

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

December 2, 2002

United States Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555-0001

Serial No.: 02-706
LR/DWL R0
Docket Nos.: 50-280/281
50-338/339
License Nos.: DPR-32/37
NPF-4/7

Gentlemen:

VIRGINIA ELECTRIC AND POWER COMPANY (DOMINION)
SURRY POWER STATION UNITS 1 AND 2
NORTH ANNA POWER STATION UNITS 1 AND 2
SUPPLEMENTAL INFORMATION TO SUPPORT LICENSE RENEWAL

Dominion provided a response to RAI 3.5-2 by letter dated November 30, 2001 (Serial No. 01-647) in which the aging management program commitment was made to perform annual groundwater testing as part of the Civil Engineering Structural Inspections. As a follow-up item to the July 9, 2002 ACRS Subcommittee meeting regarding the Surry and North Anna License Renewal Applications, Dominion has agreed to enhance the groundwater sampling program to address potential seasonal variations in groundwater chemistry. Accordingly, Dominion will revise the previously submitted UFSAR Supplement Section 18.1.6, Civil Engineering Structural Inspections, for both Surry and North Anna as follows: (Revision in italics)

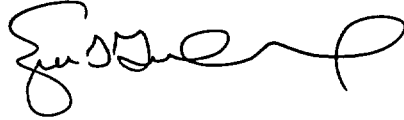
“The scope of Civil Engineering Structural Inspections will be expanded to include inspections required for license renewal, including annual monitoring of groundwater chemistry *with consideration given to seasonal chemistry variations.*”

Additionally, in order to supplement the upcoming full ACRS meeting on December 5, 2002, Dominion has been requested to provide information in the form of presentation material regarding the Secondary Piping and Component Inspection aging management program. This information is provided in an attachment to this letter.

A086

Should you have any questions regarding this submittal, please contact Mr. J. E. Wroniewicz at (804) 273-2186.

Very truly yours,

A handwritten signature in black ink, appearing to read "Eugene S. Grecheck". The signature is fluid and cursive, with a large initial "E" and a long, sweeping tail.

Eugene S. Grecheck
Vice President – Nuclear Support Services

Attachment

Commitments made in this letter: The scope of Civil Engineering Structural Inspections will be expanded to include inspections required for license renewal, including annual monitoring of groundwater chemistry with consideration given to seasonal chemistry variations.

cc:

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SN: 02-706
Docket Nos.: 50-280/281
50-338/339
Subject: License Renewal RAI

COMMONWEALTH OF VIRGINIA)
)
COUNTY OF HENRICO)

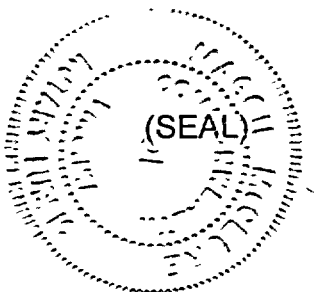
The foregoing document was acknowledged before me, in and for the County and Commonwealth aforesaid, today by Eugene S. Grecheck, who is Vice President - Nuclear Support Services, of Virginia Electric and Power Company. He has affirmed before me that he is duly authorized to execute and file the foregoing document in behalf of that Company, and that the statements in the document are true to the best of his knowledge and belief.

Acknowledged before me this 2nd day of December, 2002.

My Commission Expires: March 31, 2004.

Maggie McClure

Notary Public



Docket Nos. 50-280/281
50-38/339
Serial No.: 02-706
Attachment
(12 Pages)

Attachment

License Renewal Application – Supplemental Information

**Secondary Piping and Component Inspection
Aging Management Activity**

Presentation Material

**Surry Power Station Units 1 and 2
North Anna Power Station Units 1 and 2**

**Virginia Electric and Power Company
(Dominion)**

Secondary Piping and Component Inspection AMA

Secondary Piping and Component Inspection AMA is credited as an aging management program for managing the loss of material in carbon steel components due to flow accelerated corrosion (FAC).

