

NOVEMBER 11, 1989

In loving memory of Nick, on his 21st birthday.

Chairman, Nuclear Reactor Regulation
Attention: Kenneth Carre
Operating Reactors Branch No. 2
Washington, D.C. 20555

Pursuant to 10 C.F.R. 2.206, The Concerned Citizens for the Charlevoix Area petition the Nuclear Regulatory Commission (N.R.C.) to immediately order Consumers Power Company (CPCo) to update and retrofit the Big Rock Point Nuclear Facility to meet current safety design and radioactive-effluent criteria. We ask that the N.R.C. prohibit continued operation until such time as these objectives are met.

The N.R.C. and Consumers Power Company, in corroboration, have used cost/benefit criteria embodied in vehicles: 1) Grandfathering; 2) Probabilistic Risk Assessment; 3) ALARA, As Low As is Reasonably Achievable; 4) Experimental Status; and 5) Low Societal Risk, to defer implementation of current safety criteria, resulting in indefensibly large radioactive emissions from the Big Rock Point Facility.

On August 4, 1987, the United States Court of Appeals held that the N.R.C. cannot consider cost in setting and enforcing general safety standards for nuclear facilities.

As citizens of Charlevoix, we are outraged at the Nuclear Regulatory Commission and Consumers Powers' disregard for the health and well-being of the citizens of Charlevoix, Petoskey, Harbor Springs, Beaver Island, Boyne City, and the surrounding areas.

1. BIG ROCK WAS SECOND IN THE NATION IN TOTAL RADIATION RELEASED TO THE ENVIRONMENT IN 1986. The average 900 Megawatt reactor released 4,520 curies to the environment. Big Rock Nuclear Facility, at 75 Megawatts, released 76,700 curies, almost 20 times the national average. If we are to calculate radiation release per megawatt, Big Rock releases radiation into the environment at a rate 200 times the national average. In the past, Big Rock's record is even more sordid. In 1971, Big Rock released over 280,000 curies. In 1972, it released 258,000 curies. Prior to 1970, releases were much higher because of experimental cladding defects.

9002120276 900202
PDR ADOCK 05000155
P FDC

In evaluating the Big Rock Radwaste (Radioactive Waste) System, the N.R.C. stated, "The staff performed a cost/benefit analysis to determine if additional radwaste equipment could be added to the liquid and gaseous radwaste systems of plants that could, for a favorable cost/benefit ratio, reduce the radiation dose to the population reasonably expected to be within 50 miles of the reactor, using the interim value of \$1,000 per total body man-rem and per man-thyroid-rem. Based on the foregoing evaluation, the staff concludes that the rad-waste treatment systems installed at the Big Rock Point Plant are capable of reducing releases of radioactive materials in liquid and gaseous effluents to "As Low As is Reasonably Achievable Levels." (ALARA)

(See "Evaluation by the Office of Nuclear Regulation of the Big Rock Point Plant Waste Treatment Systems," May 1981; and "U.S. Nuclear Regulatory Commission, Radioactive Materials Released from Nuclear Power Plants, Annual Report," Vol. 7, pg. 1, Tables 1 and 6., Nov. 1988.)

This decision must be reversed in light of the U.S. Court of Appeals decision.

