

February 23, 2005

Mr. Louis Reyes
Executive Director of Operations
U.S. Nuclear Regulatory Commission
Washington, DC 20555

By FAX 301 415-2162 and Postal Service

Petition for Emergency Enforcement Action (10 CFR 2.206) requesting NRC to issue a generic communication to all Part 50 operating licenses on the reliability of power to Emergency Notification Systems (ENS) and Orders to require licensees to install and maintain ENS backup power sources

Mr. Reyes:

On behalf of the Nuclear Information and Resource Service (NIRS), Indian Point Safe Energy Coalition (IPSEC), Riverkeeper, Inc., Legislative Members of Rockland County, Putnum County, and Westchester County, New York, New Jersey Environmental Federation, McKean County Citizens Against Nuclear Waste, EFMR Monitoring, Inc., TMI Alert, UnPlug Salem Campaign, Alliance for Nuclear Responsibility, Public Citizen, Nuclear Energy Information Service, No New Nukes and others hereafter referred to as Petitioners, the United States Nuclear Regulatory Commission (NRC) is requested to take the following emergency enforcement action as provided under 10 CFR 2.206 to:

- 1) Issue generic communications to all licensed commercial nuclear power station operators to ascertain whether or not operators currently provide emergency power backup systems to significant elements of their required Emergency Notification Systems (ENS). These elements would include the emergency operations center, all sirens, repeaters and other systems, structures and components necessary to successfully notify the public in the simultaneous event of a nuclear power station accident or act of sabotage associated with the failure of the electricity grid which is the sole power source to a yet-to-be-determined number of ENS;**
- 2) Modify all operating licenses to require that nuclear power station operators provide and maintain emergency backup electrical power to notification sirens, etc., preferably through adjacent or pole mounted photovoltaic power charged battery systems, or other means independent of a vulnerable electrical grid system so as to assure the reliable operation and performance of required ENS.**

Background

An unknown number of nuclear power station operators currently rely solely on electricity from the grid to operate the required ENS within the ten-mile emergency planning zone. A number of these operators are identified in this petition and include but

are not limited to nuclear power stations in New York, Illinois, Wisconsin, Maryland, California, Tennessee, Pennsylvania, Virginia, New Jersey, North Carolina and South Carolina.

Nuclear power station operators currently are not required to have emergency power backup for the ENS to assure the operation of public notification systems in the event of an accident or an act of sabotage associated with the simultaneous or subsequent failure of the electrical grid.

NRC currently does not know how many or which operating nuclear power station sites do not have emergency power capability for their public notification sirens in the event of electrical grid failure or an act of sabotage.

The petitioners are concerned that NRC must contemplate, regulate and take enforcement action to assure the reliability and operability of emergency notification systems currently dispersed throughout the ten-mile emergency planning zones (EPZ) as required by Code of Federal Regulation around every U.S. nuclear power station.

Petitioners are concerned that NRC must contemplate, regulate and take enforcement action to assure that all public notification systems be fully operational under all reasonable contingencies. It is reasonable to assure the operability of public notification systems in light of the fact that electrical grid failure is recognized as an initiating event for Station Black Out and reactor core damage.

Petitioners contend that an attack disabling offsite electrical power sources is assumed as part of the NRC Operational Safeguard Response Evaluations (OSRE) or mock force-on-force exercises used to evaluate on-site security capabilities for repelling and recovering from a terrorist attack. Such an attack on the electrical grid would simultaneously disable the ENS at the reactors subject to this petition.

Petitioners contend that Emergency Response Plans for the 10-mile EPZ include instructions that the affected public stock up portable radios with extra batteries in the event of a loss of power so as to receive emergency communications and maintain current information upon notification that an emergency is in progress at the nuclear power station. Petitioners contend that it is unreasonable for the public to have battery supported alert and communication capability while federally required emergency notification systems are not required to have such emergency power capability in the event of electrical grid failure.

Petitioners offer the following examples (though not a comprehensive list) taken from NRC Daily Event Reports as demonstrating how a variety of electrical grid failure modes have resulted in significant degradation of nuclear power station emergency notification systems. The Daily Event Reports document the Petitioners justification for emergency enforcement action.

