



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

NRC PDR

50-339

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APR 18 1980

Mr. Robert H. Leyse
12525 Saratoga Creek Drive
Saratoga, California 95070

Dear Mr. Leyse:

Your letter to Chairman Ahearne has been referred to me for reply. In your letter you request that we provide you with the basis for selecting Essex Corporation as our consultant for control room design as it relates to human factor engineering. You also asked what is the Crystal River Syndrome.

My staff met with the Commission on April 2, 1980, to request that the Commission consider the matters regarding the issuance of an operating license which would permit the Virginia Electric and Power Company to operate the North Anna Power Station, Unit 2 at power levels not exceeding five percent (139 megawatts thermal) of full power.

The basis for requesting consideration for this low power license is presented in Supplement No. 10 to the North Anna Power Station Unit 2 Safety Evaluation Report. A copy of this Supplement may be purchased at current rates, from the United Technical Information Service, Department of Commerce, 5285 Port Royal Road, Springfield, Virginia 22161.

The Essex Corporation was selected as our consultant for control room design as it relates to human factor engineering because of their extensive experience in the application of human factor technology of control system designs which are utilized in submarines, spacecraft, aircraft and other large military applications. The Essex Corporation also has experience with nuclear reactor control rooms which they gained from their association with the Commission's Three Mile Island Special Inquiry Group.

The Crystal River Syndrome is an occurrence wherein a single failure caused a major plant upset which required the actuation of engineered safety features and simultaneously incapacitated most of the control room instrumentation that the operator would have used. This upset involved control system actions which created a plant transient which caused a power operated pressurizer relief valve to open and remain open. This valve action constitutes a small loss-of-coolant accident.

I trust that the above information is responsive to your concern.

Sincerely,

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H. R. Denton

Harold R. Denton, Director
Office of Nuclear Reactor Regulation