

ILLINOIS POLLUTION CONTROL BOARD

September 26, 1972

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IOWA-ILLINOIS GAS AND ELECTRIC COMPANY	)	
	)	
	)	
v.	)	PCB 72-279
	)	
	)	
ENVIRONMENTAL PROTECTION AGENCY	)	
	)	

SUPPLEMENTAL STATEMENT (by Mr. Dumelle)

On November 15, 1971 in PCB 71-20, 3 PCB 95, the Board by a 3-1 vote granted a permit to the Iowa-Illinois Gas & Electric Company and to Commonwealth Edison Company to operate Quad-Cities nuclear units 1 and 2. The majority opinion of that date contains these words in its opening paragraph:

We note that there are environmental considerations on both sides in this case. Petitioner Iowa-Illinois operates an old, smoky coal-fired power plant in Moline that cannot be retired until Quad-Cities is in operation. Every day's delay in bringing Quad-Cities on line means another day of dirty air in Moline.

My dissent on the Quad-Cities permit (which has since been vacated by the Board because of a U. S. Supreme Court ruling) was based on concern for people's lives because of inadequacies in the emergency core cooling system design; the unnecessary radiation dose to the public because of neglect to install in advance of startup a radioactive gas cleaning system; and lack of information on the effects of the jet diffuser in terms of fish passage.

The implication of the Board's majority statement quoted above is that the "old, smoky coal-fired power plant" in Moline will be retired when Quad-Cities 1 is in operation. The question here then is "When is Quad-Cities a reliable source of power?" There is no magic in the June 1, 1974 date proposed by Iowa-Illinois so far as Quad-Cities 1 is concerned. Refueling of boiling water reactors takes place every year and 25% of the core is replaced each time.

The McGraw-Hill publication Nucleonics Week publishes monthly figures of nuclear power generation. The past two months of available data show the following generation in gross Mwh.

<u>MONTH</u>	<u>QUAD-CITIES 1</u>	<u>QUAD-CITIES 2</u>
July	199, 025	194, 760
August	291, 597	246, 483


Using 850 Mw as each unit's gross capacity, a load availability of 31.8% and 46.6% for Quad-Cities 1 for July and August respectively and 31.1% and 39.5% for the same months for Quad-Cities 2 was computed. In normal base load operation, figures around 85% would be expected. We can say then, that as of the end of August, neither Quad-Cities unit was yet delivering power at an expected rate and the variance therefore appears to be justified.

There is a new complication. The September 7, 1972 issue of Nucleonics Week tells of a shutdown of Quad-Cities 2 due to a jet pump" being displaced from its normal position" and attributes this to "seven parts of the pump-- mostly various bolts --had inexplicably worked loose. One of the bolts has not been found... . . . A General Electric spokesman said the problem was caused by 'incomplete' installation." Will other instances of "incomplete installation" be discovered in either Quad-Cities units 1 or 2? Will other parts "inexplicably work loose"? We do not know and can only hope that a major construction defect does not appear. Loose bolts in the interior of a nuclear reactor do nothing to gain public confidence in the safety of nuclear power plants.

The August 1972 recommendation by the AEC's prestigious Advisory Committee on Reactor Safeguards that Commonwealth Edison's Zion-1 nuclear plant (a different type) be derated to 85% of full capacity for its first core life (3 years) because of lack of operating experience in large reactors and the recently discovered fuel degradation problem is proof positive that all is not yet known about nuclear power generation. The Zion derating is expected to cost Edison some \$6 million per year in lost revenue (Nucleonics Week, October 5, 1972).

A second complication is the pending Atomic Energy Commission ruling on the adequacy of emergency core cooling systems. The AEC may not rule in this matter until March 1973 or later and may then order a derating until retrofiting is done.

Iowa-Illinois and Moline may have to endure the "old, smoky" plant for a while longer depending upon developments in the fast-changing nuclear power field. I would urge Iowa-Illinois to now fully investigate possible low ash coal usage in order that particulate emissions be kept to a minimum.

  
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Jacob D. Dumelle  
Board Member

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify the above Supplemental Statement was submitted on the 21 day of October, 1972.

  
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Christan L. Moffett, Clerk  
Illinois Pollution Control Board