Michael Lesar, Chief
Rules and Directives Branch
Division of Administrative Services
Office of Administration
United States Nuclear Regulatory Commission
Washington, DC 20555-0001
Submitted Via Email
NRCREP@nrc.gov

April 15, 2005

RE: COMMENTS ON FEDERAL REGISTER NOTICE DATED FEBRUARY 28, 2005 (VOLUME 70, NUMBER 38) PAGE 9682
"Station Blackout Risk Evaluation for Nuclear Power Plants (Draft)", January 2005

Overview – why a final evaluation is important

Station Black-out

Nuclear Reactors need electricity to operate – without a supply their safety systems would be disabled. They do not generate their own electricity. Like all of us, they depend on the grid – offsite power. If offsite power fails, they depend on back up generators (EDGs). If the EDGs fail, the chance of an accident approaches certainty.

Consequence

Depending on circumstances, the station blackout reactor accident can be particularly dangerous to public health and safety – with a core melt and/or spent fuel pool fire large amounts of radioactivity will be dispersed far and wide within a few hours

1. Draft Study – Scope - inadequate

Executive Summary, page 9, states that, "Risk (from station blackout) was evaluated for internal events during critical operation; risk from shutdown operation and external events was not discussed."

A. Omission: External Events neither studied, nor defined:
On August 14, 2003 there was a serious transmission grid blackout that affected 9 U.S. nuclear reactors and states. As a result of that blackout (external event), NRC initiated a program to examine loss-of-offsite-power events and station blackout. This study, we are told in the Executive Summary, page 9, is part of that initiative. However, external events such as deregulation of the electric market and its effects on grid reliability, terrorism, global warming, and consequent increased frequency and severity

1

of storms are not discussed or studied. External events are half the equation and exceedingly important.

B. Omission: Internal Events Studied Only During Critical Operation:

Problems can occur, and be more severe, when the reactor is shut down. Therefore this should have been analyzed.

Examples: Davis–Besse NPS was shut down during the August 14, 2003 black-out. It experienced more complications than most reactors operating at the time – see analysis by the Union of Concerned Scientists comments. The worst black-out event in the United States occurred at Vogtle NPS when the reactor was shut down.

C. Omission: Spent Fuel Pools not studied

It is a serious omission not to analyze station blackout risk to spent fuel during refueling. Station black out can contribute to the loss-of-pool coolant event and/or prevent proper mitigation of the event. During refueling, there are fewer barriers and backup systems than when the reactor is operating. Thus, both the chances of a station blackout and the consequences from a station blackout are increased.

The National Academy of Science, *Safety and Security of Commercial Spent Fuel Storage Public Report* (April 2005; p.57) stated that the offloading of the reactor core into the spent fuel pool during reactor outages substantially raises the decay-heat load of the pool and increases the risk of a zirconium cladding fire in a loss-of-pool coolant event.

Analyzing risk to spent fuel storage pools is especially important now because pools are densely packed; accident or sabotage can cause loss-of-coolant; followed by a zirconium fire and radioactive release capable of contaminating hundreds of miles downwind.

Omission: Internal Events Studied Generically

Spar models do not use site specific values; spar models simply used industry average values for component unreliability. This does not account for the fact that reactors are not stamped out by "cookie cutters." Plant data may well be outside norm and such deviation must be accounted for. This is especially important now because, for example: The decrease in NRC oversight; industry use of substandard and counterfeit parts; current and varied age of reactors, and components in those reactors, and their expected degradation along what is referred to as the "bathtub curve." At the end of the life-cycle of mechanical components, they will start to wear out and mechanical and safety problems dramatically increase --- whether they are in a toaster or in a nuclear reactor. This is not accounted for or analyzed – to properly do so would require site- specific analysis.

2. Problem: Core Damage Frequency report figures differ considerably from figures in NUREG-1776, issued August 2003.

There is no explanation for the wide disparity in the numbers --- numbers in the Draft are far lower.

3. Problem: INPO used as Source Data for SPAR Models

NRC's SPAR models were updated using data from INPO's Equipment Performance and Information Exchange database, Section 2.1, page 3.

INPO is not a NRC licensee. Therefore they are not under NRC requirements for accuracy and are not audited by NRC. Therefore NRC is improperly relying on unverified, secret data to base regulatory analysis.

Respectfully submitted by,

Mary Lampert, Pilgrim Watch
148 Washington Street, Duxbury MA 02332

Deborah Katz
Citizens Awareness Network
Box 83 Shelburne Falls, MA 01379

Rochelle Becker
Alliance for Nuclear Responsibility
San Luis Obispo CA 93406-1328

Brendan Hoffman
Public Citizen
Washington, D.C.

David Agnew
Cape Downwinders
173 Morton Rd.,
S. Chatham, MA 02659-1334

Jed Thorp
Clean Water Action
262 Washington St., Suite 301
Boston, MA 02108

Jim Warren
NC WARN - North Carolina Waste Awareness & Reduction Network
PO Box 61051, Durham, NC 27715-1051

Mail Envelope Properties   (425FF5B7.050 : 6 : 24656)

Subject: COMMENTS ON FEDERAL REGISTER NOTICE DATED
                          FEBRUARY 28, 2005 (VOLUME 70, NUMBER 38) PAGE 9682
Creation Date: Fri, Apr 15, 2005 1:10 PM
From: "lampert" <lampert@adelphia.net>

Created By: lampert@adelphia.net

Recipients
nrc.gov
  twf2_po.TWFN_DO
    NRCREP

comcast.net
    d-agnew CC (David Agnew)

ncwarn.org
    jim CC (Jim Warren(ncwarn))

nukebusters.org
    can CC (can)

citizen.org
    bhoffman CC (Brendan Hoffman)

thegrid.net
    beckers CC

cleanwater.org
    jthorp CC (Jed Thorp(CWA))

Post Office   **Route**
twf2_po.TWFN_DO   nrc.gov
                                         comcast.net
                                         ncwarn.org
                                         nukebusters.org
                                         citizen.org
                                         thegrid.net
                                         cleanwater.org

Files   **Size**   **Date & Time**
  MESSAGE   5858   Friday, April 15, 2005   1:10 PM
  TEXT.htm   26334
  station blackout comment by alril 15th federal register .05.doc   40960

Mime.822 93092

Options
Expiration Date: None
Priority: Standard
Reply Requested: No
Return Notification: None

Concealed Subject: No
Security: Standard