

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

Before Administrative Judges:

Ronald M. Spritzer, Chairman
Dr. Anthony J. Baratta
Dr. Randall J. Charbeneau

In the Matter of

DTE ELECTRIC COMPANY

(Fermi Nuclear Power Plant, Unit 3)

Docket No. 52-033-COL

ASLBP No. 09-880-05-COL-BD01

May 23, 2014

PARTIAL INITIAL DECISION
(Ruling on Contentions 8 and 15)

In this Partial Initial Decision (“PID”), the Board rules on the merits of Contention 8, which challenges the adequacy of the impacts assessment on the snake contained within the Final Environmental Impact Statement (“FEIS”); and on the merits of Contention 15, which challenges the adequacy of the quality assurance (“QA”) program developed and implemented by the Applicant.¹

¹ Although this Partial Initial Decision resolves Contentions 8 and 15, it does not resolve all matters pending in this proceeding. First, this was among the cases in which a proposed new contention concerning temporary storage and ultimate disposal of nuclear waste was filed following the D.C. Circuit’s Decision in New York v. NRC, 681 F.3d 471 (D.C. Cir. 2012). See CLI-12-16, 76 NRC 63, 66 (2012). Pursuant to the Commission’s direction, see CLI-12-16, 76 NRC at 67–69 & n.10, that proposed new contention has been held in abeyance pending further order from the Commission. Licensing Board Order (Holding New Contention in Abeyance) (Aug. 29, 2012) (unpublished). Second, one day before the start of the evidentiary hearing, Intervenor filed a request to suspend the hearing and admit a new version of their previously proposed Contention 13. Motion for Suspension of Licensing Hearing, for Admission of Proposed Contention 13 for Adjudication, and for Supplementation of the Final Environmental Impact Statement (Oct. 29, 2013). The Board denied the request to suspend on the first day of the hearing. Tr. at 279–80 (J. Spritzer). The Board today issued a separate order rejecting proposed new Contention 13 and the accompanying request for supplementation of the FEIS. Finally, the Board previously raised the question whether it should ask the Commission to

On October 30 and 31, 2013, the Board held an evidentiary hearing in Monroe, Michigan on Contentions 8 and 15.² After considering all of the evidence and arguments presented, we find in favor of the Staff on Contention 8 and the DTE Electric Company (“DTE” or “Applicant”) on Contention 15.

I. INTRODUCTION

On September 18, 2008, DTE submitted a combined license application (“COLA”) pursuant to 10 C.F.R. Part 52, Subpart C, to construct and operate a GE Hitachi Economic Simplified Boiling Water Reactor (“ESBWR”) designated Unit 3 (“Fermi 3”) on its existing Fermi nuclear facility site near Newport City in Monroe County, Michigan.³ The Commission published a notice of hearing and opportunity to petition for leave to intervene on January 8, 2009.⁴ On March 9, 2009, the Intervenors⁵ filed a timely Request for a Hearing and Petition to Intervene,⁶ and on March 19, 2009, this Board was established to preside over the proceeding.⁷ In its July 31, 2009 Order, the Board concluded that the Intervenors had standing, admitted four of their contentions, including Contention 8, and granted their hearing request.⁸ On November 6, 2009, Intervenors submitted a supplemental petition alleging that DTE failed to establish a QA program

authorize sua sponte review of Intervenors’ proposed Contention 23 pursuant to 10 C.F.R. § 2.340(b). Licensing Board Order (Denying Intervenors’ Motion for Resubmission of Contentions 3 and 13, for Resubmission of Contention 23 or its Admission as a New Contention, and for Admission of New Contentions 26 and 27) at 22–24 (Apr. 30, 2013) (unpublished). The Board will decide that issue by separate order.

² Tr. at 307, 388.

³ See 74 Fed Reg. 836, 836 (Jan. 8, 2009).

⁴ Id.

⁵ Intervenors include Beyond Nuclear, Citizens for Alternatives to Chemical Contamination, Citizens Environmental Alliance of Southwestern Ontario, Don’t Waste Michigan, the Sierra Club (Michigan Chapter), and numerous individuals.

⁶ Petition of Beyond Nuclear, et al. for Leave to Intervene in Combined Operating License Proceedings and Request for Adjudication Hearing (Mar. 9, 2009); REFILED Petition of Beyond Nuclear, et al. for Leave to Intervene in Combined Operating License Proceedings and Request for Adjudication Hearing (Apr. 21, 2009).

⁷ 74 Fed. Reg. 12,913 (Mar. 25, 2009).

⁸ LBP-09-16, 70 NRC 227, 237, aff’d, CLI-09-22, 70 NRC 932, 933 (2009).

compliant with 10 C.F.R. Part 50, Appendix B (“Appendix B”).⁹ Contention 15 was admitted by the Board as part of its June 10, 2010 Order.¹⁰ Contentions 8 and 15 are addressed in this Partial Initial Decision.

II. BOARD RULING ON CONTENTION 8

A. Background

As admitted by the Board, Contention 8 stated that the Applicant’s Environmental Report (“ER”)¹¹ “fails to adequately assess [Fermi 3]’s impacts on the eastern fox snake and to consider alternatives that would reduce or eliminate those impacts.”¹² The eastern fox snake (“the snake”) is listed as a threatened species by the Michigan Department of Natural Resources (“MDNR”).¹³

On November 16, 2010, DTE submitted a Motion for Summary Disposition of Contention 8,¹⁴ asserting that “Detroit Edison has resolved the discrepancy in the ER regarding the presence of the Eastern Fox snake at the Fermi site, developed a mitigation plan for the snake, and submitted an addenda to the ER describing those plans.”¹⁵ In response to a Request for Additional Information (“RAI”), DTE had provided updated information regarding the location of the snake sightings, including a map showing the locations where observations of the snake were made by DTE employees.¹⁶ DTE also revised the site layout to reduce potential wetland

⁹ Supplemental Petition of Beyond Nuclear, Citizens for Alternatives to Chemical Contamination, Citizens Environmental Alliance of Southwestern Ontario, Don’t Waste Michigan, Sierra Club, Keith Gunter, Edward McArdle, Henry Newman, 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 for Admission of a Newly-Discovered Contention, and for Partial Suspension of COLA Adjudication (Nov. 6, 2009) [hereinafter Supplemental Petition].

¹⁰ LBP-10-09, 71 NRC 493, 498–99 (2010).

¹¹ Fermi 3 Combined License Application, Part 3: Environmental Report, Rev. 0 (Sept. 2008) (ADAMS Accession No. ML082730641). Contention 8, along with all of the other contentions addressed in the Board’s July 31, 2009 Order, were analyzed based on Rev. 0 of the Applicant’s ER.

¹² LBP-09-16, 70 NRC at 286.

¹³ Tr. at 347 (Mifsud).

¹⁴ Applicant’s Motion for Summary Disposition of Contention 8 at 1 (Nov. 16, 2010).

¹⁵ Id. at 4.

¹⁶ Id. at 6.

impacts, which results in a reduction of impact to primary snake habitat. The revised site layout reduced wetland impacts by approximately 120 acres (from 169 acres to 49 acres), and of the impacted acreage, approximately eighty percent of which are temporary impacts that would be restored following construction.¹⁷ To further reduce potential impacts to the snake, DTE developed a mitigation plan¹⁸ that included: 1) an employee education program (i.e., training), 2) pre-job briefings at the beginning of each construction shift where the snake may be encountered, 3) preconstruction surveys (developed areas), 4) preconstruction surveys (undeveloped areas), 5) construction mitigation measures, and 6) monitoring and reporting.¹⁹ The Board denied the motion for summary disposition, concluding that, although DTE had made significant modifications to the project and provided relevant new information, inconsistencies and disputes of material fact remained concerning the ER's evaluation of the impact of Fermi 3 on the snake and the status of mitigation measures to reduce those impacts.²⁰

On June 11, 2012, DTE submitted a second Motion for Summary Disposition of Contention 8.²¹ DTE explained that the ER had been superseded by the Draft Environmental Impact Statement ("DEIS"), which acknowledges the potential adverse impacts to fox snakes from Fermi 3 construction activities and describes the role of MDNR with respect to mitigation of potential impacts to the snake.²² DTE noted that the DEIS cites the Mitigation Plan that would be submitted to and reviewed by MDNR, and asserted that MDNR likely will require monitoring of the snake to assess the effectiveness of Detroit Edison's mitigation measures.²³ DTE also affirmed that, while at the time the DEIS was issued MDNR had not yet reviewed the Mitigation Plan, the Plan has subsequently been reviewed by MDNR and found to adequately address the concerns

¹⁷ Id. at 8.

¹⁸ Habitat and Species Conservation Plan Eastern Fox Snake (*Elaphe gloydi*) (Exh. NRC E5) (Mar. 2012) [hereinafter Mitigation Plan].

¹⁹ Id. at 8–9.

²⁰ LBP-11-14, 73 NRC 591, 604 (2011).

²¹ Applicant's [Second] Motion for Summary Disposition of Contention 8 (June 11, 2012).

²² Id. at 9.

²³ Id. at 10.

for potential threatened and endangered species at the site in question, and further that the proposed project would have minimal impacts on the snake if it proceeded according to the Mitigation Plan.²⁴

The Board concluded that, although DTE's second motion identified additional developments that resolved some of the problems that had led the Board to deny the earlier motion, the new information was not sufficient to resolve all disputed questions of material fact or law relevant to resolution of Contention 8.²⁵ Intervenors argued that the Staff's reliance on the Mitigation Plan was inconsistent with CEQ Guidance,²⁶ which states that, if a federal agency relies on mitigation to support a finding in an environmental assessment or in an environmental impact statement ("EIS"), the agency should ensure that mitigation commitments will be implemented, monitor the effectiveness of those commitments, be able to remedy failed mitigation, and involve the public in mitigation planning.²⁷ In the DEIS, the Staff provided no indication that it had done or intended to do any of those things. Instead, the Staff based its conclusion that the impact of construction and pre-construction activities on the snake would be small on its assumption that a State agency, the MDNR, would through future regulatory action require mitigation sufficient to protect the snake from the impacts of such activities.²⁸ The Board also noted that, even if the CEQ Guidance did not apply to the DEIS, federal courts have developed rules for deciding when federal agencies may rely on mitigation to support findings with regard to environmental impacts of an activity.²⁹ Reliance is justified if the proposed mitigation is

²⁴ Id. at 12.

²⁵ LBP-12-23, 76 NRC 445, 465 (2012).

²⁶ Final Guidance for Federal Departments and Agencies on the Appropriate Use of Mitigation and Monitoring and Clarifying the Appropriate Use of Mitigated Findings of No Significant Impact, 76 Fed. Reg. 3843, 3847 (Council on Environmental Quality, Jan. 21, 2011).

