DUKE ENERGY®

Kelvin Henderson
Vice President
Catawba Nuclear Station

Duke Energy
CNO1VP | 4800 Concord Road
York, SC 29745

o: 803.701.4251
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CNS-14-105

September 25, 2014

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

Subject: Duke Energy Carolinas, LLC (Duke Energy)
Catawba Nuclear Station, Unit 1
Docket Number 50-413
Inservice Inspection Report and Steam Generator
Inservice Inspection Summary Report for End of Cycle 21
Refueling Outage

In accordance with Section XI of the ASME Code, please find attached the subject 90-day reports which provide the results of the inservice inspection and the steam generator inspection associated with the subject outage. Note that the steam generator inservice inspection summary report includes all of the information required to be submitted in the 180-day report required by Catawba Technical Specification 5.6.8, "Steam Generator (SG) Tube Inspection Report". Therefore, no additional report is required to be submitted for this outage.

There are no regulatory commitments contained in this letter or its attachments.

If you have any questions concerning this material, please call L.J. Rudy at (803) 701-3084.

Very truly yours,

Kelvin Henderson
Vice President, Catawba Nuclear Station

LJR/s

Attachments

A047
NRR

xc (with attachments):

V.M. McCree
Regional Administrator
U.S. Nuclear Regulatory Commission - Region II
Marquis One Tower
245 Peachtree Center Ave., NE Suite 1200
Atlanta, GA 30303-1257

G.A. Hutto, III, Senior Resident Inspector
U.S. Nuclear Regulatory Commission
Catawba Nuclear Station

G.E. Miller (addressee only)
NRC Project Manager (Catawba)
U.S. Nuclear Regulatory Commission
One White Flint North, Mail Stop 8-G9A
11555 Rockville Pike
Rockville, MD 20852-2738

Attachment 1

Catawba Unit 1 End of Cycle 21 Inservice Inspection Report

CASE
N-532-4

FORM OAR-1 OWNER'S ACTIVITY REPORT

Report Number: Owner's Activity Report for Refueling Outage 1EOC21

Plant: Catawba Nuclear Station, 4800 Concord Road, York, SC 29745

Unit No. 1 (if applicable) Commercial service date 6/29/1985 Refueling outage no. 1EOC21

Current inspection interval: 3rd for Class 1, 2, & 3 Components & Supports and 2nd for Class MC Containment (1st, 2nd, 3rd, 4th, other)

Current inspection period: 3rd for Class 1, 2, & 3 Components & Supports and Class MC Containment (1st, 2nd, 3rd)

Edition and Addenda of Section XI applicable to the inspection plans: 1998 Edition through the 2000 Addenda

Date and revision of inspection plans: See Attachment

Edition and Addenda of Section XI applicable to repair/replacement activities, if different than the inspection plans: Same

Code Cases used: The following Code Cases are permitted by the ISI Plans: N-460, N-504-3, N-513-2, N-532-4, N-533-1, N-566-2, N-586-1, N-613-1, N-616, N-624, N-639, N-643-2, N-647, N-663, N-665, N-683, N-685, N-686, N-686-1, N-694-1, N-695, N-696, N-697, N-700, N-706, N-722-1, N-729-1, N-731, N-770-1 (if applicable)

CERTIFICATE OF CONFORMANCE

I certify that (a) the statements made in this report are correct; (b) the examinations and tests meet the Inspection Plan as required by the ASME Code, Section XI; and (c) the repair/replacement activities and evaluations supporting the completion of 1EOC21 (refueling outage number) conform to the requirements of Section XI.

Signed [signature] MARK A. RYNE Date 9/10/2014

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of South Carolina and employed by HSB Global Standards of CT have inspected the items described in this Owner's Activity Report, and state that, to the best of my knowledge and belief, the Owner has performed all activities represented by this report in accordance with the requirements of Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the repair/replacement activities and evaluation described in this report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

[signature] Commissions NB 12410 TNA SC 233

Inspector's Signature — National Board, State, Province, and Endorsements

Date 9-11-14

Attachment

Catawba Unit 1 End of Cycle 21 Inservice Inspection Report

Date and Revision of Inspection Plans:

1. The following documents comprise the Catawba Nuclear Station 3rd Interval Inservice Inspection Plan for Unit 1 (Class 1, 2, and 3 Components):

    a. Third Interval Inservice Inspection Plan Catawba Nuclear Station Units 1 and 2 General Requirements, Document #CISI-1462.10-0030-GEN REQ, Rev 1, dated 06/26/2008, including the following addenda:

        i. CISI-1462.10-0030-3CNS-021 through CISI-1462.10-0030-3CNS-036

    b. Catawba Nuclear Station Unit 1-Third Inspection Interval Inservice Inspection NDE Plan, Document #CISI-1462.10-0030-UNIT 1, Rev 1, dated 06/25/2008, including the following addenda:

        i. CISI-1462.10-0030-3CNS1-028 through CISI-1462.10-0030-3CNS1-083

2. The following documents comprise the Catawba Nuclear Station 3rd Interval Inservice Inspection Pressure Test Plan for Unit 1:

    a. Third Inspection Interval Inservice Inspection Pressure Test Plan for Catawba Unit 1, Document #CISI-1462.20-0020-U1PTPLAN, Rev 1, dated 07/23/2008, including the following addenda:

        i. CISI-1462.20-0020-C1-PT-031 through CISI-1462.20-0020-C1-PT-052

3. The following documents comprise the Catawba Nuclear Station 2nd Interval Containment Inservice Inspection Plan for Unit 1 (Class MC):

        i. Catawba Nuclear Station Units 1 and 2 - Second Interval Containment Inservice Inspection Plan, Document #CN-ISIC2-1042-0001, Rev 4, dated 06/04/2014

Catawba Nuclear Unit 1
Form OAR-1 Owner's Activity Report

Table 1
Items with Flaws or Relevant Conditions that Required Evaluation for Continued Service

Examination Category and Item Number	Item Description	Evaluation Description
B-P / B15.70	Boric acid residue found on valve 1NV37A, NC Pump 1D Seal Housing, and Incore Instrumentation (Zone Number 1NC-001L-A)	Areas identified in PIPs C-12-11351, C-14-04813, C-14-06204, C-14-06758, C-14-06759, and C-14-06760 were evaluated by Engineering and found to be acceptable.
C-H / C7.10	Boric acid residue found on valve 1ND-19 (Zone Number 1ND-001L-B)	Area identified in PIP C-12-10746 was evaluated by Engineering and found to be acceptable.
C-H / C7.10	Boric acid residue found on 1A NI Pump (Zone Number 1NI-003L-B)	Areas identified in PIPs C-13-06761, C-13-06762, and C-13-06763 were evaluated by Engineering and found to be acceptable.
C-H / C7.10	Boric acid residue found valve 1NI 143 (Zone Number 1NI-005L-B)	Area identified in PIP C-13-02236 was evaluated by Engineering and found to be acceptable.
C-H / C7.10	Boric acid residue found on 1A NS Pump and bolted connection #1NSFE5020 (Zone Number 1NS-001L-B)	Areas identified in PIPs C-13-05121, C-13-05123, and C-13-05127, and C-13-5129 were evaluated by Engineering and found to be acceptable.
C-H / C7.10	Boric acid residue found on 1B NS Pump seal area and bolted connection (Zone Number 1NS-002L-B)	Areas identified in PIPs C-13-02422 and C-13-02423 were evaluated by Engineering and found to be acceptable.
C-H / C7.10	Boric acid residue found on valve 1NV15B (Zone Number 1NV-001L-B)	Area identified in PIP C-13-00435 was evaluated by Engineering and found to be acceptable.
C-H / C7.10	Boric acid residue found on 1NV-265 threaded connection, 1A NV Pump seal area, suction connection, and discharge connection (Zone Number 1NV-002L-B)	Areas identified in PIPs C-13-06060, C-13-06061, C-13-06062, C-13-06063, and C-13-06064 were evaluated by Engineering and found to be acceptable.
C-H / C7.10	Boric acid residue found on 1B NV Pump seal area, suction connection, and discharge connection (Zone Number 1NV-003L-B)	Areas identified in PIPs C-13-04892, C-13-04893, C-13-04900, and C-13-04903 were evaluated by Engineering and found to be acceptable.
D-B / D2.10	Boric acid residue found on components within Zone 1KF-001L-C (1A KF Pump, Valves 1KF4, 1KF5, 1KF6, 1KF7, and blind flange connection.	Areas identified in PIPs C-14-04282, C-14-04287, C-14-04290, C-14-04294, C-14-04295, C-14-04297, C-14-04300, and C-14-04302 were evaluated by Engineering and found to be acceptable.
D-B / D2.10	Boric acid residue found on components within Zone 1KF-002L-C (1B KF Pump, Valves 1KF19, 1KF20, 1KF21, and 1KF22.	Areas identified in PIPs C-14-04279, C-14-04280, C-14-04281, C-14-04283, C-14-04284, and C-14-04285 were evaluated by Engineering and found to be acceptable.
F-A / F1.10	C1.F1.12.0015 / 1-R-NC-1535	Cold Load settings on drawing unclear. Evaluation found to be acceptable. Reference PIP C-14-04740
F-A / F1.20	C1.F1.20.0017 / 1-R-FW-0002	VT-3 examination observed rust and corrosion. Structural integrity not affected. Evaluation found to be acceptable. Reference PIP C-14-04997
F-A / F1.20	C1.F1.20.0049 / 1-R-NI-2275	VT-3 examination revealed loose locknut on strut. WR# 1110350 written to tighten. Evaluation found to be acceptable. Reference PIP C-14-04736
F-A / F1.20	C1.F1.20.0078 / 1-R-NS-0039	VT-3 examination revealed small gap between baseplate and wall. Problem was previously identified in 2005 and found to be acceptable (see PIP C-05-01594). Evaluation remains acceptable - reference PIP C-14-04743

