

**PRM-50-104
(77FR25375)**



City of South Miami

DOCKETED
USNRC

137

May 23, 2012 (11:45 am)

OFFICE OF SECRETARY
RULEMAKINGS AND
ADJUDICATIONS STAFF

May 21, 2012

U. S. Nuclear Regulatory Commission
Washington, DC 20555-0001

ATTN: Rulemakings & Adjudications Staff

On behalf of our City Commission, enclosed please find Resolution No. 110-12-13667 adopted on May 15, 2012. This resolution supports the expansion of Emergency Planning Zones around Nuclear Power Reactors and Docket No. PRM-50-104.


Our citizens deserve the greatest possible protection from nuclear power accidents and the greatest possible preparation to mitigate the effects of nuclear accidents.

The City Commission hereby states its unequivocal support for the following:

1. Expansion of current Emergency Planning Zones from the current 10 mile radius around U.S. nuclear reactor sites to a new 25 mile radius.
2. Creation of a new Emergency Response Zone ranging from 25 to 50 miles around U.S. nuclear reactor sites that would require nuclear power utilities to identify evacuation routes and provide this information to the public within this zone;
3. Expansion of the Ingestion Pathway Zone from 50 miles to 100 miles around U.S. nuclear reactor sites;
4. Emergency evacuation exercises that practice response to situations involving regionally-appropriate initiating or concurrent natural disasters (e.g., concurrent hurricane and radiation release);
5. The Petition for Rulemaking submitted by 38 organizations across the United States on February 15, 2012, since endorsed by more than 2700 organizations and individuals, and docketed by the Nuclear Regulatory Commission as Docket No. PRM-50-104, which would make the necessary changes to emergency regulations.

Your attention to this matter is greatly appreciated.

Sincerely,


Nkenga A. Payne, CMC
Deputy City Clerk

Enclosure



TEMPLATE = SECY-067

DS 10

Rulemaking Comments

**PRM-50-104
(77FR25375)**

137

From: Payne, Nkenga [NPayne@southmiamifl.gov]
Sent: Monday, May 21, 2012 11:10 AM
To: NRCExecSec Resource; CHAIRMAN Resource; CMRSVINICKI Resource;
CMRAPOSTOLAKIS Resource; CMRMAGWOOD Resource; CMROSTENDORFF Resource
Subject: Docket No. PRM-50-104
Attachments: Res No 110-12-13667.pdf
Importance: High

Good Morning,

On behalf of our City Commission, attached please find Resolution No. 110-12-13667 adopted on May 15, 2012. This resolution support expansion of Emergency Planning Zones around the Nuclear Power Reactors and calls on you to support Docket No. PRM-50-104.

Your attention to this matter is greatly appreciated.

Thanks,

*Nkenga "Nikki" Payne, CMC
Deputy City Clerk
City of South Miami
6130 Sunset Drive
South Miami, FL 33143
(305)663-6340 office
(305)663-6348 fax
npayne@southmiamifl.gov
www.southmiamifl.gov*

DOCKETED
USNRC

May 23, 2012 (11:45 am)

OFFICE OF SECRETARY
RULEMAKINGS AND
ADJUDICATIONS STAFF

Please note: The state of Florida has a very broad public records law. Written communications, including emails, are therefore subject to disclosure to the public and media upon request.

RESOLUTION NO. 110-12-13667

A Resolution Support Expansion of Emergency Planning Zones around Nuclear Power Reactors

WHEREAS, the March 2011 nuclear accident at Fukushima resulted in a mandatory evacuation of a 12 mile radius around the Fukushima Daiichi nuclear site, a recommended evacuation of an 18-mile radius, and actual evacuation of villages 25 miles away to the northwest of Fukushima Daiichi; and

WHEREAS, the April 1986 Chernobyl nuclear accident resulted in creation of a permanent 18-mile exclusion zone around the Chernobyl nuclear site and actual evacuation of villages 100 miles and more away; and

WHEREAS, the March 2011 nuclear accident at Fukushima resulted in numerous documented instances of interdiction of contaminated food and livestock 100 miles and more from the Fukushima Daiichi site and widespread contamination of crops and other vegetation; and

WHEREAS, the April 1986 Chernobyl nuclear accident resulted in interdiction of contaminated food and livestock hundreds of miles from the Chernobyl site (including continued interdiction of contaminated livestock in Wales—approximately 1,000 miles away) and widespread contamination of crops and other vegetation; and

WHEREAS, current U.S. Nuclear Regulatory Commission regulations establish a 10-mile Emergency Planning Zone for evacuations around U.S. nuclear reactors and a 50-mile Ingestion Pathway Zone to monitor and potentially interdict contaminated food, water, milk and livestock; and

WHEREAS, based on the real-world experience of the Fukushima and Chernobyl nuclear accidents, the 10 mile Emergency Planning Zone and 50 mile Ingestion Pathway zones are inadequate and outdated; and

WHEREAS, the Fukushima nuclear accident was caused by an earthquake and ensuing tsunami, which knocked out critical offsite and onsite power sources, demonstrating that natural disasters can initiate severe nuclear accidents; and

WHEREAS, the August 2011 mid-Atlantic earthquake resulted in a ground speed motion double that which the nearby North Anna nuclear complex was designed to withstand, and knocked out offsite power to the site; and

WHEREAS, tornadoes, hurricanes and floods during 2011 caused loss of offsite power and other damage to several nuclear reactor sites across the U.S., including Browns Ferry in Alabama, Surry in Virginia, Calvert Cliffs in Maryland and Fort Calhoun in Nebraska, demonstrating that natural disasters can challenge nuclear safety systems; and

