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In the Matter of: DETROIT EDISON COMPANY (Fermi Nuclear Power Plant, Unit 3)	
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**DTE000101**

May 30, 2013

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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

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WRITTEN REBUTTAL TESTIMONY OF DTE ELECTRIC  
WITNESSES PETER SMITH, STANLEY STASEK,  
RONALD SACCO, AND STEVEN THOMAS ON CONTENTION 15

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## **TABLE OF CONTENTS**

	<u>Page</u>
EXPERT WITNESSES .....	1
DISCUSSION.....	2
A. <u>Summary of DTE Position</u> .....	2
B. <u>Response to NRC Staff Testimony</u> .....	5
C. <u>Response to Intervenors' Testimony</u> .....	6
1.     Gundersen Testimony (Public) .....	6
2.     Gundersen Testimony (Proprietary) .....	23
CONCLUSIONS.....	27

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COMPANY WITNESSES PETER SMITH, STANLEY STASEK,  
RONALD SACCO, AND STEVEN THOMAS ON CONTENTION 15**

**EXPERT WITNESSES**

**Q1. Please state your full name.**

A1. My name is Peter W. Smith ("PS").

My name is Stanley Stasek ("SS").

My name is Ronald Sacco ("RS").

My name is Steven Thomas ("ST").

**Q2. Have you previously presented testimony in this proceeding?**

A2. (PS, SS, RS, ST) Yes. We provided testimony to support DTE's position on Contention 15 on April 30, 2013. Specifically, we sponsored those statements in the DTE testimony that were marked with our initials. Our professional qualifications were provided with that filing.

**Q3. Have you reviewed the NRC Staff's statement of position and testimony?**

A3. (PS, SS, RS, ST) Yes. We have reviewed the NRC Staff's statement of position, testimony, and exhibits that were filed on April 30, 2013.

**Q4. Have you reviewed the Intervenor's statement of position and testimony?**

A4. (PS, SS, RS, ST) Yes. We have reviewed the Intervenor's statement of position and testimony that were filed on April 30, 2013. The Intervenor did not submit any exhibits in support of their position.

**Q5. Please describe the purpose of your Rebuttal Testimony.**

A5. (PS, SS, RS, ST) The purpose of our Rebuttal Testimony is to respond to statements made by the NRC Staff and the Intervenor in their testimony, position statements, and exhibits.

## **DISCUSSION**

### ***A. Summary of DTE Position***

**Q6. Please summarize the conclusions in your initial testimony regarding Contention 15A.**

A6. (PS, ST, RS) Contention 15A concerns the reliability of the safety-related information in the COL Application and supporting Final Safety Analysis Report ("FSAR") and, in particular, the reliability of safety-related design information in the FSAR that was based on B&V tests, investigations, or other activities conducted during the period of time before the Fermi 3 project implemented its own quality assurance ("QA") program to oversee those activities prior to accepting B&V COL Application work product. As the record demonstrates, during the period of time that B&V was performing site investigations, tests, and other safety-related activities to support the development of a COL Application, the work was performed by B&V at DTE's direction and under B&V's established Appendix B QA program. During the site investigation phase, the

Fermi 3 Nuclear Development organization also maintained a presence to oversee those activities, and workers were subject to the applicable site programs for the operating Fermi 2. DTE also retained an Owner's Engineer ("OE") to enhance its oversight and observation of site work activities, including surveillances of the site investigation activities. The NRC Staff exercised oversight of the pre-application subsurface investigation activities being conducted to obtain geotechnical and seismic data.

(PS) Moreover, even though DTE was not required to implement a QA Program prior to application submittal, DTE did, in fact, establish an Appendix B program under the ND QAPD and developed procedures for review and acceptance of COL Application work product from B&V. The ND QAPD and implementing procedures provided additional measures of oversight beyond DTE's commercial contract oversight, including surveillances and audits of the B&V Nuclear Organization QA program.

(PS, ST) DTE retained responsibility for the quality of information in the COL application throughout the Fermi 3 project and no deficiencies of material safety significance have been identified. Based on the comprehensive set of QA measures applied to safety-related information, there is reasonable assurance that the safety-related information developed prior to COL submittal is of high-quality.

**Q7. Please summarize the conclusions in your initial testimony regarding Contention 15B.**

A7. (PS, SS) Contention 15B alleges that there is an ongoing lack of commitment to implementation of a QA program for Fermi 3. However, the testimony and exhibits provided in our initial testimony demonstrate that DTE has developed and implemented, and will continue to implement, an effective QA program, that meets all relevant requirements and guidance.

(PS, SS) DTE demonstrated its commitment to QA from the start of the project by selecting a contractor with an existing Appendix B QA program, requiring by contract that work be performed under that program, and establishing its own Appendix B QA program prior to accepting any information for use in the COL Application. DTE also adopted the Fermi 3 QAPD contemporaneously with the COL Application submittal. The NRC Staff has reviewed the Fermi 3 QAPD and found it acceptable.