Catawba Nuclear Unit 1
Form OAR-1 Owner's Activity Report

Table 1 (Continued)
Items with Flaws or Relevant Conditions that Required Evaluation for Continued Service

Examination Category and Item Number	Item Description	Evaluation Description
F-A / F1.20	C1.F1.20.0127 / 1-R-SV-1522	VT-3 examination revealed loose locknut on pipe clamp WR# 1110019 written to tighten. Evaluation found to be acceptable.- reference PIP C-14-04564
F-A / F1.20	C1.F1.20.0128 / 1-R-SV-1524	VT-3 examination revealed loose locknut on pipe clamp WR# 1110019 written to tighten. Evaluation found to be acceptable..- reference PIP C-14-04573
F-A / F1.20	C1.F1.21.0001 / 1-R-CA-1654	VT-3 examination revealed loose locknut on pipe clamp WR# 1110354 written to tighten. Evaluation found to be acceptable..- reference PIP C-14-04658
F-A / F1.20	C1.F1.21.0026 / 1-R-NI-2271	VT-3 examination revealed broken snap ring. WR# 1110327 written to replace snap ring. Evaluation found to be acceptable - reference PIP C-14-04734
F-A / F1.20	C1.F1.22.0027 / 1-R-NI-2264	VT-3 examination revealed damaged and missing snap rings. WR# 1110221 written to replace snap rings. Evaluation found to be acceptable.- reference PIP C-14-04738
F-A / F1.30	C1.F1.30.0074 / 1-R-RN-0810	VT-3 examination revealed strut and pipe clamp has a 6 degree misalignment. Evaluation determined this is within manufacturer's tolerance and these conditions do not affect function. WR 01110906 written to correct alignment - reference PIP C-14-05064
F-A / F1.30	C1.F1.30.0087 / 1-R-SA-0015	VT-3 examination revealed loose locknut on pipe clamp. WR# 1110351 written to tighten. Evaluation found to be acceptable.- reference PIP C-14-04822
F-A / F1.30	C1.F1.30.0368 / 1-R-KC-0877	VT-3 examination revealed loose concrete anchors. WO# 02154142-02 written to tighten anchors. Evaluation found to be acceptable.- reference PIP C-14-05392
F-A / F1.30	C1.F1.31.0130 / 1-R-KC-0858	VT-3 examination revealed loose locknut on pipe clamp. WR# 1111370 written to tighten. Evaluation found to be acceptable.- reference PIP C-14-05396
F-A / F1.30	C1.F1.31.0010 / 1-R-KC-0873	VT-3 examination revealed loose base plate anchors. WO# 02156818 written to tighten anchors. Evaluation found to be acceptable.- reference PIPs C-14-04823 & C-14-05790

Catawba Nuclear Unit 1
Form OAR-1 Owner's Activity Report

Table 2
Abstract of Repair/Replacement Activities Required For Continued Service

Code Class	Item Description	Description of Work	Date Completed	Repair / Replacement Plan Number
3	Category F-A, Summary Number C1.F1.30.0052, Support 1-R-KC-0875	Pipe support repaired due to water hammer damage. Reference PIP C-14-04823	06/02/2014	Work Order # 02152603-06
3	Category F-A, Summary Number C1.F1.31.0011, Support 1-R-KC-0874	Pipe support repaired due to water hammer damage. Reference PIPs C-14-04823 & C-14-05392	06/04/2014	Work Order # 02152603-01
3	Category F-A, Summary Number C1.F1.31.0096, Support 1-R-KC-0876	Pipe support repaired due to water hammer damage. Reference PIPs C-14-04823 & C-14-05392	05/29/2014	Work Order # 02154142-01
3	Nuclear Service Water System Piping	Replaced piping due to thru wall leak.	01/20/2014	Work Order# 02098791-09

Attachment 2

Catawba Unit 1 End of Cycle 21 Steam Generator Inservice Inspection Summary Report

Steam Generator Outage Summary Report

Catawba Unit 1 2014
Outage EOC 21

Location: 4800 Concord Road, York, South Carolina 29745

NRC Docket No. 50-413

National Board No. 130

Commercial Service Date: June 29, 1985

Owner: Duke Energy Corporation
526 South Church St.
Charlotte, N.C. 28201-1006

Revision 0

Prepared By: C D Cauthen Jr. Date: 9-8-2014
CHARLES CAUTHEN

Reviewed By: D B Mayos Date: 9/8/2014
DAN MAYOS

Approved By: James H Batton Date: 9/9/2014
James H. Batton

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2	Hartford Steam Boiler Inspection and Insurance Co. (AIA)
Electronic	Steam Generator Desktop

FORM NIS-1 OWNER'S DATA REPORT FOR INSERVICE INSPECTIONS

As required by the Provisions of the ASME Code Rules

1. Owner: Duke Energy Corporation, 526 S. Church St.. Charlotte, NC 28201-1006
(Name and Address of Owner)

2. Plant: Catawba Nuclear Station, 4800 Concord Road, York, SC 29745
(Name and Address of Plant)

3. Plant Unit: 1

4. Owner Certificate of Authorization (if required) N/A

5. Commercial Service Date: June 29, 1985

6. National Board Number for Unit 130

7. Components Inspected:

Component	Manufacturer	Manufacturer Serial No.	State or Province No.	National Board No.
Steam Generator 1A	BWI	770101	N/A	151
Steam Generator 1B	BWI	769304	N/A	150
Steam Generator 1C	BWI	769302	N/A	147
Steam Generator 1D	BWI	769303	N/A	149

Note: Supplemental sheets in form of lists, sketches, or drawings may be used provided (1) size is $8\frac{1}{2}$ in. x 11 in., (2) information in items 1 through 6 on this data report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

FORM NIS-1 (Back)

8. Examination Dates June 7, 2011 to June 27, 2014

9. Inspection Period Identification: Third

10. Inspection Interval Identification: Third

11. Applicable Edition of Section XI 1998 Addenda 2000

12. Date/Revision of Inspection Plan: June 27, 2005/Rev0; Per CNS Technical Specification

13. Abstract of Examinations and Test. Include a list of examinations and tests and a statement concerning status of work required for the Inspection Plan. Reference attached report.

14. Abstract of Results of Examination and Tests. Reference attached report.

15. Abstract of Corrective Measures. Reference attached report.

We certify that a) the statements made in this report are correct b) the examinations and tests meet the Inspection Plan as required by the ASME Code, Section XI, and c) corrective measures taken conform to the rules of the ASME Code, Section XI.

Certificate of Authorization No. (if applicable) NA Expiration Date NA

Date Sept. 9, 2014 Signed Duke Energy Corp. (Owner) By James H Batton
James H. Batton

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State of Province of South Carolina employed by *The Hartford Steam Boiler Inspection & Insurance Company of Connecticut have inspected the components described in this Owners' Report during the period ~~September 14, 2010~~ 9-10-2014 to September 10, 2014 and state that to the best of my knowledge and belief, the Owner has performed examinations and tests and taken corrective measures described in the Owners Report in accordance with the Inspection Plan and as required by the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations, test, and corrective measures described in this Ownersí Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection

Kenneth Dalton Commissions NB 12410 INAR SC 233
Inspector's Signature National Board, State, Province, and Endorsements

Date September 10 20 14

* The Hartford Steam Boiler Inspection & Insurance Company of Connecticut
200 Ashford Center North
Suite 205
Atlanta, GA. 30338

Catawba 1 EOC21 Steam Generator Tube Inspection Report

Pursuant to ASME Section XI and Catawba technical specification 5.6.8 the following information is provided:

a. **The scope of inspection performed on each SG**

The unit 1 steam generators had an accumulated service life of 14.6 EFPY at the end of cycle 20 and 16 EFPY by the end of cycle 21.

Baseline inspection scope shall include full length data acquisition and bobbin coil analysis for all four (4) steam generators as follows.

