UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

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BRIEFING ON EMERGENCY

PREPAREDNESS PROGRAM STATUS

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PUBLIC MEETING

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Nuclear Regulatory Commission

One White Flint North

Rockville, Maryland

Wednesday

September 24, 2003

The Commission met in open session, pursuant to notice, Chairman Nils J. Diaz presiding.

COMMISSIONERS PRESENT:

NILS J. DIAZ, Chairman

EDWARD McGAFFIGAN, JR., Member of the Commission

JEFFREY MERRIFIELD, Member of the Commission

(This transcript is produced from electronic caption media and audio video media provided by the Nuclear Regulatory Commission.)

STAFF AND PRESENTERS SEATED AT THE COMMISSION TABLE

WILLIAM KANE, DEDH

RICHARD WESSMAN, NSIR

CRAIG CONKLIN, Director Technical Services

Div., FEMA

WILLIAM BORCHARDT, Acting Director, NRR

TRISH MILLIGAN, NRR

TED QUAY, Branch Chief NRR

P R O C E E D I N G S

CHAIRMAN DIAZ: Good morning. We are pretty happy to be able to meet with the staff and our colleagues from FEMA today on a topic that is very important to every one of us. This topic of emergency preparedness which is of particular importance to us and to everybody in the country right now. It deserves our attention. And I believe that the staff has been doing just that.

And we look forward to them letting us know how progress has been achieved and all of the things that we really need to know about it. I especially like to thank Mr. Craig Conklin from FEMA for being a part of today's presentation. Let me just take a minute or two, just be a little patient here.

I believe that the use of defense-in-depth is ingrained in the exercise of NRC activity, to ensure adequate protection of public health and safety, the environment, and common defense and security. In many ways in the same manner that we have and use multiple barriers to prevent radioactive releases to the public from our reactor systems, structures, and components, we actually have in place three interactive and mutually supportive systems that provide defense-in-depth to the public from the activities that we license.

We have worked very hard to achieve the best safety and security programs at our reactor facilities and not to depend on EP. However, we have worked hard on EP or emergency preparedness,

assuming that it would be needed.

It is important to remember that from the perspective of the public, emergency preparedness programs are very visible. And it often involves them directly. Emergency preparedness drill exercises, in both State and local authorities and are very visible to the communities in which they take place, who many times have very little opportunity to see any of our other activities. So in many ways, emergency preparedness represents to them what the NRC is. And our credibility is at stake.

So the better we do it, the better we are serving the American public, the better they will believe that we are just doing that.

So EP, emergency preparedness, has always been to us and is today an important part of the assets that the nation has to support the critical infrastructure and, indeed, is very important to every one of us.

It is with this thought in mind that I believe this meeting is going to be very informative. It is a very important meeting at the right time. I look forward to the interaction and I will ask my fellow Commissioners if they have an introductory comment.

COMMISSIONER MERRIFIELD: Mr. Chairman, I would like to play a little off of the opening statement that you just provided.

As I was listening to what you said, I did want to take the opportunity, first, to note that I do agree with the focus that you have

placed on emergency preparedness. Clearly, as part of our overall defense-in-depth strategy, I think you have quite accurately placed that as a real key in terms of demonstrating to the public, our most important stakeholder, that we are doing the right things to preserve and protect the individuals around the plants that we oversee.

I think the events of 9-11 have certainly caused us to have an increased focus on this. But it certainly doesn't take away from the fact that these issues have long been a critical part of what we do as an agency and a critical part of what we do in our interactions with our sister agency at FEMA.

The more recent exercises that we have had with TOPOFF, TOPOFF 2, that I had an opportunity to participate in, the blackout recently, which was obviously a challenge, and the recent Hurricane Isabel all demonstrated the importance in the interaction between the work that we do with emergency preparedness and the overall safety activities that we undertake at the plant.

I think also this renewed emphasis is underscored by the new reactor oversight process that we put in place just a couple of years ago. The increased emphasis that that oversight process has and the performance indicators included in that that focus on emergency preparedness I think it further clarified the need for us to make sure that we do have the appropriate focus on emergency preparedness of which the Chairman has spoken.

At the end of the day, I think for many of the members who live around these plants, the adequacy and appropriateness of emergency planning is, in fact, probably the most important criteria in some respects because that is what they see and hear about most often.

So in sum, I would say that I do strongly agree with the increased rhetorical emphasis that the Chairman has placed on emergency preparedness and certainly join him in his views that we need to make sure that we keep a strong eye on the part of the Commission in ensuring this very important part of what we do as an agency.

Thank you, Mr. Chairman.

CHAIRMAN DIAZ: Thank you, Commissioner Merrifield.

Now I would like to recognize Mr. Kane who is appearing in front of us now with his new responsibilities and titles for homeland preparedness and protection.

Mr. Kane?

MR. KANE: Thank you, Mr. Chairman. Good morning. And good morning to Commissioners McGaffigan and Merrifield.

We are pleased to have the opportunity to brief the Commission on the NRC's emergency preparedness and emergency response programs. As you are aware and noted, the review and oversight of emergency preparedness at nuclear power plants involves

both the NRC and the Federal Emergency Management Agency. As you indicated, we have invited FEMA to participate in this briefing to share with you its role and insights in that regard.

Before we get started, let me please briefly introduce the participants. To my right is William Borchardt, who is the Deputy Director of the Office of Nuclear Reactor Regulation. Next to Bill is Patricia Milligan, Senior Emergency Preparedness Specialist of the Office of Nuclear Reactor Regulation. And next to Trish is Ted Quay, who is the Chief of the Emergency Preparedness and Plant Support Branch of the Office of Nuclear Reactor Regulation.

To my left is Dick Wessman, Director, Division of Incident Response Operations of the Office of Nuclear Security and Incident Response. And to Dick's left is Craig Conklin, Chief of the Nuclear and Chemical Hazards, the Federal Emergency Management Agency.

We believe emergency preparedness for nuclear power plants in the United States is a success story. It is a success in terms of the level of coordination and planning and the many years of practice and refinement. Licensees, government agencies, State and local officials, as well as thousands of first volunteers and first responders have worked together for over 20 years to create a system of emergency preparedness and emergency response that will serve the public well in the unlikely event of a nuclear power plant emergency.

The basic concept of emergency preparedness is to

develop procedures and ensure the availability of the necessary resources to adequately handle an unlikely but potentially high consequence accident. Emergency preparedness involves the development of workable plans and on-going confirmation that the plans work. The plans are periodically updated and are designed to be flexible enough to respond to a wide variety of adverse conditions.

It's been more than 24 years since the accident at Three Mile Island, Unit II plant. There have been hundreds of operating reactor years to gain experience from exercises and events.

The emergency preparedness process has the means to identify, evaluate and react to the wide spectrum of potential emergency conditions. The presentation today will discuss the basis for our robust emergency preparedness and emergency response programs.

The staff will also address some of the misinformation about nuclear emergency preparedness response that we believe exist in the public domain. We will discuss these issues throughout the presentation because we are concerned that such misinformation is a disservice to the public and can instill unwarranted fears, especially in these times.

At this point I will turn the presentation over to Trish Milligan.

MS. MILLIGAN: Good morning. As a result of the

accident at Three Mile Island, Unit II in 1979, significant changes were required in emergency preparedness and planning for commercial nuclear power plants in the United States. The Three Mile Island accident revealed that much better coordination and more comprehensive emergency plans and procedures were needed.

The Commission recognized emergency preparedness as an integral part of defense-in-depth concept associated with its accident prevention and mitigation philosophy. This policy was endorsed by the Commission in a policy statement published in the Federal Register in October of 1979.

The NRC must have reasonable assurance that the plans and procedures in place at nuclear power plants support the offsite emergency response organization and provide that adequate protective measures can and will be taken in the event of a radiological emergency. Reasonable assurance is based on licensee compliance with regulations and guidance, as well as licensee and offsite response organization demonstrations of effective emergency plan implementation during our periodic evaluated exercises.

The NRC performs oversight of emergency preparedness through performance indicators and through inspection. NRC inspectors dedicate thousands of hours to routine inspections, observations of drills and exercises, review of licensee corrective actions, as well as emergency plan changes.

If items of noncompliance are found, licensee corrective actions are inspected until successful completion. This contributes to the NRC determination of reasonable assurance.

Emergency preparedness is much more than simply emergency response. Emergency preparedness is based upon actions which can and should be performed prior to an emergency. Emergency preparedness involves the hard work and dedication of many people: Federal agencies, nuclear power plant personnel, State and local officials, as well as community volunteers.

Emergency response are actions that are taken in response to an actual event. Successful planning leads to successful response.

The objective of the NRC's emergency preparedness regulations is to mitigate the consequences of an accident and to minimize radiation exposure to the public through protective actions that take into consideration plant conditions, evacuation times, shelter factors, and other conditions that may exist at the time of an accident.

There are 16 planning standards that form the basis of emergency plans. These are contained in 10 CFR 50.47(b) and as well as in the NRC/FEMA joint NUREG-0654, The Criteria for Preparation and Evaluation of Radiological Emergency Response Plans.

To facilitate protective measures, the Commission established two emergency planning zones around each nuclear power

plant. The exact size and shape of each emergency planning zone represents a judgment as to the extent of detailed planning which must be performed to ensure an effective response.

It is decided by emergency planning officials taking into consideration the specific conditions at each site, including such things as unique geographical features as well as the demographics. The emergency planning zone provides a substantial basis to support activity outside the planning zone, should this be needed.

The first emergency planning zone has a radius of about 10 miles around the plant and is known as the plume exposure emergency planning zone.

The second emergency planning zone has a radius of about 50 miles and is known as the ingestion pathway exposure emergency planning zone. There are predetermined protective action plans in place for these emergency planning zones.

These predetermined protective actions are designed to minimize potential exposure from radioactive materials. For the 10-mile emergency planning zone, these actions include sheltering, evacuation, and the use of potassium iodide where appropriate.