The AMA monitors wall thickness in selected components and, based on the inspection results, components are repaired or replaced with more FAC-resistant materials in accordance with industry guidance.

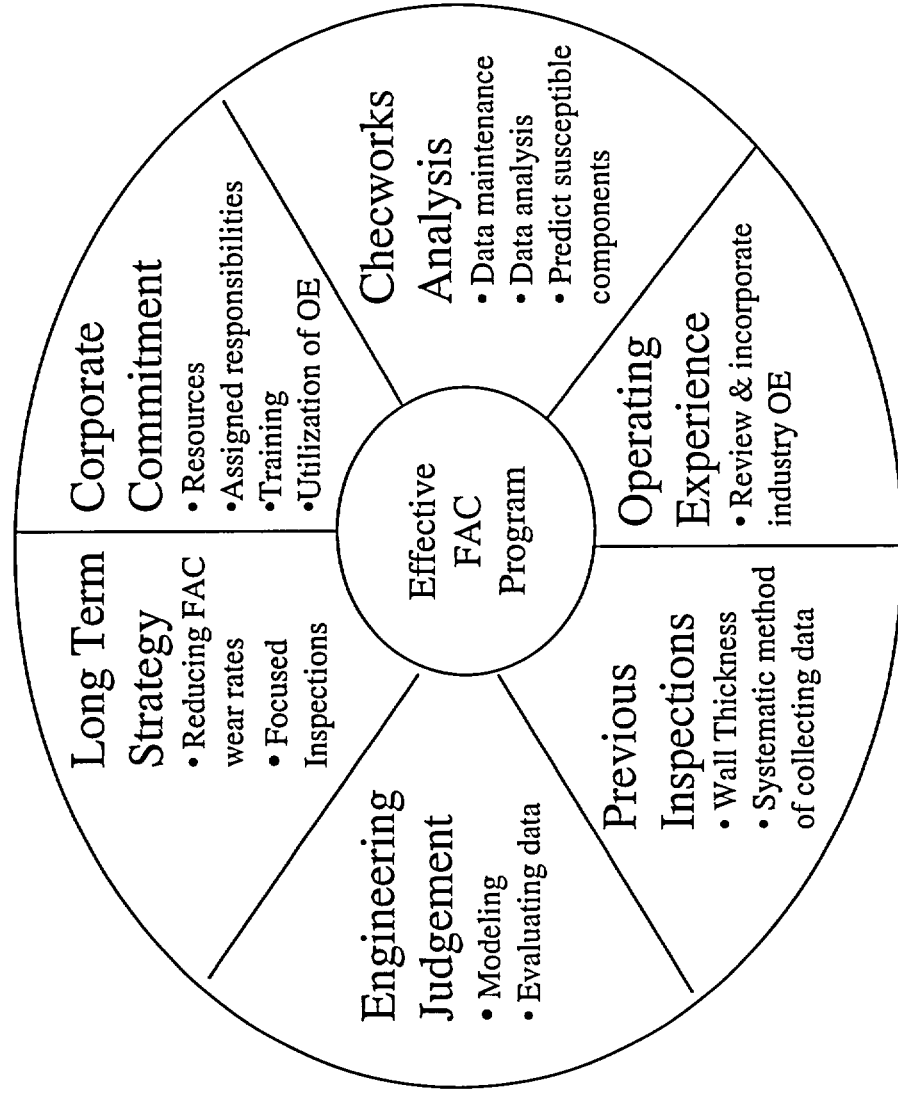
Secondary Piping and Component Inspection

Remaining wall thickness, compared to the critical thickness, is used in conjunction with the wear rate to determine remaining service life.

Ongoing program ensures piping replacement prior to reaching minimum allowable wall thickness.

Since trend data are not meaningful for small-bore piping, scheduled piping replacements occur.