WHEREAS, current Nuclear Regulatory Commission regulations do not require

bi-annual emergency exercises to include scenarios of regionally-appropriate initiating or concurrent natural disasters; and

WHEREAS, the current nuclear emergency evacuation plans, models, and calculations approved by Miami-Dade County, the State of Florida, and FEMA completely exclude citizens residing in the City of South Miami from direct consideration and planning for evacuation and iodine prophylaxis during nuclear emergencies; and

WHEREAS, the citizens of the City of South Miami deserve the greatest possible protection from nuclear power accidents and the greatest possible preparation to mitigate the effects of nuclear accidents; and

WHEREAS, current Nuclear Regulatory Commission emergency planning regulations are inadequate to provide a sufficient level of protection for the citizens of South Miami, who reside only 17-20 miles north of Turkey Point;

NOW, THEREFORE, BE IT RESOLVED BY THE MAYOR AND CITY COMMISSION OF THE CITY OF SOUTH MIAMI, FLORIDA, THAT:

Section 1. The City Commission hereby states its unequivocal support for the following:

a) Expansion of current Emergency Planning Zones from the current 10 mile radius around U.S. nuclear reactor sites to a new 25 mile radius.

b) Creation of a new Emergency Response Zone ranging from 25 to 50 miles around U.S. nuclear reactor sites that would require nuclear power utilities to identify evacuation routes and provide this information to the public within this zone;

c) Expansion of the Ingestion Pathway Zone from 50 miles to 100 miles around U.S. nuclear reactor sites;

d) Emergency evacuation exercises that practice response to situations involving regionally-appropriate initiating or concurrent natural disasters (e.g., concurrent hurricane and radiation release);

e) The Petition for Rulemaking submitted by 38 organizations across the United States on February 15, 2012, since endorsed by more than 2700 organizations and individuals, and docketed by the Nuclear Regulatory Commission as Docket No. PRM-50-104, which would make the necessary changes to emergency regulations detailed above.

Section 2. The City Clerk will send a copy of this approved resolution to our state and federal elected officials and calls on them to support Docket No. PRM-50-104.

Section 3. The City Clerk will send a copy of this approved resolution to the Secretary of the Nuclear Regulatory Commission and the appointed Nuclear Regulatory Commissioners expressing the City's support for PRM-50-104 at:

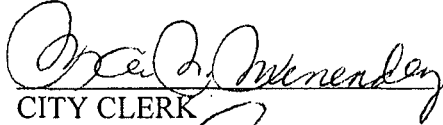
Secretary, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001,
ATTN: Rulemakings and Adjudications Staff.

Section 4: If any section clause, sentence, or phrase of this resolution is for any reason held invalid or unconstitutional by a court of competent jurisdiction, the holding shall not affect the validity of the remaining portions of this resolution.

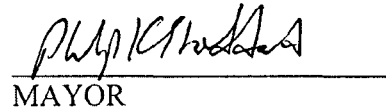
Section 5. This resolution shall become effective immediately upon adoption by vote of the City Commission.

PASSED AND ADOPTED this 15th day of May, 2012.

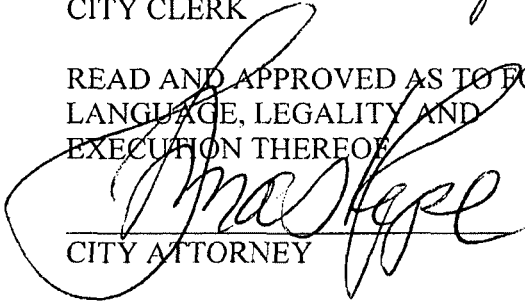
ATTEST:


CITY CLERK

APPROVED:


MAYOR

READ AND APPROVED AS TO FORM,
LANGUAGE, LEGALITY AND
EXECUTION THEREOF

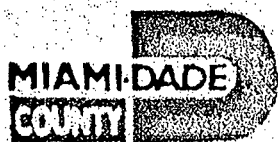

CITY ATTORNEY

COMMISSION VOTE:	5-0
Mayor Stoddard:	Yea
Vice Mayor Liebman:	Yea
Commissioner Newman:	Yea
Commissioner Harris:	Yea
Commissioner Welsh:	Yea

Concerns with Miami-Dade County Radiological Emergency Plan

Philip Stoddard, Ph.D.
Mayor of South Miami
4 Aug 2011

1. Projected evacuation times are invalid. "Shadow evacuation" calculations in Evacuation Time Estimate (ETE) study include no one living farther north than SW 152 St, 13-15 miles from TPN. Studies of actual evacuations indicate shadow evacuation frequency does not decline within 25 miles of a reactor. Our roads cannot handle actual likely evacuation.
2. In one hour, under average winds, radiation plume would escape 10-mile Emergency Planning Zone (EPZ) around Turkey Point. A decision to notify public following a radiological emergency is projected to take 70 minutes.
3. County has no plan to get potassium iodide to children and pregnant women before radiation exposure in a radiological emergency, as is necessary to prevent thyroid damage.
4. The County's radiological plan annex lists radiological shelter space for less than 1/3 of potential evacuees from 10-mile radius Emergency Planning Zone (EPZ) around Turkey Point.
5. The County has made no provision for protection or evacuation of people living farther than 10 miles from Turkey Point (including **South Miami**, Coral Gables, Pinecrest, Miami, Miami Beach, etc.).
6. The County has only one Emergency Reception Center (ERC), which could be in fallout path and which cannot handle the full evacuation population of over 200,000 people.
7. Processing of 200,000 evacuees at Tamiami ERC would be too slow. This concern was expressed in confidence by first responders after practice drill.
8. County's fallback plan, in place sheltering, ignores EPA determination that masonry homes provide only 40% reduction in radiation exposure.
9. County emergency plan includes promise of resources from agencies unprepared to provide those resources during a radiation release, e.g., US Coast Guard.
10. County has incomplete provision for radiological emergency immediately following a severe hurricane when roads may be impassible.
11. The ETE study shows that families with pets will refuse evacuate to emergency shelters that don't accept pets (i.e., most shelters).



