Bubar, Patrice

From: Sent: Carol McGeehan [cmcgeehan@sbcglobal.net] Wednesday, March 27, 2013 12:48 PM

Bubar, Patrice

To: Cc:

Carol McGeehan

Subject: NRC/Palisades comments for March, April, 2013 meetings

To: NRC Commissioner William Magwood IV, March 25, 2013

From:Carol McGeeham Holland MI 49423

Re: Safety concerns at Palisades Nuclear Plant

I live in Holland, Michigan within 40 miles of Palisades Nuclear Plant. I am very concerned about the safety problems at Palisades, as evidenced by an ongoing series of leaks and unplanned shutdowns in the past few years. This led to Palisades being demoted to level 3, as one of the worst nuclear plants in the US. After inspections and a safety drill in the fall of 2012, Palisades was upgraded to level 1 and declared to be safe again. Since then, there have been more leaks in Nov.2012 and Feb.2013. I have attended several NRC public meetings where citizens were assured by NRC and Palisades officials that the leaks were minor and no threat to the public and that Palisades is operating "safely". This upgrade is not logical in light of Palisades' past and ongoing problems.

I am concerned about risks to public health and to air and water quality, especially from the "low level" radiation leak in 2012 and the "permitted" "routine radiation" discharges into air and water. NRC's draft EIS on the 2006 Palisades license extension documented that there are releases of radioactive wastes into Lake Michigan once or twice per season. The National Academy of Science has stated that there is no safe dose of radiation and that every dose can potentially cause cancer. Physicians for Social Responsibility has stated these same concerns, especially for children and pregnant women. NRC needs stricter standards.

Lake Michigan is the source of drinking water for millions of citizens that live around it. Other people drink well water which could be contaminated by leaks or releases into groundwater. The NRC Fact Sheet "Tritium, Radiation Protection Limits, and Drinking Water Standards" (Feb. 2011) states that "Nuclear power plants routinely and safely release dilute concentrations of tritiated water." It also states that "Nuclear power plants have reported abnormal releases of water containing tritium, resulting in groundwater contamination". NRC further states that "very small doses of radiation have very little risk" and call it "acceptable". Citizens who live near Palisades disagree. Please provide specific test results and documentation to support the claim that Palisades is safe. The public needs documentation of the amounts, dates and independent test results of all radiation releases and leaks from Palisades in order to verify the claims that the plant operates "safely". Thank you for your assistance.

Taylor, Renee

From:

CMRMAGWOOD Resource

Sent:

Wednesday, March 27, 2013 10:32 AM

To:

Taylor, Renee; Jimenez, Patricia; Temp, WDM

Subject:

FW: 3-25-13 Follow up Letter to Commissioner Magwood.gov

Attachments:

Magwood Letter 3-25-13.docx

From: Bette P [mailto:bette49022@yahoo.com] Sent: Wednesday, March 27, 2013 10:09 AM

To: Bubar, Patrice

Cc: CMRMAGWOOD Resource

Subject: 3-25-13 Follow up Letter to Commissioner Magwood.gov

Hello, Ms. Bubar,

I hope that your tour of Palisades yesterday continued to be interesting. I was grateful for the opportunity to meet with and speak before Commissioner Magwood and you on Monday. Please find attached my letter to the commissioner as a followup which includes my comments and questions that were presented at the meeting.

Please confirm your receipt.

Thank you,
Bette J. Pierman
Michigan Safe Fnergy Future (South Haven)

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Benton Harbor, MI 49022

March 25, 2013

Commissioner William D. Magwood, IV U.S. Nuclear Regulatory Commission Mail Stop O-16G4 Washington, DC 20555-0001

Dear Commissioner Magwood:

I am writing to you as a concerned resident and community member living south of Palisades at the halfway mark between Palisades and DC Cook on the shore of Lake Michigan. I have the following concerns regarding the Palisades plant, and I am requesting answers to specific questions to help our community ensure the continued safe operation of Palisades.

Here are my Concerns and Questions:

1. Tritium Leak/Inoperable Air Monitoring Equipment

In December 2007, tritium was detected in a groundwater monitoring well at a level of 22,000 pCi/L. The source of the activity is leakage associated with T-91, the utility water storage tank, and associated piping. T-91 is used to store processed liquid waste prior to discharge. No radionuclides other than tritium have been detected in the groundwater. Tritium is still being released to the environment (Lake Michigan) via an unmonitored pathway, as demonstrated by the continued detection of monitoring well sample activity. However, repairs have been made and tritium concentrations have dropped to approximately 90% of values seen in previous years. A definitive release rate or total activity released cannot be determined. Conservatively, 0.5% of the total tritium activity released via batch releases, or half of the percentage that was used in 2007, 2008, and 2009, was used for 2010 effluent calculations.

Date and Duration - Tritium was first detected in a monitoring well in December 2007 and release to the environment is still occurring.

Location - The location is between the northwest corner of the auxiliary building and Lake Michigan; the plume roughly paralleling piping associated with T-91.

Volume - The volume release is conservatively estimated at 0.5% of liquid radioactive waste discharge volume - 3886 gallons.

Estimated Activity of Each Radionuclide - 3.37 curies of tritium

Effluent Monitoring Results - PNP has no offsite monitoring wells as part of the ground water monitoring program.

On-site Monitoring Results - Monitoring well sample results range in concentration from < MDA to 11,029 pCi/L for the most affected well.

Depth to Local Water Table - The depth is approximately eight to nine feet.

Classification of Subsurface Aquifers - Not used for drinking water.

Size and Extent of Any Groundwater Plume - Fifteen yards wide by fifty yards long. Expected Movement/Mobility of Groundwater Plume - Westerly direction down-gradient toward Lake Michigan at approximately two feet per day.

Land Use Characteristics - PNP site property, water not used for drinking or irrigation. Remedial Actions Considered or Taken - None

In the 2011 Annual Effluent Release Report:

...Additional repair of underground piping was performed during the spring of 2011. The overflow line to T-91 was sleeved to ensure piping integrity. This line was assumed to be dry, based on all indication, but contained highly tritiated water of which a small amount was expelled during the sleeving operation. This resulted in an additional release of tritiated water to the groundwater which caused spiking in monitoring well 3. This event is further discussed under section 9 of this report.

Monitoring of the groundwater tritium plume continues in order to determine repair effectiveness and to ensure the accuracy of the site hydrology.

Depth to Local Water Table

— The depth is approximately eight to nine feet.