Secondary Piping and Component Inspection



Secondary Piping and Component Inspections

System	Component	Chec-works [®]	Visual Inspection	NDE
Feedwater	Pipe	✓		✓
	Valve bodies	✓ (when modeled)	internal	
Main Steam	Pipe	✓		✓
	Valve bodies	✓ (when modeled)	internal	
Auxiliary Steam	Valve bodies		internal	

Secondary Piping and Component Inspections

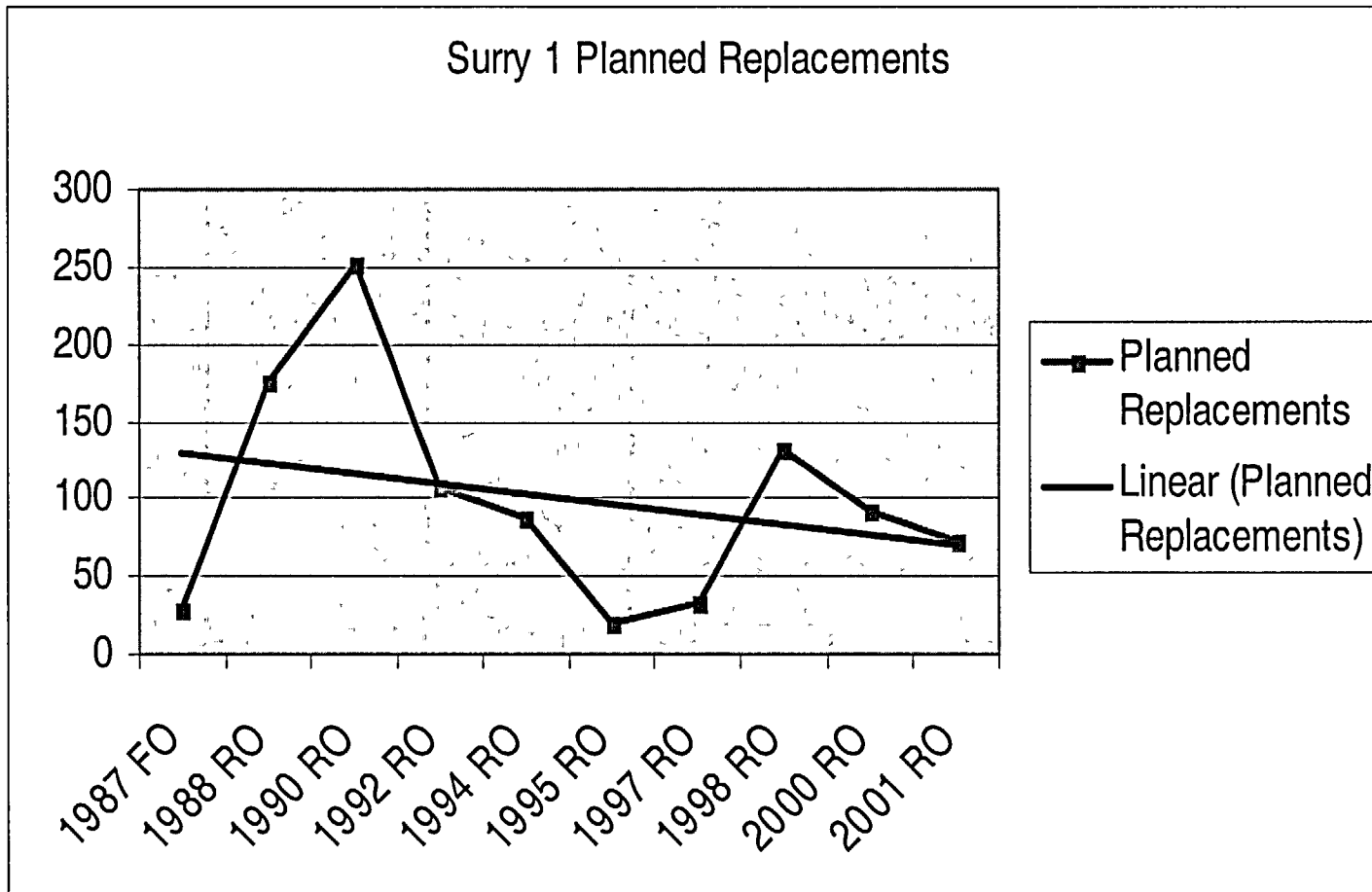
System	Component	Chec-works [®]	Visual Inspection	NDE
	Pipe	✓		✓
Blowdown	Valve bodies	✓ (when modeled)	internal	
Steam drains	Pipe	✓		✓

