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Serial No: MNS-18-003

January 11, 2018

U.S. Nuclear Regulatory Commission
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Washington, DC 20555-0001

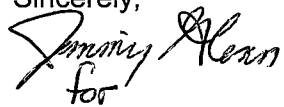
Subject: Duke Energy Carolinas, LLC (Duke Energy)
McGuire Nuclear Station, Unit 1
Docket Number 50-369
Renewed Facility License Number NPF-9
End of Cycle 25 In-service and Steam Generator In-service Inspection
Summary Reports

Pursuant to American Society of Mechanical Engineers (ASME) Section XI, as amended by ASME Code Case N-532-5, Duke Energy hereby submits the In-service Inspection Summary Report for the McGuire Unit 1 outage designed M1R25.

Additionally, pursuant to ASME Section XI and McGuire Technical Specification 5.6.8, Duke Energy submits the Steam Generator In-service Inspection Summary Report for the McGuire Unit 1 outage designed M1R25.

This submittal document contains no regulatory commitments.

If there are any questions or if additional information is needed, please contact Brian Richards of Regulatory Affairs at (980) 875-5171.

Sincerely,

for

Thomas D. Ray

Attachment 1: McGuire Unit 1 Outage M1R25 In-service Inspection Summary Report
Attachment 2: McGuire Unit 1 Outage M1R25 Steam Generator In-service Inspection
Summary Report

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January 11, 2018

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Attachment 1

McGuire Unit 1 Outage M1R25
In-service Inspection Summary Report

FORM OAR-1 OWNER'S ACTIVITY REPORT

Report Number Owner's Activity Report for Refueling Outage M1R25

Plant McGuire Nuclear Station, 12700 Hagers Ferry Rd, Huntersville, NC 28078-9340

Unit No. 1 Commercial service date 12/01/1981 Refueling outage no. M1R25
(if applicable)

Current inspection interval ISI-4th, Containment-3rd
(1st, 2nd, 3rd, 4th, other)

Current inspection period ISI-2nd, Containment-2nd
(1st, 2nd, 3rd)

Edition and Addenda of Section XI applicable to the inspection plans 2007 with 2008 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-513-3, N-526, N-532-5, N-586-1, N-613-1, N-639, N-643-2, N-648-1, N-663, N-706-1, N-716, N-722-1, N-729-1, N-731, N-735, 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 M1R25 conform to the requirements of Section XI.
(refueling outage number)

Signed Robert Weather Date 1/8/2018

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 North Carolina and employed by The Hartford Steam Boiler Inspection and Insurance Co. of Hartford, 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.

Jerome F. Swan Commissions NB# 11473 NC# 1524
Inspector's Signature National Board, State, Province, and Endorsements N, I

Date 1/8/2018

Attachment

McGuire Unit 1 End of Cycle 25 Inservice Inspection Report

The McGuire Nuclear Station Unit 1 Fourth Ten Year Inservice Inspection (ISI) Plan complies with 10CFR50.55a(g), which implements, by reference, the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Section XI, 2007 Edition with 2008 Addenda.

This summary report is being submitted pursuant to the reporting requirements of ASME Section XI as amended by ASME Code Case N-532-5, "Repair/Replacement Activity Documentation Requirements and Inservice Inspection Summary Report Preparation and Submission Section XI, Division 1".

Contained within this summary report are the form OAR-1 (Owner's Activity Report) and Tables 1 and 2 of Code Case N-532-5 for McGuire Nuclear Station during cycle 25 and Refueling Outage 25 (M1R25, Note format change). M1R25 is the second (and last) outage of the second ISI period in the fourth inspection interval. M1R25 is the first outage of the second Containment period in the third inspection interval. This report includes all Repair/Replacement activities from April 17, 2016 through October 16, 2017, cycle 25.

Date and Revision of Inservice Inspection Plans:

Fourth Interval Inservice Inspection Plans

The following document comprises the McGuire Nuclear Station 4th Interval Inservice Inspection Plan for Unit 1 (Class 1, 2, and 3 Components):

"Fourth Interval Inservice Inspection Plan, McGuire Nuclear Station Unit 1 and Unit 2, General Requirements" – Document "MISI-1462.10-0040-GEN REQ UNIT 1 SECOND AND THIRD PERIODS AND UNIT 2", Rev 1, dated 05/28/2015.

The following document comprises the McGuire Nuclear Station 4th Interval Inservice Inspection Pressure Test Plan for Unit 1:

"McGuire Nuclear Station - Fourth Interval Inservice Inspection Plan - Pressure Test Plan", Document MISI-1462.20-0040-PTPLAN, Rev 1, dated 06/18/2015.

Containment Inservice Inspection Plan

The following document comprises the McGuire Nuclear Station 3rd Interval Containment Inservice Inspection Plan for Unit 1 (Class MC):

"McGuire Nuclear Station - Third Interval Containment Inservice Inspection Plan - Containment - Units 1 & 2", Document #MC-ISIC3-1042-0001, Rev. 4, dated 11/22/2016.

McGuire 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
D-B / D2.10	Minor leak on line upstream of 1RN-884 (Drain on KD return line)	Item was evaluated by Engineering in NCR 02032731 and found to be acceptable. This is NOT considered an analytical evaluation. This item was repaired during M1R25, see entry in table 2.
D-B / D2.10	Leak on line upstream of 1RN-188 during M1R25 (Vent on 1B KC HX)	RN vent line piping failed when OPS attempted to remove pipe cap. Temp EC 410138 installed under WO 20204203 and evaluated in NCR 02156405 to be acceptable for continued interim service until repair was performed. This is NOT considered an analytical evaluation. This item was code repaired during M1R25, see entry in table 2.
F-A/F1.20	Relevant condition on 1MCR-NI-701 during M1R25	A relevant condition was identified during VT-3 examination of support. As-found condition was evaluated as acceptable for continued service by Engineering (Ref NCR 2153388 and NDE exam report VT-17-098). This is NOT considered an analytical evaluation.
F-A/F1.20	Relevant condition on 1MCA-NV-H39	A relevant condition was identified during VT-3 examination of support. As-found condition was evaluated as acceptable for continued service by Engineering (Ref NCR 2149188 and NDE exam report VT-17-065). This is NOT considered an analytical evaluation.
F-A/F1.30	Relevant condition on 1MCA-RN-2052	A relevant condition was identified during VT-3 examination of support. As-found condition was evaluated as acceptable for continued service by Engineering (Ref NCR 2146009 and NDE exam report VT-17-048). This is NOT considered an analytical evaluation.
R-A / R.17	Thickness readings below 87.5% of nominal wall were observed during UT examination of wall thickness grid at weld 1RNF197-19, 1RN1F661 and 1RN535-4 during M1R25.	Items were evaluated by Engineering NCR 02156282 and found to be acceptable. This is NOT considered an analytical evaluation.

