

The People's Hearing on Davis-Besse Relicensing

The following comments were recorded on December 18, 2010 at St. Mark's Episcopal Church, 2272 Collingwood Blvd., Toledo, Ohio. They are hereby submitted to the Nuclear Regulatory Commission as Public Comments as part of the Scoping Process for the Environmental Impact Statement submitted by First Energy Nuclear Operating Company as part of its Application for operating its Davis-Besse Nuclear Power Station, Unit 1 for an Additional 20-Year Period.

[Docket No. 50-346; NRC-2010-0298]

Speaker	Start	Finish
Anita Rios/ Joe DeMare	00:30	4:20
Anita Rios	4:23	13:40
Kevin Kamps	13:53	33:11
Al Compaan	35:03	57:20
Katie Hoepfl	58:00	1:05:00
Tony Szilagye	1:06:30	1:15:25
Ed McArdle	1:16:08	1:26:13
Phyllis Oster	1:28:04	1:31:15
David Ellison	1:31:42	1:41:00
Michael Keegan	1:41:30	1:53:30
Ralph Semrock	1:54:00	2:02:00
Mike Leonardi	2:02:30	2:09:14
Joe DeMare	2:09:30	2:15:14
Kevin Kamps	2:15:15	

Ms. Rios

...and an activist here in Toledo area and, um. Joe DeMare and myself are going to do our best to facilitate this meeting, make sure things will

go smoothly and make sure that everybody who wishes to speak can speak.

We are trying to record these proceedings because it is very important that our audio be very clear...um...so that the NRC doesn't have any excuses..[shhhhhh]...Thank you...um, and I would say I know there's going to be a lot of, um, um. communing and a lot of people sharing information so if you...if you feel like you need to do that, you can always step into the hallway because it is very important that the quality of the sound be absolutely as good as we can get it because we don't want to give the NRC any excuse for discounting this testimony.

Um, I don't know if any of you are, um, aware, but they...they have said that they have never taken video testimony before so this is unprecedented, and with the kind of hoops that they have been making us jump through in order just to have a voice in this process, I think it's probably inevitable that they will try to discount these proceedings. So, for that reason, we are trying to record as...as, um, best as we can with the equipment that we have so let's all be very patient with each other. I'm going to, um, give the mike over to Joe.

Mr. DeMare

OK, thanks, so, uh, if you're one of the scheduled speakers, this is the microphone, this little one here, this is the one that's, uh, actually making the recording for the NRC. So this, this one is for our benefit, so you need to...you need to hit both. So just, uh, a little bit of...imagine it's paparazzi, and, uh, you know, a crowd of reporters that really want to hear it.

So, um, I'd like to welcome you all. Uh, my name is Joe DeMare and I spoke at the official NRC hearing on November 4. And I have to tell you, it was a, uh, a rather disappointing experience, because almost everyone there was either employed by Davis-Besse or they were from an organization that received money from Davis-Besse. And I, I know

that there are many people, thousands of people, in the Northwest Ohio area, that don't want this license renewed and think it's an insane gamble with our health and safety to run this plant for another 20 years. And though...I felt at that time, those people should be at this hearing, but most people didn't even know it happened. It went by before people could get their thoughts together. And so we asked the NRC to hold another one here in Toledo, they refused, but we have decided to hold our own and that's what this is..that's what.this is about.

So, uh, we have a lot of very educated, very well-informed speakers. And we have people that are just plain citizens that, uh, but I think most of the people that we've scheduled to speak...feel that Davis-Besse should not be renewed. Uh, we have opened this up to the public and if anyone here wants to, to speak that hasn't been asked to already, you just need to sign up, there's a little sheet outside, I'll ask you to sign.

And, I think, we're going to learn, we're all going to learn a lot here. I've already learned a lot about Davis-Besse that I didn't know just talking to people as we all organized this. And I just want to publicly thank both the Green Party and the Sierra Club of Ohio, because without them this event would not have been put together. And, uh, and, of course, Beyond Nuclear with Kevin Kamps, and Coalition for a, a Nuclear-Free Great Lakes, and, uh... Am I missing any organization... I think, that's all the organizations, and all the individuals that have come here to, to work on this. So thank you very much, and, uh, let's get started with, uh, Anita, who's going to give a few words. Anita?

Ms. Rios

OK, so, um, a couple of things, a little bit of background about myself and, and, um, just to...put my comments in context. Sorry, I was just forgetting the first thing. Um, just to put my comments in context, um, I was born about 5 miles from here. I live about a mile from here, and, um, a couple years ago, I googled, you know now that we have computers and we can figure things out so easily, how far Davis-Besse

was from me. And Davis-Besse is about 20 miles from here. And, um, I...I have been opposed to nuclear power for a very long time. But as I was thinking about, um, what we are doing here today and, um, what I wanted to talk about today, it kept, um, coming back to me that I think that even if I was in favor of nuclear power, this is still a nuclear power plant that I would want shut down.

It has had numerous problems, and the other thing that kept occurring to me is, in the context of the, um, the, um, financial meltdown that, um, so many of our government entities were, if not having a hand in at least complicit in not, um, in the fact that they did not follow through in the type of vigilance that they were supposed to, um, be making, to keep unscrupulous individuals from gutting our economic system. And we saw what happened with the SEC, we saw what happened with the banking system, and the mortgage loan system, and that was truly a, a, a financial meltdown.

Now we're looking at what the NRC is doing in, in its laughable oversight of all the nuclear power plants but Davis-Besse in particular. And it occurs to me that, that...the NRC is a rogue agency and just as the, as the, SEC failed us, failed us, the citizens that it should be, um, watching out for, that is our goals, that is our tool, that is the thing that, the entity that we have put in place through our government to make sure that everybody plays by the rules. And that is what the, um, Nuclear Regulatory Commission is as well. However, it is failing to do that, it has, it has absolutely failed to do that. And what it has done in reference to Davis-Besse and the numerous problems that we have seen is, at Davis-Besse, demonstrates that very clearly.

So, um, as, as I consider my comments, as I consider my motivations for being here today, and, that they're, they're all motivations of an activist, an activist who, who cares about this community, who is a life-long Toledoan, who has raised my children in this community. My children went to pre-school in this church, and, um, they're grown now. But everytime I think about that, and I think about the proximity of that

nuclear power plant, and what it would have done to my children and everybody else's children, there's a certain sense of outrage. And, um, I, I absolutely refuse to feel helpless about this. I think that we, we must speak out.

This is the beginning. Certainly, we don't have enough people in this room. We never do when we try to do something like this. We fit it in between all of the things that we do as, as mothers, as fathers, as, as parts of families, as parts of communities, we fit it in with our jobs, and we are determined to make a change. So as we approach that process here, in, in making comments, that the Nuclear Regulatory Commission will do their utmost to ignore, as, as we approach this process, we have to understand that this is the beginning of the process. This is the beginning of the process of us as citizens, and I believe that "We the People" is one of the most powerful statements that anybody can make. And "We the People" embodies our democracy, so "We the People" will be the ones who will have to challenge not only Davis-Besse but the NRC.

And what I hope that comes out today is: 1) how dangerous that nuclear power plant is; and 2) how lax the NRC is in its oversight of that, that nuclear power plant. And as I said, I believe that the NRC is a rogue agency. And I think that one of the, the most crucial next steps that each of us must take is to put pressure on all of our elected officials to take a stand on, on this issue, and not just about the relicensing of this nuclear power plant, but on the, the way that the NRC has simply failed, it has simply failed to, to live up to, um, to live up to what it must do in order to keep us safe.

So, um, a couple of things about Davis-Besse. Um, we, we all remember when it, um, when it corroded to the point where it, um, almost sprang a hole in the nuclear vessel head. And what happened in response to that, um, was that, the first step was they held hearings, they had open hearings.

I attended most of those hearings. Um, they're usually held out in, in Oak Harbour. And certainly anybody who, who depends on public transportation cannot go out there. But I attended all of those hearings. And I recall hearing over and over and over again from, um, FirstEnergy in response to how did this happen and what would they do in response, their, in response to future problems. Their response, again and again, was "It's a learning process," "It's a learning process." And, you know, to me that seemed like the flimsiest of, of reasons, the flimsiest of justifications, the flimsiest of plans for the future, in terms of what they could do to make all of us safer. Um, and, as they kept on, "We're learning," "This is the learning process," um, it occurred to me that if they were criminals, and I consider them criminals. I think that their lack of oversight of the nuclear power plant has been absolutely criminal. If we had somebody, um, who was, who was on trial and they went up before a judge and said "Oh, well, I robbed that bank, but it was a learning experience." I don't think anybody would accept that. Nobody would accept that as justification. We wouldn't just slap them on the wrist and say "Oh, well, now you know better."

Um, and in the face of that, in the face of that lack of responsibility and lack of planning for the future, the NRC has continued to do nothing. They just slapped them on the wrist for that, they slapped them on the wrist, they fined them. But if you look at, uh, First Energy's profits, they have gone up, they have, they have never gone down, they never had to really pay for, for what they did here at Davis-Besse. They have shown, uh, a complete lack of responsibility to the people they serve. And the NRC has failed to hold them accountable.

Now the other thing about FirstEnergy is, First Energy holds a corporate charter from here in Ohio. And I think that one of the next steps that, that we should be pushing towards is to revoke that corporate charter for FirstEnergy. Um, they are, they are a rogue corporation. They have failed to, um, to provide oversight of their own facilities, and they have failed to, um, show any real determination to actually learn from that situation that transpired back when the, um, Davis-Besse almost, um,

melted down actually. So I hope that these proceedings are the first step towards preventing, um, a nuclear meltdown. In the face of the failure of First Energy to be vigilant and maintain its, its facilities appropriately, and in the face of, of the failure of the Nuclear Regulatory Commission to provide adequate oversight, and I would invite each of you to be a part of that next step because certainly we must grow this movement if we are to be effective. Thank you.
(Appause)

OK, our next speaker is Kevin Kamps. And I'm sorry but we don't have a microphone stand so you just have to hold this one and speak into that one.

Mr. Kamps

Hello everybody, Uh, I'm Kevin Kamps. I work for Beyond Nuclear, uh, based in Washington, DC. And, uh, I just wanted to start by saying thanks so much to Anita, and to Joe, uh, to the Sierra Club, to the Green Party, for pulling this event together so quickly, and to, you know, many others who I look forward to meeting and working with, uh, uh, folks running the video cameras so we can get this official public comment to the NRC. [pause] Man, where to start! [laugh]

Um, first thing I'll do is hold this up. [Holds up report entitled, "Davis-Besse Atomic Reactor: 20 *MORE* Years of Radioactive Russian Roulette on the Great Lakes shore?!"] If you haven't heard about this, uh, these handouts are available on the table in the hallway there and, um.... When I heard about Davis-Besse's move to get a 20-year license extension on top of its original 40-year operating license, the first thing I realized I needed to do was to, uh, educate myself on the past history of this reactor. I had heard bits and pieces from several colleagues, uh, Michael Keegan who's in the back here from Don't Waste Michigan and Coalition for a Nuclear-Free Great Lakes, uh, Terry Lodge, she works with the Toledo Coalition for Safe Energy. But I didn't have it, um, in my head all the near-misses and not so near-misses, and, uh, leaks, and

accidents, and incidents, problems that this reactor Davis-Besse has had over the decades. And, uh, so I tried, uh, to get it in here, what I thought was going to be a two-pager ended up being in the end a seven-and-a-half-pager with two and a half pages of footnotes, just in case sceptics thought we were making this stuff out of thin air. And, uh, there were some doozies in there, that I'll just go over them real quickly here. Um, a lot of dodged bullets, a lot of, uh, really scary events. And, uh, you know, credit to Tom Henry of *The Blade* for his extensive coverage, uh, especially since the, the hole in the head incident. So you can see in the footnotes that I, I, um, I cite his work in *The Blade* quite a bit.

