December 6, 2010

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
Before the Atomic Safety and Licensing Board

In the Matter of: ) Docket No. 52-033
The Detroit Edison Company )
(Fermi Nuclear Power Plant, )
(Unit 3)

INTERVENORS’ MEMORANDUM IN OPPOSITION
TO DTE’S ‘MOTION FOR SUMMARY DISPOSITION
OF CONTENTION 8’

Now come Intervenors Beyond Nuclear, Citizens for Alternatives to Chemical Contamination, Citizens Environmental Alliance of Southwestern Ontario, Don’t Waste Michigan, Sierra Club (Michigan Chapter), Keith Gunter, Edward McArdle, Henry Newnan, Derek Coronado, Sandra Bihn, Harold L. Stokes, Michael J. Keegan, Richard Coronado, George Steinman, Marilyn R. Timmer, Leonard Mandeville, Frank Mantei, Marcee Meyers, and Shirley Steinman (hereinafter “Intervenors”), by and through counsel, and set forth their opposition to the “Motion for Summary Disposition of Contention 8” brought by DTE, the Applicant.

Facts Demonstrating Issues of Material Fact

While DTE has finally responded to prodding and moved away from unequivocal denial of the presence of the Eastern Fox Snake at the Fermi site, to the conclusion that there is “wide distribution” of the reptile throughout the two-square-mile area occupied by the power plant complex (see attached “Statement of Facts Demonstrating Issues of Material Fact” ¶ 1), the mitigation proposed by Applicant is ad hoc and legally insufficient under NEPA. DTE’s revised ER also acknowledges that the snake warms itself on paved areas at the Fermi site.

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Id. ¶ 5. There will be serious traffic problems at Fermi at many junctures during the construction phase of Fermi 3, especially coinciding with nuclear refueling outages at adjacent Fermi 2. There will be 3 or 4 refueling outages at unit 2, and since at least one of those will coincide with the peak construction activity at the site, an estimated 5000 workers, exclusive of deliveries, will be present for weeks if not months between the two units. Id. ¶¶ 3, 4.

DTE has neither quantified nor factored in any added traffic congestion effects from the presence at the Fermi site of even more workers and large construction vehicles involved with the coming decommissioning and dismantling of the Fermi 1 reactor, which is proximate to the proposed Fermi 3 location. Id. ¶ 7. The Michigan Historic Preservation Officer has yet to approve the decommissioning plan.

The density of workers is anticipated by DTE to create serious traffic management problems, which means that the chances of vehicle-snake meetings, resulting in reptile fatalities, will be significantly increased. DTE explains that the traffic jams can be reduced by signal installations and signal modifications, staggering worker shifts, busing employees from off-site, minor lane additions and/or a second entrance to the site. Id. ¶ 4. While there is discussion of the possibility of reducing traffic impacts, there is no commitment by DTE to doing so. And the measures are designed to make traffic flow more efficient, not to make avoidance of road killing the eastern fox snake.

The NRC Staff has not approved DTE’s mitigation plan for the snake for completeness or adequacy. Id. ¶ 6. There are pending changes in the delineation and mitigation of wetlands loss at the
Fermi site, which would have direct implications for the habitat of the wetlands-resident eastern fox snake. Id. ¶ 8. These plans have not been approved by the Michigan Department of Natural Resources and Environment nor the U.S. Army Corps of Engineers, nor has the mitigation proposal of DTE to preserve the eastern fox snake.

Vegetation in the vicinity of the Fermi 2 and 3 cooling towers - presumably including wetlands which are the snake’s habitat - may experience salt depositions as a consequence of treatments applied by DTE to retard plume drift (also called “salt drift”). Id. ¶ 9. As salinity levels increase, growth of intolerant plants declines, and yields are reduced. Growth suppression is sometimes accompanied by leaf injury. The potential effects of multiplying the cooling tower plumes over Fermi, and the consequences of increased use of the retardant, are neither mentioned nor discussed in the ER or the lately-submitted mitigation plan.

