Citizens' Resistance at Fermi Two

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DTE Files Fermi 2 NPDES #MI0037028 Renewal

DTE has filed a renewal application for Fermi 2's National Pollutant Discharge Elimination System (NPDES) permit, which allows the Fermi reactor to "…continually discharge a maximum of 45.1 million gallons per day (MGD) of cooling tower blowdown, processed radwaste wastewater, residual heat removal system service water, and treated chemical and nonchemical metal cleaning wastewater".

Water is life and we must do what we can to protect it, and Lake Erie is the one being harmed by legal dumping known as discharges. CRAFT will oppose this permit renewal and the changes it seeks, such as "The Company requests a waiver for submittal of analytical data for Outfalls 011 and 013."

If one stands on the lakefront at Monroe's Sterling State Park looking East, Fermi 2's Cooling towers are visible on the left/north side and DTE's coal burner on the right/south. Straight out in between those two outdated technology discharges is where algal blooms are jumpstarted with the cumulative impact of heated water.

Here is the State's response to our inquiry: "The NPDES permit expires October 1, 2022. The application was recently received and is currently going through application reviews. Effluent limitation development will be completed during the permit processing period between October 2022 through September 2023. Once completed, the draft permit will be placed on public notice for 30 days." Stay tuned and prepare to defend Lake Erie.

House Bill No. 6019 – Nuke Study

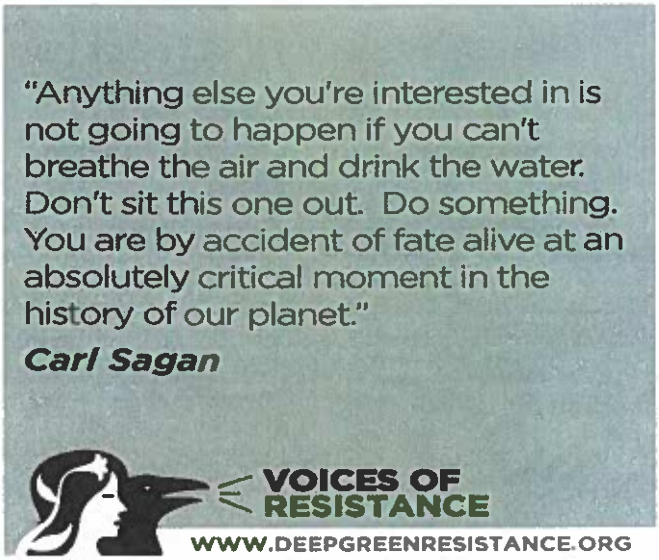
Michigan Rep. Joe Bellino is among twenty others (17 Republicans and 4 Democrats) sponsoring a bill in the Michigan House to study the issue of building another nuclear reactor in Michigan.

While it is presented as an amendment to a 1939 law, the bill reads like a DTE planning session, "The commission shall engage an outside consulting firm to conduct a feasibility study on nuclear energy generation in this state."

And we can only guess what they mean by, "potential acceleration or efficiencies and leveraging existing nuclear energy generation facilities within this state."

We are sure what they mean by asking that the study make, "Analysis of national international studies of cases where development of nuclear energy is supported and adopted." And "recommendation of current and future policies that may be needed to support or accelerate the adoption of nuclear energy generation…"

DTE is still pushing to build Fermi 3. Link to follow HB 6019 - there is icon upper right of menu to Comment. This will be Public Record, and we are trying to persuade Representatives. https://legiscan.com/MI/text/HB6019/2021
Link to HB 6019 language;
https://legiscan.com/MI/text/HB6019/id/2570068/Michigan-2021-HB6019-Introduced.html



MPSC - Stacking the Deck?

State regulators have hired a consulting firm with financial ties to both DTE and Consumers Energy to decide if Michigan should increase its use of Renewable Natural Gas (RNG), also called biogas.

RNG is being promoted by the gas industry saying it burns cleaner than fossil fuel natural gas, and they are pushing it as an alternative to wind, solar, and electrification. Critics disagree.

Last year, State Sen. Rick Outman introduced legislation requiring the Michigan Public Service Commission (MPSC) to do a RNG study, and they hired ICF. (Outman received $14,500 in campaign donations from DTE, Consumers, and Marathon).

ICF has at least five contracts with DTE and Consumers, and one company manager has served as an expert witness for DTE. ICF has previously done studies funded by DTE.