Um, the first one that's on this list is the Three-Mile Island meltdown pre-cursor incident of September 1977, about 18 months before Three-Mile Island suffered its 50% meltdown. Uh, Davis-Besse is a twin reactor to Three-Mile Island Unit II and had the exact same accident sequence, uh, underway 18 months earlier. And long story short, fortunately one of the, uh, operators in Davis-Besse's control room recognized what was going on and ended it before, uh, a meltdown occurred. But incredibly, that news, that, uh, "learning experience," as, uh, Anita [laugh] mentioned there from the NRC's perspective, uh, was not communicated to the industry. It was not communicated to the Three-Mile Island, uh, despite the best efforts of an inspector from the NRC's Chicago office, um... So, 18 months later, we have a 50% meltdown at a, at a US atomic reactor. And, uh, for the 30th anniversary of that incident, uh, Three-Mile Island over there, it held a press conference in preparation in Harrisburg. Uh, Harvey Gunderson, who is an expert witness, a nuclear engineer who's working with us up at Fermi III to oppose that new reactor proposal up there, uh, spoke at the press conference for TMI's 30th anniversary. Uh, did a re-evaluation of how much radioactivity, uh, he calculated got out from the meltdown, and take the official version and multiply it by 100 is what Harvey Gunderson says. So, were there health, uh, effects of that? You bet there were. Steve Wayne at the University of North Carolina at Chapel Hill, epidemiologist, uh, has documented several increases in different

cancers downwind of Three-Mile Islands and the near proximity, including lung cancer. The official version of things, uh, don't recognize this, unfortunately.

So, moving on in, uh, Davis-Besse's history, um, "the worst accident since TMI" was a loss of coolant to the reactor core for 12 minutes, that was in June of '85. Uh, moving on, a direct hit by a tornado in June of '98, where, uh, the emergency diesel generators were breaking down and had to be jerry-rigged time and time again, uh, for the course of 24 to 48 hours, with a very hot reactor core despite being shut down already. And a pool full of irradiated nuclear fuel that was in danger of heating up.

Uh, the next one down was the hole in the head, that's been mentioned already, uh, within 3/16 of an inch of a breach of the reactor pressure vessel. And as Tom Henry put it in *The Blade*, that would be, uh, the first time since Three-Mile Islands that radioactive steam would, uh, form in a reactor containment building. So all of these threats to the reactor core, you better hope that the reactor containment building functions as designed. But if the meltdown is bad enough and it melts through the foundations of the containment building, the radioactivity is going to get out.

Uh, in accidents and that are a habit here is the Northeast blackout of 2003. Um, did Davis-Besse's hole in the head expenses and distraction have anything to do with, uh, lack of maintenance on its infrastructure, such as, uh, power lines sagging into trees, which, whoa, just so happens to be the, uh, the start of the Northeast blackout. What do you know? Huh! Wonder if there's any connection there.

Uh, more recently, March of 2010, a new leak in a reactor lid at Davis-Besse. This, uh, replacement lid is from Midland Nuclear Power Plant in Michigan, which was nearly completely built but never fired up, and it wasn't an exact fit on Davis-Besse's, uh, reactor pressure vessel. But, um, you know, I wanted to mention that there have been victories

over the years, and one of the victories was when the first lid leak at Davis-Besse occurred, the first proposal by First Energy, and the NRC is pretty infamous for just rubberstamping what companies want, was a plug. They were going to plug the, uh, corrosion hole in the lid. And so a lot of folks showed up with, uh, giant bandaid bumper stickers, and, you know, giant banners that looked like bandaids, and the public pressure had a lot to do with that proposal not flying. But we've got, you know, a new, a new leak in the lid. So they have another replacement lid on the way. Something that should be mentioned about that, speaking of NRC's lack of enforcement of the safety regulations. In the aftermath of Davis-Besse, uh, six lids have been replaced in the United States at pressurized water reactors. Uh, Peach Bottom would be one.

Uh, something that we had learned that has not seen the light of day in the media to this point, the New York Times was sniffing around a story, we did a lot of groundwork for them to try to get them what they needed to run the story, it still has not run, and that groundwork we did was back in early 2007. So, this story has remained silent. The story is that at Palisades in southwest Michigan, a pressurized water reactor with a badly-corroded lid, needing a replacement, the company said by July 2007 the lid needed to be replaced. Well, here we are, how long? Three and a half years later? That lid has not been replaced. Why hasn't that lid been replaced? Well, it turns out that the replacement lid from a company called Babcock and Wilcox Canada was defective. The replacement lid, brand-new lid, fabricated especially for Palisades, had cracks in its bolt holes. And the inspector from Palisades who went up to the factory to check it out let them know that this was the case, and for doing his job, he was fired by the owner of Palisades, because he was messing with the schedule. There was a mutiny of the lid replacement crew. They said, "Hire him back or we're, we're not going to do any work" and they did hire him back. So for a brief period of time, this whistleblower was in communication with Dave Lochbaum of the Union of Concerned Scientists.

There were six lids replaced with Babcock and Wilcox Canada lids in this country. They were put on at the other nuclear power plants. So the question is: How are those bolt holes on those other lids? So you can see there are serious problems in this industry. Um, moving on down the schedule, I mentioned in here, um, radioactive risks piling up. It should say "on the Lake Erie shoreline," I put "Lake Michigan." There's been problems with that, too, though. I've got Lake Michigan on the mind, here.

So the current amount of waste at Davis-Besse is 557 tons of irradiated nuclear fuel. The only reason we know that figure is because spring of 2010 was a magic date in the history of radioactive waste in this country. It's when Yucca Mountain, Nevada, would have been full if it had ever opened. So, uh, spring of 2010, there, there existed 63,000 metric tons of commercial irradiated nuclear fuel in this country, the legal capacity for Yucca Mountain, Nevada, to have accepted as a national dumpsite. So, uh, that's how much, uh, was at Davis-Besse at that time. 557 tons. So it could have been said that every ton of waste generated after spring of 2010 would have been excess to Yucca. The thing is, every ton of waste ever generated in this country is excess to Yucca, because Yucca Mountain is not going to happen. It's geologically unsuitable. It's an earthquake zone. It's a volcanic zone. There's a drinking water aquifer below. If waste is ever buried there, would have ever been buried there, it would have leaked massively over time, ending up in that drinking water supply, created a nuclear sacrifice area over a, a wide region of agricultural land, Native American land, national parkland, national wildlife refuge, all that is downstream. It's not happening. Uh, President Obama and Energy Secretary Chu have canceled the Yucca Mountain dump. They have zeroed out the funding as of last February. That fight is still on. The other side is pushing back. And just last week in federal court in DC, uh, appeals court, the second highest court in the land, agreed to hear a suit brought by the state of Washington, which has a lot of military hi-level radioactive waste, the state of South Carolina, which also has military hi-level radioactive waste, not to mention a lot of commercial waste within its borders. That court case is

now proceeding in, uh, appeals court. So that fight is still on. But President Obama, who will at least be in office for 2 more years, has decided to, uh, zero out the funding.

And there's ongoing problems with Davis-Besse, um, to the present day. Um, I'd like to just share some figures for, um, what might happen if there were a major radioactivity release at Davis-Besse. This comes from a 1982 NRC report entitled "Calculation of Reactor Accident Consequences," or CRAC, which is a nice little acronym the NRC came up with. So, if there were a major radioactivity release from Davis-Besse, the NRC and the Sandia National Lab in New Mexico, which conducted the study, uh, determined that there could be 1,400 peak early fatalities, they call them, 1,400 peak early fatalities, 73,000 peak early injuries, and 10,000 peak cancer deaths. And they attributed a dollar figure of 84 billion dollars for property damage. So, that study came out in 1982. NRC tried to cover it up. Uh, Congressman Ed Markey of Massachusetts, uh, got it outed by subpoena by holding a hearing and out came the figures. So if you increase, uh, all those casualties due to the increase in population since 1982, if you, uh, increase, due to inflation the, uh, property value damages, that would go up to \$185 billion dollars. And a little update to mention, just came out in, uh, mid-September, uh, "Inside the EPA," which is a trade press, uh, publication in Washington, DC, [cough] uh, scooped the story that they did a freedom of information act release to the NRC, the EPA, and the Federal Emergency Management Agency, and discovered, uh, internal emails between the agencies, the lawyers of the agencies, uh, fighting with each other over a little minor detail of after a major radioactivity release who would, uh, be in charge of the clean-up and how would it be paid for. So it turns out that the lawyers at these 3 agencies, uh, were discussing how Price-Anderson, the national liability, uh, coverage for major nuclear power plant accidents, will not cover the clean up costs. It would cover other things, property damage and, and some very strictly controlled categories, but not clean up costs. So, that's a little issue.

Uh, Davis-Besse, which is deteriorated with age, has already had so many close calls, 2 major accidents. So, you can see things are pretty out of control. Anita mentioned the, uh, NRC as a rogue agency. And we keep trying to figure out what the NRC stands for. Is it Nobody Really Cares? Is it Nuclear Rubberstamp Commission? Uh, it might be Nuclear Rubberstamp Commission, because of, uh, the 60 license extension applications they've considered so far, they have rubberstamped every single one of them. And, uh, these are oldest reactors in the country with major problems.

Uh, for a long time, groups like this gathered today stopped challenging these license extensions because it was such an obvious rigged process and such waste of time that they didn't even engage with it. There may be other avenues to fight these things. Well, when it came to Palisades in Michigan, first of all we were shocked that the company would even try to get a license extension because this plant, Palisades, was a lemon before it even, even started up. So it was incredible that they, uh, ... and they got it. We, we fought them, we got steamrolled. But the silver lining, I think, uh, was that we learned some things. So Paul Gunter, my coworker at Beyond Nuclear, learned a thing or two about the NRC license extension procedure. And the next one up was Oyster Creek, New Jersey. And, uh, he gave them hell and shined a bright spotlight on Oyster Creek, on a major technical problem, a corrosion of the radiological containment barrier. Had an excellent lawyer from Rutgers University, Richard Webster. Had a great expert witness, uh, who had served us at Palisades in the past, a corrosion expert, a metallurgist named Rudolph Housner. And the 3-man team there really took on Oyster Creek. Got a split decision from the licensing board, which is very rare, a 2 to 1 vote in favor of license extension. Got a split decision at the NRC commission itself, a 3 to 1 vote. And the man who voted against the license extension at Oyster Creek is currently the NRC Chairman, Greg Jaczko. So, that was a huge victory.

Uh, we just learned within the last few days that Oyster Creek, New Jersey, uh, Exelon Corporation of Chicago, under pressure from not only

citizen groups but the state of New Jersey itself, has said "OK, OK, OK, we're not going to operate for 60 years, we'll only operate for 50 years, but don't make us build a cooling tower, we don't want to spend the 200 million, the 300 million on a cooling tower." So unfortunately, a deal's been brokered. They're going to go for 10 more years into the future, but they're not going to go for 20. And so we still need to fight them on the 10, because that plant has so many problems that should require its immediate shutdown. One that I'll mention is that its, uh, waste storage pool is very vulnerable to accident or terrorist attack.