Loss of Emergency Notification Systems Due To Mechanical Failure of the Electrical Grid

Event Number: 41350

Event Date: 01/23/2005

Facility: CALVERT CLIFFS

LOSS OF EMERGENCY NOTIFICATION SIREN CAPABILITY DUE TO LOSS OF POWER

“A significant portion of the emergency notification sirens (19 of 50) located in Calvert County, MD are out of service due to a Southern Maryland Electric Cooperative (SMECO) power outage. The licensee stated that power is expected to be restored by 1700 ET 01/23/05.

Event Number: 41242

Event Date: 12/04/2004

Facility: SUMMER

EARLY WARNING SIREN SYSTEM FAILURE

"Actual failure was 100% (106 sirens) due to loss of power to station on-site/off-site radio repeaters. Failure occurred at 22:30 12-03-04. System was restored on temporary power at 23:06 12-03-04. State and local counties notified of failure at 23:26 12-03-04. System returned to normal power a 01:00 12-04-04. Station resident inspectors notified (J. Zeiler and M. King). System verified communications at 92% availability"

Event Number: 40073

Event Date: 08/14/2003

Facility: INDIAN POINT

“Emergency sirens lost in four counties due to a loss of power.”

Event Number: 40078

Event Date: 08/15/2003

Facility: INDIAN POINT

“...a review of the county siren overviews maps revealed that Westchester County had experienced another major power loss to its service. This resulted in more than 60 sirens being without utility-supplied power. This situation rendered the system inoperable for Westchester County as the sirens were without substantial power by which to be sounded. Further information revealed that the utility had to shed load.”

Event Number: 40074

Event Date: 08/14/2003

Facility: GINNA

“As a result of grid problems it was noted that Ginna did not meet the required number of emergency sirens (greater than 25% of sirens without power).”

Loss of Emergency Notification Systems Due To Adverse Weather

A further sampling of NRC Daily Event Reports indicates that adverse weather frequently results in the loss of electrical power for extended periods of time and the simultaneous failure of emergency sirens in large sectors (including complete failure) of the emergency planning zones:

Event Number: 41363

Event Date: 01/30/2005

Facility: SUMMER

LOSS OF EMERGENCY SIREN CAPABILITY DUE TO ADVERSE WEATHER

“Loss of greater than 25% EWSS [Early Warning Siren System] due to ice storm. The majority of the sirens were lost in Fairfield and Newberry Counties. The licensee had no estimated time for restoration.”

Event Number: 41311

Event Date: 01/06/2005

Facility: CLINTON

LOSS OF POWER TO OFFSITE SIRENS GREATER THAN 1 HOUR DUE TO INCLEMENT WEATHER

“At about 07:45 hours CST on January 6, 2005, greater than 25% of the Clinton Power Station (CPS) offsite sirens were out of service, 17 of 44 sirens were not available due to inclement weather... At approximately 09:11 hours on 1/6/2005, 10 sirens were returned to service when power was restored to the area.”

Event Number: 41302

Event Date: 12/31/2004

Facility: DIABLO CANYON

LOSS OF EMERGENCY NOTIFICATION SIRENS

“Loss of 21 emergency notification sirens due to a loss of power. A rain storm in San Luis Obispo county resulted in a loss of a local substation. This substation supplies power to 21 of [over 400] emergency sirens.”

Event Number: 40922

Event Date: 08/14/2004

Facility: Braidwood

LOSS OF EMERGENCY NOTIFICATION DUE TO INOPERABLE SIRENS

“At 0715 on August 4, 2004, Exelon was notified by Fulton Contracting that Braidwood Station had >[greater than] 25% of its emergency notification sirens inoperable. The cause of the inoperability [at 0626] for the sirens was due to a loss of power due to severe weather.”

Event Number: 40953
Event Date: 08/14/2004
Facility: BRUNSWICK

“On August 14, 2004, at approximately 1225 hours [EDT], Brunswick began losing the function of several offsite emergency preparedness sirens as a result of adverse weather conditions associated with Hurricane Charley. There are a total of 36 sirens located in Brunswick and New Hanover Counties, NC. The total number of inoperable sirens peaked at 25.”