Nor is there mention by DTE of another surface on which eastern fox snakes might sun themselves, which has more ominous implications. Forty-four (44) BWR irradiated nuclear fuel assemblies, cooled for about 25 years post-removal from a reactor core, still give off 6,200 watts of thermal heat output. Id. ¶ 10. This might provide an unusually warm place on spring and fall days on the concrete pads of Fermi 2's Independent Spent Fuel Storage Installation (ISFSI). The Holtec dry storage casks to be used at Fermi 2's ISFSI are designed to cool the wastes within at a temperature of several hundred degrees F. (as opposed to 100 degrees F. in indoor storage pools), as permitted by NRC regulations and the casks' technical specifications. Such heat would likely raise the temperature of the concrete pad on which the DSC’s sit, and serve to attract reptiles such as the snakes. Any
reptiles so attracted to warm themselves near irradiated nuclear fuel
dry casks would also be exposed to the radioactivity emanating from
them. NRC regulations allow for 10 millirem per hour dose rates at a
distance of 2 meters (6 feet) from a dry cask; this is about one human
chest x-ray per hour worth of gamma ray exposure. Id. NRC allows for
200 mrem/hour dose rates at the cask's outer surface, or 20 chest x-
rays per hour. Such radiation doses to the small body mass of an
eastern fox snake would have not only physical impacts on that
individual snake, but also on its genetic material, which could cause
harm to future generations. Genetic damage to endangered and
threatened species further risks its future extinction. None of this
is acknowledged or addressed in the amendments proposed or made by DTE
to its ER.

Legal Principles Governing Summary Disposition

1. Summary of Argument

A. DTE has not met its factual burden, viz., that there are no
issues of material fact. Even if Contention 8 is one of omission, the
omitted information must be supplied and must not be a sham.

B. DTE has failed to perform the requisite cumulative effects
analysis required by NEPA, as a result of which the proposed
mitigation plan for the eastern fox snake is inadequate.

A. Law Pertinent to DTE’s Factual Burden

Where a contention alleges the omission of particular information
or an issue from an application, and the information is supplied later
by the applicant, the contention is moot. Amergen Energy Co., LLC
(Oyster Creek Nuclear Generating Station), LBP-06-16, 63 NRC 737, 742
(2006). However, Intervenors believe that important omitted informa-
tion has been, at best, only partially supplied on this issue. As the
attached “Statement of Facts Demonstrating Issues of Material Fact” reveals, DTE has not considered, at all, the additional traffic congestion impacts on the eastern fox snake of the pending decommissioning of Fermi 1. Nor has DTE accounted for likely changes in delineation and configuration of wetlands loss in its mitigation plan or ER. Nor does DTE mention or analyze the potential for plume drift salinity to the wetlands habitat which is the snake’s home as a result of using a salty retardant. DTE also has not mentioned nor considered the effects of irradiation exposure of snakes sunning themselves on the concrete pads containing dry storage casks containing spent nuclear fuel.

The burden of proof with respect to summary disposition rests upon DTE, which must demonstrate the absence of any genuine issue of material fact. Advanced Medical Systems, Inc. (One Factory Row, Geneva, Ohio 44041), CLI-93-22, 38 NRC 102 (1993); Dairyland Power Cooperative (La Crosse Boiling Water Reactor), LBP-82-58, 16 NRC 512, 519 (1982), citing Adickes v. Kress and Co., 398 U.S. 144, 157 (1970). Summary disposition is not appropriate when the movant fails to carry its burden of setting forth all material facts pertaining to its summary disposition motion. Gulf States Utilities Co. (River Bend Station, Unit 1), LBP-95-10, 41 NRC 460, 466 (1995). When the matters presented fail to foreclose the possibility of a factual dispute, the moving party fails to meet its burden on summary disposition. Entergy Nuclear Vermont Yankee, L.L.C., and Entergy Nuclear Operations, Inc. (Vermont Yankee Nuclear Power Station), LBP-06-5, 63 NRC 116, 122 (2006).

Intervenors, as nonmovant, are entitled to the favorable inferences that may be drawn from any evidence submitted. See Sequoyah
Fuels Corp. (Gore, Oklahoma Site Decontamination and Decommissioning Funding), LBP-94-17, 39 NRC 359, 361, aff’d, CLI-94-11, 40 NRC 55 (1994). Vermont Yankee, LBP-06-5, 63 NRC at 121-22 (citing Advanced Med. Sys., Inc., supra.