So, just to conclude, I'd like to leave you all with some hope that now license extensions are being seriously challenged, almost the minute that they're brought up. Uh, another one to mention is Indian Point, New York, River Keeper, Hudson River Keeper headed by Bobby Kennedy Junior, has seriously challenged the Indian Point license extension. The state of New York has joined that proceeding. The Attorney General of New York, uh, the Environmental Department of New York, they are also requiring now Indian Point to install cooling towers, uh, to lessen the thermal damage to the Hudson River, just like the thermal damage, the, uh, just, uh, catastrophic destruction of marine organisms going on at these plants that lack cooling towers. That's not an issue at Davis-Besse because they have a cooling tower. But as we raised at Fermi III, we add up all the thermal impacts, of all power plants in this neck of the woods, and all the toxic chemicals they're releasing, I'm talking nuclear and coal and others. Uh, you got to look at even the thermal impacts going on now, the destruction of the, of the eco-system in Lake Erie, um, especially when Fermi III is being proposed.

And, uh, there was another, uh, license extension, that I wanted to mention, that's being challenged. I brought some things to look at over here, some old posters from Seabrook New Hampshire, in the mid-1970s. Uh, you know, fifteen hundred people got arrested on a single day in 1977 trying to block the construction of Seabrook. Well, Seabrook has gone for a 20-year license extension and they've gone for it 20 years early, incredibly. They're only 20 years old. They have 20

more years on their license, and they've asked for a 20-year license extension. So Paul Gunter, my coworker, has challenged this 20-year early application, uh, and his main challenge is the wind power potential off the gulf of Maine, which is tremendous. So showing that wind power is a great alternative. And, I'll just close now, uh, by saying that the wind power potential of the Great Lakes is there. That will be one of our contentions against Davis-Besse for 20 more years. And add to that the solar potential, with the biggest solar, uh, panel manufacturing factory in the country right here in Toledo. Add to that the efficiency potential, and there's no need for 20 more years of radioactive Russian roulette on the Lake Erie shoreline. Thank you very much. (Applause)

Ms. Rios

OK, just, just a couple of things. I just wanted to remind people that this microphone down here, that's the crucial one, OK? We, we have to make sure we speak into that one. Um, I'm also going to go over the list of speakers, just so everybody knows, OK? Um so that was Kevin Kamps. Our next speaker's going to be Al Compaan. The next person's going to be Kate Hoepfl. Um, then Tony Szylagye, um, Ed McArdle, um, David Ellison, um, did Ralph Semrock ever come? OK, um, Phyllis Oster, and then Michael Keegan. Did Bev Apel come? OK, so that's just so you folks know what our roster looks like so far. So our next speaker is going to be Al Compaan.

Mr. DeMare

OK, so while Al's setting up, I just want to mention that, um, technically what these comments are going to be is part of the Environmental Scoping comments for the Environmental Impact Statement, which is part of the application for the 20-year renewal. So part of that process is that if we could show that there are cheaper, safer, more environmentally friendly alternatives to doing nuclear power, to renewing this license for another 20 years, technically the NRC is supposed to say "OK, you're right, uh, nuclear power isn't that, we won't extend this, uh, licensing

application." So right now, uh, Al Compaan's going to give the talk and I think he's going to speak to some of this...to some of these very issues.

Dr. Compaan

Thanks, Joe. Uh, I wonder if we could, could we turn these lights down? It may be...the screen may be a little more visible if we turn the lights down. [Turns on Slide Projector] OK, uh, so, uh, Kevin has anticipated, uh, much of what I'm going to say actually. Uh, but let me just give you my background. Uh, I recently retired from the University of Toledo, I'm an Emeritus professor at this point, although I'm maintaining an active research program and my, uh, research area is in, uh, photo-voltaic, so in solar electricity. Um, so what I'd like to focus on are, are the alternatives to, to Davis-Besse, and, uh, uh, first I'll give you an overview of, uh, what, I just want to make a couple of, uh, comments about the history of Davis-Besse which Kevin, uh, actually covered in very nice detail, and his, uh, position paper is, uh, was eye opening to me as well. Uh, one of the things that, uh, that, oops...

One of the things that I think is important to keep in mind is that First Energy and Davis-Besse, um, provides about 8.3% of, uh, First Energy's baseload power generation, so, uh, that's important to recognize in terms of the alternatives. Now, um, in Ohio, Senate bill 221, which was passed in the spring of 2008, uh, mandates for the investor-owned utilities that they should, um, achieve a higher efficiency by reducing demand by 2025 by 22%, a much larger number than the 8.3%, uh, generation that's provided by Davis-Besse. And in addition, achieve 12 1/2% generation from renewals by 2025 and another 12 1/2% generation from so-called advanced energy, which may include new, new advanced nuclear, uh, but, uh, but continuation of Davis-Besse would not qualify for that, uh, additional gen..., for that 12 1/2%.

Distributed generation will also qualify for a, a credit under that Senate bill 221. And, um, alternative sources are very attractive for...wind, as Kevin mentioned, and also solar. Uh, so, uh, Kevin already mentioned

this, but, uh, the expectation when Davis-Besse and all the other nuclear reactors were built was that would mean that there would be a federal repository for all of the hi-level nuclear waste and that is not available. And as Kevin mentioned, uh, the Yucca Mountain, uh, facility has been, uh, the funding for it has been discontinued, it has no operating license. That means that for 33 years, all of the high-level radioactive waste generated at Davis-Besse are still being stored on-site, initially in a cooling pool, as I understand it, and then, uh, a few years ago, they, they constructed above-ground containers for the fuel after it cools off, uh, in this pool.

So, uh, my, uh, position would be that no nuclear plant license extensions should be granted until there's a long-term storage facility available for these nuclear wastes. And, one of the troubling indicators, I think, is I read through the Environmental Study that is, is mandated for this license extension. This is a study by Davis-Besse. In Appendix E, that's the Environmental Report, on this page (Page 2.3-2), uh, I quote here, they're, they're required, uh, by their operating license to have monitoring wells to monitor the quality of the groundwater in the, uh, within the perimeter. And one of their wells in 2..., in the spring of 2009 showed a tritium level that was rising, uh, 4000, uh, pico curies/liter. And, uh, this is a quote from their study. "As a result, the First Energy Nuclear Operating, uh, uh, Company," notice that that's a separate operating company from First Energy, from the rest of First Energy, "is pursuing a root cause approach to identify the source of the tritium in the wells. Uh, no tritium concentrations of...have been detected above the, uh, US EPA drinking water limit of 20,000 picocuries." But, this to me is very troubling. Even though the, the, uh, concentration is not that high yet, but it's an increasing amount, the question is where does it come from?

So tritium is an isotope of hydrogen, it's hydrogen-3, which means one proton and two neutrons, and, uh, it is not naturally occurring and has a half, half-life of 12.3 years. Um, so it is produced in nuc...in all nuclear reactors by a neutron bombardment either of lithium-6, uh, or boron-10.

And, uh, some of you may remember boron is the acid, uh, well, there's boron in the, the cooling water that is in the pressure vessel, and it was that leaking of boric acid, uh, that was responsible for going through 6 inches of carbon steel in the reactor head. So, the presence of that boron is, uh, uh, under neutron, uh, uh, impact, uh, can produce the, uh, tritium. It's radioactive, it decays, uh, in 12.3 years half-life, and it emits a high-energy electron which is, uh, known as a, a beta particle, um, and, and there's another particle which is an anti-neutrino, which, which almost interacts, uh, uh, so, so, so little that, uh, neutrinos can pass completely through the earth. So we don't worry about the neutrinos or the anti-neutrinos, but the beta particle is 5.7 kilo, uh...KEV, kilo electron volts, and, uh, this also has a fairly, fairly low penetration. It, it barely gets into your skin, uh, it stops almost with the dead layers of the skin. However, if you ingest it, uh, or you breathe it, then it's very dangerous because it, it has a very short, uh, penetration distance in your lungs or, or in your intestinal tract. So, bec...it's likely to be ingested either as water vapor, as, uh, hydrogen, actually it would be an analog ...isotope, one, one, uh, one atom of hydrogen, one atom of, of normal hydrogen, one atom of tritium, or it, it forms, uh, H₂O, water, as, uh, most likely a normal hydrogen isotope and a tritium isotope together with oxygen, so you will ingest it if you drink water from one of these contaminated wells. So, just a couple of things to, uh, to remind us of the danger of, of these reactors. Even if there is not a catastrophic meltdown, there are ever-present dangers in these, in the operation of these nuclear reactors.

Let's talk about the, uh, alternatives. So, I would argue that, uh, certainly before you extend the 40-year license, this is the design, uh, uh, intended design life for the nuclear reactors, 40 years, uh, uh, Davis-Besse, uh, First Energy wants to extend it by another 20 years. The incident and the accident record that, uh, Kevin talked about should be enough to, uh, not ask for any, any further justification for not renewing their license. But we, uh, should also know that there some very good alternatives for, uh, generating electricity, and one of those normally not thought about as generation, but it's energy conservation.

And that is now widely accepted as the cheapest way to get more effectively, to get more energy, it's to use our energy more, uh, more wisely. And then there's a very strong wind resources and solar resources. So, the important thing that, uh, we need to recognize is that, is that these components, energy conservation, wind and solar, are already mandated by Senate bill 221 in the state of Ohio. And, uh, windmills are, uh, used by the, uh, uh, the publicly-owned, uh, utilities, uh, they are allowed by Ohio law to pass through, to pass those costs on to the customers, so, on to the consumers of the electricity. That, that might not have been my favorite way of doing it, but that's the way, uh, the legislators have decided in the Public Utility Commission of Ohio.

So, just a couple of details about Senate bill 221. One component of that is the alternative energy portfolio standard, that's, uh, now embedded in the Ohio Revised Code, this, uh, this, uh, paragraph. It requires, uh, as I've mentioned, 25% electricity generation by advanced energy by 2025, 12 1/2% by renewables, the rest 12 1/2% may be, uh, uh, done through, uh, alternatives such as clean coal, that is, coal-fired power plants that, uh, the carbon dioxide is sequestered, for example. It may be done by advanced nuclear, and that's requiring, uh, NRC Generation III. Uh, Davis-Besse, I believe, is Generation II technology, but Generation III incorporates a passive safety, uh, systems. So even if the power goes out, such as when the tornado came through and disconnected the power plant from its, uh, uh, emergency diesel generators, uh, there would be passive safety equipment in the Gen-II, Gen-III design. And the Gen-III design would be for 60 years of operation instead of 40 years. ORC, the second part of the Ohio Revised Code allows net metering, which, uh, has been implemented. Uh, my home, for example, has photo-voltaics on the rooftop and we can feed power back into the, uh, into the grid and get, uh, full retail value for the power. That's been in place for several years now. And then there's an energy efficiency standard, uh, embedded in another of the Ohio Revised Code paragraphs which requires a 20...22% reduction in, uh, the use of energy from each one of the public, uh, utilities. Furthermore, there is a 7%, uh, requirement for a 7% reduction in peak

demand, um, that is the siphoning of power as it increases through the day and decreases at night. Again, these costs may be passed through to the customers, and so there are some very good business reasons why First Energy ought to be doing this, but I think they tend to be stuck in the past, in the technologies of the past.

Here are some additional details, um, that we're going to...that were in the presentation available to the, the NRC. But you can see how the, uh, the requirement for the renewable portfolio standard advanced energy standard increases year by year. And we've now started on that process. There are penalties. If First Energy does not meet those requirements, they will have to pay a penalty. This year, I think it's \$400. \$400 per megawatt-hour, which is equivalent to 40 cents per kilowatt-hour, First Energy will have to pay. And if they have to pay a fine, they are not allowed to pass that on to the ratepayers. If they stimulate the demand for electricity, whether it's...sorry, demand for renewable electricity, then they provide incentives to homeowners or for businesses or for large, uh, utility-scale installations of solar, wind, they are allowed to pass those costs on to the ratepayers.