²⁷ LBP-12-23, 76 NRC at 466 (citing 76 Fed. Reg. at 3847).

²⁸ Office of New Reactors (NRO), NRC, Draft Environmental Impact Statement for Combined License (COL) for Enrico Fermi Unit 3, NUREG-2105, Vol.1 at 4-44 (Oct. 2011) (ADAMS Accession No. ML11287A108).

²⁹ LBP-12-23, 76 NRC at 467-69.

required by statute, regulation, or equivalent assurance.³⁰ Because the DEIS failed to identify any such requirement that would justify its reliance on the Mitigation Plan, the Board agreed with Intervenor that there remained disputed questions of material fact or law relevant to resolution of Contention 8. Accordingly, the Board denied DTE's second motion for summary disposition.

On November 19, 2012, DTE filed a Motion for Reconsideration of the Board's Order denying its Second Motion for Summary Disposition of Contention 8.³¹ On January 30, 2013, the Board denied this motion as moot.³² The Second Motion for Summary Disposition was based on the DEIS, but in January 2013 NRC Staff issued the FEIS³³ that superseded the DEIS and contains a different analysis of construction impacts on the snake than that contained in the DEIS. The DEIS found the impacts on the snake to be small based on the assumed implementation of mitigation measures. By contrast, the FEIS relied on a bounding analysis under which the impacts to the snake range from small based on successful implementation of mitigation measures to moderate if mitigation measures are not successful or are not fully implemented. Thus, the appropriate focus of litigation concerning Contention 8 was now the FEIS, not the DEIS. Moreover, DTE's Reconsideration Motion failed to satisfy the demanding requirements of 10 C.F.R. § 2.323(e). DTE failed to identify a significant factual or legal matter that the Board overlooked or provide compelling circumstances that render the Board's decision invalid. DTE's new argument concerning State law requirements was too late, given the requirement that a motion for reconsideration should not include new arguments or evidence unless it relates to a Board concern that DTE could not reasonably have anticipated.

³⁰ Ohio Valley Env'tl. Coalition v. Hurst, 604 F. Supp. 2d 860, 888 (S.D. W. Va. 2009).

³¹ Applicant's Motion for Reconsideration (Nov. 19, 2012).

³² Memorandum and Order (Denying Motion for Reconsideration of the Board's Order Denying Second Motion for Summary Disposition of Contention 8) at 4 (Jan. 30, 2013) (unpublished).

³³ NRO, NRC, Environmental Impact Statement for the Combined License (COL) for Enrico Fermi Unit 3, Final Report, NUREG-2105, Vols. 1-4 (Exh. NRC E1A and Exh. NRC E1B) (Jan. 2013) [hereinafter FEIS]. The NRC Staff submitted the FEIS into evidence as Exh. NRC E1A, containing Volumes 1 (Chapters 1-6) and 2 (Chapter 7-Appendix D), and Exh. NRC E1B, containing Volumes 3 (Appendix E) and 4 (Appendices F-M). When citing to the FEIS, the Board cites to these two exhibits.

DTE did not file a motion for summary disposition based on the FEIS.

B. Burden of Proof

In general, an applicant in a licensing proceeding bears the burden of proving by a preponderance of the evidence that it is entitled to the applied-for license.³⁴ Nonetheless, because Contention 8 alleges a violation of the National Environmental Policy Act (“NEPA”),³⁵ the burden shifts to the Staff because the NRC, not the applicant, bears the ultimate burden of establishing compliance with NEPA.³⁶ As a practical matter, however, the Staff typically relies on the applicant’s ER in preparing the FEIS.³⁷ Consequently, while environmental contentions ultimately challenge the NRC’s compliance with NEPA,³⁸ an applicant is free to support positions set forth in the EIS that are under challenge.³⁹

C. Witnesses

The Staff presented the prefiled direct testimony of Bruce A. Olson⁴⁰ to sponsor the introduction of the Staff’s FEIS into the record of this proceeding. The Staff also submitted the prefiled direct testimony and prefiled rebuttal testimony of J. Peyton Doub, Environmental Scientist in the NRO Division of Site Safety and Environmental Analysis, and David A. Weeks, an Environmental Scientist with Ecology and Environment, Inc., to present the Staff’s position with regard to Contention 8.⁴¹ The professional qualifications of the Staff’s witnesses were submitted

³⁴ See 10 C.F.R. § 2.325.

³⁵ 42 U.S.C. §§ 4321 *et. seq.*

³⁶ See, e.g., Duke Power Co. (Catawba Nuclear Station, Units 1 and 2), CLI-83-19, 17 NRC 1041, 1049 (1983).

³⁷ See 10 C.F.R. §§ 51.41, 51.45(c).

³⁸ Catawba, CLI-83-19, 17 NRC at 1049.

³⁹ La. Energy Servs. L.P. (Claiborne Enrichment Center), LBP-96-25, 44 NRC 331, 339 (1996) (citing Pub. Serv. Comm’n of New Hampshire (Seabrook Station, Units 1 and 2), ALAB-471, 7 NRC 477, 489 n.8 (1978)), rev’d on other grounds, CLI-97-15, 46 NRC 294 (1997).

⁴⁰ Prefiled Direct Testimony of Bruce A. Olson Sponsoring NUREG-2105 Into the Hearing Record (Exh. NRC E20) (Mar. 28, 2013).

⁴¹ Prefiled Direct Testimony of J. Peyton Doub and David A. Weeks Regarding Contention 8 (Exh. NRC E21) (Mar. 29, 2013) [hereinafter Staff Prefiled Direct Testimony]; Prefiled Rebuttal Testimony of J. Peyton Doub and David A. Weeks Regarding Contention 8 (Exh. NRC E22) (Apr. 29, 2013).

together with their testimony.⁴² Both Mr. Doub and Mr. Weeks testified at the hearing.⁴³ The parties stipulated to the admission of the FEIS into evidence,⁴⁴ making it unnecessary for Mr. Olson to testify.

DTE presented the direct and rebuttal testimony of three witnesses: (1) Peter Smith, Director, Nuclear Development – Licensing and Engineering, DTE; (2) Randall Westmoreland, Licensing Technical Expert, DTE; and (3) David Mifsud, certified professional wildlife biologist and owner of Herpetological Resource and Management in Michigan.⁴⁵ The professional qualifications of the Applicant's witnesses were submitted together with their written testimony.⁴⁶ All of the Applicants' witnesses testified at the hearing.⁴⁷

Intervenors did not offer testimony regarding Contention 8; however, they did provide initial and rebuttal statements of position.

D. Applicable Legal Requirements

Contention 8 arises under NEPA and the NRC's implementing regulations in 10 C.F.R. Part 51. Under NEPA, the NRC is required to take a "hard look" at the environmental impacts of a proposed action.⁴⁸ The proposed action relevant to this proceeding is the NRC's issuance of a combined license ("COL") authorizing construction and operation of one new GEH ESBWR power reactor on the Detroit Edison Enrico Fermi Atomic Power Plant ("Fermi") site in Monroe County, Michigan.⁴⁹ The FEIS considers and weighs the environmental impacts of constructing and

⁴² Professional Qualifications of Bruce A. Olson (Exh. NRC E2); Professional Qualifications of David A Weeks (Exh. NRC E3); Professional Qualifications of J. Peyton Doub (Exh. NRC E4).

⁴³ Tr. at 308.

⁴⁴ Tr. at 304 (Lodge; T. Smith).

⁴⁵ Initial Written Testimony of Peter Smith, Randall Westmoreland and David Mifsud (Exh. DTE 001) (Mar. 29, 2013) [hereinafter DTE Initial Written Testimony]; Written Rebuttal Testimony of Peter Smith, Randall Westmoreland and David Mifsud (Exh. DTE 096) (Apr. 29, 2013).

⁴⁶ Affidavit of Peter W. Smith (Exh. DTE 002) (Mar. 29, 2013); Affidavit of Randall Westmoreland (Exh. DTE 003) (Mar. 29, 2013); Affidavit of David Mifsud (Exh. DTE 004) (Mar. 29, 2013).

⁴⁷ Tr. at 346.

⁴⁸ La. Energy Servs., L.P. (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 87–88 (1998).

⁴⁹ FEIS (Exh. NRC E1A) at 1-9.

operating a new nuclear unit at the Fermi site and at alternative sites and mitigation measures available for reducing or avoiding adverse impacts.

The “hard look” requirement is tempered by a “rule of reason” that requires agencies to address only impacts that are reasonably foreseeable – not those that are remote and speculative.⁵⁰ The discussion of mitigation measures is an important part of an agency’s hard look at the environmental consequences of a proposed Federal action.⁵¹ However, “NEPA does not require a fully developed plan that will mitigate all environmental harm before an agency can act.”⁵² Instead, “NEPA requires only that mitigation be discussed in sufficient detail to ensure that environmental consequences have been fully evaluated.”⁵³ In Methow Valley, the Supreme Court distinguished an agency’s procedural obligation to discuss mitigation in sufficient detail (to ensure that environmental consequences have been fairly evaluated) from any substantive requirement to actually develop and adopt a detailed mitigation plan.⁵⁴ The Court explained: “[b]ecause NEPA imposes no substantive requirement that mitigation measures actually be taken, it should not be read to require agencies to obtain an assurance that third parties will implement particular measures.”⁵⁵ Thus, under Methow Valley and related cases, EISs do not need to present mitigation plans that are legally enforceable, fully developed, or funded in order to satisfy NEPA.

Nevertheless, according to CEQ Guidance,

although NEPA does not require mitigation of environmental impacts, it does require that, if a federal agency relies on mitigation to support a finding in an [EIS] or a finding of no significant impact (FONSI), the agency should ensure that mitigation commitments are implemented, monitor the effectiveness of such

⁵⁰ See, e.g., Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1), ALAB-156, 6 AEC 831, 836 (1973).

⁵¹ See Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 352 (1989).

⁵² Laguna Greenbelt, Inc. v. U.S. Dep’t of Transp., 42 F.3d 517, 528 (9th Cir. 1994) (citations omitted).

⁵³ Id.

⁵⁴ Methow Valley, 490 U.S. at 352.