B. Obligations Attendant to NEPA

NEPA was intended to reduce or eliminate environmental damage and to promote “the understanding of the ecological systems and natural resources important to” the United States. Dep’t of Transp. v. Pub. Citizen, 541 U.S. 752, 756, 124 S.Ct. 2204, 159 L.Ed.2d 60 (2004) (quoting 42 U.S.C. § 4321). Instead of mandating particular environmental results, NEPA “imposes procedural requirements on federal agencies, requiring agencies to analyze the environmental impact of their proposals and actions.” Coliseum Square Ass’n, Inc. v. Jackson, 465 F.3d 215, 224 (5th Cir.2006) (quoting Pub. Citizen, 541 U.S. at 756-57, 124 S.Ct. 2204).

Under NEPA, when several proposals for actions that will have a cumulative or synergistic environmental impact upon a region are pending concurrently before an agency, their environmental consequences must be considered together. Sequoyah Fuels Corp. (Gore, OK, Site Decommissioning), LBP-99-46, 50 NRC 386 (1999). The term “synergistic” refers to the joint action of different parts - or sites - which, acting together, enhance the effects of one or more individual sites. Sequoyah Fuels Corp. (Gore, OK, Site Decommissioning), LBP-99-46, 50 NRC 386 (1999). Cumulative actions are those “which when viewed with other proposed actions have cumulatively significant impacts.” 40 C.F.R. § 1508.25(a)(2) (2001). NEPA regulations state that “[c]umulative impacts can result from individually minor but collectively significant actions taking place over a period of time.” 40 C.F.R. §
1508.7. Hence a consideration of cumulative impacts must also consider "[c]losely related and proposed or reasonably foreseeable actions that are related by timing or geography." Vieux Carre Prop. Owners, Residents, & Assocs., Inc. v. Pierce, 719 F.2d 1272, 1277 (5th Cir.1983).

In City of Carmel-By-The-Sea v. U.S. Dept. of Transp., 123 F.3d 1142 (9th Cir. 1997), the court noted that an EIS must include a "useful analysis of the cumulative impacts of past, present and future projects." Id. at 1160. This requires "discussion of how [future] projects together with the proposed ... project will affect [the environment]." Id. The EIS must analyze the combined effects of the actions in sufficient detail to be "useful to the decisionmaker in deciding whether, or how, to alter the program to lessen cumulative impacts." Id. at 1160. Detail is therefore required in describing the cumulative effects of a proposed action with other proposed actions. Blue Mountains Biodiversity Project v. Blackwood, 161 F.3d 1208, 1214-15 (9th Cir.1998).

When analyzing cumulative impacts of a proposed action, an agency should consider:

(1) the area in which the effects of the proposed project will be felt;

(2) the impacts that are expected in that area from the proposed project;

(3) other actions past, proposed, and reasonably foreseeable that have had or are expected to have impacts in the same area;

(4) the impacts or expected impacts from these other actions; and;

(5) the overall impact that can be expected if the individual
impacts are allowed to accumulate. 

Fritiofon v. Alexander, 772 F.2d 1225 (5th Cir.1985)(citing Cabinet Mountains Wilderness/Scotchman's Peak Grizzly Bears v. Peterson, 685 F.2d 678, 683-84 (D.C.Cir.1982)), overruled on other grounds, Sabine River Authority v. U.S. Dep't of Interior, 951 F.2d 669 (5th Cir. 1992). Furthermore, "[a]n impact is `reasonably foreseeable' if it is `sufficiently likely to occur that a person of ordinary prudence would take it into account in reaching a decision.'" City of Shoreacres v. Waterworth, 420 F.3d 440, 453 (5th Cir.2005) (citing Sierra Club v. Marsh, 976 F.2d 763, 767 (1st Cir.1992)).

Although federal agencies are given considerable discretion to define the scope of NEPA review, connected, cumulative, and similar actions must be considered together to prevent an agency from "dividing a project into multiple `actions,' each of which individually has an insignificant environmental impact, but which collectively have a substantial impact." Wetlands Action Network v. United States Army Corps of Eng'rs, 222 F.3d 1105, 1118 (9th Cir.2000) (quoting Thomas v. Peterson, 753 F.2d 754, 758 (9th Cir.1985)).

**Conclusion**

DTE's failure to consider multiple actions - dismantling of Fermi 1, refueling of Fermi 2, the eventual decommissioning of Fermi 2, construction of Fermi 3, and the deployment of irradiated fuel dry storage casks - together means that the full potential combined impacts on the eastern fox snake have not been properly analyzed. Consequently, the proposed mitigation is fatally flawed and does not properly dispose of Contention 8 even if it is treated as a contention of omission.

