June 4, 1990

NOTE FOR: Ed Jordan, Director, AEOD

Frank Ingram FROM: Assistant to the Director Public Affairs

Attached is a draft public announcement of the IIT report on the Vogtle loss-of-power incident on March 20. I would appreciate any comments and/or suggestions you and your staff may have and will get a separate copy to Al Chaffee. I would expect to issue the announcement following the Commission briefing on Friday, June 8.

> Frank L. Ingram Assistant to the Director Public Affairs

Attachment: As stated

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NRC STAFF TEAM COMPLETES INVESTIGATION OF LOSS-POWER-EVENT AT VOGTLE NUCLEAR POWER PLANT

A NRC staff Incident Investigation Team (IIT) has completed its review of a March 20 incident involving the loss of all electrical power to Unit 1 at Georgia Power Company's Vogtle nuclear power plant near Augusta, Georgia. The team concluded that adequate precursor information was available to make the incident preventable.

Unit 1 at the Vogtle plant was shut down for refueling on March 20 when a truck carrying fuel and lubricants backed into a power pole, knocking out offsite power to the unit. An on-site backup diesel generator started up but tripped off twice leaving Unit 1 without electrical power and an operable residual heat removal system for a period of 36 minutes when the diesel was restarted for a third time and began operating properly. As a result, the temperature of the reactor coolant increased from about 90 degrees Fahrenheit to about 136 degrees Fahrenheit.

A Size Area Emergency was declared but was downgraded to an Alert after the diesel generator began operating properly. The Alert was terminated when offsite power was restored to the unit after about three hours.

In its report, the team found that this incident was not unique and not without precedent because loss-of-offsite-power events, loss-of-decay-heatremoval events and diesel generator failures have occurred previously. Further, the industry has been informed of these events and the NRC staff and the Institute of Nuclear Power Operations have provided lessons learned and other guidance related to them.

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The IIT also concluded that a combination of non-conservative conditions at the time combined with a failure to control work in the switchyard led to the event. First, two of four sources of effsite power were out of service for maintenance. Second, the Vogtle staff had no effective control over the fuel and lubricants truck which could have caught fire as the result of electrical arcing. Such a fire could have caused further damage in the switchyard and further hampered efforts of the Vogtle staff to restore electrical power.

In addition the Vogtle staff has concluded that it was not necessary to have two of four sources of offsite power out of service for maintenance when the water level in the reactor vessel had been lowered to perform other maintenance work. While the investigation to determine the root cause of the backup diesel generator trips is continuing, a preliminary evaluation suggests they resulted from the failure of sensors designed to shut down the diesel when cooling water temperatures get too high. A significant number of these sensors used at the Vogtle facility have failed since 1985.

The IIT also found that the Vogtle staff's response to the incident generally was effective and compensated for weaknesses in their existing procedures. Some weaknesses in their ability to cope with the conditions that would have existed had the residual heal removal system not been returned to service also were identified.

As a result of this investigation, significant potential generic lessons were identified, including:

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--approaches to risk management when power reactors are in a shutdown condition need to be developed;

--existing analyses and guidance has not been implemented into procedures and training;

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-- there is a need for additional analysis of reactor coolant system behavior following the loss of the decay heat removal system;

---existing operating information needs to be further synthesized; ---problems exist with emergency classifications and guidance and implementation of that guidance;

--technical specifications do not take into consideration the risk associated with various configurations of systems that may exist when a power seactor is in a shutdown condition; and

---at least some diese' generator control and annunicator systems are complex and may not be well understood.

The IIT was not asked to address possible violations of NRC requirements or resulting enforcement actions which might be associated with the incident. Those matters will be addressed separately.