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Nuclear Business Unit

MAY 30 1996

LR-N96111  
LCR H96-02

United States Nuclear Regulatory Commission  
Document Control Desk  
Washington, DC 20555

Gentlemen:

**REQUEST FOR ADDITIONAL INFORMATION  
REVISION OF DIESEL FUEL OIL STORAGE AND TRANSFER REQUIREMENTS  
HOPE CREEK GENERATING STATION (HC)  
FACILITY OPERATING LICENSE NPF-57  
DOCKET NO. 50-354**

This letter transmits Public Service Electric and Gas Company's (PSE&G) response to your request for additional information regarding License Change Request (LCR) H96-02. In PSE&G's original submittal dated March 6, 1996 (Ref. LR-N96008), PSE&G proposed changes to the HC Technical Specifications (TS) to reduce the minimum required fuel oil stored in the Emergency Diesel Generator (EDG) Fuel Oil Storage Tanks (FOSTs) and to add specific operability conditions on the fuel oil transfer pumps.

During a telephone conversation between PSE&G and the NRC on April 12, 1996, PSE&G received a request for the following additional information:

1. How will the temporary hoses and jumpers that are used for transferring fuel oil between pairs of FOSTs be obtained.
2. What additional (tertiary) supplies of fuel oil are available on site.
3. How will the tertiary supplies be transferred to the FOSTs.

This letter is in response to that verbal request.

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The power is in your hands.

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### **Temporary Hoses and Jumpers**

Transfer capability between pairs of FOSTs provides a secondary one day supply of ASTM 2D fuel oil for the most heavily loaded EDG.

As described in the Safety Evaluation Report for Amendment 59, PSE&G proposed to pre-stage the equipment necessary to maintain the fuel oil transfer capability should the fuel oil cross-tie lines not be available following an accident. Pre-staging of this equipment in a designated locker has been accomplished. In addition, periodic inventories of the locker are taken to ensure continued availability of the temporary transfer equipment.

### **Additional (tertiary) Supplies**

There are two bulk fuel oil storage tanks on the HC/Salem site. One tank, located near the Salem Generating Station, is nominally 800,000 gallon capacity and is typically maintained at least 50% full with #2 fuel oil that is qualified as ASTM 2D diesel fuel oil. This tank provides normal makeup to the FOSTs for the Salem Generating Station EDGs.

The second tank, located near HC, is nominally 1,000,000 gallon capacity and is typically maintained between 25% and 100% full with #2 fuel oil. The #2 fuel oil in the HC bulk fuel oil storage tank is not specifically qualified as ASTM 2D diesel fuel oil since it is not used as makeup to the HC EDGs. However, it is reasonable to assume this oil is compatible with the HC EDGs since this #2 fuel oil is procured from the same suppliers as the #2 fuel oil in the Salem bulk fuel oil storage tank. To confirm this compatibility, a sample from the HC bulk fuel oil storage tank was recently analyzed. The results of the analysis demonstrated that key parameters, including the cetane number, were within the bounds of ASTM 2D fuel oil.

Also, as a result of HC's location on the Delaware River, it is within a short distance from oil refineries and fuel oil storage facilities. Should normal truck delivery be unavailable to supplement the onsite sources, it would take only a short time to arrange delivery of fuel oil by barge (via a slip located in the vicinity of the HC bulk fuel oil storage tank).

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### **Transfer of Tertiary Supplies to the FOSTs**

Within the context of an emergency situation and given a response time of at least seven days (as provided for in the primary and secondary fuel supplies), the capability exists to transfer much of the on site tertiary supply of fuel oil to the FOSTs.

Regarding the Salem Generating Station's bulk fuel oil storage tank; it is recognized that it is not connected to any of the HC fuel oil storage tanks due to the distance involved (approximately one mile). However, a tank truck is normally maintained on site for servicing non-permanent diesel-driven equipment. Given the seven days fuel oil supply guaranteed to be available for the HC EDGs, arrangements could be readily made to utilize this tank truck to transfer a sufficient quantity of fuel oil from the Salem bulk fuel oil storage tank to the HC FOSTs.

Regarding the HC bulk fuel oil storage tank, although it is located approximately 30 feet higher in elevation than the FOSTs and is connected by permanent piping to the HC FOSTs, check valves are provided to ensure a discharge of fuel oil from the FOSTs to the bulk fuel oil storage tank. Therefore, it would be necessary to install fittings and hose at the bulk storage tank drain to enable gravity draining the contents to the FOSTs.

Another method available to ensure a continued supply of fuel oil to the FOSTs is via a barge fill connection, which is permanently connected to the FOSTs. This fill connection is located adjacent to the barge slip, however, since the barge slip is not normally used, some silt removal may be necessary to ready it for barge docking. This would be considered in the arrangements for barge delivery.

The Technical Support Center (TSC) would be activated under circumstances requiring transfer of the tertiary supplies to the FOSTs. Due to the unknown circumstances involving a loss of offsite power and the variety of methods available to transfer fuel oil to the HC FOSTs, the TSC would make arrangements for successful transfer of fuel oil.

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**Summary**

Transfer capability between pairs of HC FOSTs via permanent piping or temporary hoses and jumpers provides a secondary one day supply of 2D fuel oil for the most heavily loaded EDG. Equipment necessary to facilitate the transfer is pre-staged and periodically inventoried to ensure its continued availability.

A tertiary on site supply of #2 fuel oil, qualified as ASTM 2D diesel grade fuel oil, stored in a 800,000 gallon tank at the Salem Generating Station is available for transfer to the HC FOSTs via tank truck. In addition, the 1,000,000 gallon HC bulk fuel oil storage tank could be available for transfer to the FOSTs through a combination of installed piping and temporary hose.

In addition, supplies of fuel oil from nearby refineries and storage facilities could be made available by truck or barge delivery.

Should you have any questions regarding this response, we will be pleased to discuss them with you.

Sincerely,

*D. R. Powell*

D. R. Powell  
Manager -  
Licensing and Regulation

Attachments (1)

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Attachment 1

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HOPE CREEK GENERATING STATION  
FACILITY OPERATING LICENSING NPF-57  
DOCKET NO. 50-354**

The following drawings are attached in support of information provided:

<u>Drawing No.</u>	<u>Title</u>
M-30-1, Sh 1 of 3	Diesel Engine Auxiliary Systems; P&ID
M-20-0, Sh 1 of 3	Auxiliary Boiler Fuel Oil System; P&ID

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