1) *All tubes with previous indications.*
2) *All tubes surrounding plugged tubes.*
3) *Periphery tubes two rows deep of the hot leg and cold leg (outer perimeter and open lane) with bobbin probe.*
4) *Array probe acquisition and analysis five tube pitches deep on periphery – hot leg, cold leg, and along open lane from top of tubesheet up to the first lattice grid.*
5) *50% random sample of remaining in-service tubes.*

Note: There were 3,742 tubes inspected with bobbin in the A SG, 3,739 in the B SG, 3,738 in the C SG, and 3,783 in the D SG.

Special interest inspection scope shall include data acquisition and array data analysis as follows:

1) *Locations where bobbin coil indications are observed that require further characterization.*
2) *New dent and new % through wall indications.*
3) *Bounding inspections around all PLP indications confirmed with array.*
4) *Ten pairs of periphery tubes in SG 1D, monitoring for evidence of tubes touching. No touching is evident.*

Plug inspection scope shall be as follows:

1) *Visual inspection of all plugs. There was no degradation observed.*
2) *Bowl cladding inspection (NSAL 12-1). There was no degradation observed.*

b. **Active degradation mechanisms found**

Active degradation found in all four (4) steam generators include wear at support structures and wear from loose objects.

c. Non-destructive examination techniques utilized for each degradation mechanism

Bobbin was used to detect wear at support structures. Bobbin and array were used to detect wear from loose objects.

d. Location, orientation (if linear), and measured sizes (if available) of serviced induced indications

The complete listing for service induced indications is attached.

e. Number of tubes plugged during the inspection outage for each active degradation mechanism

No tubes were found to require plugging.

f. The total number and percentage of tubes plugged to date

	SG A	SG B	SG C	SG D	Total
Prior to EOC21	8	0	24	17	49
EOC21	0	0	0	0	0
Total	8	0	24	17	49
% Plugged	0.12	0.00	0.36	0.26	0.18

Each SG contains 6,633 tubes

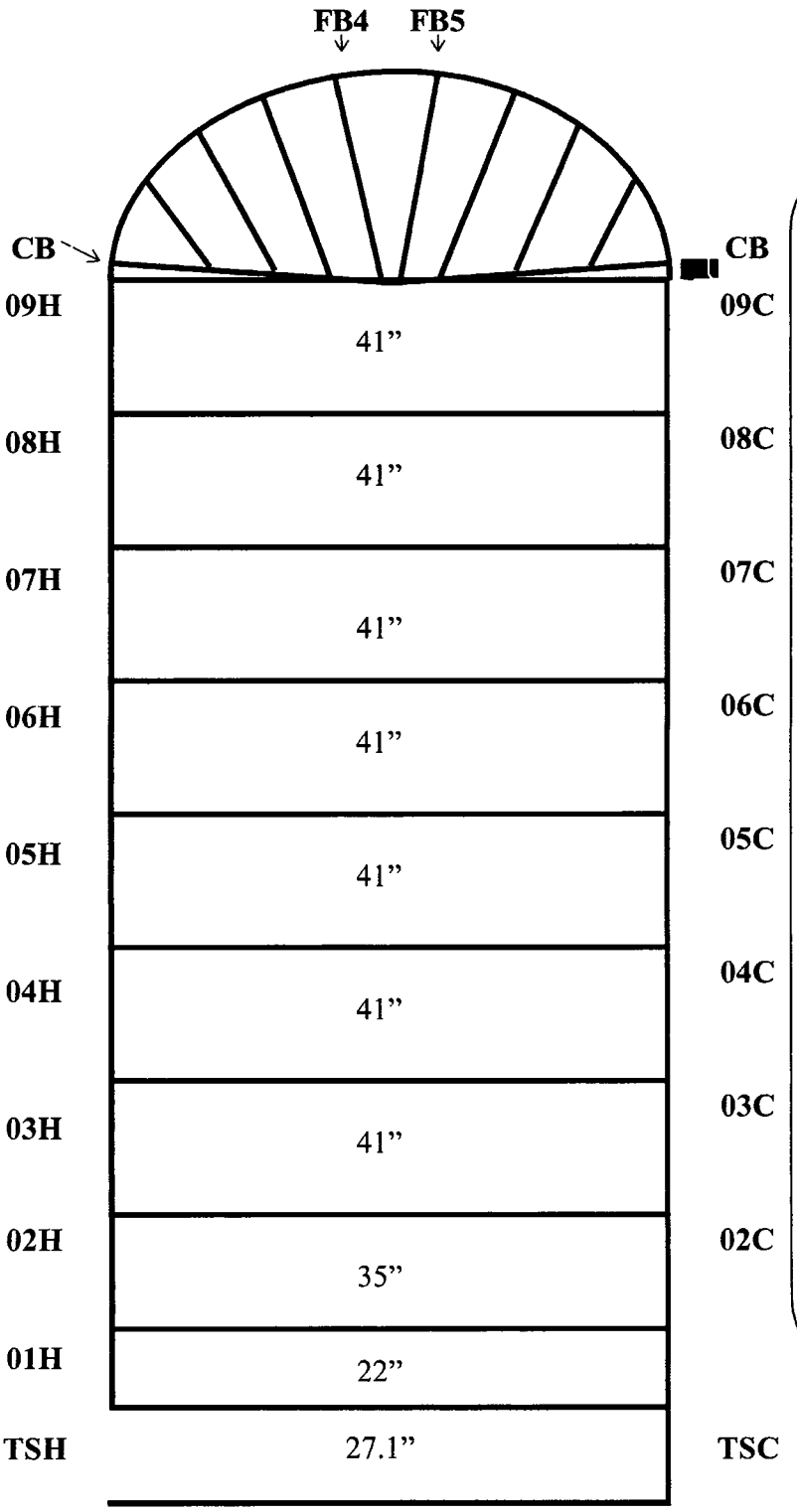
g. The results of the condition monitoring, including the results of tube pulls and in-situ pressure testing

Condition monitoring and operational assessment evaluations for the Catawba Unit 1 steam generators were performed based on the inspection results from 1EOC21. These evaluations were performed according to NEI 97-06 using procedures from the EPRI Steam Generator Integrity Assessment Guidelines and the EPRI Steam Generator Degradation Specific Management Flaw Handbook.

The observed tubing degradation at 1EOC21 consisted of wear at tube support locations and two instances of previously detected foreign object wear. The maximum observed NDE degradation depth for wear at support structures was 31% TW. The projected worst case support structure wear from the 1EOC19 CMOA was 48% TW. As predicted by the previous CMOA, there was no growth of foreign object wear locations from 1EOC19 to 1EOC21. Therefore, the 1EOC19 CMOA calculation was appropriate and conservative.

No tube plugging was performed at CNS 1EOC21. The present state of degradation of the Catawba Unit 1 steam generator tubing is very mild and does not challenge structural and leakage integrity requirements. Acceptable structural and accident leakage integrity is projected for the next 3.0 EFPY of operation.

Additional Information to assist with locations within the SG's.



CFR 80

Tube Information:

No. of Tubes	**6633**
Material:	**Inconel 690**
Nominal Dia.:	**0.688"**
Nominal Wall:	**0.040"**
Row 1 Radius:	**3.973"**
Straight Length:	**31.9'/32.7'**
Tube Pitch:	**.930"**

Tube Support Information

Type:	**Lattice**
Material	**410 Stainless**
Thickness:	
High:	**3.150"**
Med.:	**2.562"**
Low:	**1.000"**