2. WORKERS AT THE BIG ROCK FACILITY RECEIVED MORE RADIATION EXPOSURE PER UNIT OF ELECTRICITY PRODUCED THAN ANY WORKERS IN THE UNITED STATES IN 1985, WITH THE EXCEPTION OF NEBRASKA'S COOPER PLANT; FIVE TIMES THE NATIONAL AVERAGE.
3. BIG ROCK WAS THE REACTOR WITH THE HIGHEST OPERATING AND MAINTENANCE COST IN 1987.
4. BIG ROCK CONTRIBUTES ONLY 1 TO 1 1/2% TO CONSUMERS POWER COMPANY'S TOTAL GRID. CONSUMERS POWER HAS A 20 TO 30% POWERGRID EXCESS.
5. BIG ROCK HAS NEVER BEEN THE SUBJECT OF AN ENVIRONMENTAL IMPACT STUDY, AS ORDERED BY THE NATIONAL ENVIRONMENTAL POLICY ACT OF 1969. Consumers Power has not complied, citing "grandfathering," and "cost-effectiveness."
6. THE BIG ROCK PLANT OPERATES IN NON-COMPLIANCE WITH TODAY'S MINIMAL SAFETY REQUIREMENTS.
 - A. The Big Rock Containment is unshielded. Under pressure from the N.R.C. to implement shielding, Consumer's officials replied, "Based on these results, (the Big Rock Probabilistic Risk Assessment) a philosophical position has been developed relative to the reactor shielding at Big Rock Point." NUREG 0578 Requirement 2.213 states that nuclear power plants must shut down immediately in the event of complete loss of a safety function. Shielding is critical to protection of workers, as well as the public.
 - B. Big Rock is designed to vent radiation continuously. Today's nuclear plants are fined thousands of dollars if vents are inadvertently left open. Big Rock must vent so that operators can have access to vital areas of the plant. For many years these containment isolation valves had a failure rate of 25%. (See Appendix IV to the PRA at 3.3)
 - C. Radwaste (radioactive waste) systems are antiquated and obsolete. Batches of liquid radioactive waste are routinely released into Lake Michigan. When radioactivity levels are too high, water is pumped from Lake Michigan and used to dilute the batches.

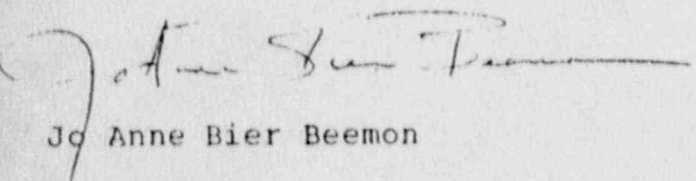
- D. Due to shielding and capacity, the liquid radwaste systems would be of limited usefulness in accidents which generate large quantities of high activity in water. In August of 1981, in response to oral interrogatories, Big Rock expert Charles Axtell stated, "It's a well-known fact that this plant is not equipped to handle an accident where large quantities of water are generated."
 - E. Off-gas systems are not capable of bringing gaseous effluents to within industry norms.
 - F. In 1976, Big Rock was given a lifetime exemption from meeting the N.R.C.'s current safety standards. This decision must be re-viewed.
 - G. Big Rock's exemptions from T.M.I. NUREGs and Systematic Evaluation Program topics must be reevaluated.
7. THE USE OF PROBABILISTIC RISK ASSESSMENT IS GROUNDED IN COST/BENEFIT ANALYSIS, AND SHOULD BE USED WITH CAUTION; CONCLUSIONS MUST BE RE-EXAMINED.
- A. In 1981, Consumers Power Company submitted the Big Rock Point Nuclear Power Plant Probabilistic Risk Assessment Main Report to the N.R.C. At 1.0 Executive Summary 1.1, Motivation for Performance of a Probabilistic Risk Assessment, Consumers Power Co. argued, "The small size of Big Rock Point limits the capital which can be economically spent on plant modifications. Regulatory requirements imposed on nuclear plants on a generic basis after the accident at Three Mile Island make continued operation of Big Rock Point an unattractive alternative from an economic perspective." At 1.3 Objectives of the PRA, Consumers Power asserted, "There were two major objectives of the Big Rock Point PRA. The first was to quantify the risk to the public from operation of BRP. The second objective was to define those design and procedural modifications to BRP which are most cost-effective from the standpoint of risk reduction." Consumers Power Co. calculated that the maximum recommended expenditure to totally eliminate the remaining risk from Big Rock was approximately \$70,000 to eliminate public health risk and \$600,000 to eliminate the risk associated with normal worker exposure. To reach this conclusion, CPCo used plant-specific data and WASH-1400 estimates of property loss and latent fatalities, and the proposal in NUREG-0739 that a latent fatality is valued at \$1 million dollars, and an estimate that property damage associated with accidents is valued at approximately 25% of the acute fatality loss.
 - B. Consumers Power Company's assertion that the sum of \$670,000 would totally eliminate the public risk from the Big Rock Facility, does not appear to be supported by other Company studies. Common sense tells us this figure is absurd.
 - 1. At the March 29, 1960 hearing for the Big Rock Construction Permit, Consumers Power experts testified that in the event of an accident, "It is conceivable that the general population in a small area near the plant might have to be evacuated for a short period (up to several months) as a result of ground contamination. Monitoring and possible confiscation of crops and milk might have to be resorted to over an area of up to about two square miles."
- (Page 103 at 3.)