Natural gas (think fracking) currently generates about forty percent of the nation's electricity but burns with elevated levels of methane and carbon dioxide. Biogas is captured from landfills or manure on commercial farms.

Since the gas industry has spent - and earned - billions of dollars in natural gas pipelines, they are confident they can switch them over to biogas. But consumer and environmental groups say No!

A Georgia Institute of Technology study found "RNG is not inherently climate-friendly" because of methane leaks.

The California Energy Commission found wind and solar much cheaper than RNG, and they feared biogas would generate demand for landfill or farm waste which has its own set of environmental problems which is being noted in Michigan.

"Concentrated animal feeding operations (CAFOs) are chock-full of pathogens, microorganisms, and bacteria that are capable of causing human disease," said Cheryl Ruble, an infectious disease doctor in West Bloomfield, adding that RNG production would increase demand for animal waste when it should be reduced.

ICF held one public meeting in January, another will be held in June and their report is due in September.

FYI - In the News

= U.S. Representative Fred Upton (Republican-Michigan), in office for 35 years, long-serving chair of the powerful House Energy and Commerce Committee, and a leading pro-nuclear power advocate, has announced his retirement.

= The Utility Workers Union of America, AFL-CIO says DTE Energy is blocking progress on negotiating a first contract with a small unit of members that organized last year.

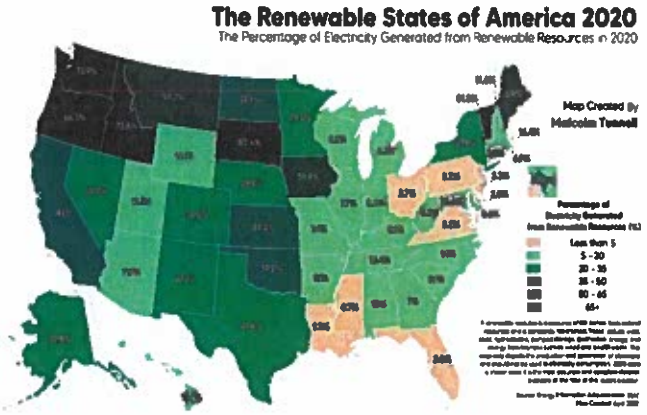
= State Reps. Abraham Aiyash and Yousef Rabhi, both Democrats, introduced legislation Wednesday that would tighten regulations on electrical utilities by penalizing them for power outages. House Bills 6043-6047 would require utilities to compensate customers for the costs of outages and would require regulators to hold evidentiary hearings on electrical distribution plans.

= In response to reporting by Outlier Media and ProPublica showing how DTE Energy disconnected electric accounts for nonpayment during the COVID-19 pandemic, the Detroit City Council is calling for the power company to enact a one-year pause on electricity and gas shut-offs.

= Michigan Gov. Gretchen Whitmer releases a statewide climate action plan that includes calls for a carbon-neutral target by 2050, electric vehicle incentives and clean energy job training. *(Bridge Michigan)*

= Michigan Governor Gretchen Whitmer announced she will apply to the Biden administration for a massive federal taxpayer-funded bailout, to prop up the economically failed and very dangerously age-degraded Palisades atomic reactor.

= Michigan's two major electric utilities that jointly own the Ludington Pumped Hydro Storage power plant along Lake Michigan claim the contractor hired for a $500 million upgrade of the facility has "delivered defective work" and is failing to meet contractual deadlines.



Fermi 1 Decommissioning Fund

"Fermi 1 is a permanently shut down experimental sodium cooled breeder reactor, which last operated in 1972," states this year's filing. "It is in SAFSTOR status and at a future date decommissioning will be continued for the purpose of removing the remaining residual radioactive material and terminating the Fermi 1 license."

DTE's filing also states that Fermi's "Total net worth is $8,705,000,000." Also, DTE spends $150,000 per year for SAFSTOR maintenance which they expect to continue for another nine years.

Fermi's License Event Report

Fermi automatically scrammed (shut down) on February 4th when it was at 57.9 % power and slowing down for the refueling outage. The report was filed showing that the scram was caused by low reactor water level.

Although a Root Cause Evaluation will not be conducted until after the completion of the refueling outage, but the report states, "the plant had known valve leak-by in the Feedwater system downstream of the Reactor Feed Pump."

The Corrective Actions that, "...valve that may have contributed to the Feedwater system's response is being cut out and replaced during the refueling outage."