The protective actions for the 50-mile emergency planning zone include interdiction of contaminated food and water, relocation, access control, and other factors.

There's been a concern raised to the staff by members of

the public that the 10-mile emergency planning zone does not provide adequate protection, that there is a peak fatality zone that extends out to 17-1/2 miles and a peak injury zone that extends out beyond 50 miles.

These terms were used by Sandia National Labs in a 1982 report. These studies were never intended to be realistic assessments of accident consequences. The authors of the report in 1982 stated that these studies did not and were never intended to reflect reality or to serve as a basis for emergency planning. Unfortunately, at times, such calculated values are taken out of context without consideration of the probability or the unrealistic nature of these assumptions.

When the public evacuates they are removed from exposure to the plume. And under most conditions evacuation is preferred. However, there are instances when sheltering may be the preferred protective action.

Sheltering may provide protection that is equal to or even greater than evacuation when you take into consideration such factors as the weather, competing events, a fast-breaking or perhaps a short-term release. And it may be prudent to recommend then that the population shelter in their homes, in the schools, and office buildings.

Depending on the type of structure, sheltering can result in a dose reduction of up to 80 percent compared to remaining out of

doors.

When evacuation is considered, there are evacuation models that are designed and implemented for severe accidents. The principles used in these models have a two-mile ring in which all people in this two-mile radius are evacuated. And then the people living downwind in the projected path of the plume travel as well as the adjacent sectors are also evacuated. This area, the downwind sector and the two adjacent sectors, affords protection from potential wind shifts and plume meander. This is known as a "keyhole" because of its appearance.

In order to facilitate planning for evacuations, evacuation time estimates have been developed for each site. These time estimates are tools to assist offsite authorities to determine egress routes and as well as traffic control plans.

In 2001 the NRC issued a regulatory information summary to alert licensees to the possible need to update emergency planning evacuation time estimates as a result of the Census in 2000. As population numbers changed, the impact on evacuation time travel estimates could also change. The times could increase or decrease depending on the population and changes in infrastructure.

Longer or shorter evacuation times then could result in changes about decisions for protective actions to evacuate or shelter certain sectors of the population.

These time estimates are considered, as I said, by State and local authorities when they make such protective action decisions. For example, under inclement weather conditions the time to evacuate may be longer. So the decision may be made only to evacuate a small portion of the area and advise sheltering for the other population.

Sheltering positions people in non-evacuated population to receive additional information and instructions and to standby.

Additionally, these evacuation time estimates identify potential traffic impediments, allow for development of adequate traffic management plans, as well as the efficient use of traffic control personnel during an evacuation.

It's important to note that evacuation time estimates are not linked to the doses at which protective actions are recommended. These doses are one rem whole body and five rem thyroid. These doses represent the level at which considerations of the risks from radiation exposure are weighed against the overall risk from evacuation itself. They are not dose limits.

Another important consideration of our protective action response includes the radioactive plume. Plume characteristics are determined by natural environmental factors such as the wind speed and wind direction, turbulence due to solar heating, humidity and ground temperature. As radioactivity enters the plume, it will travel downwind and it expands in a horizontal as well as vertical direction.

This expansion of the plume is directly related to the concentration of radioactivity in the plume. The radiation dose, then, to persons in the plume is a direct relationship to this concentration.

As the plume expands downwind, the concentration decreases as does the radiation dose.

Although most plume typically tend to be narrow, protective actions encompass a broader portion of the downwind area. Many, many parts of the circle are completely un-effected by the plume at any point in time.

As we know, changes in wind direction will impact the direction of the plume. The keyhole approach to protective actions already considers the impact of changes in wind direction.

Because radioactivity from a power plant does not move in all directions at once but travels in this plume that covers but a small fraction of the emergency planning zone, it is apparent that not all residents of the 10-mile emergency planning zone are subject to exposure from radioactive materials.

In a response to concerns voiced by some citizens in New York State, the governor of New York on August of 2002, hired James Lee Witt Associates to perform a review of nuclear power plant emergency preparedness in New York State. The report states that evacuation in the areas around the nuclear power plant would not be successful, would expose the public to doses in excess of Federal

permissible limits and that the public would not listen to directions given by emergency management personnel. The staff has serious concerns with these statements.

As we discussed, the recommended evacuation dose criteria are not limits. They are merely decision points.

In addition, there are many examples of successful evacuations in this country as a result of non-nuclear events, such as in a case when a train derails carrying toxic chemicals. There have been at least four communities which have implemented a portion of their nuclear emergency plans to deal with non-nuclear and potentially deadly immediate threats.

Ten thousand people from Cedar Rapids, Iowa, were evacuated following a fire at a sewage treatment plant that spread a plume of toxic gases over the city. A portion of Cedar Rapids is in the 10-mile emergency planning zone for the Duane Arnold Nuclear Power Station. City officials credited the nuclear power plant emergency planning program, specifically the plans, the drills, and the exercises for the knowledge of large scale emergency response and public awareness of emergency response.

Seventeen thousand persons were evacuated from St. Charles, Louisiana following a leak at a chemical plant. A nuclear power plant emergency plan was used to enable this evacuation. There had just been a recent emergency planning exercise which had

heightened awareness in the community of emergency plans and appropriate response.

In Pennsylvania, a fire at a metal plant necessitated the evacuation of 13,000 people. The Susquehanna Nuclear Power Plant evacuation plan was used to organize this effort.

And finally, the city of San Luis Obispo, California, needed to evacuate approximately 3,000 people due to an out of control wildfire. The coordination between the response organizations, notification of the public, and successful evacuation of these impacted persons were in large part due to the extensive emergency preparedness exercise program that was developed to support the Diablo Canyon Nuclear Power Plant.

In these instances, the plans were immediately and successfully implemented. The public did listen and they did follow directions from emergency management officials and were successfully evacuated.

Another criticism of the emergency plans is that they do not contemplate multiple attacks on infrastructures such as roads, bridges, transportation, and therefore would not work in a terrorist scenario. We are concerned that such a statement will cause people unnecessary fears.

Traffic management plans that are developed detail multiple evacuation routes so that the evacuating population could be

redirected if necessary. In addition, as we discussed, sheltering is an option that may be used when conditions warrant.

And as we have seen, importantly, only a small part of the population will be in the plume pathway at any point in time.

In January of 2001, the Commission published a rule change to the NRC emergency planning regulations to include the consideration of the use of potassium iodide. The Food and Drug Administration issued guidance on the dosage and the effectiveness of potassium iodide for thyroid prophylactics.

The NRC has provided has supplied potassium iodide tablets to states requesting it for the populations within their 10-mile emergency planning zones. To date, 18 states have participated in the NRC program for a total of approximately 10,100,000 tablets. If taken properly --

COMMISSIONER MERRIFIELD: Can I ask clarification? How many states potentially qualified to receive KI?

MS. MILLIGAN: Thirty-three states and one native Tribal government.

COMMISSIONER MERRIFIELD: Of that 18 --

MS. MILLIGAN: Have participated.

COMMISSIONER MERRIFIELD: And how about the Tribal government?

MS. MILLIGAN: The Tribal government has not yet

indicated an interest. State of Illinois purchased their own potassium iodide. And Tennessee had only before our program come out had purchased additional stockpile. So essentially 20 of our nuclear states have potassium iodide programs.

Potassium iodide, if taken properly, will help reduce the dose to the thyroid gland from radioactive iodines and, therefore, reduce the risk of thyroid cancer. The population closest to the nuclear power plant, and that is our population within their 10-mile EPZ is the population at greatest risk of exposure to radiation and radioactive materials.

When this population is evacuated out of the area and potentially contaminated foodstuffs are interdicted, the risk from further radioactive iodine exposure to the thyroid gland is essentially eliminated. Beyond 10 miles, the major risk of radioactive iodine exposure is from ingestion of contaminated foodstuffs and particularly from milk products.

Both the Environmental Protection Agency as well as the Food and Drug Administration have published guidance to protect consumers from contaminated foods. In addition, as I have already discussed, there are preplanned protective actions for the 50-mile emergency planning zone which include interdiction of contaminated foods.

COMMISSIONER MERRIFIELD: Can I ask for a

clarification? On Slide 20, your slide there does note interdiction of contaminated food and milk. And I think I may have misheard you but I think you said, when you said it, you said interdiction of contaminated food and water. You meant to say milk.

MS. MILLIGAN: Yes.

COMMISSIONER MERRIFIELD: Milk is the principal thing that we are concerned about in this regard. Is that correct?

MS. MILLIGAN: Yes. That is a principal pathway, sir.

COMMISSIONER MERRIFIELD: I just wanted to clarify that.

MS. MILLIGAN: The infrastructure in the United States supports ready removal of contaminated foods from market. This is seen when products that are tainted with harmful bacteria need to be removed and are quickly removed from market.

If necessary, and should the accident situation arise, potassium iodide would be used to supplement sheltering and evacuation, and not to take the place of these actions.

If radioactive iodine is taken into the body after the consumption of potassium iodide, it will be rapidly excreted from the body. The two doses of potassium iodide supplied by the NRC's program will provide approximately 48 hours of protection.

Some members of the public have expressed concerns to the staff that potassium iodide should be distributed out beyond the

10-mile emergency planning zone. The staff has carefully considered the health effects caused by the Chernobyl accident and we continue to monitor the ongoing Chernobyl health effects research.

In addition, we have evaluated the protective actions in place in the United States. From these evaluations the staff has concluded that recommending consideration of potassium iodide distribution out to 10 miles was adequate for the protection of public health and safety.

At this time, there's some additional pieces of what I would refer to as emergency preparedness misinformation that I would like to discuss.

There's been a concern that a radioactive release as a result of a nuclear power plant accident will render thousands of square miles uninhabitable around a plant. It is true that radioactive materials can travel long distances. But it is simply not true that the mere presence of radioactive materials are harmful.

