PSEG Nuclear LLC
P.O. Box 236, Hancocks Bridge, New Jersey 08038-0236

AUG 1 7 2001

PSEG Nuclear LLC

LRN-01-267
LCR H01-002

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555-0001

Gentlemen:

**REQUEST FOR CHANGE TO TECHNICAL SPECIFICATIONS-
SUPPLEMENTAL INFORMATION
INCREASE IN ALLOWABLE MSIV LEAKAGE RATE AND
ELIMINATION OF MSIV SEALING SYSTEM
HOPE CREEK GENERATING STATION
FACILITY OPERATING LICENSE NPF-57
DOCKET NO. 50-354**

This letter forwards additional information in support of License Change Request (LCR) H-01-002. Mr. R Ennis, NRC Project Manager, requested this information verbally.

Attachment 2 to this letter provides a copy of the preliminary results of the Constant Injection Tracer Gas Ventilation Test performed at Hope Creek. This testing for determining air inleakage into the control room envelope was based on the following:

1. ASTM Standard E741-95, "Standard Test Method for Determining Air Change Rate in a Single Zone by Means of a Tracer Dilution".

2. ASTM Standard E2029-00, "Standard Test Method for Volumetric and Mass Flow Rate Measurement in a Duct using Tracer Gas Dilution".

3. ANSI/ASME PTC 19.1 1985 (Reaffirmed 1990), Part 1, "Measurement Uncertantity: Instruments and Apparatus".

In accordance with 10CFR50.91(b)(1), a copy of this submittal has been sent to the State of New Jersey.

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Should you have any additional questions regarding this request, please contact Mr. Michael Mosier at (856) 339-5434.

Sincerely,

Mark B. Bezilla
Vice President – Technical Support

Attachments:

1. Affidavit
2. Memo dated July 30, 2001, from P.L. Lagus, to John Cichello, Preliminary Tracer Gas Test Data Hope Creek Generating Station.

C: USNRC Senior Resident Inspector – HC (X24)

Mr. H. Miller, Administrator – Region I
U. S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406

Mr. R. Ennis
Licensing Project Manager – Hope Creek
U. S. Nuclear Regulatory Commission
One White Flint North
Mail Stop 8B1
11555 Rockville Pike
Rockville, MD 20852

Mr. K. Tosch, Manager IV
Bureau of Nuclear Engineering
PO Box 415
Trenton, New Jersey 08625

STATE OF NEW JERSEY)
) SS
COUNTY OF SALEM)

Mark B. Bezilla, being duly sworn according to law deposes and says:

I am Vice President – Technical Support of PSEG Nuclear LLC, and as such, I find the matters set forth in the above referenced letter, concerning Hope Creek Generating Station, Unit 1, are true to the best of my knowledge, information and belief.

Subscribed and Sworn to before me
this 17th day of August, 2001

Notary Public of New Jersey

My Commission expires on June 13, 2003.

Attachment 2

PRELIMINARY TRACER GAS TEST DATA

HOPE CREEK GENERATING STATION

DATE: July 30, 2001

TO: John Cichello, Hope Creek Generating Station

FROM: P.L. Lagus, Ph.D., CIH

SUBJECT: PRELIMINARY TRACER GAS TEST DATA

Tracer gas air inleakage tests were performed on the Control Room Envelope (CRE) at the Hope Creek Generating Station (NGS) during July 2001 by a team of test engineers from NCS Corporation (NCS) and Lagus Applied Technology, Inc. (LAT). Air inleakage into the Control Room Envelope was measured with the Control Room Emergency Ventilation System (CREVS) operating in the Pressurization Mode as well as the Recirculation Mode. For the purposes of air inleakage testing, the Control Room Envelope consisted of the Main Control Room (MCR) and the ductwork and air handling units that comprise the CREVS.

Concentration Buildup/Steady State Tests were undertaken to infer inleakage rates into the CRE with the Control Room Emergency Ventilation System (CREVS) operating in the Pressurization Mode. In a concentration buildup/steady state test, tracer gas is continuously injected into the makeup air stream of the CREVS at a constant rate and is dispersed throughout the CRE. After waiting a sufficient period of time for concentration equilibrium to occur, measurement of the tracer concentration at the most downstream point (in a static pressure sense) of the CREVS allows inference of the Total Inleakage to the CRE.

Makeup flowrates are simultaneously measured by a tracer gas dilution technique. Knowledge of the makeup flowrate allows calculation of the amount of air inleakage to the CRE that is not provided by makeup flow by differencing these two measured values.

A Concentration Decay Test was undertaken to infer inleakage rates into the CRE with the Control Room Emergency Ventilation System (CREVS) operating in the

Recirculation Mode. In a concentration decay test, a quantity of tracer gas is injected initially into the CREVS and is dispersed throughout the CRE.
One then obtains a series of concentration versus time points and performs regression analysis on the logarithm of concentration versus time to find the best straight-line fit to the data. The slope of this straight line is volume normalized air inleakage rate in air changes per hour (ACH). Knowledge of the CRE volume allows calculation of the air inleakage rate in CFM.

Tracer gas tests were performed also to measure the leakage past the normal mode isolation dampers with the CREVS in the Pressurization Mode. For a tracer gas isolation damper leakage test, a known concentration of tracer is introduced immediately upstream of the damper in a continuous fashion by means of a flow controlling and measuring device, e.g. a mass flow controller or a mass flow meter. The concentration of tracer gas downstream of the injection location is measured. For continuous injection, the downstream concentration is inversely proportional to the damper leakage rate. At Hope Creek, the isolation dampers were tested in pairs.

Preliminary measured inleakage, damper bypass leakage and makeup flowrate data are provided in the attached table. A Draft Final Report will be provided to Hope Creek and NCS by September 15, 2001

Table 1

Preliminary Tracer Gas Test Results

Item	Value *
A CREVS Makeup Flowrate	674 +/- 20 SCFM**
A CREVS Inleakage	196 +/- 10 SCFM
B CREVS Makeup Flowrate	680 +/- 20 SCFM**
B CREVS Inleakage	138 +/- 15 SCFM
Recirculation Mode Inleakage	312 +/- 12 ACFM***
Dampers FC9588AA & AB	< 0.19 SCFM
Dampers FC9588BB & BA	< 0.14 SCFM

* Referenced to 70 Deg F and 14.7 psia

** Mean of seven measurements

*** Referenced to 408.6 in. w.g. (at 137 ft. level) and 70 Deg F