⁵⁵ Id. at 353 n.16.

commitments, be able to remedy failed mitigation, and involve the public in mitigation planning.⁵⁶

Federal courts have agreed that, “[w]hen conducting a NEPA-required environmental review, an agency may consider the ameliorative effects of mitigation in determining the environmental impacts of an activity.”⁵⁷ But courts insist that “[a]n agency’s reliance on mitigation in making a FONSI . . . must be justified.”⁵⁸ Reliance is justified if the proposed mitigation satisfies two criteria: (1) “the proposed mitigation underlying the FONSI ‘must be more than a possibility’ in that it is ‘imposed by statute or regulation or have been so integrated into the initial proposal that it is impossible to define the proposal without mitigation’”⁵⁹; and (2) “there must be some assurance that the mitigation measures ‘constitute an adequate buffer against the negative impacts that result from the authorized activity to render such impacts so minor as to not warrant an EIS.’”⁶⁰ Proposed mitigation measures are sufficient “if they are supported by sufficient evidence, such as studies conducted by the agency, or are ‘adequately policed.’”⁶¹

As explained in Section II (A) above, the FEIS, unlike the DEIS, relied on a bounding analysis under which the predicted impacts to the snake range from small based on successful

⁵⁶ LBP-12-23, 76 NRC at 466 (citing 76 Fed. Reg. at 3847).

⁵⁷ Ohio Valley Env'tl. Coalition, 604 F. Supp. 2d at 888 (citing O'Reilly v. U.S. Army Corps of Eng'rs, 477 F.3d 225, 231 (5th Cir. 2007); Sierra Club v. U.S. Army Corps of Eng'rs, 464 F. Supp. 2d 1171, 1224 (M.D. Fla. 2006), aff'd, 508 F.3d 1332 (11th Cir. 2007)). Although these cases involved agency reliance on mitigation to support a FONSI, there is no sound reason why an agency should be able to take credit for unenforceable mitigation in an EIS to support a finding that an impact will be insignificant or small when it may not do so in an EA. See Sierra Club v. U.S. Army Corps of Eng'rs, 464 F. Supp. 2d at 1227 (“[T]he level of analysis required by NEPA in an EIS is more rigorous than is required when the [agency] has determined on the basis of its EA that the project as proposed will not result in significant environmental impact.”) (emphasis added).

⁵⁸ Ohio Valley Env'tl. Coalition, 604 F. Supp. 2d at 888 (citing Sierra Club, 464 F. Supp. 2d at 1224).

⁵⁹ Id. (quoting Sierra Club, 464 F. Supp. 2d at 1225 (quoting Wyo. Outdoor Council v. U.S. Army Corps of Eng'rs, 351 F. Supp. 2d 1232, 1250 (D. Wyo. 2005))). Accord Davis v. Mineta, 302 F.3d 1104, 1125 (10th Cir. 2002).

⁶⁰ Ohio Valley Env'tl. Coalition, 604 F. Supp. 2d at 888 (quoting Wetlands Action Network v. U.S. Army Corps of Eng'rs, 222 F.3d 1105, 1121 (9th Cir. 2000) (citing Greenpeace Action v. Franklin, 14 F.3d 1324, 1332 (9th Cir. 1992))).

⁶¹ Id. (quoting Wetlands Action Network, 222 F.3d at 1121 (quoting Wyo. Outdoor Council, 351 F. Supp. 2d at 1250)).

implementation of mitigation measures to moderate if mitigation measures are not implemented as planned. Thus, in the FEIS, the Staff no longer assumes that mitigation will necessarily occur, but has evaluated the impact to the snake both with and without mitigation. The question now before the Board, therefore, is whether the Staff's bounding analysis is reasonable and whether the Staff otherwise fulfilled its obligation to take a hard look at the impact of construction on the snake.

E. Findings of Fact

1. The range of the snake extends from Michigan and Ohio into Ontario, Canada. It is protected as a "threatened" species in Michigan.⁶² It is both provincially and federally protected in Canada. In Ohio, the snake is designated a species of special concern. It is not protected under the federal Endangered Species Act.⁶³

2. MDNR is the agency responsible for protection of the snake under the Michigan Natural Resources and Environmental Protection Act.⁶⁴

3. The snake was sighted on the Fermi site twice in June 2008 and 15 other times between 1990 and 2007.⁶⁵ In her review of the Applicant's ER, Lori Sargent, a Nongame Wildlife Biologist in MDNR's Wildlife Division, stated that MDNR's recorded sightings of the snake at the Fermi 3 site conflicted with statements in the ER alleging that the species had not been observed on the site.⁶⁶ She also opined that "going forward with the construction would not only kill snakes but destroy the habitat in which they live and possibly exterminate the species from the area. We would like to see a plan for protection of this rare species with regard to this new reactor project."⁶⁷ This conflicted with the statement in the ER that any impact of the project on the snake would be small and therefore no mitigation measures were necessary.

⁶² Tr. at 347 (Mifsud); FEIS (Exh. NRC E1A) at 2-64.

⁶³ Tr. at 346-47 (Mifsud); FEIS (Exh. NRC E1A) at 2-64.

⁶⁴ DTE Initial Written Testimony (Exh. DTE 001) at A43.

⁶⁵ FEIS (Exh. NRC E1A) at 2-53

⁶⁶ Email from Lori Sargent, Nongame Wildlife Biologist, MDNR (Exh. DTE 013) (Feb 9, 2009).

⁶⁷ Id.

4. The term “take” is defined by Michigan law with respect to fish and wildlife as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct.”⁶⁸ The Michigan Natural Resources and Environmental Protection Act (Act 451) prohibits an individual from “taking” wildlife indigenous to the state that have been determined to be endangered or threatened.⁶⁹ “Upon good cause shown . . . , endangered or threatened species found on the state list . . . may be removed, [or] captured, . . . but only as authorized by a permit issued by the department.”⁷⁰

5. The FEIS evaluated the potential impacts from building the proposed Fermi 3 on the snake. The FEIS notes that, because they have less ability to flee during land-clearing activities compared to more mobile species (such as most mammals), eastern fox snakes inhabiting work areas could be inadvertently killed during land-clearing activities, such as tree felling, grubbing, and grading.⁷¹ Increased wildlife mortality may also result from increased traffic volume on nearby roadways during the building of the proposed Fermi 3.⁷² Detroit Edison substantially reduced the amount of intended wetland disturbance, including disturbance of the emergent wetlands particularly favored by the snake, by re-designing the project layout.⁷³ Nevertheless, approximately 21 acres of emergent wetlands, as well as other potential eastern fox snake habitat, would still be unavoidably disturbed.⁷⁴

6. Because the potential impacts on the snake of preconstruction and construction activities described on pages 4-36 and 4-37 of the FEIS fall within the definition of “take,” the Staff expects that DTE will require a permit from MDNR authorizing take of the snake before building

⁶⁸ Michigan Natural Resources and Environmental Protection Act, Mich. Comp. Laws § 324.36501(f) (Exh. NRC E17) (2012); Staff Prefiled Direct Testimony (Exh. NRC E21) at A23.

⁶⁹ Mich. Comp. Laws § 324.36505(1)(a) (Exh. NRC E17).

⁷⁰ Id. § 324.36505(5).

⁷¹ FEIS (Exh. NRC E1A) at 4-26.

⁷² Id.

⁷³ Id. at 4-38.

⁷⁴ Id.

activities at the Fermi 3 site may proceed.⁷⁵ The wetlands permit for the Fermi 3 project specifically acknowledges the snake and states that “[i]ssuance of this permit does not obviate the need to obtain approval under Part 365, Endangered Species, of the [Natural Resources and Environmental Protection Act], from the Michigan Department of Natural Resources’ (MDNR) Natural Heritage Program prior to commencement of construction activity.”⁷⁶

7. Applicant first met with MDNR in 2009 to provide an overview of the project, and was informed that a mitigation plan for the fox snake would be required.⁷⁷ A draft mitigation plan was provided for MDNR review and comment, and, following additional meetings between DTE and MDNR, a final mitigation plan (“the Mitigation Plan”) was developed.⁷⁸ MDNR found that information provided by DTE “adequately address[es] the concerns for potential threatened and endangered species at the site in question,” and “[t]he proposed project should have minimal direct impacts on known special natural features at the location(s) specified if it proceeds according to the plans provided.”⁷⁹

8. MDNR noted the snake as a special feature at the site, and stated that “[a]n endangered species permit is required if activities will harm the species that are present, including transplanting them to another location”⁸⁰ as called for in the Mitigation Plan.

9. The Mitigation Plan outlines specific measures to be implemented during the building of Fermi 3, including

educating construction workers through use of a site-specific eastern fox snake manual, briefing workers on the possible presence of the snake, relocating snakes from work areas to other suitable habitat, . . . inspecting undeveloped areas for

⁷⁵ Staff Prefiled Direct Testimony (Exh. NRC E21) at A23.

⁷⁶ Michigan Department of Environmental Quality Water Resources Division Permit, No. 10-58-011-P (Exh. DTE 010) at 4 (Oct. 22, 2012); DTE Initial Written Testimony (Exh. DTE 001) at A55.

⁷⁷ Tr. at 361 (Westmoreland).

⁷⁸ Id.

⁷⁹ Letter from Lori Sargent, Endangered Species Specialist, MDNR, to Randall Westmoreland, DTE Energy (Exh. DTE 014) at 1 (Apr. 6, 2012) [hereinafter Sargent Letter]; Tr. at 361–62 (Westmoreland & Mifsud).

⁸⁰ Sargent Letter (Exh. DTE 014) at 2.

snakes prior to initiating work[.]. . . . walking down work areas to inspect for the eastern fox snake, developing procedures for capturing and relocating eastern fox snakes, instructing workers to halt work in the presence of an eastern fox snake until it can be relocated, and maintaining a log of monitoring efforts and actions taken.⁸¹

10. The targeted collection goal for the snake in affected areas is a minimum 90 percent during the 6 to 8 weeks prior to any construction activities. For such areas, there would be another walk-down one week prior to the start of construction, and on the day of construction there would be additional assessments looking for fox snakes.⁸² “The emphasis for this project will first and foremost be to mitigate onsite, keeping the eastern fox snakes within the current Fermi facility to the extent possible.”⁸³ If suitable habitat is not available onsite, snakes may be relocated to the offsite wetland mitigation area that will be constructed as a condition of the wetlands permit.⁸⁴ That permit

requires the construction of 107.31 acres of wetland mitigation to compensate for permanent and temporary wetland impacts [from the construction of Fermi Unit 3]. The mitigation site [will be] located approximately 7.25 miles south of the proposed Fermi 3 location on an agricultural field on the southern border of the Monroe [coal-fired] Power Plant site.⁸⁵

11. The Fermi site as a whole is 1260 acres, of which 650 acres are part of the Detroit International Wildlife Refuge.⁸⁶ The wetland impact is about 35 acres and the overall construction impact once construction is complete will be 50 acres.⁸⁷ Snakes that are captured will have transponder tags inserted.⁸⁸ Movement and survival of the snakes will be tracked, and their behavior and response to the new setting will be monitored.⁸⁹

⁸¹ FEIS (Exh. NRC E1A) at 4-37; see also Staff Prefiled Direct Testimony (Exh. NRC E21) at A18.