McGuire 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
1	Snubber 1-MCR-NV-1096	Snubber replaced due to failure of existing snubber (broke)	10/8/2017	WO 20203536
2	Snubber 1-MCR-NC-0910	Snubber replaced due to failure of functional test	10/6/2017	WO 20203157
3	1A KF Pump AHU Coil	Replaced 1VA-AH-0030 / 1A KF Pump AHU Cooling Coil (on-line leak). Component was isolated until repair completed. Ref NCR's 02132243 & 02131707.	9/10/2017	WO 20175767
3	RN piping in vicinity of weld 1RN1FW195-15	Replace piping in the vicinity of weld 1RN1FW195-15 (MCFI-1RN195). Leak discovered during weld prep for EOC examination during M1R25. Ref NCR 02156395.	10/11/2017	WO 20203931
3	RN piping upstream of 1RN-884	Code repair to pipe upstream of 1RN-884. Ref. NCR 02032731	10/9/2017	WO 20082987
3	RN piping upstream of 1RN-883	Code repair to pipe upstream of 1RN-883. This was a EOC item from the issue at 1RN-884.	10/7/2017	WO 20101843
3	RN piping upstream of 1RN-188	Code repair to broken pipe upstream of 1RN-188. Ref NCR 02156405.	10/13/2017	WO 20204203

Attachment 2

McGuire Unit 1 Outage M1R25
Steam Generator In-service Inspection
Summary Report

***Steam Generator
In-service Inspection Summary Report***

***McGuire Nuclear Station Unit 1
MIR25
Fall Outage 2017***




Location: McGuire Nuclear Station, 12700 Hagers Ferry Road Huntersville, N.C.
28078-9340

NRC Docket No. 50-369
National Board No. 44

Commercial Service Date: December 1, 1981

Owner: Duke Energy Carolinas, LLC
526 South Church St.
Charlotte, N.C. 28202

Revision 0

Prepared By: <u>Mitch Hatley</u> 	Date: <u>11/30/17</u>
Checked By: <u>Dan Mayes</u> 	Date: <u>11/30/2017</u>
Approved By: <u>Etienne Fonteneau</u> 	Date: <u>12/4/2017</u>

Document Completion Date: _____

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Corporation (AIA)

State of North Carolina Department of Labor

CASES OF ASME BOILER AND PRESSURE VESSEL
CODE

FORM OAR-1 OWNER'S ACTIVITY REPORT

Report Number Owner's Activity Report for SG Inspection Outage M1R25

Plant McGuire Nuclear Station, 12700 Hagers Ferry Rd, Huntersville, NC 28078-9340

Unit No. 1 Commercial servicedate December 1, 1981 Refueling outage no. M1R25
(if applicable)

Current inspection interval 4th
(1st, 2nd, 3rd, 4th, other)

Current inspection period 2nd
(1st, 2nd, 3rd)

Edition and Addenda of Section XI applicable to the inspection plans 2007 Edition through 2008 Addenda

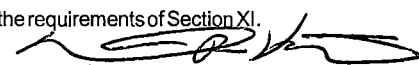
Date and revision of inspection plans 4-7-17 Rev 2 (M-ISISG-0169.030.0040)

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

Code Cases used for inspection and evaluation: N-532-5
(if applicable, including cases modified by Case N-532 and later revisions)

CERTIFICATE OF CONFORMANCE

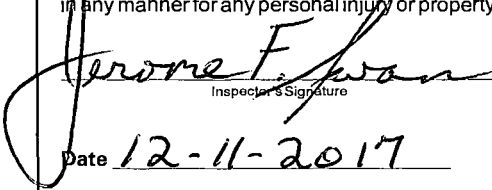
I certify that (a) the statements made in this report are correct; (b) the examinations and tests meet the Inspection Plan as required by the ASME Code, Section XI; and (c) the repair/replacement activities and evaluations supporting the completion of M1R25 conform to the requirements of Section XI. (refueling outage number)

Signed  Date 11/30/17
Owner or Owner's Designee, Title

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and employed by HARTFORD STEAM BOILER OF CONNECTICUT 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.

 Commission NB 11473, IN, NS, NSI, R
Inspector's Signature (National Board Number and Endorsement)

Date 12-11-2017

CASES OF ASME BOILER AND PRESSURE VESSEL CODE

**TABLE 1
ITEMS WITH FLAWS OR RELEVANT CONDITIONS THAT REQUIRED
EVALUATION FOR CONTINUED SERVICE**

Examination Category and Item Number	Item Description	Evaluation Description
Category B-Q B16.20.001 B16.20.002 B16.20.003 B16.20.004	Steam Generator Tubing in U-Tube Design	No ASME Section XI Acceptance Requirement Exceeded (Reference Attached Inspection 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
None	None	None	None	None

McGuire M1R25 Steam Generator Tube Inspection Report

Pursuant to McGuire technical specification 5.6.8 the following information is provided:

a. The scope of inspections performed on each SG

Bobbin Inspection

- Full length bobbin probe inspection of 50% tubes. The 50% sample contained:
 - All tubes with previous indications, e.g., wear, DNT, PLP, PRX, etc.
 - All tubes surrounding plugged tubes one tube deep.
 - Periphery tubes two rows deep in the hot leg and cold leg (outer perimeter and open lane).
 - 50% of rows 5-6 full length.

Array Inspection

- 100% of periphery tubes (5 tubes in from periphery) with array probe from top of tubesheet to the first support in both hot leg (TEH to 01H) and cold leg (TEC to 01C).
- Special interest inspections were also performed on selected indications.

Visual Inspection

- Previously installed plugs
- Bowl cladding inspection
- Foreign object search and retrieval (FOSAR) of the tubesheet in all 4 steam generators.

b. Degradation mechanisms found

Degradation found included wear at support structures and presumed wear from foreign objects.

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

The bobbin probe was utilized for the detection of wear at support structures and freespan locations and to size wear at support structures. The array probe was used to size the presumed foreign object wear.

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

There were 337 indications of fanbar (FB) wear reported. Forty-eight (48) of these indication were newly reported. The deepest of fanbar wear indication was 31% TW. The average growth rate was -0.2 %TW/EFY. There were nine (9) indications of lattice grid (LG) wear reported. There were no newly reported lattice grid wear indications. The deepest of lattice grid wear indication was 21% TW. The average growth rate for lattice grid wear was -0.3%TW/EFY. There were twenty-two (22) indications of presumed foreign object wear with no part present reported. The deepest presumed foreign object wear was 20% TW. One of these indications was newly reported, its depth was 16% TW.

The complete listing for service induced indications is attached.

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

There were no tubes plugged in the 1A, 1B, 1C, or 1D SGs.

f. **Total number and percentage of tubes plugged to date, and the effective plugging percentage in each steam generator.**

<i>Steam Generator¹</i>	<i>1A</i>	<i>1B</i>	<i>1C</i>	<i>1D</i>	<i>Total</i>
<i>Prior to MIR25</i>	<i>2</i>	<i>4</i>	<i>5</i>	<i>8</i>	<i>19</i>
<i>MIR25</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
<i>Total</i>	<i>2</i>	<i>4</i>	<i>5</i>	<i>8</i>	<i>19</i>
% Plugged/Effective Plugging %	0.03%	0.06%	0.08%	0.12%	0.07%

1= There are 6633 tubes per steam generator

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

The cumulative SG EFPY for EOC-23(MIR23) was 15.80, EOC-24 (MIR24) was 17.11 and EOC-25 (MIR25) was 18.55.

As of EOC-25, the McGuire steam generators had operated 17.56 EFPY since the first in-service inspection after replacement. In total, the McGuire steam generators had operated 18.55 EFPY since replacement.

Condition monitoring structural and leakage integrity were met for fanbar, lattice grid and presumed foreign object wear.

An NDE maximum depth call of 48.9 %TW or less for fanbar wear is sufficient to demonstrate a minimum degraded tube burst pressure of 3ΔP, 4050 psi, at 0.95 probability with 50% confidence. The worst case depth call for fanbar wear observed during the inspection was an NDE depth of 31%TW.

An NDE maximum depth call of 51.3 %TW or less for lattice grid wear is sufficient to demonstrate a minimum degraded tube burst pressure of 3ΔP, 4050 psi, at 0.95 probability with 50% confidence. The worst case depth call for lattice grid wear observed during the inspection was an NDE depth of 21%TW.