The standard applied to this particular claim has been a whole body dose of 10 rem over 30 years or approximately 330 millirem per year. This dose is almost the average background radiation dose in the United States which is about 360 millirem per year. Some parts of the country have a background radiation dose two or more times higher than this national average.

So, in effect, this additional 330 millirem dose is an

additional year background dose or the difference in dose between someone living in a sandy coastal area or someone living in the Rocky Mountains.

COMMISSIONER MERRIFIELD: Just for clarification here, you are saying that some of the accusations about the areas being declared uninhabitable that have been thrown out there, if you use that very same standard, Denver, Colorado, for example, would be declared uninhabitable. Would that be a fair characterization?

MS. MILLIGAN: Based on the increase in dose, yes, sir.

COMMISSIONER McGAFFIGAN: If you put that chart back up that was up just a moment ago, "Sources of Exposure," I think you all -- this is a fairly trivial point, but the medical exposure is a lot higher today, according to UNSCEAR 2000, than 53 millirem. I believe that they said in advanced countries, which they included us, and Russia, and England and UK, France, whatever, and I think we are by far the greatest user of PET scans, CT scans and whatever, that the average as of 2000, as of UNSCEAR 2000 was over 100 millirem for medical exposure.

And if you are averaging the U.S. with Russia, UK, France, we could well be approaching 200 millirem a year in terms of medical exposure in this country on average.

So I think somebody should update the chart at some point. A lot of agencies use this chart but it has not been updated in

light of the UNSCARE 2000 data.

MS. MILLIGAN: Thank you.

Another concern that the staff has heard that adds to confusion and certainly adds to fear is that a nuclear power plant is a weapon of mass destruction.

Nuclear power plants are not nuclear weapons and cannot explode like such a weapon. It's just not physically possible. These plants have a long history of safety. In the United States since the 1960's, these plants have been safely producing electricity. There has not been a member of the public in the United States that has been physically harmed by exposure to radiation from any commercial nuclear power plant accident.

COMMISSIONER MERRIFIELD: Can I ask you a question? Is it not true that the long-term studies conducted by the University of Pittsburgh of, I believe -- what was it 18,000 individuals surrounding the Three Mile Island plant -- could you talk about the specific results of that particular long-range study? Very briefly to underscore that.

MS. MILLIGAN: The core population was studied for long-term health effects. They found no increases in cancers in that population from the Three Mile Island exposures.

COMMISSIONER MERRIFIELD: No identifiable health impacts?

MS. MILLIGAN: No identifiable health impacts. That's correct.

COMMISSIONER MERRIFIELD: From the Three Mile Island accident?

MS. MILLIGAN: From the Three Mile Island accident.

COMMISSIONER MERRIFIELD: Which is the most significant fuel melt -- the most significant accident we have had here in the United States; is that not correct?

MS. MILLIGAN: Yes, sir.

As a result of the terrorist attacks of September 11, 2001, there has been much attention paid towards emergency planning at nuclear power plants. The staff has conducted an evaluation of the impacts on emergency preparedness programs as well as inspected licensee implementation of NRC emergency preparedness interim compensatory measures and orders.

In addition, the Commission is implementing a pilot force-on-force exercise program to assess the security response at nuclear power plants to potential terrorist threats. Emergency response is a part of this program.

To date, studies do not indicate that a terrorist-based event can create an accident that generates a radiological release more quickly or significantly larger than the source term that the emergency preparedness planning basis already considers. This

source term includes reactor as well as spent fuel pool accidents.

It is important to note that emergency plans are not dependent upon the initiating scenario but are designed to accommodate this wide range of possible events. The staff remains confident that the emergency preparedness planning basis is valid.

Some individuals have expressed concerns to the staff as members of the public that emergency plans do not address fast-breaking scenarios that may involve a rapid radiological release. Emergency preparedness regulations require the rapid notification of the public. And as you will hear from FEMA, they are enhancing their oversight in this area.

In December of 1979 the Federal Emergency Management Agency was directed by the President to take the lead in assuring the development of acceptable State and local offsite emergency plans and activities for nuclear power facilities. FEMA's recommendations as to the acceptability of the offsite emergency plans are included in NRC's consideration of reasonable assurance.

The NRC has the ultimate responsibility to determine the acceptability of the overall radiological emergency plans for any nuclear power plant. Our relationship between FEMA and the NRC is codified in regulations as well as in Memoranda of Understanding between our two agencies.

The successful NRC/FEMA relationship is supported by

active participation in the FEMA/NRC Steering Committee, the Regional Assistance Committee, the Federal Radiological Preparedness Coordinating Committee. Additionally, FEMA and NRC staff routinely interact on a day-to-day basis when working on joint projects.

The successful implementation of the Commission potassium iodide program is an example of our close working relationship between FEMA and the NRC staff.

At this time I would like to introduce Mr. Craig Conklin of the Federal Emergency Management Agency. Mr. Conklin will discuss FEMA's role in emergency planning.

CHAIRMAN DIAZ: Mr. Conklin, I want to thank you again for coming to join us today.

For the record, because I think it's important, let me state that FEMA and the NRC have distinct but joint responsibilities in this area. We appreciate the work that we do together.

FEMA, of course, has the responsibility for offsite responses. We have direct statutory responsibilities over our licensees' preparedness. And eventually, we have to make a determination on both issues.

I want to again appreciate the relationship that we continue to have and look forward to your statements, sir.

MR. CONKLIN: Thank you very much. It is a pleasure to

be here this morning. And I do appreciate the opportunity to discuss FEMA's role in preparing for and responding to emergencies involving commercial nuclear power plants.

I am the chief of a nuclear and chemical hazards branch in the emergency preparedness and response directorate, which is more commonly known as FEMA, within the Department of Homeland Security. I am responsible for two very important programs, responsible for assuring that State and local officials can and will take measures to protect their citizens in the event of a technological emergency. These two programs are the chemical stockpile emergency preparedness program and the radiological emergency preparedness program, which is the focus of our discussion this morning.

As was mentioned earlier, on December 7, 1979, following the accident at Three Mile Island, President Carter assigned the Federal lead role in offsite radiological emergency planning preparedness to FEMA. FEMA established the REP program to ensure that the health and safety of citizens around the commercial nuclear power plant would be protected in the event of an accident at the plant and secondly, to inform and educate the public about radiological emergency preparedness.

It is important to remember that the REP program responsibilities encompass only offsite activities. That is State, Tribal,

and local government emergency planning and preparedness activities that take place beyond the nuclear power plant boundaries.

On-site activities, as you talked about earlier, continue to be the responsibilities of the Nuclear Regulatory Commission.

Currently, the REP program is involved in planning and preparedness activities in 31 states and approximately 400 local governments. The mission of the REP program is to enhance planning, preparedness, and response for all types of peacetime radiological emergencies with Federal, State, Tribal, and local governments and the private sector. And to ensure that adequate offsite emergency plans and preparedness are in place and can be implemented by State, Tribal and local governments to protect the health and the safety of the public living in the vicinity of commercial nuclear power plants through the evaluation of scheduled exercises and drills.

We accomplish our mission by reviewing and evaluating offsite radiological emergency response plans that are developed by State, Tribal, and local governments; by evaluating exercises conducted by State, Tribal and local governments to determine whether such plans can be implemented; by making findings and determinations on the adequacy of offsite planning and preparedness and submitting them to the NRC in connection with the licensing of the commercial plants; by providing regulatory oversight, rulemaking and

guidance; by responding to requests from the NRC pursuant to our Memorandum of Understanding dated in June of 1993; and by coordinating the activities of federal departments and agencies that have responsibilities in the radiological emergency planning process; and by chairing the Federal Radiological Preparedness Coordinating Committee, and the regional assistance committees.

In order to make a finding that it has reasonable assurance that adequate protective measures can and will be taken by state and local officials in response to an emergency at a power plant, FEMA evaluates offsite response plans and procedures, evaluates drills and exercises designed to determine if those plans and procedures can be effectively implemented, and in some cases, conducts alert and notification system reviews.

Commercial nuclear power plant licensees are required to conduct a FEMA-graded exercise every two years. With 104 operating nuclear power plants, FEMA is responsible for evaluating the performances of the State, Tribal and local governments in over 30 exercises a year.

Any deficiencies identified during the exercise must be brought to the attention of the State and local participants within 10 days of the exercise. And the deficiency must either be corrected within 120 days of the exercise or a schedule for correcting the deficiency must be agreed upon within 120 days of the exercise.

Areas requiring corrective action, which are a lower level type of finding, are typically corrected prior to or during the next scheduled biennial exercise. In addition to the biennial exercises, State, Tribal, and local governments routinely conduct out-of-sequence drills to examine specific focused response activities. These drills are referred to as out of sequence because they are not conducted during the biennial exercise. Instead, they may be conducted in the months coming up to or following the biennial exercise.

Examples of such out-of-sequence drills are the setup and operation of a relocation center for reception of evacuated citizens, the use of bus drivers to examine school evacuation routes or the setup of traffic control points.

While it is best to perform these activities as part of the biennial exercise, the burden on State and local governments participating in the exercise can be significant. And the spacing out and evaluation of these response components helps to reduce that burden while still providing an effective means of examining their response capabilities.

In 2002, FEMA implemented a new performance-based, results-oriented approach to exercise evaluation. This new exercise evaluation methodology was one of the outcomes of the strategic review of the REP program that was conducted during the previous administration.

This new performance-based methodology was implemented in every exercise that was conducted in 2002 and has been the basis for every exercise conducted this year as well.

In keeping with the commitment made during the strategic review, FEMA has recently published a Federal Register notice requesting comments on lessons learned from implementing the new performance-based technology. FEMA will closely review all comments submitted to determine if additional changes to the performance-based, results-oriented methodology is needed in order to further improve the exercise program.

Offsite radiological response plans must meet 16 planning standards contained in NUREG-0654/FEMA-REP-1, which is our joint document entitled "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants". FEMA, through the regional assistance committees, assists States, Tribal governments, and local government officials in the development of their radiological emergency response plans and reviews these plans and observes exercises to evaluate the adequacy of the plans.