Classification of Subsurface Aquifers

Not used for drinking water.

Expected Movement/Mobility of Groundwater Plume

— Westerly direction down-gradient toward Lake Michigan at approximately two feet per day.

Land Use Characteristics

- PNP site property, water not used for drinking or irrigation.

http://pbadupws.nrc.gov/docs/ML1112/ML11129A078.pdf

http://pbadupws.nrc.gov/docs/ML1212/ML12121A010.pdf

Questions:

- If the Tritium release to the environment—first detected in a monitoring well in December 2007—is still occurring, why has the leak not been stopped? What steps have been taken to clean up the site and remove the Tritium contamination?
- How is the Tritium plume being monitored? How far from Lake Michigan is it at this time? What steps are being taken to prevent it from reaching and contaminating Lake Michigan and other area watersheds?
- When Entergy and NRC resident inspectors discovered the leak, did they notify the area governments i.e. South Haven and Covert City Councils and the local township boards so that they could more closely monitor the drinking water being drawn from Lake Michigan? What about those governments further South where drinking water also comes from the lake?

Effluent Monitoring System Inoperability

The effluent monitors that were out of service for greater than 30 days were:

RIA-2323, B steam generator main steam line monitor, was out of service from March 28, 2010, to July 26, 2010 (120 days). RIA-2327, high range noble gas monitor, was out of service from July 4, 2010, to December 15, 2010 (142 days). http://pbadupws.nrc.gov/docs/ML1112/ML11129A078.pdf

Questions:

• Regarding the failed Effluent Monitoring System Inoperability, why was this deemed an acceptable occurrence for a monitor to be out-of-service for "greater than 30 days"? It is particularly disturbing that the "high range noble gas monitor was out of service for a total of 142 days in 2010. How can the public be assured of safe plant operation when they learn of instances like these? How does anyone know what they may have been exposed to during this time?

2. Low Lake Michigan Water Level Risks

Many recent reports have warned of the increasing problem with lake water levels in the Great Lakes. In a letter to the editor of the Herald Palladium on Oct. 2, 2012, John B. Ehret Stevensville about Lake levels threaten nuclear power plants expressing his concerns "...nobody thought about the fact that there are about nine nuclear reactor power plants on the shores of Lake Michigan, Lake Huron and Lake Erie. If our bone-dry forests catch fire, the concrete nuclear plants won't burn, but the power lines will melt, and the plants will be forced to deal with hot reactors and nowhere to unload the reactors' power. We could be faced with a Three Mile Island or Fukushima-type meltdown, where our safety is solely dependent on access to the cool water of the Great Lakes... the startling bureaucratic fact is that the ACOE, the IJC, the Nuclear Regulatory Commission and the various private owner-operators of the nuclear plants do not communicate with each other about lake bed lowering or raising the lake levels. Both affect water depth, which in turn controls the height of waves at the shore or nuclear plant seawalls.

http://www.heraldpalladium.com/opinion/letters_to_editor/letters/article_362b0d03-09e8-54c4-bc26-b9519f28686c.html

Another resource reported lake levels near Palisades "one of the most highly stressed, or environmentally threatened areas" on Lake Michigan. (See map) http://www.freep.com/article/20121218/news06/121218004

Questions:

- In the event of a super storm hitting the shores of the greatest freshwater, inland lake
 system in the world, how are you going to prevent the nuclear waste storage casks and
 reactor from ending up in the lake contaminating the source of drinking water for untold
 millions of people? What is the plan? (Yes, we have 25 foot plus waves on Lake
 Michigan, and we have not experienced a super storm yet.)
- Reiterating the comment in this LTE, "if our bone-dry forests catch fire, the concrete nuclear plants won't burn, but the power lines will melt, and the plants will be forced to deal with hot reactors and nowhere to unload the reactors' power." What plans are in place at Palisades to deal with this scenario and when has it been tested?

- What plans are in place at Palisades to deal with the fluctuating lake levels and how those levels will impact the plant safe operation on a daily basis and in the event of a super storm?
- What measures are in place to ensure that the storage casks will not end up in Lake Michigan with the potential for major contamination in the event of an unprecedented super storm?

Additional references:

http://www.weather.com/news/great-lakes-record-low-water-levels-20130206

http://www.freep.com/article/20121218/NEWS06/312180137/Lakes-Erie-Ontario-most-threatened-study-finds?odyssey=mod|newswell

http://thewmeacblog.org/2013/01/10/lakes-michigan-and-huron-have-hit-all-time-low/

http://newswatch.nationalgeographic.com/2012/11/20/climate-change-and-variability-drive-low-water-levels-on-the-great-lakes/

3. Fire Safety Lack of Compliance

In Spring 2006, Consumers Energy cited the need to upgrade fire protections as an expense it could not afford, thus leading it to sell the plant to Entergy.

Re: the 2008 Dave Lochbaum report co-authored with Paul Gunter and Jim Warren Fire When Not Ready, Lochbaum that the only thing that would have been revised today was the date. "50 of the nation's 103 nuclear power reactors are KNOWN to violate federal fire protection regulations...an industry and regulator constantly asserting that safety as the top priority cannot achieve compliance with very important safety regulations despite decades of time to do so...if actions speak louder than words, inactions speak the loudest. NRC's inactions on this topic are deafening."

"...And the NRC knows the fire hazard is very real:

'Approximately one-half of the core damage risk at operating reactors results from accident sequences that initiate with fire events.' In other words, the reactor meltdown risk from fire hazards is roughly equal to the meltdown risk from <u>ALL</u> other hazards, combined. It is important to realize that the risk assessments assume the plants are in complete compliance with fire protection regulations to minimize the chance that a fire propagates to disable redundant systems as at Browns Ferry. The known non-compliances with these regulations mean that the fire risk is likely higher than reported."

Questions:

• After reviewing the FEMA After Action Reports and Communication Re: Specific Emergency Exercises at http://www.nrc.gov/about-nrc/emerg-preparedness/related-information/fema-after-action-reports.html, I could not understand why there have not

- been any reports for Palisades since 2004. In light of the relicensing approval in 2007, how could the NRC make an informed decision without this information?
- Where does Entergy stand with the enforcement of the new fire rules at Palisades? Have they been given a waiver and deadline extension by NRC until 2016?
- If Palisades is not enrolled in the new fire program, what interim steps are in place to protect the reactors while they work on their new fire plans?
- When was the last fire inspection conducted by the NRC staff, and what were the 3 to 5 areas for scrutiny at that inspection? Are they conducting these inspections every 3 years or more often in the case of Palisades safety record?