Connector Bar

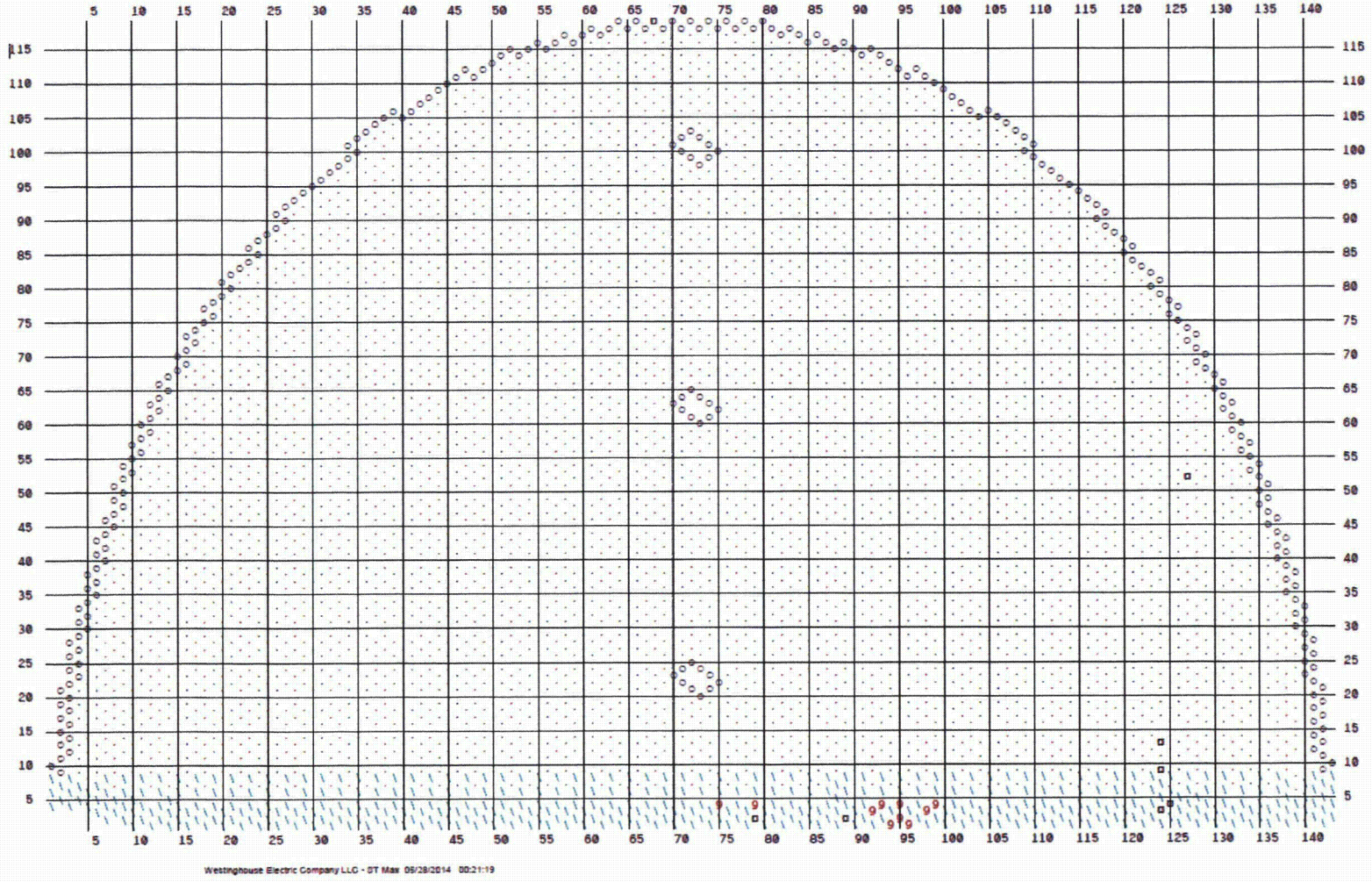
Material:	**410 Stainless**

NOTE: Dimensions are to the centerline of the tube support structures.

Fan Bars

Material:	**410 Stainless**
Thickness	**0.110"**
Width	**1.25"**

Typical Tube Sheet Layout:



These codes are used in the following list of service indications and are provided to assist in reviewing the data.

Code	Description
WAR	Wear
PCT	Percent Through Wall

Probe code	
ZBAZ1	Bobbin
ZYAXP	Array

Catawba 1 1EOC21 DCP 20140501 09/03/2014 10:56:59

INSPDATE	ROW	COL	VOLTS	DEG	IND	PER	CHN	LOCN	INCH1	INCH2	UTIL1	UTIL2	CRLEN	CRWID	CEG	BEGT	ENDT	PDIA	PTYPE	CAL	L	IDX
2014/05/01	56	57	.12	0	PCT	6	P2	FB4	.89		WAR					TEH	TEC	.560	ZBAZ1	61	C	101
2014/05/01	114	63	.25	0	PCT	11	P2	FB7	1.86		WAR					TEH	TEC	.560	ZBAZ1	61	C	105
2014/05/01	73	64	.21	0	PCT	10	P2	FB6	-.63		WAR					TEH	TEC	.560	ZBAZ1	61	C	102
2014/05/01	109	66	.28	0	PCT	13	P2	FB7	-1.98		WAR					TEH	TEC	.560	ZBAZ1	63	C	77
2014/05/01	55	70	.16	0	PCT	9	P2	FB4	-.63		WAR					TEH	TEC	.560	ZBAZ1	63	C	79
2014/05/01	61	70	.21	0	PCT	11	P2	FB4	.42		WAR					TEH	TEC	.560	ZBAZ1	63	C	78
2014/05/01	89	72	.44	0	PCT	17	P2	FB5	-.03		WAR					TEH	TEC	.560	ZBAZ1	61	C	125
2014/05/01	89	72	.44	0	PCT	17	P2	FB6	.00		WAR					TEH	TEC	.560	ZBAZ1	61	C	125
2014/05/01	80	75	.12	0	PCT	6	P2	FB4	-1.09		WAR					TEH	TEC	.560	ZBAZ1	61	C	109
2014/05/01	114	75	.18	0	PCT	8	P2	FB5	1.54		WAR					TEH	TEC	.560	ZBAZ1	61	C	124
2014/05/01	51	78	.22	0	PCT	11	P2	01H	-1.43		WAR					TEH	TEC	.560	ZBAZ1	63	C	80
2014/05/01	55	78	.25	0	PCT	10	P2	FB4	1.43		WAR					TEH	TEC	.560	ZBAZ1	61	C	106
2014/05/01	89	78	.23	0	PCT	10	P2	FB5	-.61		WAR					TEH	TEC	.560	ZBAZ1	61	C	112
2014/05/01	101	78	.38	0	PCT	14	P2	FB4	-1.31		WAR					TEH	TEC	.560	ZBAZ1	61	C	123
2014/05/01	103	78	.24	0	PCT	10	P2	FB5	-.54		WAR					TEH	TEC	.560	ZBAZ1	61	C	122
2014/05/01	92	79	.31	0	PCT	13	P2	FB4	-.64		WAR					TEH	TEC	.560	ZBAZ1	61	C	113
2014/05/01	81	80	.15	0	PCT	8	P2	FB7	-.72		WAR					TEH	TEC	.560	ZBAZ1	63	C	84
2014/05/01	89	80	.29	0	PCT	14	P2	FB5	-1.18		WAR					TEH	TEC	.560	ZBAZ1	63	C	89
2014/05/01	91	80	.32	0	PCT	13	P2	FB6	1.16		WAR					TEH	TEC	.560	ZBAZ1	61	C	111
2014/05/01	88	81	.18	0	PCT	10	P2	FB5	-1.78		WAR					TEH	TEC	.560	ZBAZ1	63	C	88
2014/05/01	90	81	.14	0	PCT	8	P2	FB5	-1.88		WAR					TEH	TEC	.560	ZBAZ1	63	C	90
2014/05/01	94	81	.30	0	PCT	11	P2	FB5	1.86		WAR					TEH	TEC	.560	ZBAZ1	61	C	114
2014/05/01	49	82	.23	0	PCT	10	P2	FB2	1.03		WAR					TEH	TEC	.560	ZBAZ1	61	C	107
2014/05/01	77	82	.26	0	PCT	13	P2	FB5	-.67		WAR					TEH	TEC	.560	ZBAZ1	63	C	83
2014/05/01	102	83	.49	0	PCT	17	P2	FB5	1.27		WAR					TEH	TEC	.560	ZBAZ1	61	C	115
2014/05/01	102	83	.34	0	PCT	13	P2	FB6	-1.31		WAR					TEH	TEC	.560	ZBAZ1	61	C	115
2014/05/01	91	84	.40	0	PCT	17	P2	FB4	-1.30		WAR					TEH	TEC	.560	ZBAZ1	63	C	87
2014/05/01	100	85	.34	0	PCT	15	P2	FB4	1.03		WAR					TEH	TEC	.560	ZBAZ1	63	C	92
2014/05/01	95	86	.25	0	PCT	12	P2	FB4	-1.19		WAR					TEH	TEC	.560	ZBAZ1	63	C	91
2014/05/01	95	88	.23	0	PCT	11	P2	FB4	-.70		WAR					TEH	TEC	.560	ZBAZ1	63	C	86
2014/05/01	108	93	.20	0	PCT	10	P2	FB5	1.49		WAR					TEH	TEC	.560	ZBAZ1	63	C	93
2014/05/01	98	109	.31	0	PCT	12	P2	FB5	1.61		WAR					TEH	TEC	.560	ZBAZ1	61	C	117
INSPDATE	ROW	COL	VOLTS	DEG	IND	PER	CHN	LOCN	INCH1	INCH2	UTIL1	UTIL2	CRLEN	CRWID	CEG	BEGT	ENDT	PDIA	PTYPE	CAL	L	IDX