Delivering Excellence Every Day

Department of Emergency Management
9300 NW 41 Street
Miami, FL 33178
Email: ecg@miamidade.gov
Phone: 305-468-5400
Fax: 305-468-5401

May 9, 2011

The Honorable Phillip K. Stoddard
Mayor, City of South Miami
6130 Sunset Drive
South Miami, FL 33143

Dear Mayor Stoddard:

The radiological emergency at Japan's Fukushima Daiichi nuclear plant has rightly raised questions at both the local and national level about the ability of governments to protect the public in the event of a similar emergency in the United States. As a Miami-Dade emergency manager, I welcome the interest because it provides an opportunity to communicate our local capabilities, as well as advocate for increased threat awareness and personal preparedness.

First and foremost, the focus of emergency planning for nuclear emergencies is to avoid or minimize exposure to dangerous levels of radiation. Federal regulations have established two emergency planning zones around nuclear plants: the plume exposure pathway (with a radius of about 10 miles from the reactor site) and the ingestion exposure pathway (with a radius of about 50 miles from the reactor site). When applied to the Turkey Point nuclear plant, the 10-mile zone includes an area of south Miami-Dade roughly between Cutler Bay and the Miami-Dade / Monroe County line; and from west Homestead to Elliot Key in Biscayne Bay. The ingestion exposure pathway (with a radius of about 50 miles) includes all of Miami-Dade County, and parts of Broward, Monroe and Collier Counties, as well as adjacent coastal waters.

Miami-Dade's Radiological Emergency Preparedness Plan contains predetermined protective action strategies for each of these planning zones, and the flexibility to extend protective measures beyond the 10-mile zone, if warranted. Since no two emergencies are exactly alike, response plans are adaptable to both minor and major emergencies, taking into account the variables that define a nuclear emergency (e.g., release rates, wind direction, etc.). Protective measures range from sheltering and evacuation options for areas close to the nuclear plant to control or embargo of dietary consumables for areas extending well away from the nuclear plant.

Multiple evacuation scenarios are considered so evacuation decision-makers have detailed time estimates that take into account such vagaries as shadow evacuations within and outside the emergency planning zone, transient population behavior and weather impacts. Our experience with hurricane threats demonstrates our ability to manage large-scale evacuations and sheltering operations.

Miami-Dade maintains a robust radiological emergency training and exercise program. Responders tasked in the plan receive recurring radiological response training and are evaluated by the Federal Emergency Management Agency (FEMA) during regular drills and exercises. Evaluations are thoughtful and comprehensive and range from traffic control to medical management of radiation injuries. Ample quantities of Potassium Iodide (KI) are stocked locally and available for distribution at the Emergency

Page 2

Miami-Dade's Radiological Emergency Preparedness Plan
May 9, 2011

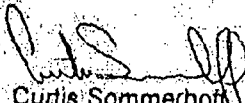
Reception Center. Since KI only protects one organ from only one type of radiation, and does not prevent other radiation doses, the focus of the plan is on moving people out of harm's way.

Prompt public alerting and emergency information is central to the plan. Warning sirens are located throughout the 10-mile area around Turkey Point and scripted public information messages provide information on the emergency and the appropriate protective action.

In summary, the greatest challenge posed by a possible radiological emergency comes not from radiation, evacuation capacity, or monitoring capability, but from a lack of awareness and subsequent fear. From a risk standpoint, the chance of being seriously injured, permanently disabled or killed in an auto accident far exceeds the chance of being injured, permanently disabled or killed as a result of a nuclear plant accident. Perception is difficult to affect without education. It is my hope the tragic events in Japan will lead to the discussions necessary to match the actual threat from nuclear power to the perceived threat.

Please do not hesitate to contact me at (305) 468-5403 with any questions or concerns as we work together to ensure the safety of Miami-Dade County's residents during emergencies.

Sincerely,


Curtis Sommerhoff
Director

*[this letter was sent to the Miami-Dade County Commission,
and to state and federal elected officials representing South Miami]*

28 May 2011

Dear _____:

We received a letter from Mr. Curtis Somerhoff, Director of Miami Dade County's Department of Emergency Management, dated 9 May 2011, explaining the County's radiological emergency plan. I go through his letter below and explain why his explanations do not assuage my grave concerns about the County's preparation for radiological emergencies at Turkey Point.

Mr. Somerhoff wrote:

Federal regulations have established two emergency planning zones around nuclear plants: the plume exposure pathway (with a radius of about 10 miles from the reactor site) and the ingestion exposure pathway (with a radius of about 50 miles from the reactor site).