⁸² Tr. at 348–49 (Mifsud).

⁸³ Tr. at 375 (Mifsud).

⁸⁴ Tr. at 377 (P. Smith).

⁸⁵ Mitigation Plan (Exh. NRC E5), App. C at 1.

⁸⁶ Tr. at 376 (P. Smith).

⁸⁷ Tr. at 376–77 (Westmoreland).

⁸⁸ Tr. at 310 (Weeks).

⁸⁹ Tr. at 312 (Doub).

12. The Mitigation Plan requires DTE to produce an annual monitoring report that will be submitted to MDNR.⁹⁰ Metrics for success of the Mitigation Plan are presented in Appendix C of the Plan as follows:

1. Documented survival of marked and relocated snakes within restored, enhanced, or created habitat areas.
2. Continued survival and long-term viability of Fermi eastern fox snake population through presence of multiple age classes within targeted areas post construction and use of habitat features and structures for intended purposes.
3. Use of restored and enhanced habitat by eastern fox snakes and other native wildlife and establishment of eastern fox snakes within the offsite mitigation area (pending [MDNR] approval).
4. Reduction in number of eastern fox snake deaths post construction.⁹¹

13. If problems or deficiencies in the Mitigation Plan are found, then DTE's lead biologist will identify corrective actions.⁹²

14. The area of the Fermi site that would be impacted by construction is small compared with the overall size of the facility.⁹³ The largest populations of eastern fox snakes are found in the coastal habitat contiguous to the north and south of the Fermi site, and long-term, even with the temporary or permanent impacts from construction, the Fermi site "is actually the most highly protected area within that region in the sense that one of the biggest threats to eastern fox snakes is actually persecution by people."⁹⁴

15. MDNR has provided review and consultation in development of the Mitigation Plan for the snake.⁹⁵ It will review annual monitoring reports required by its threatened/endangered

⁹⁰ DTE Initial Written Testimony (Exh. DTE 001) at A37.

⁹¹ Mitigation Plan (Exh. NRC E5), App. C at 2.

⁹² Tr. at 352 (Westmoreland).

⁹³ See Tr. at 376–77 (P. Smith & Westmoreland).

⁹⁴ Tr. at 382–83 (Mifsud).

⁹⁵ See Tr. at 360–62 (Westmoreland).

species permit and will participate in the development of any corrective actions required to ensure effective implementation of the Mitigation Plan.⁹⁶

16. If the Applicant is non-compliant with the permit, then a stop work order can be issued.⁹⁷ The Michigan Natural Resources and Environmental Protection Act includes potential criminal penalties for non-compliance.⁹⁸ MDNR has a law enforcement division that would be charged with enforcing any criminal actions.⁹⁹

17. Unlike the DEIS, which assumed that impacts to the snake would be small, the FEIS describes a range of potential impacts from preconstruction, construction and operation of Fermi 3 on the snake. The FEIS concludes:

The staff's evaluation of the potential impacts on the eastern fox snake recognizes the potential for mitigation measures proposed by Detroit Edison . . . and approved by the MDNR to significantly reduce impacts from Fermi 3 on that species, thereby leading to SMALL impacts, but acknowledges the possibility of MODERATE impacts if proposed mitigation is not implemented as described in their plan.¹⁰⁰

18. Because there was some uncertainty in the FEIS analysis, the Staff took a conservative approach that included a bounding analysis.¹⁰¹ Staff acknowledged that the term "bounding analysis" is not specifically used in Staff NEPA guidance (NUREG 1555), but the guidance does not prohibit use of a bounding analysis.¹⁰² Although the Staff believes that the mitigation measures will be successfully implemented, it also acknowledged the possibility that the Mitigation Plan may not work as planned. For that reason, the Staff decided that in the FEIS it would take the more conservative approach of describing the potential impacts as small to moderate.¹⁰³

⁹⁶ Tr. at 354 (Mifsud).

⁹⁷ Tr. at 362 (Mifsud).

⁹⁸ Mich. Comp. Laws § 324.36507 (Exh. NRC E17).

⁹⁹ Tr. at 363 (Mifsud).

¹⁰⁰ FEIS (Exh. NRC E1A) at 7-21.

¹⁰¹ Tr. at 325–26 (Doub).

¹⁰² Tr. at 326 (Doub).

¹⁰³ FEIS (Exh. NRC E1A) at 7-21; Tr. at 344 (Weeks).

19. Intervenors acknowledged during closing argument that there is no evidence to show that impacts to the snake would be greater than moderate, as that term is defined by the NRC.¹⁰⁴ Moreover, Michigan has four known populations of the snake.¹⁰⁵ Because only one of the four regional populations would be impacted by the construction of Fermi 3, the record supports the Staff's determination that impacts from construction would have at most a moderate impact upon the survival of the snake. The Board therefore finds that the FEIS analysis reasonably bounds the potential impacts to the snake from the construction of Fermi 3.

F. Conclusions of Law

Based on all of the evidence and testimony presented by the parties, including the FEIS, the Board concludes that NRC Staff has taken the requisite "hard look" at potential impacts to the snake from pre-construction and construction activities for development of Fermi 3. NRC Staff considered the effectiveness of DTE's Mitigation Plan to reduce impacts to the snake population, as well as other actions to reduce impacts to wetlands generally. Staff has also considered the range of impacts to the snake that might occur if no mitigation measures are undertaken. Initiation of pre-construction and construction activities for Fermi 3 will require a permit from MDNR and MDNR will likely require implementation of the Mitigation Plan or a similar plan. MDNR has sufficient authority to require compliance with its permit requirements. CEQ guidance allows reliance on mitigation to support FEIS findings, as long as there is reasonable assurance that the mitigation will actually occur.

NRC Staff has evaluated Fermi 3 impacts on the snake under conditions ranging from successful implementation of mitigation measures to conditions where mitigation measures are not successful. The FEIS reports findings on impacts to the snake under this range of conditions. Staff has therefore taken the required "hard look" at impacts of Fermi 3 on the snake

¹⁰⁴ Tr. at 641–42 (Lodge).

¹⁰⁵ Tr. at 382 (Mifsud).

under a reasonable range of conditions, including both implementation of mitigation measures and the failure to do so.

We therefore conclude that the NRC Staff has met its obligation under NEPA to evaluate impacts to the snake, and that the FEIS's examination of that issue satisfies Part 51 and NEPA. The Board accordingly rules for the Staff on Contention 8.

Although Intervenors have not prevailed on Contention 8, they arguably have won the war despite losing the battle. The admission of Contention 8 in this proceeding resulted in significant changes to the Fermi 3 project that, if implemented, are likely to significantly reduce impacts to the snake. DTE has acknowledged as much. In response to the question "[w]hat steps did DTE take in response to Contention 8," DTE's pre-filed testimony states that it

re-evaluated the original proposed site layout and, based on that review, made changes to its application to reduce potential wetland impacts, which, in turn, reduced impacts to Eastern Fox Snake habitat. And, DTE developed a mitigation plan to reduce impacts to the Eastern Fox Snake during the site clearing, pre-construction, and construction phases of the Fermi 3 project.¹⁰⁶

By contrast, DTE's position as set forth in its ER was that the snake had not been observed on the Fermi 3 property, construction activities would primarily be located away from potential snake habitat and "the snake would be expected to move away from these activities," the impact to the species would therefore be small, and "no mitigative measures are needed."¹⁰⁷ There has clearly been a major shift in DTE's position since the admission of Contention 8 that resulted in a detailed mitigation plan intended to protect the snake from the impacts of construction and that will likely be incorporated in the MDNR permit for the project. Thus, the resolution of Contention 8 represents a NEPA success story.¹⁰⁸

¹⁰⁶ DTE Initial Written Testimony (Exh. DTE 001) at A17.

¹⁰⁷ LBP-09-16, 70 NRC at 289 (quoting Applicant's ER at 4-45).

¹⁰⁸ See Surfrider Foundation v. Dalton, 989 F.Supp. 1309, 1325 (S.D. Cal. 1998) ("In many respects, this project represents a NEPA success story, because the final proposal includes numerous environmental improvements that might not have been realized without the lengthy NEPA process.").

III. BOARD RULING ON CONTENTION 15

A. Background

On November 6, 2009, the Intervenors filed a Supplemental Petition for Admission of a Newly Discovered Contention (“Supplemental Petition”), which included a QA¹⁰⁹ contention numbered as Contention 15.¹¹⁰ Intervenors’ proposed Contention 15 was based upon a Staff inspection in August 2009 that resulted in a Notice of Violation (“NOV”) issued in October 2009 (“2009 NOV”). In the 2009 NOV, the NRC Staff accused DTE of having failed in several respects to comply with the QA requirements of 10 C.F.R. Part 50, Appendix B.¹¹¹

In June 2010, the Board admitted a reformulated version of Contention 15, dividing it into two parts:

Detroit Edison (DTE) failed to comply with Appendix B to 10 C.F.R. Part 50 to establish and implement its own quality assurance (QA) program when it entered into a contract with Black and Veatch (B&V) for the conduct of safety-related combined license (COL) application activities and to retain overall control of safety-related activities performed by B&V. This violation began in March 2007 and continued through at least February 2008. Further, DTE failed to complete internal audits of QA programmatic areas implemented for the Fermi 3 COL Application, and DTE also has failed to document trending of corrective actions to identify recurring conditions adverse to quality since the beginning of the Fermi Unit 3 project in March 2007.

Contention 15A:

These deficiencies adversely impact the quality of the safety related design information in the FSAR that is based on B&V’s tests, investigations, or other safety-related activities. Because the NRC may base its licensing decision on safety-related design information in the FSAR only if it has reasonable assurance

¹⁰⁹ As used in Appendix B, “quality assurance” comprises all those planned and systematic actions necessary to provide adequate confidence that a structure, system, or component will perform satisfactorily in service. Quality assurance includes quality control, which comprises those quality assurance actions related to the physical characteristics of a material, structure, component, or system which provide a means to control the quality of the material, structure, component, or system to predetermined requirements.

10 C.F.R. Part 50, App. B at Introduction.

¹¹⁰ Supplemental Petition at 2–3.

¹¹¹ See LBP-10-9, 71 NRC 493, 500 (2010). The specific violations are identified in Finding of Fact 22 below.

of the quality of that information, it may not lawfully issue the COL until the deficiencies have been adequately corrected by the Applicant, or until the Applicant demonstrates that the deficiencies do not affect the quality of safety-related design information in the FSAR.