2. In the Big Rock PRA, pages 117-138, Consumers Power experts calculate that Big Rock has a high core damage probability (meltdown) of 9.8×10^{-4} per year.
 3. Big Rock has a high degree of core damage events which produce very large releases of radiation.
 4. The probability at which one or more fatalities would occur for Big Rock Point is approximately a factor of six higher than for the average plant analyzed in the Reactor Safety Study.
8. CONSUMERS POWER COMPANY HAS CITED "LOW POPULATION AREA" AND "REMOTE SITING" AS INCENTIVE TO DEFER SAFETY REQUIREMENTS CLAIMING "LOW SOCIETAL RISK." (See PRA and Applicant Correspondence, Feb. 22, 1980) This is the industry's rationalization for continued operation in remote areas in spite of non-conformance to safety regulations. In cost/benefit terms, this means that the lives of a few people in a rural area are not worth as much, in nuclear safety leverage, as the lives of many people in a high population area, in the calculation of cost/benefit of nuclear plant safety requirements. This is a clear violation of the civil rights of all citizens in rural America having the misfortune to live in close proximity to a commercial nuclear facility. The same safety considerations should be afforded people living in low population areas as those afforded individuals living in high population areas.
9. THE GROUND UPON WHICH BIG ROCK WAS BUILT IS SACRED INDIAN LAND, AND THE USE AND CONTAMINATION OF THE LAND BY CONSUMERS POWER COMPANY VIOLATES INDIAN TREATIES.
10. THE PRODUCT OF NUCLEAR FISSION IS NUCLEAR WASTE. The energy produced is used, and gone. Nuclear waste, the most deadly poison known to us, remains deadly for hundreds and thousands of years.
- A. There is no suitable answer to the radioactive waste problem. This is a technical problem, not a political one, as the nuclear industry would have us believe. All nuclear waste dumps have leaked. There are no success stories. Michigan is now being told we must accept "low level" waste from six other states. This is clearly ludicrous. The nuclear industry leaves a trail of contamination in its wake. There are tons and tons of radioactive tailings; there are contaminated nuclear sites, and buildings, and vehicles, and tools, and cities, and counties, and beautiful little tourist towns.
11. THE GREATEST DANGER IS TO CHILDREN. There is no safe level of radiation. Radiation damages the basic building block of life, the cell. Children are most susceptible because they are growing and changing.
- A. A damaged cell can cause cancer, birth defects, genetic damage, and other health problems.
 - B. A 1972 Canadian Atomic Energy study showed low levels of radiation cause cell membrane damage harmful to the immune system.

- C. Radiation damages the cells of all living things; from the amoeba to human beings. Radiation can alter the genetic code in viruses and bacteria and create new diseases in people and all living things. The nuclear industry is playing life and death games with the human race.
- D. Studies showing low birth weights, high cancer rates, and any other abnormal health statistics in the population around nuclear plants and nuclear dumps, and around the Big Rock Facility in particular, must be re-examined in conjunction with an Environmental Impact Study as ordered by the National Environmental Act of 1969.

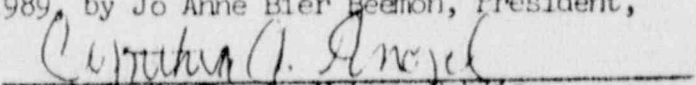
For the above stated reasons, The Concerned Citizens for the Charlevoix Area ask the N.R.C. to immediately order Consumers Power Company to update and retrofit the Big Rock Nuclear Facility to meet current safety design criteria in accordance with the August 4, 1987 decision of the United States Court of Appeals, which stated that the N.R.C. cannot consider cost in setting and enforcing general safety standards for nuclear facilities.