Local governments typically provide their plans and procedures to the State government which in turn provides both the State and local plans to FEMA for review and approval.

In some cases, FEMA may also rely on staff assistance

visits and discussions with State and local officials to review plan updates and improvements. Areas identified for improvements are called planning issues. Planning issues typically should be resolved prior to the next scheduled biennial exercise.

The results of the graded exercise and the plan reviews constitute the primary basis for FEMA's reasonable assurance findings. In addition, States also submit annual letter of certification as a means of informing FEMA about all the preparedness activities they participated in during the previous year. The ALC is a summary of preparedness activities. It is not a certification.

I need to repeat that. It's not a certification of reasonable assurance by State and local officials. The ALC is a voluntary mechanism for reporting information to FEMA and is not a requirement for FEMA to make a finding of reasonable assurance.

Periodically, the alert and notification systems in the communities surrounding the nuclear power plants are evaluated to ensure that they are still capable of functioning as originally designed. NUREG-0654 requires the establishment of both administrative procedures and physical means for notifying the public within the 10-mile emergency planning zone.

Most often outdoor sirens systems are used to alert and warn the public. Other mechanisms such as radios are also used as primary notification systems.

Recognizing that equipment failure may occur, backup notification methodologies are incorporated into the plans. These methods include backup route alerting. Route alerting is accomplished using vehicles equipped with sirens and public address systems to alert the public. Typically, this is accomplished by emergency response personnel and it has proven to be an effective means of notifying the public of the need to evacuate during real emergencies.

FEMA-REP-10, the guide for evaluation of alert notification systems for nuclear power plants, provides the guidance for evaluating alert and notification systems for determining whether the methodology meets NRC and FEMA requirements.

Hurricane Isabel provided the latest example of the need for backup route alerting. Because of the loss of power to 35 of 67 sirens surrounding the Surrey Nuclear Power Plant in Southeast Virginia, State and local officials in conjunction with the Virginia National Guard, State police, developed a plan for notifying the citizens living around the plant which included not only backup route alerting, but also the use of a helicopter and pre-positioned law enforcement officers.

This plan was key to determining that adequate protective measures were in place that would allow the restart of the Surrey Power Plant.

The REP program is widely recognized as being a very

successful program. There are several reasons for that. I would like to talk about those in the next few paragraphs.

While the NRC and FEMA are the two primary Federal agencies involved in the implementation of the REP program, the program benefits from the efforts of Federal experts from 15 other departments and agencies. This interagency coordination is accomplished to the Federal Radiological Preparedness Coordinating Committee or FRPCC, which meets on a quarterly basis in Washington, D.C.

The purpose of the FRPCC is to assist FEMA in providing policy direction to State, Tribal, and local governments, assist FEMA in resolving issues relating to granting approval of State plans, and to coordinate research and study efforts related to State and local government radiological emergency preparedness, to ensure a minimum of duplication of effort and maximum benefits to the State, Tribal and local governments.

FRPCC membership includes representatives from FEMA and the NRC, the Environmental Protection Agency, the Departments of Energy, Health and Human Services, Defense, Transportation, Justice, Agriculture, Commerce, Interior, Veterans Affairs, State, Housing and Urban Development. It also includes representatives from the National Communication System, the General Services Administration and the National Aeronautics and Space Administration.

These agencies all contribute to successful radiological emergency preparedness in the United States.

The FRPCC is supported by nine regional assistance committees. There is a regional assistance committee in each standard federal region that has a commercial nuclear power plant. Only FEMA Region VIII does not have an assistance committee.

The regional assistance committee is also known as RACs, assists State and local government officials in the development of the radiological emergency response plans and will review these plans and observe exercises to evaluate the adequacy of the plans. These plan reviews are key to supporting FEMA's determination that adequate off-site plans and preparedness are in place and can be implemented by State, Tribal, and local governments to protect the public health and safety of the citizens living in the vicinity of these commercial power plants.

The RACs also meet on a quarterly basis and are composed of the same departments and agencies that are typically represented on the FRPCC.

FEMA regional staff also works closely with the counterparts in State, Tribal and local governments. Through staff assistance visits FEMA regional staff help to develop plans and procedures, conduct training and drills, and interpret policy and guidance.

FEMA and the NRC communicate frequently with each other, daily if necessary, to address critical issues. The FEMA and NRC have established a steering committee that meets on a quarterly basis to formally discuss and resolve program issues. As was mentioned previously, the FEMA/NRC steering committee has been very effective in addressing such issues as the implementation of the KI program.

The most recent example of extensive communication between FEMA and the NRC occurred with Hurricane Isabel and the need to monitor the impact of the storm when off-site preparedness and the ability of the State and local governments to be able to respond to an emergency at a power plant that was in the path of that storm.

As you know, FEMA, along with 21 other departments and agencies, became part of the Department of Homeland Security on March 1, 2003. This was the largest reorganization of government in over 50 years. As a result there has been some concern raised about the future of the REP program.

It is safe to say that the REP program has a solid future within the department. The support from FEMA management has been very strong and key decision-makers are extremely accessible. In fact, because of the consolidation of government wide programs that effect emergency planning and preparedness, critical infrastructure protection and terrorists planning, FEMA and DHS are better positioned to support

the nuclear power industry as part of its all-hands approach to emergency planning preparedness and response.

Thank you for this opportunity. I appreciate this opportunity to discuss FEMA's role in emergency planning. And at this time I would like to turn this over to Mr. Dick Wessman of the Nuclear Security and Incidents Response office.

MR. WESSMAN: Thanks, Craig.

NRC's emergency response program provides a strong capability for the agency to deal with emergencies at nuclear facilities should they occur. NRC's responsibilities include independent assessment of plant conditions, evaluation of protective action recommendations made by the licensee, support to off-site officials and communication with other agencies and the media.

The emergency response program includes the NRC in the role of lead federal agency in the coordination of as many as 17 federal agencies under the Federal Radiological Emergency Response Plan known as the FRERP.

This lead federal agency role would be taken in response to emergencies at NRC licensed facilities or involving NRC agreement State licensed radioactive materials. While exercising the lead federal agency role, NRC also provides oversight such as assessment, advice and coordination assistance to State and local responders and to the licensee during an incident. Coordination with FEMA is an important

facet of our response.

As you are aware, we have a Headquarters Operation Center over in the other building. It is continuously staffed 24/7 during -- and then during an emergency response, that staffing may increase from two watch standers to 50 or more individuals. These would comprise four to five technical and support teams assisting senior decision-makers.

The NRC's emergency response is led by the Chairman or his or her designee as the executive team director from their headquarters operations center. The NRC response also includes site teams of individuals dispatched from and supported by the effected regions. It should be noted that the Chairman and NRC Commissioners routinely participate in full-scale exercises, along with members of the staff that would respond during an emergency. Most recently was Kewaunee exercise yesterday with Commissioner McGaffigan leading the response.

COMMISSIONER MERRIFIELD: Mr. Wessman, let me interrupt for a second. You said "routinely." Just to clarify, it is the practice of the Commission that each Commissioner would participate in a full-scale exercise once a year. Is that not the case?

MR. WESSMAN: Yes, sir.

COMMISSIONER MERRIFIELD: So routinely means each one of the Commissioners is doing that at least once a year?

MR. WESSMAN: Yes, sir. And routinely, we have at least four exercises that involve reactor facilities, one in each region, and one exercise involving a fuel facility. So that conveniently comes out to five exercises for the five Commissioners when we have a full slate of Commissioners.

COMMISSIONER MERRIFIELD: Just for further clarification, you mentioned that there might be 50 individuals who might be in the incident response center here in Two White Flint. But typically, how many members of the NRC staff participate in one of the full-scale exercises in which you said, five of which occur each year?

MR. WESSMAN: Well, in each exercise that number is closer to 100 because there are regional staff members that will staff in the regional center and a site team that would go out to the site as part of that exercise. So each of these full-scale exercises will involve at least 100 members of the staff.

COMMISSIONER MERRIFIELD: A major effort?

MR. WESSMAN: Yes, sir. And we tend to rotate individuals of the technical staff, just like we rotate Commissioners leading the response, so that over the course of a year really there are hundreds of individuals that have had an opportunity to participate in at least one of these exercises. This builds the depth of our capability to respond.

COMMISSIONER McGAFFIGAN: Just if I could, you

might also mention how many people from other agencies typically participate in these exercises because it's quite a large number.

MR. WESSMAN: That's correct. And, in fact, Dan Wilcox from Craig Conklin's organization was with us yesterday. We had representatives from DOE. Sometimes DHS has a representative, HHS, Agriculture. So this liaison linkage --

COMMISSIONER McGAFFIGAN: EPA?

MR. WESSMAN: EPA is also there.

This liaison linkage is an important part of it.

And more recently we have had observers from the Department of Defense because of the interest in some of the interagency exercises.

COMMISSIONER MERRIFIELD: Not to keep going on this but we should also mention that there would be typically, I presume, dozens of State and local individuals also involved in these exercises?

MR. WESSMAN: Yes, sir.

Continuing. Although the emergency response program is robust following the attacks of September 11th, we continue to enhance the program, particularly, the security aspects of the program.

Lead by Commissioner Merrifield, we actively participated in one of the largest interagency terrorists exercises, TOPOFF 2, in May of this year. And that involved activity here in Washington, D.C.,

but also at the Seattle and Chicago venues and ran over a period of several days.

NRC has also been actively involved in the TOPOFF 2 lessons learned process, particularly in the areas of radiological dispersal device consequence modeling and recovering. And Commissioner McGaffigan has been very involved in that work.

NRC continues to work with the Department of Homeland Security and the other federal agencies on the integration of federal response plans into a unified national response plan and national incident management system. We are presently coordinating with the Department of Defense, including Northcom and Norad to plan and participate in forthcoming interagency exercises next year such as Unified Defense 04, which will be in the spring and Amalgam Virgo 04, which will be in the summer.