Contention 15B:

Although DTE claims that in February 2008 it adopted a QA program that conforms to Appendix B, DTE has failed to implement that program in the manner required to properly oversee the safety-related design activities of B&V. This demonstrates an ongoing lack of commitment on the part of DTE's management to compliance with NRC QA regulations. The NRC cannot support a finding of reasonable assurance that the plant, as built, can and will be operated without endangering the public health and safety until DTE provides satisfactory proof of a fully-implemented QA program that will govern the design, construction, and operation of Fermi Unit 3 in conformity with all relevant NRC regulations.¹¹²

In substance, Contention 15A alleges that DTE lacked an adequate Fermi 3 QA program for the conduct of safety-related COLA activities. An adequate QA program is basic to ensuring that a nuclear power plant is designed and built to the exacting standards needed to provide adequate assurance of safety. The QA program used to develop design and site characteristics must therefore be robust enough to ensure all data and design information is reliable and accurate. The Commission requires that an adequate QA

program must provide for control over activities affecting quality of 'structures, systems, and components, to an extent consistent with their importance to safety.' The program must also include provisions requiring that the applicant regularly review the status and adequacy. [Appendix B] further mandate[s] that the program establish measures to assure that conditions 'adverse to quality' are promptly identified and corrected.¹¹³

Contention 15A maintains that DTE's QA program was insufficient to enable the Applicant to satisfy those requirements for safety-related work conducted during the pre-application period.

Contention 15B claims that, given DTE's QA violations and alleged general lack of commitment to compliance with Appendix B requirements, the NRC may not make the safety

¹¹² Id. at 510–11.

¹¹³ Cleveland Elec. Illuminating Co. (Perry Nuclear Power Plant, Units 1 and 2), ALAB-802, 21 NRC 490, 492–93 (1985) (internal citations omitted); see also 10 C.F.R. Part 50, App. B at XVI. Corrective Action.

findings necessary to support issuance of the COL until DTE provides satisfactory proof of a fully-implemented QA program.

On April 17, 2012, DTE moved for summary disposition of Contention 15 and subparts 15A and 15B.¹¹⁴ On May 7, 2012, the Staff filed an answer supporting DTE's motion.¹¹⁵ On May 17, the Intervenors filed a response opposing summary disposition.¹¹⁶ DTE asserted that, throughout the preparation of the material to support the application, the work was performed under the contractor's Appendix B QA program. However, Intervenors responded that there were conflicting interests between B&V acting as the QA contractor, design contractor, and pre-application activity contractor.¹¹⁷ Intervenors also questioned whether the arrangement satisfied the requirement that DTE "retain responsibility for the quality assurance program."¹¹⁸ As admitted by the Board, Contention 15 included a dispute over whether DTE exercised proper oversight of its contractor, something that Intervenors continued to dispute in their response to the summary disposition motion. The Board concluded that the dispute had not been fully resolved. Therefore, Intervenors identified a material issue relevant to Contention 15 that remained in dispute. The Board accordingly denied DTE's Motion for Summary Disposition of Contention 15.

B. Burden of Proof

The applicant has the burden of proof on Contention 15.¹¹⁹ As we pointed out, however, in our ruling admitting Contention 15:

[P]erfection in plant construction and the facility construction quality assurance program is not a precondition for a license under either the Atomic Energy Act or the Commission's regulations. What is required instead is reasonable assurance

¹¹⁴ Applicant's Motion for Summary Disposition of Contention 15 (Apr. 17, 2012).

¹¹⁵ NRC Staff Answer to Applicant's Motion for Summary Disposition of Contention 15 (May 7, 2012).

¹¹⁶ See Intervenors' Response in Opposition to Applicant's Motion for Summary Disposition of Contention 15 (May 17, 2012).

¹¹⁷ See id. at 8.

¹¹⁸ Id.

¹¹⁹ 10 C.F.R. § 2.325.

that the plant, as built, can and will be operated without endangering the public health and safety.¹²⁰

During closing argument, counsel for both Intervenors and DTE agreed that reasonable assurance, not perfection, is the correct standard to be applied in this case.¹²¹ Accordingly, DTE's burden is to show that the quality control procedures it implemented for safety-related COLA activities provide reasonable assurance that the plant, as built, can and will be operated without endangering the public health and safety.

C. Witnesses

The Staff presented three witnesses in its direct and rebuttal testimony: (1) Adrian Muñiz, (2) Aida Rivera-Varona, and (3) George A. Lipscomb. Mr. Muñiz is an electrical engineer with eleven years of NRC experience. He has been a Project Manager in the New Reactor Licensing Division of NRO since 2008, and has been the Lead Project Manager for the safety review of the Fermi 3 COLA since June 2010. Mrs. Rivera-Varona is a chemical engineer with eleven years of NRC experience. From February 2007 to January 2010, she was a Vendor Inspection Team Leader in Quality and Vendor Branch 2 in the NRO Division of Construction Inspection and Operational Programs. In that capacity, she led a Staff inspection at the Applicant's headquarters in August 2009 that resulted in three cited violations that initially formed the basis for Contention 15.¹²² Mr. Lipscomb is an electrical engineer with over twenty-five years of experience in the U.S. Navy, in the nuclear industry, and at NRC. Since July 2008, he has worked as a QA Inspector and technical reviewer in the NRO Division of Construction Inspection and Operational Programs. He was the lead technical reviewer for QA for Chapter 17 of the SER (Exhibit NRC S1), and he was a member of the inspection team for the August 2009 inspection of

¹²⁰ LBP-10-09, 71 NRC at 519 (quoting Pac. Gas & Elec. Co. (Diablo Canyon Nuclear Power Plant, Units 1 and 2), ALAB-756, 18 NRC 1340, 1345 (1983)) (citing 42 U.S.C. §§ 2133(d), 2232(a); 10 C.F.R. § 50.57(a)(3)(i)) (other citations omitted).

¹²¹ Tr. 643–44, 699 (Lodge; T. Smith).

¹²² See NRC Inspection Report 05200033/2009-201 and Notice of Violation [NOV] (Exh. NRC S2) (Oct. 5, 2009) [hereinafter Oct. 2009 Inspection Report/NOV].

DTE that resulted in the cited QA violations that underlie Contention 15 (Exhibit NRC S2). The professional qualifications of the Staff's witnesses were submitted together with their written testimony.

DTE presented four expert witnesses in its direct and rebuttal testimony: (1) Peter W. Smith, (2) Stanley Stasek, (3) Ronald Sacco, and (4) Steven Thomas. Mr. Smith has been employed by DTE as the Director, Nuclear Development –Licensing and Engineering, since 2007. He has overall responsibility for the Fermi 3 project, including the COLA and other State and Federal permits and approvals. Mr. Stasek is employed by DTE as Director, Quality Management, for the Fermi 3 project. In this position, he is responsible for developing and maintaining the Fermi 3 QA program, evaluating compliance with the program, and managing QA organization resources. Mr. Sacco is employed by B&V as the Director of Nuclear Quality Assurance for B&V Energy in Overland Park, Kansas. He has been in that position since 2006. In that capacity, he has provided QA and quality management support for nuclear projects including the River Bend, Turkey Point, and Bell Bend COL projects in addition to Fermi 3. Mr. Thomas is employed by B&V as an Engineering Manager in Overland Park, Kansas. He has been in that position since 2007 and was responsible for all engineering and technical activities necessary to develop the Fermi 3 COLA. The professional qualifications of the Applicant's witnesses were submitted together with their written testimony.

The Intervenors presented one witness, Mr. Arnold Gundersen, in their direct and rebuttal testimony. Mr. Gundersen is employed as Chief Engineer for Fairewinds Associates, a Vermont-based non-profit dedicated to nuclear energy issues. He has provided expert witness testimony in numerous state and federal proceedings. He is a former manager of an NRC-licensed company with expertise in nuclear decommissioning and remediation. Mr. Gundersen's qualifications were submitted together with his written testimony.

D. Applicable Legal Requirements

1. Contention 15A

According to DTE, “[t]here are no QA requirements that apply prior to submittal of a COLA application – that is, before a company is an ‘applicant. Rather, implicitly, the 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.”¹²³ Intervenors disagree, arguing that DTE was required to have its own in-house Appendix B QA program during the pre-application period and to apply that program to all safety-related COLA activities, including those performed by B&V.¹²⁴ The Staff takes an intermediate position, contending that DTE was not required to have its own in-house QA Program during the pre-application period, but that it had to assure that all safety-related COLA activities were performed consistently with the QA requirements of Appendix B. It could do this by having the safety-related activities performed by a contractor with its own QA program that satisfies Appendix B requirements, provided that DTE retained responsibility for the QA program.¹²⁵ In general, the Board agrees with the Staff.

Appendix B sets forth the requirements for a QA program for a nuclear power plant. Also relevant here is 10 C.F.R. § 52.79, which establishes the requirements for the applicant’s FSAR and is cited in the Introduction to Appendix B. Interpretation of these regulations, like the interpretation of a statute, begins with the language and structure of the provisions, and the entirety of each provision must be given effect.¹²⁶ Where the meaning of a regulation is clear and

¹²³ Initial Written Testimony of [DTE] Witnesses Peter Smith, Stanley Stasek, Ronald Sacco, and Steven Thomas on Contention 15 (Exh. DTE 015) at A21 (Apr. 30, 2013) [hereinafter Initial Written Testimony of Smith, et al.].

¹²⁴ See Intervenors’ Rebuttal Statement of Position on Contention 15 at 6–8 (May 30, 2013).

¹²⁵ See Tr. at 672–92 (Carpentier); see also Tr. at 580 (Lipscomb).

¹²⁶ See AmerGen Energy Co., LLC (Oyster Creek Nuclear Generating Station), CLI-08-28, 68 NRC 658, 674–75 (2008); Northeast Nuclear Energy Co. (Millstone Nuclear Power Station, Unit 3), CLI-01-10, 53 NRC 353, 361 (2001); La. Energy Servs. (Claiborne Enrichment Center), CLI-97-15, 46 NRC 294, 299 (1997).

obvious, the regulatory language is conclusive, and the Board may not disregard the letter of the regulation; it must enforce the regulation as written.¹²⁷ Interpretation “may not conflict with the plain meaning of the wording used in [a] regulation,” which in the end “of course must prevail.”¹²⁸

The Introduction to Appendix B states:

Every applicant for a combined license under part 52 of this chapter is required by the provisions of § 52.79 of this chapter to include in its final safety analysis report a description of the quality assurance applied to the design, and to be applied to the fabrication, construction, and testing of the structures, systems, and components of the facility and to the managerial and administrative controls to be used to assure safe operation.¹²⁹

The use of the past tense when referring to “quality assurance applied to the design” shows that safety-related design activities must have been performed under an acceptable QA program even though those activities were performed prior to the date on which the COLA (which includes the FSAR) was filed with the NRC. That the use of the past tense was intentional is confirmed by the immediately following reference to the QA program “to be applied” to fabrication, construction, and testing -- activities that will ordinarily occur after the COLA is filed.

