April 15, 1996

LICENSEE: Virginia Electric and Power Company

FACILITY: North Anna Units 1 and 2

SUBJECT: MEETING SUMMARY - MEETING BETWEEN VIRGINIA ELECTRIC AND POWER COMPANY (VEPCO) AND THE NRC T DISCUSS PROPOSAL TO PERMIT EMERGENCY DIESEL GENERATOR MAINTENANCE OUTAGE DURING PLANT OPERATION (TAC NOS. M93415 AND M93416)

On April 2, 1996, the NRC staff met with representatives of VEPCO to discuss their proposal to permit an emergency diesel generator (EDG) to be taken out of service once every 18 months with the reactor at power. The allowed outage time (AOT) would be 14 days. The license amendment proposal was submitted to the NRC on September 1, 1995. Attendance at the meeting is listed in Enclosure 1. VECPO's slides, which served as a basis for the discussion, are provided in Enclosure 2.

The purpose of the meeting was for VEPCO to clarify details of the proposal. The NRC staff indicated that at least two sets of questions would be soon transmitted to VEPCO. The general nature of the questions was described by the staff as part electrical and part probabilistic analysis. It was agreed at the meeting that if the staff could issue electrical questions soon, a follow-up conference call the following week could be used for any clarification needed. The licensee indicated their schedular goal is to complete work on this issue by June 1996 so that they could begin to implement it before the next refueling outage which is scheduled for next September.

(Original Signed By)

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Office of Nuclear Reactor Regulation

Docket Nos. 50-338 and 50-339

Enclosures: 1. List of Attendees
2. Summary of Presentation

cc w/encls: See next page

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ENCLOSURE 1

NORTH ANNA/VEPCO MEETING

ON DIESEL GENERATORS

APRIL 2, 1996

LIST OF ATTENDEES

Name	Organization
Gordon Edison	NRC
David Heacock	VEPCO
Thomas Shaub	VEPCO
Dave Bucheit	VEPCO
Robert Stacy	VEPCO
Ronald Thomas	VEPCO
Millard Wohl	NRC
Virgil Beaston	NRC
Fred Burrows	NRC
Nanette Gilles	NRC
Theresa Sutter	BECHTEL
Ian Jung	NRC
John Flack	NRC

EDG Tech Spec Change Request
North Anna Unit 1 & 2
Introduction

- Not Requesting a 14 Day EDG AOT.
- Requesting a 14 Day Preventive Maintenance Outage Once Every 18 Months.
- Maintain Existing 72 Hour AOT for EDGs.
- Utilized Deterministic and Risk Based Analysis to Support Package.

EDG Tech Spec Change Request
North Anna Unit 1 & 2

- Upper Bound AOT Changes Based on:
  - Δ CDF / Δ CDP (conditional-single AOT)
  - Containment Performance (e.g., CCFP, LERF, or Δs).

- Configuration (Equipment Simultaneously out-of-service) restrictions.

- Before performing maintenance activities, including removing any equipment from service, an assessment of the overall impact on safety functions (as required by the maintenance rule) must be performed.

AOT and Δ CDF for Diesel Configuration Risk			
Unavailable Diesel	**Tech Spec AOTs**	**Configuration CDF**	**Δ CDF from Zero TM model**
AAC DG	none	4.1E-5	5.1E-6
1 EDG on this unit	3 / 14 day	5.0E-5	1.5E-5
1 EDG on opposite unit	3 days	3.6E-5	5.0E-7
AAC & 1 EDG	72 hours	1.7E-4	1.4E-4
2 EDGs	8 hours	4.1E-4	3.7E-4
2 EDGs & AAC DG	8 hours	3.3E-3	3.2E-3

Containment Performance

- Large Early Release Frequency Not Significant For North Anna
  - IPE Showed That North Anna Has A High Capacity Containment.
  - Subatmospheric Containment Isolated By Design.
  - Most Accident Sequences Develop Slowly.

- Steam Generator Tube Rupture and Inter-system LOCA are the Most Significant Large Early Release Accidents. These Accident Sequences Do No Have Diesel Failure in the Dominant Cut Sets.

Configuration Restrictions
During EDG Maintenance Outage

- Controlled by Tech Specs, Maintenance Rule Program and Procedures.

- Current On-Line Maintenance Guidance is Only One Risk Significant Functional Equipment Group will be Unavailable at a Time. This may be Revised As Risk Acceptable Combinations Are Specifically Identified.

- If Other Risk Significant Equipment Becomes Unexpectedly Unavailable During An EDG Maintenance Outage Then Tech Spec LCOs Will Be Followed. For Example if the AAC DG Becomes Inoperable Then The Unit Will be Placed in Hot Standby Within 72 Hours, if the Unit's Other EDG Becomes Inoperable Then the Unit Will be Placed in Hot Standby Within 8 Hours.

Overall Impact on Safety Functions During EDG Maintenance Outage

- Only difference between the EDG and AAC DG is the time required to supply power to an emergency bus. The EDGs can supply power in 10 seconds and the PSA conservatively assumes a 60 minute delay for the AAC DG to supply power to an emergency bus.

- This timing difference makes it possible for the AAC DG to serve as an acceptable substitute during all accident sequences except for LOCAs. The most probable LOCA sequences do not include electrical transients requiring an EDG.

Annual Risk Sensitivity on EDG Unavailability					
PSA Model	**EDG Unavailability (days/year)**	**LOCAs (CDF/year)**	**General Transients (CDF/year)**	**Electrical Transients (CDF/year)**	**Total (CDF/year)**
No-AAC	4.1	3.02E-5	2.62E-6	2.13E-5	5.42E-5
95 June	4.1	3.01E-5	2.52E-6	8.16E-6	4.08E-5
EDG AOT	13.4	3.01E-5	2.53E-6	9.42E-6	4.21E-5
Bounding	40	3.02E-5	2.54E-6	1.40E-5	4.67E-5

Configuration Risk Sensitivity on Diesel Operability				
Inoperable Diesel	**LOCAs (CDF/year)**	**General Transients (CDF/year)**	**Electrical Transients (CDF/year)**	**Total (CDF/year)**
none	2.75E-5	2.12E-6	6.03E-6	3.56E-5
AAC DG	2.75E-5	2.12E-6	1.10E-5	4.07E-5
1 EDG on this unit	2.75E-5	2.13E-6	2.09E-5	5.05E-5
1 EDG on opposite unit	2.75E-5	2.21E-6	6.43E-6	3.61E-5
AAC & 1 EDG	2.77E-5	2.23E-6	1.44E-4	1.74E-4
2 EDGs	2.77E-5	2.20E-6	3.75E-4	4.05E-4
2 EDGs & AAC DG	2.86E-5	3.03E-6	3.23E-3	3.27E-3

Memorandum Dated April 15, 1996

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