In the significant radiation releases on record following nuclear accidents, airborne radiation plumes, at levels considered dangerous, have not stopped 10 miles from the reactor site, not at Chelyabinsk, Seversk, Chernobyl, Three Mile Island, or Fukushima. Our government evacuated American citizens 20 miles out from Three Mile Island and 50 miles out from Fukushima. The Japanese government is now evacuating people from Iitate Village, 25 miles from the Fukushima. Transposed to Miami, that would be the distance from Turkey Point to Miami International Airport, an area with over a million inhabitants. Although the NRC statutes only require local agencies to prepare evacuation plans for a 10 mile emergency planning zone (EPZ), experience shows this radius is inadequate.

The ingestion exposure pathway (with a radius of about 50 miles) includes all of Miami-Dade County, and Parts of Broward, Monroe, and Collier Counties, as well as adjacent coastal waters.

Food and water obtained within 50 miles of Turkey Point would be off limits for human consumption. In other words, the entire Miami-Dade agricultural industry, the Biscayne Bay and Florida Bay fisheries and seafood industry, and the Everglades water supply could be contaminated beyond use. What would we drink, cook with, and wash our dishes and ourselves in if not the water?

Protective measures range from sheltering and evacuation options for areas close to the nuclear plant...

According to FPL's evacuation study, the 10-mile EPZ around Turkey Point is home to 187,374 residents and 19,055 transients, 206,429 people in all. Miami-Dade County has nuclear emergency shelter capacity for 60,769 evacuees, just under a third of the EPZ population. What happens to the other 145,660 people directed to show up at the Tamiami Park Emergency Reception Center (ERC), with their pets, seeking direction to

safe radiation shelters? The ETE study found that 30% of evacuees would bring their pets along, but only two shelters accept pets, and only if they are pre-registered.

And what happens if the plume extends up into the shelter zone, or even to Tamiami Park contaminating the ERC itself?

Multiple evacuation scenarios are considered so evacuation decision-makers have detailed time estimates that take into account such vagaries as shadow evacuations within and outside the emergency planning zone, transient population behavior and weather impacts.

Let us consider these "shadow evacuations", the propensity of people outside an EPZ to self-evacuate without official instruction to do so. The County's radiological emergency evacuations plan is based on an Evacuation Time Estimate (ETE) study prepared by FPL's consultants. The ETE study considered the effects on traffic that 60% of the people in the shadow region evacuated. Unfortunately they defined the shadow region to only include people living outside the 10-mile EPZ but south of Coral Reef Drive (SW 152 St), just 13 miles from Turkey Point. Based on what evidence do County emergency planners believe that people who live north of Coral Reef Drive would not self-evacuate? Following every nuclear disaster, the suckers who followed official directions and stayed behind were told after the fact *"Oh sorry, the radiation your area received was higher than we realized at the time."* Everybody knows that now. May I suggest that Coral Reef Drive was an arbitrary boundary, selected by the consultants to keep the total number of evacuees in a logistically manageable range, but with no scientific basis in the history of nuclear accidents or the published studies of self-evacuation behavior following radiological releases. A more extensive shadow evacuation than planned (i.e., people north of SW 152 St) totally invalidates the evacuation time estimates.

People who cannot evacuate because of outside conditions (e.g., traffic jams, radiation clouds, lack of shelter space) will be told to stay inside with the windows closed, a practice called "in-place sheltering". I think it's fair to assume that we'd also be without power following a nuclear power plant accident, so no air conditioning, and the tap water should be considered unfit to drink for 50 miles. This scenario is a formula for widespread heat shock as happened in New Orleans after Katrina.

But the County's in-place sheltering plan has other problems. According to the EPA, masonry houses such as we have in South Florida provide only a 40% reduction in radiation exposure in a radiological emergency. Spending 24 hours in our houses during a radiation release would give us the same radiation exposure as standing in our front yards for 14 hours.

Our experience with hurricane threats demonstrates our ability to manage large-scale evacuations and sheltering operations.

Prior to hurricane County emergency planners have over a week of warning, and days of television coverage in which to provide residents with detailed instructions. We get no warning prior to a radiological emergency, our residents have never practiced a radiological evacuation, people are truly terrified of invisible threats like radiation, and even scientists cannot yet agree about the risks of low radiological exposure. With the

nuclear plants down and Turkey Point in a haze of radiation, we'll have no power and probably no television. The sirens and the odd radio may be the residents' only warning of an invisible threat. My point is that experience with hurricanes should not leave us over-confident of our ability to manage a radiological emergency.

Miami-Dade maintains a robust radiological emergency training and exercise program. Responders tasked in the plan receive recurring radiological response training and are evaluated by the Federal Emergency Management Agency (FEMA) during regular drills and exercises.

Indeed, the Miami-Dade County Radiological Emergency Preparedness Plan stated the following in 2009:

Organizations that operate rotary wing aircraft that could be tasked to support response or recovery operations in Miami-Dade include but are not limited to:

- 1. Miami-Dade Fire Rescue Department*
- 2. Miami-Dade Police Department*
- 3. Miami-Dade Public Works Department*
- 4. US Immigration & Customs Inspections*
- 5. US Coast Guard*
- 6. City of Miami Police Department*

But here's what the US Coast Guard wrote to FPL the year before in 2008:

*This letter provides current resource and support capabilities for Coast Guard assets located in the vicinity of the Florida City Turkey Point Nuclear Plant. Please note that any emergency assistance that the Coast Guard may provide would be limited by the fact that **Coast Guard crews are not equipped or trained for radiological response**, and thus, cannot be exposed to radiological contamination. Coast Guard assets will be restricted to activities and geographic locations that are air monitored for radioactive fallout and are certified to be safe without protective clothing or equipment. Consequently, **the Coast Guard is unable to act as the primary responder for nuclear power plant disasters.***

One might ask how carefully the County discussed its radiological plan with the US Coast Guard, or the other five agencies on that list.