The Introduction also clarifies that the quality assurance program that must have been applied to the design is an Appendix B program:

Nuclear power plants and fuel reprocessing plants include structures, systems, and components that prevent or mitigate the consequences of postulated accidents that could cause undue risk to the health and safety of the public. This appendix establishes quality assurance requirements for the design, manufacture, construction, and operation of those structures, systems, and components. The pertinent requirements of this appendix apply to all activities affecting the safety-related functions of those structures, systems, and components; these activities include designing, purchasing, fabricating, handling, shipping, storing, cleaning, erecting, installing, inspecting, testing, operating, maintaining, repairing, refueling, and modifying.¹³⁰

¹²⁷ Cleveland Elec. Illuminating Co. (Perry Nuclear Power Plant, Unit 1), LBP-95-17, 42 NRC 137, 145 (1995), rev'd on other grounds, CLI-96-13, 44 NRC 315 (1996).

¹²⁸ See Long Island Lighting Co. (Shoreham Nuclear Station, Unit 1), ALAB-900, 28 NRC 275, 288, 290, review declined, CLI-88-11, 28 NRC 603 (1988); see also Graystar, Inc., LBP-01-07, 53 NRC 168, 187 (2001).

¹²⁹ 10 C.F.R. Part 50, App. B at Introduction.

¹³⁰ Id. (emphasis added).

Thus, Appendix B requirements apply to, inter alia, the design of the safety-related functions of the structures, systems, and components that prevent or mitigate the consequences of postulated accidents.¹³¹ The regulation draws no distinction between safety-related design activities performed before the COLA is submitted to the NRC and those performed later. All such activities must be performed under a QA program that satisfies the requirements of Appendix B.

Our reading is reinforced by 10 C.F.R. § 52.79, which establishes the requirements for the applicant's FSAR. Section 52.79(a)(25) requires that the applicant for a COL include in its FSAR:

A description of the quality assurance program, applied to the design, and to be applied to the fabrication, construction, and testing, of the structures, systems, and components of the facility. Appendix B to 10 CFR part 50 sets forth the requirements for quality assurance programs for nuclear power plants. The description of the quality assurance program for a nuclear power plant must include a discussion of how the applicable requirements of appendix B to 10 CFR part 50 have been and will be satisfied, including a discussion of how the quality assurance program will be implemented.¹³²

Here also, the use of the past tense when referring to the QA program “applied to the design” shows that safety-related design activities must have been performed under an acceptable QA program even though the activities were performed prior to the date on which the COLA (which includes the FSAR) was filed with the NRC. Equally important, the text of section 52.79(a)(25) confirms that the QA program that must have been applied to the design is one that meets the requirements of Appendix B. An applicant will only be able to explain “how the applicable requirements of appendix B to 10 CFR part 50 have been . . . satisfied” if it implemented an Appendix B QA program for safety-related design activities.

Not only does the relevant text of Appendix B fail to distinguish between activities performed before or after the COLA is filed, we fail to see any logical reason why it would do so.

¹³¹ See Tr. at 611 (Lipscomb).

¹³² 10 C.F.R. § 52.79(a)(25) (emphasis added).

Regardless of when safety-related design work is performed, it must be done under a QA program that meets the NRC's requirements for the Commission to find that the design will provide adequate assurance of the protection of public health and safety.¹³³ A licensing board should not interpret regulatory text in a way that would essentially negate the stated purpose of the regulation or impute to the Commission an intent to create a "schizophrenic" rule.¹³⁴

We are not persuaded by DTE's argument that Appendix B requirements apply to activities performed only after the COLA is submitted to the NRC. DTE assumes that because the requirements of Appendix B apply to an "applicant," they apply only after the COLA is filed with the NRC because only then does a company become an "applicant." The issue whether DTE was an "applicant" prior to submitting its COLA for Fermi 3 arose because of the dispute whether the Staff could issue an NOV to DTE for alleged QA violations during the pre-application period. DTE argued, and the Staff eventually agreed, that the use of the term "applicant" in Appendix B limits the Staff's authority to issue an NOV for violations that may have occurred before DTE submitted the COLA to the NRC. The Intervenor's disagree with both the Staff and DTE on that issue, stating that under 10 C.F.R. § 50.2 "[a]n applicant means a person or entity applying for a license."¹³⁵ Using this definition, the Intervenor's argue that DTE was an applicant from the point when it notified the NRC of its intent to apply for a COL for Fermi 3.¹³⁶

¹³³ The Commission may issue a COL if the Commission finds, *inter alia*, that (i) the applicable standards of the Atomic Energy Act and the Commission's regulations have been met; and (iii) there is reasonable assurance that the facility will be constructed and will operate in conformity with the license, the provisions of the Act, and the Commission's regulations. See 10 C.F.R. § 52.97(a)(1)(i), (iii). The applicable regulations include the quality assurance requirements specified in Appendix B to 10 C.F.R. Part 50. See 10 C.F.R. § 52.79(a)(25) and 10 C.F.R. Part 50, Appendix B, Introduction.

¹³⁴ Hydro Res., Inc. (P.O. Box 777, Crownpoint, New Mexico 87313), LBP-06-1, 63 NRC 41, 68–69 (citing Exxon Nuclear Co. (Nuclear Fuel Recovery and Recycling Center), ALAB-447, 6 NRC 873, 878 (1977)), aff'd, CLI-06-14, 63 NRC 510 (2006); see also New York State Dep't of Soc. Servs. v. Dublino, 413 U.S. 405, 419–20 (1973); Treadway v. Gateway Chevrolet Oldsmobile Inc., 362 F.3d 971, 976 (7th Cir. 2004).

¹³⁵ Tr. at 390 (Gundersen).

¹³⁶ See id.

The Board need not resolve this question because Contention 15 concerns licensing, not enforcement. For licensing purposes, all safety-related design activities, including site characterization, performed before the COLA is submitted must be performed under a QA program meeting applicable Appendix B requirements. Even if the Staff is correct that it may not issue an NOV for failure to satisfy Appendix B requirements during the pre-application period, it may deny the COL for failure to satisfy the standards and requirements of the Commission's regulations.¹³⁷

The Board also disagrees with the Intervenor's argument that DTE was required to have an in-house Appendix B QA program (i.e., an Appendix B program established and implemented solely by DTE personnel) throughout the pre-application period and to use that program to provide oversight of all safety-related COLA activities performed by B&V. The Intervenor argues that DTE's preliminary QA efforts, undertaken from 2007-2009 (the period before and after the September 2008 COLA submission), were inadequate. According to the Intervenor, DTE failed to comply with Appendix B by (1) not establishing and maintaining its own QA program after March 2007, when it entered into a contract with B&V for the conduct of safety-related COLA activities; and (2) failing to retain overall control of safety-related activities performed by B&V.¹³⁸ Mr. Gundersen testified that he has never seen a nuclear reactor program that did not have a fully operational QA Program in place at the onset of its design process. He maintains that the owner's QA program and its supporting design review, document control, and rigorous process must begin several years prior to COLA submittal.¹³⁹ He acknowledges that DTE could delegate the QA function to a contractor, but DTE had to provide adequate oversight of the contractor

¹³⁷ 10 C.F.R. § 52.97(a)(1)(i).

¹³⁸ Prefiled Direct Testimony of Gundersen (Exh. INTS 068) at A22 [hereinafter Gundersen Testimony].

¹³⁹ Id.

through its in-house QA program. This required DTE to have throughout the pre-application period a Fermi 3 QA program staffed by its own QA professionals.¹⁴⁰

Intervenors' position is in substance a legal argument that Appendix B requirements can only be satisfied during the pre-application period in the manner specified by Mr. Gundersen. It is true that Appendix B requires that the applicant be responsible for the establishment and execution of the QA program.¹⁴¹ But it also states 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, but [the applicant] shall retain responsibility for the quality assurance program."¹⁴² Appendix B does not define what is meant by "retain responsibility." This suggests that the Board should consider all relevant facts and circumstances to determine whether DTE exercised sufficient supervision, oversight, and contractual control of B&V and its QA program during the pre-application period.

We therefore do not accept Intervenors' argument that the only way in which DTE could "retain responsibility" during the pre-application period was through an in-house QA program that met Appendix B requirements. DTE could delegate to its contractor the work of establishing and executing the QA program for site characterization activities, provided that the contractor had a QA program that satisfied Appendix B requirements and DTE retained responsibility for the program. The question whether DTE did in fact retain responsibility is the factual issue in dispute with respect to Contention 15A.

2. Contention 15B

Contention 15B concerns the time period after the COLA was filed. For that period, there is no dispute that Appendix B requirements apply to the Applicant's QA program. Intervenors question whether DTE's QA program will in fact be implemented during construction and

¹⁴⁰ See Tr. at 415–16 (Gundersen).

¹⁴¹ See generally 10 C.F.R. Part 50, App. B.

¹⁴² Id. at I. Organization.

operation of Fermi 3. In the Callaway licensing proceeding, the Appeal Board recognized that, even when an applicant shows that all ascertained construction errors have been cured,

there may remain a question whether there has been a breakdown in quality assurance procedures of sufficient dimensions to raise legitimate doubt as to the overall integrity of the facility and its safety-related structures and components. A demonstration of a pervasive failure to carry out the quality assurance program might well stand in the way of the requisite safety finding.¹⁴³

Intervenors allege such a pervasive failure.

E. Findings of Fact

(1) DTE pre-application activities for the Fermi 3 COLA

1. The Fermi 3 COLA project was initiated in December 2006. In late April 2007, DTE formally established the Fermi 3 Nuclear Development project group to oversee the COLA project. The COLA was ultimately submitted to the NRC on September 18, 2008.¹⁴⁴

2. Site characterization was one of the major activities to develop the Fermi 3 COLA performed prior to September 2008.¹⁴⁵ DTE acknowledges that its subsurface investigations (*i.e.*, site characterization work) performed during 2007 were safety related or supported safety related information.¹⁴⁶ Thus, the site characterization work had to be performed under the QA program required by Appendix B for “all activities affecting the safety-related functions of those structures, systems, and components” that prevent or mitigate the consequences of postulated accidents.¹⁴⁷ ASME Standard NQA-1-1994¹⁴⁸ provides a method found acceptable by the NRC Staff for satisfying Appendix B QA requirements.¹⁴⁹

¹⁴³ Union Elec. Co. (Callaway Plant, Unit 1), ALAB-740, 18 NRC 343, 346 (1983).