We continue to make upgrades to the headquarters operation center and the regional response centers.

With that, I will turn it back to Bill.

COMMISSIONER MERRIFIELD: One further clarification. You talked about making improvements in our regional and headquarters response centers. Ball park, what is the amount of money that we have spent on those types of improvements? For example, a whole new regional response center at Region IV. Is that not in the millions of dollars of improvements?

MR. WESSMAN: The Region IV work is in the millions of dollars. I don't have a figure available here. And Region III is involved in a similar improvement process by virtue of relocating their building. Jim Dyer is here. He may be able to amplify on that which is coming there.

And we have several million dollars that we are in the process of expending, upgrading the display systems and the computer systems in our own headquarters center here.

COMMISSIONER MERRIFIELD: But suffice it to say, there is many millions of dollars that we have spent in enhancing our emergency response capabilities, equipment wise and personnel wise since 9-11?

MR. WESSMAN: Some of that was going on before. I believe actually the Region IV work was in process before 9-11. And, of course, now comes the Region III work.

And Region II did a lot of work just several years ago upgrading their center.

COMMISSIONER MERRIFIELD: Appreciate that clarification.

MR. KANE: Okay. I get to wrap up here. In conclusion, obviously we are very strongly committed to the protection of public health and safety. We talked a lot today about the two principle elements of that, it is prevention as well as mitigation. We have talked

exclusively about mitigation in the course of this discussion. And I think our record on the prevention side is certainly one to be very proud of.

But we are similarly very proud of what we do in the area of preparing for an event if it should occur. You certainly appreciated, from the discussion, as I know you did before, that emergency preparedness and emergency response are dynamic processes. But I can tell you that we are well prepared to respond to emergencies at nuclear facilities.

Emergency planning assumes that the unlikely can occur and develops a response to address the consequences of potential releases. Whether releases from the plant occur as a result of natural disasters, equipment malfunctions, or terrorist acts, emergency plans provide an effective framework for decision-making and response.

Licensees and off-site authorities routinely train, drill and exercise their plans and personnel to identify areas for improvements. The Commission's active role in emergency planning oversight and a vision of a strong emergency preparedness and response capability guide the implementation of emergency preparedness programs through inspections, exercise evaluations, and safety reviews.

The NRC's effective and robust emergency preparedness regulations and oversight, with strong FEMA support, continue to demonstrate our strong commitment to the protection of public health and safety.

Mr. Chairman, that concludes our presentation and we would be pleased to answer any questions you may have.

CHAIRMAN DIAZ: Thank you, Mr. Kane. And thank you to the staff and Mr. Conklin for your presentation. I think I should say that I have been seven and a half years on this job of Commissioner and then Chairman.

I think that this is one area where every time I have interacted with any federal agency, any State, any local authorities, there is a strong commitment to emergency preparedness. There is a strong commitment of doing the right thing.

That doesn't stop at any boundaries. There are no turf battles when it comes to emergency preparedness or actions. We have seen this over and over in many small issues, small sources, dropped from a truck, going to a hospital many, many times and people say, who was in charge. It matters not.

All the Federal, State and local authorities that have ever been involved in any of those issues have responded quickly and effectively. Our plans do work, continue to work, and I'm very pleased to hear that the staff is not only taking this very seriously but have actually accomplished many of the things that we were hoping to accomplish.

Having said that, it's now time to have some fun and ask you some questions. All right. Let me start today.

One of the things that Trish talked about, a very important issue that is being addressed in the Congress and addressed in the press is the issue of fast developing scenarios. There's always this question, does a terrorist attack make a difference?

We keep saying, well, certainly terrorism creates, as an initiating event, different challenges. There is no doubt about it. It creates different challenges in what happens at the first phase of the event. It creates some challenges in the way that the events evolves.

But I believe, but I want you to say it again, that what we have found out is that our planning basis covers well any of these fast developing scenarios. I want to hear it from you in clear details, slow words, again.

MS. MILLIGAN: I could do a summary. But Randy Sullivan of our EP staff has been our response to terrorist authority expert. I would like to turn that to him to clarify.

Randy?

MR. SULLIVAN: Thank you, Chairman.

The staff has done that evaluation, is in the process of evaluating emergency preparedness in the post 9-11 environment. And we are convinced that the emergency planning basis remains valid. There are challenges. As you have said, there are things that can be done a little better. But the basis is valid.

CHAIRMAN DIAZ: It's valid because the radioactive

plume or the releases are still framed by our planning basis. And we do not foresee any faster than what we have actually already considered. Is that correct?

MR. SULLIVAN: Yes, Chairman. That's exactly correct. We do not envision in studies to date and the physical processes that we have studied in our analyses, do not indicate that a significant source term can be developed any faster than the planning basis already considers.

COMMISSIONER MERRIFIELD: That we have been using for years?

MR. SULLIVAN: Post TMI for 25 years.

CHAIRMAN DIAZ: Pre and post TMI.

COMMISSIONER MERRIFIELD: Mr. Chairman, can I ask for clarification. Can you characterize the amount -- let me see, let me put this question in the right way. Can you characterize the amount of effort that the staff has made to confirm that fact or to confirm that opinion, I should say?

MR. SULLIVAN: Yes, Commissioner. But it involves several of our offices. There is an extensive amount of work done by the office of nuclear research that involves the vulnerability assessments of many phases of our nuclear facilities. And national labs are involved.

So, it's an effort that spans --

CHAIRMAN DIAZ: It's the agency and outside?

MR. SULLIVAN: It's the whole agency. I mean, I can't give you a dollar term.

COMMISSIONER MERRIFIELD: I'm not looking for dollar. I think the reason I asked that question we have been asked whether we have given a vigorous review of that very question. Is our review of the fast breaking issue -- is that covered?

And I take from your answer that we have taken a thorough, vigorous, and extensive evaluation of that very question. Is that a fair characterization?

MR. SULLIVAN: Yes, Commissioner, that's a very fair --

COMMISSIONER MERRIFIELD: So we didn't just blow through this? We really dug deep into this issue to make sure we were confident of the conclusion that we had? Is that a fair characterization?

MR. SULLIVAN: And we are continuing to dig deep into it. Yes, sir, that's true.

CHAIRMAN DIAZ: I think since you are a learning organization, you will continue to dig into it?

MR. SULLIVAN: Yes, sir.

CHAIRMAN DIAZ: Now, some of the things that have actually taken place is when we issued orders in February 25th of the year 2002, a few months after September 11, we immediately required our licensees to take steps to improve emergency preparedness.

Has that been evaluated and found to be successful? I know that a few plants that have no finished again.

Maybe you should stay up there.

MR. SULLIVAN: Yes, sir, thank you.

The temporary instruction for inspecting the implementation of the ICMs at the nuclear plants includes evaluation of the emergency preparedness related ICMs. That evaluation is nearing completion, will be done shortly at calendar year 2003. There is been very few problems found. Implementation has been effective and complete. And it has addressed the issues as they were known in 2001 when the ICM was issued.

CHAIRMAN DIAZ: Right. So in summary, we issue orders to improve or check, make sure that the I's were dotted in February. They became effective in August of 2002. Licensees all implemented them.

We have been inspecting them. We have found a few problems, which are being corrected. And we will have a final evaluation shortly on the entire program.

MR. SULLIVAN: Yes, Chairman.

MR. BORCHARDT: Chairman, I would also like to make it clear that it's part of our baseline inspection program as well. So there is an on-going annual assessment of emergency preparedness done in addition to the special verifications for the orders that were

issued in February.

CHAIRMAN DIAZ: Good. So we have more than one way.

MR. KANE: As well as involvement in the force-on-force exercises which include operations in emergency planning as well as security. They integrated assessment of all of those functions.

I might just say -- I don't know whether it came out -- ICMs term was used, interim compensatory measures.

CHAIRMAN DIAZ: Probably my fault. But it is interim compensatory measures. Things that we did at the time where we needed to take action. We didn't know all of the details or the whys but the actions were taken to protect public health and safety.

MR. KANE: Yes, sir.

CHAIRMAN DIAZ: Now, I know there is a phrase that says practice makes perfect. But I don't want the staff to feel good. So I'm just going to say practice makes better.

Can you summarize for us what you have learned from this successful implementation of evacuation for non-reactor accidents that use actual, you know, reactor emergency preparedness plans? Have there been some concrete lessons that have allowed us to get better?

MR. SULLIVAN: Yes, Chairman. There have been improvements made from the studies that you have indicated. In this

case, industry has taken the lead. And in the 1980's, a survey of evacuations of the public was performed with an eye towards lessons learned and areas for improvement.

Those lessons were implemented by industry to improve evacuation plans and the like. NRC is updating and performing a similar study currently. And that study will be done this year. And we expect to have more lessons and insights into public evacuations.

CHAIRMAN DIAZ: I thank you for mentioning the industry. I probably was remiss in saying that we actually rely on the licensees to maintain the effectiveness of this program. And we are using a phrase of my favorite President, we trust and verify that that is correct. But they do take not only very seriously but I believe it shows that they are committed to the same goals of protecting the people that we have.

Let me quickly go to Dick Wessman here. You are talking about communications and how we, you know, work with other agencies. When we have one of these incidents developing and we do activate, you know, occasionally, hopefully we never really have to after TMI to deal with a significant, you know, reactor accident. But we do activate.

How far up the chain of command of the United States government are we prepared to deal in the incident response center?

MR. WESSMAN: If necessary, we can communicate all

the way up to the President. We have the capability of talking to the White House situation room which is the communications linkage that gets us all the way.

CHAIRMAN DIAZ: I just wanted to make sure for the record that these communications are across the federal government and they actually stop at the desk of the President of the United States. If necessary, we have that access.

And it's actually we exercise it. We actually do exercise that capability to make sure that it is maintained.

MR. WESSMAN: That's correct. Not quite so frequently to the White House situation room as we may exercise with the Department of Homeland Security. In the recent Paducah exercise they were a participant and were a little bit of that exercise.