Additional References:

http://www.propublica.org/article/nrc-waives-enforcement-of-fire-rules-at-nuclear-plants

Sincerely,

Bette J. Pierman

Michigan Safe Energy Future (South Haven)

Lette X. Pierman

Cc: File

Patrice M. Bubar, NRC Chief of Staff

Kraig Schultz
Michigans Safe Energy Future (South Haven)
Grand Haven, MI 49417 USA
Phone:

March 25, 2013

Commissioner William D. Magwood, IV U.S. Nuclear Regulatory Commission Mail Stop O-16G4 Washington, DC 20555-0001

Dear Commissioner Magwood:

I am writing to you as a father and community member living 49 miles from the Palisades Nuclear Power Plant. I have the following concerns regarding the plant and I am requesting answers to specific questions to help our community ensure the safe operation and decommissioning of Palisades.

Here are my Concerns and Questions:

1. Embrittlement Testing Status:

Given the findings in Japan related to non-expected and rapid increases in reactor vessel embrittlement that fall well outside of projection models, we are concerned that embrittlement may be advancing more quickly than prediction models might indicate.(1) This may mean that embrittlement at Palisades is far worse than we predict it to be.

- a. Please provide us with the exact dates and with reports for each of the actual samples that have been taken from the Palisades Reactor (1971-2013).
- b. Please provide us with the dates that are planned for future samples to be taken.
- c. Please provide us with a plot of the prediction model that shows actual data points taken during Palisades operating history.
- d. During the embrittlement webinar last week there was mention of two samples left. How many data points on the embrittlement chart will the remaining samples provide?

2. Status of Plant Improvement Projects:

In August 2006, David Joos, the Chief Executive Officer of Consumers Energy Company, under direct testimony to the Michigan Public Service Commission was asked, "Why did Consumers Energy decide to sell Palisades?"

As one of several reasons, David Joos, answered, "There are significant capital expenditures that will be required at Palisades over and above the normal approximately \$20 million annual amounts. These include investments NECESSARY for the reactor vessel head replacement, the Steam Generator replacement, for the Combined Pressurizer/Alloy 600 program, and for various

other life extension projects. The total of these non-routine capital expenditures could exceed \$589 million over the next 10 years." (2)

As a community, these were factors under which we agreed to allow the sale to Entergy. Please provide us with the specific status (planned or actual completion dates) of the following improvements that were identified by Consumers Power as significant and NECESSARY:

- a. Reactor vessel head replacement
- b. Steam Generator replacement
- c. Combined Pressurizer/Alloy 600 Program
- d. Reactor Vessel Embrittlement Issues
- e. Increased Fire protection
- f. Containment coatings
- g. Sump strainers

3. Decommissioning Fund:

For a matter of public record, we would like a detailed accounting of how the Palisades decommissioning fund shrunk from having

- a. \$566 million on March 1, 2007 to only \$230.8 million on July 31, 2009 (3) (4)
- b. Also, how much remains in the decommissioning fund today?
- c. Given that we have so little experience operating Nuclear Power plants past the age of 40 years, why did the NRC allow the fund to be depleted? (5)

4. Age and Breakdowns:

Of major concern when re-licensing a plant to continue operating past its designed life of 40 years, is the concern for deterioration and unplanned failure caused by age. Since September 2011, Palisades has had 8 UNPLANNED shut downs! 8 shut downs in 18 months of operation (refueling shut down was planned and occurred April 8-May 12, 2012)! So, our Mean Time Between Emergency shut-down is approximately 9 weeks. (6)

- a. Does the NRC consider this frequency of unplanned shutdowns acceptable?
- b. Does the NRC track the Mean Time Between Failure (MTBF) or other metrics to provide <u>non-subjective</u> criteria to rank how well a plant is being maintained and how well its design is holding up under the stress of age? What metrics are used?
- c. Is there a chart or graph that indicates how Palisades has performed over its entire 42 year lifespan for reliability? Has Palisades always been this bad, or is it getting worse?
- d. I wouldn't drive a car that's as unreliable as Palisades, why should our entire community put their very lives at stake to allow the continued operation of Palisades? Wind and Solar PV are now less expensive than Nuclear without the risk. (7) (8) (9) Palisades is operating today, because the NRC extended its license. What is the NRC's justification for allowing Palisades to continue putting millions of people at risk? (10)

References:

(1)

http://www.cnic.jp/english/newsletter/nit148/nit148articles/irradiation embrittlement http://www.cnic.jp/english/newsletter/nit148/nit148articles/irradiation embrittlement http://www.cnic.jp/english/nit148articles/irradiation embrittlement http://www.cnic.jp/english/englis

- (2) http://efile.mpsc.state.mi.us/efile/docs/14992/0001.pdf Page 132 David Joos testimony on reasons for selling Palisades.
- (3) http://efile.mpsc.state.mi.us/efile/docs/14992/0001.pdf Page 13 \$566 Million in Decommissioning fund March 1, 2007
- (4) http://pbadupws.nrc.gov/docs/ML0934/ML093490351.pdf \$230.8 Million in Decommission Fund on July 31, 2009
- (5) http://www.eia.gov/tools/faqs/faq.cfm?id=228&t=21 Average U.S. Nuke Plant is 32 years old, oldest plants are 43 years old
- (6) http://www.michiganradio.org/post/timeline-8-shutdowns-palisades-nuclear-power-plant-past-2-years History of shut downs over last 2 years, 2013 shut down not included on list.
- (7) http://www.eia.gov/forecasts/aeo/electricity_generation.cfm Cost of Wind \$96.0/MWh, Cost of Nuclear \$107/MWh (safe "disposal" costs not included), Cost of Solar PV \$119/MWh
- (8) http://www.michigan.gov/documents/mpsc/implementation of PA295 renewable en ergy 411615 7.pdf page 30, Cost of Wind in Michigan plummets to \$50/MWh in 2013
- (9) http://www.fastcompany.com/1745113/what-happens-when-solar-power-cheap-coal Solar Makes all Dirty Sources of Electricity Obsolete
- (10) http://www.epa.gov/greatlakes/monitoring/great_minds_great_lakes/social_studies/without.html">http://www.epa.gov/greatlakes/monitoring/great_minds_great_lakes/social_studies/without.html 26 Million People get their drinking water from the Great Lakes

Sincerely,

Kraig D. Schultz

Groung D. Schulk

Note: An electronic copy of these questions can be downloaded from the following webpage: www.RenewableFuture.US/palisade1303.pdf

Tom Wesolowski Coloma, Mi 49038

The Herald Palladium letters@TheHP.com

March 15, 2013

My subject of concern is Palisades Nuclear Power Plant located on the shores of Lake Michigan between South Haven and St. Joseph Michigan. It's an old plant and like anything that gets old it starts having its limits. Take us for example, when we're young we've got the capacity to perform to our utmost, and the older we grow, the less performance we show to the point that if we do any of the things we did when we were young ... we break.