Event Number: 41049
Event Date: 09/17/2004
Facility: WATTS BAR

“On Sept. 17, 2004, with Watts Bar Unit 1 at 100% power, the main control room was notified that the 99 sirens which make up the Public Prompt Notification System were not functional. The system uses two repeaters to control the sirens. As the remnants of Hurricane Ivan were passing through the Tennessee River Valley one of the repeaters (Pone Knob) was found to be without power around midnight. The siren system operators confirmed the second repeater (Grandview) was still functioning. Approximately 5:00 a.m., however, communications were lost with the second repeater.”

Event Number: 40171
Event Date: 09/18/2003
Facility: PEACH BOTTOM

“Due to adverse weather conditions, the number of emergency sirens out of service has risen to 80 (out of a total of 90).”

Event Number: 40172
Event Date: 09/18/2003
Facility: HOPE CREEK

“Due to the effects of severe weather related to Hurricane Isabel, local power outages have resulted in an excessive number of sirens within the Salem/Hope Creek 10-mile Emergency Protection Zone (EPZ) being unavailable. Sirens will be recovered when power is restored.”

Event Number: 40175
Event Date: 09/18/2003
Facility: CALVERT CLIFFS

“A significant portion of emergency sirens (43 of 72) located in Calvert, St. Mary's and Dorchester counties are unavailable due to a loss of power.”

Event Number: 40181
Event Date: 09/19/2003
Facility: SURRY

“45 of the 67 sirens expected to respond to the siren polling are considered inoperable at this time due to power failure as a result of Hurricane Isabel.”

Event Number: 39727
Event date: 04/03/2003
Facility: KEWAUNEE

“The percent siren coverage population lost is 50.03%. The lost siren coverage is due to weather related power outages.”

Event Number: 39729
Event Date: 04/04/2003
Facility: GINNA

“The plant has 59 of the 96 offsite notification system sirens out of service due to loss of power caused by ice storms damage to the electrical power supplies. They do not know how soon the sirens will be returned to service.”

Potential Loss of Emergency Notification Systems Due to a Terrorism-Related Attack on a Nuclear Power Station

Nuclear power stations are widely regarded as potential targets of terrorism, including by President George W. Bush in his 2002 State of the Union Address. An attack on a nuclear power station is regarded as a potential fast breaking event with a likely initial attack focused on the offsite power supply infrastructure. NRC Operational Safeguard Response Evaluations (OSRE) or “force on force” mock attacks begin with the assumption that there is a loss of offsite power. Therefore, terrorist attacks upon a nuclear power plant are likely to come in concert with a prior or simultaneous attack on offsite electrical lines that also provide primary power to the Emergency Notification System. For an unknown number of nuclear power stations, such power lines also provide the only electrical power to the ten-mile radius emergency notification system that would be rendered inoperable in the same attack.

Reliance on “mobile route alerting” or “local route notifications” does not constitute an equivalent nor adequate compensatory action for a reliable emergency notification system in the event a fast breaking accident, act of terrorism or adverse weather that is coupled with widespread or localized electrical grid failure.

In the event of an inoperable ENS due to loss of power, NRC approves of utilities and emergency agencies may engage in “mobile route alerting” which involves first responders (police, fire departments, civil defense departments etc.) to get into police cruisers, fire trucks and other emergency vehicles to directly communicate the general emergency to the public within the affected emergency area.

Petitioners contend that this is not an appropriate compensatory action nor does it constitute a reasonable equivalent compensatory measure for fast breaking accidents or act of terrorism or during adverse weather. NRC must anticipate that police and fire departments might otherwise be engaged in a security response or more directly related emergency response activity such as fire fighting activity at the reactor. NRC must contemplate that extensive flooding could not only result in the loss of power to the ENS but also make roadways inaccessible for mobile route alerting to provide instructive actions such as sheltering in place.

Petitioners are aware that some nuclear power station operators have emergency power backup systems to ENS. Petitioners therefore contend that NRC is inconsistent in its approach to the regulatory oversight by not requiring emergency power backup to all nuclear power station emergency notification systems.

NRC Routinely Employs Generic Communications Requesting Information from Industry for the Purpose of Evaluating and Providing Adequate Margins of Safety to the Public

There are numerous examples of the agency's use of generic communications to licensees to initiate inspections, surveillance and other actions to ascertain a variety of conditions, (margins of safety, material conditions, etc.) in nuclear power station operation. Petitioners assert that emergency preparedness and public notification is no exception to providing reasonable assurance that adequate margins of operability exist by providing backup power supplies so that the public can receive a timely warning.