More routinely, when we react to events or situations, considering back to the power outage in August or to the hurricane, we had extensive communications across the federal government. And those communications did go all the way to the White House situation room because of the magnitude of that particular national event.

COMMISSIONER MERRIFIELD: Just a clarification, because I did participate in that one. During the course of the blackout in August, there was at about, I think, 5:00 or 5:30 that afternoon a conference call of the Homeland Security Council to the White House situation room that I participated in on behalf of the agency. And we

were very actively involved with other members of the federal family in interacting there.

So, yes, I think the Chairman quite smartly points out that that is one that we do have a direct access. And we are very, very involved. And that demonstrate what we can do.

CHAIRMAN DIAZ: In other words, I just wanted to be clear that it's not NRC or FEMA but that there is a network in the federal government that involves, if necessary, all the way to the President of the United States and the resources that the President has that are exercised with certain frequency and that are always available. And that, I think, is an important point.

COMMISSIONER MERRIFIELD: Mr. Chairman, not to trip on your point but to follow it, because I agree with it, I think, in fact, the events post 9-11, whether it's with TOPOFF, the blackout or other exercises, that not only have we historically had that very good relationship but I think that's been enhanced in the last two years. And I would argue that it is very, very strong right now in terms of the overall coordination among federal agencies.

CHAIRMAN DIAZ: Thank you, sir. One last comment. And then I will let my follow Commissioners take their turn now.

There was a point I made in my remarks. You repeated it in yours. You know, we can see there the way that we conduct our safety, security, and emergency preparedness as an integrated

program because each one of them makes the other one stronger. The stronger the safety is, you know, the better security is. The stronger security is, the better security -- emergency preparedness -- the better emergency preparedness. There is a synergistic effect between this drive that the agency has to protect public health and safety and the environment.

I wonder, when we deal with our Federal agencies and the States and local authorities, do we emphasize this point that there is not one issue, it is not emergency preparedness only? Because I think it provides a very good indication of how robust our programs, to really show or demonstrate or have them aware of the interaction between this program.

Is that something that we do or something that we should do?

MR. WESSMAN: I would fake an initial response, if I could, sir, and point out, the State outreach activity that we held this last June that involved both security and emergency preparedness and health physics-type representatives from nearly all of the States. And, of course, we had participating in that representatives from Homeland Security, FEMA, and other Federal organizations. I think we have strong outreach activities.

That was a very successful conference that had several hundred people from the States here. And we, on a more routinely and

a closer basis, may interact with a smaller community of States within a region.

For example, last year Region IV hosted a conference. They are going to do the same sort of thing for licensee and State representatives in their regional area of interest. A lot of activity, I think, goes on in this area.

CHAIRMAN DIAZ: But there is a point in here that I think is very important.

If potential equipment failure or even, you know, an attempted or partially successful terrorist attack does not necessarily mean a disaster because we have this many layers interacting with each other. It had -- you know, we have so many safety layers, so many capabilities to prevent releases of radioactivity to the public.

And I think it is really, you know, extremely important that we work at emphasizing these issues because, hopefully, whatever it is, our main point is to minimize anything that could go out there. And that is part of a strong network of issues and protection devices and systems.

Mr. Kane?

MR. KANE: I appreciate your point. I think it is important that we continue to reinforce that point that you are making. I know for the sake of doing emergency exercises, we have to take typically -- to fully test, really, the licensee as well as the State and local officials.

We really need to take these to the point of the declaration of general emergency every event in order to test the entire infrastructure. That's a necessary thing we have to do.

But it is important to, you know, to inform the States and keep them informed that we don't -- you know, our experience has been that we have not taken real events that far. And that they are terminated much earlier if that's the point --

CHAIRMAN DIAZ: That's right. We are actually capable of terminating them much earlier. We have a tremendous success story on that.

Commissioner McGaffigan?

COMMISSIONER McGAFFIGAN: Thank you, Mr. Chairman.

I think we have an absolutely outstanding program in emergency preparedness. I'm going to try to bring that out through a line of questioning. I'm going to start with Mr. Conklin.

I heard chemical in your title. I have got to ask the question, having read in the newspapers we may have 123, I think it is, plants in this country where you can get a million prompt casualties and 700-odd where you can get 100,000 prompt casualties in a worse case event.

Does the chemical industry have anything like this? I mean, the staff gave us in chart 31 an example of sort of four chemical

events where our plans were executed because we happened to be nearby. But does the chemical industry have any requirements for emergency plans? Do States have planning zones around chemical plants? Are their exercises routinely? Are there inspections, are there sirens? Is there any infrastructure whatsoever on the chemical side of the equation?

MR. CONKLIN: Let me clarify the chemical part of the title that I have. The chemical side of the house that I deal with is the army's military chemical weapons.

COMMISSIONER McGAFFIGAN: And there we have a very elaborate system. That's a very elaborate system. But for the private sector chemical industry of this country, is there any emergency planning system that you are aware of?

MR. CONKLIN: They do have -- through the national contingency plan, they do have local emergency planning commissions, State emergency response commissions that deal with those kinds of things. But I don't think they have the level of sophistication that we have either in the REP program or the CSAP program..

COMMISSIONER McGAFFIGAN: Do they have exercises?

MR. CONKLIN: I haven't worked them that closely, to be honest with you.

COMMISSIONER McGAFFIGAN: My understanding is -- we have these five or six very significant exercises a year that involve Commissioners that are full blown and whatever. But in the course of emergency planning, every site gets an exercise every couple of years at some level. And we have conducted over 2,000 exercises since 1979. Isn't that correct?

MS. MILLIGAN: Yes, sir.

COMMISSIONER McGAFFIGAN: And as a result of each of these exercises, we find things sometimes. Sometimes they score aces. But more typically, we will find deficiencies of some sort. There are various categories of deficiencies. Those deficiencies are documented. they are on our web page under the emergency planning cornerstone. They are put into the licensee emergency corrective action program and they are fixed. Isn't that correct?

MS. MILLIGAN: That's correct, sir.

COMMISSIONER McGAFFIGAN: Our program, would it be fair to say that what we did in emergency planning -- I would say a lot of this predated Three Mile Island unfortunately it hadn't totally come together -- but the EPA, the NRC and FEMA were working together in the late '70's to put things together which allowed us to move very rapidly after Three Mile Island. I think it was August of '79 we had regulations in place. Anybody who knows the pace of regulations in this agency knows there had to be an intellectual property prior to

March of ’79 in order to pull that one off.

But hasn’t our program that developed in the late ’70’s and was put in place in the early ’80’s, isn’t that a model for the rest of the world? Doesn’t the IAEA basically build its emergency planning guidance off of the U.S. model to a greater or a lesser degree?

MS. MILLIGAN: Yes, sir. They do.

COMMISSIONER McGAFFIGAN: In Europe do they use 6 kilometer -- 10 kilometer or 6.2 miles emergency planning zone for evacuation and sheltering purposes for their planning purposes? Isn’t that more typical?

MS. MILLIGAN: That’s more typical. And typically they actually shelter first and evacuation is low on their chain.

CHAIRMAN DIAZ: But if I may comment on that. There are a few countries that they use 20 kilometers.

COMMISSIONER McGAFFIGAN: Twenty kilometers would be 12 -- but we are in the same ballpark as other countries and that’s not a surprise because their systems largely followed our system over the last quarter century?

MS. MILLIGAN: That’s correct.

COMMISSIONER McGAFFIGAN: When EPA and NRC in 1978 arrived at the 10-mile and 50-mile emergency planning zones, it was a deterministic analysis that they did at the time.

If we were doing it today in light of our -- and I’m not

saying we should do it. I'm not advocating it. But I'm trying to make the point that numbers may be conservative. We know a lot more about source terms today than we did in 1978 after, you know, a decade or more of heavy investments and severe accident research and the revised source term being developed and all of that. Would it be fair to say that what we know today makes the 1978 analysis conservative?

MS. MILLIGAN: Extremely conservative. Yes, sir.

COMMISSIONER MERRIFIELD: Can I ask a follow-up question? Because you have got a line of questioning here that I think is particularly useful. Can I ask one follow-up question?

Commissioner McGaffigan was asking you about 10-mile EPZs versus 10 kilometers. Are you aware of any country that has an emergency planning system that is as extensive, comprehensive or as routinely tested as that we have here in the United States?

MS. MILLIGAN: Not that I know of.

MR. BORCHARDT: I'm not aware of any. I know of some countries in some amount of detail but I certainly don't know all of them. I think I could answer the question. I'm not aware of any.

COMMISSIONER MERRIFIELD: None springs to mind?

MR. BORCHARDT: Right.

CHAIRMAN DIAZ: But there are many countries that are comparable.

COMMISSIONER MERRIFIELD: No, they do. Put the

point I am trying to say, we are pretty much the state of the art as it gets. We are as good as anyone else. Is that a fair characterization?

MR. BORCHARDT: In our opinion, yes.

COMMISSIONER McGAFFIGAN: But to go back to something that Chairman Diaz said, practice doesn't make perfect, practice makes better. And that's our philosophy here, is that we are going to find things. Hopefully we don't find a lot of things. But we are going to find things. We are going to keep working at them. We are going to keep making things better. That is the underlying, underpinning of both the FEMA and NRC approach to emergency planning.

MR. KANE: That is correct.

COMMISSIONER McGAFFIGAN: And we still find things. Conversation, Craig was talking about the sirens out at Surrey this past week and the compensatory measures that were put in place so that the plant could restart. And we had siren issues in the August 14th blackout. And we may well think about siren issues going forward although we have a very robust program with lots of backups at the moment --

MR. KANE: Just note that that's a lessons learned. It goes back to the hurricane, I believe, at Turkey Point that led to this extensive coordination with FEMA that when a plant shuts down after an event such as that, a natural disaster type of event, that there is the

need before the plant restarts, for us to communicate with FEMA and be sure that the conditions are appropriate in the infrastructure to allow that to happen.