We live in a very beautiful area ... one of the most beautiful areas of our country. Why put it at risk? A breakdown of Palisades Nuclear Power Plant would devastate this area to the state of obliteration for years to come. Our forests, our animals, our Lake ... us!

How many of us have lived, worked, played and shared this area with so many of our loved ones? How many of us have been children here? How many of us are newcomers and are living in this bliss for our retirement years? Well think about all of it as gone because of a greedy energy company trying to squeeze every bit of energy and profit from an aging old plant that has been patched up and patched up to the point of now being extremely dangerous.

It's time to put this old and dangerous energy plant to rest before it breaks because we all know what's going if we don't.

Tom Wesolowski

Hagar Shore, Mi

Statement by Gail Snyder Contact Information Email: gail.snyder@comcast.net Cell Phone:

Michigan Coalition of Citizens Concerned about the Palisades Nuclear Facility Meeting with Nuclear Regulatory Commissioner William D. Magwood, IV Monday, March 25th, South Haven, Michigan

Thank you Commissioner Magwood, fellow NRC officials and staff for meeting with us today. I live in Illinois but own a vacation property in this region of Michigan and spend a lot of time in here during the summer at the vacation homes of friends and family. This region along the shoreline of Michigan is a vacation destination for many people from Illinois and Indiana.

The environmental risks from nuclear f are unique in the level of damage they can do to people, animals, agriculture, water the general environment, economics and in the length of time those risks can last. As you are well aware nuclear accidents at Chernobyl and Fukushima have left permanent evacuation zones and caused levels of damage to everything I have just mentioned. While I can appreciate the nuclear industry's and the NRC's constant reassurances that Palisades will not have a meltdown I would just reply that Fukushima was not supposed to happen and neither was the incident at Ft. Calhoun in Nebraska. Many of us here today and others who could not be here today believe the risks taken to operate nuclear power facilities are too great and we do not wish to be put at any continued risk so that they may continue to operate.

The southwest corner of the State of Michigan consists of six counties with a total population of 707,000 people, I am rounding the numbers off. An average of 354,000 people lives within the three counties that make up the shoreline region and another 354,000 people on average live in the three counties in the more inland region. These totals do not include any vacationers or people who have second homes in the region. No one that I have spoken with so far can provide me with any data that shows how many people are in this region during the summer vacation and festival season. I spoke with the Michigan State Demographer, various staff in each of the 6 counties, the company that handles tourism for the State of Michigan; The Pure Michigan Development Corporation, various Chambers of Commerce and the South West Michigan Tourist Council and Emergency Management staff in the six counties and the Michigan State Police, Emergency Management & Homeland Security Division who are in charge of coordinating county emergency staff in the event of an emergency.

Berrien County Sheriff staff told me that they get the information on vacation population through the Census and the South West Michigan Tourist Council. When I told him that the Census does not have that data and that

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GailSnyder

the South West Michigan Tourist Council told me they "do not deal with numbers at all" he said the nuclear facility does an estimate of the people in campgrounds and other such facilities. I asked him where I could get that estimated number from and he was going to get back to me but has not yet provided me with that information. In our list of compiled questions that we will be giving you today I ask for you to provide us with that number.

When I asked an emergency staff person from one of the more inland counties how they determine the number of vacationers in their area he said they use swag "SWAG" Scientific Wild Ass Guess. When I asked, "Do you talk to owners of campground facilities etc...", he said no then he elaborated that they really just take a guess because they were not a big vacation area, but how would they know how many vacation properties exist when haven't done the work? When asking questions about what would happen in the event of a nuclear emergency one emergency staff person in an adjacent county told me that if people were to evacuate from the shoreline counties into their county they would be overwhelmed and that they do not have sufficient resources to handle such an incident and that the counties with nuclear facilities plan for taking care of their own people. He added that currently the counties were working on more coordinated emergency planning and communication. One would think after 30+ years with two nuclear facilities in the region such plans would already be in place and adjacent counties would feel like they were ready.

In Japan the Fukushima nuclear disaster on the shoreline had winds that blew a lot of airborne and waterborne radiation away from the mainland of Japan while people could evacuate in the opposite direction moving inland. Here in Michigan the opposite situation would occur because winds blow inland most of the time. Winds would tend to blow radiation form a nuclear incident along Lake Michigan inland and over those that would be evacuating to the east. As we all now know the concentric ringed emergency planning zones around a nuclear facility do not reflect the real world situation during a nuclear accident and it is the wind that determines what areas will be most at risk.

Chairman Magwood you have been to Fukushima since the nuclear disaster and you have seen the vast area that was impacted by the radiation. The City of South Haven would very likely be a permanent evacuation zone if Palisades were to have a meltdown and we do not want to see that happen. This region is not prepared, the residents are not prepared and certainly the vacationing population is not prepared. How many people is it acceptable to expose to dangerous levels of radiation that will harm them either immediately or in the longer term? My answer is zero.

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Gail Snyder

Governments and Nuclear Regulators have a bad track record of notifying people when they are in harm's way due to a nuclear disaster. As a result any informed member of the public lacks confidence that government agencies have their back so to speak. In a recent speech you gave you pointed out how Russia and Japan failed their people on this point. You held our country up as the gold standard when in fact our government agencies have done no better.

Recently Arnie Gundersen, relayed a story told to him about the workers at the Three Mile Island nuclear facility pulling their children out of school because they were privy to what was really going on as the facility was having a partial meltdown. Nuclear workers and their families understood the risk while other families relied on the government to warn them. Government warnings were delayed as the government and the nuclear facility tried to downplay the problem and prevent panic and bad press. This left children exposed to radiation that their teacher measured at alarming levels during a classroom Geiger counter experiment.

After Fukushima the U.S. Environmental Protection Agency found that their nationwide radiation monitoring system had significant malfunctions. The U.S. FDA failed to recall milk after higher than allowable levels were measured. Our government has done a terrible job at measuring the impact of radiation on food supplies, warning people about high radiation levels from Fukushima and even protecting the military from exposure and providing long term monitoring and care for their radiation exposures.