Secondary Piping and Component Inspection Results

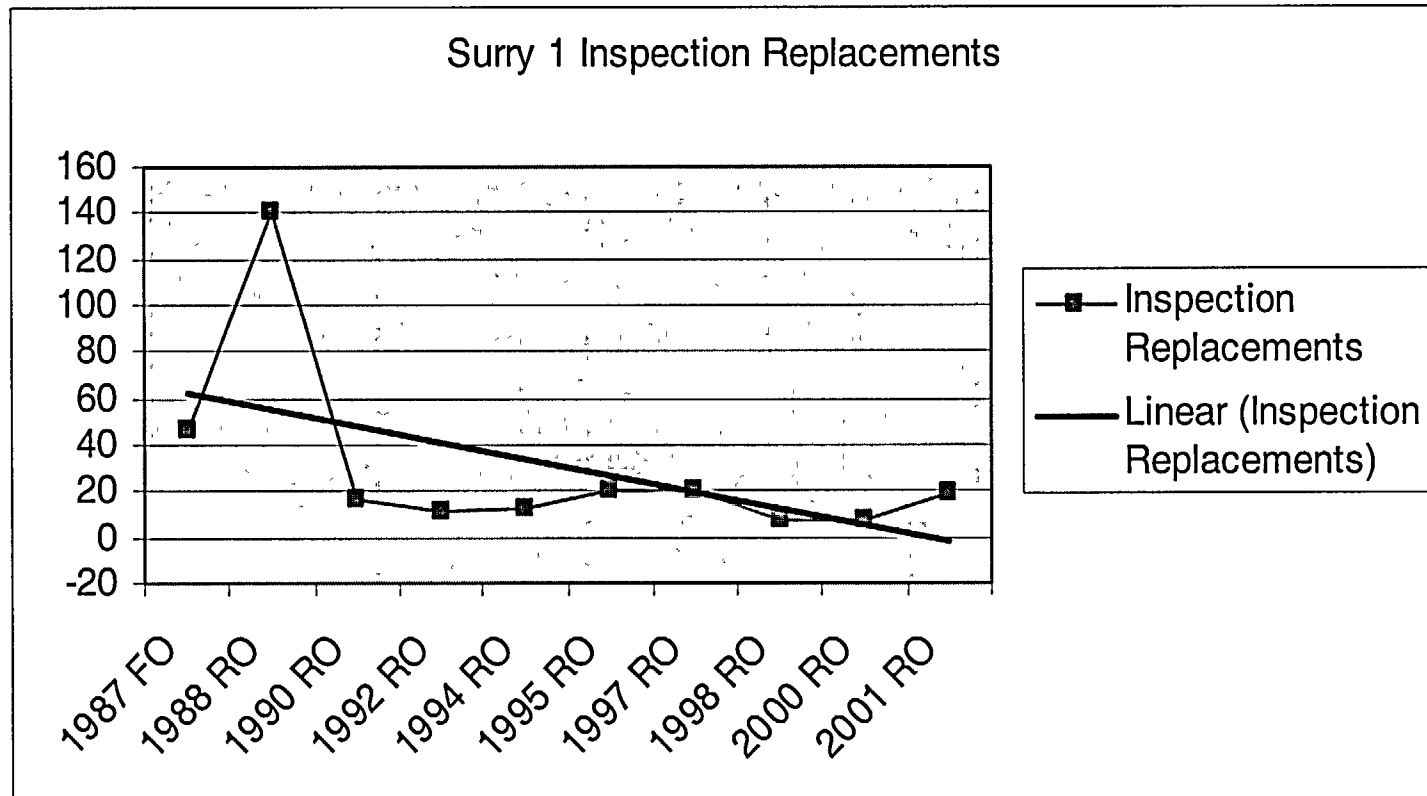
Feedwater Piping (projected to 2004 refueling outage)

