

## Fermi3CEM Resource

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**From:** mkeeganj@comcast.net  
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**To:** Fermi3COLEIS Resource  
**Cc:** mkeeganj  
**Subject:** Proposed Fermi 3 Comments to DEIS: Docket ID NRC-2008-0566

### Docket ID NRC-2008-0566

Draft Environmental Impact  
Statement for Combined License (COL)  
for Enrico Fermi Unit 3  
report number: NUREG-2105

Comments of Intervenors in the Fermi 3 Combined Operating License Application  
Presented by  
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January 11, 2012

### Water Intake and Drinking Water Quality - Inadequate Consideration and Omissions

Independent Audited Radiation Monitors are needed to protect the public from radiation exposure. Additional equipment for detecting other persistent toxic chemical contamination allowed under the Fermi 3 NDPEs permits must be provided to the City of Monroe. Adequate financial resources must be provided to City by DTE to install such equipment.

The monitoring must be established in a transparent manner and capable of audit. DTE must not be contracted, sub-contracted, to operate, maintain, or calibrate the instrumentation. To do so is a direct conflict of interest in protecting Monroe residents and residents from other communities.

Financial resources should be provided to the City to higher staff to operate, maintain, and calibrate equipment and then to provide reports for public consumption.

The Communities of Toledo, Luna Pier, in Downriver, Amherstburg, and Windsor Ontario must be consulted and provided equipment to protect their water supply as well. This monitoring should be set up with 'Real Time' and remote data access. Radiation Monitor system onto water intake that can be read in real time and by remote access.

Currently DTE is doing the maintenance on the City Water Intake. The calibration is not independent. There can be no appearance of a vested interest in low balling radiation reports.

Independent Methodologies for Radiation Monitoring equipment must be transparent. In 1986 through citizen initiatives, DTE was required to place a radiation monitoring system onto the City water intake, at the City's request. Real time monitoring with independent verification provided in the public domain, with remote reading and observation is needed.

In the DEIS and in the Environmental Report there is a failure to analyze the impact of the addition of decomposing dead aquatic life that would be returned to Lake Erie. The aquatic life is caught on screens, and then returned to the lake. This is the equivalent of fertilizing the water in the lake. No environmental impact has been provided for this addition of nutrients to the lake and the surrounding shoreline. (Please see page 3-11 and ch. 7 Cumulative Impacts DEIS Fermi 3.) This certainly will have negative impact on quality of drinking water. This is an omission of the DEIS and Environmental Report and must be addressed.

The water intake station jointly owned by Monroe City and Frenchtown Township withdraws water from Lake Erie and supplies water to these communities. Fermi 3 is also planning to receive water for plant potable needs from the Frenchtown Township Water Treatment Plant which receives water from this intake.

The impacts of planned discharges from Fermi 3 on water quality within Lake Erie is discussed in EIS section 5.2.3.1 (beginning on page 5-10). Normal operational discharges are required to be within effluent limits specified by the NPDES permit with MDEQ for Fermi 3. This permit covers CWA Section 316(a) and limits are set to protect the public and the environment. Regular testing is required to verify compliance with these limits. The radiological impacts of normal operation were also analyzed and discussed in Section 5.9 of the EIS.

In this analysis the pathway causing the highest potential calculated dose to residents was determined. One of the scenarios evaluated was the ingestion of drinking water. Protection of the public is also the primary focus of the NRC safety review, under the 10 CFR Part 52 review process. Impacts to drinking water and members of the public due to the accidental release of radiological effluents are evaluated in the Final Safety Analysis Report (or FSAR) Section 2.4.13.

In this analysis NRC staff considers the release of the highest potential concentration from the liquid waste management system and flow to the nearest potential water user using conservative site-specific parameters (dilution, velocity, sorption, etc.). According to the schedule on the NRC public website, this document should be ready for review by 9/12 (contact the Project Manager Adrian Muniz with questions (301) 415-4093).

It is precisely because there is the potential for radioactive effluents through planned releases as under licensing conditions referred to as 'Permissible Allowable Levels' and accidental releases that Independent Monitoring as described above is essential.

Below is a letter from the City of Monroe Water System speaking to the concerns and potential for damage to the City Water Intake and overall quality of water. We adopt those concerns as ours Intervenors as well.

### Fermi3CEm Resource

From: Laroy, Barry [[barry.laroy@monroemi.gov](mailto:barry.laroy@monroemi.gov)]

**Sent:** Sunday, December 11, 2011 8:16 PM

**To:** Fermi3COLEIS Resource

**Cc:** Knight, Christopher; Brown, George

**Subject:** Fermi 3 Project Comments

To Whom it May Concern:

The City of Monroe Water System is generally in favor of the overall Fermi 3 project. The City of Monroe is located adjacent to Frenchtown Charter Township such that the City & Frenchtown co-own a raw water facility (Raw Water Partnership) used to serve potable water to their respective retail and wholesale customers. The City of Monroe maintains the raw water facility for the partnership were Lake Erie is the raw water source. Between both water systems, approximately 75,000 people are served potable water. The City of Monroe and Raw Water Partnership are in receipt of the correspondence for the proposed Fermi 3 Project.