Recently even you and some on the NRC commission voted against having the nuclear industry install filters to trap radiation that might be released from certain nuclear facilities. Those of us who have been learning about this issue all eventually come to realize that the best determination of a warning about a nuclear incident might be seeing if someone you know who works at the nuclear facility suddenly sends their own family to visit relatives out of the area. As people learn more about nuclear incidents and the government's willingness to take risks with other people's lives they too will decide that nuclear power is not worth the risk they have been unknowingly been under and this is the situation here at Palisades.

----end----

Gail Snyder 3

Michigan Coalition of Citizens Concerned about the Palisades Nuclear Facility Meeting with Nuclear Regulatory Commissioner William D. Magwood, IV Monday, March 25th, South Haven, Michigan

Compiled Questions

Dear Commissioner Magwood,

Please find below a 4 page list of some of the questions that participants in today's meeting have regarding the Palisades Nuclear Facility. Some individuals may submit additional questions to you as letters at this end of the meeting or mail them to you after the meeting. Contact information for your response is provided under each person's name.

Thank You

From Kraig Schultz

Contact Information:

Grand Haven, MI 49417 USA

Email: Kraig@RenewableFuture.US

1. Embrittlement Testing Status:

Given the findings in Japan related to non-expected and rapid increases in reactor vessel embrittlement that fall well outside of projection models, we are concerned that embrittlement may be advancing more quickly than prediction models might indicate.(1) This may mean that embrittlement at Palisades is far worse than we predict it to be.

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- b. Please provide us with the dates that are planned for future samples to be taken.
- c. Please provide us with a plot of the prediction model that shows actual data points taken during Palisades operating history.
- d. During the embrittlement webinar last week there was mention of two samples left. How many data points on the embrittlement chart will the remaining samples provide?

2. Status of Plant Improvement Projects:

In August 2006, David Joos, the Chief Executive Officer of Consumers Energy Company, under direct testimony to the Michigan Public Service Commission was asked, "Why did Consumers Energy decide to sell Palisades?"

10F4 Compiled Questions As one of several reasons, David Joos, answered, "There are significant capital expenditures that will be required at Palisades over and above the normal approximately \$20 million annual amounts. These include investments NECESSARY for the reactor vessel head replacement, the Steam Generator replacement, for the Combined Pressurizer/Alloy 600 program, and for various other life extension projects. The total of these non-routine capital expenditures could exceed \$589 million over the next 10 years." (2)

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- g. Sump strainers

3. Decommissioning Fund:

For a matter of public record, we would like a detailed accounting of how the Palisades decommissioning fund shrunk from having

- a. \$566 million on March 1, 2007 to only \$230.8 million on July 31, 2009 (3) (4)
- b. Also, how much remains in the decommissioning fund today?
- c. Given that we have so little experience operating Nuclear Power plants past the age of 40 years, why did the NRC allow the fund to be depleted? (5)

4. Age and Breakdowns:

Of major concern when re-licensing a plant to continue operating past its designed life of 40 years, is the concern for deterioration and unplanned failure caused by age. Since September 2011, Palisades has had 8 UNPLANNED shut downs! 8 shut downs in 18 months of operation (refueling shut down was planned and occurred April 8-May 12, 2012)! So, our Mean Time Between Emergency shut-down is approximately 9 weeks. (6)

- a. Does the NRC consider this frequency of unplanned shutdowns acceptable?
- b. Does the NRC track the Mean Time Between Failure (MTBF) or other metrics to provide <u>non-subjective</u> criteria to rank how well a plant is being maintained and how well its design is holding up under the stress of age? What metrics are used?
- c. Is there a chart or graph that indicates how Palisades has performed over its entire 42 year lifespan for reliability? Has Palisades always been this bad, or is it getting worse?
- d. I wouldn't drive a car that's as unreliable as Palisades, why should our entire community put their very lives at stake to allow the continued operation of Palisades? Wind and Solar PV are now less expensive than Nuclear without the risk. (7) (8) (9) Palisades is operating today, because the NRC extended its



license. What is the NRC's justification for allowing Palisades to continue putting millions of people at risk? (10)

References:

- (1) http://www.cnic.jp/english/newsletter/nit148/nit148articles/irradiation embrittlement.html Unprojected Ductile Brittle Transition Temperature (DBTT) of Genkai-
- (2) http://efile.mpsc.state.mi.us/efile/docs/14992/0001.pdf Page 132 David Joos testimony on reasons for selling Palisades.
- (3) http://efile.mpsc.state.mi.us/efile/docs/14992/0001.pdf Page 13 \$566 Million in Decommissioning fund March 1, 2007
- (4) http://pbadupws.nrc.gov/docs/ML0934/ML093490351.pdf \$230.8 Million in Decommission Fund on July 31, 2009
- (5) http://www.eia.gov/tools/faqs/faq.cfm?id=228&t=21 Average U.S. Nuke Plant is 32 years old, oldest plants are 43 years old
- (6) http://www.michiganradio.org/post/timeline-8-shutdowns-palisades-nuclear-power-plant-past-2-years History of shut downs over last 2 years, 2013 shut down not included on list.
- (7) http://www.eia.gov/forecasts/aeo/electricity generation.cfm Cost of Wind \$96.0/MWh, Cost of Nuclear \$107/MWh (safe "disposal" costs not included), Cost of Solar PV \$119/MWh
- (8) http://www.michigan.gov/documents/mpsc/implementation of PA295 renewable energy 411615 7.pdf page 30, Cost of Wind in Michigan plummets to \$50/MWh in 2013
- (9) http://www.fastcompany.com/1745113/what-happens-when-solar-power-cheap-coal Solar Makes all Dirty Sources of Electricity Obsolete
- (10) http://www.epa.gov/greatlakes/monitoring/great minds great lakes/social studies/without.html 26 Million People get their drinking water from the Great Lakes

From Barbara Pellegrini, Ph.D

Contact Information:

Benton Harbor, MI 49022

- Does the NRC have a definition of "plant safety?" What are the variables? Which ones are most salient?
- 2. What has NRC done to create a standard protocol for assessing the integrity of materials used in aging nuclear plants?
- 3. Over the tenure of Palisades, the NRC has collected a lot of data. What has NRC done to convert that data into derived variables for purposes of trend analysis and prediction modeling?
- 4. What criteria does the NRC use to judge the integrity of reports received from plant officers?
- 5. Has the NRC ever called in a third party to validate the test results received from any plant?
- 6. Does the NRC regard the nuclear industry as an entity in need of monitoring? Why or why not?
- 7. Chairman Jaczko at the meeting on May 25, 2013 in South Haven said, "It is very hard to shut down a plant because we need hard empirical data." Does NRC concur with that statement? What policies has NRC advanced that would increase the collection and amount of hard empirical data for decision-making?
- 8. How many employees at NRC have a doctorate in nuclear science/engineering? Out of how many employees?