Type	Size (in.)	Flowrate (Mbm/hr)	Velocity (ft/sec)	Oper. Temp (°F)	Nom Thickness (in.)	Avg Wear Rate (mils/year)	Critical Thickness (in.)	Predicted Time to T _{crit} (hrs.)	Actual Service Time (hrs.)
Straight pipe	6.625	0.7488	20.280	320.0	0.432	4.16	0.236	376675	88460
90-degree elbow	16.00	4.1542	19.910	440.85	0.844	8.245	0.570	182818	176920
45-degree elbow	16.00	4.1542	19.910	440.85	0.844	7.799	0.570	209449	176920
90-degree elbow	12.75	1.5000	11.549	390.00	0.844	12.721	0.674	103323	88460

Secondary Piping and Component Inspection

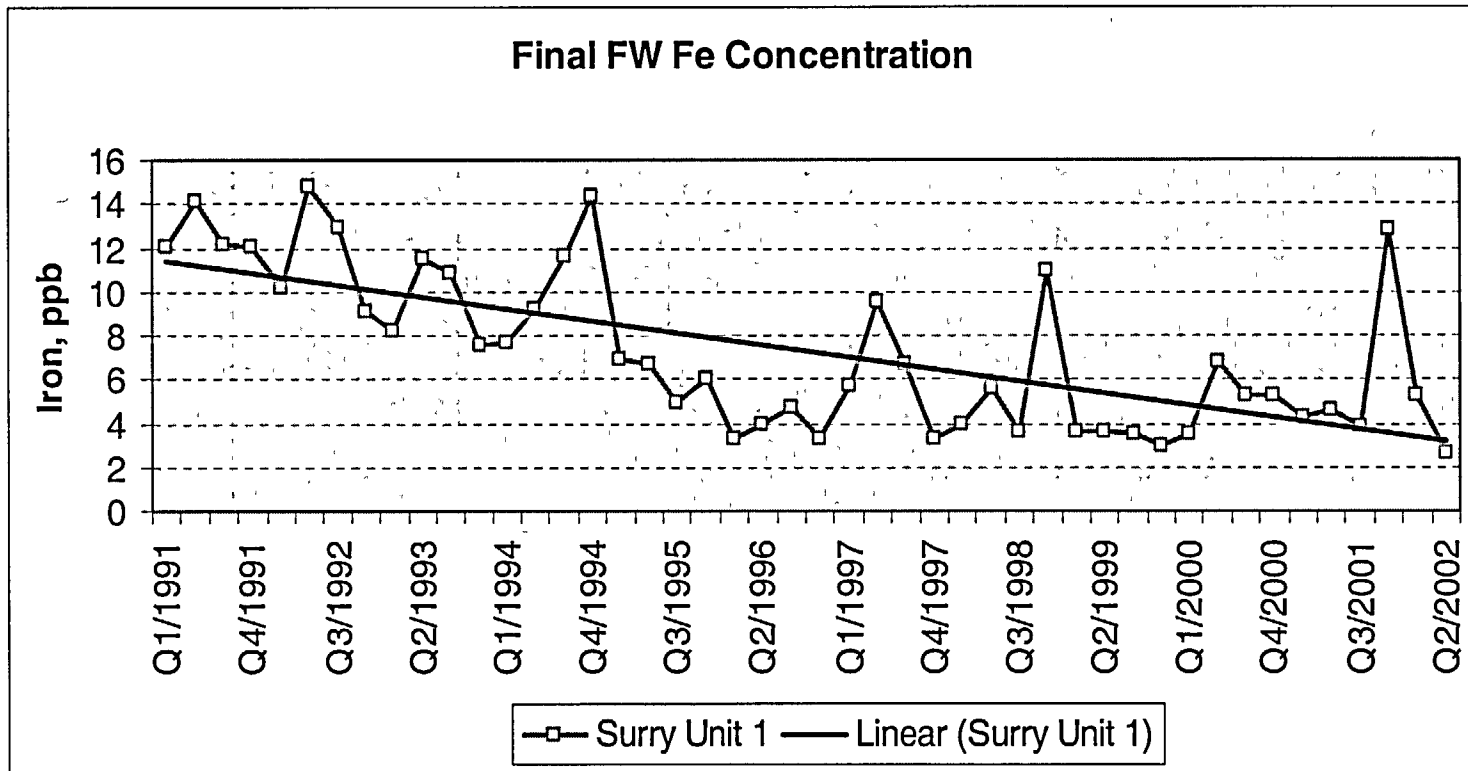


Secondary Piping and Component Inspection



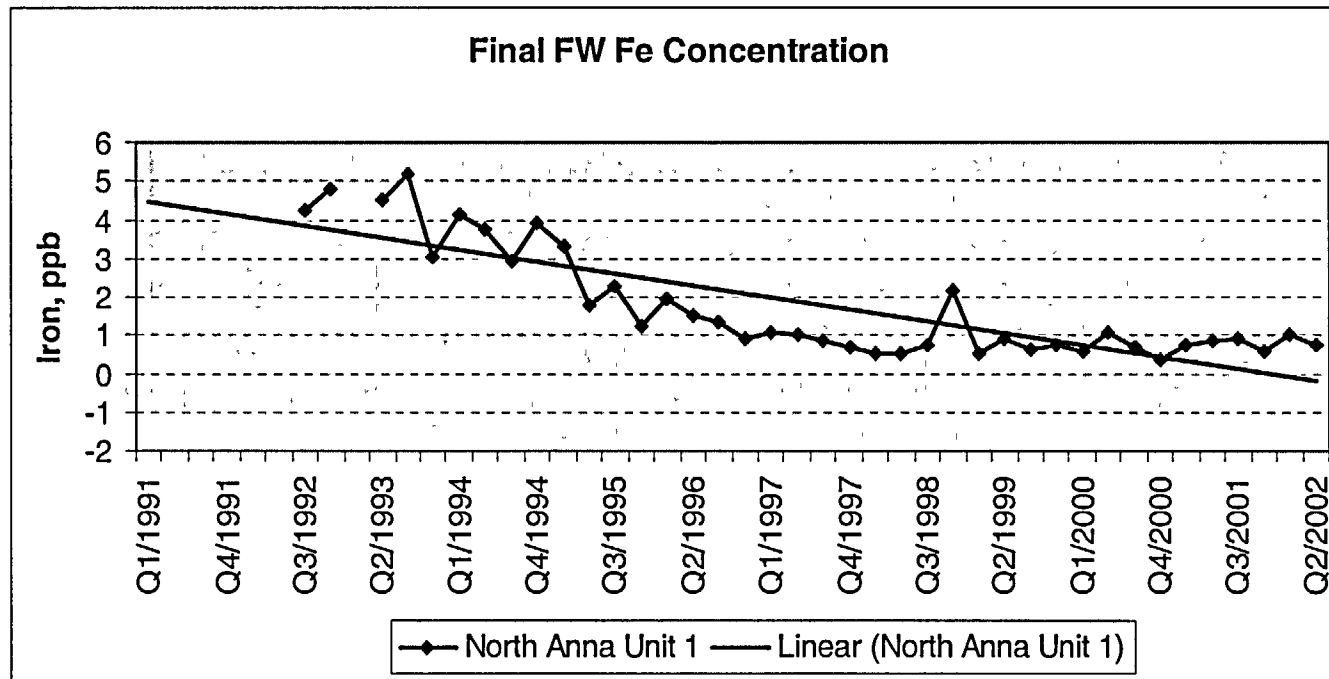
Secondary Piping and Component Inspection

The decrease in iron concentration is consistent with a decrease in the FAC rate over time.