(PS, SS) DTE has implemented the Fermi 3 QAPD since its adoption through procedures based on the QAPD and NRC requirements. DTE has performed numerous audits, surveillances, assessments and other actions to ensure effective implementation of the DTE QA program. The NRC Staff verified implementation of the Fermi 3 QAPD by inspection and also concluded that DTE has provided satisfactory oversight of the contracted activities by implementing the applicable oversight components of the DTE QA Program. Implementation of the program is also subject to ongoing NRC oversight.

(PS, SS) There has been no pervasive or ongoing breakdown in the Fermi 3 QA program and no “serial” violations of QA requirements. DTE has, since the beginning of the project, been providing active oversight of its contractor’s Appendix B program and has implemented the Fermi 3 QAPD to carry oversight forward throughout the construction and operation of Fermi 3 — consistent with all NRC standards and expectations. As a result, there is reasonable assurance that the Fermi 3 QA program has been, is, and will be implemented in accordance with NRC regulations and the applicable QAPD.

***B. Response to NRC Staff Testimony***

**Q8. Have you reviewed the NRC Staff Testimony and the exhibits cited in that testimony?**

A8. (PS, SS, RS, ST) Yes, we have reviewed the NRC Staff testimony and the exhibits.

**Q9. What is your general reaction to the NRC Staff Testimony?**

A9. (PS, SS, RS, ST) We agree with conclusions made by the NRC Staff witnesses. They reach the same conclusions that we made in our initial testimony.

**Q10. Do you have any comments on the NRC Staff Testimony?**

A10. (PS, SS) Yes. The NRC Staff’s testimony demonstrates the depth and breadth of the NRC’s review of the Fermi 3 COL Application on QA issues. The testimony also effectively summarizes the identification and resolution of the QA NOVs. On the whole, the NRC Staff performed an extensive and searching review of the quality measures applied to the Fermi 3 project. Based on that review, the NRC Staff concluded that the QA violations were resolved, that those violations did not

affect safety-related information in the COL Application, and that there are no outstanding QA issues related to Fermi 3.

***C. Response to Intervenors' Testimony***

**Q11. Have you reviewed the Intervenors' initial statement of position and testimony?**

A11. (PS, SS, RS, ST) Yes, we have reviewed the Intervenors' filing and testimony (both public and proprietary).

**Q12. What is your general reaction to the Intervenors' filing?**

A12. (PS, SS, RS, ST) We strongly disagree with the inferences and conclusions that the Intervenors draw from the information that they present. We will address specific issues raised by the Intervenors in the paragraphs that follow.

***1. Gundersen Testimony (Public)***

**Q13. Before getting into the specifics of Mr. Gundersen's testimony, do you have any initial observations?**

A13. (PS, SS) Yes. Mr. Gundersen identifies a number of documents and examples that, he claims, demonstrate problems in DTE's QA program. As discussed further below, Mr. Gundersen cites to text out of context or highlights discrete issues that were identified, investigated, and resolved under the Fermi 3 Corrective Action Program ("CAP"). The fact that issues are entered into the CAP is evidence that the program is working effectively. We would, frankly, be concerned if we were not finding any issues or areas for improvement. In any event, the documents and examples he cites do not suggest any problems with



safety-related information, nor do they indicate a pervasive failure in, or lack of commitment to, quality assurance.

**Q14. In Q8, Mr. Gundersen claims that DTE deviated from the NEI template, which had been approved by the NRC, without informing the NRC of the change. Is this an accurate description of the circumstances?**

A14. (PS, SS) No. First, from a regulatory perspective, the requirement is a QA program that meets Appendix B and NQA-1. Use of the NEI QAPD template is a tool to promote consistency and efficiency, but is not, in and of itself, a requirement. Second, delegation is specifically addressed in the NEI QAPD template in Part 2, Section 2.2 (Exh. DTE000091 at 12).<sup>1</sup> That section explains that the applicant/licensee may delegate to others all or part of the activities of planning, establishing, and implementing the program for which they are responsible, but must retain the responsibility for the program's effectiveness. Here, DTE delegated QA activities to B&V, while retaining overall responsibility for the program's effectiveness. There was therefore no "deviation" from the template. Third, the NRC was aware of DTE's plans to delegate certain QA activities to B&V during the site investigation phase. Specifically, the NRC audit of pre-application subsurface activities, dated August 8, 2007 (Exh. DTE000084), notes (at 3) that B&V QA measures are being applied to the work. DTE also informed the NRC in a letter, dated May 31, 2007, that the B&V QA Program was being applied to the geotechnical investigation work scope.<sup>2</sup> Thus, DTE

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<sup>1</sup> Delegation is also explicitly permitted in 10 C.F.R. Part 50, Appendix B, Criterion I.

<sup>2</sup> Letter from D. Gipson, DTE, to NRC, NRC3-07-0002, dated May 31, 2007 (Exh. DTE000107).

clearly informed the NRC that it was delegating some QA functions to B&V during the site investigation phase.

**Q15. In Q9, Mr. Gundersen asserts that the NOV issued by the NRC related to a deviation from the NEI template. Is that correct?**

A15. (PS, SS) No. As noted above, compliance with the NEI template is not itself a regulatory requirement and therefore could not be the basis for a NOV. The reasons for the NOV were discussed at length in ¶¶62-69 of our direct testimony. In brief, Violation A involved a failure to sufficiently *document* the basis for qualifying the B&V QA program for safety-related Fermi 3 COL activities. Violation B involved a failure to perform certain audits and trending of CARs that DTE committed to perform in the Fermi 3 QAPD. Neither involved a deviation from the NEI template.

