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May 21, 1981



Mr. L. L. Kintner
U. S. Nuclear Regulatory Commission
7920 Norfolk
Bethesda, Maryland 20014

References: EF-2 Technical Specifications
EF-2 NRC Docket No. 50-341

Subject: Reactor Water Sampling, Analysis,
and Administrative Control

Dear Mr. Kintner:

Attached to this letter are Reactor Water Sampling and Analysis parameters and a summary of Chemical Administrative Controls for reactor water maintenance. Reactor water copper will have an administrative trigger point of 40 ppb. In addition, Feedwater copper will have an administrative trigger point of 0.6 ppb.

If any additional information or clarification is required, please contact L. E. Schuerman.

Very truly yours,

W. F. Colbert
Technical Director
Enrico Fermi 2

WFC:ca
Attachment

cc: G. Bethke
R. R. Eberhardt
E. Lusi
W. McNeil
L. E. Schuerman

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REACTOR WATER SAMPLING AND ANALYSIS

SUMMARY OF CORRECTIVE ACTION/ADMINISTRATIVE CONTROL

The Radchem Engineer or his delegate is responsible for:

(1) the interpretation and recording of data, (2) investigative analysis, (3) identification of problem sources, and (4) recommendations to control/minimize detrimental effects to reactor water and to the System.

Specific guidelines are outlined below:

Power Operation

When the reactor water conductivity exceeds a control point of $0.7 \mu\text{S/cm}$, increased sampling and investigative analysis will be performed to identify the source and control/minimize its effects. If reactor water conductivity is $\geq 1.0 \mu\text{S/cm}$, operations will continue as outlined in Enrico Fermi 2 Technical Specification Section 3.4.4.

Startup/Hot Standby

If reactor water conductivity exceeds a control point of $1.3 \mu\text{S/cm}$ and trending upward during startup/hot standby, increased sampling and investigative analysis will be performed to identify the source and control/minimize its effects. If reactor water conductivity is $\geq 2.0 \mu\text{S/cm}$ during startup/hot standby, operations will continue as outlined in Enrico Fermi 2 Technical Specification Section 3.4.4.

Copper

The control point for Copper (Cu) in reactor water is 40 ppb. If previous samples indicate an upward trend, increased sampling and investigative analysis will be performed to identify the source and control/minimize copper input. The number of excursions beyond the 40 ppb control point will be identified in the annual report.

REACTOR WATER SAMPLING & ANALYSIS¹

<u>ANALYSIS</u>	<u>NORMAL LIMITS/CONTROL POINTS</u>	<u>SAMPLING FREQUENCY</u>	<u>INTERVAL ALLOWED ABOVE NORMAL LIMIT</u>
*Conductivity	Power Operation - $\leq 1.0 \mu\text{S/cm}$ Startup/Hot Standby - $\leq 2.0 \mu\text{S/cm}$ Cold Shutdown - $\leq 10.0 \mu\text{S/cm}$	Continuously/Mo.	336 Days/Year
*Chloride	Power Operation - $\leq 200 \text{ ppb}$ Startup/Hot Standby - $\leq 100 \text{ ppb}$ Cold Shutdown - $\leq 500 \text{ ppb}$	Daily	336 Days/Year
*pH	Power Operation - 5.6-8.6 Depressurized - 5.3-8.6	Every 8 hours when conductivity is $\geq 1.0 \mu\text{S/cm}$	72 Hours Continuous
Suspended Solids	$\leq 500 \text{ ppb}$	Daily	
Silica	$\leq 1000 \text{ ppb}$	Daily	
Boron	$\leq 1000 \text{ ppb}$	Weekly	
Fe		Monthly	
Ni		Monthly	
CR		Monthly	
Cu	40 ppb**	Weekly/Monthly	
DO ₂	$\leq 200 \text{ ppb}$	As required	

1- Chemical analyses exclusively

*Critical parameters

**Control point