Fermi's License Amendment 222

Fermi's operating license continues to be amended as the years go by, this amendment is the 222nd time and it deals with Technical Specifications and changes.

One thing we do not understand is the continued use of RIP, which we are sure has a meaning other than what we are used to, but the document does not make that apparent, it just keeps using it as: "Applicability: Thermal Power ≥ 25% RIP."

DTE Also Files Fermi 3 NPDES Permit Renewal

Although most people believe a Fermi 3 reactor will never be built, we will not believe that because DTE keeps all the licenses for its current. And after filing for the Fermi 2 Dumping renewal, DTE then filed for the Fermi 3 renewal.

Since there is no Fermi 3, all 163 pages of their application are moot. However, the start of the application is scary. "The withdrawal of cooling water removes and kills hundreds of billions of aquatic organisms from waters of the United States each year, including fish, shellfish, fish eggs, and larvae."

CRAFT Public Zoom Meeting

This is an invitation to attend a zoom meeting with the CRAFT Steering Committee Team on Thursday May 5th from 5:30-6:30 p.m. We are not yet having In-Person meetings, but zoom is good. Here is the link for the meeting: https://us02web.zoom.us/j/6559569802?pwd=ajM vRE5TNmVJaW1iWlRJalV2dnhZdz09

April Fermi Documents Received

= **ML22090A097.** Fermi 1 Decommissioning Funding Status. See article, page 2.
https://adamswebsearch2.nrc.gov/webSearch2/main.jsp?AccessionNumber=ML22090A097

= **ML22090A144.** Request for more information about renewable materials license # 21-02335-09.
https://adamswebsearch2.nrc.gov/webSearch2/main.jsp?AccessionNumber=ML22090A144

= **ML22096A267.** Request for Information regarding Baseline Inspection planned for August.

https://adamswebsearch2.nrc.gov/webSearch2/main.jsp?AccessionNumber=ML22096A267
= **ML22094A212.** DTE's application to renew Fermi 2's NPDES.
https://adamswebsearch2.nrc.gov/webSearch2/main.jsp?AccessionNumber=ML22094A212
= **ML21335A280.** Issuance of License Amendment 222. See article, page 3.
https://adamswebsearch2.nrc.gov/webSearch2/main.jsp?AccessionNumber=ML21335A280
= **ML22101A047.** Fermi 3 NPDES permit renewal application. See article, page 3.
https://adamswebsearch2.nrc.gov/webSearch2/main.jsp?AccessionNumber=ML22101A047
= **ML22094A155.** License Event Report 2022-001. See article, page 3.
https://adamswebsearch2.nrc.gov/webSearch2/main.jsp?AccessionNumber=ML22094A155
= **ML2212A054.** Zip File containing reissuance of license for a source material. ML22112A041, ML22112A020, MLL22090A144, ML22061A033
https://adamswebsearch2.nrc.gov/webSearch2/main.jsp?AccessionNumber=ML22112A054
= **ML22116A041**. NRC's In-Person Meeting.
https://adamswebsearch2.nrc.gov/webSearch2/main.jsp?AccessionNumber=ML22116A041

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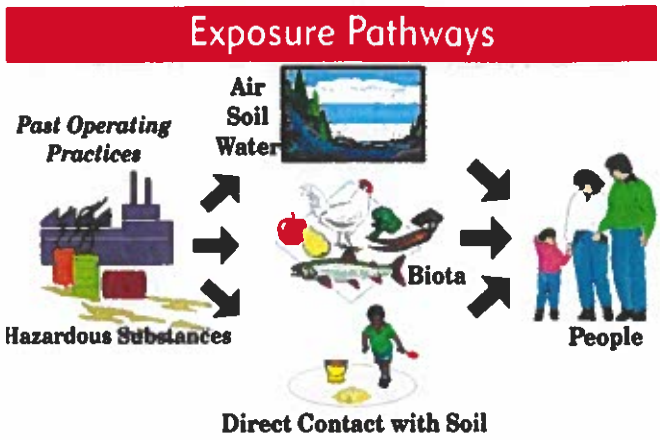

NRC In-Person Public Meeting

The Nuclear Regulatory Commission will host an Open House to meet with the public and share information about the Fermi nuclear reactor.

This in-person event will be held at the Monroe County Court House, 125 Ease Second Street, Monroe, MI 48161. The date is Monday, May 16th, from 6 to 7 p.m.