**Q16. In Q12, Mr. Gundersen implies that there is some tension between the NRC's decision to withdraw the portion of the QA NOV for the pre-application period and DTE's recognition of the need for QA measures during the pre-application period. Can you respond?**

A16. (PS, SS) While there are no QA requirements that apply prior to submittal of a COL application — that is, before a company is an “applicant” — this does not mean that DTE ignored the need for quality work. A prospective applicant must conduct activities that are important to safety (particularly safety-related site investigation activities) in a manner such that the quality can be demonstrated to support the eventual application. This is precisely what DTE did for the Fermi 3 project. At all times, including both the pre-application and COL Application review phases, DTE ensured, through systematic processes, that suppliers of

safety-related equipment or services meet the applicable requirements of Appendix B.

**Q17. In Q12, Mr. Gundersen claims that the responsibility for the QA program was given to one division of B&V while DTE delegated all the Fermi 3 “Licensing Project Engineering” to a separate division within B&V. Is this accurate?**

A17. (PS, SS) No. As DTE explained in its direct testimony (at ¶51), the Owner’s Engineer was retained under a contract with the Ann Arbor, Michigan, office of B&V. This contract was separate and independent of the contract between DTE and the Overland Park, Kansas, office of B&V preparing the COL Application work product. As a matter of practice, the OE maintained separation from the B&V COL Application project and relied on different personnel. The OE was not, as Mr. Gundersen suggests, given responsibility for the QA program. Nor were QA responsibilities “divided” between the two offices of B&V. Each had distinct responsibilities. And, DTE at all times retained responsibility for the quality of COL Application material.

**Q18. In Q13, Mr. Gundersen claims that “early QA problems are the root cause of the current site characterization issues that continue to plague” Fermi 3. Do you know what he is referring to?**

A18. (PS, SS) No. We are aware of no outstanding site characterization issues relating to the Fermi 3 COL Application. Nor are we aware of any ongoing QA issues.

(PS) DTE is continuing to work on a Soil-Structure Interaction (“SSI”) analysis. But, that work is unrelated to the site investigation for Fermi 3. In Revision 7 of the Design Control Document (“DCD”) for the ESBWR, GE added a new

specification relating to engineered backfill, which triggered the need for additional analysis by COL Applicants referencing the ESBWR design, including DTE. That analysis is ongoing. However, the SSI analysis (and the need for the analysis) had nothing to do with data gathered during the site investigation phase. Revision 7 was submitted in March 2010 — nearly three years after the site investigation work. Nor does the need for the SSI analysis stem from any QA problems or concerns at the Fermi 3 project.

**Q19. Mr. Gundersen asserts in Q15 that the NRC Staff was wrong to decide that the requirement to have an Appendix B QA program applied only to applicants. Can you explain why, as you understand it, the NRC Staff reached its decision?**

A19. (PS, SS) Yes. Appendix B, Criterion I, states that the “applicant” shall be responsible for the establishment and execution of the QA program. Under a plain reading of Criterion I, the Appendix B requirements were not applicable to DTE prior to September 18, 2008, because DTE was not yet an applicant.<sup>3</sup> Therefore, the NRC cannot issue a violation for QA activities prior to the COL Application.

(PS, SS) Regardless, the NRC Staff expects quality work in the application. Accordingly, DTE did have in place a QA program that met Appendix B prior to submitting the COL Application. Indeed, the ND QAPD was in place in February 2008 — before DTE accepted any work product from B&V for use in the COL Application. DTE fully recognized that information developed in the preparation of a COL Application, including site investigation activities, needed to be

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<sup>3</sup> See also DTE Statement of Position on Contention 15 at 17-18.

conducted in a quality manner. DTE therefore took systematic and appropriate quality actions. DTE's approach to implementation of quality requirements was deliberate and timely, and provided the required level of quality as evidenced by the substantive and in-depth NRC Staff reviews.

**Q20. In Q18 and Q19, Mr. Gundersen claims that there were problems associated with geotechnical work performed at the site, including use of an unapproved vendor. Can you address his concerns?**

A20. (PS, RS, ST) Mr. Gundersen claims that DTE relied on the Fermi 2 QA program for geotechnical work without qualifying Fermi 2 as an approved vendor. While a nuclear QA program was applied to the Geotechnical Site Boring Program, Mr. Gundersen wrongly assumes that the operating Fermi 2 QA program was applied to that work. Instead, the geotechnical work was performed under the B&V Appendix B QA program.