Mr. Somerhoff's statement about delivery of potassium iodide (KI) excuses the state's policy not to support proactive KI distribution plans:

Ample quantities of Potassium Iodide (KI) are stocks locally and available for distribution at the Emergency Reception Center. Since KI only protects one organ from only one time of radiation, and does not prevent other radiation doses, the focus of the plan is on moving people out of harm's way.

I find both his statement and plan for KI distribution to be irresponsible. While radioactive cesium, strontium, and xenon are certainly problematic in a radiological release, radioiodines (e.g., I¹³¹) are the most abundant radioisotopes released, and are particularly dangerous for children because they concentrate in the thyroid and focus what may be written off as low whole-body dose ("no more radiation than a few chest X-

rays") onto a much smaller target organ. Here I quote from the document *World Health Organization Guidelines for Iodine Prophylaxis Following Nuclear Accidents*:

To obtain full effectiveness of stable iodine for thyroidal blocking requires that it be administered shortly before exposure or as soon after as possible.

The County stocks KI for distribution at the Tamiami Park ERC. That fact makes it difficult or impossible to provide KI prophylaxis to children and pregnant women downwind of a nuclear accident *before* they are exposed to airborne radioiodines. According to the WHO report, taking KI nine hours after initial exposure reduces its efficacy by 50%. How long would it take to get KI into circulation in 95% of the affected population? In North Carolina the public utilities pre-distribute KI to residents to avoid the obvious distribution problem during and after an emergency.

In none of the local planning documents I have read has anyone convinced me it would be possible to quickly screen 200,000+ people for radiation exposure at the County's sole ERC, located at Tamiami Park. Nor is it clear whether emergency managers can realistically get all the cars through the site in a timely manner. The Youth Fair at Tamiami Park gets less than 100,000 attendees at peak, yet when I tried to get my daughter to the fair one night last spring we found ourselves mired in a 4 square mile traffic jam; she got out and walked the last half mile.

When Mr. Somerhoff wrote that the County has "ample KI" on hand, I am wondering how many doses of KI that includes. The disparity in shelter spaces vs. EPZ population also makes me question whether the County stocks enough doses for the population that could be exposed (all those under the age of 40), and enough stocks for the next few weeks or months as proved necessary in neighboring Poland following the Chernobyl disaster in Ukraine. Likewise I wonder whether the County maintains stocks of KI in syrup form suitable for children. Children, as we know, are critically vulnerable to I¹³¹ exposure because their thyroid glands are small and their metabolisms are high.

Then Mr. Somerhoff downplayed the human risks from nuclear accidents.

From a risk standpoint, the chance of being seriously injured, permanently disabled or killed in an auto accident far exceeds the chance of being injured, permanently disabled or killed as a result of a nuclear plant accident.

I take it that his point is we should keep things in perspective and not worry too much about mortality from nuclear accidents. However physicians and scientists recognize that a nuclear accident entails far broader epidemiological risks than just acute exposure leading to rapid death. The medical profession has known for over 50 years that genetic damage from radiological exposure may not appear for years or even generations (Powell, 1957, Am J Public Health).

Mr. Somerhoff concluded his letter with this confusing statement:

It is my hope the tragic effects in Japan will lead to the discussions necessary to match the actual threat from nuclear power to the perceived threat.

First he reminds us of Japan where three of Fukushima's nuclear plants experienced reactor core meltdowns, and loss of cooling at spent fuel pools exposed fuel rods causing hydrogen explosions, a brief criticality, and massive release of nuclear contamination. Then he implies that the actual threat of nuclear power is less than the perceived threat. Scientists believe that the actual threat in South Florida is *significantly greater* than has been broadly perceived. A threat is the product of the probability of an event and the consequences of an event: on both counts, the actual threat is greater than most people realize.

First, consider the probability of a radiological accident at Turkey Point. FPL has repeatedly stated that Turkey Point withstood the full impact of Andrew. It did not. Hurricane Andrew passed to the north of Turkey Point, dealing it the clean side of the storm and only a 5.5 foot storm surge. Even so, the reactors were down for 5 days, cooled by diesel generators. Had Hurricane Andrew come ashore South of Turkey Point, in Card Sound for example, the 17 foot surge it delivered to what is now Cutler Bay would have been directed at the Turkey Point reactor site. FPL has repeatedly stated that TPN 3 & 4 are situated 20 feet above sea level, but LiDAR-based elevation maps provided by Dr. Dean Whitman at FIU show the land on which the two reactors sit is between 11 to 16 feet, with the surface around the reactor buildings at 15 to 16 feet. Reviewing the elevation data, a scientist in this group stated:

There are areas right nearby which are lower including the generators and other major electrical equipment on the west side which are around 11 feet where the outlet for cooling water is located. A 16 foot surge with waves on top of that would inundate 80-95 percent of the property and damage much of the equipment located outside.

These generators and cooling pumps are all-critical for keeping two reactor cores and 2.4 million pounds of spent fuel from overheating as happened in Fukushima. NOAA has recorded lesser storms over that deadly track on two occasions. It's just a matter of time.

Second, consider the consequences. I should like you to close your eyes and remember what South Dade was like after Hurricane Andrew. Now imagine it with oxidizing fuel rods.