The project will aid in employment opportunities and retail revenue for Monroe County. We have reviewed the proposed plans such that concerns with the construction project will likely produce soil erosion and may increase sediment transport into Lake Erie. Lake Erie is the source of both water systems and due to the site work proximity to the intakes used to draw raw water from the lake, we are concerned that a decrease in raw water quality may result from the project conversely increasing water treatment plant costs to treat the water to safe drinking water standards.

Also, details on the Fermi 3 containment system to be used are not available. Any potential radioactive leakage from the containment system into the lake is not desirable due to the amount of customers served by both water systems and limited raw water sources. The partnership currently has a DTE provided & maintained radioactive metering system used

to detect any radioactive raw water while being drawn in via intakes such that it is desired that the system continue to be maintained and or upgraded with the project with newer technology to allow both water systems adequate time to change raw water sources or alternatives in the event of a catastrophic event.

Thank you for the opportunity to offer our comments.

Barry S. LaRoy, P.E.

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In addition Section 5.221 Line 1 after line 16 states that the Great Lakes Compact of 2008 requires that any new water use of more than 5 MGD be subjected to a regional review, So Fermi 3 would be subject to such a review by the other Great Lakes States and provinces. While this statement is correct, the State of Michigan has also adopted a water withdrawal model that should be part of this review.

In addition there is a 2011 report by Limnotech that shows the algae in the area of where Fermi 3 is to be built which is not reported or discussed in the EIS.

NOAA MODIS satellite imagery available for Lake Erie in 2011 shows massive algal blooms along the Monroe shoreline from July through October. Researchers say that the Lake Erie 2011 algal bloom was the largest ever recorded. Detroit Edison in their EIS depicted Lake Erie as being healthier and thriving when in fact the water quality and types of aquatic habitat it can support are declining. USEPA, Ohio EPA and others can verify the growing algae problem in Lake Erie. The Fermi Three plant will heat an estimated additional 4% of the water in western Lake Erie which will contribute to undesirable toxic algae growth which is a threat to human health and the environment. Contribution to algae growth and degradation to the fish population from the additional algae was not evaluated in the EIS.

Because of thermal plume from Fermi 3 discharges there is higher potential for more intense Algae Blooms. Including the Lyngbia Wollei which is a toxic blue-green algae.

The Water Intake for the City of Monroe is at the end of Pointe aux Pouix road. This is approximately (air) 1/4 mile south of the Fermi 2. Fermi 3 is north of Fermi 2 and that is where water out-take / discharge for the Fermi will occur. There is direct and indirect potential for the thermal zone to impact the water intake.

It is noted in the DEIS that the permissible "mixing zone" will be determined by state of Michigan agencies MDEQ/DNRE and has not yet been decided (p 523 of the DEIS pdf). Estimates of plume range of up to approximately 1.3 surface acres, reported as 300 ft in length.

The Michigan DEQ does not permit mixing zones in locations where there is long-term (chronic) human exposure, such as wading beaches or drinking water intakes.

<http://www.deq.state.or.us/wq/wqpermit/mixingzones.htm>

Elsewhere in the DEIS, Section 5.2.3.1 discusses the mixing zone/thermal plume as be about 55,000 square feet. This conflicts with a recent mixing zone/thermal study conducted by BP (British Petroleum) for the Ohio EPA in Maumee Bay in approximately eight feet of water which is near equivalent as the reported Fermi 3's estimated depth. That study documented that the plume extended in some cases over one mile – significantly more than the Detroit Edison information suggests, this is odd, since it appears from same research and that the same model was used. NRC should review the BP thermal report recently completed which includes analysis of fish kills and determine why there are such discrepancies in the mixing zone calculations. Section 5.2.2.1 line 6 page 5-9 talks about the water quantity withdrawal impacts when considering the Monroe/Frenchtown water intake. There is no discussion of the impact on

the water intake from the discharged waters of Fermi 3 – both from water quality changes and from temperature changes. The State of Oregon bans drinking water intakes from being in a mixing zone. Given the shallow nature of the water – estimated at 8.5’, it is imperative that the EIS include an analysis of impacts on the Monroe drinking water intake for the public health. Once again the Michigan DEA does not permit mixing zones in locations where there is long-term (chronic) human exposure, such as wading beaches or drinking water intakes. <http://www.deq.state.or.us/wq/wqpermit/mixingzones.htm>

This 'Water Intake' excerpt is from page 729 line 16 of the DEIS.