So, let's take a little bit closer look at the resources that are available for wind. Uh, Lake Erie and the Lake Erie shore, as well as all of the Great Lakes, are great resources for, um, for wind energy. So, I, I'm showing here this, uh, wind energy map. This is for the average wind power across the United States. And it may be hard to see from there, but, uh, we hear a lot about the, the wind corridor in the Great Midwest, from Texas through to North Dakota. That's this, uh, region of the Great Plains. But now, the wind, uh, resources uh, in...increase, the average wind power increases as you go from white, actually the key is down here, from white to the light blue to the darker blue and still darker, and you can see that, uh, Ohio, for the most part, has a lot of wind resources that are similar to Texas.

We hear about Texas because it has the most wind power of any of the, uh, any of the states. And Ohio has similar resources. But if you look

at, in Lake Erie and on the near shore and, uh, up to the border with Canada, you can see it's a very dark blue, and that's similar to some of these mountain passes here. So wind, uh, resource availability in Lake Erie is really, really prime. Uh, much higher than almost any of the places in, in Texas, for example. So that's an indication that there really are tremendous resources out there and wind power is very competitive in terms of, uh, rates for electricity generated by wind power. The big, uh...let me just back up...One of the big issues with Texas, which is now struggling with getting the power, of course they have some major cities, but they can generate more than what can be used in their cities, is how you are going to get the power out to the big metropolitan areas like Chicago and Cleveland and Toledo and so on, and Detroit. That is not a problem when you generate the power in Lake Erie, we have a lot of major metropolitan areas that are very nearby.

For solar, Ohio has, uh, actually very good solar insolation as well. Uh, and I want to point out that in this, in this Environmental Report, uh, that's part of the First Energy petition for the renewal, there are some errors in that, in that report. For example, they, they say that the amount of sunlight in Ohio is less than half of what it is in some of the best areas in the country. Uh, that's a bit of a, uh, an error and I'll point out why in just a moment. And then, they also used some data for the costs, which came from back in 1988, and the costs for solar photo-voltaic electricity has come down dramatically since 1988.

One of the mistakes that is commonly, uh, made when you think about solar, is you think about being able to see a sun, uh, the sun in a clear day. And you think, you think, that, well, it's only on those clear days that photo-voltaics will generate usable power. And this is the kind of map that you would use if you were really worried only about direct sunlight, being able to have a clear sky, and being able to see a clear sun out there. And then when you take and you compare Toledo or, or Lake Erie with some areas in the Southwest, and I did the numbers here. Actually, for the...for the South. Uh, when you compare Toledo with Orlando, even when you consider only direct sunshine, Toledo gets 75%

of what Orlando does, down here in Florida. But it's not as good as San Diego, it's almost 60% of San Diego, ????. Uh, and if you go out to the Mojave Desert, Toledo gets about 45%. So that's a number that's consistent with what, uh, First Energy claimed in that report. However, the real data that you need to look at are the, uh, the full sky radiation.

The point of...Most solar panels are flat panels and they will accept light which is indirect, that is, as it comes scattered in hazy days or light cloudy days and light is scattered from those clouds and still make it to those panels. And so this is the appropriate math that needs to be looked for, uh, the amount of electricity that can be produced by solar panels over the years. So, in that case, if you compared Toledo with Orlando, or Toledo with San Diego, uh, Toledo gets 86% of what, uh, Orlando gets, 79% of what San Diego gets. So the argument that the solar resources in Ohio, in Northern Ohio, are not very good, and actually you can see that the best resources here are Western Ohio and in certain...that's an argument that doesn't, uh, work when you address solar. And the last point that I'd like to make about solar is that there are huge changes that have been happening in the last several years in terms of the costs of solar panels. And the cost driver on this is actually FirstEnergy, uh, First Solar, sorry, First Solar, which is, uh, started here in Toledo, by Toledo industrialists such as Harold, Harold McMaster, and our only US generating, uh, US manufacturing facility is in Perrysburg.

They've been, uh, leading the cost reductions. So if you look here, this is a study that was done by Deutsch Bank and updated in 2009. It doesn't go back, uh, to 1998, which is when, when First Energy pulled their numbers, but, uh, you can, you can extrapolate back further if you want. There, it was something on the order of 40 cents/kilowatt-hour for the levelized cost of electricity, as it's called. Um, but in 2010, the cost is about 20 cents/kilowatt-hour for cadmium teluride. This is, this is the type of material in the panels that are made by First Solar. Some of the other kinds of solar panels are shown here, a little bit higher in cost. But what Deutsch Bank projected is that there's going to be a crossover,

a convergence between the cost of solar-generated electricity, as you go out here to, what is the number, it's like 2017 or so, so, 2017, at about the time when, when FirstEnergy wants to extend the license on the plant, solar is going to be, uh, completely competitive, if not lower cost than, uh, the electricity, than the conventional electricity. Notice that Deutsch Bank is using an average over the United States. Now the cost of electricity in the FirstEnergy territory is actually higher, those of you who live in FirstEnergy territory, your home costs, your home electricity costs are something like 12 or 12 1/2 cents/kilowatt-hour, so the curve for us should really start a little bit higher, and that convergence will happen even sooner.

So, FirstEnergy has the option of extending, uh, a nuclear generating plant with all of its associated dangers and also its costs. The cost of nuclear generated power is high, higher than most of the baseload, um, generating capacity of FirstEnergy. And its cost is continuing to increase. The alternative is to jump on some of the new technology, jump on those bandwagons, and those costs are decreasing. So that's the kind of options that FirstEnergy has, and you'd think that if they really look at it seriously and look at the options that they ought to conclude, that some of these alternative forms of electricity are the ones that ought to be, uh, the ones, uh, that are developed for the long-term future of their, of their company. So, just to make one final point, and that is alternative, uh, alternative energy resources generate lots of jobs. They actually generate, uh, many more jobs than what nuclear power does. Energy conservation, retro-fitting of homes and businesses and so with the more energy-efficient lights, uh, and motors, uh, and thermal efficiency saves, saves, saves energy for everyone. It reduces the need for, uh, uh, generating capacity. Uh, Ohio has a lot of manufacturers that supply components for wind turbines. The maintenance of wind turbines generages many jobs. Uh, I've already mentioned, First Solar is the largest manufacturer in the world. So manufacturing creates jobs. And there are several other PV manufacturers that are beginning, uh, in Ohio, most of them actually in northwest Ohio, in the Toledo area. PV design and insulation creates a num...a large set of jobs.

So this is the final slide with some references for where I pulled some of the data. And, uh, uh, places where you can go for finding the backup material that will support the comments that I just made. Thank you. (Applause)

Ms. Rios

Thank you, Dr. Compaan. And again, I would like, folks, this is, this is the microphone that it's very important to speak into. Um, we will double-check on all this though. If you have your, uh, comments in writing, we would like to submit those along with this, um, this videotape, OK? Our next speaker is going to be Kate, Kate, Hoepfl, Hoepfl.

Ms. Hoepfl

Hello everybody, my name is Katie Hoepfl, student of Professor Compaan's at the University of Toledo. I'm a major in physics. My research is in this renewable energy area. So, what I'm going to be talking about today is alternatives to nuclear power. In FirstEnergy's license renewal application, they dismissed the possibility of almost any form of renewable energy to replace the power production that would be lost by the closing of Davis-Besse. [Displays Slides]

A lot of the reasons that they used for this dismissal is that intermittency or the volatility of power production by wind and solar, the large land requirements that are used to produce the same equivalent amounts of energy that is produced by Davis-Besse with wind and solar. They mentioned the low wind and low light compared to other states which Professor Compaan has already disputed for us, the associated aesthetic impacts of wind, and the high cost per kilowatt of capacity for solar which, again, Professor Compaan has already disputed for us.

So, what I have done is looked at specific resources here in Ohio, and

this better understanding of systems that are already in place will help us see that their reasons for dismissal aren't exactly correct.

So what I have done is done some statistical modelling using systems that are already in place here in northwest Ohio. I used one of the wind turbines in Bowling Green, owned by Bowling Green municipalities, and a solar array mounted on the home of Professor Compaan.

This model is a little bit confusing. What it is here is on the X axis we have the volatility or the intermittency of the system that FirstEnergy mentioned. So what that means is that at some points throughout the day it can be high, it can be low. It's unexpected, the power production that would be produced. On here [indicating the Y axis] it's the actual output of the system. So along our curve here we have an entire wind, only wind system, and at the other end we have only solar. And, along the middle is a combination of the two.

So, what I'm going to show you today is that it's not a matter of using one or the other. The combination of these different forms of renewable energy that's really going to help us offset the loss of nuclear power by closing Davis-Besse. So over here on the end of the curve is where we have the least volatility in the system. For this specific northwest Ohio that turned out to be about half wind and half solar that's going to produce the best outcome for us.

Just an example here of what I mean by this. So in a 100% wind system has a volatility something like this. This is the power production over the course of the week by the Bowling Green wind turbine. You can see it's pretty unexpected what it's going to produce throughout the day. And on the opposite end, a 100% solar system, follows a pattern, you only get power production during the day, but even throughout the day you not sure if you're going to get a sunny day, cloudy day things like that are unexpected...So, by optimizing the system, using similar rating, say one megaWatt wind turbine farm and one megaWatt solar array, you get something that's quite a bit more predictable.

Now put this here against a demand curve. This is from EBCOT it's in Texas, but the demand curve for any big city is gonna look about the same. A lot of high peaks during the afternoon, evening hours and lower at night time when we're sleeping. It's quite a bit more predictable, it follows the demand curve.

What I want to point out here, though is that my graph is still quite a bit volatile here, but it's only taking into consideration two specific sites. We only have one wind turbine and one solar array. But, if FirstEnergy were to take their resources and erect, um sorry, use the wind and solar throughout their entire area that they service. Solar, it's not going to be cloudy in all the areas that they service. It's not going to be not windy in all the areas that they service. That's exactly what the (Go to my summary slide, here) European Wind Energy Association in their annual report in 2009. They said exactly that. That as wind and solar is developed across the entire area, the volatility in one specific area does not infect the overall baseload that it's generating.

That's another thing I'd like to point out in FirstEnergy's application for Renewal, they kept mentioning that solar and wind are not a good replacement because they can't satisfy a baseload. But, as Dr. Compaan mentioned in his speech, Davis-Besse only produces 8.3% of FirstEnergy's baseload. So, we're not trying to make these curves fit identical. It just has to back up the coal and everything else that's already being produced. So we're using a combination of wind, solar and all the other existing technologies that are out there. They'll be able to easily offset the production lost by Davis-Besse.

The only other thing that I was wanting to mention is the jobs that are going to be created. As he had already mentioned, the maintenance of the wind turbines; the installation of the projects; and also the forecasting that can be done. This was also mentioned in the European Wind Energy Association's annual report. The new technologies. They are able to forecast four hours ahead exactly what the wind speeds are

going to be. So that they can predict if they need to have boost up the coal or other forms of production. It makes it really a lot more stable. So, this argument of volatility doesn't quite hold.

So, if FirstEnergy acts now, we can be prepared for the energy production loss by closing Davis-Besse in 2017. We can also have a head start on meeting the requirements of Ohio Senate Bill 221.

And that's that. (Applause)

Mr. DeMare

Alright, thank you Kate. That was excellent. I think that a lot of people know and believe the points that you guys are making, but it's wonderful to have the actual numbers provided to us. It's very heartening to not only know that you're right, but to actually see it proved scientifically.

