

LANCASTER COUNTY

LANCASTER COUNTY PLANNING COMMISSION

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JOHN R. AHLFELD
Planning Director

May 23, 1979

79EN

Mr. Joseph M. Hendrie, Chairman
Nuclear Regulatory Commission
1717 H Street, NW
Washington, D. C. 20555

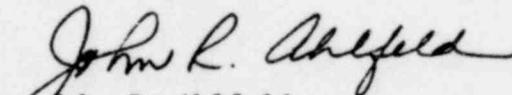
Dear Mr. Hendrie:

This is a follow-up to my letter of April 12, 1979 regarding the Three Mile Island accident, the proposed Fulton Nuclear Generating Station, and related matters. To date, the Planning Commission has not received an acknowledgement of that letter or comments on any of its three questions.

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Enclosed is an article from the May 6, 1979 New York Times which relates to the Planning Commission's previously expressed concerns. The article was reviewed at the Planning Commission's meeting on May 14. Particular attention was given to the report on the Peach Bottom facility and the comment that it "is the least safe site in Region 1 and has the poorest management."

Since the Planning Commission's serious concerns, and those of the rest of the community, continue, we hope to hear from you shortly with a response to our previous letter.

Sincerely,

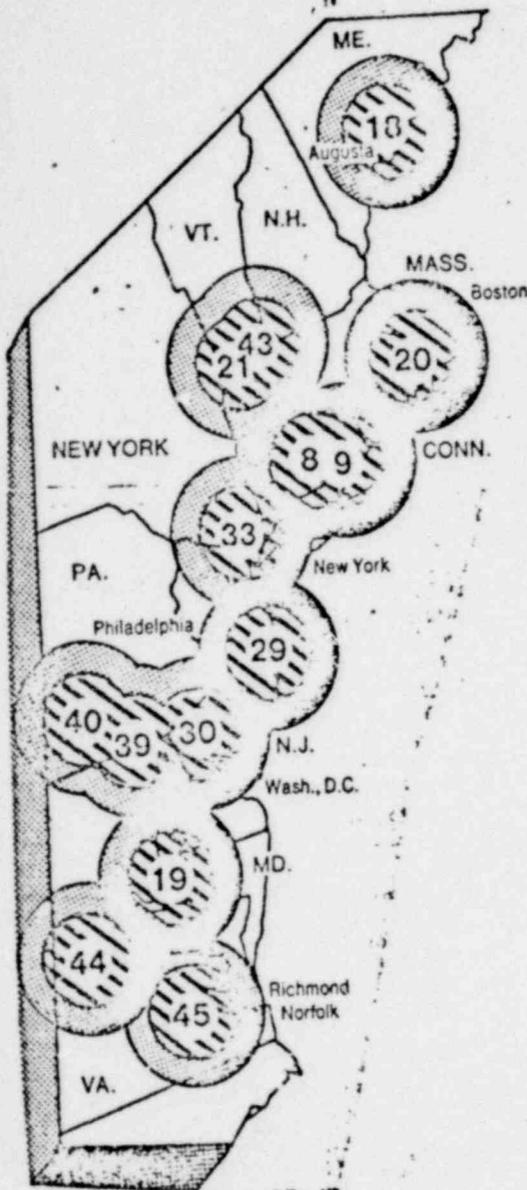
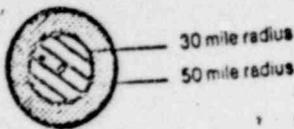

John R. Ahlfeld
Planning Director

JRA/blk
Enclosure

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Where They Are

At the 48 sites described below are the 70 licensed nuclear reactors used commercially to generate electricity. Where there is more than one reactor at a given site, at Indian Point for example, the number is shown in parenthesis next to the name of the plant. The name of the town given underneath the site is the nearest settlement, regardless of population.

All data in the listings, except for exposure rates, come from the Nuclear Regulatory Commission. The N.R.C. used the 1970 census for demographic and urban siting information.

Nearest city is that city of 25,000 or more population closest to the reactor site.

Large cities are all cities, by name, of 100,000 or more population that are within 50 miles of the reactor site. The specific mileage is measured from the city's center, not from nearest outskirts.

Within 30 miles. This is the number of all cities and large cities in a 30-mile radius. The population shown is that for the entire area, including all cities, towns, villages and unsettled places.

Within 50 miles. This is the same information for a larger radius.

System describes the type of nuclear steam system, B.W.R. (Boiling Water Reactor) or P.W.R. (Pressurized Water Reactor) and the company that built it.

Licensee shows the utility licensed by the N.R.C. to operate the plant.

Exposure shows the percentage and number of workers at the plant who were exposed to 0.5 or more Rem (Roentgen equivalent in man) in 1977. These data were collected by the Health Research Group, a medical organization associated with Ralph Nader.

Safety ratings were collected in 1977 by the N.R.C. in a preliminary effort to develop a systematic, statistical ranking of reactors.