Tubes: 30 Records: 32

INSPDATE	ROW	COL	VOLTS	DEG	IND	PER	CHN	LOCN	INCH1	INCH2	UTIL1	UTIL2	CRLEN	CRWID	CEG	BEGT	ENDT	PDIA	PTYPE	CAL	L	IDX
2014/05/01	89	60	.36	0	PCT	15	P2	FB5	-1.05		WAR					TEC	TEH	.560	ZBAZ1	14	H	123
2014/05/01	89	60	.27	0	PCT	12	P2	FB6	-1.10		WAR					TEC	TEH	.560	ZBAZ1	14	H	123
2014/05/01	99	62	.36	0	PCT	17	P2	FB5	.75		WAR					TEC	TEH	.560	ZBAZ1	16	H	82
2014/05/01	80	63	.29	0	PCT	13	P2	FB5	-1.34		WAR					TEC	TEH	.560	ZBAZ1	14	H	125
2014/05/01	100	63	.39	0	PCT	18	P2	FB6	-1.76		WAR					TEC	TEH	.560	ZBAZ1	16	H	81
2014/05/01	100	63	.33	0	PCT	16	P2	FB6	1.50		WAR					TEC	TEH	.560	ZBAZ1	16	H	81
2014/05/01	95	64	.29	0	PCT	13	P2	FB5	-.81		WAR					TEC	TEH	.560	ZBAZ1	14	H	126
2014/05/01	100	67	.23	0	PCT	11	P2	FB4	-.81		WAR					TEC	TEH	.560	ZBAZ1	14	H	133
2014/05/01	69	70	.38	0	PCT	18	P2	FB4	.98		WAR					TEC	TEH	.560	ZBAZ1	18	H	85
2014/05/01	91	70	.29	0	PCT	13	P2	FB4	.75		WAR					TEC	TEH	.560	ZBAZ1	14	H	136
2014/05/01	91	70	.36	0	PCT	15	P2	FB5	.67		WAR					TEC	TEH	.560	ZBAZ1	14	H	136
2014/05/01	91	70	.51	0	PCT	19	P2	FB6	1.04		WAR					TEC	TEH	.560	ZBAZ1	14	H	136
2014/05/01	97	70	.76	0	PCT	24	P2	FB5	-1.04		WAR					TEC	TEH	.560	ZBAZ1	14	H	135
2014/05/01	97	70	.26	0	PCT	12	P2	FB5	.67		WAR					TEC	TEH	.560	ZBAZ1	14	H	135
2014/05/01	97	70	.45	0	PCT	18	P2	FB6	-1.00		WAR					TEC	TEH	.560	ZBAZ1	14	H	135
2014/05/01	97	70	.26	0	PCT	12	P2	FB6	.94		WAR					TEC	TEH	.560	ZBAZ1	14	H	135
2014/05/01	97	70	.25	0	PCT	12	P2	FB8	1.20		WAR					TEC	TEH	.560	ZBAZ1	14	H	135
2014/05/01	103	70	.37	0	PCT	15	P2	FB4	-.51		WAR					TEC	TEH	.560	ZBAZ1	14	H	134
2014/05/01	117	70	.28	0	PCT	13	P2	FB5	-.65		WAR					TEC	TEH	.560	ZBAZ1	14	H	61
2014/05/01	117	70	.37	0	PCT	16	P2	FB5	.37		WAR					TEC	TEH	.560	ZBAZ1	14	H	61
2014/05/01	117	70	.27	0	PCT	15	P2	FB6	.18		WAR					TEC	TEH	.560	ZBAZ1	14	H	61
2014/05/01	66	73	.36	0	PCT	18	P2	FB5	.24		WAR					TEC	TEH	.560	ZBAZ1	18	H	86
2014/05/01	82	75	.33	0	PCT	16	P2	FB4	-1.16		WAR					TEC	TEH	.560	ZBAZ1	20	H	67
2014/05/01	96	75	.33	0	PCT	16	P2	FB6	-.33		WAR					TEC	TEH	.560	ZBAZ1	20	H	66
2014/05/01	95	76	.36	0	PCT	17	P2	FB6	-.26		WAR					TEC	TEH	.560	ZBAZ1	16	H	176
2014/05/01	65	80	.60	0	PCT	25	P2	FB4	1.15		WAR					TEC	TEH	.560	ZBAZ1	32	H	11
2014/05/01	74	83	.34	0	PCT	17	P2	FB4	1.26		WAR					TEC	TEH	.560	ZBAZ1	32	H	15
2014/05/01	82	83	.38	0	PCT	19	P2	FB4	1.22		WAR					TEC	TEH	.560	ZBAZ1	32	H	14
2014/05/01	86	83	.32	0	PCT	17	P2	FB4	1.11		WAR					TEC	TEH	.560	ZBAZ1	32	H	13
2014/05/01	86	83	.49	0	PCT	22	P2	FB5	1.24		WAR					TEC	TEH	.560	ZBAZ1	32	H	13
2014/05/01	98	83	.44	0	PCT	21	P2	FB5	1.04		WAR					TEC	TEH	.560	ZBAZ1	32	H	12
2014/05/01	46	89	.22	0	PCT	12	P2	FB5	1.49		WAR					TEC	TEH	.560	ZBAZ1	22	H	165
2014/05/01	84	97	.44	0	PCT	17	P2	FB3	1.15		WAR					TEC	TEH	.560	ZBAZ1	30	H	161
2014/05/01	93	100	.20	0	PCT	10	P2	07H	.50		WAR					TEC	TEH	.560	ZBAZ1	34	H	12
INSPDATE	ROW	COL	VOLTS	DEG	IND	PER	CHN	LOCN	INCH1	INCH2	UTIL1	UTIL2	CRLEN	CRWID	CEG	BEGT	ENDT	PDIA	PTYPE	CAL	L	IDX