Our experience with hurricanes has given us incentive to invest in emergency training and infrastructure. That is the only good news. Local hurricane preparedness plans are predicated on our ability to predict storms far before they happen. Nobody has ever predicted a nuclear accident before it happened. South Florida's emergency planners, managers, and responders have no experience coping with actual radiological release, especially following a monster hurricane, which is when a nuclear accident is most likely to occur in South Florida.

When FPL planned the existing reactors at Turkey Point in the 1960s, Miami was a small city and South Dade was a sparsely populated agricultural region. A large population has moved in since then, a population too large to evacuate effectively, FPL's ETE study notwithstanding. If anything, Mr. Somerhoff's letter details the inadequacy of our emergency preparedness. We have no plan for evacuating large swaths of South Florida's population from should radiation streak northward 50 miles. We have no viable

mechanism in place to get KI into the mouths of children and pregnant women before they are exposed to radioiodines. Reliance on a single Emergency Reception Center for the entire county is ludicrous. People within 10 miles of Turkey Point have received literature but those I've spoken to have only have limited understanding of the radiological emergency plans that they've never practiced. The rest of the County's population seems to have been left out of the planning process altogether.

Last autumn, I protested these inadequacies to the Atomic Safety and Licensing Board of the NRC. Here's part of their response:

FEMA sent a letter to the NRC indicating that, based on its "thorough review," FPL's emergency evacuation plans are adequate, and there is Reasonable Assurance that the plans can be implemented with no corrections needed.

This would be the same FEMA that approved New Orleans' emergency plans prior to Hurricane Katrina.

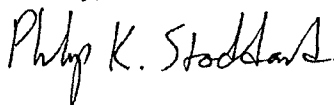
Considering the dire circumstances that we have in New Orleans, virtually a city that has been destroyed, things are going relatively well.
- FEMA Director Michael Brown, Sept. 1, 2005

FEMA has not been very good at imagining what hurricane driven water can do to levees or, apparently, to nuclear power plants.

My city, South Miami, is situated 17 miles north of Turkey Point, seven miles outside the planned evacuation zone. The only consideration we receive in the County's radiological emergency plan is that we live in the "ingestion exposure pathway" so in a radiological emergency we will be told not to consume our homegrown fruits and vegetables.

FEMA's stamp of approval clearly doesn't protect our own families or the residents that we were elected or appointed to serve from the lack of realistic preparation here in Miami-Dade County. We deserve better consideration.

Sincerely,



Philip K. Stoddard, Ph.D.
Mayor

Follow-up on meeting over Miami-Dade County Radiological Emergency Plan

4 Aug 2011

Prepared by Philip Stoddard, Ph.D., Mayor of South Miami

Persons Present:

Philip Stoddard, Mayor of South Miami

Curtis Somerhoff, Director, M-D County Dept. Emergency Management

Niel Batista, Emergency Management Coordinator for M-D County Emergency Mgt.

Victoria Mallet, Office of External Affairs, M-D Dept. Emergency Management

Xavier Suarez, M-D County Commissioner, District 7 (had to leave early)

Ela Pestano, aid to Com. Suarez

David Gelman representing Rep. Ileana Ros-Lehtinen

Melissa Leonard representing Rep. Ileana Ros-Lehtinen

Below, are the concerns I raised at our meeting and comments by the participants. Following those are my recommendations for corrective action, and a list of published references.

1. Projected evacuation times are invalid. "Shadow evacuation" calculations in Evacuation Time Estimate (ETE) study include no one living farther north than SW 152 St, 13-15 miles from TPN. Studies of actual evacuations indicate shadow evacuation frequency does not decline within 25 miles of a reactor. Our roads cannot handle actual likely evacuation.

Mr. Somerhoff questioned whether studies of evacuation following Three Mile Island in 1979 are still valid in predicting behavior of people today because we have so much more information about actual risks of radiation exposure following nuclear accidents.

Mayor Stoddard stated that scientific studies of prior behavior are the best predictors of future behavior. Further, because the public now understands that areas 25-45 miles from Fukushima became uninhabitable, he would expect the shadow evacuation area to increase, not decrease from Three Mile Island.

Mr. Somerhoff does not believe gridlock will occur on Florida's Turnpike and other major egress roads (US 1, Krome Ave.) because emergency managers can exercise highly effective options for traffic control.

Mayor Stoddard believes the artificial boundary of the existing Turkey Point shadow evacuation area produces an unrealistically small estimate of the shadow evacuation population and that actual evacuees would put far more cars on the road than estimated, leading to complete gridlock.

Mr. Somerhoff stated that the County is seeking to become the contracting agent for future ETEs to make them more reliable and accountable.

Mayor Stoddard says it can't happen too soon. The current ETE is not realistic and leaves the population too vulnerable.

2. In one hour, under average winds, radiation plume would escape 10-mile Emergency Planning Zone (EPZ) around Turkey Point. A decision to notify public following a radiological emergency is projected to take 70 minutes.

Mr. Somerhoff explained nuclear accidents do not happen all at once, and that we have time to get people out of the way of a radiation plume.

Mayor Stoddard observed that in every major radiological release from a nuclear plant, people have been exposed faster and farther than the government was aware at the time, that extensive radiation was detected only after fallout had landed, and that most people were warned after they were exposed rather than before. Further, winds wander, and radiation plumes swept over wide arcs following both Chernobyl and Fukushima accidents.