Comments were a second experimental attempt by the N.R.C. to assess safety. Because this method was employed at different times, using different criteria, the findings may differ somewhat from the statistical ratings.

Reactors currently not operating are all those with Babcock & Wilcox steam systems: Arkansas One (Unit 1), Crystal River, Davis-Besse, Indian Point (Unit 1), Oconee (one of three units), Rancho Seco and Three Mile Island (Units 1 and 2). In addition the N.R.C. has closed four sites out of consideration for seismic faults: James A. FitzPatrick, Beaver Valley, Maine Yankee and Surry (Units 1 and 2); and, for other reasons, some others including Oyster Creek and Palisades. All reactors are periodically shut down for maintenance, inspection and repairs.

PENNSYLVANIA

38 Beaver Valley

Shippingport

Nearest city Weirton, W. Va. (15 miles)

Large cities Pittsburgh (20)

Youngstown, Pa. (35)

Canton, Ohio (50)

Within 30 miles 3 cities; 1,700,000 people

Within 50 miles 7 cities; 3,600,000 people

System P.W.R. by Westinghouse

Licensee Duquesne Light and Ohio Edison

Exposure 3% (26 workers)

Safety rating [Not rated by statistical method]

Comments "Staff is experienced. O.A. controls improved. Staff is improving. Bugs are being worked out of equipment and administrative controls. Plant management has improved. Security has improved with increased requirements. Staff still learning."

39 Peach Bottom (2)

Peach Bottom

Nearest city Lancaster, Pa. (19 miles)

Large cities Baltimore, Md. (37 miles)

Within 30 miles 5 cities; 830,000 people

Within 50 miles 19 cities; 4,000,000 people

System B.W.R. by General Electric

Licensee Philadelphia Electric

Exposure 30% (1,168 workers)

Safety rating Unit 2: Average

Unit 3: Above average

Comments "This is the least safe site in Region I and has the poorest management. O.A. and security are not upgraded to current standards. Many repeat items of non-compliance. Plant staff has appeared incapable of correcting increased plant radiation levels. Management is slow responding to problems. A greater inspection frequency is partially attributable to proximity to [the N.R.C.] regional office. Expect improvements as a result of management meeting with company president. Operating staff presently error-prone due to back-to-back overhaul periods for Units 2 and 3. General attitude of plant appears to be compliance only as required. Careless operations and poor maintenance."

40 Three Mile Island (2)

Middletown

Nearest city Harrisburg, Pa. (11 miles)

Large cities None

Within 30 miles 4 cities; 1,000,000 people

Within 50 miles 5 cities; 1,600,000 people

System P.W.R. by Babcock & Wilcox

Licensee Metropolitan Edison and

Jersey Central Power & Light

Exposure 18% (221 workers)

Safety rating Unit 1: Average

Unit 2: [Opened too recently]

Comments [Unit 2 was the site of accident]

"Station and unit superintendents are new. Security has improved. This is the first B&W (Babcock & Wilcox) plant of current generation. Management control during construction was deficient. Management control in operations is strong. Overall site safety may decrease because staff has become diluted with the licensing of Unit 2."

POOR ORIGINAL

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By DAVID BURNHAM

Siting Nuclear Reactors
 Once Seemed Simple and Safe
 POOR ORIGINAL

News of the Week in Review
 May 6, 1979

WASHINGTON — The Nuclear Regulatory Commission, as part of its legal responsibility to ensure the safe operation of nuclear reactors, has final authority over where reactors may be located. Yet in the last 20 years, utility companies have so often been permitted to build nuclear plants in heavily populated areas that more than 20 million Americans now live within 30 miles of a reactor, and 10 million live within 20 miles.

The attractions and pressures to place reactors near cities were many. The utilities avoided the extra cost of building long transmission lines to carry the electricity to where it was used. There was even some hope that if reactors were close enough, their "waste" heat — approximately 50 percent of the heat they generate — could be piped to apartment houses and factories rather than being lost to the environment through expensive cooling towers. And in the early days of the nuclear age, the average reactor was considerably smaller than today.

But in permitting the construction of reactors such as the ones at Indian Point, just north of New York City, and Zion, halfway between Chicago and Milwaukee, the regulators did not take into account the worst possible nuclear accident that might occur.

According to several officials in the Nuclear Regulatory Commission, the decision not to deal explicitly with "Class 9" accidents — those involving a meltdown of the uranium fuel rods and the subsequent release of large amounts of radiation — was initially based on concern over the "image" of nuclear power. In more recent years, the Class 9 accident has been disregarded largely because of a belief that one was highly unlikely.

The accident at the Three Mile Island reactor in Pennsylvania, which for several days was thought to be on the edge of total meltdown, has challenged that assumption. It has also raised tough questions about the location of any future reactors and about the necessity of remedial steps for reactors situated closest to large populations.