30F4 Compiled Questions 9. Who among the NRC Commissioners have a doctorate in nuclear science/ engineering? In any science?

From Carol McGeehan

Contact Information:

Holland MI 49423

Email: cmcgeehan@sbcglobal.net

- 1. Will you/NRC provide us a record of independent test results for any leaks(including Aug.2012) and routine releases into air and water from Palisades in the past 3 years with date, amount of radiation if any) to verify Palisades claims of safe operation?
- 2. Will you provide us with documentation for how and where any radioactive releases were treated, including "small, low level" releases?
- 3. Will you provides us with your rationale and any tests to prove that Palisades deserves to be rated at level 1, despite recent leaks in 2012 and 2013, after it was upgraded from level 3?

From Gail Snyder

Contact Information:

Homer Glen, Il 60491

Email: gail.snyder@comcast.net

 Can you have someone from the NRC provide us with the most current population data for the Palisades plant used to calculate the increased population during the summer months for emergency planning purposes. Please include where that number is obtained or how it is estimated by the NRC or the operator of Palisades.

Gompiled Questions

3/25/13

Thank you Commissioner Magwood for asking to meet with us so you might better understand the concerns that those of us who live in the shadow of the Palisades Nuclear Power Plant have about the continued operation of this plant. We come again to a meeting such as this to try to understand just why the NRC would allow Palisades to keep running.

There are many of us here today and you must know we represent hundreds if not thousands more who would say the same things to you as we are saying to you tonight if they had the opportunity to be here. Entergy and the NRC are rolling the dice but we are not willing to play!

We want this plant shut down!!! We know as you surely know that Palisades is perhaps the oldest operating plant in the US. Its systems, its internals, its piping, and on and on are degraded. Words and phrases used to describe Palisades such as the most embrittled plant in the country or Pressurized Thermal Shock may be academic to you but they are not to us. These words may not strike terror in your heart but do in ours!!!

In 2005 at the license extension hearing for Palisades, we were assured again and again that by 2011 Palisades would have to have a plan to deal with the embrittlement issue or they would have to close in 2014. Well, here we are in 2013 and now the new date is 2017. Why should we believe you? Palisades is now even more embrittled and yet all that is required by the NRC are more calculations, more equations, more predictions!! Please know that we know that no amount of new equations or new formulas can assure us that Palisades will not at some point experience an event that will trigger the Emergency Core Cooling System and we will be moments away from a core meltdown.

Why are we not assured by your equations and formulas? Because they are all based on calculations that are all based on information that is shot full of holes with variables and unknowns. Literally no one knows how many, how much or even what impurities are in the reactor vessel material and where these impurities congregate. Most importantly no one knows just how much copper is in these impurities and without knowing that all these equations and formulas are literally based on unpredictables!!! We can have no sense of security as long as Palisades is operating and that is not acceptable to us.

In the words of Emeritus Professor Hiromitsu Ino at Tokyo University who has extensively studied embrittlement in nuclear power plants:

"For reactors with such extreme irradiation embrittlement that the conclusion concerning whether or not they are safe varies depending on the analytical method and point of view, there is no other way to ensure people's sense of security than to make a decision to shut these reactors.

Destruction of the pressure vessel due to embrittlement is an accident that must not be allowed to happen. If the pressure vessel is destroyed the nuclear fuel will be spread over a wide area and there will be no way of cooling the nuclear fuel to remove the decay heat. Emergency response fire trucks and power supply trucks will all become ineffective. Reactors with even a small risk of being destroyed due to embrittlement should be shut down."

alicehint Pamilicom

Don't Waste Michigan

Carol McGeehan

From: To:

"Carol McGeehan" <cmcgeehan@sbcglobal.net> "Carol McGeehan" <cmcgeehan@sbcglobal.net>

Sent:

Monday, March 25, 2013 10:32 AM

Subject:

Revised comments and questions to NRC/Palisades for 3/25/13 meeting

---- Original Message --From: Carol McGeehan

To: gail.snyder@comcast.net; Bette P; Kevin Kamps; Carol McGeehan

Sent: Sunday, March 24, 2013 8:07 PM

Subject: Revised comments and questions to NRC/Palisades for 3/25/13 meeting

Questions to NRC regarding safety issues at Palisades Nuclear Plant.

- 1. Will you/NRC provide us a record of independent test results for any leaks(including 2011-12) and routine releases into air and water from Palisades in the past 3 years with date, amount of radiation if any to verify Palisades' claims of safe operation?
- 2. Will you provide us with documentation for how and where any radioactive releases were treated, including "small, low level" releases into water or soil, especially from 2010-2013?

3. Will you provide us with your rationale and any tests to prove that Palisades deserves to be rated at level1, despite recent leaks in 2012 and

4. What are MC reporting requirements to The public and NRC When there are light at nuclear plants? Where can the public access the data onleaks from Polisades? To: NRC Commissioner William Magwood IV, March 25, 2013
From: Carol McGeehan 568 West 21st Helle 12 To 12 To 12 To 13 To

From: Carol McGeehan, 568 West 31st, Holland MI 49423

Re: Safety concerns at Palisades Nuclear Plant

I live in Holland, Michigan within 40 miles of Palisades Nuclear Plant.I am very concerned about the safety problems at Palisades, as evidenced by an ongoing series of leaks and unplanned shutdowns in the past few years. This led to Palisades being demoted to level 3, as one of the worst nuclear plants in the US. After inspections and a safety drill in the fall of 2012, Palisades was upgraded to level 1 and declared to be safe again. Since then, there have been more leaks in Nov.2012 and Feb.2013. I have attended several NRC public meetings where citizens were assured by NRC and Palisades officials that the leaks were minor and no threat to the public and that Palisades is operating "safely".