An NDE maximum depth call of 51.7%TW or less for FO wear is sufficient to demonstrate a minimum degraded tube burst pressure of 3ΔP, 4050 psi, at 0.95 probability with 50% confidence. The worst case depth call for FO wear observed during the inspection was an NDE depth of 20%TW.

During FOSAR, a total of 21 metal objects were found with 12 removed. All foreign objects that were not removed have a technical evaluation demonstrating that tube integrity will be met through the next scheduled inspection at MIR28. There was no wear was associated with any foreign object.

No degradation was detected in the plug visual or bowl cladding inspections.

No in-situ tests or tube pulls were performed.

SG - A Service Induced Indications

McGuire 1 1E0C25

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ROW	COL	VOLTS	DEG	IND	PER	CHN	LOCN	INCH1	INCH2	UTIL1	UTIL2	CRLEN	CRWID	CEG	BEGT	ENDT	PDIA	PTYPE	CAL	L	IDX
78	19	.43	66	PCT	13	207	TSC	.80				.30	.20	01C	TEC	.560	ZYAXP	7	C	151	
77	20	.39	141	PCT	12	207	TSC	.23				.22	.20	01C	TEC	.560	ZYAXP	7	C	157	
79	20	.56	134	PCT	20	203	TSC	.32				.30	.20	01C	TEC	.560	ZYAXP	8	C	166	
81	20	.54	106	PCT	15	207	TSC	1.26				.22	.27	01C	TEC	.560	ZYAXP	7	C	158	
80	21	.80	62	PCT	18	207	TSC	1.30				.24	.20	01C	TEC	.560	ZYAXP	8	C	167	
82	21	.33	225	PCT	12	207	TSC	.90				.30	.27	01C	TEC	.560	ZYAXP	7	C	159	
82	21	.14	122	PCT	8	207	TSC	1.77				.30	.20	01C	TEC	.560	ZYAXP	7	C	159	
82	21	.26	70	PCT	10	207	TSC	2.03				.30	.27	01C	TEC	.560	ZYAXP	7	C	159	
3	30	.47	86	PCT	14	207	TSC	10.20				.54	.27	01C	TEC	.560	ZYAXP	6	C	47	
98	33	.22	128	PCT	9	207	TSC	.75				.35	.20	01C	TEC	.560	ZYAXP	6	C	208	
98	33	.15	113	PCT	8	207	TSC	3.35				.35	.20	01C	TEC	.560	ZYAXP	6	C	208	
60	47	.09	271	PCT	6	P5	FB5	-1.12		WAR					TEC	TEH	.560	ZBAZX	13	H	36
72	53	.13	274	PCT	6	P5	FB5	1.46		WAR					TEC	TEH	.560	ZBAZX	6	H	26
61	54	.17	92	PCT	7	P5	FB4	1.24		WAR					TEC	TEH	.560	ZBAZX	14	H	60
108	57	.39	264	PCT	15	P5	FB5	1.57		WAR					TEC	TEH	.560	ZBAZX	6	H	17
110	57	.30	96	PCT	14	P5	FB5	1.47		WAR					TEC	TEH	.560	ZBAZX	3	H	23
81	58	.41	277	PCT	19	P5	FB4	-1.03		WAR					TEC	TEH	.560	ZBAZX	5	H	57
111	58	.11	255	PCT	6	P5	FB5	1.12		WAR					TEC	TEH	.560	ZBAZX	5	H	21
84	59	.19	271	PCT	8	P5	FB5	-.67		WAR					TEC	TEH	.560	ZBAZX	6	H	51
98	59	.43	81	PCT	16	P5	FB4	-1.63		WAR					TEC	TEH	.560	ZBAZX	6	H	48
100	59	.21	261	PCT	9	P5	FB4	-1.67		WAR					TEC	TEH	.560	ZBAZX	6	H	47
45	60	.25	74	PCT	11	P5	FB4	1.29		WAR					TEC	TEH	.560	ZBAZX	14	H	93
49	60	.12	280	PCT	7	P5	03H	-1.56		WAR					TEC	TEH	.560	ZBAZX	13	H	103
79	60	.23	86	PCT	12	P5	FB4	-.76		WAR					TEC	TEH	.560	ZBAZX	5	H	68
81	60	.40	92	PCT	19	P5	FB4	-.80		WAR					TEC	TEH	.560	ZBAZX	5	H	69
83	60	.35	80	PCT	14	P5	FB4	-.72		WAR					TEC	TEH	.560	ZBAZX	6	H	55

SG - A Service Induced Indications

McGuire 1 1EOC25

MNS 20171001

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ROW	COL	VOLTS	DEG	IND	PER	CHN	LOCN	INCH1	INCH2	UTIL1	UTIL2	CRLEN	CRWID	CEG	BEGT	ENDT	PDIA	PTYPE	CAL	L	IDX	
95	60	.37	105	PCT	18	P5	FB4	-.87		WAR						TEC	TEH	.560	ZBAZX	5	H	70
95	60	.21	113	PCT	11	P5	FB5	-1.49		WAR						TEC	TEH	.560	ZBAZX	5	H	70
94	61	.33	90	PCT	13	P5	FB5	-1.49		WAR						TEC	TEH	.560	ZBAZX	6	H	60
79	62	.23	90	PCT	12	P5	FB4	-.80		WAR						TEC	TEH	.560	ZBAZX	5	H	82
79	62	.21	305	PCT	11	P5	FB4	.88		WAR						TEC	TEH	.560	ZBAZX	5	H	82
113	62	.32	81	PCT	16	P5	FB7	.65		WAR						TEC	TEH	.560	ZBAZX	5	H	15
70	63	.14	278	PCT	6	P5	FB3	.55		WAR						TEC	TEH	.560	ZBAZX	6	H	77
72	63	.14	301	PCT	8	P5	FB5	1.26		WAR						TEC	TEH	.560	ZBAZX	5	H	92
112	63	.24	113	PCT	12	P5	FB3	1.24		WAR						TEC	TEH	.560	ZBAZX	3	H	20
55	64	.13	65	PCT	6	P5	FB3	.86		WAR						TEC	TEH	.560	ZBAZX	14	H	113
95	64	.17	108	PCT	9	P5	FB3	-.78		WAR						TEC	TEH	.560	ZBAZX	5	H	93
95	64	.17	259	PCT	9	P5	FB5	-.66		WAR						TEC	TEH	.560	ZBAZX	5	H	93
97	64	.16	265	PCT	9	P5	FB2	.61		WAR						TEC	TEH	.560	ZBAZX	5	H	94
99	64	.28	81	PCT	11	P5	FB3	-.96		WAR						TEC	TEH	.560	ZBAZX	6	H	78
99	64	.45	85	PCT	17	P5	FB4	-1.07		WAR						TEC	TEH	.560	ZBAZX	6	H	78
99	64	.27	82	PCT	11	P5	FB5	-1.26		WAR						TEC	TEH	.560	ZBAZX	6	H	78
94	65	.28	80	PCT	11	P5	FB5	-1.18		WAR						TEC	TEH	.560	ZBAZX	6	H	86
100	65	.35	279	PCT	14	P5	FB5	.72		WAR						TEC	TEH	.560	ZBAZX	6	H	85
112	65	.15	284	PCT	8	P5	FB2	.66		WAR						TEC	TEH	.560	ZBAZX	5	H	96
112	65	.29	113	PCT	15	P5	FB4	1.49		WAR						TEC	TEH	.560	ZBAZX	5	H	96
112	65	.36	98	PCT	17	P5	FB5	.84		WAR						TEC	TEH	.560	ZBAZX	5	H	96
112	65	.28	287	PCT	14	P5	FB6	1.39		WAR						TEC	TEH	.560	ZBAZX	5	H	96
105	66	.25	286	PCT	13	P5	FB4	-.89		WAR						TEC	TEH	.560	ZBAZX	5	H	107
109	66	.18	261	PCT	8	P5	FB4	-.85		WAR						TEC	TEH	.560	ZBAZX	6	H	93
111	66	.24	92	PCT	12	P5	FB4	-.78		WAR						TEC	TEH	.560	ZBAZX	5	H	108
111	66	.34	111	PCT	17	P5	FB4	1.21		WAR						TEC	TEH	.560	ZBAZX	5	H	108
111	66	.49	100	PCT	22	P5	FB6	-1.12		WAR						TEC	TEH	.560	ZBAZX	5	H	108
111	66	.22	84	PCT	12	P5	FB7	-1.13		WAR						TEC	TEH	.560	ZBAZX	5	H	108
115	66	.10	94	PCT	6	P5	FB4	.85		WAR						TEC	TEH	.560	ZBAZX	5	H	109
86	67	.21	104	PCT	11	P5	FB4	1.50		WAR						TEC	TEH	.560	ZBAZX	5	H	118