Tooth Fairy Project

Do you want to help with a scientific study? You do not need to be a scientist - all you need to do is donate a missing baby tooth from your child!!!! The Radiation and Public Health Project (RPHP) research group is asking for donations of baby teeth from children living near the Fermi nuclear reactor.

Please see www.radiation.org, or contact Joe Mangano at odiejoe@aol.com for more about this groundbreaking study.

National Radioactive Waste Coalition
Opposes Consolidated Interim Storage (CIS)

and determines that keeping radioactive waste on-site is the least risky option.
The waste should be transported only once - from the reactor sites to an
environmentally just and scientifically sound site for permanent isolation.

Over 80,000 metric tons of radioactive waste have piled up at nuclear power plants across the United States, and there is still no responsible solution for storing and isolating this waste for the next million years.

The intent of CIS facilities is to transport and temporarily store high level radioactive waste from across the country. At some point in the future, the plan is to move this waste a second time to a currently non-existent permanent repository. The nuclear industry's plan poses a real threat for all of us.

- **CIS is unjust and immoral; it violates the principles of environmental justice.**
  Environmental justice is the concept that major polluting projects should not have a disproportionate impact on people of color and working poor communities. Too often, nuclear waste dumps, toxic incinerators, nuclear reactors, and other such facilities are located in communities with few resources and little political clout. Too often, the communities targeted are working poor, people of color, and Indigenous Peoples.

Presently there are two proposed facilities - Southwestern Texas: Andrews County (Interim Storage Partners/ Waste Control Specialists) and Southeastern New Mexico: Lea County (Holtec International). Both proposed sites are in working poor Hispanic communities. Neither New Mexico nor Texas consent to the proposed CIS facilities in their communities. These proposals are clear examples of environmental racism.

- **Transporting irradiated nuclear waste by rail, truck, and barge is dangerous.** If CIS is implemented, it would involve a decades-long process of transporting over 100,000 shipments of nuclear waste through 44 states and the District of Columbia.

- The waste would go through major cities including Atlanta, Chicago, Houston, St. Louis, and the Los Angeles and San Diego areas. Most shipments would travel over 1,000 miles, risking the health and safety of communities along the way.
- Despite heavy shielding, the transportation casks constantly emit some radiation which would expose drivers, crew, and anyone nearby, and increase the incidents of cancers and other health problems.
- Our infrastructure isn't prepared to handle thousands of shipments without risk of derailments, bridge collapses, traffic accidents, and contamination of waterways.
- An accident or attack on a nuclear waste shipment could release large amounts of radiation, causing the affected area to be uninhabitable for decades, exposing the community to nuclear contamination and costing billions of dollars in damages and cleanup.

- **CIS is illegal.** Congress amended the Nuclear Waste Policy Act in 1987. It states that no interim storage is permitted unless and until a permanent repository has been identified and approved by Congress. The nuclear industry is attempting to circumvent the law by seeking congressional approval for CIS.

radioactivewastecoalition.org

Nuclear energy is NOT a climate solution.

Fact #1: Nuclear energy has a large carbon footprint.

- Uranium mining, milling, plant construction, fuel enrichment, waste storage are energy intensive.
- Decommissioning is a carbon-intensive process as equipment and buildings are dismantled and transported to disposal sites over a period of 60 years or longer.

Fact #2: Nuclear energy is not clean. It is toxic and dangerous.

- Radiation is routinely released into the air and water as part of operations.
- Accidents happen: Three Mile Island. Chernobyl. Fukushima.
- There is no safe, just, permanent solution for the isolation of over 80,000 metric tons of high-level radioactive waste for the million years that it will remain lethal.
- Nuclear facilities are vulnerable targets of terrorism.

Fact #3: Nuclear energy is not reliable in a climate disrupted world; its demands on water are not compatible with a warming planet.

- Under global warming conditions, water is fast becoming a precious commodity. Reactors consume billions of gallons of water daily and return heated water which undermines our waterways and destroys aquatic life.
- During droughts and heatwaves, the warmer water requires nuclear plants to power down or even shut down altogether.
- Water levels are rising. Many of the nuclear plants located along waterways will eventually become submerged, making the plants inoperable and the stored radioactive waste even more vulnerable.

Fact #4: Nuclear energy is too expensive.

- Nuclear energy is at least three times as expensive to produce as solar or wind, and the price of renewables continues to drop while the cost for nuclear continues to rise.
- The nuclear industry is able to survive only because of huge tax-payer subsidies.