Each of Us is given a Gift of Time
 on this beautiful Earth.
 And with this Gift comes a Sacred Responsibility
 to the Children of Today and all the Tomorrows.
 We must Preserve and Protect our Mother Earth,
 that They may Live.



Jo Anne Bier Beemon
 President
 Concerned Citizens for the Charlevoix Area
 Charlevoix, MI
 49720
 STATE OF MICHIGAN
 COUNTY OF CHARLEVOIX

Acknowledged before me this 16th day of November, 1989, by Jo Anne Bier Beemon, President, Concerned Citizens for the Charlevoix Area.


 Cynthia A. Engel, Notary Public
 Emmet Co. acting in Charlevoix Co., MI

My comm expires: 6-2-90

WASP Post
9.5-87

NRC Rulemaking Change Ordered

Cost Can't Be Considered in Setting Safety Regulations, Court Says

By Nancy Lewis
Washington Post Staff Writer

The Nuclear Regulatory Commission cannot consider cost in setting and enforcing general safety standards for nuclear facilities, the U.S. Court of Appeals held yesterday, overturning 1985 NRC procedures for determining plants needing improvements to meet new standards.

The decision, considered a victory for nuclear safety groups, is the second major defeat in a week for the Reagan administration's regulatory reform program, which required cost-benefit analyses to be a part of the rulemaking on many safety questions.

In a unanimous decision last week, the full D.C. Circuit court ruled that the Environmental Protection Agency can consider only health, not cost or technological feasibility, in setting permissible emissions standards for toxic substances.

"We hold that the [NRC] may not take economic costs into account in fulfilling its statutory mandate to ensure adequate protection of the public health and safety," Judge Abner J. Mikva said yesterday, writing for the three-judge panel. He was joined by Judge Harry T. Edwards, and Judge Stephen F. Williams concurred. The decision came

in a challenge to a new NRC rule on backfitting, or retrofiting, brought by the Union of Concerned Scientists. Any change in a nuclear plant after approval of the facility's construction permit is considered backfitting or retrofiting.

The rule allowed the commission to use cost-benefit analyses in setting any new general safety rules and in determining whether operating nuclear facilities would have to be updated, or retrofitted.

At the same time, the rule stated that cost should not be considered in providing "adequate protection." The court said the rule was confusing and described it as an "exemplar of ambiguity and vagueness; indeed, we suspect that the commission designed the rule to achieve this very result."

"The commission must determine the content of the adequate-protection standard without reference to economic costs; the commission must then apply that standard to individual applicants and licensees notwithstanding any pleas of poverty," Mikva said.

Costs can only be taken into account in deciding whether to require additional protection, above and beyond the statute's "adequate-protection" level, the court said.

Ellyn R. Weiss, an attorney for the scientists' group, said, "This is

another example of the court holding the line against some of the excesses of this administration, in particular, the efforts to weaken the standards of protecting the public in the process of lowering costs of the nuclear industry."

William H. Briggs Jr., NRC solicitor, said the commission believed the decision was narrowly drawn, but basically upheld the process the commission had established on retrofitting.

"I will be surprised if the decision has any Draconian impact on anything," Briggs said.

Weiss said it was unclear how many decisions on retrofitting the NRC made using the new rule because the regulations for implementing it required the cost-benefit analyses to be performed early in the process. "We don't know how many were tossed out before they ever reached the point of formal consideration," Weiss said.

The court's decision may prohibit the NRC from approving a proposal to change its emergency planning ruling that is also based on a cost-benefit rationale, Weiss said. The proposal would exempt the Shoreham nuclear facility on Long Island and the Seabrook plant in New Hampshire from the requirement that states have emergency plans in effect before plants open.

Safety
backfit