SG - A Service Induced Indications

McGuire 1 1E0C25

MNS 20171001

11/27/2017 10:53:44

ROW	COL	VOLTS	DEG	IND	PER	CHN	LOCN	INCH1	INCH2	UTIL1	UTIL2	CRLEN	CRWID	CEG	BEGT	ENDT	PDIA	PTYPE	CAL	L	IDX		
102	67	.19	94	PCT	10	P5	FB3	.73		WAR							TEC	TEH	.560	ZBAZX	5	H	114
102	67	.32	279	PCT	16	P5	FB5	1.36		WAR							TEC	TEH	.560	ZBAZX	5	H	114
102	67	.21	277	PCT	11	P5	FB6	1.27		WAR							TEC	TEH	.560	ZBAZX	5	H	114
106	67	.36	100	PCT	14	P5	FB4	-1.32		WAR							TEC	TEH	.560	ZBAZX	6	H	102
106	67	.28	96	PCT	11	P5	FB5	-1.43		WAR							TEC	TEH	.560	ZBAZX	6	H	102
110	67	.30	279	PCT	15	P5	FB5	-1.58		WAR							TEC	TEH	.560	ZBAZX	5	H	112
114	67	.29	97	PCT	12	P5	FB3	-.72		WAR							TEC	TEH	.560	ZBAZX	6	H	100
114	67	.74	275	PCT	24	P5	FB4	-1.70		WAR							TEC	TEH	.560	ZBAZX	6	H	100
114	67	.31	277	PCT	12	P5	FB6	1.26		WAR							TEC	TEH	.560	ZBAZX	6	H	100
116	67	.23	92	PCT	9	P5	FB3	-.94		WAR							TEC	TEH	.560	ZBAZX	6	H	99
37	68	.27	259	PCT	11	P5	FB5	-.88		WAR							TEC	TEH	.560	ZBAZX	16	H	19
43	68	.40	78	PCT	15	P5	FB5	-.90		WAR							TEC	TEH	.560	ZBAZX	16	H	20
77	68	.23	99	PCT	12	P5	FB4	1.08		WAR							TEC	TEH	.560	ZBAZX	5	H	123
97	68	.15	107	PCT	8	P5	FB6	.99		WAR							TEC	TEH	.560	ZBAZX	5	H	124
103	68	.24	284	PCT	13	P5	FB3	-1.13		WAR							TEC	TEH	.560	ZBAZX	5	H	125
103	68	.31	87	PCT	16	P5	FB4	-.99		WAR							TEC	TEH	.560	ZBAZX	5	H	125
111	68	.19	106	PCT	10	P5	FB4	.65		WAR							TEC	TEH	.560	ZBAZX	5	H	126
113	68	.37	99	PCT	18	P5	FB4	-.53		WAR							TEC	TEH	.560	ZBAZX	5	H	127
113	68	.24	276	PCT	13	P5	FB4	.80		WAR							TEC	TEH	.560	ZBAZX	5	H	127
113	68	.29	286	PCT	15	P5	FB5	-.71		WAR							TEC	TEH	.560	ZBAZX	5	H	127
90	69	.43	100	PCT	20	P5	FB4	1.09		WAR							TEC	TEH	.560	ZBAZX	5	H	134
92	69	.32	82	PCT	13	P5	FB4	.92		WAR							TEC	TEH	.560	ZBAZX	6	H	120
104	69	.18	119	PCT	10	P5	FB4	1.33		WAR							TEC	TEH	.560	ZBAZX	5	H	131
106	69	.45	101	PCT	20	P5	FB5	1.12		WAR							TEC	TEH	.560	ZBAZX	5	H	130
106	69	.31	102	PCT	15	P5	FB6	1.15		WAR							TEC	TEH	.560	ZBAZX	5	H	130
108	69	.31	88	PCT	12	P5	FB4	1.40		WAR							TEC	TEH	.560	ZBAZX	6	H	116
112	69	.22	291	PCT	12	P5	FB2	.68		WAR							TEC	TEH	.560	ZBAZX	5	H	129
112	69	.24	102	PCT	13	P5	FB3	1.04		WAR							TEC	TEH	.560	ZBAZX	5	H	129
112	69	.17	91	PCT	10	P5	FB4	1.40		WAR							TEC	TEH	.560	ZBAZX	5	H	129
112	69	.17	275	PCT	10	P5	FB6	1.56		WAR							TEC	TEH	.560	ZBAZX	5	H	129
95	70	.31	88	PCT	16	P5	FB4	-.74		WAR							TEC	TEH	.560	ZBAZX	5	H	140