While DTE has proffered an *ad hoc* mitigation plan, it is not
connected to, nor related in a meaningful way to, the added environmental burdens of constructing and operating Fermi 3, the teardown and removal of Fermi 1, changes in wetlands mitigation, the unanalyzed plume salt drift, and/or radiation effects from the ISFSI facility.

Intervenors recognize that "NEPA not only does not require agencies to discuss any particular mitigation plans that they might put in place, it does not require agencies - or third parties - to effect any." *Citizens Against Burlington, Inc. v. Busey*, 938 F.2d 190, 206 (D.C. Cir.) cert. denied, ___ U.S. ___, 112 S.Ct. 616, 116 L.Ed.2d 638 (1991). However, NEPA requires that there be a "reasonably complete discussion of possible mitigation measures." *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 352, 109 S.Ct. 1835, 1847 (1989). That is not possible in light of incomplete or missing information about the environmental impacts. CEQ regulations specify that when an agency is faced with "incomplete or unavailable" information relating to its evaluation of "reasonably foreseeable significant adverse effects on the human environment," it must obtain and include in the EIS information on "reasonably foreseeable significant adverse impacts" if the costs of obtaining such information are not exorbitant. 40 C.F.R. § 1502.22. In light of the missing information about Fermi 1 decommissioning; lack of various agencies’ approvals of the proposed mitigation plan; lack of consideration of salt drift effects on eastern fox snake habitat; lack of consideration of the unshielded IFSFI casks; and the pending changed minimization of wetland impacts; the ASLB should not dismiss Contention 8.

Intervenors have demonstrated differences of material fact on key issues. An evidentiary hearing is necessary if a genuine issue of material fact is in dispute. *Advanced Medical Systems, Inc.* (One
Intervenors have countered DTE’s claims that, treated as a “contention of omission,” Contention 8 has been mooted. They have come forward with significant evidence which warrants denial of DTE’s Motion and the setting of Contention 8 for hearing.

Respectfully,

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STATEMENT OF FACTS DEMONSTRATING ISSUES OF MATERIAL FACT IN SUPPORT OF INTERVENORS’ OPPOSITION TO DTE’S ‘MOTION FOR SUMMARY DISPOSITION OF CONTENTION 8’

Now come the Intervenors herein, by and through counsel, and set forth material facts in support of their opposition to Applicant’s “Motion for Summary Disposition of Contention 8.”

1. No longer theorizing the possible presence of a few of the Eastern Fox Snake at the Fermi site, DTE scientists have identified “wide distribution” of the reptile throughout the two square mile area occupied by the power plant complex:

As demonstrated on the map provided in the response to part A of this letter, eastern fox snakes have been observed in numerous locations including those that are developed and currently in use for Fermi 2 operations. Due to the observed wide distribution, all undeveloped areas on the site are considered to provide habitat for the species. While eastern fox snakes have been observed at numerous developed locations, these sites do not possess habitat (food, cover, or water) for the snakes. (Emphasis supplied).


2. During Fermi 3’s construction phase of several years, DTE projects a workforce of 2900 workers at peak, in 2017. ER Rev. 1 March 2010 ¶ 4.4.2.4.2, p. 4-82 (ADAMS No. ML101110564).

3. Refueling outages at nearby Fermi 2 recur as frequently as every 18 months, meaning there will be 3 to 4 such outages of a month or more at Fermi 2 during the construction of Fermi 3. Id. A refueling outage at Fermi 2 during the period of peak construction at Fermi
3 will mean the presence of 5,000 workers daily at the plant site, using two principal means of traffic ingress and egress to Fermi. Id.

4. “With up to 5000 workers commuting to the Fermi site at the time of peak Fermi 3 construction employment, there is the potential for large traffic impacts near the plant entrance....” Id. However,

It has been determined that by implementing potential improvements including signal installations and signal modifications, staggering worker shifts, bussing employees from off-site, minor lane additions and/or a second entrance to the site that a great deal of the increased traffic impacts can be minimized, resulting in a SMALL impact.

Id. p. 4-83. While the ER elucidates mitigating measures for the traffic overload at the Fermi site during Fermi 3 construction, nowhere in the environmental documents is there a commitment to the implementation of those measures. And the measures are designed to make traffic flow more efficient, not to make avoidance of road killing the eastern fox snake.