INSPDATE	ROW	COL	VOLTS	DEG	IND	PER	CHN	LOCN	INCH1	INCH2	UTIL1	UTIL2	CRLEN	CRWID	CEG	BEGT	ENDT	PDIA	PTYPE	CAL	L	IDX
2014/05/01	32	31	.24	0	PCT	11	P2	02H	.38		WAR					TEC	TEH	.560	ZBAZ1	82	H	97
2014/05/01	63	44	.26	0	PCT	12	P2	FB4	-1.65		WAR					TEC	TEH	.560	ZBAZ1	38	H	44
2014/05/01	80	51	.33	0	PCT	14	P2	FB3	-1.54		WAR					TEC	TEH	.560	ZBAZ1	32	H	97
2014/05/01	79	52	.62	0	PCT	21	P2	FB3	-1.98		WAR					TEC	TEH	.560	ZBAZ1	30	H	112
2014/05/01	76	59	.43	0	PCT	17	P2	FB6	-1.87		WAR					TEC	TEH	.560	ZBAZ1	32	H	62
2014/05/01	80	59	.42	0	PCT	17	P2	FB5	1.59		WAR					TEC	TEH	.560	ZBAZ1	32	H	61
2014/05/01	75	60	.51	0	PCT	19	P2	FB4	-.92		WAR					TEC	TEH	.560	ZBAZ1	30	H	54
2014/05/01	75	60	.39	0	PCT	15	P2	FB6	-1.20		WAR					TEC	TEH	.560	ZBAZ1	30	H	54
2014/05/01	79	60	.34	0	PCT	14	P2	FB4	-1.15		WAR					TEC	TEH	.560	ZBAZ1	30	H	55
2014/05/01	81	60	.29	0	PCT	12	P2	FB6	-.82		WAR					TEC	TEH	.560	ZBAZ1	30	H	56
2014/05/01	68	61	.45	0	PCT	17	P2	FB5	1.74		WAR					TEC	TEH	.560	ZBAZ1	38	H	72
2014/05/01	72	61	.37	0	PCT	15	P2	FB5	1.77		WAR					TEC	TEH	.560	ZBAZ1	30	H	51
2014/05/01	76	61	.47	0	PCT	17	P2	FB5	1.32		WAR					TEC	TEH	.560	ZBAZ1	30	H	49
2014/05/01	80	61	.38	0	PCT	15	P2	FB4	.76		WAR					TEC	TEH	.560	ZBAZ1	30	H	47
2014/05/01	80	61	.45	0	PCT	17	P2	FB7	1.15		WAR					TEC	TEH	.560	ZBAZ1	30	H	47
2014/05/01	86	61	.41	0	PCT	16	P2	FB4	-.96		WAR					TEC	TEH	.560	ZBAZ1	30	H	44
2014/05/01	86	61	.61	0	PCT	21	P2	FB5	-.55		WAR					TEC	TEH	.560	ZBAZ1	30	H	44
2014/05/01	73	62	.29	0	PCT	13	P2	FB6	-.87		WAR					TEC	TEH	.560	ZBAZ1	32	H	51
2014/05/01	75	62	.55	0	PCT	21	P2	FB4	-1.28		WAR					TEC	TEH	.560	ZBAZ1	32	H	52
2014/05/01	79	62	.68	0	PCT	24	P2	FB4	-1.33		WAR					TEC	TEH	.560	ZBAZ1	32	H	53
2014/05/01	79	62	.39	0	PCT	16	P2	FB5	.63		WAR					TEC	TEH	.560	ZBAZ1	32	H	53
2014/05/01	85	62	.30	0	PCT	14	P2	FB4	-.68		WAR					TEC	TEH	.560	ZBAZ1	32	H	54
2014/05/01	85	62	.33	0	PCT	14	P2	FB5	-.67		WAR					TEC	TEH	.560	ZBAZ1	32	H	54
2014/05/01	91	62	.36	0	PCT	15	P2	FB4	.73		WAR					TEC	TEH	.560	ZBAZ1	32	H	55
2014/05/01	91	62	.44	0	PCT	18	P2	FB5	-.74		WAR					TEC	TEH	.560	ZBAZ1	32	H	55
2014/05/01	91	62	.49	0	PCT	19	P2	FB5	.65		WAR					TEC	TEH	.560	ZBAZ1	32	H	55
2014/05/01	109	62	.22	0	PCT	11	P2	FB4	-.90		WAR					TEC	TEH	.560	ZBAZ1	32	H	56
2014/05/01	94	63	.30	0	PCT	13	P2	FB6	-1.45		WAR					TEC	TEH	.560	ZBAZ1	32	H	37
2014/05/01	51	64	.37	0	PCT	15	P2	FB3	1.44		WAR					TEC	TEH	.560	ZBAZ1	38	H	127
2014/05/01	85	64	.38	0	PCT	16	P2	FB5	-.44		WAR					TEC	TEH	.560	ZBAZ1	32	H	7
2014/05/01	74	65	.37	0	PCT	15	P2	FB4	.69		WAR					TEC	TEH	.560	ZBAZ1	30	H	53
2014/05/01	74	65	.47	0	PCT	18	P2	FB5	1.47		WAR					TEC	TEH	.560	ZBAZ1	30	H	53
2014/05/01	74	65	.36	0	PCT	14	P2	FB6	-1.86		WAR					TEC	TEH	.560	ZBAZ1	30	H	53
2014/05/01	79	66	.24	0	PCT	11	P2	FB8	.90		WAR					TEC	TEH	.560	ZBAZ1	26	H	159
2014/05/01	97	66	.59	0	PCT	20	P2	FB5	.43		WAR					TEC	TEH	.560	ZBAZ1	30	H	13
2014/05/01	99	66	.49	0	PCT	18	P2	FB5	.96		WAR					TEC	TEH	.560	ZBAZ1	30	H	14
2014/05/01	99	66	.35	0	PCT	14	P2	FB6	.62		WAR					TEC	TEH	.560	ZBAZ1	30	H	14
2014/05/01	99	66	.28	0	PCT	12	P2	FB7	.58		WAR					TEC	TEH	.560	ZBAZ1	30	H	14
2014/05/01	98	67	.37	0	PCT	14	P2	FB4	1.04		WAR					TEC	TEH	.560	ZBAZ1	28	H	84
2014/05/01	98	67	.41	0	PCT	15	P2	FB5	.64		WAR					TEC	TEH	.560	ZBAZ1	28	H	84
2014/05/01	98	67	.37	0	PCT	14	P2	FB7	-1.77		WAR					TEC	TEH	.560	ZBAZ1	28	H	84
2014/05/01	98	67	.52	0	PCT	18	P2	FB7	1.57		WAR					TEC	TEH	.560	ZBAZ1	28	H	84
2014/05/01	108	67	.45	0	PCT	16	P2	FB7	1.35		WAR					TEC	TEH	.560	ZBAZ1	28	H	79
2014/05/01	77	68	.35	0	PCT	14	P2	FB6	-.55		WAR					TEC	TEH	.560	ZBAZ1	28	H	67
2014/05/01	98	69	.47	0	PCT	18	P2	FB5	.56		WAR					TEC	TEH	.560	ZBAZ1	26	H	140
2014/05/01	102	69	.40	0	PCT	16	P2	FB5	.46		WAR					TEC	TEH	.560	ZBAZ1	26	H	138
2014/05/01	102	69	.81	0	PCT	25	P2	FB6	1.34		WAR					TEC	TEH	.560	ZBAZ1	26	H	138
2014/05/01	106	69	.42	0	PCT	17	P2	FB6	1.43		WAR					TEC	TEH	.560	ZBAZ1	26	H	136
2014/05/01	114	69	.42	0	PCT	17	P2	FB6	1.46		WAR					TEC	TEH	.560	ZBAZ1	26	H	132
2014/05/01	93	70	.37	0	PCT	15	P2	FB4	-1.28		WAR					TEC	TEH	.560	ZBAZ1	26	H	126
2014/05/01	93	70	.34	0	PCT	14	P2	FB5	-1.32		WAR					TEC	TEH	.560	ZBAZ1	26	H	126
2014/05/01	93	70	.36	0	PCT	15	P2	FB5	.86		WAR					TEC	TEH	.560	ZBAZ1	26	H	126
2014/05/01	93	70	.33	0	PCT	14	P2	FB6	1.32		WAR					TEC	TEH	.560	ZBAZ1	26	H	126
2014/05/01	95	70	.32	0	PCT	14	P2	FB4	-1.30		WAR					TEC	TEH	.560	ZBAZ1	26	H	127
2014/05/01	95	70	.33	0	PCT	14	P2	FB5	-1.39		WAR					TEC	TEH	.560	ZBAZ1	26	H	127
2014/05/01	95	70	.50	0	PCT	19	P2	FB6	.57		WAR					TEC	TEH	.560	ZBAZ1	26	H	127
2014/05/01	91	72	.52	0	PCT	18	P2	FB6	-.65		WAR					TEC	TEH	.560	ZBAZ1	28	H	60
2014/05/01	95	72	.48	0	PCT	17	P2	FB4	.02		WAR					TEC	TEH	.560	ZBAZ1	28	H	61
2014/05/01	95	72	.50	0	PCT	17	P2	FB5	-.02		WAR					TEC	TEH	.560	ZBAZ1	28	H	61
2014/05/01	95	72	.51	0	PCT	18	P2	FB6	.00		WAR					TEC	TEH	.560	ZBAZ1	28	H	61
2014/05/01	98	73	.45	0	PCT	17	P2	FB4	-.36		WAR					TEC	TEH	.560	ZBAZ1	26	H	108
2014/05/01	98	73	.45	0	PCT	17	P2	FB5	-1.27		WAR					TEC	TEH	.560	ZBAZ1	26	H	108
2014/05/01	88	75	.35	0	PCT	13	P2	FB5	-1.30		WAR					TEC	TEH	.560	ZBAZ1	28	H	54
2014/05/01	96	75	.31	0	PCT	12	P2	FB5	-1.43		WAR					TEC	TEH	.560	ZBAZ1	28	H	52
2014/05/01	104	75	.19	0	PCT	8	P2	FB4	-.51		WAR					TEC	TEH	.560	ZBAZ1	28	H	51

