The following questions/comments were provided via comment cards during the January 9 through 10, 2006, Nuclear Regulatory Commission (NRC) public workshop:

Jennifer Weber, TVA - Transmission

* Very Important *

"Offsite Power" : clearly distinguish throughout when actual real-time physical loss is intended vs. tech spec "disqualification" (i.e., cannot assure adequacy for a subsequent DBE) vs. "external power," which seems to be the intent of the section on emergency restoration (i.e., will run plant loads, but not necessarily be TS/DBE-qualified for start-up purposes).

NRC Response:

Questions 3 and 4 in the Generic Letter address the issue of adequacy of offsite power and meeting the N–1 contingency for satisfying the Technical Specification requirements. Question 7 in the Generic Letter addresses procedures required for making local power sources (offsite or onsite) to resupply the nuclear power plant following a loss-of-offsite power (LOOP) or an station blackout (SBO). The information requested in questions 3, 4, and 7 of the Generic Letter are needed to assess whether the nuclear power plant is meeting its regulatory requirements to which it was licensed.

Jennifer Weber, TVA - Transmission

"Stressed grid" & "degraded grid" : these terms are too broad, vague, and subjective and should be eliminated from the GL unless more specifically defined. Consider term such as "periods of increased risk to offsite power adequacy."

NRC Response:

The revised Generic Letter contains a section on "Definitions," which provides clarification on "Stressed grid," and "degraded grid," so that these terms are clearly defined and clarified.

Jennifer Weber, TVA - Transmission

Eliminate use of term "reliability," which NERC relates to the ability of the Transmission operator to maintain positive control of the grid. Even if controlled load shed or generation trips are required. Instead, use "offsite power adequacy," since nuclear O.P. is a special form of grid customer demand.

NRC Response:

The terms "adequate offsite power," and "grid reliability," are defined and clarified under the section, "Definitions," in the revised Generic Letter. We believe there is no need to eliminate the term "reliability."

Jennifer Weber, TVA - Transmission

Eliminate use of term "stability," which is a narrow technical term relating to the damping of post-disturbance oscillations as the system transitions to a new steady-state condition. Instead, refer to "offsite power adequacy or risk."

NRC Response:

Refer to the "Definitions" section in the revised Generic Letter that clarifies this term.

Jennifer Weber, TVA - Transmission

"Reactor trip" and similar terms: change to "worst-case Design Basis Event (DBE), such as a LOCA shutdown or full-load rejection, including the associated changes in plant loads."

NRC Response:

The reactor trip (or unit trip) may occur independent of design bases event (DBE), therefore these terms are not the same. The term 'reactor trip' is used in Regulatory Guide 1.155 and other NRC documents such as the Standard Review Plan (NUREG-800). Therefore, it is not prudent to accept the above proposed change.

Jennifer Weber, TVA - Transmission

Note that a unit trip "contingency" that is modeled for Bulk System Reliability and NERC compliance purposes is not the same as a DBE shutdown that must be considered for offsite power adequacy/qualification purposed (i.e., with associated changes to load magnitude and source alignment).

- Define "contingency" clearly for the intended purpose.

NRC Response:

See the "Definitions" section in the revised Generic Letter where N –1 contingency is defined.

Jennifer Weber, TVA - Transmission

Q2 Please clearly define "RTCA" in light of Mr. Paul Gill's comment that it is intended to be a generic term that encompasses a variety of possible tools. What are the specific characteristics of the tool/ process that the NRC is interested in? (e.g., use of near-real-time models vs. bounding models).

NRC Response:

See the "Definitions" section in the revised Generic Letter where Real Time Contingency Analysis (RTCA) is defined for clarification.

Jennifer Weber, TVA - Transmission

Very Important

Q2 To meet the stated intention of determining how Licensees continue to ensure that their offsite power analysis remain adequate given dramatically changing grid conditions, rather than implying the requirement to use a particular tool, rephrase each subquestion to focus on the underlying safety requirement rather than how an RTCA in particular would handle it.