3. County has no plan to get potassium iodide (KI) to children and pregnant women before radiation exposure in a radiological emergency, as is necessary to prevent thyroid damage.

Mayor Stoddard stated that the World Health Organization calls for predistribution of potassium iodide (KI). In Miami, all the KI is to be distributed at the ERCs after an emergency is already in progress. In North Carolina, KI is mailed to people in their houses.

Mr. Somerhoff says pre-distribution options have been tried before, allowing people to pick up KI in advance at distribution points, but that public response was very limited.

Mayor Stoddard suggested distributing KI through annual checkups with family doctors and pediatricians who can make sure people receive it, and that anyone allergic to iodine is excluded.

Mr. Somerhoff commented on the difficulties getting people to take the H1N1 flu vaccine.

Mayor Stoddard observed the extreme effectiveness of pediatric vaccination programs, and pointed out that the flu vaccines are usually late, limited in quantity, and require a special appointment. Most children (the most vulnerable to radioiodines) get an annual medical checkup and that would be an excellent and reliable distribution point.

4. The County's radiological plan annex lists radiological shelter space for less than 1/3 of potential evacuees from 10-mile radius Emergency Planning Zone (EPZ) around Turkey Point.

Mr. Somerhoff noted that the County has considerable flexibility in adjusting the number of shelters to match the demand. Other shelters can be opened anywhere in the County, and that Broward and Palm Beach Counties can provide shelters for displaced residents of Miami-Dade County. Mr. Somerhoff's department expects far fewer people than the ~204,000 residents of the EPZ would evacuate to local shelters, and that most would drive farther.

Mayor Stoddard noted that studies of radiological evacuations showed that most evacuees did indeed drive farther, typically 75-100 miles. He asked how many people were expected to actually use designated radiation emergency shelters.

Mr. Somerhoff did not have that number at hand.

5. The County has made no provision for protection or evacuation of people living farther than 10 miles from Turkey Point (including **South Miami**, Coral Gables, Pinecrest, Miami, Miami Beach, etc.).

Commissioner Suarez noted that this area included his entire district, and felt this matter was very serious.

Mr. Somerhoff pointed out that the 10 miles circle is stipulated in the federal guidelines. He mentioned that the NRC is looking at mandating wider evacuation zones in the future.

Mayor Stoddard noted that the current Federal evacuation guidelines are only a minimum requirement, and they do nothing to protect residents of his city. As for future changes in NRC guidelines, he noted that Congress is being heavily lobbied by the nuclear power industry to delay implementing recommendations of the NRC Fukushima Taskforce.

6. The County has only one Emergency Reception Center (ERC), which could be in fallout path and which cannot handle the full evacuation population of over 200,000 people.

Mr. Somerhoff stated that the equipment was mobile so the County could relocate the ERC to any of several alternate locations on a moment's notice.

Mayor Stoddard wanted to see the alternate locations mentioned in the text of the actual plan.

7. Processing of 200,000 evacuees at Tamiami ERC would be too slow. This concern was expressed in confidence by first responders after a practice drill.

Mayor Stoddard asked for details on the screening of evacuees.

Mr. Somerhoff stated that they could open 6 screening stations on short order, and eventually 50 stations. It takes 30 seconds on average to screen an evacuee for radiation exposure.

Mayor Stoddard observed that at full capacity, they could screen 100 people a minute, 6000 an hour. If 200,000 people showed up for screening, it would take 33 hours to get them all screened. There would be health and safety issues from people standing in line for that long. [Note also that KI loses its protective effect the longer one takes it after exposure to radioiodines – see WHO document cited below].

Mr. Somerhoff stated that 200,000 people would not show up. He expected fewer, but could not produce an estimate.

Mayor Stoddard asked if people entering shelters had to be certified free of radiation by screening at the Emergency Reception Center (ERC).

Mr. Somerhoff said nobody who had not been screened at the ERC and certified free of radiological contamination could enter a designated shelter.

8. County's fallback plan, in place sheltering, ignores EPA determination that masonry homes provide only 40% reduction in radiation exposure.

Commissioner Suarez was concerned about the limited protection afforded by a masonry house and said perhaps Congresswoman Ros-Lehtinen could make those figures more stringent.

Mayor Stoddard said he would produce the reference [see refs at end].

[Note: making houses tighter for energy efficiency purposes will also increase protection from fallout].

9. County emergency plan includes promise of resources from agencies unprepared to provide those resources during a radiation release, e.g., US Coast Guard.

Mr. Somerhoff said it was understood that the U.S. Coast Guard would only keep boats away from an irradiated area and would provide assistance with radio communications, but would not enter the radiological zone.

10. County has incomplete provision for radiological emergency immediately following a severe hurricane when roads may be impassible.

Mayor Stoddard noted that following Hurricane Andrew, the US military ran out of tires attempting to access South Dade across impassible roads. A loss-of-cooling accident at Turkey Point following a hurricane / storm surge event could render evacuation extremely difficult. [Note: fallen trees made the road into Turkey Point impassible for 2 days following Hurricane Andrew].

Mr. Somerhoff and Mr. Batista noted that people would have already evacuated for the hurricane, leaving fewer potential evacuees.

Mayor Stoddard noted that hurricane evacuations are incomplete, and many people go to local shelters rather than remote ones, leaving a reduced but significant number still to evacuate under difficult circumstances.

11. The ETE study shows that families with pets will refuse evacuate to emergency shelters that don't accept pets (i.e., most shelters).