INSPDATE	ROW	COL	VOLTS	DEG	IND	PER	CHN	LOCN	INCH1	INCH2	UTIL1	UTIL2	CRLEN	CRWID	CEG	BEGT	ENDT	PDIA	PTYPE	CAL	L	IDX
2014/05/01	75	76	.64	0	PCT	21	P2	FB5	1.37		WAR					TEC	TEH	.560	ZBAZ1	28	H	34
2014/05/01	83	76	1.18	0	PCT	31	P2	FB5	-.54		WAR					TEC	TEH	.560	ZBAZ1	28	H	38
2014/05/01	83	76	.46	0	PCT	16	P2	FB6	-1.28		WAR					TEC	TEH	.560	ZBAZ1	28	H	38
2014/05/01	85	76	1.10	0	PCT	29	P2	FB5	-1.28		WAR					TEC	TEH	.560	ZBAZ1	28	H	39
2014/05/01	97	76	.32	0	PCT	13	P2	FB4	1.24		WAR					TEC	TEH	.560	ZBAZ1	28	H	44
2014/05/01	86	77	.38	0	PCT	15	P2	FB8	.65		WAR					TEC	TEH	.560	ZBAZ1	26	H	94
2014/05/01	98	77	.72	0	PCT	24	P2	FB5	-1.86		WAR					TEC	TEH	.560	ZBAZ1	26	H	92
2014/05/01	102	77	.49	0	PCT	19	P2	FB3	1.54		WAR					TEC	TEH	.560	ZBAZ1	26	H	90
2014/05/01	102	77	.80	0	PCT	25	P2	FB4	-.43		WAR					TEC	TEH	.560	ZBAZ1	26	H	90
2014/05/01	102	77	.56	0	PCT	20	P2	FB5	-1.35		WAR					TEC	TEH	.560	ZBAZ1	26	H	90
2014/05/01	102	77	.53	0	PCT	20	P2	FB7	-.67		WAR					TEC	TEH	.560	ZBAZ1	26	H	90
2014/05/01	69	78	.35	0	PCT	16	P2	FB5	-.75		WAR					TEC	TEH	.560	ZBAZ1	40	H	160
2014/05/01	97	78	.60	0	PCT	21	P2	FB4	.92		WAR					TEC	TEH	.560	ZBAZ1	26	H	81
2014/05/01	97	78	.40	0	PCT	16	P2	FB5	.90		WAR					TEC	TEH	.560	ZBAZ1	26	H	81
2014/05/01	97	78	.90	0	PCT	27	P2	FB6	-1.75		WAR					TEC	TEH	.560	ZBAZ1	26	H	81
2014/05/01	99	78	.58	0	PCT	21	P2	FB4	.96		WAR					TEC	TEH	.560	ZBAZ1	26	H	82
2014/05/01	101	78	.49	0	PCT	19	P2	FB4	-1.27		WAR					TEC	TEH	.560	ZBAZ1	26	H	83
2014/05/01	101	78	.51	0	PCT	19	P2	FB4	.94		WAR					TEC	TEH	.560	ZBAZ1	26	H	83
2014/05/01	101	78	.52	0	PCT	19	P2	FB5	-1.25		WAR					TEC	TEH	.560	ZBAZ1	26	H	83
2014/05/01	103	78	.55	0	PCT	20	P2	FB6	-1.49		WAR					TEC	TEH	.560	ZBAZ1	26	H	84
2014/05/01	69	80	.43	0	PCT	19	P2	FB5	-.59		WAR					TEC	TEH	.560	ZBAZ1	40	H	161
2014/05/01	79	80	.32	0	PCT	12	P2	FB4	.59		WAR					TEC	TEH	.560	ZBAZ1	28	H	30
2014/05/01	80	81	.51	0	PCT	19	P2	FB4	-1.21		WAR					TEC	TEH	.560	ZBAZ1	26	H	49
2014/05/01	96	81	.37	0	PCT	15	P2	FB5	-1.14		WAR					TEC	TEH	.560	ZBAZ1	26	H	57
2014/05/01	100	81	.34	0	PCT	14	P2	FB5	1.60		WAR					TEC	TEH	.560	ZBAZ1	26	H	59
2014/05/01	102	83	.42	0	PCT	17	P2	FB5	-1.44		WAR					TEC	TEH	.560	ZBAZ1	26	H	63
2014/05/01	83	84	.53	0	PCT	20	P2	FB5	-1.24		WAR					TEC	TEH	.560	ZBAZ1	26	H	35
2014/05/01	98	85	.33	0	PCT	13	P2	FB3	1.09		WAR					TEC	TEH	.560	ZBAZ1	28	H	6
2014/05/01	98	85	.44	0	PCT	16	P2	FB4	.97		WAR					TEC	TEH	.560	ZBAZ1	28	H	6
2014/05/01	98	85	.44	0	PCT	16	P2	FB5	-.98		WAR					TEC	TEH	.560	ZBAZ1	28	H	6
2014/05/01	98	85	.41	0	PCT	15	P2	FB5	.61		WAR					TEC	TEH	.560	ZBAZ1	28	H	6
2014/05/01	79	86	.41	0	PCT	15	P2	FB5	-.97		WAR					TEC	TEH	.560	ZBAZ1	28	H	5
2014/05/01	79	86	.35	0	PCT	14	P2	FB6	-.64		WAR					TEC	TEH	.560	ZBAZ1	28	H	5
2014/05/01	97	86	.40	0	PCT	16	P2	FB5	-.56		WAR					TEC	TEH	.560	ZBAZ1	24	H	83
2014/05/01	97	86	1.07	0	PCT	30	P2	FB6	-.60		WAR					TEC	TEH	.560	ZBAZ1	24	H	83
2014/05/01	101	86	.43	0	PCT	16	P2	FB5	-.65		WAR					TEC	TEH	.560	ZBAZ1	24	H	19
2014/05/01	101	86	.33	0	PCT	13	P2	FB6	-.66		WAR					TEC	TEH	.560	ZBAZ1	24	H	19
2014/05/01	105	86	.39	0	PCT	15	P2	FB5	-.57		WAR					TEC	TEH	.560	ZBAZ1	22	H	26
2014/05/01	113	86	.30	0	PCT	12	P2	FB5	-.53		WAR					TEC	TEH	.560	ZBAZ1	18	H	33
2014/05/01	74	87	.45	0	PCT	17	P2	FB4	-1.30		WAR					TEC	TEH	.560	ZBAZ1	26	H	11
2014/05/01	90	87	.53	0	PCT	19	P2	FB5	.63		WAR					TEC	TEH	.560	ZBAZ1	26	H	19
2014/05/01	92	87	.52	0	PCT	19	P2	FB5	-1.25		WAR					TEC	TEH	.560	ZBAZ1	26	H	20
2014/05/01	96	87	.38	0	PCT	15	P2	FB4	1.04		WAR					TEC	TEH	.560	ZBAZ1	26	H	22
2014/05/01	96	87	.45	0	PCT	17	P2	FB5	1.58		WAR					TEC	TEH	.560	ZBAZ1	26	H	22
2014/05/01	96	87	.25	0	PCT	11	P2	FB6	-1.15		WAR					TEC	TEH	.560	ZBAZ1	26	H	22
2014/05/01	98	87	.38	0	PCT	16	P2	FB5	-1.44		WAR					TEC	TEH	.560	ZBAZ1	26	H	23
2014/05/01	98	87	.46	0	PCT	18	P2	FB6	-1.47		WAR					TEC	TEH	.560	ZBAZ1	26	H	23
2014/05/01	100	87	.45	0	PCT	17	P2	FB4	.65		WAR					TEC	TEH	.560	ZBAZ1	24	H	20
2014/05/01	100	87	.33	0	PCT	13	P2	FB5	-1.41		WAR					TEC	TEH	.560	ZBAZ1	24	H	20
2014/05/01	102	87	.55	0	PCT	20	P2	FB5	-1.53		WAR					TEC	TEH	.560	ZBAZ1	26	H	24
2014/05/01	63	88	.29	0	PCT	15	P2	FB4	-1.19		WAR					TEC	TEH	.560	ZBAZ1	40	H	216
2014/05/01	77	88	.44	0	PCT	17	P2	FB5	-.21		WAR					TEC	TEH	.560	ZBAZ1	22	H	120
2014/05/01	79	88	.37	0	PCT	15	P2	FB5	-.42		WAR					TEC	TEH	.560	ZBAZ1	22	H	119
2014/05/01	105	88	.73	0	PCT	21	P2	FB5	-.51		WAR					TEC	TEH	.560	ZBAZ1	20	H	45
2014/05/01	84	103	.06	0	PCT	4	P2	05H	.56		WAR					TEC	TEH	.560	ZBAZ1	24	H	28
INSPDATE	ROW	COL	VOLTS	DEG	IND	PER	CHN	LOCN	INCH1	INCH2	UTIL1	UTIL2	CRLEN	CRWID	CEG	BEGT	ENDT	PDIA	PTYPE	CAL	L	IDX

