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DUKE POWER

May 15, 1996

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555

Subject: Catawba Nuclear Station, Units 1 and 2
Docket Nos. 50-413 and 50-414
Frequency Reduction: Sampling of Reactor
Coolant System Boron to Comply with
Regulatory Guide 1.97 Commitment

Re: Letter from H. B. Tucker, Duke Power Company, to
U.S. NRC, Dated October 23, 1990, Subject: Deletion of
the Boronometer as a Method for Meeting a Regulatory
Guide 1.97 Commitment.

Gentlemen:

Under the referenced letter, Duke Power Company, Catawba Nuclear Station Units 1 and 2, committed that with the deletion of the Boron Concentration Measurement System, (Boronometer), twice-daily sampling of the Reactor Coolant System (RCS) and analysis for boron concentration would be performed as a proven method of obtaining boron concentration to meet Regulatory Guide 1.97.

Catawba Nuclear Station intends to change the frequency of sampling to once-daily. This change does not adversely affect Catawba's commitment to Regulatory Guide 1.97 and there is not an adverse impact on plant safety. This change is in line with general industry practice and would allow for more efficient Chemistry operations on the backshift and support our staffing reduction plans that are currently in place.

Attachment 1 provides the justification for this change in sampling frequency.

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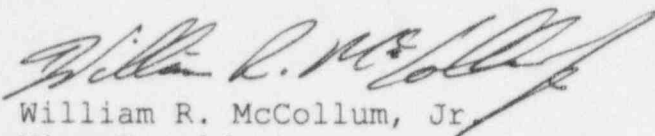
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Should there be any questions concerning this change, please
call D. Tower at (803) 831-3419.

Very truly yours,



William R. McCollum, Jr.
Vice President
Catawba Nuclear Station

Attachment

xc (with attachment):

S.D. Ebnetter, Regional Administrator
Region II

R.J. Freudenberger, Senior Resident Inspector
Catawba Nuclear Station

P.S. Tam, Senior Project Manager
ONRR

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bxc (with attachments):

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M.S. Kitlan	CN01RC
P.R. Newton	PB05A
ELL	EC050
NCMPA-1	
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PMPA	
SREC	
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ATTACHMENT 1

JUSTIFICATION FOR CHANGE IN
RCS BORON SAMPLING FREQUENCY

JUSTIFICATION FOR CHANGE IN RCS BORON SAMPLING FREQUENCY

BACKGROUND

Generic Letter 82-33 (Supplement 1 to NUREG-0737) was issued by the NRC regarding Regulatory Guide 1.97, Revision 2. The NRC concluded that Duke Power Company had provided an explicit commitment on conformance to Regulatory Guide 1.97, and that Duke had either conformed to or was justified in deviating from the regulatory guide. One of the regulatory guide variables that pertains to PWRs is Reactor Coolant System Soluble Boron Concentration. This Type B variable is intended to provide post-accident information to indicate whether the plant safety function for reactivity control is being accomplished. Catawba's original commitment, relative to this variable, was to utilize the installed boronometer. The boronometer had a different range than required by the regulatory guide, but was considered adequate for the anticipated concentrations of boron. Sampling and analysis were stated to be the backup source of information for the reactor coolant soluble boron concentration.

The boronometer was designed for use as an advisory system. It was not designed as an Engineering Safeguards system or as a component of a safeguards system. The boronometer was not part of a control element or control system, nor was it designed for this use. No credit was taken for this system in any accident analysis. Therefore, redundancies of measurement components, self checking subsystems, malfunction annunciation, and diagnostic circuitry were not included in this system. As a general operating aid it provided information when additional check analyses were warranted rather than a basis for fundamental operating decisions.

While in Modes 3, 4, 5, and 6, boron concentration addition and dilution accidents are afforded protection by use of the Boron Dilution Mitigation System which is a completely redundant system.

When in Modes 1 and 2, the operator is alerted to the dilution event by the Over-Temperature Delta-T reactor trip and/or the rod insertion limit alarm. and by the power range high neutron flux low setpoint reactor trip, respectively.

JUSTIFICATION

At the time of removal of the boronometer, it was concluded that the Regulatory Guide 1.97 requirement to monitor reactor coolant soluble boron concentration may be satisfied by sampling and chemical analysis. Catawba committed to twice-daily sampling as the method to meet Regulatory Guide 1.97 requirements.

Chemistry has been sampling reactor coolant soluble concentration twice-daily since Unit 1 initial startup. Historical sampling data shows that for all measurable purposes, there is no difference between 12 hour data and 24 hour data readings. Therefore, sampling once per day as opposed to twice per day does not adversely affect Catawba's commitment to Regulatory Guide 1.97.

Neither the Boron Dilution Mitigation System, the Over-Temperature Delta-T reactor trip the rod insertion limit alarm, nor the power range high neutron flux low setpoint reactor trip will be affected by this change. Any upset in boric acid concentration is detected by one of the above installed instrumentation systems, regardless of the sampling frequency. Therefore, a once-daily sampling frequency is satisfactory to meet regulatory requirements.

Since no plant parameters, setpoints, operating conditions, or basic operator decision making information sources are altered by decreasing the sampling frequency, the margin of safety as described in the basis of any Technical Specification is not reduced. The consequences of an accident or malfunction of equipment of a different type than any evaluated in the SAR will not be created. This change in sampling frequency has no adverse impact on plant safety.