Our next speaker is going to be Tony Szilagye. Tony is a member of the Sierra Club, and I would like to say that the only other person at the hearing that spoke out against the license renewal was named Pat Marida. She was also from the Ohio Sierra Club, and she has also gotten testimony from other people. She has recorded the comments, I think, of 15 other people, who couldn't make it here today. People who live in places like Columbus and Cleveland, and so those will also be entered into the record along with these comments. So um, the depth of opposition to this is very deep.

Thank you, Tony for coming.

Mr. Szilagye

Water is the foundation of life. Um, And it's our most precious resource in Ohio. Nuclear energy is not needed for life here in northwest, Ohio. We need to protect our water resources first from the effects of nuclear forms of pollution. Lake Erie provides drinking water and other

consumptive uses to millions of people and many different industries in northern Ohio. We rely on Lake Erie for recreation, and we are entrusted to care for and protect the Lake for future generations as well. They have as much a right to the use and enjoyment of Lake Erie as our present generation, even if the comments do not agree.

Davis-Besse is one of the greatest threats to the health of our Lake. Davis-Besse was strategically located on Lake Erie to meet the tremendous needs of Davis-Besse for water as a coolant. This is great for Davis-Besse but not so good for the Lake. Davis-Besse uses water from the Lake and spews it back as thermal pollution. Over the years, this has had consequences for Lake Erie. We have once again had increasing algae problems for Lake Erie. The growth of *lyngbya wollei*, a toxic algae, has accelerated over the past few years along with *microcystis*. These toxic algae have numerous conditions which contribute to their growth. One, of course, is the presence of ample amount of phosphorous and nitrogen. Another ingredient is an abundance of warm water. We have billions of gallons of thermal pollution from the power plants surrounding Lake Erie.

Now, part of these comments were also, um, written by Sandy Benz and below are Sandy's comments.

Um, studies on water use, fish kills, and the thermal impacts at the bay shore park land are over 30 years old. The intake for Davis-Besse is in less than 30 feet of water in the Great Lakes...should have been...in the Great Lakes, in Lake Erie's shallowest most biologically productive waters. Davis-Besse uses an estimated 50 million gallons of water a day which causes fish kills and thermal impacts. While cooling towers at Davis-Besse limit water use and fish kills with the best available technology, there should be an assessment of water use and fish kills. This request is made as the number of walleye are declining from an ODNRS estimate of 80 million about 5 years ago to less than 20 million in 2010.

In addition, the amount of toxic algae has increased over the last, uh, 10 to 15 years, so much that the Ohio EPA reports that physical contact with the toxic algae in Lake Erie probably causes illnesses, probably caused illnesses to 10 people in the summer of 2010. If Davis-Besse were to close on schedule, there would be fewer fish killed and no more warm water discharge. The estimated number of fish that would not be killed is unknown because there are no counts of fish impingement, that is, fish caught against screens, and entrainments, fish that go through screens. In assessing whether Davis-Besse should remain open or closed, an updated, independent analysis of the Davis-Besse water impacts, uh, to fish impingement and entrainment and thermal impacts using Clean Water Act 316 A and B protocol needs to be conducted. If the incremental increase in fish kills and added temperature to the water in aiding algae growth and in decreasing walleye numbers, the environmental and economic impact of the fish kills and algae growth should be considered in the requested re-licensing of Davis-Besse. Furthermore, um, should the licensing go forward, the license needs to require periodic impingement and entrainment fish counts and thermal mixing zone plume impacts on algae growth and water quality.

My comments will continue. Um, there are many different incidents that can be used to demonstrate a lack of, of oversight by the NRC and Davis-Besse failures. The following are quotes from the Lessons Learned Report in regard to the hole in the reactor head.

The NRC and the industry regarded the boric acid deposits on the RPV head as an issue that required attention. However, the NRC and the industry did not regard the presence of boric acid deposits on the RPV head as a significant safety concern. The recurring nature of alloy 600 nozzle cracking and boric acid corrosion events indicates that industry actions in general, and Davis-Besse Nuclear Power Plant actions in particular, were less than adequate. Similarly, given that the NRC has issued multiple generic communications addressing these two issues, the recurring nature of these events also indicates the NRC failed to effectively review, assess, and follow up on [unintelligible] operating

experience. The NRC's AIT concluded that Davis-Besse staff missed several opportunities to identify the boric acid corrosion of the RPV head at an earlier time. In the task force's view this means that Davis-Besse Nuclear Power Station staff missed these opportunities because Davis-Besse staff failed to assure that the plant safety issues would receive appropriate attention. The NRC missed prior opportunities to identify the VHP nozzle leaks and the RPV head degradation. In the task force view, the NRC failed to integrate known or available information into a safety assessment. Babcock and, and Wilcox and CE plants appear to be highly susceptible to boric acid leakage and corrosion. One hundred percent of their plants have reported boric acid leakage-related problems. Given the high incidence rate of boric acid leakage problems, problems at B&W plants, uh, Davis-Besse should have been alerted and taken appropriate, appropriate corrective actions prior to the discovery of the leaking VHP nozzles and the degraded RPV head.

Um, and there's other quotes too, but I'll move on. To summarize the meaning of these quotes, um, the NRC spoke about these leaks and they gave warnings of the leaks, and at the same time, relaxed in their oversight of Davis-Besse. The question about lessons learned, um, is not whether, uh, they will learn. Uh, it's, it's also whether we should entrust Davis-Besse to be operated safely and is it safe now? The answer is no. Davis-Besse should not be re-licensed. The other question that has to be considered - is the safety culture within Davis-Besse changed? And if one were to assess the safety culture in personnel...Technology doesn't fail on its own, technology fails...People operate technology. Is the safety culture at Davis-Besse different today? The answer is no. And we believe this should be taken into account in any re-licensing. It is well known that the economic concerns are top priority for the NRC and First Energy, no matter how many of us are fried in a major safety blunder.

Here are a few suggestions. In the year 2021, Senate bill 221 will eliminate or generate as much power as Davis-Besse produces. If First

Energy takes seriously the opportunities available for generating power through energy efficiency and making agreements for a better payoff for exceeding the energy efficiency targets the Senate bill 221 mandates, they can be more profitable without Davis-Besse. If they take an aggressive look at the potential of combined heat and power, wind, compressed air storage, solar, they can generate either through efficiency or through greater uses of existing resources, the needed capacity that the loss of Davis-Besse will create. There are solutions for generating capacity. For every one cent invested in elec...in energy efficiency, three cents profit is gained. The solutions and incentives...alternative to the continuation of nuclear power to the elimination of nuclear power are already out there. Thank you. (Applause)

Mr. DeMare

Alright, thank you very much, Tony. And I just wanted to give credit, right now. The idea of this People's Hearing was actually, initially Kevin Kamps' from from uh. This was his notion. He mentioned, "Well we could just hold a hearing. If they're not gonna give us one" And I'm really glad we did. I've already learned a ton so far, and I'm grateful to everyone who has spoken so far. And our next speaker is Ed McArdle.

Mr. McArdle

Hi folks. Um I prepared written comments for the NRC. I'm really pleading with you all because I'm not sure they'll listen or read them.

My name is Ed McCardle I'm a Michigan resident that resides within the approximate 50 mile radius of the Davis-Besse nuclear installation. I'm speaking today for approximately 22,000 members and supporters of the Sierra Club of Michigan. Which I point out, I'm not a staff person. I'm a volunteer. I've been working on various pollution issues for a long time. I am the Chapter, the Michigan Chapter Conservation Chair, and I'm just recently getting involved in the nuclear issues. I'm trying to pull more of the Sierra Club to this um crucial issue.

So, we urge the Commissioners to deny the 20 year relicensing. If there ever was a candidate for the first denial of a relicense, this is it. As the history of this facility proves, it is too dangerous and expensive to continue this operation, especially since it is not needed for present or future power generation. I would like to refer the Commissioners to two articles quoting studies that support this latter statement.

I would first like to quote excerpts from an article in *The Nation* magazine dated February 15, 2010, "The Case for Grade Power." This is generally referred to as using waste heat or cogeneration from large facilities of which Ohio has plenty of. The article uses Ohio as an example for this opportunity. The article states that according to an analysis by Recycled Energy Development, the Libbey Glass Plant in Toledo, the Arselor (unintelligible) Middle School in Cleveland and the (unintelligible) Chemical Plant in Cincinnati together produces enough waste heat to produce between 145 and 185 megaWatts of additional electricity. The study also indicates that Ohio has enough cogeneration potential to retire up to 8 nuclear power plants. According to Oak Ridge National Laboratory this strategy will cost less than half of a coal plant.

A recent report by Policy Matters of Ohio estimates that recycling 7.7 GigaWatts would require a \$10.5 billion investment with a three year payback. This would have the further effect of making Ohio industries more competitive, more profit, saving both jobs and the environment.

The second article I refer is the November, 2009 cover story in *Scientific American*. I bought this issue and bring it with me to almost everything I go to. This article is entitled "A Plan for Sustainable Future. How to Get All Energy from Wind, Solar and Water by 2030 using Present Technology." The article by Mark Z. Jacobsen of Stanford University and Mark A. Delucchi of University of California, Davis it is describe by the editors of *Scientific American* as a "pragmatic hard headed study." Supply 100% clean energy by 2030 at the same or lower

cost of traditional fossil and nuclear resources. Frankly, I'm amazed by this article. This is something, I think, we've been waiting for, and something we should push.

Um. Ok. Besides adding all the GigaWatts and the TetraWatts, the article discusses, "How do we get there?" and the answer is we need the political will to pass legislation to give incentives to producers of clean energy. The most effective strategy is based on the feed-in tariff concept. That's f*e*e*d-i*n-t*a*r*i*f*f*. This is a concept that is kind of foreign to Americans, but this is what the rest of the world calls it. We were thinking of calling it "clean mobile energy", but then we'll have to refer to it as "like the feed-in tariff" in Europe and Asia so I may as well go with the feed-in tariff or FIT. You can check this concept out at FITcoalition.com or .org. There's a lot of it on the Internet um I'll be talking more about that but let me continue with comments.

Okay um feed-in tariff has been widely, wildly successful in Europe, Asia and now, most recently in Ontario. Germany claims that they created over 300,000 jobs with their version of a feed-in tariff. They have cancelled new coal plants and they have a moratorium on new nuclear proposals. Although there is debate to remove the moratorium. The cost to the German rate payer, the public, is approximately \$3 to \$4 a month, about the price of a beer.

Since the passage of the Ontario feed-in tariff last year, the Province has promised to shut down the largest coal plant in North America at Nanticoke and has cancelled several new nuclear proposals. I'm not sure if it's four that are cancelled or six because two are maybe refurbished. So, I'm not sure about that. But they've already started shutting down two coal units at Nanticoke. The articles coming out of Canada are just amazing for this type of legislation.

More than 70 countries and a few states have passed versions of this legislation. I think it's far more than 70 countries, now. But Vermont has passed it's version. There's the Gaines bill for the utility for the State

owned utility that's passed for feed-in tariff solar. Consumer's power in Michigan passed a very teeny-tiny one and it was filled up within hours.

Okay according to a report by the National Renewable Energy Laboratory, U.S. Department of Energy, "a well-designed feed-in tariff is far more effective and less costly than the renewable portfolio standard."

It's past time to admit that we can no longer afford this complicated and dangerous technology--not the feed-in tariff, I'm referring to Davis-Besse. It is not carbon free as claimed, and not sustainable. There's no place to put the waste and we believe that it is immoral to burden our children and generations far into the future with deadly waste. Thank You.