Fact #5: Nuclear energy impedes the development of renewable energy sources.

- An efficient, responsive, and flexible grid is required to respond to energy demands. Nuclear cannot adapt to changing demands.
- The nuclear industry draws needed resources away from renewable energy expansion.

Fact #6: Given the climate crisis, we can't wait.

- We need to move rapidly to an efficient, low-cost, sustainable energy system.
- Nuclear takes 10-20 years to complete. Solar and wind projects take just 2 to 5 years to come online.

National Radioactive Waste Coalition
radioactivewastecoalition.org

Dear Michigan House Energy Committee,
Take these written comments in opposition to MIHB6019, as well as my testimony in opposition and all submitted documents.

When it comes to the future of Michigan we must think of the safety and future of the Great Lakes in every move we make. Our contributions to its maintenance, renewal, and living safety are priceless. **We must craft a future full of renewable and alternative energies free from radioactive waste.**

Nuclear energy is not clean or carbon-free. The nuclear fuel chain is responsible for carbon emissions during mining, milling, enriching, construction, transportation, and decommissioning. Nuclear energy generates pollution with well-documented negative health impacts in nearby communities, including cancer, and creates the risk of a nuclear disaster in Michigan on the scale of Chernobyl or Fukushima. Uranium mines, nuclear waste dumps, toxic incinerators, atomic reactors, and other such facilities typically are located where there is cheap land, cheap facilities, and little organized opposition. Too often, this has been in Black, Indigenous, People of Color, and low-wealth communities who have felt powerless to oppose corporate giants.

We need safe, pollution-free energy. We can do better than 50% resolution of renewables by 2030 - not more highly radioactive waste on our great lakes shores, we can do more, faster. **Renewable is doable.**

The process, including any in regard to such as MIHB6019, must be inclusive of frontline peoples and solutions, as well as keep in heart and mind the wellbeing of all creatures and elements we impact. The plan must have community voices, solutions, and demands implemented as a part of any facility/energy system siting process. Environmental Justice, poor working class, and already impacted communities must have first and last word. This cannot be left up to a shadow firm who may or may not have michigan and our responsibility to the great lakes in mind.

Any study should have community involvement and implementation lead by affected and frontline communities.

I oppose HB 6019. The Legislature is proposing to pass a bill to hire an unknown consultant to write a report with the pre-ordained conclusion that more nuclear plants should be built. The unknown consultant will be paid an open-ended and therefore unknown sum, from an unknown budget and the manipulated conclusion will be cited as some sort of authority and will be used to justify wasting untold millions of taxpayer and ratepayer dollars for new reactor technologies that have not yet been developed and cannot be available in time to try to mitigate the dramatic effects of climate chaos that are racing toward us.
Please vote "no."

Thank You,
Concerned Community member, citizen, family member, community organizer and speaker on behalf of Citizens Resistance At Fermi Two (CRAFT)

Things we flag in relation to this bill,

1)This is a two year stall tactic at a time when action is needed on known solutions like renewable energy, battery storage and other grid upgrades. In the 2 years of this study we could build out how many MW of solar energy can we build out while the nuclear energy stalls for time to keep grips in their profit share of the grid.

2)This outline represents a myopic view of an energy study, designed to reach a predetermined solution to a problem that doesn't exist. There are no calls for comparative analysis that include known renewable solutions.

3)Environmental Justice must be its own preeminent concern, primary focus and not a secondary subsection as it is presented in the bill. Uranium mines, nuclear waste dumps, toxic incinerators, atomic reactors, and other such facilities typically are located where there is cheap land, cheap facilities, and little organized opposition. Too often, this has been in Black, Indigenous, People of Color, and low-wealth communities who have felt powerless to oppose corporate giants.

4) We already know it is dirty, slow, expensive and harmful to people, land, water, and beings all along the fuel chain.Nuclear energy is not clean or carbon-free**. The nuclear fuel chain is responsible for carbon emissions during mining, milling, enriching, construction, transportation, and decommissioning. Nuclear energy generates pollution with well-documented** negative health impacts in nearby communities**.**

5) this bill in section 2f contains language that would introduce harmful technologies known as false solutions that will continue to impact climate issues and humans negatively. It is an attempt to greenwash nuclear energy by unholy pairing with dangerous demand mitigation strategies that would enable a renewable driven baseload capacity. An act of historical revisionism by the nuclear industry to create the answers they need to justify using the people, land, waters, and beings guinea pigs to perpetuate antiquated nuclear technologies, even passing some design off as new.