¹⁴⁴ Initial Written Testimony of Smith, et al. (Exh. DTE 015) at A24.

¹⁴⁵ Id. at A25.

¹⁴⁶ Tr. at 478 (P. Smith).

¹⁴⁷ 10 C.F.R. Part 50, App. B at Introduction.

¹⁴⁸ NQA-1-1994, Quality Assurance Requirements for Nuclear Facility Applications (Exh. BRD-001) at 155 (Undated) [hereinafter NQA-1-1994].

¹⁴⁹ The NRC endorsed NQA-1-1994 in Regulatory Guide 1.28, “Quality Assurance Program Requirements (Design and Construction)” (Rev. 3). See Initial Written Testimony of Smith, et al. (Exh. DTE 015) at A22.

3. With respect to the site characterization and information gathering for the FSAR, the principal safety-related site activities were site geotechnical and hydrogeological investigations and seismic analysis. These work activities had at least the potential to influence the design of safety-related structures, systems, and components.¹⁵⁰

4. The principal safety-related site characterization activities involved core borings and test wells to determine whether hydrogeological characteristics and site seismic hazards fall within the bounds of the ESBWR design certification.¹⁵¹

5. NQA-1-1994, Subpart 2.20, "Quality Assurance Requirements for Subsurface Investigations for Nuclear Power Plants," identifies QA measures to be used for site investigation activities.¹⁵²

6. Subsurface investigations are defined in NQA-1-1994 as the determination, correlation, and interpretation of soil, rock, and groundwater subsurface features as disclosed or inferred by exploratory excavating, drilling, sampling, testing, and geophysical surveying.¹⁵³ Subpart 2.20 is intended to apply to any of these activities which will be used to formulate design bases for the plant. The extent to which the individual requirements of Subpart 2.20 apply will depend upon the nature and scope of work to be performed and the importance of the item or service involved.¹⁵⁴

7. DTE agrees that the subsurface investigations were safety related or supported safety related information.¹⁵⁵

¹⁵⁰ Initial Written Testimony of Smith, et al. (Exh. DTE 015) at A25.

¹⁵¹ Id. at A27.

¹⁵² NQA-1-1994 (Exh. BRD-001) at 155.

¹⁵³ Id.

¹⁵⁴ Id.

¹⁵⁵ Tr. at 478 (P. Smith).

(2) QA during site characterization

8. DTE did not have an in-house QA program (i.e., a program established and implemented solely by DTE personnel) in place for Fermi 3 at the outset of the COLA development project.¹⁵⁶

9. DTE prepared a formal Request for Proposals (“RFP”) from contractors to perform the activities necessary to prepare a COL application.¹⁵⁷

10. The RFP required bidders to demonstrate as a prerequisite that they had an established Appendix B QA program.¹⁵⁸

11. The proposal submitted by B&V referenced and appended B&V’s QA Program, which satisfies Appendix B and NQA-1-1994.¹⁵⁹

12. DTE contracted with B&V to perform safety-related activities that supported development of the Fermi 3 COLA, including site characterization, and B&V personnel and subcontractors performed those activities under the B&V QA program rather than under a DTE program.¹⁶⁰ B&V was required by DTE to have a QA program.¹⁶¹ The site characterization work was obtained from B&V under its QA program.¹⁶²

13. During the site characterization, DTE observed the B&V site work. For example, Mr. Smith (DTE’s Director, Nuclear Development – Licensing and Engineering) observed the

¹⁵⁶ See Written Direct Testimony of George A. Lipscomb Concerning the Staff’s Review of the Fermi 2 Quality Assurance Program as it Relates to Contention 15 (Exh. NRC S23) at A35 (Apr. 30, 2013) [hereinafter Lipscomb Written Direct Testimony]; Initial Written Testimony of Smith, et al. (Exh. DTE 015) at A35; Gundersen Testimony (Exh. INTS 068) at A27.

¹⁵⁷ Initial Written Testimony of Smith, et al. (Exh. DTE 015) at A30.

¹⁵⁸ Id.

¹⁵⁹ See generally Binder 2 Submittal – Technical Requirements, Pricing, and Disaster Recovery/Business Resumption Response; Lipscomb Written Direct Testimony (Exh. NRC S23) at A18, A25; Initial Written Testimony of Smith, et al. (Exh. DTE 015) at A31; Tr. at 395 (Gundersen).

¹⁶⁰ See Lipscomb Written Direct Testimony (Exh. NRC S23) at A25; Initial Written Testimony of Smith, et al. (Exh. DTE 015) at A37, A39–43; Gundersen Testimony (Exh. INTS 068) at A27.

¹⁶¹ See Project Management Memorandum, [DTE] (Fermi Site) COL Application Preparation (Exh. DTE 056) at 22–23 (Mar. 30, 2007).

¹⁶² Initial Written Testimony of Smith, et al. (Exh. DTE 015) at A29.

collection of core samples.¹⁶³ DTE also established an owner's engineer organization to perform the QA oversight of the B&V work.¹⁶⁴ The owner's engineer organization was staffed by people from the Ann Arbor office of B&V, an office independent from the B&V Kansas City office that performed the site investigation work.¹⁶⁵

14. Appendix B directs that

[a] comprehensive system of planned and periodic audits shall be carried out to verify compliance with all aspects of the quality assurance program and to determine the effectiveness of the program. The audits shall be performed in accordance with the written procedures or check lists by appropriately trained personnel not having direct responsibilities in the areas being audited. Audit results shall be documented and reviewed by management having responsibility in the area audited. Followup action, including reaudit of deficient areas, shall be taken where indicated.¹⁶⁶

14. The B&V QA program was audited by the Nuclear Procurement Issues Committee ("NUPIC") prior to placement of the purchase order by DTE for site characterization services.

NUPIC provides such audit services for many utilities. The NUPIC audit was lead by Entergy.¹⁶⁷

15. DTE reviewed the results of the NUPIC audit. No deficiencies were identified by the NUPIC audit of B&V.¹⁶⁸

16. DTE performed its own audit of B&V in 2009. During that audit DTE also reviewed the earlier NUPIC audit and did not identify any issues that were identified during that previous audit as well.¹⁶⁹

¹⁶³ Tr. at 488 (P. Smith).

¹⁶⁴ Tr. at 474 (P. Smith & Stasek).

¹⁶⁵ Id.

¹⁶⁶ 10 C.F.R. Part 50, App. B, § XVIII.

¹⁶⁷ Tr. at 468 (P. Smith & Stasek). NUPIC is a committee that was formed because of the additional resources that were necessary to monitor and audit all of the nuclear vendors that nuclear utilities had in place. NUPIC's function is to facilitate resource sharing between the utilities such that all of the utilities may take credit for the audits that are done by NUPIC using a standard format. NUPIC performs audits of programs using a combined team of representatives from different utilities. These teams use a standard checklist from vendor to vendor so that there is consistency between the audits. See Tr. at 468–69 (Stasek).

¹⁶⁸ Tr. at 469–70 (P. Smith & Stasek).

¹⁶⁹ Tr. at 470 (P. Smith & Stasek).

17. Personnel from both the Owner's Engineer Office in Ann Arbor and the QA office within the B&V Kansas City Office periodically performed surveillances of activities on the Fermi 3 site.¹⁷⁰

18. The owner's engineer assisted DTE in providing oversight of site activities.¹⁷¹ DTE had personnel on site such that DTE had firsthand knowledge of what work was being done.¹⁷²

19. DTE acknowledges that when it became an applicant more activities needed to be managed in house, and DTE needed to have its own QA program in place to guide those activities.¹⁷³ Beginning in November 2007, DTE began developing a formal process for the receipt, review, and acceptance of safety-related COLA work product from B&V. DTE established its own QA program for the Fermi 3 project under the Nuclear Development Quality Assurance Program Description ("ND QAPD") on February 4, 2008.¹⁷⁴ DTE did not accept any safety-related B&V work product until after the Fermi 3 project had its own QA program in place to govern the receipt, review, and acceptance of such information.¹⁷⁵

20. Under the ND QAPD, DTE established applicable elements of an Appendix B program and created procedures for implementing those elements associated with the activities planned in support of the review and acceptance of the B&V COLA application work product.¹⁷⁶ Using these procedures, DTE was able to verify for each chapter and section of the COLA that there was a reference to a B&V calculation, a reference to the source, and that there were trails

¹⁷⁰ Tr. at 480–81 (P. Smith).

¹⁷¹ Tr. at 473 (P. Smith).

¹⁷² Id.

¹⁷³ Tr. at 617 (Rivera-Verona & Lipscomb).

¹⁷⁴ Initial Written Testimony of Smith, et al. (Exh. DTE 015) at A35.

¹⁷⁵ Id. at A30, A55.

¹⁷⁶ See Tr. at 587–88 (Lipscomb).

enabling someone to verify that that calculation is correct and based on the information presented.¹⁷⁷

(3) NRC Staff Investigation and the NOV

21. At the beginning of the Fermi 3 FSAR review, the Staff was familiar with other COL applications which used the QA programs from the applicants' existing reactors to control both pre-application activities and activities in the application review phase. In contrast to the approach used by such applicants, DTE informed the Staff that, for the Fermi 3 project, it intended to develop a new QA program for Fermi 3 that was separate from the program in place for Fermi 2. The Staff determined that further clarification of this approach was necessary.¹⁷⁸

22. The Staff conducted an inspection in August 2009 that resulted in an NOV issued to DTE in October 2009.¹⁷⁹ In the 2009 NOV, the Staff accused DTE of having failed in several respects to comply with the QA requirements of 10 C.F.R. Part 50, Appendix B. The alleged violations included: (A) failing to establish and implement a Fermi 3 QA program between March 2007 (when DTE initially contracted with B&V for the conduct of COLA activities for Fermi 3) and February 2008 and failing to retain overall control of contracted COLA activities as required under Criterion II, "Quality Assurance Program" of Appendix B, resulting in inadequate control of procurement documents and ineffective control of contract services performed by B&V for COLA activities; (B) failing to perform internal audits of QA programmatic areas implemented for Fermi 3 COLA activities; and (C) failing to document trending of corrective action reports.¹⁸⁰

23. DTE responded to the Staff's NOV letter on November 9, 2009, denying that any violation occurred because DTE was not a COL applicant before September 18, 2008, and thus could not be subject to an NOV for QA deficiencies before that date.¹⁸¹ DTE acknowledged,

¹⁷⁷ Tr. at 483–84 (P. Smith).