(PS) As we explained in our initial testimony at ¶48, experienced DTE personnel provided direct oversight for all site work to provide the necessary interface between the COL project and Fermi 2 plant and to ensure compliance with existing Fermi 2 site programs (*e.g.*, for site access, work control, and contractor oversight). Work at the Fermi site is governed by the Fermi 2 site authority to ensure that there is no adverse impact of site activities on Fermi 2 and that activities are carried out in accordance with Fermi 2 site requirements. For example, Fermi 2 procedures were applied to ensure appropriate control of contractors (*i.e.*, no violations of site rules), and planned excavation activities

must be authorized in advance. But, the work was conducted under the B&V QA program, not the Fermi 2 QA program.<sup>4</sup>

**Q21. In Q20, Mr. Gundersen asserts that “after the geotechnical work had already begun in April 2007, Black & Veatch attempted to backfill the certifications of their non-nuclear contractors.” Is that an accurate characterization?**

A21. (PS, RS, ST) No. To the contrary, the “pre-work surveillance” of GEOVision referenced in the NOV response (emphasis added) was conducted in order to qualify GEOVision under the B&V QA program to perform work activities associated with seismic testing and data collection. The pre-work surveillance is therefore evidence of a functioning QA program and was in no way an attempt to “backfill” certifications after-the-fact.

**Q22. Mr. Gundersen claims in Q21 that “Fermi 2 is not an approved vendor.” Can you respond?**

A22. (PS, RS, ST) Yes. Mr. Gundersen is repeating the same error identified previously regarding the role of Fermi 2. As discussed above, the Fermi 2 QA program was not applied to site investigation activities. Instead, site investigation activities were conducted under the B&V QA program. There was no need to “qualify” Fermi 2 as a vendor because Fermi 2 performed no safety related work for Fermi 3. Applicable Fermi 2 site procedures were followed for reasons related

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<sup>4</sup> In the NRC Staff testimony at ¶19, Mr. Lipscomb notes that at the beginning of the Fermi 3 COL Application, the NRC Staff was primarily familiar with applications that relied on QA programs associated with existing reactors. However, he notes that, since the Fermi 3 COL Application, other applicants have taken the same approach as DTE. Mr. Lipscomb notes that this approach “helps ensure that new applications are informed by current regulatory standards and guidance.”

to operation of Fermi 2, but not for the purpose of developing safety-related information in the COL Application for Fermi 3.

**Q23. In Q23 and Q24, Mr. Gundersen reiterates the issues that he identified earlier in this proceeding. Have you addressed these previously?**

A23. (PS, RS, ST) Yes. DTE addressed these issues in its Motion for Summary Disposition on Contention 15, dated April 17, 2012. Although the Board gave Mr. Gundersen an extension of time in which to prepare a response, Mr. Gundersen ultimately did not submit any testimony or otherwise respond. We also addressed his concerns in our direct testimony at ¶¶85-94. We briefly summarize those responses below.

**Q24. In Q23, Mr. Gundersen complains that he was unable to find a reference to the “New Plant Oversight Manager” position in the COL Application. Can you explain?**

A24. (PS, SS) Yes. As we explained in our direct testimony at ¶85, the title of the person responsible for the QA program has evolved over time. The Nuclear Development QA Manager existed only while the ND QAPD was in effect. The duties of the Nuclear Development QA Manager were taken over by the New Plant Oversight Manager (Revision 0 of the Fermi 3 QAPD), which became the Director, Quality Management (in Revision 1 of the Fermi 3 QAPD in October 2009).

(PS) Mr. Gundersen also claims that this reflects confusion within DTE over the conflicting roles of the two positions (New Plant Oversight Manager and Nuclear Development QA Manager). But, it instead appears that it is Mr. Gundersen who is confused about the evolution of the QAPDs applied to different stages of the

Fermi 3 project. Although they have different titles depending on which QAPD was in effect, all three positions — Nuclear Development QA Manager, New Plant Oversight Manager, and Director, Quality Management — have the same responsibilities.

**Q25. In Q24, Mr. Gundersen highlights “five additional major concerns” that he has. Have you addressed them previously?**

A25. (PS, SS) Yes. Each of his concerns has been addressed previously. As discussed in ¶88 of our direct testimony, there was no 3-month gap in QA oversight. Instead, there was continuous QA oversight during the relevant period. As discussed in ¶¶89-92, there was appropriate independence and reporting relationships within the QA Program during the relevant period. As discussed in ¶93, there was no deviation from the NEI QAPD template. As discussed in ¶94, there was no reference (nor should there have been any reference) to the Nuclear Development QA Manager in the Fermi 3 QAPD. Instead, the Nuclear Development QA Manager was a position that existed only while the ND QAPD was in effect.

(PS, SS) Overall, none of five “issues” raised by Mr. Gundersen have any validity, reflecting instead Mr. Gundersen’s misunderstanding of the evolution of the QA program for Fermi 3.

**Q26. In Q25, Mr. Gundersen claims that “DTE expected a *self-executing* QA program to be provided by its vendor.” Can you address his claim?**

A26. (PS, RS, ST) It is not clear what Mr. Gundersen means by a “self-executing” program. As we explained in our initial testimony at ¶23, a QA program includes



the following attributes: *administrative and programmatic controls* for safety-related activities; consistent and thorough *execution* of all work in accordance with the procedural requirements; *verification activities* that provide reasonable assurance that the execution of work is in conformance with the established procedural requirements, regulatory requirements, and industry standards; and a *corrective action program*. Consistent with DTE's expectations, both the B&V QA program and the Fermi 3 QA program include these attributes. These two QA programs both incorporate ongoing efforts to drive continuous improvement in performance and therefore are not expected to be "self-executing."