SG - A Service Induced Indications

McGuire 1 1EOC25

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11/27/2017 10:53:44

ROW	COL	VOLTS	DEG	IND	PER	CHN	LOCN	INCH1	INCH2	UTIL1	UTIL2	CRLEN	CRWID	CEG	BEGT	ENDT	PDIA	PTYPE	CAL	L	IDX
95	70	.23	280	PCT	12	P5	FB5	-1.47		WAR					TEC	TEH	.560	ZBAZX	5	H	140
109	70	.12	76	PCT	7	P5	FB4	.89		WAR					TEC	TEH	.560	ZBAZX	5	H	141
58	71	.39	84	PCT	15	P5	FB6	.73		WAR					TEC	TEH	.560	ZBAZX	16	H	34
74	71	.32	98	PCT	16	P5	FB4	1.49		WAR					TEC	TEH	.560	ZBAZX	5	H	152
74	71	.30	96	PCT	15	P5	FB5	.78		WAR					TEC	TEH	.560	ZBAZX	5	H	152
76	71	.24	97	PCT	10	P5	FB4	1.44		WAR					TEC	TEH	.560	ZBAZX	6	H	138
114	71	.34	96	PCT	16	P5	FB4	1.57		WAR					TEC	TEH	.560	ZBAZX	5	H	142
69	72	.18	252	PCT	10	P5	FB4	-.53		WAR					TEC	TEH	.560	ZBAZX	15	H	36
85	72	.22	109	PCT	12	P5	FB5	.00		WAR					TEC	TEH	.560	ZBAZX	5	H	155
93	72	.43	285	PCT	20	P5	FB5	.12		WAR					TEC	TEH	.560	ZBAZX	5	H	156
93	72	.20	262	PCT	11	P5	FB6	.02		WAR					TEC	TEH	.560	ZBAZX	5	H	156
109	72	.30	101	PCT	15	P5	FB4	-.15		WAR					TEC	TEH	.560	ZBAZX	5	H	157
109	72	.40	106	PCT	19	P5	FB5	-.02		WAR					TEC	TEH	.560	ZBAZX	5	H	157
117	72	.63	90	PCT	16	207	TSC	.13				.20	.20	01C	TEC		.560	ZYAXP	6	C	326
70	73	.26	91	PCT	11	P5	FB4	1.40		WAR					TEC	TEH	.560	ZBAZX	18	H	26
82	73	.23	246	PCT	13	P5	FB7	1.81		WAR					TEC	TEH	.560	ZBAZX	17	H	20
86	73	.23	236	PCT	10	P5	FB4	.48		WAR					TEC	TEH	.560	ZBAZX	18	H	22
86	73	.34	250	PCT	14	P5	FB5	1.73		WAR					TEC	TEH	.560	ZBAZX	18	H	22
88	73	.65	90	PCT	22	P5	FB5	1.69		WAR					TEC	TEH	.560	ZBAZX	18	H	21
88	73	.30	276	PCT	12	P5	FB7	1.77		WAR					TEC	TEH	.560	ZBAZX	18	H	21
94	73	.44	79	PCT	17	P5	FB5	1.19		WAR					TEC	TEH	.560	ZBAZX	18	H	20
94	73	.30	275	PCT	12	P5	FB7	1.70		WAR					TEC	TEH	.560	ZBAZX	18	H	20
104	73	.19	239	PCT	11	P5	FB5	1.55		WAR					TEC	TEH	.560	ZBAZX	17	H	15
104	73	.17	228	PCT	10	P5	FB6	.29		WAR					TEC	TEH	.560	ZBAZX	17	H	15
104	73	.20	238	PCT	11	P5	FB7	1.58		WAR					TEC	TEH	.560	ZBAZX	17	H	15
112	73	.23	76	PCT	12	P5	FB4	1.02		WAR					TEC	TEH	.560	ZBAZX	17	H	13
77	74	.31	241	PCT	16	P5	FB5	-1.60		WAR					TEC	TEH	.560	ZBAZX	17	H	23
85	74	.38	69	PCT	18	P5	FB5	-1.69		WAR					TEC	TEH	.560	ZBAZX	17	H	24
109	74	.33	62	PCT	17	P5	FB4	1.52		WAR					TEC	TEH	.560	ZBAZX	17	H	25

SG - A Service Induced Indications

McGuire 1 1EOC25

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11/27/2017 10:53:44

ROW	COL	VOLTS	DEG	IND	PER	CHN	LOCN	INCH1	INCH2	UTIL1	UTIL2	CRLEN	CRWID	CEG	BEGT	ENDT	PDIA	PTYPE	CAL	L	IDX
111	74	.10	24	PCT	6	P5	FB4	1.49		WAR					TEC	TEH	.560	ZBAZX	17	H	26
72	75	.40	236	PCT	19	P5	FB4	1.36		WAR					TEC	TEH	.560	ZBAZX	17	H	39
96	75	.36	54	PCT	18	P5	FB3	-.89		WAR					TEC	TEH	.560	ZBAZX	17	H	33
96	75	.19	231	PCT	11	P5	FB5	-.89		WAR					TEC	TEH	.560	ZBAZX	17	H	33
96	75	.51	72	PCT	23	P5	FB5	1.37		WAR					TEC	TEH	.560	ZBAZX	17	H	33
99	76	.48	250	PCT	22	P5	FB4	.66		WAR					TEC	TEH	.560	ZBAZX	17	H	40
113	76	.47	69	PCT	22	P5	FB4	-1.09		WAR					TEC	TEH	.560	ZBAZX	17	H	41
113	76	.29	73	PCT	15	P5	FB6	.50		WAR					TEC	TEH	.560	ZBAZX	17	H	41
94	77	.16	97	PCT	7	P5	FB4	.73		WAR					TEC	TEH	.560	ZBAZX	18	H	49
94	77	.24	279	PCT	10	P5	FB5	1.19		WAR					TEC	TEH	.560	ZBAZX	18	H	49
102	77	.47	85	PCT	18	P5	FB4	1.26		WAR					TEC	TEH	.560	ZBAZX	18	H	47
102	77	.32	269	PCT	13	P5	FB5	1.56		WAR					TEC	TEH	.560	ZBAZX	18	H	47
104	77	.14	221	PCT	8	P5	FB7	1.21		war					TEC	TEH	.560	ZBAZX	17	H	45
106	77	.32	230	PCT	16	P5	FB4	.84		WAR					TEC	TEH	.560	ZBAZX	17	H	44
106	77	.20	46	PCT	11	P5	FB5	-1.11		WAR					TEC	TEH	.560	ZBAZX	17	H	44
47	78	.31	282	PCT	12	P5	FB5	-1.06		WAR					TEC	TEH	.560	ZBAZX	20	H	229
78	79	.28	78	PCT	12	P5	FB5	1.71		WAR					TEC	TEH	.560	ZBAZX	18	H	68
100	79	.43	92	PCT	16	P5	FB4	1.09		WAR					TEC	TEH	.560	ZBAZX	18	H	63
100	79	.34	271	PCT	14	P5	FB5	1.55		WAR					TEC	TEH	.560	ZBAZX	18	H	63
113	80	.38	52	PCT	19	P5	FB3	-.75		WAR					TEC	TEH	.560	ZBAZX	17	H	66
113	80	.30	235	PCT	16	P5	FB4	-1.38		WAR					TEC	TEH	.560	ZBAZX	17	H	66
113	80	.30	71	PCT	16	P5	FB5	-1.28		WAR					TEC	TEH	.560	ZBAZX	17	H	66
113	80	.20	250	PCT	11	P5	FB6	-.92		WAR					TEC	TEH	.560	ZBAZX	17	H	66
85	82	.42	73	PCT	20	P5	FB3	-1.00		WAR					TEC	TEH	.560	ZBAZX	17	H	67
85	82	.25	64	PCT	14	P5	FB5	-.83		WAR					TEC	TEH	.560	ZBAZX	17	H	67
105	82	.26	55	PCT	14	P5	FB4	-1.62		WAR					TEC	TEH	.560	ZBAZX	17	H	68
60	83	.16	108	PCT	9	P5	FB4	-.96		WAR					TEC	TEH	.560	ZBAZX	19	H	189
94	83	.20	95	PCT	9	P5	FB4	1.25		WAR					TEC	TEH	.560	ZBAZX	18	H	83
114	83	.22	42	PCT	12	P5	FB3	-.93		WAR					TEC	TEH	.560	ZBAZX	17	H	69
53	84	.24	67	PCT	9	P5	FB5	.85		WAR					TEC	TEH	.560	ZBAZX	20	H	248