As described in Section 5.2.2.1 ...'There are also two water intakes on Lake Erie and in the vicinity of the Fermi site for public water supply: the Frenchtown Water Plant, which uses 8 million gallons per day (MGD), and the Monroe County Water Plant, which uses 7.5 MGD (Frenchtown Charter Township 2010; AWWA 2009). The impacts of these two water plants and the other projects listed in Table 7-1 are considered in the analysis in Sections 4.2 and 5.2 and would not be detectable or would be so minor that they would not affect surface water use.' There are also two water intakes on Lake Erie and in the vicinity of the Fermi site for public water supply: the Frenchtown Water Plant, which uses 8 million gallons per day (MGD), and the Monroe County Water Plant, which uses 7.5 MGD (Frenchtown Charter Township 2010; AWWA 2009). The impacts of these two water plants and the other projects listed in Table 7-1 are considered in the analysis in Sections 4.2 and 5.2 and would not be detectable or would be so minor that they would not affect surface water use.

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<http://www.deq.state.or.us/wq/wqpermit/mixingzones.htm>

Below is the table of contents on the DEIS for Radiological Impacts. It is precisely because the operation of a nuclear power plant allows for the routine effluents of gaseous, liquid and solid radionuclides below 'permissible allowable levels' and during routine operation, and during accidental discharges, that Independent Monitoring is needed.

The DEIS and the Environmental Report have omitted a great deal in the consideration of Water Intake and Safe Drinking Water. What has been provided is a tertiary overview which does not address the gravity of the situation.

5.9 Radiological Impacts of Normal Operations .....	5-104
5.9.1 Exposure Pathways .....	5-105
5.9.2 Radiation Doses to Members of the Public .....	5-107
5.9.2.1 Liquid Effluent Pathway .....	5-107
5.9.2.2 Gaseous Effluent Pathway .....	5-109
5.9.3 Impacts on Members of the Public .....	5-111
5.9.3.1 Maximally Exposed Individual .....	5-111
5.9.3.2 Population Dose .....	5-112
5.9.3.3 Summary of Radiological Impacts on Members of the Public .....	5-113
5.9.4 Occupational Doses to Workers.....	5-113
5.9.5 Impacts on Biota Other Than Humans .....	5-114
5.9.5.1 Liquid Effluent Pathway .....	5-114
5.9.5.2 Gaseous Effluent Pathway .....	5-115

5.9.5.3 Impact on Biota Other Than Humans .....	5-115
5.9.6 Radiological Monitoring .....	5-116
5.10 Nonradioactive Waste Impacts .....	5-117
10.1 Impacts on Land .....	5-118
5.10.2 Impacts on Water .....	5-118
5.10.3 Impacts on Air .....	5-119
5.10.4 Mixed Waste Impacts .....	5-119

Because...There are also two water intakes on Lake Erie and in the vicinity of the Fermi site for public water supply: the Frenchtown Water Plant, which uses 8 million gallons per day (MGD), and the Monroe County Water Plant, which uses 7.5 MGD (Frenchtown Charter Township 2010; AWWA 2009). The impacts of these two water plants and the other projects listed in Table 7-1 are considered in the analysis in Sections 4.2 and 5.2 and would not be detectable or would be so minor that they would not affect surface water use.

Because the chemical content of the water vapor emitted from the cooling towers is unknown, there is also a failure to analyze the environmental impact of the contents of the water vapor emitted from the cooling towers. The environmental impact cannot be assessed if the chemical content of the drift from the towers is unknown. The total dissolved solids in the drift water were assumed to be salt (see pages 5-18, 5-91, 5-138 of the Fermi 3 DEIS). Such an assumption does not constitute a science-based analysis of the actual conditions and completely fails to consider the impact of other chemicals in the drift, many of which could be far more environmentally destructive than salt and could appreciably contribute to the PM2.5 emissions from the cooling towers. On page 7-13 DEIS Fermi 3, there is a brief discussion of the industrial pollutants that are acknowledged to be in the waters of Lake Erie. However, the rest of the document assumes that these pollutants do not exist and does not address their potential environmental impact as cooling tower drift.

Because of the above, Independent Radiation Monitoring and Independent Chemical Monitoring of the City of Monroe Water Intake is needed. This holds true for other near by Water Intake Systems as well in Cities of Toledo, Luna Pier, Flat Rock, Down River, Amhersburg Ontario, Windsor Ontario.

As a result of an Turbine Missile Accident on Christmas day 1993 over 2 million gallons of water became contaminated and were eventually dumped into Lake Erie. In the past year the Fermi 2 has experienced a major leak where contaminated and radioactive water did make it into the Monroe Water Intake system.

Thank you for your review

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