RDB Received
1/3/05

Citizens Action Coalition of Indiana * Citizens for Alternatives to Chemical Contamination * Citizens Resistance at Fermi Two * Clean Water Action of Michigan * Coalition for a Nuclear-Free Great Lakes * Don't Waste Michigan * Nuclear Energy Information Service * Nuclear Information and Resource Service * Ohio Citizen Action * Toledo Safe Energy Coalition * West Michigan Environmental Action Council

9/24/04

69 FR 57366

(5)

December 8, 2004

Chief, Rules and Directives Branch

Division of Administrative Services

Office of Administration, Mailstop T-6D59

U. S. Nuclear Regulatory Commission

Washington, D. C., 20555-0001

Attention Director of Re-licensing

On behalf of the public interest community the following comments are being submitted regarding the renewal of operating licenses DPR-58 and DPR-74 for an additional 20 years of operation at Donald C. Cook Nuclear Plant, Units 1 and 2 (CNP), located in Berrien County, Michigan (regarding "Generic Environmental Impact Statement for License Renewal of Nuclear Plants Regarding D.C. Cook Nuclear Plant - Draft Report for Comment").

From the citizen standpoint it is recognized that the opportunity for public input has been intentionally compromised. This results from the recent streamlining of the re-licensing process and expediting of that process by the Nuclear Regulatory Commission (NRC). This results in the defaulting to a generic plan that disallows unique site specific factors that should be considered in determining extended operating license renewal. The scheduling of one day only for in-person public comment regarding CNP (November 9, 2004) simply reinforces the superficiality of that process.

There is structural weakness in the containment wall of Unit 2, described at the time prior to its startup in 2000 as "degraded but operable" despite inspections that found "no solid concrete at the 14-inch depth, according to a corrective action report dated Nov. 22, 1999." (South Bend Tribune, 11/27/00). Our records indicate that no repairs to this "soft spot" have ever been completed. The work simply consisted of grouting as opposed to more substantial concrete and rebar. AEP's decision was to "defer a permanent repair" because the "operability of the current condition" was "reasonable" (SBT). At the same time, similar structural defects were identified as existing in Unit 1 as well. No consideration has been afforded this in discussion of re-licensing.

The public record indicates that Cook Unit 2 is the only reactor in the country that MUST shut down its main condenser to avoid cooling down the reactor too rapidly in order to

SISP Review Complete

Template = ADM-013

E-RIDS = ADM-03

Add - W. Dam (WLD)
R. Schaaf (RES)

prevent thermal shock on the metal core of the reactor. This has forced them to use a backup safety system during "normal" shutdowns to cool the reactor core and as a result this has become "standard operating procedure." Expert consultations inform us that this continued use of short cuts on safety puts undue stress on systems that need to maintain integrity as a backup system, and not be used for normal plant operation. This is like using a car's emergency brake for all stops, because the brakes are not functioning properly. If done often enough, the risk of the emergency brake not functioning increases.

These safety compromises increase the likelihood of inability to cool the reactor core. Such a scenario could lead to overheating, and loss of coolant accident (LOCA). Combined with Cook's deficient containment system, this could lead to a catastrophic radiation release to the environment. Beyond Design Basis technical compromises have not been adequately addressed.

Two of these are:

1) Soft spots in the containment walls of both Cook units 1 & 2.

2) The extensive use of backup safety systems for controlled cool down of the reactor core.

Re-licensing of CNP should be denied on the basis of increased amounts of highly radioactive nuclear waste that would be generated during an additional 20 years of operation at Units 1 and 2.

Based on U.S. Department of Energy (DOE) figures from its Yucca Mountain Final Environmental Impact Statement (FEIS, Feb. 2002, Tables A-7 and A-8), it can be shown that CNP generates an average of more than 43 metric tons of irradiated nuclear fuel during every year of operations at its two reactors. DOE's Yucca FEIS shows that by the year 2011, there will already be an accumulated 63,000 metric tons of irradiated nuclear fuel from commercial reactors across the country, filling Yucca Mountain to its legal capacity limit as spelled out in the Nuclear Waste Policy Act, as Amended. Therefore, any irradiated nuclear fuel generated at the CNP after 2011 would be excess to Yucca's capacity to accept it, even if the Yucca dump opens, which itself is far from a foregone conclusion.