**Q27. In Q25, Mr. Gundersen also asserts that "DTE knowingly and deliberately minimized its corporate commitment to quality oversight." Can you comment?**

A27. (PS, SS) Since the beginning of the Fermi 3 project, and prior to submittal of the COL Application, DTE has been committed to implementing QA procedures for all aspects of work that are important to the safety of the Fermi 3. In both the pre-application and the COL Application review phases of the project, DTE has ensured, through systematic processes, that suppliers of safety-related equipment or services have met the applicable requirements of Appendix B. DTE knowingly and deliberately contracted with B&V to perform specific services under the B&V Appendix B QA Program. DTE did not, in any sense, "minimize its corporate commitment to quality oversight." DTE took responsibility for the program, delegated the function to a qualified vendor, and exercised organizational oversight of that work. And, the ND QAPD was subsequently approved for use before COL Application chapters were accepted from B&V and

before the COL Application was submitted. Finally, as discussed in ¶75 of our direct testimony, DTE is committed to implementing the QA Program in all aspects of work that are important to the safety of Fermi 3 as described in its QAPD.<sup>5</sup>

**Q28. In Q28 and Q30, Mr. Gundersen states that DTE had not yet selected the reactor technology when the site investigation began. Is this significant?**

A28. (PS, ST) While it is true that in March 2007 DTE had not yet made a final reactor technology selection, this has no bearing on the QA program applied to site investigation activities. The significance of the technology selection related only to the scope of the information that would need to be collected during the site investigation. Different reactor technologies have different footprints and therefore may require more or less (or different) information in order to demonstrate that site conditions are bounded by the certified reactor design. This is discussed further in our direct testimony at ¶¶25-27.

(PS, ST) The email referenced by Mr. Gundersen in Q28 discusses the work plans that would be shared with the Fermi 2 organization. As noted above, the Fermi 2 organization has responsibility for ensuring that work performed at the Fermi site (*e.g.*, site investigations) complies with site procedures for, among others, access and control of contractors. The Fermi 2 organization also has

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<sup>5</sup> The Fermi 3 FSAR includes the Fermi 3 policy for “Quality Assurance During Construction and Operation.” The policy evidences a clear corporate commitment to implement the QAPD such that Fermi 3 is and will be designed, procured, constructed, and operated in a manner that ensures the safety of the public and workers.

responsibility for ensuring that on-site geotechnical investigations do not adversely impact Fermi 2 systems, structures, or components (“SSCs”).

**Q29. In Q29, Mr. Gundersen highlights an email that, he claims, demonstrates that DTE’s goal was to “avoid QA oversight.” Is that accurate?**

A29. (PS) No. As the email indicates and as discussed throughout our testimony, the site investigation work was performed under the B&V QA plan. The reference to QA audits referred only to my view that B&V’s qualifications were adequately demonstrated through Nuclear Procurement Issues Committee (“NUPIC”) audits and other utilities’ audits such that DTE did not need to perform a QA audit at that time.<sup>6</sup> These reviews by established nuclear organizations provided strong evidence that the B&V program was being properly implemented for nuclear work, including COL application work. In particular, at that time B&V was successfully leading the development of the Entergy River Bend COL application, which had a similar scope of work as the Fermi 3 COL Application. Moreover, as described in my direct testimony at ¶57, DTE has, subsequent to that email, performed numerous audits and surveillances of B&V’s QA program, including in April 2008, June 2008, July 2009, November 2011, and January 2012.

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<sup>6</sup> As discussed in DTE Testimony at ¶65, DTE based B&V’s qualification on the contract solicitation process, which referenced the basis for B&V QA qualification, including B&V QA program details and audits of the B&V program by other U.S. nuclear utilities. DTE’s Nuclear Development procedures also stated the basis for B&V’s qualifications to provide QA services. See NDP-NP-4.1, “Procurement of Services” (Exh. DTE000055).

**Q30. In Q30 and Q31, Mr. Gundersen focuses on the status of the DTE QA program in November 2007. Did DTE have a QA program at that time?**

A30. (PS) Beginning in November 2007, DTE began to develop a formal process for the receipt, review, and acceptance of COL Application work product from B&V for submittal to the NRC. As discussed in our direct testimony at ¶¶30, 55, and 63, no work product was accepted until after the Fermi 3 project had its own QA program in place — the ND QAPD — beginning in February 2008.

**Q31. In Q31, Mr. Gundersen questioned the role of “a DTE employee named Ashworth” who claimed to be the “DTE OE Quality Manager.” Can you explain?**

A31. (PS) Yes. As noted in our direct testimony at ¶34, DTE secured the services of an OE to support owner-related activities, including development of a QA program for the Fermi 3 project. In November 2007, DTE was still considering options for staffing the QA program, including use of OE resources. Mr. Craig Ashworth was a QA professional, working for the OE, who had been identified to serve in the Quality Manager role. In the end, DTE decided to staff the QA organization within DTE and rely less on OE resources. This decision is reflected in the ND QAPD, which was approved for use in February 2008, and DTE’s hiring of Mr. Werner (and then Mr. Stasek) to fill the QA Manager role.

