship for its QA function. DTE did not notify the NRC in its original COLA filing for Fermi 3, that it had arbitrarily chosen to modify the NEI approved reporting relationship approved by NRC for this new generation of reactors." Applicant points out a host of paperwork changes it has made since originally departing from the NEI script. The problem remains that there was a large amount of quality assurance groundwork that was supposed to have been achieved in the 2007-2010 period that may have been compromised by the implicitly admitted *status quo ante*. As Mr. Gundersen stressed, the NRC and the inherent dangerousness of the nuclear power mission require a strong quality assurance commitment from the outset of a new plant project.

E. QAPD Reference to Nuclear Development QA Manager

Respecting this controversy, Mr. Gundersen claims that his review of Revision 0 of DTE's initial COLA "Quality Assurance Program Description" contained no reference to a Nuclear Development QA Manager anywhere, in contradiction to DTE's response to RAI No. 26, which asserts that the Nuclear Development QA Manager role was put in place in March 2008. DTE now urges (MSD at 53) that "[w]hile the titles have changed, the basic roles and

responsibilities are identical. . . . Roles and titles in one QAPD have corresponding roles in the other QAPD. Once again, DTE does not argue that Mr. Gundersen's finding was incorrect, only that there has been some revision of the promulgated QAPD in the intervening years, perhaps prompted by the 2009 Notices of Violation or the visibility given quality assurance in motion proceedings before this Board.

*3. The Proprietary Iceberg That Stifles
Meaningful Investigation of QA Compliance*

Beyond the usual disparities in litigation resources in nuclear operating license cases, the utility company has another weapon: invocation of proprietary privilege. Here, DTE had discretion over the timing of its motion filing (including a choice of whether to file its QA Motion simultaneously with the MSD on Contention 6).

Since the first set of disclosures which listed evidentiary items pertinent to Contention 15, the frequency of DTE's invocation of the proprietary privilege has snowballed. According to the count by Intervenor's counsel, in September 2010, DTE listed over 700 items as proprietary, and 404 as non-proprietary. From October 2010 through May 2012, there were 425 claims of propriety information, and only 44 were non-proprietary. In the period of September 2011 through May 2012, DTE claimed 197 items as proprietary, and only 5 were not.

Intervenors are cognizant of the policy that the ASLB

expects all parties to be prepared to litigate. But on quality assurance - an aspect of licensing which one might think would be template-driven and not a matter of business secrets - DTE has decidedly hidden the ball. Contrasting with quality assurance proprietaries, in non-QA disclosures over the last year and a half, there have been fewer than ten invocations of the proprietary privilege.

Because of this strategic secrecy policy of DTE, Intervenors are, contemporaneously to this memorandum filing, moving the ASLB to hold the record open for supplementation of their response in opposition to summary disposition. Intervenors don't have the resources to comb one-by-one through such a tranch of secret documents, nor to pay their expert to do so, except on a selective, guesswork basis. Quality assurance is an all-important "sleeper" issue in nuclear power management, however, and so Intervenors will continue to peek behind DTE's looking glass.

Conclusion

By presenting proofs of early QA failings, Intervenors have produced evidence "sufficient to raise legitimate doubt as to whether the plant can be operated safely," and a ruling in favor of DTE should be denied. *Pacific Gas & Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 & 2), ALAB-756, 18 NRC 1340, 1344-1345 (1983), citing *Union Electric Co.* (Callaway Plant, Unit 1), ALAB-740, 18 NRC 343, 346 (1983); *Louisiana Power & Light Co.*

(Waterford Steam Electric Station, Unit 3), ALAB-812, 22 NRC 5, 15 (1985). This standard has been held applicable to an applicant's design quality assurance program. *Pacific Gas & Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 & 2), ALAB-775, 19 NRC 1361, 1366 (1984), *aff'd sub. nom. San Luis Obispo Mothers for Peace v. NRC*, 751 F.2d 1287 (D.C. Cir. 1984).

The moving party fails to meet its burden when the filings demonstrate the existence of a genuine material fact; when the evidence introduced does not show that the nonmoving party's position is a sham; when the matters presented fail to foreclose the possibility of a factual dispute; or when an issue arises as to the credibility of the moving party's evidentiary material. *Entergy Nuclear Vermont Yankee, L.L.C., and Entergy Nuclear Operations, Inc.* (Vermont Yankee Nuclear Power Station), LBP-06-5, 63 NRC 116, 122 (2006). Intervenors, as nonmovants, are entitled to the favorable inferences that may be drawn from any evidence submitted. *See Sequoyah Fuels Corp.* (Gore, Oklahoma Site Decontamination and Decommissioning Funding), LBP-94-17, 39 NRC 359, 361, *aff'd*, CLI-94-11, 40 NRC 55 (1994).

Intervenors' evidence suggests that some of the 2007-2010 quality assurance activities involving the proposed Fermi 3 were compromised by conflicts of interest wherein Black & Veatch personnel, acting as the "Owner's Engineer", were overseeing fellow Black & Veatch personnel who were serving as general

contractor and quality assurance guarantors for DTE. There were discrepancies in the earliest QA program description information which, to the extent they might have been corrected, have been repaired only on paper. At this point, it may be that many early pre-application and post-COLA activities may not have been undertaken with the requisite attention to QA expectations. The burden rests on DTE to overcome this negative, and Applicant has not discharged it with its Motion.

WHEREFORE, Intervenors respectfully pray the ASLB deny DTE's Motion for Summary Disposition of Contention 15.

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NUCLEAR REGULATORY COMMISSION
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* * * * *

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing "INTERVENORS' RESPONSE IN OPPOSITION TO DTE MOTION FOR SUMMARY DISPOSITION OF CONTENTION 15" have been served on the following persons via Electronic Information Exchange this 17th day of May, 2012:

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