If CNP is granted 20 additional years of operations, it will generate nearly 1,000 metric tons of irradiated nuclear fuel with no permanent long-term storage facility designated to accommodate this highly radioactive waste, even if the Yucca Mountain dump opens and fills to capacity. That is nearly as much or even more waste than is currently stored at CNP. A 20 year license extension would mean de facto permanent storage of about 1,000 metric tons of high-level radioactive waste on the Lake Michigan shoreline.

This high-level radioactive waste presents the potential for a catastrophic release of radioactivity into the environment, due to an accident or terrorist attack. Up to the present, all of the irradiated nuclear fuel ever generated at Cook is stored in the plant's storage pool. If, through accident or attack, the pool were to lose its cooling water, a fuel fire could ensue. Three decades of accumulated irradiated nuclear fuel could literally catch on fire (the zirconium cladding of the fuel rods is combustible at high enough

temperatures), disgorging volatile radionuclides into the environment to blow with the wind and flow with the water. Such a massive radioactivity release would represent a Chernobyl-scale catastrophe (or worse) in the heart of the Great Lakes Basin. An October 2000 NRC report documents that such waste pool fires are possible, and that fatal radiation doses could be delivered to persons downwind as far away as 500 miles.

Even if eventually transferred into outdoor, on-site dry cask storage containers (a growing trend in the industry, due to pools filling to capacity and lack of off-site storage) the vulnerability to accidents and attacks would persist, for dry casks are not even required to include radiation monitoring equipment, and they would be out in the open air, not bunkered or fortified against a wide range of potential terrorist attack scenarios from land, lake, or air.

The irradiated fuel storage pool may contain tens of millions of curies of radioactivity, but the operating reactor cores contain tens of billions of curies. It should be noted that CNP reactors are located on the eastern shoreline of Lake Michigan. To the west of the reactors, in the direction of Chicago, is open lake for fifty or more miles. The risk of aerial attack is increased due to the lack of impediments on the western flank. A terrorist attack that breached Cook's relatively weak containment structures and caused a meltdown could also release catastrophic amounts of radioactivity into the Great Lakes Basin ecosystem.

These events suggest that the problem of lethal, highly radioactive nuclear waste that is generated in the process of electrical power generation at nuclear plants is the Achilles Heel of the whole process, the culmination in a litany of activities that routinely release radioactive particles as a matter of general business practices, from uranium mining, milling, manufacturing, nuclear power plant production, waste shipment, and decommissioning. No one wants this waste, but no one is willing to seriously consider the possibility of ceasing its manufacture, least of all the nuclear industry itself.

It is disturbing to read the Environmental Report for License Renewal, which describes a bucolic paradise of unique and fragile geologic and environmental characteristics and threatened and endangered flora and fauna, into which has been deposited a factory that produces the most lethal man-made product on earth, with electricity as a mere fleeting by-product, contrary to nuclear proponent suggestions to the opposite. Tellingly, the Environmental Report says it all when describing that the "design allows a smaller containment building that blends into the surrounding dune landscape and helps preserve the natural beauty of the eastern Lake Michigan shore." Unfortunately it is impossible to hide the purposeful and intentional manufacture of a lethal, cancerous product within such a tranquil setting. We stand against the license renewal for a 20 year extension period at the Cook Nuclear Plant and support the reclamation of this national shoreline treasure back to its original state.

These comments are respectfully submitted on December 8, 2004 by

Kevin Kamps

Nuclear Waste Specialist

Nuclear Information and Resource Service

1424 16th Street, NW, Suite 404

Washington, D.C. 20036

Phone 202.328.0002 ext. 14

on behalf of the following organizations:

Grant Smith, Executive Director
Citizens Action Coalition of Indiana
Indianapolis, IN

Kay Cumbow, Chair
Citizens for Alternatives to Chemical Contamination
Brown City, MI

Keith Gunter
Citizens Resistance at Fermi Two
Livonia, Michigan

Cyndi Roper, Michigan Director
Clean Water Action
Grand Rapids, MI

Michael Keegan
Coalition for a Nuclear-Free Great Lakes
Monroe, Michigan

Alice Hirt, Board Member
Don't Waste Michigan
Holland, Michigan

David Kraft, Executive Director
Nuclear Energy Information Service
Evanston, Illinois

Michael Mariotte, Executive Director
Nuclear Information and Resource Service
Washington, D.C.

Sandy Buchanan, Executive Director
Ohio Citizen Action
Cleveland, OH

Terry Lodge, Chair
Toledo Safe Energy Coalition
Toledo, Ohio

Thomas Leonard, Executive Director
West Michigan Environmental Action Council
Grand Rapids, MI