But, I do want to say one more thing about the feed-in tariff. I've been following this issue ever since our state legislator in Michigan, who got term limited and didn't get re-elected, Kathleen Law introduced the first feed-in tariff legislation in North America. And Dr. Herman Schearer from Germany who instituted the concept in the German Parliament long before the United States. She had the same as well as I did. Dr. Schearer died this past year I'm sorry to say. She introduced the first feed-in tariff in the Michigan Legislature. She says she got calls from all over the world. People wanting to, you know, companies wanted to locate whoever had passed the feed-in tariff. Because the feed-in tariff actually guarantees not only do you get the capital costs and a fifteen to twenty year contract, usually, and a profit, a modest profit.

Boy. You know, let's go get 'em. Let's get that money. But it's especially well suited to a um to solar, because then you don't have to build out the grid. You can have more distributed power and therefore you don't have to have a big utility be part of the feed-in tariff until an excess is given. Extra power is produced. But, you know, anyone can do it. Anyone can get one of these contracts, if they can get the finance them. That includes farmers, that includes, you know communities, towns, villages,

churches, individuals, etc. So this is really the most effective thing that we can do, and we need to do this.

Thank You. (Applause)

Ms. Rios

Okay, just to let you know, we have um one, four more speakers scheduled and I don't think we're going to have anybody else coming in um if we have somebody else coming in we'll certainly accomodate them. But then we will be able to take a break to share information, and also to let you know that one of the things that we're hoping to do today, before you all leave is that Kevin has um some information that um.. He has a contention. Which is a part of the next process in front of you. The process after we oppose the licensing.

But those of us who live within fifty miles of Davis-Besse have to validate what Kevin and Beyond Nuclear are saying for that for them to have standing. We'll talk about that. We'll bring Kevin up again before we finish up so that he can explain that process so that those of us who are willing to go ahead and sign on to his contentions.

Mr. DeMare (interrupting)

Uh Anita?

Ms. Rios

Yes?

Mr. DeMare

Um we need to swap out our video card. It will take about 5 minutes.

Ms. Rios

Do we want to take a five minute break?

Mr. DeMare

For technical reasons, yes, I do.

Ms. Rios

Okay, we'll take a five minute break. Bathrooms are out in the hallway.

Ms. Oster

I had been involved in the initial opposition to granting a license for the building of Davis-Besse and I certainly didn't expect to be at a relicensing opposition meeting.

My husband was a geneticist in the biological sciences department Bowling Green State University, and his research focused on the effects of radiation and chemical mutagens on the genetic material of *Drosophila Melanogaster*, commonly known as fruit flies. A group from Bowling Green State University came to the hearings to testify in opposition. Opposition to the building of the plant was based on the fact that tons of radioactive waste would be generated in order to produce electricity. At that time, planning for the long term containment of the radioactive waste was to be done in the future. We now know that we still do not have any methods approved for the long term storage and isolation of the tons of spent radioactive rods and other radioactive material that is made during the mining and processing of the fuel.

This material will be dangerously radioactive to humans and other living things for hundreds of thousands of years. To put that into perspective, we will be starting on the year 2011 of the common era on January 1st.

Davis-Besse has proven to be one of the most unreliable plants in the

U.S. as other people have testified here. FirstEnergy has been very negligent in maintaining the safety of the plant. Renewing the license of this aging facility will place the population of northwest Ohio and probably parts of lower Michigan in great danger.

As a very senior citizen, I would like to encourage the members of the audience who are opposing the relicensing of the plant to keep fighting. It can sometimes get discouraging, but the opposition that was mounted to the original building of nuclear plants in the 1960's and 70's did result in enough added expense for the electrical industry to put a halt to the building of new plants, although Davis-Besse was approved.

Originally nuclear power was touted as power that would be produced so cheaply that it would not even have to be metered. Now we are being told that it will solve the problem of pollution generated by using fossil fuels. We will be replacing carbon problems of pollution, generated by using fossil fuels, with problems of radioactive pollution for which there is no cleanup but time. (Applause)

Ms. Rios

Thank you, Phyllis. Okay, our next speaker is going to be David Ellison from um Cleveland.

Mr, Ellison

Good Afternoon. I'm going to try and make a few remarks before my voice completely goes out. My name is David Ellison. I live in Cleveland. I'm an architect. I just finished a race for the newly created Cuyahoga County Executive, a position that replaces the three County Commissioners in Cuyahoga County.

I ran on the Green Party ticket because this year was the first year that the Green Party was actually on Ohio's ballot, and uh if there was better representation from either the Republican or Democratic parties we

might not be having to have this hearing today.

Um the uh. Some people may remember me from the early 90's. I know at least Mike Leonardi was here in the room. There he is! That's when we fought off the whole proposition to build a low level radioactive waste dump here in Ohio. I'm sorry I wasn't here in the 70's to resist against the Davis-Besse, but if I lived in Ohio then, I would've. Um.

We need to broaden the idea of what environmental consequences, environmental impact means when it comes to nuclear power and something like Davis-Besse, and other people who have spoken here today have done a better job at talking about what specifically those.. the common definition of what environmental impacts might be. But I'd like to say something about the political environment that that is affected by the operation of nuclear power plants and Davis-Besse and the NRC in Ohio at this time. In relationship to the Davis-Besse relicensing, the potential licensure of a plant down in Piketon a new power plant that our Democratic Governor invited in to this uh situation that Kasich will probably go right along with and that is the credibility and the competency of something called the Nuclear Regulatory Commission.

And Uh. Already while the residents of this area would be most directly affected by the power plant, Cleveland is not that far away and the NRC should have solicited input from people from a broader radius around the power plant including Michigan and Indiana. Because what we've found from the Chernyoble accident is that radioactive waste doesn't stop at municipal boundaries or national boundaries. And the environmental impact is much broader than how some fish that get caught in an intake pipe or the other kind of more immediate sort of environmental impacts that people might think of.

The fact that the NRC didn't hold multiple hearings on this is a problem, but they shouldn't and I'm speaking directly to the NRC at this point. The NRC shouldn't take as the expression of the people of Ohio the testimony of just those people who attended the hearing on November

6th or 4th or whenever it was right after after election day. That the people that are economically benefitting from the conduct of FirstEnergy by the operation of that power plant whether it's through their jobs or through charitable contributions, that is not a legitimate expression. We have a political problem in this country of disengagement and alienation and generally, the government and its regulatory bodies are treated with contempt by the mass media. And a culture of contempt is built among the people for our government and for the mechanisms that we as people use collectively to monitor things like the banking industry or the nuclear industry. It's not to our benefit that that is happening, but it is. So that small group of people who testified in favor of this relicensing is not a complete or an inclusive representation of the people that are concerned with this. And I would suggest that most of the people that are concerned with this are disengaged and are not paying attention. And the credibility of the NRC is at stake.

When it comes to evaluating power plants for relicensure, this power plant is one that should be denied relicensure on the grounds of its past performance. It hasn't performed well enough to bother relicensing, and it should be taken off line.

We should come up with energy conservation and efficiency measures that replace that 8.3%. Forget creating any alternative fuels or advanced nuclear. Just energy in energy conservation efficiency alone, we make up for this. The system that requires that we maintain the amount of consumption that we currently have uh as part of the licensure relicensure application is absurd because so much of the future depends on our reduction of and our conservation and our efficient use of energy. It's absurd to perpetuate the existing system.

So when and if there's a problem, when and if they relicense Davis-Besse, their credibility notche notches, ratchets down. Already the public is disengaged and doesn't have a lot of respect or a lot of confidence in the over all system. We saw at Chernyoble when you take 800 people from around the Soviet Union, and you put them to work

cleaning up that mess and then send them all back home, it doesn't take long for the competency and the credibility of the federal government to fail to exist. And what we have now is a much different government and a much different country in the former Soviet Union than existed prior to the Chernybole accident. And I propose that it was that evidence of incompetence in the government that ultimate, through exhibited through their reaction to Chernybole that eventually to their collapse.

And economically, as we all know, and others have testified to, nuclear power does not make economic sense. In as much as our economy is the management of our household, I think it relates directly to the ecology of our household or our State or our community here, and that ecological system that we are all part of and that this nuclear power plant and the NRC and the other governmental leaders and the other citizens that aren't here, that ecosystem is very much a part of the environment, and any hearing that focuses on environmental impacts has to include all of that as the one ecosystem or environment that we're in.

And uh I think that will be about what I have to say. Thanks for listening. (Applause)

Mr. DeMare

Alright, Thank You. And uh next up we have Michael Keegan who um was one of the people, who along with Anita and Kevin and myself, one of the main people who planned this event and brought it all together. So come on up, Mike.

Mr. Keegan

Thank you, Joe.

We are...My name is Michael Keegan I'm with the Coalition for a Nuclear Free Great Lakes and I'm also with the organization Don't Waste Michigan and Davis-Besse is just about 15 miles from Michigan,

obviously.

We are blessed in that we live in 20% of the world's surface freshwater here in the Great Lakes the most precious resource on the Planet. Without it life is not possible. And yet we have a nuclear power plant that has an abysmal record, Davis-Besse. But I'm here to tell you that it's not about the generation of energy. It's about the concentration of wealth and power. Political economy.

We've heard that there are several alternatives to Davis-Besse. Replacement power is available now. Could be generated much cheaper. It is about the consecration of wealth and a cartel of the utilities that like the monopoly status that they enjoy, and they are locking out the people. It is not power, not energy for the people. It is power and political power against the people.

We looked at the Davis-Besse in 2002 and we saw the hole in the head the size of a football, ate through six inches of carbon steel down to the stainless steel liner which was now bulging through that hole and started to show signs of cracking as well, 3/16ths of an inch. And the NRC came in and said, "Well there's got to be lessons learned here. We're going to learn lessons and we're really going to put the thumb, put the foot down and things are gonna, got to improve. We won't allow a relicensing, a reopening of the plant without proper scrutinization." A series of meetings, dog and pony shows, were held, and the last one was, "Wow, they really turned it around. They really surprised us and turned it around. Doing a good job and we're going to allow them to put on this compromised lid that they got from the Midland nuclear power plant and operate."

And six years later, we learn, I think this past March, We learned about the cracks in the control rod mechanisms. And the lessons that I learned are that the NRC is incapable of learning lessons.

The reason Davis-Besse did not shut down to examine the head back in

2001 when the NRC had told the entire industry that they must all shut down and inspect, the utility, FirstEnergy, pushed forward because it was profit over safety, production over safety. And the NRC promised us that would not happen again. But, lo and behold, now we see again a compromised lid at the Davis-Besse plant. And, once again the NRC allows production over safety, profit over people.

So the lesson I take out of this was I learned that the NRC is incapable of learning lessons. As mentioned earlier, they are indeed a rogue agency. This past week, the 61st nuclear power plant that had applied for relicensing was relicensed. They are now batting 1000%. 1000, Batting 1000. 61 for 61 on relicensing applications. So, the NRC has not a shred of credibility with the public, and they are there, running interference, keeping the people away from confronting these utilities when they run these abysmal plants.

Earlier this week I got a e-mail from a woman who lives near Fermi nuclear power plant, and she shared with me a story about living next to Fermi, in the shadow, and all her neighbors having cancers, leukemias, thyroids, early deaths, lymphomas and that this is epidemic through that area. I've spoken with a number of health care persons over the last year who are very concerned about the cancer rates in the western basin, the horseshoe around Lake Erie beginning from down river area which is north of Monroe right through Sandusky area.

