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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

In the Matter of)
)
Philadelphia Electric Company) Docket Nos. 50-352
) 50-353
(Limerick Generating Station,)
Units 1 and 2)

AFFIDAVIT OF JOHN W. BENKERT IN RESPONSE
TO THE ATOMIC SAFETY AND LICENSING BOARD'S
SEPTEMBER 7, 1984 ORDER

John W. Benkert, being duly sworn comes forward and states:

1. My name is John W. Benkert, of the Bechtel Power Company. As Civil Structural Group Supervisor for the Limerick project, I am familiar with the design of the Limerick Generating Station Reactor Enclosure and the analysis of the Limerick Reactor Enclosure South Stack which is the subject of this affidavit. A statement of my professional qualifications is contained in the record of the proceeding, ff. Tr. 8205, and is made a part of this affidavit.

2. This affidavit responds to the Atomic Safety and Licensing Board "Order Regarding FOE Motion to Set Aside Partial Initial Decision and Motion to Reopen Record," in which it asked the Applicant to update information contained in Board Notification 84-142.

3. As part of a general review of all structural calculations by Bechtel Power Corporation prior to turnover

to the Philadelphia Electric Company, begun in November 1983, selected calculations were reviewed by Bechtel engineers. In April 1984, as a result of this review, an engineer identified that calculations related to the Reactor Enclosure South Stack were not complete. These calculations which related to the evaluation of the effect of the design basis railroad explosion on this structure had been originally prepared in the period from 1973 to 1977.

4. The South Stack is a nonsafety-related ventilation exhaust structure which rises to the reactor enclosure roof. It is located at the plant center line where Units 1 and 2 meet. The structure is constructed of steel truss framing with precast panels connected to the framing.

5. The matter of the sufficiency of the design of this Category 2 structure was resolved through Bechtel civil and mechanical group consultations which culminated in a multidisciplinary review meeting held in mid-May. The meeting was attended by engineers from the civil, mechanical and electrical disciplines. The effect of design basis railroad explosions and other load combinations was discussed from both structural and system function standpoints. It was recognized that the natural gas pipeline detonation overpressures for this structure were enveloped by the railroad explosion. It was concluded from this multidisciplinary systems oriented review that the ability of

the plant to safely shut down in the event of a design basis railroad explosion (and therefore from a natural gas explosion) would not be compromised, even were the South Stack to fail. No design modifications for the South Stack were determined to be necessary. This evaluation was incorporated in the design calculations for the facility.

6. During the week of August 20, 1984, in preparation for a meeting with the NRC to be conducted the following week, additional confirmatory calculations were prepared as an independent check of the ability of the South Stack to withstand railroad blast overpressures. These confirmatory calculations showed that the precast concrete panels connected to the steel framing of the South Stack would not become dislodged or fall, thus further confirming the previous evaluation.

7. The NRC Staff visited the Bechtel San Francisco office the week of August 27, 1984 to review the structural calculations and associated drawings and specifications. Although the results of the NRC's review have not been communicated, I am aware of no outstanding matters necessary for resolution.

John W. Bechtel

Subscribed and sworn to
before me this 13th day
of SEPT. , 1984

Mavis M. Lynde
Notary Public