Tubes: 79 Records: 120

INSPDATE	ROW	COL	VOLTS	DEG	IND	PER	CHN	LOCN	INCH1	INCH2	BEGT	UTIL1	UTIL2	CRLEN	CRWID	CEG	ENDT	PDIA	PTYPE	CAL	L	IDX
2014/05/01	109	54	.14	107	PCT	10	P40	05H	32.81		06H	WAR		.14	.29	48	05H	.560	ZYAXP	14	H	30
2014/05/01	72	59	.51	0	PCT	19	P2	FB5	1.19		TEH	WAR					TEC	.560	ZBAZ1	31	C	66
2014/05/01	94	61	.44	0	PCT	16	P2	FB5	.60		TEH	WAR					TEC	.560	ZBAZ1	29	C	105
2014/05/01	94	61	.76	0	PCT	23	P2	FB6	1.36		TEH	WAR					TEC	.560	ZBAZ1	29	C	105
2014/05/01	114	61	.47	0	PCT	17	P2	FB4	-1.02		TEH	WAR					TEC	.560	ZBAZ1	29	C	115
2014/05/01	89	62	.35	0	PCT	13	P2	FB5	-.38		TEH	WAR					TEC	.560	ZBAZ1	29	C	133
2014/05/01	91	62	.41	0	PCT	15	P2	FB5	-.36		TEH	WAR					TEC	.560	ZBAZ1	29	C	132
2014/05/01	93	62	.72	0	PCT	22	P2	FB5	-.40		TEH	WAR					TEC	.560	ZBAZ1	29	C	131
2014/05/01	93	62	.32	0	PCT	12	P2	FB6	-.41		TEH	WAR					TEC	.560	ZBAZ1	29	C	131
2014/05/01	95	62	.36	0	PCT	13	P2	FB5	-.55		TEH	WAR					TEC	.560	ZBAZ1	29	C	130
2014/05/01	80	63	.51	0	PCT	19	P2	FB6	-1.00		TEH	WAR					TEC	.560	ZBAZ1	31	C	101
2014/05/01	95	64	.41	0	PCT	16	P2	FB5	.92		TEH	WAR					TEC	.560	ZBAZ1	31	C	131
2014/05/01	97	64	.37	0	PCT	15	P2	FB5	-.43		TEH	WAR					TEC	.560	ZBAZ1	31	C	130
2014/05/01	99	64	.40	0	PCT	9	P2	FB5	.97		TEH	WAR					TEC	.560	ZBAZ1	31	C	129
2014/05/01	113	64	.39	0	PCT	15	P2	FB5	-1.41		TEH	WAR					TEC	.560	ZBAZ1	31	C	126
2014/05/01	100	65	.36	0	PCT	14	P2	FB4	.65		TEH	WAR					TEC	.560	ZBAZ1	29	C	168
2014/05/01	110	65	.41	0	PCT	15	P2	FB3	-1.46		TEH	WAR					TEC	.560	ZBAZ1	29	C	173
2014/05/01	110	65	.42	0	PCT	15	P2	FB4	-1.14		TEH	WAR					TEC	.560	ZBAZ1	29	C	173
2014/05/01	110	65	.53	0	PCT	18	P2	FB5	-1.16		TEH	WAR					TEC	.560	ZBAZ1	29	C	173
2014/05/01	57	66	.76	0	PCT	23	P2	FB5	-.82		TEH	WAR					TEC	.560	ZBAZ1	29	C	186
2014/05/01	71	66	.35	0	PCT	13	P2	FB5	.98		TEH	WAR					TEC	.560	ZBAZ1	29	C	185
2014/05/01	77	66	.46	0	PCT	16	P2	FB5	.87		TEH	WAR					TEC	.560	ZBAZ1	29	C	184
2014/05/01	79	66	.37	0	PCT	14	P2	FB5	.57		TEH	WAR					TEC	.560	ZBAZ1	29	C	183
2014/05/01	94	67	.42	0	PCT	16	P2	FB4	-.58		TEH	WAR					TEC	.560	ZBAZ1	31	C	158
2014/05/01	79	68	.40	0	PCT	15	P2	FB5	-.59		TEH	WAR					TEC	.560	ZBAZ1	31	C	178
2014/05/01	81	68	.46	0	PCT	17	P2	FB4	.77		TEH	WAR					TEC	.560	ZBAZ1	31	C	177
2014/05/01	81	68	.54	0	PCT	19	P2	FB6	-1.05		TEH	WAR					TEC	.560	ZBAZ1	31	C	177
2014/05/01	95	68	.51	0	PCT	18	P2	FB3	-.57		TEH	WAR					TEC	.560	ZBAZ1	31	C	176
2014/05/01	95	68	.72	0	PCT	23	P2	FB5	-.94		TEH	WAR					TEC	.560	ZBAZ1	31	C	176
2014/05/01	95	68	.70	0	PCT	22	P2	FB7	-1.19		TEH	WAR					TEC	.560	ZBAZ1	31	C	176
2014/05/01	97	68	.95	0	PCT	27	P2	FB5	-1.01		TEH	WAR					TEC	.560	ZBAZ1	31	C	175
2014/05/01	99	68	.56	0	PCT	20	P2	FB5	.68		TEH	WAR					TEC	.560	ZBAZ1	31	C	174
2014/05/01	80	69	.29	0	PCT	11	P2	FB4	.61		TEH	WAR					TEC	.560	ZBAZ1	29	C	206
2014/05/01	90	69	.55	0	PCT	18	P2	FB4	.68		TEH	WAR					TEC	.560	ZBAZ1	29	C	211
2014/05/01	92	69	.51	0	PCT	18	P2	FB4	.60		TEH	WAR					TEC	.560	ZBAZ1	29	C	212
2014/05/01	100	69	.52	0	PCT	18	P2	FB5	.86		TEH	WAR					TEC	.560	ZBAZ1	29	C	216
2014/05/01	100	69	.69	0	PCT	21	P2	FB6	1.05		TEH	WAR					TEC	.560	ZBAZ1	29	C	216
2014/05/01	102	69	.43	0	PCT	15	P2	FB4	.67		TEH	WAR					TEC	.560	ZBAZ1	29	C	217
2014/05/01	114	69	.34	0	PCT	13	P2	FB4	.94		TEH	WAR					TEC	.560	ZBAZ1	29	C	223
2014/05/01	114	69	.38	0	PCT	14	P2	FB5	.70		TEH	WAR					TEC	.560	ZBAZ1	29	C	223
2014/05/01	93	70	.67	0	PCT	21	P2	FB5	-1.12		TEH	WAR					TEC	.560	ZBAZ1	33	C	9
2014/05/01	93	70	.57	0	PCT	19	P2	FB6	-1.10		TEH	WAR					TEC	.560	ZBAZ1	33	C	9
2014/05/01	88	71	.44	0	PCT	16	P2	FB5	-1.36		TEH	WAR					TEC	.560	ZBAZ1	31	C	202
2014/05/01	108	71	.50	0	PCT	18	P2	FB5	.48		TEH	WAR					TEC	.560	ZBAZ1	31	C	212
2014/05/01	93	72	.56	0	PCT	19	P2	FB4	-.57		TEH	WAR					TEC	.560	ZBAZ1	35	C	14
2014/05/01	80	73	.46	0	PCT	17	P2	FB4	1.37		TEH	WAR					TEC	.560	ZBAZ1	33	C	28
2014/05/01	80	73	.68	0	PCT	22	P2	FB5	1.57		TEH	WAR					TEC	.560	ZBAZ1	33	C	28
2014/05/01	86	73	.53	0	PCT	18	P2	FB4	1.25		TEH	WAR					TEC	.560	ZBAZ1	33	C	31
2014/05/01	86	73	.79	0	PCT	24	P2	FB5	1.70		TEH	WAR					TEC	.560	ZBAZ1	33	C	31
2014/05/01	86	73	.63	0	PCT	20	P2	FB6	-1.20		TEH	WAR					TEC	.560	ZBAZ1	33	C	31
2014/05/01	88	73	.59	0	PCT	20	P2	FB5	1.58		TEH	WAR					TEC	.560	ZBAZ1	33	C	32
2014/05/01	92	73	.58	0	PCT	19	P2	FB5	.58		TEH	WAR					TEC	.560	ZBAZ1	33	C	34
2014/05/01	108	73	.44	0	PCT	16	P2	FB4	.69		TEH	WAR					TEC	.560	ZBAZ1	33	C	41
2014/05/01	65	74	.40	0	PCT	15	P2	FB5	.54		TEH	WAR					TEC	.560	ZBAZ1	33	C	49
2014/05/01	67	74	.40	0	PCT	15	P2	FB5	.62		TEH	WAR					TEC	.560	ZBAZ1	33	C	48
2014/05/01	69	74	.54	0	PCT	18	P2	FB5	.69		TEH	WAR					TEC	.560	ZBAZ1	33	C	47
2014/05/01	36	75	.51	0	PCT	17	P2	03H	-1.22		TEH	WAR					TEC	.560	ZBAZ1	37	C	218
2014/05/01	114	75	.41	0	PCT	17	P2	FB6	-1.29		TEH	WAR					TEC	.560	ZBAZ1	35	C	52
2014/05/01	53	76	.90	0	PCT	26	P2	FB4	1.73		TEH	WAR					TEC	.560	ZBAZ1	35	C	55
2014/05/01	63	78	.28	0	PCT	12	P2	FB5	-1.77		TEH	WAR					TEC	.560	ZBAZ1	35	C	56

INSPDATE	ROW	COL	VOLTS	DEG	IND	PER	CHN	LOCN	INCH1	INCH2	BEGT	UTIL1	UTIL2	CRLEN	CRWID	CEG	ENDT	PDIA	PTYPE	CAL	L	IDX
2014/05/01	77	78	.33	0	PCT	13	P2	FB5	1.53		TEH	WAR					TEC	.560	ZBAZ1	35	C	101
2014/05/01	52	79	.45	0	PCT	18	P2	FB5	-.82		TEH	WAR					TEC	.560	ZBAZ1	35	C	62
2014/05/01	101	80	.39	0	PCT	16	P2	FB6	-.97		TEH	WAR					TEC	.560	ZBAZ1	35	C	97
2014/05/01	85	84	.40	0	PCT	15	P2	FB5	-1.11		TEH	WAR					TEC	.560	ZBAZ1	33	C	208
2014/05/01	66	85	.48	0	PCT	17	P2	FB4	1.48		TEH	WAR					TEC	.560	ZBAZ1	35	C	149
2014/05/01	109	88	.30	0	PCT	13	P2	FB5	.68		TEH	WAR					TEC	.560	ZBAZ1	35	C	177
2014/05/01	63	90	.21	60	PCT	13	P34	04H	29.52		05H	WAR		.19	.41	67	04H	.560	ZYAXP	16	H	11
2014/05/01	52	91	.36	0	PCT	13	P2	FB4	-.75		TEH	WAR					TEC	.560	ZBAZ1	37	C	18
2014/05/01	62	95	.38	0	PCT	14	P2	FB4	-.83		TEH	WAR					TEC	.560	ZBAZ1	37	C	35

INSPDATE	ROW	COL	VOLTS	DEG	IND	PER	CHN	LOCN	INCH1	INCH2	BEGT	UTIL1	UTIL2	CRLEN	CRWID	CEG	ENDT	PDIA	PTYPE	CAL	L	IDX

Tubes: 56 Records: 69