And in fact there is a cancer cluster near Clyde, Ohio which is about 15 to 18 miles as the crow flies from Davis-Besse. So, the comment that I have on Scoping is that I am requesting that baseline epidemiological studies be done. And that we explore what is coming out of that nuclear power plant. They are allowed by licensing to release gaseous, liquid from the plant. Below "permissible" levels. But there are cancers over in Clyde, and families are decimated. And I would request that baseline epidemiological studies be done in the entire region.

Earlier again, this week, I got several documents from Connie Klein

who was one of the intervenors at Davis-Besse on the first Operating. And she shared with me photos of the flooding of the Davis-Besse in 1972. This was during construction. The entire site was flooded for two to three weeks. Um I have concerns about the Davis-Besse flooding. As you all know Lake Erie is very shallow. The western basin is very very shallow, and it is subject to something called a seiche where the wind blows out the water, blows it east. Then the water comes back, like a bathtub, and floods the western shore. I'm concerned about the potential flooding of that Davis-Besse Plant.

In addition, it was mentioned earlier that there were Tritium leaks in 2009. There was also a Tritium leak in 2008. The grounds are contaminated. I'm concerned about the buried piping at the Davis-Besse plant, about the leaking of Tritium, about the potential of flooding externally, the potential of flooding internally at the Davis-Besse plant. This is an aging plant. And with that Tritium leak and as you run a nuclear power plant into the ground, which is being proposed, another 20 years there are going to be increasing leaks, increasing contamination.

So I'm requesting that the NRC, my comments of Scoping are such that there needs to be an increased decommissioning fund for the next 20 years that they're proposing. That there needs to be a mechanism put in place that comes out of their bottom line, not the ratepayers. Because the more, and longer they run that plant the larger the cost of decontaminating, decommissioning will be. We saw this phenomenon over at the Yankee, the Vermont-Yankee plant. The decommissioning costs are soaring there. There's not enough money that's been set aside to decommission the plants properly and the longer they run, the higher the price tag goes for decommissioning.

In addition, a scoping comment I have is the thermal pollution coming off the nuclear power plant. It's about a thousand nine hundred, about nine hundred megaWatt facility. That's close to three thousand megaWatts of thermal heat coming off of that. And, as we've seen, Lake

Erie is beyond the tipping point when it comes to algal blooms. We are beyond that point. We have several facilities in the western basin of Lake Erie; several coal plants, and several nuke plants and the Lake cannot take the load.

So I am requesting that the algal blooms that are occurring on Lake Erie, the *lyngbya wollei*, which is a toxic algae--it's leading to the eutrophication of Lake Erie, the death of Lake Erie, I am requesting that this concept of algal blooms be investigated, and thermal pollution from the nuclear power plant be considered.

In years past, about five years back, we challenged the nuclear power plant, the Pallsades on their relicensing. They made several promises to the Advisory Committee on Reactor Safeguards. They made promises that they would upgrade equipment, that there would be replacement on major components. They have not done so. With that promise, the NRC, the regulator, allowed them to relicense. They have not done the work since. The plant got sold to an Entergy Company which has now ten nuclear power plants that they basically buy like used cars and run them into the ground. They do not do proper maintenance, the proper repairs. These are limited liability companies that once they have a major accident, they will walk away and leave the public to with the clean up.

So, I do not have confidence in the NRC to force about proper equipment, maintenance. Perpetually, there are exemptions that are requested and just as a matter of rubberstamping--the Nuclear Regulatory Commission, the Nuclear Rubberstamp Commission, allows them exemption time after time. Again. Production over safety. Profit over people.

In addition there is a IFSC, IFFSC. It's dry cask storage of high level nuclear waste. High level nuclear waste is currently stored outside at the Davis-Besse. This has a.. there's..No one wants this nuclear waste. Yucca Mountain is not going to happen. It's not geologically sound. It's not scientifically sound. It's not going to happen. Nobody wants this

stuff. Yet, the NRC runs a con game. They have "confidence" a "waste confidence" decision. It is a con game. They're asking the public, the folks of Toledo, of Ohio, "Please accept our promise to take this waste at some point. We don't know what to do with it just yet. But, we'll figure it out later on. But, in the meantime just let us go and make more."

It's been said that nuclear power is the gift that keeps on giving. It keeps on giving the radioactive waste, and the power is fleeting. But we are left with the deadly lethal legacy for tens of thousands of years. Now we've got to stop the production of this material, and I say do not relicense this and the plant should be shut down immediately. Thank You. (applause)

Mr. DeMare

Okay, alright, next up is Ralph Semrock.

Mr. Semrock

I'm Associate Professor over at Owens. And, um It's very interesting. I'm so glad to see a lot of people here, and I want to thank Joe for um inviting me. Um my wife, Lee, and I, we live 12 miles from Davis-Besse. Out in Ottawa County.

And I was one of the few people, I guess, that actually took one of four tours they had back in 1977 when it was opening. And, I don't know how many of you have been able to take a tour through there, but the word "awesome" is so often over used. It is truly awesome to see the extent, the scope, the size of the systems that they're talking about.

I remember, just what you said [pointing to audience member] the lady here in front, the tour guide said, "The power is going to be so cheap, they won't be able to meter it." We all wondered about that, in awe.

Of course, it's been anything but that. And um, I guess the thing that

irritates me, I teach CAD, I'm more technically involved. Um and what really irritates me when I look at the history of their um operating procedures is that they cared so little for safety, as the previous speaker indicated. And the fact that they cared so little that, um to the point when this terrible pineapple, football sized hole occurred, they should have been monitoring that. The engineers should have been monitoring that. And yet, I'm quoting now. It says, this is from *The Cleveland Plain Dealer*, "For more than two years, the radiation detectors at the Davis-Besse nuclear power plant insistently signalled that something was wrong inside the reactor that houses the reactor." It says, "Although they suspected a coolant leak somewhere, Davis-Besse personnel couldn't find one. So, instead of pursuing the cause, they moved the monitors' intakes to a different spot. So that they don't get these signals. But finally, they even bypassed one of the device's three sensors because it kept triggering alarms and they didn't want to listen to it anymore."

That just scares the heck out of me, because as we've all seen with Chernobyl, this is going to continue for a quarter of a million years. At least over there. And, as close as we were, they cared so little about safety, and all they cared about was keeping the plant running.

Now what further irritates me is that, when they finally did open it up in 2002 and found this hole at the site, even Babcock-Wilcox, the manufacturer of the plant, recommended to them "You shouldn't replace the head." And um. Because the one that they got from the middle of Michigan had the same, poor quality alloy, steel in the control nozzles that are welded on to the top of the reactor head for where the control rods go down.

It had the same steel! As what was made originally. Davis-Besse had ordered a replacement head from Europe, but it wasn't going to be done until 2014. Well, they didn't want to wait twelve more years. It was back in 2002. So what'd they do? Go get the one that wasn't quite finished from Midland Michigan. And bring that down. Against Babcock-Wilcox's advice, they put it on.

So guess what? They're seeing the same cracks as was mentioned before. The same cracks with the lower alloy quality steel, around the openings, the nozzles. And they're having trouble. And they're having to repair those expensively and when they dye checked them, after the repairs, they're still finding a few leaks.

This is what we have to look forward to, because they *did not wait to do it right*. If they were going to replace it. The one that they're supposed to get in 2014 has the higher quality alloy steel that can take the heat, four, five hundred degrees and 650 pounds per square inch pressure. But no, they won't do that. They had to get it in now. They had to spend \$220 million doing it. So now, this is what we have, six years later, eight years later.

And they said that... This is very interesting to me. As other people have mentioned, you can't trust the NRC. I certainly don't trust them. But as they said back in 2002, all misinformation and the cover ups that FirstEnergy did to the NRC, they said that that was the worst in the nuclear industry in America. The worst!

And then they make a scapegoat out of the engineer who was a whistle-blower. And the NRC, I don't know if you... I did some research. I didn't know it but I found out that they banned him from working in the nuclear industry for five years. The engineer! Did they do anything to the people above him? No. They still have their jobs. Maybe FirstEnergy fired a few, I don't know. But they blamed it on this guy. Like he was the sole cause of this horrible, potentially horrible, accident. Really. Really. One person.

That just amazes me. That right there that just loses the credibility right away. Now. They want to license it for another 20 years. Do you know why? They want to get their money back from the head that they put on, obviously. But, assuming they can even get that working correctly, and safely as mentioned previously again, what about all the other

equipment? All the other, the piping, steam generator, everything?
What's going to happen for another 20 years with that?

They have a miserable record. They do not care about public safety. They say they do, but their actions speak differently. The very fact that they tried to cover things up speaks differently. So.

And the fact that after the accident and everything after 2002, 2004 and into 2005 the NRC had this wonderful policy, making potassium iodide pills available to everyone. Within a ten mile radius. They were contacting all the pharmaceutical, all the pharmacies, to make sure that you could get, you'd get a coupon in the mail. And, then you'd go to the pharmacy and get your two pills. To help you. In case a...what did they call it euphamistically?..an "incident" happened. An incident.

That pisses me off. So, I just agree that they should not get relicensing whatsoever. They have done the *worst* job in managing this plant. They *do not* follow good engineering principles. They're making the same mistakes all over again. They should be shut down permanently, and they should not be relicensed. Thank you. (applause)

Mr. DeMare

Alright, we just have one more speaker, and then I'll have a few, concluding comments, and then this official People's Hearing will be done. But right now, we'd like to hear from Mike Leonardi.

Mr. Leonardi,

Good afternoon, everybody. I've been living in Italy for about nine years since, um...I remember just before leaving we organized a demonstration to shut Davis-Besse down. It was in a park in the shadow of the uh um plant. A few years before that we organized the Zebra Mussel Alliance, taking the name from the mussels that had clogged the intake valves, to try to shut down Fermi II nuclear power plant. We were

successful in shutting it down for a day.

My wife who's from Naples, Italy (indicated on this map right over here). You can see. Italy is one of the only countries in Europe that is nuclear free. And the reason why it is nuclear free is because they voted by citizen's referendum in 1994 to not allow the generation of nuclear power within the country. Um It did have nuclear plants, before.

Where I'm coming from most recently is in the South of Italy, Calabria. A region in the south where there is no industry to speak of. There were textile mills that are all shut down. Other than that, there are no um major industrial plants of any kind. It's a rural, agricultural area.

Along the river valley in Calabria called Fume Oliva, the river Oliva that flows directly into the Mediterranean Sea -- a beautiful coastline. They found Cesium-137. Nuclear waste. High level nuclear waste. It can only be found in nuclear power plants.

This was brought there and dumped illegally by a network of Mafia and State governments that have used the south of Italy and the South of the World as a virtual dumping ground, a real dumping ground, of high level radioactive and hazardous wastes.

In Basilicata, which is a region right to the north of Calabria in the south of Italy, they discovered that there are high level radioactive wastes, spent fuel rods, from a nuclear power plant in the United States. I believe the nuclear power plant is called Falls Creek. But, I'm not sure. I can't be sure of this. And it's stored in Basilicata in the South of Italy. So under the Nuclear Regulatory Commission's so called "watch" high level radioactive waste has ended up in the South of Italy. From the United States. Italy which doesn't have nuclear power plants. Basilicata which does not have a nuclear power plant. It has a mothballed plant.

I would go farther than to say the Nuclear Regulatory Commission is a "rogue" organization. I would call it a "terrorist" organization. And I

would say that the cancer that people are suffering from in Clyde, Ohio, I know that Lucas County, when I left ten years ago had the highest cancer rates of the State of Ohio. We're all facing cancer as our future. And this cancer, I would say is on the most part, is on the hands of... It's a legacy of industrial capitalism, but this cancer is on the Nuclear Regulatory Comissions hands because they have done nothing to police or regulate or control this industry. It's disgusting, it makes me sick to my stomach.