Furthermore, the acknowledgement that a Class 9 accident is possible points up increasing evidence that state and local governments are in the main unprepared to deal with such a catastrophe. Congress' General Accounting Office, for example, concluded in a report last month that only a few areas had developed effective plans to evacuate people in the path of the wedge-shaped radioactive cloud that could be expected downwind from a serious accident.

Robert B. Minogue, director of Standards Development at the Nuclear Regulatory Commission, acknowledged in an interview that the Government has no formal, specific policy on sites for reactors, and that the most serious kinds of accidents had never been directly considered in the case-by-case process by which utilities are granted reactor construction permits. But, he said, informal guidelines adopted by the Commission staff in recent years meant that new reactors had been located farther and farther from major population centers.

While the technicians managed to prevent a meltdown at Three Mile Island, the accident emphasized the logistical and political difficulties of evacuation. Over 600,000 persons live within 20 miles of the Susquehanna River island that the reactor sits on; a million live within 30 miles, and 1.8 million within 50 miles.

Decisions about moving that many people presented problems that were almost paralyzing. Consider, then, New York's Indian Point reactor: 4.3 million people live within 30 miles of it, and 17.2 million within 50 miles.

The failure of the Nuclear Regulator Commission (and its predecessor, the Atomic Energy Commission) to develop a consistent, overall policy on nuclear reactor sites has long been held up as one of the more important shortcomings of nuclear regulation.

Two and a half years ago, for example, John F. O'Leary, former top official in the old Atomic Energy Commission who is now the Deputy Secretary of Energy, wrote a letter on the subject to the Carter campaign policy committee. "The frequency of serious and potentially catastrophic nuclear incidents," he wrote, "support the conclusion that sooner or later a major disaster will occur at a nuclear generating facility. The N.R.C., as was the case

with its predecessor the A.E.C., has been unwilling to face up to the policy consequences of assigning high probability to a serious nuclear accident."

The "siting problem was created by the insistence of the old Commission that nuclear power could compete side by side with power generated from other sources," Mr. O'Leary said. "Successive commissions simply refused to accept the possibility of a serious accident as a planning parameter." As a result, he added, "nuclear plants were permitted in locations adjacent to large metropolitan centers."

Mr. O'Leary said the Nuclear Regulatory Commission should "immediately initiate a proceeding aimed at the development of a siting policy that is consistent with the realistic probability of a serious accident and should assure that future plants are located at a sufficient distance from current or projected population centers to avoid catastrophic consequences to public health and safety as a result of a serious nuclear accident."

He also recommended development of rules to reduce the chance of an accident at plants now located near population centers. "This would take the form of derating [slowing down] facilities within metropolitan areas, of additional conservatism built into the technical specifications applicable to such plants and to the development of evacuation procedures for the affected populations."

Mr. O'Leary has been a nuclear power advocate in his Department of Energy position. In response to an inquiry last week about his 1976 letter, he said that if "I left the impression the system is bare, I was incorrect." He said he understood that though the Nuclear Regulatory Commission had not formally adopted more stringent licensing rules, its staff had informally done so for its latest decisions on plant sites.

Mr. Minogue, the Commission official, said an extensive re-evaluation of "siting" policy was scheduled to be completed by June 15. He said the evaluation, ordered by the Commission before the Three Mile Island accident, involved extraordinarily complex problems.

"It's not just a question of where the reactor is located," he said. "Consideration also has to be given to the design of the plant, the extra safety equipment that has been installed and the location of roads that would permit nearby residents to evacuate an area."

Mr. Minogue said he believed the Commission would also be considering what steps were required to reduce the hazards. Such steps, he said, might include shutting down some reactors, requiring others to operate at a slower speed and ordering extra safety equipment.

It's not only the Government that is re-evaluating policy on the location of nuclear plants. With the support of the Ford Foundation and the Sloan Foundation, Dr. Joel Yellin and Dr. Paul L. Joskow, both professors at the Massachusetts Institute of Technology, have for the last two years been considering the questions involved.

Dr. Yellin said that based on tests conducted by the Government at its Hanford Engineering and Development Laboratory, he and his colleague had concluded that a catastrophic release of radiation could extend as far as 18 to 29 miles downwind from a reactor.

"Assuming an inability to evacuate that area for 24 hours, the possible radiation levels could mean immediate death for half the exposed population," Dr. Yellin said.

The theoretical physicist, an associate professor in the M.I.T. School of Humanities, said that in some cities the lethal range might be considerably extended. At Indian Point above New York City, for example, the prevailing winds and the Hudson River valley would serve as a natural channel for radiation.

Another question about the continued operation of existing reactors, of course, is whether they are safe. In 1976, the Nuclear Regulatory Commission began developing techniques to evaluate reactor performance. The idea was to identify those licensees whose performance was not as good as the others, determine the reasons why, and find methods for improving the performance of those with the poorest records. The Commission has now tried several different methods of rating performance, and on the basis of these experimental evaluations it has initiated a second round of safety evaluation which is scheduled to be completed in March 1981.

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