5. There is an unquantified, anecdotally-recognized likelihood that the fox snake will loaf on paved traffic arteries at the site:

While eastern fox snakes have been observed at numerous developed locations, these sites do not possess habitat (food, cover, or water) for the snakes. It is believed that the snakes observed at these locations were migrating from areas possessing habitat or using the paved and gravel surface as a means of increasing their body temperature. (Emphasis supplied).


6. The NRC Staff itself has not approved the adequacy of the mitigation scheme for the snake which DTE has described. In a November 8, 2010 conference call between the NRC, Argonne Laboratories and DTE, it was noted that “E&E had previously identified the need for additional details from Detroit Edison on how vehicle related mortality of the eastern fox snake would be mitigated during construction and operations. The preliminary indication is that the issue was addressed in the Detroit Edison response on October 29, but the overall adequacy of the response is under detailed review.” Adams No. ML103260660.

7. DTE has neither identified nor discussed in the ER the cumulative impacts that the presence of workers and heavy equipment to decommission and dismantle Fermi 1 might have on the eastern fox snake. In the aforesaid conference call notes this mention of the status of Fermi 1 appears:

The Section 106 submittal form for the Fermi 1 decommissioning (ML101790146) is being reviewed for consistency with NRC policy and will be submitted by NRC to the SHPO in the near future. Since the Maritime Assessment Report has been modified it
will be resubmitted as an attachment to the Section 106 form. The Fermi 3 submittal (ML101820297) will be sent at the same time or shortly after the Fermi 1 package.

Id. p. 2.

8. There are proposed changes to wetlands delineation and configuration at the Fermi site which are incomplete. In an October 25, 2010 phone conference between NRC Staff and DTE (ADAMS No. ML103260662), the topic was addressed as follows:

A mitigation strategy for wetland impacts will be developed by Detroit Edison [ACTION ITEM]. Feedback from the Michigan Department of Natural Resources and Environment (MDNRE) or USACE could result in some changes from the strategy currently presented in the EIS draft. The full scope and nature of those required changes is not known, but Detroit Edison is expected to resolve bounding parameter requirements set by the MDNRE and USACE by the end of the year (2010) [ACTION ITEM].

The implications for and impacts to the habitat for the eastern fox snake, which is closely identified with wetlands, have not been identified or discussed in the mitigation plan.

9. Vegetation in the vicinity of the Fermi 2 and 3 cooling towers "may experience salt deposition due to plume drift. As salinity levels increase, growth of intolerant plants declines, and yields are reduced. Some plant families tend to show either high or low limits of salt survival. Growth suppression is sometimes accompanied by leaf injury." ER Rev. 1 March 2010 ¶ 5.3.3.2.1, p. 5-50.

With the formal acknowledgment of the fox snake's presence on the Fermi site, the possible implications for its habitat from salt depositions as a consequence of treatment to retard plume drift are neither mentioned nor discussed in the ER or lately-submitted mitigation plan.


Although the Holtec dry storage casks to be used at Fermi 2's Independent Spent Fuel Storage Installation (ISFSI) are designed to cool the wastes within, it is at a temperature of several hundred degrees F. (as opposed to 100 degrees F. in indoor storage pools), which is permitted by NRC regulations and the casks' technical specifications. This heat level would raise the temperature of the casks as well as the concrete pad on which they sit, serving to attract reptiles such as Eastern Fox Snakes. Any eastern fox snakes attracted to warm themselves near irradiated nuclear fuel dry casks
would also be exposed to the radioactivity emanating from them. NRC regulations allow for 10 millirem per hour dose rates at a distance of 2 meters (6 feet) from a dry cask; this is about one human chest x-ray per hour worth of gamma ray exposure. NRC allows for 200 mrem/hour dose rates at the cask's outer surface, or 20 chest x-rays per hour. Such radiation doses to the small body mass of an eastern fox snake would have not only physical impacts on that individual snake, but also on its genetic material, which could cause harm to future generations. Genetic damage to endangered and threatened species further risks its future extinction.

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CERTIFICATE OF SERVICE

I hereby certify that copies of “Intervenors’ Opposition to ‘Motion for Summary Disposition of Contention 8’” and “Statement of Facts Demonstrating Issues of Material Fact, in Support of Intervenors’ Opposition” have been served on the following persons via Electronic Information Exchange this 6th day of December, 2010:

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