SG - A Service Induced Indications

McGuire 1 1EOC25

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11/27/2017 10:53:44

ROW	COL	VOLTS	DEG	IND	PER	CHN	LOCN	INCH1	INCH2	UTIL1	UTIL2	CRLEN	CRWID	CEG	BEGT	ENDT	PDIA	PTYPE	CAL	L	IDX
77	84	.12	276	PCT	7	P5	FB4	-1.23		WAR					TEC	TEH	.560	ZBAZX	17	H	81
81	84	.27	96	PCT	11	P5	FB5	-.71		WAR					TEC	TEH	.560	ZBAZX	18	H	90
85	84	.23	234	PCT	13	P5	FB4	-1.28		WAR					TEC	TEH	.560	ZBAZX	17	H	82
85	84	.29	65	PCT	15	P5	FB5	-.69		WAR					TEC	TEH	.560	ZBAZX	17	H	82
93	84	.24	63	PCT	13	P5	FB4	-.95		WAR					TEC	TEH	.560	ZBAZX	17	H	83
101	84	.36	63	PCT	18	P5	FB5	-.63		WAR					TEC	TEH	.560	ZBAZX	17	H	84
50	87	.19	83	PCT	10	P5	FB6	.98		WAR					TEC	TEH	.560	ZBAZX	21	H	12
66	87	.09	267	PCT	6	P5	FB3	.83		WAR					TEC	TEH	.560	ZBAZX	21	H	8
35	88	.16	268	PCT	7	P5	FB5	-.91		WAR					TEC	TEH	.560	ZBAZX	22	H	16
55	88	.12	288	PCT	5	P5	FB3	-1.95		WAR					TEC	TEH	.560	ZBAZX	22	H	17
56	89	.14	101	PCT	6	P5	FB4	-.85		WAR					TEC	TEH	.560	ZBAZX	22	H	20
60	89	.22	88	PCT	12	P5	FB5	1.64		WAR					TEC	TEH	.560	ZBAZX	21	H	19
50	91	.14	85	PCT	8	P5	FB2	.78		WAR					TEC	TEH	.560	ZBAZX	21	H	32
80	91	.26	54	PCT	10	P5	FB4	-1.03		WAR					TEC	TEH	.560	ZBAZX	20	H	39
50	93	.14	83	PCT	8	P5	FB4	.79		WAR					TEC	TEH	.560	ZBAZX	21	H	42
50	95	.11	258	PCT	7	P5	FB4	1.18		WAR					TEC	TEH	.560	ZBAZX	21	H	52
108	95	.20	89	PCT	11	P5	FB6	2.18		WAR					TEC	TEH	.560	ZBAZX	19	H	46
64	97	.12	54	PCT	7	P5	FB4	-1.07		WAR					TEC	TEH	.560	ZBAZX	21	H	57
58	101	.16	71	PCT	9	P5	FB4	-1.24		WAR					TEC	TEH	.560	ZBAZX	21	H	77
72	101	.10	127	PCT	6	P5	FB4	-1.27		WAR					TEC	TEH	.560	ZBAZX	19	H	75
74	103	.13	35	PCT	5	P5	FB5	.60		WAR					TEC	TEH	.560	ZBAZX	20	H	109
63	110	.11	300	PCT	5	P5	FB4	1.03		WAR					TEC	TEH	.560	ZBAZX	22	H	125
86	119	.94	271	PCT	19	78	01C	-1.73				.22	.14	01C	TEC		.560	ZYAXP	4	C	226
88	119	.94	76	PCT	19	207	01C	-2.86				.32	.27	01C	TEC		.560	ZYAXP	3	C	230
49	126	.12	260	PCT	5	P5	FB4	1.06		WAR					TEC	TEH	.560	ZBAZX	22	H	211

Tubes: 124 Records: 171
ST Max

SG - B Service Induced Indications

McGuire 1 1EOC25

MNS 20171001

11/27/2017 12:36:15

ROW	COL	VOLTS	DEG	IND	PER	CHN	LOCN	INCH1	INCH2	UTIL1	UTIL2	CRLEN	CRWID	CEG	BEGT	ENDT	PDIA	PTYPE	CAL	L	IDX
45	18	.27	266	PCT	14	P5	FB4	.88		WAR					TEH	TEC	.560	ZBAZX	26	C	63
88	31	.18	284	PCT	9	P5	08H	.30		WAR					TEH	TEC	.560	ZBAZX	23	C	173
96	35	.42	94	PCT	13	166	TSH	3.42				.20	.20	01H	TEH	.560	ZYAXP	4	H	142	
100	35	.10	230	PCT	6	207	TSH	2.15				.27	.14	01H	TEH	.560	ZYAXP	3	H	188	
97	36	.16	252	PCT	8	207	TSH	3.31				.27	.14	01H	TEH	.560	ZYAXP	3	H	191	
62	43	.42	281	PCT	21	P5	07H	-1.62		WAR					TEH	TEC	.560	ZBAZX	17	C	54
68	51	.29	93	PCT	13	P5	FB5	-.97		WAR					TEH	TEC	.560	ZBAZX	24	C	118
45	52	.13	270	PCT	7	P5	06H	.50		WAR					TEH	TEC	.560	ZBAZX	24	C	117
45	52	.12	102	PCT	6	P5	FB4	-1.02		WAR					TEH	TEC	.560	ZBAZX	24	C	117
61	52	.17	81	PCT	9	P5	FB5	1.64		WAR					TEH	TEC	.560	ZBAZX	25	C	117
46	57	.17	62	PCT	8	P5	FB3	-2.06		WAR					TEH	TEC	.560	ZBAZX	24	C	96
77	64	.29	263	PCT	16	P5	FB4	-1.12		WAR					TEH	TEC	.560	ZBAZX	19	C	71
81	64	.43	96	PCT	18	P5	FB4	-1.21		WAR					TEH	TEC	.560	ZBAZX	21	C	84
68	65	.25	222	PCT	12	P5	FB4	-.78		WAR					TEH	TEC	.560	ZBAZX	24	C	56
82	65	.19	89	PCT	12	P5	FB5	-1.61		WAR					TEH	TEC	.560	ZBAZX	19	C	67
94	65	.11	98	PCT	5	P5	FB4	-1.09		WAR					TEH	TEC	.560	ZBAZX	21	C	77
77	66	.23	91	PCT	13	P5	FB4	-1.25		WAR					TEH	TEC	.560	ZBAZX	19	C	60
81	66	.29	88	PCT	13	P5	FB5	1.34		WAR					TEH	TEC	.560	ZBAZX	21	C	72
74	67	.16	255	PCT	10	P5	FB4	1.43		WAR					TEH	TEC	.560	ZBAZX	19	C	58
76	67	.21	244	PCT	10	P5	FB4	1.46		WAR					TEH	TEC	.560	ZBAZX	21	C	70
80	67	.21	286	PCT	12	P5	FB4	1.41		WAR					TEH	TEC	.560	ZBAZX	19	C	57
82	67	.17	244	PCT	10	P5	FB4	1.71		WAR					TEH	TEC	.560	ZBAZX	19	C	56
94	67	.24	68	PCT	11	P5	FB4	1.49		WAR					TEH	TEC	.560	ZBAZX	21	C	65
91	68	.27	94	PCT	15	P5	FB5	-1.18		WAR					TEH	TEC	.560	ZBAZX	19	C	48
97	68	.21	93	PCT	13	P5	FB5	-1.13		WAR					TEH	TEC	.560	ZBAZX	19	C	49