That's a routine and preplanned and exercised many times in hurricanes.

MR. BORCHARDT: We have direct evidence that the industry continuing to improve. When we first started the reactor oversight program we have had a new emphasis on emergency preparedness.

COMMISSIONER McGAFFIGAN: That was going to be my next question.

MR. BORCHARDT: That resulted in a higher number of findings on an annual basis than we had under the previous program. We have seen that the number of findings tail off. They are coming down. The industry is correcting the problem, addressing it, taking a harder look at themselves.

So although we are still coming up with inspection findings and there is still performance indicator information being gathered, it is improving.

COMMISSIONER McGAFFIGAN: I just would suggest to any member of the public listening to this discussion today that they might want to go to our web page, look up the reactor oversight program, look up their plant and look at the emergency planning

cornerstone. And, you know, I think we are unique in the world in having emergency planning performance indicators right there for the public to see and all of our inspection reports right there for the public to see. So someone can get very well informed about emergency planning at their particular facility by going to this very transparent web page that we have on the reactor oversight process.

And as Bill has just pointed out, we found some things. As a matter of fact, we put renewed emphasis on emergency planning as a result of the revised oversight process. And we found some things and they have been corrected.

I think that what we are trying to demonstrate to the public here today is that I think we have something here that's really unique in the nation, unique in the world, something where we have taken the leadership role in the world. The United States. Not just NRC, but NRC, EPA, FEMA, the combined Federal community.

People come. I know during exercises that each of us has been the lead Commissioner on, we've had foreign visitors come to our emergency planning center. When GAN was starting up, the Russian regulator, the Gosatomnadzor, one of the things we helped them with was setting up their emergency planning system, their emergency operation center.

Our emergency operation center, which we continue to improve, as Commissioner Merrifield points out, both here and in our

regions where we have backup capabilities, are a model for other nations.

I should mention last week I happened to be Acting Chairman. And with Hurricane Isabel coming, one of the other things we have we haven't mentioned today, we have a continuity of operations program where if the lights when out in this building and the building next door, seamlessly, everything transfers to Region IV. And Region IV was fully staffed for that contingency during that event.

So we have, again, thought through these things, exercised them previously, exercised them routinely.

The last item I'm just going to mention, you know, we can go back to the chart, the 360 millirem chart. But one of the things that bugs me about some of the stuff that certain members of the public put out -- I'm looking at something from Riverkeeper here, the notion that radioactivity from nuclear power plants is worst than naturally occurring radioactivity. I'll read this. This comes from a Riverkeeper fact analysis about radiation in Indian Point.

"These chemicals," they are referring to strontium, cesium, and iodide, "are different from background radiation found in nature and cosmic rays in the earth's surface. Background radiation while still harmful, contains no chemicals that specifically attack the thyroid gland, bones or other organs."

I scratch my head and I think about radon in lungs,

potassium 40 all through my body which is on same line on the periodic table as cesium and sodium and all the other elements. This is just nonsense. So there's a lot of nonsense put out by these folks.

There is this desperate need to justify that the trip to Aspen to go skiing and the granite counter top in their kitchen is not causing them any harm. The radon in their homes that they have probably never tested. But one atom that might be emitted from a nuclear power plant is going to be the end of the world.

As your table showed, the nuclear fuel cycle contributes, I think it's .04 millirem per year. So one ten thousandth of the typical radiation that every member on average gets. And one hundred thousandth of people that get higher natural background radiation in this country.

So there is a lot of misinformation that gets put out here. There's a lot of misinformation that we have to combat. And I hope today's briefing will help in that regard.

Thank you, Mr. Chairman.

CHAIRMAN DIAZ: Thank you, Commissioner McGaffigan.

Commissioner Merrifield?

COMMISSIONER MERRIFIELD: Thank you, Mr. Chairman. I want to follow off the closing comment of Commissioner McGaffigan.

I have got friends and family who live in the area near Indian Point. And I have to say, you know, I have been working in this town since 1986. And I have to say that I have not encountered a situation where such a well-funded group has exhibited such a gross distortion of facts in order to try to scare people.

And I think it is most unfortunate that the good people of the area surrounding Indian Point have been subjected to this. Because I think there is a lot of misinformation that's been out there. These comments about kill zones, weapons of mass destruction, TV advertisements, all of that. I think it's a gross distortion of facts. And I think it's unfortunate.

I have a couple of general questions. We have put a significant amount of effort over the course of the last two years into evaluating how we conduct emergency planning and what we need to do relative to the source term at the plants. How would -- and I guess I might direct this toward Bill Kane.

How would you generally characterize the amount of activity specifically we have put toward evaluating Indian Point? Would you characterize that as minimal, moderate, or significant?

MR. KANE: I think there has been a significant effort which has been shared by -- well, I guess I should put it this way. Region I has spent an enormous amount of resources associated with Indian Point and Headquarters in support of Region I. But I don't have

a specific number to put on it.

COMMISSIONER MERRIFIELD: I'm not looking for a specific number. Obviously we want to make sure that all the plants that we regulate have adequate protection. But would it be fair to say that we have put significantly more effort in Indian Point than any of the other plants that we oversee?

MR. KANE: Yes, sir.

COMMISSIONER MERRIFIELD: So that's the number one plant we have been spending time thinking about?

MR. KANE: That's correct.

COMMISSIONER MERRIFIELD: I want to -- this may go toward Trish. The Chairman has already asked you once but I'm going to ask you the same question in a different way.

In our review of the emergency preparedness activities at Indian Point, do we still have the ability to provide adequate assurance for the protection of individuals who live within the 10-mile EPZ, including and encompassing fast breaking events?

MR. BORCHARDT: Yes. The results of our inspections, oversight of exercises, coordination with FEMA all allow us to reach that conclusion.

COMMISSIONER MERRIFIELD: Thanks for answering that, Bill.

The final area I want to get into does go to Trish. And this

goes to the issue of some of those slides you had on plume and whether we evacuate or shelter.

It strikes me in reviewing some of this -- I think there may be a concern out there in the general public that when there is an issue at the plant there is, in fact, a release. That that release acts more like a stone hitting a pond, that there is this ripple effect. When, in fact, that is not the case. Typically, as you said in your preparation, most of these -- the modeling shows that most of these would have a plume that tends to be narrow in scope. Is that correct?

MS. MILLIGAN: That's correct.

COMMISSIONER MERRIFIELD: So in following that logic, if you have a relatively slow, narrow plume, the notion of evacuation of that keyhole area that you show up in slide 24 makes sense. And that for people who are not within that keyhole -- and if you don't have wind changes, that's going to be the most protective opportunity for the folks in that keyhole. But for other individuals, sheltering seems much more logical. Isn't that --

MS. MILLIGAN: Absolutely.

COMMISSIONER MERRIFIELD: Now, if we had an event in which there was very rapid wind shifts, a lot of atmospheric activity, would that not have a tendency of rapidly disbursing the material not causing that narrowly defined plume but having a widely disbursed plume?

MS. MILLIGAN: Yes. That's correct.

COMMISSIONER MERRIFIELD: In that circumstance, would it not be that in many cases sheltering would still remain the most logical activity for many individuals who were in that EPZ?

MS. MILLIGAN: Sheltering could an excellent option. We also then have the ability then to expand the keyhole if we know -- we know what the winds are doing. We have meteorologists and so we have these facts. So we simply expand the sectors.

So in the slides we had an effective sector and two adjacent with rapidly moving or highly shifting winds. We could expand that to be the effective factor and perhaps two adjacent sectors or four adjacent sectors. So that we identify the population in the zone. And then we would then look at either evacuating or sheltering or some combination thereof as to what would make sense.

COMMISSIONER MERRIFIELD: The reason I'm following this line of questioning is because it strikes me -- there is this concern about self evacuation. This is an issue that has presented itself in many places, including at Indian Point.

It strikes me that a lot of the information that we provide to the public does put an emphasis on evacuation. In many instances, that does make a lot of sense. But as you see most of these, for most individuals in most events that we model, the individual will be better off sheltering.

MS. MILLIGAN: Absolutely. To stay put in shelter. That's correct.

COMMISSIONER MERRIFIELD: And it makes me wonder whether we have done as good a job as we can do. And I certainly want to invite Craig Conklin to comment on this as well.

I'm wondering if we have done as good a job -- I'm wondering in some instances whether we have oversold the importance of evacuation and have potentially have undersold sheltering so that the public may be left with this mis-impression that if something happens in the plant, by God, I have got to evacuate. When, in fact, the best thing we can do to protect our children, pregnant mothers and other individuals is to get in the house.

Any comments?

MR. CONKLIN: Yes. I tend to agree. In the chemical stockpile program, we rely on a balanced approach for protective actions. Sheltering is a large part of that balanced approach.

In fact, for the communities that are located nearest these demilitarization facilities, whether either burning the weapons or neutralizing them they don't have time to evacuate. Flat out. They have got make two to five minutes to respond. In that time frame they need to shut their doors, their windows, get inside their house, basically a safe room. We have got some other measures there. But basically sheltering in place is one of the key first responses they need to take.

And what we are doing now is developing a program to say, okay, now that you have sheltered in place, at what point do the chemical hazards inside the house become equal to the hazards outside and when do you terminate sheltering in place in order to protect the people further?

So we are doing some detailed studies on that aspect of the sheltering. But I think we have relied on it maybe too heavily. And I think we need to have a more balanced approach in our discussions with our State and local reps in the communities.

And we need to really understand the housing situations, what kind of sheltering the houses have. With the title envelopes the houses have for energy efficiency, for example, there is less in leakage of materials into the home. So you are actually developing protection for the movement of materials into the home. I think we need to take a good hard look at it and see what we can do.