I am concerned about risks to public health and to air and water quality, especially from the "low level" radiation leak in 2012 and the "permitted" "routine radiation" discharges into air and water. NRC's draft EIS on the 2006 Palisades license extension documented that there are releases of radioactive wastes into Lake Michigan once or twice per season. The National Academy of Science has stated that there is no safe dose of radiation and that every dose can potentially cause cancer. Physicians for Social Responsibility has stated these same concerns, especially for children and pregnant women. Lake Michigan is the source of drinking water for millions of citizens that live around it. Other people drink well water which could be contaminated by leaks or releases into groundwater. The NRC Fact Sheet "Tritium, Radiation Protection Limits, and Drinking Water Standards" (Feb. 2011) states that "Nuclear power plants routinely and safely release dilute concentrations of tritiated water." It also states that "Nuclear power plants have reported abnormal releases of water containing tritium, resulting in groundwater contamination". NRC further states that "very small doses of radiation have very little risk" and call it "acceptable".

Please provide documentation of the amounts, dates and independent test results of all leaks and releases from Palisades in order to verify the claims that the plant operates "safely". Thank you for your assistance.

March 25, 2013

RE: Formal Comments for the Record, March 25, 2013 Meeting with Michigan organizations asking that Palisades be "Shutdown before a Meltdown", Beach Haven Center, Covert, MI

FR: Iris Potter, Michigan Safe Energy Future, Kalamazoo, MI Chapter

Dear Commissioner Magwood:

My comments today address your recent remarks at the NRC Regulatory Information Conference (RIC) on March 13, 2013.

You spoke of your visit to Fukushima, Japan as you witnessed the Daiichi disaster firsthand soon after the disaster and devastation in January 2012. You said "...it will be decades before the damaged reactor cores, spent fuel and contaminated water and debris are safely recovered and disposed." You saw what the people experienced—death before their eyes. Thousands of Japanese people lost their lives. We do not want that here.

To me and for many others, this is enough real evidence as you observed, to ask you and your co-Commissioners, to not let this happen at Palisades. It is the only moral and ethical solution at this time. Palisades is the worst embrittled reactor in the Country at this time with major potential for meltdown. It has experienced problem after problem, shutdown after shutdown, with no resolution or required repairs in sight. Entergy has not done the required repairs and that is documented.

We have studied document after document, listened to Entergy and the NRC at meetings, etc. We understand the potential for major catastrophe here and the loss much of what is living in the Lake Michigan fresh-water basin.

You also stated that "When very bad things happen, be it Fukushima, 9/11, or Chernobyl, institutions and even countries look inward and ask: What went wrong? Who was responsible? And, if the issues demand it, they may even ask: Who are we that this could have happened?

We, as citizens concerned and working towards a Palisades shutdown, know and understand who is responsible.

You also said to the Industry officials present at this Regulatory Conference that ... "These are your plants and you are responsible to your ratepayers and the public for all of your work done at your sites... Blaming the vendor if things go wrong will buy you little sympathy."

We, as citizens, know that Entergy is not responsible in any way and that they will blame the vendors and potentially dump the mess on us because they are already in financial distress—also documented.

You also talked about the role of the NRC commissioners and said "...the magic of the commission structure is in its ability to reflect the broad spectrum of views in our country regarding 'how safe is safe enough'" You also asked them "Who are we? We also espouse values such as regulatory stability and predictability, openness and transparency, and decision-making based on scientific and technical facts, but are we certain that we could not do more in all of these areas."

We believe that you and the other Commissioners are human beings who feel strongly about life and can immediately recommend that Palisades be shutdown in 2013 and not 2017 when the reactor core is even closer to that "verge" where one small piece of metal finally breaks away. Palisades should have never been re-licensed and Entergy has not followed your Regulatory requirements.

We look to you to be the Leader towards Shutdown. It will give you and all of us pride, that we did the right thing and saved so many lives.

Respectfully,

Michigan Safe Energy Future, Kalamazoo Chapter

Palisades: A threat to our precious food-growing area.

A Statement to Commissioner William Magwood and the Nuclear Regulatory Commission Maynard Kaufman, March 25, 2013.

I have been a farmer in Van Buren County for forty years and I had no idea, when Palisades was being built, that it would be in operation this long. I saw that it was plagued with problems from the beginning and has been deteriorating since then.

I am speaking in behalf of my wife, Barbara, and in behalf of Michigan Land Trustees, a local group that is active in Southwest Michigan. It promotes responsible land use and the development of local food and energy systems. Our home has been powered by renewable energy from wind and sun for twelve years.

Needless to say, we are anxious about the threat posed by the Palisades nuclear plant to the area downwind from the plant. This includes Van Buren County, which is one of the most diversified agricultural areas in the state. Lake Michigan provides a climate which is ideal for food crops. This county is number one in fruit production among the counties in the state and number four in vegetable production. It also ranks fourth among the counties in the number of greenhouse and nursery facilities.

These food crops are a priceless resource and will be even more important as the cost of fuel curtails the shipment of such crops from other areas. As more droughts reduce food production, the food from this county will be vastly more important than the energy produced by Palisades. Because food is now cheap and abundant it is easy to overlook how vulnerable our food supply is. But the risk of damage to this diversified farmland along Lake Michigan would end when the plant is shut down, and the risks it imposes are much greater than the need it fulfills.

Michigan Land Trustees is only one among many local groups hoping that the Nuclear Regulatory Commission will shut down Palisades, a plant that is a danger to all of us in this area.



Nuclear Energy Information Service

Illinois' Nuclear Power Watchdog since 1981

Office and Mail: 3411 W. Diversey Avenue, #16, Chicago, IL 60647-1245 (773)342-7650 www.neis.org neis@neis.org

COMMENTS ON NRC "SAFETY CULTURE" Meeting with Commissioner William Magwood

March 25, 2013 South Haven Michigan

1.) NRC's Definition of "nuclear safety culture"

• From viewgraph, Sept. 12, 2012 (while giving Entergy a public dress down for lack of a NSC):

"...the core values and behaviors resulting from a collective commitment by leaders and individuals to emphasize safety over competing goals to ensure protection of people and the environment." (emphasis ours)

- Comm. Magwood's concepts:
 - o "Why must we wait for a catastrophe to engage in such critical introspection?"
 - o "Remember the words penned by Dr. Kurokawa: 'our reluctance to question authority; our devotion to 'sticking with the program;' our groupism; our insularity....It would be a tragic for some independent commission of the future to conclude that a disaster was allowed to occur because of a "devotion to sticking with the program" at the NRC."
- Chair MacFarlane's comments:
 - o "Throughout this process, the NRC has made openness and transparency a priority."
 - "It is critically important for all countries to have strong inspection and enforcement programs with transparent processes and objective criteria. Workers in the nuclear industry need a questioning attitude and an environment in which they feel free to raise safety concerns."