**Q32. In Q33, Mr. Gundersen highlights an early draft of a QAPD and claims that “[i]t is clear based on the paragraphs detailed below that in 2007 DTE believed that it had organizational responsibility to oversee the COLA process.” Do you agree?**

A32. (PS) Yes. DTE had (and has) responsibility for the COL Application. At the outset of the Fermi 3 COL Application development project in March 2007, DTE contractually delegated to B&V the responsibility for establishing and executing a

QA program for the B&V scope of work on the project. DTE, however, retained overall responsibility for the program. And, in February 2008 DTE implemented the ND QAPD. No COL Application work product was accepted by DTE for use in the COL Application until after DTE had a QA program in place.

**Q33. In Q34, Mr. Gundersen quotes from a document that, he claims, shows that DTE chose to continue its “self-executing” QA program. Is that an accurate characterization of the document?**

A33. (PS) No. Mr. Gundersen cites to “DTE-00653, Nuclear Development Decision Document 12/17/07.”<sup>7</sup> But, he quotes selectively from the document. The text that Mr. Gundersen cites addresses alternatives that DTE did not adopt. In the section entitled “Description of Solution,” which reflects the approach that DTE adopted, DTE explained that it would conduct the COL Application work production acceptance review in accordance with Standard Work Instructions (“SWIs”). As discussed in ¶54 of our direct testimony, individual FSAR chapters or sections were reviewed by DTE’s Nuclear Development staff as prescribed by SWI 03-001-001-0529, “COLA Section and Chapter Review and Acceptance Process” (Exh. DTE000050). DTE reviewed the application work product against relevant regulatory guidance, information provided by DTE to B&V, and the Reference COL Application (“R-COLA”), as applicable. Comments were documented and provided to B&V for formal resolution. All comments were resolved in accordance with procedures.

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<sup>7</sup> The Intervenor did not introduce this document as an exhibit. DTE will refer to this as Exh. DTE000106.

**Q34. In Q35, Mr. Gundersen references an email that purports to show that “it is clear that any organizational knowledge of the existence of a quality program is also lacking.” Is this an accurate characterization?**

A34. (PS, ST) No. The email was sent by a licensing contractor, used by B&V, who was helping to prepare the content for Chapter 17 of the FSAR.<sup>8</sup> In the process of doing so, he noted the approaches used in the North Anna and Grand Gulf applications and asked others involved in the project about how DTE planned to address QA. The email therefore reflects nothing more than his efforts to gather information to support development of the text of the COL Application. As we explained in our initial testimony (at ¶28), DTE developed the QA program for the Fermi 3 project independent of the QA program for the operating Fermi 2 unit to minimize the burden on the operating plant organization. And, as Mr. Lipscomb noted in ¶19 of his direct testimony, other COL applicants have since taken the same approach as DTE. Mr. Lipscomb notes that this approach “helps ensure that new applications are informed by current regulatory standards and guidance.”

**Q35. In Q37 and Q38, Mr. Gundersen discusses an organizational chart, dated January 2008, and claims that it shows a lack of an independent reporting relationship for the QA program. Can you address his concern?**

A35. (PS, SS) Yes. First, Mr. Gundersen claims that the organizational chart shows a “Nuclear QA Oversight Quality Assurance Program” title that is not addressed in the QAPD. But, that is a placeholder for the QA organization itself — the QA “department” for the Fermi 3 project, including the manager and support staff — not the title of a specific position. Section 1.2.1.2.1 of the ND QAPD (Exh.

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<sup>8</sup> As discussed in ¶70 of DTE’s direct testimony, FSAR Chapter 17 addresses QA.

DTE000070) describes the ND Quality Assurance Manager (“QA Manager”) position and explains that the “Nuclear QA Oversight Quality Assurance function reports administratively to the Director & Project Manager Nuclear Development.” The organization chart therefore aligns with the ND QAPD.

(PS, SS) Second, Mr. Werner, who filled the ND QA Manager position, was hired in March 2008.<sup>9</sup>

(PS, SS) Third, independence was discussed in the description of the ND QA Manager function and in ND QAPD Section 1.4, “Quality Assurance Organizational Independence” (Exh. DTE000070).<sup>10</sup> In the pre-application phase the QA Manager reported directly to the Director & Project Manager Nuclear Development specifically to ensure that the personnel performing QA oversight functions were not subject to line organization influence.<sup>11</sup> This reporting relationship ensured that QA personnel were provided direct access to senior management that is independent of the line functions for reporting QA concerns.

(PS, SS) In addition, the position description for the Nuclear Development QA Manager included the following responsibility: “[i]f the [ND QA Manager] disagrees with any actions taken by the Nuclear Development organization and is unable to obtain resolution, the [QA Manager] shall bring the matter to the

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<sup>9</sup> This is discussed in more detail in ¶88 of DTE’s direct testimony.

<sup>10</sup> This is discussed in more detail in ¶89 of DTE’s direct testimony.