We only need to use these things green hydrogen(solar) storage paired with solar technology in the studys and in real life as opposed to grey hydrogen(nuclear) technologies. You don't need an evacuation plan for a solar panel.

We at CRAFT find the push to pair hydrogen and energy storage with Nuclear to be an act of the utmost hypocrisy. Available renewable solutions have long been sandbagged with false claims that energy storage is not feasible. Nuclear has been falsely hailed as worth the risk and expense because it is a reliable baseload source that does not require storage. It is pairing the dirtiest form of energy production with the very demand mitigation strategies that negate false claims of it's necessity.

Dear Michigan House Energy Committee,
Take these written comments in opposition to MIHB6019, as well as my testimony in opposition and all submitted documents.

Below are things that can easily be found in many publications that are both for and against nuclear power.

1. Every nuclear power reactor dumps radioactive water, scatters radioactive particles, and disperses radioactive gasses as part of its routine, everyday operation. It doesn't take an accident. Federal regulations permit these radioactive releases.

2. Radioactivity is measured in curies. An average operating nuclear power reactor will have about 16 billion curies in its reactor core. This is the equivalent long-lived radioactivity of at least 1,000 Hiroshima bombs. In contrast, a large medical center, with as many as 1,000 approved laboratory areas in which radioactive materials are used, may have a combined inventory of only about two curies.

3. Many of a reactor's byproducts give off radioactive particles and rays for enormously long periods --- described in terms of "half-lives." For example, iodine-129 has a half-life of about 16 million years; technetium-99 = 211,000 years; and plutonium-239 = 24,000 years. Xenon-135, a noble gas, decays into cesium-135, an isotope with a 2.3 million-year half-life. Radioactive materials give off hazardous radioactivity for at least ten half-lives.

4. A reactor's fuel rods, pipes, tanks and valves can leak. Mechanical failure and Human error can also cause leaks. As a nuclear plant ages, so does its equipment --- and leaks generally increase.

5. Liquid releases:

   a. Some contaminated water is intentionally removed from the reactor's cooling system to reduce the amount of radioactive and corrosive chemicals that damage valves and pipes. This water is filtered and then either recycled back into the cooling system or released into the environment.

   b. A typical 1000-megawatt pressurized water reactor (with a cooling tower) takes in about 20,000 gallons of river, lake or ocean water per minute for cooling; circulates it through a 50-mile maze of pipes; returns about 5,000 gallons per minute to the same body of water; and releases the remainder to the atmosphere as vapor. A similar reactor without a cooling tower can take in as much as one-half million gallons per minute. The discharge water is contaminated with radioactive isotopes in amounts that are not precisely tracked and are potentially biologically damaging.

   c. Government regulations allow radioactive water containing "permissible" levels of contaminants to be released to the environment. Permissible does not mean safe.

Detectors at reactors are set to allow radioactive water to be released, unfiltered, if below the "permissible" legal levels.

6. Gaseous releases:
Some radioactive gasses, stripped from the reactor cooling water, are retained in decay tanks for days before being released into the atmosphere through filtered roof top vents. Some gasses leak into the power plant buildings' interiors and are released during periodic "purges" or "ventings." These airborne gasses contaminate not only the air, but also fall out upon soil and water.

7. Radioactive releases from a nuclear power reactor's routine operation often are not fully detected or reported. Accidental releases also cannot be completely verified or documented.

8. Economically feasible filtering technologies do not exist for some major reactor byproducts, such as radioactive hydrogen (tritium) and noble gasses, such as krypton (that becomes rubidium, and then strontium) and xenon (that becomes cesium). Some liquids and gasses are retained temporarily in tanks so that the shorter-lived radioactive materials can break down before the batch is released to the environment.

9. The Nuclear Regulatory Commission relies upon self-reporting and computer modeling by each reactor's operator in an attempt to track radioactive releases and their projected dispersion. A significant portion of the environmental monitoring data is extrapolated — it's virtual, not real.

10. Any exposure to radiation increases the risk of damage to tissues, cells, DNA and other vital molecules, potentially causing genetic mutations, cancers, leukemias, birth defects, and reproductive, cardiovascular, endocrine, and immune system disorders

Thank You,
Concerned Community member, citizen, family member, community organizer and speaker on behalf of Citizens Resistance At Fermi Two (CRAFT)