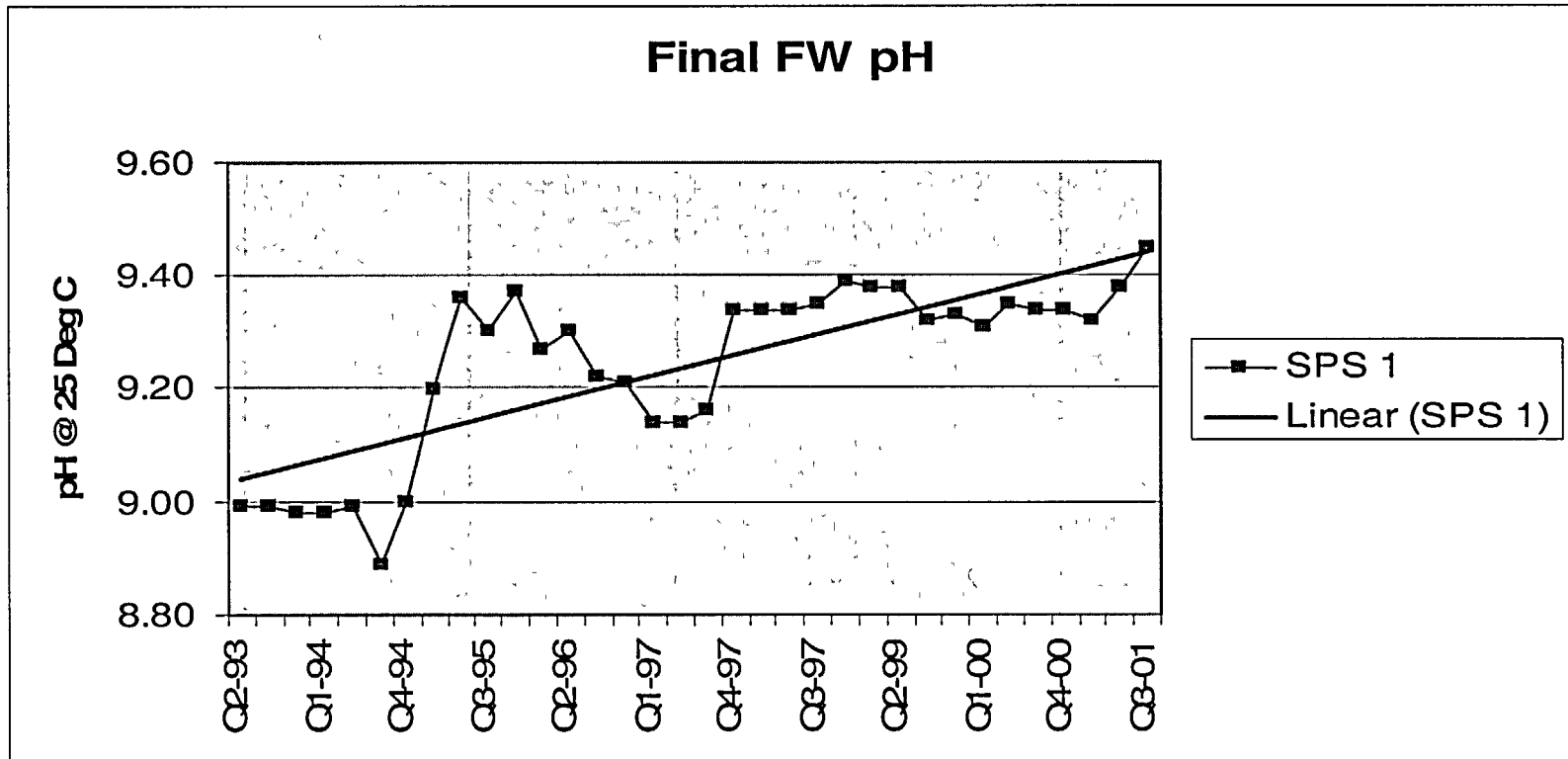
Secondary Piping and Component Inspection

The decrease in iron concentration is consistent with a decrease in the FAC rate over time.



Secondary Piping and Component Inspection

Based on Dominion's chemistry, increasing the pH decreases FAC



Secondary Piping and Component Inspection

Based on Dominion's chemistry, increasing the pH decreases FAC