COMMISSIONER MERRIFIELD: I appreciate that comment. Because the issue of self-evacuation is one that has been consistently raised. And I think it does require us to re-look again at how we explain to the public what's going on with evacuation, vis-a-vis sheltering and provide, I think, some more detailed information to the public to explain to them, you know, in most cases, you are going to be a heck of a lot better off sheltering than you would be in self evacuation. And you really ought to be listening to the guidance of

FEMA, State and local authorities in that regard, rather than taking things into your own hands.

COMMISSIONER McGAFFIGAN: Commissioner Merrifield, can I add to that point?

COMMISSIONER MERRIFIELD: Yes.

COMMISSIONER McGAFFIGAN: I think a lot of people who try to spur the self evacuation it comes from the point I was talking about earlier, this misinformation that's spread about the effects of radiation. And the point you made earlier about whether, you know, you would have to evacuate Denver under this hypothesis. A couple hundred millirem is bad for you.

We have flight crews that routinely get 4 or 5 hundred millirem a year as a result of their jobs. The EPA standard for radon in indoor air is 4 pico curies per liter, which for a typical occupation in the home equates to about 400 millirem per year but could equate to 6 or 8 hundred millirem per year if it's a mother and child that live in a nice tight home that is air conditioned in the summer and heated in the winder and they don't ventilate very much. They can get a pretty good dose.

Typically, as I said, the medical uses of radiation in this country now probably the average person is 200 millirem a year, certainly more than what the chart indicates. Your typical CT Scan of a chest is 2 rem. And the medical community, I think, appropriately uses

this.

This is involuntary. What a member of the public might well say to what I just said is all that, flying airplanes, living in your home, taking radon doses and not bothering to check about them, that's all my choice but this other stuff is being imposed on me. But it's still the order of magnitude of the release is similar to all of these other things in people's lives and they should not panic over a few hundred millirem or even a couple of rem. Our occupational dose limit which we believe is protective is 5 rem per year.

And that is not -- you know, this amount of radiation that they would have people panic over and self evacuate over really complicates the job. One of the good things in the Witt report -- James Lee Witt had several points in his report without identifying particular groups said that people putting out this sort of information actually are doing a disservice to the community.

But it's this radiation phobia, absolutely inflamed by these anti-nuclear groups putting out their misinformation that hurts emergency planning, as Mr. Witt said.

COMMISSIONER MERRIFIELD: I'm going to pile on. I think one of the other concerns out there are these comments about another Chernobyl. And this has really bothered me. I have stood in RBMK reactors and I have looked up at the tin roof on top of those buildings. And I think there are folks out there who want to really pull

one over on the American people. There is a distinct difference between what happened at Chernobyl and the reactors that we regulate.

That building had no containment. There were consequences associated with the design of that reactor and a fire that resulted from it that are not at all -- it's a completely different design than what we have.

The only analogous situation we have here in the United States is the Three Mile Island, Unit II incident that caused a significant portion of that fuel to melt. There was a release outside of that building.

But a long-term study by the University of Pittsburgh -- 18,000 people, I think it was, demonstrated that there were no health effects from the most significant reactor incident that we have had in the United States. And in part, it was because there was -- it wasn't a tin roof over that reactor. There was four feet of concrete in that containment. These reactors are designed in such what way to avoid those kinds of things.

So I think -- it troubles me that these very same people who are trying to spread this information are using a distortion of what happened at Chernobyl to really scare people. We have got to deal with the facts. And that's not to excuse any of this. We all work very hard to make sure that these reactors are regulated safely. We work

very hard in making sure that emergency preparedness is done in the way it should. And as the Chairman says, we work very hard in terms of making sure that they are secure. It's not to say that we can't do more.

The comments that I made earlier comparing our emergency preparedness with other countries isn't to say that we are where we ought to be. We ought to be continuing to improve. But we do a pretty good job of it. And I did want to get that in the record.

CHAIRMAN DIAZ: Thank you, Commissioner Merrifield. If I may pile onto that.

In Chernobyl the thing that broke down was emergency preparedness. It is that that country was not capable of making the decisions to protect its people. I think what we are trying to say today is that we will.

COMMISSIONER MERRIFIELD: I am glad that you mentioned that, because I'm going to pile on even more.

One of the major causes of the thyroid cancers that occurred resulted to that site was the fact that they didn't tell people living around that plant to stop drinking the milk and eating the foodstuffs. And there are other protective measures that perhaps could have been taken --

CHAIRMAN DIAZ: For as long as 28 days.

COMMISSIONER MERRIFIELD: Twenty-eight days.

Absolutely irresponsible. We would be in position with our brother and sister agencies, with FEMA, the Department of Agriculture, the States and local governments giving people accurate information. And one of the first things we would be doing is telling them not to consume those products.

That's a significant difference between where they were and where we are.

COMMISSIONER McGAFFIGAN: Mr. Chairman, there is one question that Commissioner Merrifield's earlier line of questioning led me to write down and I didn't get a chance to ask at the time. When he was saying that we had too much emphasis, perhaps, on evacuation not enough on sheltering. These evacuation time estimates that get developed as a result of the 2000 census, are these evacuation time estimates for 314 square miles? Or do you ask people to do evacuation time estimates for typical keyholes?

Because I think it may be the former. And I worry whether we shouldn't be asking people for realistic evacuation time estimates by just saying take your worst keyhole, whichever keyhole has the most population in it and go out to ten miles rather than just five miles. But let's do that keyhole and see what your evacuation time estimate is.

MS. MILLIGAN: Our evacuation time estimates are for the 10-mile EPZ. We look at it under good weather conditions, adverse

conditions --

COMMISSIONER McGAFFIGAN: That's all 314 square miles?

MS. MILLIGAN: It's within -- yes, sir.

COMMISSIONER McGAFFIGAN: I think we may do ourselves a disservice. In addition, sometime in the future, you may want to ask -- I don't think -- has there ever been -- we have done all those exercises all those years in the OPs center. I was in with Kewaunee yesterday. We were doing a keyhole, two mile total and five miles in three sectors.

Have we ever, in all of the exercises we have ever done here with you guys writing the scenarios, where everything always breaks and there's all these valves stuck open and pathways to the environment and all of that, have we ever made an immediate decision to evacuate all 10-mile EPZ, all 314 square miles?

MR. KANE: I will have to go back -- not the agency, in terms of what the agency would recommend. I do believe that that is a default for some States.

COMMISSIONER McGAFFIGAN: To evacuate all ten?

MR. KANE: Yes.

COMMISSIONER McGAFFIGAN: I see. If it is a default for the States -- that may not even -- I mean, I just would make the point --

MR. KANE: That's my recollection.

COMMISSIONER McGAFFIGAN: -- that that may not -- it strikes me that if all you need to do is the two miles and maybe a little bit of a five-mile thing and instead you are moving all ten miles out, that may not even be good emergency planning because instead of getting people that you really need to get, you are worrying about people who don't need to be got. So I guess we leave those decisions to the State.

COMMISSIONER MERRIFIELD: If I may interject for a second. There is a lot of layers and sensitivities that go into this and decisions made by local governments. I will only use an example for explication.

I had an opportunity to participate in the Vermont Yankee exercise at some point back. And there is a trigger mechanism, at least there, where when one State decides it wants to evacuate, the other States do as well, irrespective of whether the wind is blowing in their direction or not.

So I think in that particular case, when Massachusetts decides to do it, New Hampshire said well we'll and see what Vermont does. Vermont says, well, if Massachusetts is going to do it, we will do it. It was something along those lines. I may have the facts somewhat wrong. But it was --

COMMISSIONER McGAFFIGAN: Having grown up in Massachusetts, I will not say anything about my home state. And I will

say nothing about your home state of New Hampshire. I hope they are not typical.

CHAIRMAN DIAZ: We had a very good meeting. I certainly thank you for the information presented by our staff and by FEMA. It's just the right things that we wanted to hear. The Commission is concerned and we will continue to be concerned about the effectiveness of our emergency preparedness programs just as we are concerned with our safety and we are concerned with our security.

I think that the message that we wanted to send by, you know, bringing in the staff and FEMA to talk to us and for us to question is that we care about this. And we care a lot about it. And that we intend to make sure that these programs continue to get better as time goes on.

If I learned one extra thing today -- and, of course, I think I'm speaking for my fellow Commissioners -- is that we also are trying to improve our communications because that's one of the obligations that the agency has. And in this area there might be some particular needs that need to be looked at, including the decision between whether you shelter or you evacuate, and how those issues are made and communicated. And that is certainly one area that, I think, you know, we could take another look at it and do better.

And if my fellow Commissioners are don't have any further comments --

COMMISSIONER MERRIFIELD: Mr. Chairman, I completely agree with your closing comments. I think -- my hope would be that the audience here in White Flint One and anyone who would be viewing it on our web broadcast would recognize that the Commission takes emergency planning very, very seriously and we think -- and we do a lot in that regard.

On the communications front, Mr. Chairman, I was also thinking in addition to the better explanation of evacuation versus sheltering, I think we may also wish to also consider as part of the Chairman's communication efforts whether there may be some way through our web site, we could give the public a more interactive understanding of what we do with emergency planning, whether with some videos of the folks that we had over in White Flint Two, pictures that may explain some of the different teams that we have deployed, the activities of our State and local counterparts at the reactor site and the involvement of many of the members of the Federal family.

I envision potentially a way in which we could have a good demonstration for the public that would give them a better understanding of the significant effort that we have and the significant thought that we put into this emergency planning.

COMMISSIONER McGAFFIGAN: Mr. Chairman, I will pile on one last time today. And I think I called to Trish Milligan's attention a year ago or so.

The French have a pretty good web site. The French Le Coste organization on emergency preparedness. It's quite good in terms of laying things out.

They have sole responsibility for almost everything. So we would probably have to be careful or do this in conjunction with our sister agencies lest with step on toes. But they have a really good web site where a member of the public can click on and understand how emergency planning would work in a typical French nuclear reactor.

CHAIRMAN DIAZ: Very good. Well, thank you so very much. I think it has been a most productive meeting. In fact, it's been so productive that we might have to do it again. With that, we are adjourned.

{The meeting was adjourned.)