NRC Response:

See the revised Generic Letter for added clarification of each question.

Jennifer Weber, TVA - Transmission

Q2 (a) Rephrase to something like "Given the greater variability in system flow patterns from historical norms, how are actual grid conditions evaluated to ensure that offsite power remains adequate."

NRC Response:

See the revised Generic Letter for added clarification of each question.

Jennifer Weber, TVA - Transmission

Q2 (h) "...not available to the NPP's TSO"
Change to "... not used by the NPP's TSO for offsite power adequacy determination,"

"...for the TSO to obtain one?"
Change to "... for the TSO to use a RTCA for official offsite power adequacy determinations."

NRC Response:

See the revised Generic Letter for added clarification of each of these questions.

Jennifer Weber, TVA - Transmission

Q2 (j) Please clarify how (a) - (i) constitute "provisions of GDC 17," compliance with which is called into question if a RTCA is not used.

NRC Response:

Given that the grid is being operated in manner that may not be within the constraints of the original analysis, the question then arises how are nuclear power plants meeting their licensing basis? Further, if the grid operations and flows change on daily basis or hourly basis, how do you verify that it is being operated within the bound of the original analysis? One way to assure this is by operating the grid within the confines of a bounding analysis. The second option is to assess via a real time analysis such as RTCA (or some other tool) that the grid will not degrade

the offsite power system as set forth in the nuclear power plant license (i.e., General Design Criterion (GDC) 17 and other GDCs that rely on offsite power). The staff believes that an analysis is needed to assess grid conditions to ensure adequate offsite power given that the grid is not being operated in the manner that was used in the licensing bases of the nuclear power plant.

Jennifer Weber, TVA - Transmission

Q3 (a) Note that O.P. operability is not required to withstand a grid failure, such as a line trip. "stability" studies that consider line and load trips, etc. are very different from offsite power degraded voltage studies.

NRC Response:

The nuclear power plant was licensed to withstand the loss of the largest supply (nuclear or non-nuclear), the most critical transmission line, or largest load to ensure that the offsite power will have the capability and capacity (GDC 17) to supply the design basis event loads. The requirements of GDC 17 were embodied in the Technical Specifications that established the operating requirements and the associated Limiting Conditions for Operations.

Jennifer Weber, TVA - Transmission

Q4 "... remain operable following a trip of your NPP"
Redundant, or could imply double-contingency. "Operability" is determined by evaluating a postulated NPP DBE shutdown.

NRC Response:

The licensing basis of the nuclear power plant is that the offsite power remains operable (capability and capacity) following a trip of the reactor. Therefore, licensees have to ensure that this capability is not compromised for a DBE or other events as specified in the license of the nuclear power plant.

Jennifer Weber, TVA - Transmission

Q5 (c) **"Stress on grid"** too broad, vague, undefined
Q5 (c) and (d) **"Seasonal variations"** consider instead referring to "definable periods of increased risk to offsite power adequacy"
Q5 (i) **"Such a condition"** Spell out the condition being referred to
Q5 (l) **"Worsening <u>degraded grid, reliability,</u> conditions"** "offsite power and adequacy conditions"

NRC Response:

See the revised Generic Letter where all of the above terms have been defined and clarified.

Dan Goldston, SCANA, SCE&G

There seems to be an implicit assumption that using and passing an RTCA will provide assurance that a Degraded or Undervoltage actuation will not occur. Our RTCA is steady state to steady state - it does not predict minimum voltage or it's duration during a transient. I suspect this is true for most of them. This is in spirit of very conservative bus voltage violation limits for the RTCA - well above degraded voltage or undervoltage setpoints.

NRC Response:

We agree that an RTCA type tool should be used to predict minimum voltage and it's duration during a transient for the conditions that the plant was licensed to in order assure that adequate offsite power will be available upon the trip of the nuclear power plant.

ADAMS/ACCESSION NO.: ML060170552