Commissioner Suarez commented on the non-voluntary nature of a radiological emergency evacuation. When ordered to evacuate people must not be allowed to remain behind.

Mayor Stoddard noted that the County website says people with pets must pre-register their pets to be admitted at a pet-friendly emergency shelter.

Mr. Somerhoff noted that in an actual emergency, shelters that accept pets will not turn away people who have not pre-registered, despite what it says on the County website, and that they can open additional shelters for evacuees with pets.

Follow-up Requests by Mayor Stoddard

1. Provide to Mayor Stoddard and other interested officials an estimate of the numbers of evacuees predicted to show up at the Emergency Reception Center (ERC) for (i) iodine prophylaxis, (ii) radiation screening, and (iii) sheltering.
2. Provide to Mayor Stoddard and other interested officials a table showing the projected processing time for these evacuees.
3. Correct critical flaw in the shadow evacuation population figures used in the Evacuation Time Estimate (ETE) model and revise evacuation plan accordingly. The simplest way would be to contract with KLD Associates to re-run their existing ETE model with shadow evacuation population figures based on a survey of residents out to 50 miles from Turkey Point.
4. Predistribute potassium iodine to all Miami-Dade County residents below the age of 40, either by direct mail or through family physicians.
5. Devise a formal written plan for informing and protecting all Miami-Dade County residents immediately following a nuclear accident.
6. Include in the written emergency plan, and public emergency pamphlets, alternate sites for ERCs and procedures for re-directing evacuees to those alternate sites should Tamiami Park (only 20 miles from Turkey Point) be in the fallout plume.

References

EPA Office of Radiation Programs. *Manual of Protective Action Guides and Protective Actions for Nuclear Incidents*. 1992. Washington.

Available online.

Table C-6 on page 232 lists protection of different building types.

World Health Organization. *Guidelines for Iodine Prophylaxis following Nuclear Accident*. Update 1999. Geneva.

Available online.

Figure 1 shows the importance of taking iodine (KI) before exposure to radioiodines: taking KI before or at the time of I^{131} exposure is 100% protective, however taking KI twelve hours after exposure is only 36% protective, and taking it a day after exposure is only 10% protective.

Zeigler, D.J., Johnson, J.H., 1984. *Evacuation behavior in response to nuclear power plant accidents*. *The Professional Geographer* 36, 207-215.

Available online at FIU, or by request from Philip Stoddard.

EYE ON MIAMI

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Monday, August 08, 2011

South Miami Philip Stoddard and County Commissioner Xavier Suarez: tough on nuclear emergency evacuation in Miami-Dade: good for them and us! by gimleteye

Wow. There is, actually, one elected official with the intelligence and determination to pull the curtain down on one of the biggest scams relating to FPL's nuclear power at Turkey Point: the fantasy of evacuation in the case of a nuclear emergency. Mayor Phillip Stoddard recently met with county emergency management officials and strongly differed with the agency's assumptions about evacuation; requesting a follow-up and proof of calculations Miami-Dade is using to protect citizens in the case of a nuclear emergency. County Commissioner Xavier Suarez briefly attended the meeting, too. Congratulations to Commissioner Suarez, who said "this matter was very serious".

But special congratulations to South Miami voters for electing Mayor Stoddard. Without his clarity and purpose, issues relating to FPL's expansion plans at Turkey Point-- like transmission lines running through highly populated communities and transit corridors-- would remain buried nuggets of the non-stop influence peddling by FPL, one of Florida's most powerful corporations, its lobbyists and facilitators on the county commission who-- over decades-- have permitted the issue of evacuation planning to languish in a pool of lies.

Stoddard, who is the most informed and eloquent critics of FPL, sets an example for elected officials too timid to apply the lessons of Fukushima to South Florida. With nuclear power, there is no such thing as "It can't happen here." The questions Stoddard has posed, backed up with a simple calculator applying population densities to evacuation routes, is what happens next? How does Miami-Dade get residents and taxpayers, children and seniors, doctors, lawyers and Indian Chiefs out of harm's way? Eyeonmiami has also asked these questions, and we have been particularly keen to know, as is Mayor Stoddard: why aren't South Floridians given medications as are other residents where nuclear emergencies could occur? I suspect it is realtors, speculators; and developers who control the bullder associations and Chamber of Commerce who have halted distribution of potassium iodide pills.

Links to this post at 8:24 AM 2 comments 

Labels: FPL, Gimleteye, Nuclear Power Plant, South Miami, Stoddard, Turkey Point

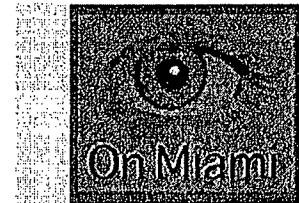
US Rep. Cliff Stearns; joking about pollution and jobs and trashing Florida's waters ... by gimleteye

The following editorial is from the Ocala Star Banner, the hometown newspaper of US Congressman Cliff Stearns. Stearns had been the only Republican to stand apart from his caucus on the GOP intent to knee-cap the U.S. EPA's effort to clean up Florida's waters. This is not something the EPA came to willingly; it took a major lawsuit by environmental groups to get EPA to do its job. But the Republicans in Florida want to keep Florida dirty so their biggest campaign funders-- like the billionaire sugar baron Fanjuls-- can keep making money. Apparently, Stearns was handed a bloody fish head wrapped in newspaper for his gutsy move and quickly flip-flopped. Tomorrow Stearns hosts a field hearing in his district, "EPA's Takeover of Florida's Nutrient Water

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