<sup>11</sup> The line organization is led by the Director, Nuclear Development Licensing and Engineering (P. Smith).

attention of the Senior Vice President DTE Energy who will determine the final disposition.” For the Fermi 3 project the ND QA Manager reported to the “Senior Nuclear Development Officer” — the Director & Project Manager, Nuclear Development. The reporting structure during this period was consistent with the NEI template.

**Q36. In Q39, Mr. Gundersen highlights an email for the proposition that DTE “had no intention of hiring QA professionals.” Is this accurate?**

A36. (PS) As discussed above in ¶31, at one point in the project, DTE had considered using OE resources to staff the QA program. DTE ultimately decided to staff the QA organization within DTE. The email cited by Mr. Gundersen merely discusses this history.

**Q37. In Q40, Mr. Gundersen describes an email that, he says, shows that DTE did not have a clear understanding of its organizational responsibilities. Do you agree?**

A37. (PS) No. As explained above, Mr. Werner, who was an experienced QA professional, joined the Fermi 3 project as the ND QA Manager in March 2008. Contrary to Mr. Gundersen’s assertion, the email does not show that Mr. Werner was asking B&V to tell him “what type of reviews DTE needs to perform in order to meet COLA requirements.” The email from Mr. Werner reflects his effort to better understand B&V’s processes and procedures being applied to the Fermi 3 project. This information would help inform the manner in which Mr. Werner would perform his duties as the ND QA Manager. Put simply, Mr. Werner was just doing his job.



**Q38. Do you agree with Mr. Gundersen's claims, in Q41, that DTE recognized "that its lack of a QA program had created organizational chaos"?**

A38. (SS) No. The presentation cited by Mr. Gundersen was given to an industry group working on QA issues for new plants shortly after the NRC issued its initial QA NOV to DTE. The presentation is not evidence of program failure. Instead, the purpose of the presentation was to generate conversation among QA professionals. The conclusions reflect nothing more than DTE's lessons-learned and continual improvement efforts.

## **2. Gundersen Testimony (Proprietary)**

**Q39. In Q1, Mr. Gundersen claims that there is "no record" of a meeting with the NRC on July 11, 2007, and states that Fairewinds Associates was unable to find any record. Was a meeting summary in fact available?**

A39. (PS, ST) Yes. The meeting with the NRC was documented in an audit report, "Audit of Combined License Pre-Application Subsurface Investigation Activities at Fermi (Project No. 757)" (ADAMS Accession No. ML072190660). The audit report, which was introduced in DTE's direct testimony as Exh. DTE000084, concluded that "work was being done in an appropriately controlled manner." NRC inspectors conducted the audit in accordance with Inspection Manual Chapter ("IMC") 2502, *Construction Inspection Program: Pre-Combined License (Pre-COL) Phase*, dated June 22, 2005.<sup>12</sup>

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<sup>12</sup> IMC 2502 invokes, for COL applications that do not reference an Early Site Permit (such as the Fermi 3 application), Inspection Procedure 35004, *Pre-Docketing Early Site Permit Quality Assurance Controls Inspection*, dated May 29, 2003.

**Q40. In Q2, Mr. Gundersen gives five examples of issues that, he claims, “are endemic of a systematic failure of the Quality Assurance function within DTE.” Do you agree with him?**

A40. (PS, SS) No. The examples that he cites in no way show a systemic failure of the QA function. To the contrary, they show that the QA program was functioning effectively. The examples provide evidence of quality processes working to identify and capture issues. The examples also demonstrate the relatively low threshold being applied for initiating condition reports (which is a desired attribute). Significantly, none of the examples involved safety-related information relied upon by DTE in the COL Application. The relevance of these examples to Contention 15 is therefore unclear.

**Q41. Can you provide a brief explanation of the examples listed by Mr. Gundersen?**

A41. (PS, ST) Yes. The first example cited by Mr. Gundersen was taken from a condition report prepared by B&V involving the Environmental Report (“ER”). The issue was identified by B&V and was entered into the B&V Corrective Action Program. Within the context of Contention 15, which relates to the quality of safety-related information in the COL Application, it is worth noting that the ER is not a safety-related document subject to a QA program.<sup>13</sup> In any event, the issue involved an error found in a *draft* revision of an ER section — specifically, wording in draft revision 3 was different than wording in draft revision 2, but the change was not identified as a proposed change and the basis for the change was not provided. After investigation, B&V determined that the issue was the result

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<sup>13</sup> DTE Direct Testimony at ¶25.

of a singular occurrence associated with the translation between text editing and document publication software. And, the issue was identified prior to the ER being submitted to the NRC. So, far from representing a breakdown in the DTE QA program, the issue represents effective functioning of the B&V QA program in that B&V identified the problem, researched its cause, and took steps to avoid recurrence.

(PS) The second example identified by Mr. Gundersen involved errors identified by DTE during its review of *draft* COL Application materials provided by B&V. The issues were identified during the Request for Review (“RFR”) process by which DTE reviewed and commented on draft COL Application work product prepared by B&V. A corrective action report (“CAR”) was prepared to document the errors, investigate the cause, and develop a response.<sup>14</sup> Based on a review of the issue, DTE concluded that the errors identified in the CAR were found as part of the normal COL Application review process and did not indicate a larger or programmatic issue. If anything, the fact that DTE identified and captured the errors before any materials were provided to the NRC demonstrates an effective quality assurance program.