SG - B Service Induced Indications

McGuire 1 1EOC25

MNS 20171001

11/27/2017 12:36:15

ROW	COL	VOLTS	DEG	IND	PER	CHN	LOCN	INCH1	INCH2	UTIL1	UTIL2	CRLN	CRWID	CEG	BEGT	ENDT	PDIA	PTYPE	CAL	L	IDX
86	69	.20	85	PCT	9	P5	FB6	1.15		WAR					TEH	TEC	.560	ZBAZX	21	C	56
102	69	.20	236	PCT	9	P5	FB6	1.28		WAR					TEH	TEC	.560	ZBAZX	21	C	52
89	70	.21	77	PCT	13	P5	FB5	1.28		WAR					TEH	TEC	.560	ZBAZX	19	C	37
78	71	.39	73	PCT	16	P5	FB5	-.78		WAR					TEH	TEC	.560	ZBAZX	21	C	45
88	71	.20	80	PCT	12	P5	FB5	-1.11		WAR					TEH	TEC	.560	ZBAZX	19	C	30
5	72	.13	249	PCT	8	P5	07H	1.43		WAR				09C	TEH	.540	ZBAUC	16	H	13	
89	72	.58	94	PCT	26	P5	FB5	.00		WAR					TEH	TEC	.560	ZBAZX	19	C	35
95	72	.43	256	PCT	21	P5	FB5	-.20		WAR					TEH	TEC	.560	ZBAZX	19	C	34
97	72	.75	263	PCT	26	P5	FB4	.07		WAR					TEH	TEC	.560	ZBAZX	21	C	47
97	72	.70	267	PCT	25	P5	FB5	.24		WAR					TEH	TEC	.560	ZBAZX	21	C	47
99	72	.27	87	PCT	12	P5	FB5	.02		WAR					TEH	TEC	.560	ZBAZX	21	C	46
64	73	.18	98	PCT	9	P5	FB5	1.27		WAR					TEH	TEC	.560	ZBAZX	38	C	34
94	73	.16	94	PCT	8	P5	FB2	-1.82		WAR					TEH	TEC	.560	ZBAZX	29	C	70
94	73	.27	279	PCT	13	P5	FB4	-1.57		WAR					TEH	TEC	.560	ZBAZX	29	C	70
102	73	.14	109	PCT	7	P5	FB4	-1.17		WAR					TEH	TEC	.560	ZBAZX	29	C	67
106	73	.13	274	PCT	7	P5	FB4	1.70		WAR					TEH	TEC	.560	ZBAZX	28	C	10
116	73	.18	313	PCT	9	P5	FB4	1.69		WAR					TEH	TEC	.560	ZBAZX	29	C	63
105	74	.27	106	PCT	13	P5	FB5	.89		WAR					TEH	TEC	.560	ZBAZX	28	C	24
94	75	.58	291	PCT	23	P5	FB5	-1.37		WAR					TEH	TEC	.560	ZBAZX	29	C	110
96	75	.64	95	PCT	25	P5	FB5	-1.29		WAR					TEH	TEC	.560	ZBAZX	28	C	32
108	75	.19	284	PCT	10	P5	FB4	-.72		WAR					TEH	TEC	.560	ZBAZX	29	C	107
110	75	.20	263	PCT	10	P5	FB6	.76		WAR					TEH	TEC	.560	ZBAZX	28	C	26
114	75	.28	110	PCT	13	P5	FB3	1.21		WAR					TEH	TEC	.560	ZBAZX	29	C	106
114	75	.54	286	PCT	22	P5	FB5	-1.25		WAR					TEH	TEC	.560	ZBAZX	29	C	106
114	75	.26	99	PCT	13	P5	FB7	1.39		WAR					TEH	TEC	.560	ZBAZX	29	C	106
57	76	.91	101	PCT	31	P5	FB5	1.48		WAR					TEH	TEC	.560	ZBAZX	38	C	69
84	77	.21	306	PCT	11	P5	FB4	-.99		WAR					TEH	TEC	.560	ZBAZX	30	C	18

SG - B Service Induced Indications

McGuire 1 1E0C25

MNS 20171001

11/27/2017 12:36:15

ROW	COL	VOLTS	DEG	IND	PER	CHN	LOCN	INCH1	INCH2	UTIL1	UTIL2	CRLEN	CRWID	CEG	BEGT	ENDT	PDIA	PTYPE	CAL	L	IDX
92	77	.19	307	PCT	10	P5	FB4	-.96		WAR					TEH	TEC	.560	ZBAZX	30	C	16
92	77	.48	298	PCT	21	P5	FB5	-1.27		WAR					TEH	TEC	.560	ZBAZX	30	C	16
94	77	.40	317	PCT	18	P5	FB5	-1.15		WAR					TEH	TEC	.560	ZBAZX	30	C	15
106	77	.32	85	PCT	15	P5	FB5	-1.20		WAR					TEH	TEC	.560	ZBAZX	31	C	9
112	77	.53	96	PCT	21	P5	FB4	-1.10		WAR					TEH	TEC	.560	ZBAZX	31	C	8
112	77	.19	236	PCT	10	P5	FB5	.80		WAR					TEH	TEC	.560	ZBAZX	31	C	8
51	78	.17	289	PCT	9	P5	FB4	-.99		WAR					TEH	TEC	.560	ZBAZX	40	C	18
89	78	.42	296	PCT	19	P5	FB4	-1.03		WAR					TEH	TEC	.560	ZBAZX	30	C	33
89	78	.19	135	PCT	10	P5	FB4	1.06		WAR					TEH	TEC	.560	ZBAZX	30	C	33
101	78	.22	302	PCT	11	P5	FB4	1.00		WAR					TEH	TEC	.560	ZBAZX	30	C	36
111	78	.29	269	PCT	14	P5	FB5	-1.54		WAR					TEH	TEC	.560	ZBAZX	28	C	25
76	79	.22	75	PCT	11	P5	FB4	-1.17		WAR					TEH	TEC	.560	ZBAZX	31	C	27
78	79	.31	110	PCT	15	P5	FB5	1.46		WAR					TEH	TEC	.560	ZBAZX	30	C	30
92	79	.19	85	PCT	10	P5	FB5	-1.31		WAR					TEH	TEC	.560	ZBAZX	31	C	26
81	80	.18	78	PCT	9	P5	FB2	-1.92		WAR					TEH	TEC	.560	ZBAZX	30	C	42
95	80	.24	123	PCT	12	P5	FB4	1.20		WAR					TEH	TEC	.560	ZBAZX	30	C	43
49	82	.22	292	PCT	11	P5	FB5	.93		WAR					TEH	TEC	.560	ZBAZX	38	C	94
86	83	.21	75	PCT	11	P5	FB4	-1.58		WAR					TEH	TEC	.560	ZBAZX	32	C	27
110	83	.17	67	PCT	10	P5	FB4	1.20		WAR					TEH	TEC	.560	ZBAZX	32	C	21
92	87	.28	104	PCT	13	P5	FB4	1.16		WAR					TEH	TEC	.560	ZBAZX	33	C	54
108	87	.12	296	PCT	6	P5	FB4	-.63		WAR					TEH	TEC	.560	ZBAZX	33	C	58
39	88	.07	96	PCT	4	P5	FB4	-1.00		WAR					TEH	TEC	.560	ZBAZX	38	C	118
65	88	.28	277	PCT	14	P5	FB4	1.44		WAR					TEH	TEC	.560	ZBAZX	38	C	27
106	89	.22	71	PCT	10	P5	FB5	-1.15		WAR					TEH	TEC	.560	ZBAZX	33	C	65