¹⁷⁸ Lipscomb Written Direct Testimony (Exh. NRC S23) at A19.

¹⁷⁹ See Oct. 2009 Inspection Report/NOV (Exh. NRC S2).

¹⁸⁰ See generally id.

¹⁸¹ [DTE] Reply to a [NOV] 05200033/2009-201-01, 02, and 03, Attach. 1, NRC3-09-0041,

however, that quality deficiencies prior to that date “would affect the licensing review.”¹⁸² DTE’s reply also described the corrective actions it had taken since the NOV was issued:

To address the concerns noted in the violation and to assure that all COLA activities continue to be conducted at a level of quality necessary to support future safety related activities the following measures are now in place:

1) As stated in the NRC’s “Vendor Inspection Report,” Detroit Edison put in place the Nuclear Development Quality Assurance Program Description, Revision 0 on February 4, 2008.

2) Subsequently, Detroit Edison put in place the Fermi 3 Quality Assurance Program Description (Fermi 3 QAPD), Revision 0 on September 25, 2008 which implements in full the requirements from Criterion II, “Quality Assurance Program,” Criterion IV, “Procurement Control,” and Criterion VII, “Control of Purchased Materials, Equipment, and Services,” of Appendix B to 10 CFR Part 50.¹⁸³

24. On April 27, 2010, the Staff responded to DTE, agreeing that the Staff could not issue an NOV for actions or omissions before the date on which DTE submitted the Fermi 3 COLA to the NRC.¹⁸⁴ But the Staff also stated that “Detroit Edison must demonstrate compliance with Appendix B in order to receive a COL from the Nuclear Regulatory Commission.”¹⁸⁵ The Staff response contained a revised NOV that reformulated the original violations A, B, and C into two new violations.

25. Under the Staff’s revised NOV, “Detroit Edison’s activities related to Fermi 3 became subject to NRC regulations and NRC enforcement upon filing the Fermi 3 COL application on September 18, 2008.”¹⁸⁶ The NOV was therefore revised to eliminate references to activities occurring before the Fermi 3 Application was submitted to the NRC on September 18, 2009.¹⁸⁷ Violation A cited Detroit Edison “for failure to perform an evaluation of the B&V quality

Response to Violation 05200033/2009-201-01 (Exh. NRC S3) at 4 (Nov. 9. 2009).

¹⁸² Id. at 5.

¹⁸³ Id. at 9.

¹⁸⁴ NRC Response to [DTE] Reply to a [NOV] 05200033/2009-201-01, 02, and 03 and Revised [NOV] to [DTE] (Exh. NRC S4) at 1 (Apr. 27, 2010).

¹⁸⁵ Id.

¹⁸⁶ Id. at 2.

¹⁸⁷ See id.

assurance program and adequately document the basis for the qualification of B&V to perform safety-related Fermi 3 COL activities after September 18, 2008.” The Staff required DTE to respond within 30 days to the revised Violation A.¹⁸⁸

26. Revised Violation B combined previous violations B and C. The Staff’s April 27, 2010 letter stated that it had reviewed DTE’s corrective actions relating to Violations B and C of the Initial NOV and found them responsive to the Initial Notice. The Staff stated that it had

no further questions or comments at this time and you are not required to respond further to these two violations, or to Violation B of the Revised Notice. We may review the implementation of your corrective actions during a future NRC staff inspection to determine that full compliance has been achieved and maintained.¹⁸⁹

27. DTE sent a response to the revised NOV in May 2010.¹⁹⁰ DTE did not dispute revised Violation A, acknowledging that it “failed to sufficiently document a review of the Black & Veatch, Overland Park, Kansas (B&V) 10 CFR 50 Appendix B QA program, which would typically include the basis for qualifying the B&V QA program, thereby assuring that B&V was qualified to perform safety-related Fermi 3 COL activities.”¹⁹¹ But DTE maintained that the violation had been corrected:

As of July 2009, Detroit Edison has taken the necessary steps to assure that B&V is qualified to supply the safety-related services to Detroit Edison, as required by Criterion VII, “Control of Purchased Material, Equipment, and Services” of 10 CFR 50 Appendix B. Detroit Edison expanded the guidance within implementing procedures NP-7. 1, “Supplier Audits, Surveillances, and Commercial Grade Surveys”, and NP-7.2, “Supplier Evaluations.” Audit and surveillance schedules initiated by Detroit Edison further specify supplier evaluation activities. With these changes in place, Detroit Edison has established a program to comply with the requirements of Criterion VII, “Control of Purchased Materials, Equipment, and Services,” of Appendix B to 10 CFR Part 50.¹⁹²

¹⁸⁸ Id.

¹⁸⁹ Id.

¹⁹⁰ See [DTE] Reply to [NOV] 05200033/2009-201-04 (Exh. NRC S5) (May 25, 2010).

¹⁹¹ See id., Attach. 1, NRC3-10-0023, at 2.

¹⁹² Id. at 3.

DTE also stated it had “confirmed that the safety-related activities performed by B&V prior to July 2009 were completed in accordance with 10 CFR 50 Appendix B requirements.”¹⁹³ Finally, DTE stated that it had established processes to prevent any future violations.¹⁹⁴

28. The Staff reviewed DTE’s response, together with RAI responses that DTE also submitted in May 2010,¹⁹⁵ and determined that in its view all post-application issues related to DTE’s contracting with B&V were resolved.¹⁹⁶ The Staff issued a letter closing the NOV on June 4, 2010.¹⁹⁷ The Staff has not identified any post-application QA issues other than those identified in the revised NOV.¹⁹⁸

29. The Staff acknowledges that its resolution of the NOV does not resolve the questions in Contention 15A related to pre-application safety-related activities.¹⁹⁹

F. Conclusions of Law

(1) Contention 15A

As explained in Section III (D) above, Appendix B permits DTE to delegate the work of establishing and executing the QA program, provided that it retained responsibility for the program. Accordingly, the factual dispute that the Board must resolve is whether DTE in fact retained responsibility for the QA program during the pre-application period.

The Board concludes that, although DTE’s QA program was different from the previously typical situation in which the applicant utilizes a QA program from one of its existing reactors, DTE satisfied Appendix B requirements during the pre-application period. To fulfill the obligation to provide quality information in support of its application, DTE found a vendor which had in place a

¹⁹³ Id.

¹⁹⁴ Id. at 4.

¹⁹⁵ [DTE] Response to NRC Request for Additional Information Letter No. 26 – Related to SRP Section 17.5 (Exh. NRC S7) (May 10, 2010).

¹⁹⁶ Lipscomb Written Direct Testimony (Exh. NRC S23) at A23.

¹⁹⁷ [NRC] Inspection Report 05200033/2009-201 and Revised [NOV] to [DTE] (Ex. NRC S6) (June 4, 2010).

¹⁹⁸ Lipscomb Written Direct Testimony (Exh. NRC S23) at A24.

¹⁹⁹ NRC Staff Proposed Findings of Fact and Conclusions of Law for Contentions 8 and 15 at Para. 117 (Jan. 22, 2014).

QA program that met the Appendix B requirements. DTE chose to use that program for the conduct of all of the safety-related site investigation work and other COLA development work. In keeping with Appendix B and NQA-1, DTE retained responsibility for the QA program by requiring by contract that B&V have a QA program that satisfied Appendix B requirements and that would be applied to the safety-related COLA activities; reviewing the prior audit of B&V's QA program by NUPIC; providing oversight of B&V activities onsite and through the use of an owner's engineer to oversee the B&V QA effort on Fermi 3; and not receiving any work product from B&V until DTE had its own Appendix B QA program in place to govern the receipt, review, and acceptance of safety-related COLA work product. Thus, DTE retained responsibility for the work product during the pre-application period.

Nor do we find anything improper in DTE's use of a B&V office different from the one doing the design work to act as its owner's engineer and ensure that QA standards were being met. The separation between the owner's engineer organization in Ann Arbor performing the QA function and the B&V organization in Kansas City is similar to the relationship in a nuclear utility between the production and QA organization in that they both meet at some common point in the organization at a high level.²⁰⁰ We therefore conclude that the relationship between the owner's engineer is not unlike the method used successfully in the nuclear utility industry for QA and that it provides sufficient separation of function to ensure independence of the QA function from the production function.

The Board therefore concludes that DTE, through direct supervision, oversight, and contractual control of B&V and its QA program during the pre-application period, retained and exercised sufficient responsibility for the Fermi 3 QA program during that time frame. DTE's QA efforts during the pre-application period satisfied Appendix B requirements so that there is

²⁰⁰ See Tr. at 474 (P. Smith & Stasek).

reasonable assurance that the data used in the design of Fermi 3 is of high quality. The Board accordingly rules for the Applicant on Contention 15A.

(2) Contention 15B

With respect to Contention 15B, which applies to post-application QA requirements, it is undisputed that the QA plan in the Fermi 3 COLA meets the requirements of Appendix B and is consistent with the NRC's Standard Review Plan. All QA violations identified by the Staff have been resolved, and the record shows that those violations had no effect on any safety-related activities performed after initial submittal of the application. We conclude that there is reasonable assurance that the plant, as built, can and will be operated without endangering the public health and safety because the Applicant has provided satisfactory evidence of a fully implemented QA program governing the design, construction, and operation of Fermi 3 in conformity with all relevant NRC regulations. We find no evidence of a pervasive failure to comply with QA requirements. The Board therefore rules for DTE on Contention 15B.

IV. CONCLUSION

Accordingly, the Board, after considering all of the evidence and arguments presented, finds in favor of the Staff on Contention 8 and DTE on Contention 15.

In accordance with 10 C.F.R. § 2.1210, this partial initial decision will constitute a final decision of the Commission forty (40) days after its issuance unless: (1) a party files a petition for Commission review within twenty five (25) days after service of this initial decision; or (2) the Commission directs otherwise. Within twenty five (25) days after service of a petition for Commission review, parties to the proceeding may file an answer supporting or opposing

Commission review. A party who seeks judicial review of this decision must first seek Commission review, unless otherwise authorized by law.

It is so ORDERED.

THE ATOMIC SAFETY
AND LICENSING BOARD
/RA/

Ronald M. Spritzer, Chairman
ADMINISTRATIVE JUDGE
/RA/

Dr. Anthony J. Baratta
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Dr. Randall J. Charbneau
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Rockville, Maryland
May 23, 2014

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing **PARTIAL INITIAL DECISION (Ruling on Contentions 8 and 15) (LBP-14-07)** have been served upon the following persons by Electronic Information Exchange.

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PARTIAL INITIAL DECISION (Ruling on Contentions 8 and 15) (LBP-14-07)

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Dated at Rockville, Maryland
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