When I tell people stories about living between Fermi II and Davis-Besse, they think of Toledo as something out of "The Simpsons" a popular TV show in across the world, and that's how they imagine it. It's like a colonization of the people's minds that live here, as well. There is this disengagement. The people don't have time to think in this, you know...

I was listening to public radio the other day and they were talking about how they felt like "the Rust Belt" was kind of offensive terminology to use for this area of the country. And the thought crossed my mind well why not "The Cancer Belt" instead? Because that's the number one killer in this area. So, if the "rust belt" is too nicey-nice. You know, they want to consider it the "water belt" but the "water belt" is contaminated.

I was hearing on NPR a couple days ago, too, Mike Keegan, and I'm pretty sure there's something going on. They said that there was a low level radioactive waste leak from the Fermi II nuclear power plant. They interviewed some guy that representeing Fermi saying, "Oh yes. It was just a minor leak into the water supply. We can guarantee that it won't happen again. We're sure that there's not going to be any releases that are gonna endanger the public in the future." This is what we were trying to shut Fermi II down about, what fifteen years ago, twelve years ago. The same radioactive releases that they were doing then.

I want to thank Tom Henry and his work at *The Blade* because I've been following the situation at Davis-Besse like a horror story from Italy.

And, you know, I'm really happy to be back. And I want to also say that *The Blade* when I was talking to John Robinson Blach years ago, he suggested doing something that I think that we might try to do. Which is to do a maybe in cooperation with the urban affairs department at the University of Toledo and the sociology department is a scientific poll of the citizens of northwest Ohio, Ohio in general, get their opinions on nuclear power. For Toledo, it might just be the Toledo residents. John Robinson Blach was quite confident that the majority of people would be opposed to nuclear power here, especially having watched the story unfold in the paper. Even though I don't think that the majority of the people read the paper anymore. But, it's something worthwhile doing. I think that the majority of the citizens are opposed.

I don't have any faith in the Nuclear Regulatory Commission to do anything about the issue, but, thanks. That's all I have to say. (applause)

Mr. DeMare

Alright, well, I just have one or two things to add to all the excellent comments and observations that were made here all afternoon.

I want to thank everyone here for having the patience to sit through the process, and for having the patience to keep dogging this industry for more than forty years. Because without that dogged opposition I'm confident, I'm certain that by now we would have had at least one nuclear power plant melt down. Um you know, as hard as it is, I believe that environmentalists have prevented disasters from occurring.

We haven't done enough. We haven't killed this monster yet. But, I think I had hopes that it would die a natural death. That as each plant reached the end of its operating license it would simply be pulled off the market for economic reasons. Now they're trying to give us undead nuclear power plants. Nuclear zombie power plants.

I have just a few very quick observations. First of all I've been asked to

tell everyone my e-mail. Especially if you made comments and if you have a written version you can e-mail me for inclusion in the submission to the NRC. My e-mail is electricity2.. That's the number 2 as in you know, other electricities. electricity2@cs.com. "C" "s" That's short for compuserve. Oh question, Yes?

Unidentifiable Woman

Um. I just wanted to. All the comments that this is going to be played um in front of a panel. The comments recorded.

Mr. DeMare

These comments will be submitted to the NRC, and the other thing I wanted to tell everyone is that I'm going to take the film and the video that we've made and create a compilation of it, and I'm going to have it available. I'm going to put it on TransferBigFiles.com, and I'll send e-mails around to interested people so that they can download it and review it. Because there's been a ton of information. I know I haven't absorbed it all. I've tried my best but, uh. There's been a lot. Yes?

Unidentifiable Woman

I just wanted to know, um, I don't know if we have a scientist here or anyone from the Lake Erie um I'm so sorry. But the Lake Erie um

Mr. Compaan

Resource Center?

Unidentifiable Woman

Resource Center and talk about the rise in microcystine levels due to the thermal pollution. And how that. I mean are they aware that did anyone comment on that

Mr. DeMare

Yes...

Unidentifiable Woman(Interrupting)

Are they aware! That did anyone comment on that for them.

Mr. DeMare

Yes we've had comments on Microcystine.

Unidentifiable Woman

levels.

Mr. DeMare

Levels.

Unidentifiable Woman (Interrupting)

I mean I know that inadvertently...

Mr. DeMare (Interrupting)

If you have questions maybe you could ask Anita...

Unidentifiable Woman (Shouting)

It's not a question! I just want the panel to know that inadvertently when people start dying or getting sick because the levels occur. Is there any way that they could possibly be held responsible or get sued?

Mr. DeMare

Well that's a good question. I hope so. (laughter) And I don't know the answer. Um if you have...

Unidentifiable Woman. (Interrupting)

Because there...

Mr. DeMare

If you want want to ask, if you want to ask what we've been over for the last three hours...

Unidentifiable Woman.

No they don't. I just wanted to make sure that someone said that to them. And realize that the microcystine levels are are rising.

Mr. DeMare

Yes. Someone has said that. Tony Szilagye mentioned that in his comments.

Unidentifiable Woman

I'm sorry. It's like I just mention

Mr. DeMare

Now another question from the back. Oh. Ok. Well. Um. Actually. Let's see. I think we're reaching the point of winding up here. So. Um.

Something else I just wanted to mention that Tony Mangano, Anthony Mangno has pointed out that thyroid cancers in Ottawa County, right

around the plant, went from below the national average before the plant started operating to above the national average now.

And, in fact, research says that cancer rates, thyroid cancer rates particularly, just about double when you put a nuclear power plant in.

So, Iodine, radioactive iodine is very rare. Thyroid cancer is very rare. Pretty much you can count on the fact that those people who are dying from thyroid cancer are dying because of radioactive releases from the plant. Radioactive releases that are casual, that are average, that are "normal," part of their normal operations.

So, people are dying. They're in the hundreds now. If we keep doing this plant and radioactive thyroid, uh. Iodine, radioactive isotopes of Iodine stay radioactive for 20 million years. So the more we generate the more we'll be. People will die from the cancers caused by this radioactive Iodine. They're in the hundreds now. Another 20 years they'll be in the thousands.

So what we are trying to do here is prevent thousands of people from being killed by an unnecessary form of energy. We've heard testimony here today about just exactly why that's so unnecessary.

So, I wanted to thank everyone here for keeping up the fight. And um I think Kevin has one more comment about the next step would be after this comment period is over. We'll submit comments. But after this is finished then we're going to have interventions. Once they grant the license. We're expecting they'll grant it. We'll be able to perhaps put in one last line of defense to stop this monster. Let it die a natural death. So, here's Kevin one last time.

Mr. Kamps,

Thank you again for organizing this Joe and Anita really appreciate it. Thanks everybody for coming out today to come out.

So on this intervention deadline, we face a December 27th deadline to file our contentions, our intervention against the 20 year license extension. It's also the deadline for environmental scoping comments.

Umm.. the um *Federal Register* Notice appeared on October 24th. They have a very short window of Intervention opportunity of sixty days which fell on December 24th which is an official holiday, and the technical rule is the next business day. That becomes the deadline. That's December 27th. So, it's an indication, gives you an idea of how brutal the NRC's process is. That extends right into the technical requirements of intervening.

One of those is to obtain standing, and that's the main thing I'd like to talk about. Anyone who lives within 50 miles of Davis-Besse could, almost automatically, receive Standing to be a Party to this proceeding. And it's important for a group like Beyond Nuclear. We do not live that close, we're about 500 miles away. So for us to enter a contention and get standing, we're gonna need supporters in the local area. And if you're a member of another environmental group you could encourage that group to join with Beyond Nuclear and become a Party to the proceedings as well.

So if you are interested and you do live within 50 miles, please afterwards come see me. I'd love to get your contact information. We can discuss it further. You don't need to decide today.

It's a simple form; it's a one sheet form. We already have the language. Not with us; we didn't have enough time to pull it together. But we've used it in other proceedings like Fermi III, like Pallsades, and all you have to do is agree to it. It gets you individual standing, and it also gets organizations standing. We can actually file this paperwork in time.

And, um just to close, I would like to say that Italy was mentioned, and I took a lot of inspiration several years ago from (if I pronounce it

correctly) Scanzano, Italy where Berlusconi came out of the blue and said, "We've figured out where we're going to put all the nuclear waste. We're going to put it in Scanzano." Just announced it one day, and within couple weeks, there were hundreds of thousands of people in the streets: blocking the train tracks; occupying the site that was targeted; and um two weeks later, Berlusconi said, "Well, we're going to study it some more." (laughter from audience) He reversed himself.

In Germany, what I was getting to here, in Germany the Angela Merkle Government has reneged on a ten year old agreement called the "nuclear consensus" that the Social Democrats and the Greens prioritized to phase out nuclear power plants at the end of their operating licenses. And so, what Merkle has done is to push for extensions at certain of the reactors. Just like as proposed at Davis-Besse. And what this has led to is just incredibly large protests in the streets.

Several months ago, 120,000, 150,000 people formed a human chain between two nuclear power plants. It stretched 75 miles long. More recently, a few months back, about 100,000 people in the streets of Berlin, protesting the license extensions.

Then most recently, there's annual protests against radioactive waste shipments to um they call it a "centralized interim storage site." A warehouse which is right next door to a targeted deep geological disposal site. What a coincidence, Ha! And every year there's protests. I was there in 2001 there were 10,000 protestors 15,000 police.

So, it takes police state tactics to move a few containers of waste. At a huge cost. We're talking \$100,000,000 for one of these shipments. And this past protest was 50,000 people.

So, I just wanted to leave on the hopeful note that, in other places where license extensions are proposed there are huge groundswells of opposition. So, inspiring stuff. Thanks. (Applause)

Ms. Rios,

Thanks everybody for coming out. Just a few last housekeeping sorts of things. I realize that there is a lot that we still need to learn a lot that we still need to organize and there's a lot that we still need to discuss. So, um, what I would say is that everybody who signed in, we have your e-mail addresses.

Those e-mail addresses are going to go back to the groups that sponsored this: the Green Party; the Sierra Club; Beyond Nuclear; and the Coalition for a Nuclear Free Great Lakes. We will continue to get you information unless you ask to be removed from our list. We will send you information about what happened here today. We will send you additional information about the additional actions, because obviously, one of the things that we need to do from here in Toledo and North West Ohio is to go back to our elected officials and demand that they speak for us on this.

And that may mean that we have to start asking Monroe City Council, Toledo City Council, our state legislatures to pass ordinances in opposition to this. We need to speak with a loud voice on this, and we need to speak with a united voice on this. So, there's a lot more ahead of us.

So, I know that there are many questions that we have done um done today or not done yet, too, because we are so, so tired now. So, what I would say is if you want any specific information, go back to the sign up sheets. Put a note in. You're also welcome to talk to Kevin and Michael and folks from the Sierra Club or me and Joe from the Green Party in the next few minutes. We still have a few minutes before we have to be out of here. And also there's still soup left in the back, and there's cookies, and help yourself.

Yes? Eric?

Eric Britton

If it helps anyone, we have space at the Perrysburg library reserved for the first Wednesday night in January. For a follow up meeting.

Ms. Rios

Okay, that's the first Wednesday night in January. If we have your e-mail address you'll get that in the e-mail. That's the Sierra Club. Okay Thank you for everyone. (Applause)

Mr. DeMare

And if anyone is concerned about the issue of transporting nuclear wastes across the Great Lakes, Ed McArdle is....

(Unintelligible)