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<sup>14</sup> The Fermi 3 CAP procedure, NP-16.1 (Exh. DTE000052), is designed to assist the Nuclear Development team with initiating, assigning, reviewing, dispositioning, and closing CARs. The person assigned a CAR will investigate the condition, determine causes, evaluate and implement measures to correct the condition, and document the resolution. DTE’s Nuclear Development CAR Review Committee, which is comprised of representative directors and managers from Nuclear Development, manages and oversees the effectiveness of the CAR process.

(PS) The third example cited by Mr. Gundersen involves a CAR documenting the discrepancy in the ER (which, again, is not a safety-related document) regarding the presence of Eastern Fox Snakes on the Fermi site.<sup>15</sup> Following an investigation, the discrepancy was resolved and changes were made to the ER. The issue was not found to be part of a larger problem, but rather reflected a discrete error involving reconciliation of documented fox snake sightings and anecdotal observations on the Fermi site.

(PS) The fourth example provided by Mr. Gundersen involved mistakes in the schedule provided by DTE to the NRC for responding to Requests for Additional Information (“RAIs”). Significantly, the mistakes only related to the schedule for providing responses and did not involve substantive errors in the response or errors in any safety-related information. This example reflects a simple human performance issue and does not have any bearing on the issues that are the subject of Contention 15.

(PS) The fifth example cited by Mr. Gundersen involved a CAR initiated by DTE to address perceived deficiencies in the rigor and thoroughness of actions to close CARs. The deficiencies were identified during ND Audit 09NI01 (Exh. DTE 000058). Following an assessment of the extent of condition, DTE initiated two reviews of the Fermi 3 CAP: an audit performed by the supervisor of audits for Fermi 2 and an external review by a contractor, Conger & Elsea, Inc. Based upon those reviews, DTE made some adjustments to the CAP process to improve

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<sup>15</sup> This discrepancy is the subject of Contention 8.

efficiency and enhance the process descriptions and level of detail in implementing procedures. The CAR does not suggest any issue with safety-related related information in the COL Application. In the end, this CAR provides evidence of DTE taking proactive steps to improve the effectiveness of the CAP as part of its continual improvement efforts.

**Q42. Based on the above examples, do you have any additional observations regarding Mr. Gundersen's conclusions?**

A42. (PS, SS) Yes. The examples cited by Mr. Gundersen are notably lacking any indication of an error in safety-related information gathered during the site investigation phase or sent to the NRC — much less a pervasive or programmatic breakdown in the QA program. Instead, the examples actually demonstrate the effective functioning of the Fermi 3 QA program through verification activities (*e.g.*, self-assessments, performance trending, audits, surveillances, vendor reviews, and third party audits) and the Corrective Action Program. CAP procedures were applied to assess performance gaps and areas for improvement; ensure that management was made aware of issues and that the cause was determined; and develop actions to address the gap and improve performance levels.

### **CONCLUSIONS**

**Q43. Did Mr. Gundersen's testimony change your conclusions regarding Contention 15A?**

A43. (PS, ST, RS) No. As the record and testimony demonstrate, site investigation work was performed by B&V at DTE's direction and under B&V's established Appendix B QA program. The Fermi 3 Nuclear Development organization

maintained a presence to oversee those activities, and DTE retained an OE to enhance its oversight and observation of site work activities. Moreover, DTE established an Appendix B program under the ND QAPD and developed procedures for review and acceptance of COL Application work product. The ND QAPD and implementing procedures provided additional measures of oversight beyond DTE's commercial contract oversight. Based on the comprehensive set of QA measures applied to safety-related information, there is reasonable assurance that the safety-related information developed prior to COL submittal is of high-quality. Mr. Gundersen has provided no evidence to the contrary. No issues of material safety significance have been identified.

**Q44. Did Mr. Gundersen's testimony change your conclusions regarding Contention 15B?**

A44. (PS, SS) No. The testimony and exhibits demonstrate that DTE has developed and implemented, and will continue to implement, an effective QA program, that meets all relevant requirements and guidance. DTE has demonstrated its commitment to QA from the start of the project by selecting a contractor with a proven Appendix B QA program, requiring by contract that work be performed under that program, establishing its own Appendix B QA program prior to accepting any information for use in the COL Application, and implementing the applicable QAPD program throughout ongoing COL-related work.

(PS, SS) DTE has continued to implement the QAPD since its adoption through procedures based on the QAPD and NRC requirements. DTE has performed numerous audits, surveillances, assessments and other actions to ensure effective

implementation of the DTE QA program. The NRC Staff verified implementation of the Fermi 3 QAPD by inspection and also concluded that DTE has provided satisfactory oversight of the contracted activities by implementing the applicable oversight components of the DTE QA Program. There has been no pervasive or ongoing breakdown in the Fermi 3 QA program and no “serial” violations of QA requirements. As a result, we conclude that there is reasonable assurance that the Fermi 3 QA program has been, can be, and will be implemented in accordance with NRC regulations and the applicable QAPD.

**Q45. Does this conclude your testimony?**

A45. (PS, SS, RS, ST) Yes.