(remarks made Sept. 19, 2012, INSAG Forum, IAEA, Vienna Ausrtria)

• Dir. Casto: "We're trying to... [go] beyond what's required..." 12/11/12 meeting at Palisades

2.) The Public's observation: dissonance between NRC's pronouncements and their actions:

- Entergy has owned Palisades for 5 years, and boasts hundreds of reactor-years worth of nuclear power operating experience. Yet, according to the former Chair of the Commission, Entergy is still unable to implement the "fundamentals" of nuclear power plant operation. Palisades shifts 2 columns over, into "acceptable" operation. (May 2012, site visit with Chair Jaczko).
- "Cumulative Effects of Non-Regulation," David Lochbaum, Union of Concerned Scientists, Aug. 23, 2012
- Lack of implementation of fire prevention program for the past 30 years
- Suppression of flood threat report, NRC engineer Richard Perkins, Sept., 2012
- IG investigation into the incident regarding Commissioner Ostendorf's alleged attempt to suppress
 OI investigation as to why Chair Jaczko was not informed of the May, 2012 leaks at the Palisades
 reactor control room;
- NEIS questions #1 & #4 submitted Oct. 1, 2012 regarding Palisades requesting a response remain unanswered

- Recent allegations of staff abuse and intimidation occurring at Exelon's Byron NPP, with nonintervention or tacit approval of the NRC onsite observers, resulting in three suicide deaths among reactor operator staff; (*Japan Times*, March 11, 2013)
- Comm. Magwood's rationalizations for not adopting filtered vents, 3/22/13:
 - o "The use of qualitative factors applied by the staff in this SECY [-12-0157] goes well beyond previous Commission guidance and the use of such an approach renders the Backfit Rule essentially meaningless....The regulatory stability the NRC has developed over the decades would be lost."
 - Question: does preserving "regulatory stability" take precedence over public health and safety?
- Barring of members of the public "observers" and stakeholders from Class 3 public meeting, with no intervention on the part of NRC March 18th, SSHAC workshop, Oakland, CA; Region IV
- Transparency and accountability: No official record of this meeting, nor meeting in DC on Sept. 22, 2012 with Chair Macfarlane and Comm. Magwood.

3.) Questions, Observations and Recommendations:

- **Observation**: the concerned public does not see the NRC's on the ground actions matching their lofty rhetoric; "core values" espoused," "behaviors" largely absent
- Observation: based on NRC's observed slavish adherence to the letter of regulation and "regulatory stability," it does not adhere to its own definition of a "nuclear safety culture", placing safety secondary to the "competing goal" of "devotion to 'sticking with the program"
- **Observation:** meaningful transparency is largely absent, and conflated with empty ostentation, with no ability to verify issues and agreements, and no timely follow-up of actions
- Recommendation: actions that demonstrate "going beyond what's required" by regulations,
 PARTICULARLY at Palisades, which is not only old and decrepit, but which may be moving into potential shutdown mode by 2017
- Recommendation: written responses to the outstanding questions and requests for information
- **Recommendation:** initiation of investigation into the serious and safety-related worker abuse allegations at Byron and other NPPs.
- Recommendation: letter of reprimand to Region IV staff responsible for not intervening into the
 barring of legitimate observers at the March 18th, SSHAC meeting in Oakland; letter of instruction
 all Regional Directors, especially Region IV director Elmo Collins, that it the responsibility of NRC
 staff to require adherence to NRC public meeting rules by ALL parties; and a letter to all utilities and
 interested parties that failure to adhere to these public meeting rules will result in fines or other
 appropriate actions.

While the quotes from the Japanese Diet report are valuable, and in many cases on target, it would be good for the Commissioners to recall with equal attentiveness the remarks of IAEA Chair Yukiya Amano on nuclear safety made shortly after the Fukushima disaster, when he said,

"Even the best safety standards are useless unless they are actually implemented..."We have to move by days, weeks, months, and I cannot wait years....We need to have a sense of urgency."

From the standpoint of the concerned public, especially that assembled at this meeting, we can't wait years, either. We hear that years tend to be very, very short.

QUESTIONS FOR NRC STAFF CONCERNING PALISADES OCTOBER 1, 2013

Submitted by Dave Kraft, Director, NEIS

1.) Your public notification memo of 9/26/12 stated at NRC inspectors "independently verified that the leak did not challenge public health."

Please describe the methods you chose for verification, and why you believe they are "independent."

- 2.) On June 20, 2011 the head if the IAEA Yukiya Amano said in response to the Fukushima disaster, "Even the best safety standards are useless unless they are actually implemented." Does NRC agree or disagree with this statement?
- 3.) Have you identified the root cause for the perpetual seal leaks at Palisades? If so, do these repetitive leaks not constitute "significant conditions adverse to quality." as defined in Criterion XVI of Appendix B, CFR Part 50? How many times has Palisades been granted an exemption from the requirement to not just implement corrective actions, but implement actions "to preclude repetition" of the seal leaks?
- 4.) During the May 2012 site inspection of Palisades by then Chairman Greg Jaczko, he characterized the problems at Palisades as dealing with "the fundamentals" of nuclear power plant operation. When pressed for more details, he described these as 1.) "the basics of management," 2.) "cross-cutting issues," dealing with the machine/personnel interactions; and 3.) equipment challenges and failures.

Entergy has owned this plant for 5 years. It boasts hundreds of reactor-years worth of nuclear power operating experience. Yet, according to the former Chair of the Commission, Entergy is still unable to implement the "fundamentals" of nuclear power plant operation.

Please explain in detail how and why the NRC tolerates this contradiction in performance? Does NRC now accept this standard of inability to grasp "the fundamentals" of nuclear plant operation from veteran industry operators as the new norm for permissible operation of nuclear power plants, since you are content to keep the reactors operating while Entergy masters "the fundamentals"?

Since the FAA and airlines ground defective planes, and auto manufacturers institute recalls of cars for repairs which must be made BEFORE allowing either planes to fly or cars to operate again, why does NRC exempt nuclear power plants from this common industry standard and safety philosophy?

Written responses to these questions are requested, either by e-mail or hard copy response. Thank you in advance

Dave Kraft, Director Nuclear Energy Information Service 3411 W. Diversey, #16 Chicago, IL 60647 773-342-7650 neis(a neis.org