Bulletin 2004-01 "Inspection of Alloy 82/182/600 Materials Used in the Fabrication of Pressurizer Penetrations and Steam Space Piping Connectors at Pressurized Water Reactors," May 28, 2004. NRC requests PWR operators to provide information regarding materials used in fabrication and inspections and requires a written response in accordance with 10 CFR 50.54(f).

Generic Letter 2004-01 "Requirements for Steam Generator Tube Inspections," August 30, 2004. NRC requests all PWR operators submit a description of their steam generator tube inspections performed to ensure that licensee is in compliance with technical specifications and requires them to submit a written response in accordance with 10 CFR 50.54(f).

Bulletin 2003-02 "Leakage Reactor Pressure Vessel Head Lower Penetrations and Reactor Coolant Pressure Boundary Integrity," August 21, 2003. NRC requests PWR operators to provide inspection information that have been or will provide information to verify the integrity vessel head penetration and requires licensees to provide a written response in accordance with 10 CFR 50.54(f).

Bulletin 2003-01 "Potential Impact of Debris Blockage on Emergency Sump Recirculation at Pressurized Water Reactors," June 09, 2003. NRC requests PWR

operators to confirm compliance with existing regulatory requirements and provide NRC with a written response in accordance with 10 CFR 50.54(f).

The following Petitioners therefore request NRC to take the above requested emergency enforcement actions:

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IPSEC member organizations include the following:

Beacon Sloop Club, Bergen County Greens, Bronx River Research Group, Cancer Awareness Coalition, CAN DO (Citizens Against Nuclear Energy – Dobbs Ferry), Chappaqua Against Nuclear Generated Energy (CHANGE), Children's Health Fund, Citizens Awareness Network, Citizens for Safe Energy, CODE PINK NYC, Communities United For Responsible Energy, Connecticut Citizens Awareness Network, Council on Intelligent Energy & Conservation Policy, Croton Close Indian Point Group, Earth Save Long Island, Environmental Advocates of New York, Federated Conservationists of Westchester Co, Inc., Fishkill Ridge Community Heritage, Friends of the Earth, Global Resource Action Center for the Environment (GRACE), Healthy Schools Network, Ironbound Community Corporation, Hackensack Riverkeeper, Hogarth Center for Social Action, Manhattanville College, Hudson River Sloop Clearwater, Inc., Hudson Riverkeeper, Irvington Neighbors Against Indian Point
KLEAN NYC, Long Island Peacesmiths, Mid Island Radiation Alert, New York City Campaign to Close Indian Point, New York City Environmental Justice Alliance New York City SAFE (Seeking Alternatives for the Environment), New York City Women's Action for New Directions, New York City Physicians for Social Responsibility, New York Climate Rescue, New York Public Health Association, New York Public Interest Research Group (NYPIRG), Nuclear Control Institute, Nuclear Free Hudson, Nuclear Information and Resource Service (NIRS), Orange Environment, Inc., Pace Energy Project, Philipstown League for the Environment and Safe Energy (PLEASE), Public Citizen's Critical Mass Energy and Environment Program, Putnam Citizens Awareness Network

Riverkeeper, Inc., Rockland Citizens Awareness Network, Rockland Coalition to Close Indian Point, Rockland County Civic Association, Rockland County League of Women Voters, Rockland County Conservation Association, Saw Mill River Audubon, Sierra Club – Atlantic Chapter, Sierra Club – Hudson-Meadowlands Group, Sierra Club – Lower Hudson Group, Scenic Hudson, Sprayno Coalition, Sound Shore Safe Energy Advocates (SSSEA), STAR Foundation (Standing for Truth About Radiation), Stony Point Action Committee for the Environment (SPACE), Sustainable South Bronx, Walkabout Clearwater Chorus, Waterkeeper Alliance, Westchester Citizens Awareness Network, Westchester Green Party, Northwest, Westchester Psychotherapists for Social Responsibility, WESPAC Foundation, Westchester SAFE (Seeking Alternatives for the Environment), Westchester Residents Advocating for Improved Neighborhoods (WRAIN), Yorktown Close Indian Point Group

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