ROW	COL	VOLTS	DEG	IND	PER	CHN	LOCN	INCH1	INCH2	UTIL1	UTIL2	CRLEN	CRWID	CEG	BEGT	ENDT	PDIA	PTYPE	CAL	L	IDX
68	53	.18	257	PCT	8	P5	FB4	-1.61		WAR					TEC	TEH	.560	ZBAZX	15	H	192
75	54	.24	283	PCT	10	P5	FB4	-1.31		WAR					TEC	TEH	.560	ZBAZX	12	H	89
95	54	.36	214	PCT	13	P5	FB4	1.20		WAR					TEC	TEH	.560	ZBAZX	11	H	70
116	57	.18	74	PCT	9	207	TSC	12.79				.14	.14	01C	TEC	.560	ZYAXP	4	C	19	
116	57	.69	99	PCT	17	207	TSC	13.71				.20	.20	01C	TEC	.560	ZYAXP	4	C	19	
116	57	.50	91	PCT	14	207	TSC	14.15				.16	.25	01C	TEC	.560	ZYAXP	4	C	19	
63	58	.63	73	PCT	22	P5	FB5	1.07		WAR					TEC	TEH	.560	ZBAZX	18	H	18
70	59	.28	54	PCT	11	P5	FB5	-1.35		WAR					TEC	TEH	.560	ZBAZX	11	H	37
82	59	.25	94	PCT	10	P5	FB5	-.72		WAR					TEC	TEH	.560	ZBAZX	12	H	45
86	59	.35	241	PCT	13	P5	FB3	1.16		WAR					TEC	TEH	.560	ZBAZX	11	H	33
86	59	.46	57	PCT	16	P5	FB5	-1.10		WAR					TEC	TEH	.560	ZBAZX	11	H	33
90	59	.23	256	PCT	10	P5	FB3	.85		WAR					TEC	TEH	.560	ZBAZX	12	H	43
96	59	.49	240	PCT	17	P5	FB4	1.19		WAR					TEC	TEH	.560	ZBAZX	11	H	30
100	59	.19	291	PCT	8	P5	FB4	-1.57		WAR					TEC	TEH	.560	ZBAZX	12	H	40
100	59	.20	45	PCT	9	P5	FB6	1.38		WAR					TEC	TEH	.560	ZBAZX	12	H	40
69	60	.32	94	PCT	12	P5	FB4	-.75		WAR					TEC	TEH	.560	ZBAZX	17	H	28
73	60	.48	233	PCT	17	P5	FB4	-1.11		WAR					TEC	TEH	.560	ZBAZX	11	H	38
75	60	.39	229	PCT	14	P5	FB4	-1.04		WAR					TEC	TEH	.560	ZBAZX	11	H	39
77	60	.35	89	PCT	14	P5	FB4	-.75		WAR					TEC	TEH	.560	ZBAZX	12	H	48
79	60	.14	247	PCT	6	P5	FB4	-.83		WAR					TEC	TEH	.560	ZBAZX	12	H	49
83	60	.46	62	PCT	16	P5	FB4	-1.21		WAR					TEC	TEH	.560	ZBAZX	11	H	40
85	60	.76	70	PCT	24	P5	FB4	-.94		WAR					TEC	TEH	.560	ZBAZX	11	H	41
95	60	.47	59	PCT	16	P5	FB4	-1.13		WAR					TEC	TEH	.560	ZBAZX	11	H	42
76	61	.38	92	PCT	15	P5	FB5	-.30		WAR					TEC	TEH	.560	ZBAZX	9	H	28
80	61	.27	72	PCT	11	P5	FB5	-.50		WAR					TEC	TEH	.560	ZBAZX	9	H	26
86	61	.37	87	PCT	15	P5	FB5	-1.51		WAR					TEC	TEH	.560	ZBAZX	9	H	23
90	61	.27	274	PCT	11	P5	FB6	-.67		WAR					TEC	TEH	.560	ZBAZX	9	H	21

SG - C Service Induced Indications

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ROW	COL	VOLTS	DEG	IND	PER	CHN	LOCN	INCH1	INCH2	UTIL1	UTIL2	CRLEN	CRWID	CEG	BEGT	ENDT	PDIA	PTYPE	CAL	L	IDX		
94	61	.40	258	PCT	14	P5	FB5	-1.68		WAR							TEC	TEH	.560	ZBAZX	20	H	43
94	61	.31	255	PCT	11	P5	FB6	-.60		WAR							TEC	TEH	.560	ZBAZX	20	H	43
96	61	.38	91	PCT	15	P5	FB5	-1.50		WAR							TEC	TEH	.560	ZBAZX	9	H	18
98	61	.30	84	PCT	12	P5	FB6	-.02		WAR							TEC	TEH	.560	ZBAZX	9	H	17
100	61	.43	91	PCT	16	P5	FB6	.61		WAR							TEC	TEH	.560	ZBAZX	9	H	16
110	61	.82	270	PCT	26	P5	FB4	-1.20		WAR							TEC	TEH	.560	ZBAZX	9	H	11
114	61	.40	81	PCT	15	P5	FB6	1.11		WAR							TEC	TEH	.560	ZBAZX	9	H	6
85	62	.27	100	PCT	11	P5	FB6	-1.79		WAR							TEC	TEH	.560	ZBAZX	9	H	32
99	62	.21	75	PCT	9	P5	FB7	.56		WAR							TEC	TEH	.560	ZBAZX	9	H	33
82	63	.23	79	PCT	10	P5	FB5	-1.30		WAR							TEC	TEH	.560	ZBAZX	9	H	54
88	63	.23	246	PCT	10	P5	FB4	1.51		WAR							TEC	TEH	.560	ZBAZX	9	H	51
102	63	.12	285	PCT	5	P5	FB7	1.74		WAR							TEC	TEH	.560	ZBAZX	9	H	44
110	63	.23	91	PCT	10	P5	FB7	1.73		WAR							TEC	TEH	.560	ZBAZX	9	H	40
65	64	.08	263	PCT	4	P5	FB4	1.74		WAR							TEC	TEH	.560	ZBAZX	18	H	56
69	64	.24	105	PCT	10	P5	FB4	1.12		WAR							TEC	TEH	.560	ZBAZX	17	H	45
95	64	.50	85	PCT	18	P5	FB5	-.96		WAR							TEC	TEH	.560	ZBAZX	9	H	61
101	64	.47	271	PCT	17	P5	FB5	-1.07		WAR							TEC	TEH	.560	ZBAZX	9	H	62
84	65	.28	90	PCT	11	P5	FB5	-1.64		WAR							TEC	TEH	.560	ZBAZX	9	H	82
94	65	.28	247	PCT	11	P5	FB5	-1.40		WAR							TEC	TEH	.560	ZBAZX	9	H	77
104	65	.09	65	PCT	4	P5	FB4	-.80		WAR							TEC	TEH	.560	ZBAZX	9	H	72
104	65	.31	270	PCT	12	P5	FB4	1.15		WAR							TEC	TEH	.560	ZBAZX	9	H	72
108	65	.35	258	PCT	14	P5	FB4	-1.52		WAR							TEC	TEH	.560	ZBAZX	9	H	70
108	65	.31	92	PCT	12	P5	FB5	-1.10		WAR							TEC	TEH	.560	ZBAZX	9	H	70
33	66	.10	232	PCT	5	P5	FB5	1.76		WAR							TEC	TEH	.560	ZBAZX	18	H	39
75	66	.44	88	PCT	17	P5	FB4	-1.29		WAR							TEC	TEH	.560	ZBAZX	9	H	90
64	67	.28	259	PCT	11	P5	FB5	-1.17		WAR							TEC	TEH	.560	ZBAZX	17	H	58

SG - C Service Induced Indications

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ROW	COL	VOLTS	DEG	IND	PER	CHN	LOCN	INCH1	INCH2	UTIL1	UTIL2	CRLEN	CRWID	CEG	BEGT	ENDT	PDIA	PTYPE	CAL	L	IDX
66	67	.18	252	PCT	8	P5	FB5	-.94		WAR					TEC	TEH	.560	ZBAZX	18	H	68
84	67	.39	98	PCT	15	P5	FB5	-1.28		WAR					TEC	TEH	.560	ZBAZX	9	H	112
88	67	.27	78	PCT	11	P5	FB4	1.11		WAR					TEC	TEH	.560	ZBAZX	9	H	110
90	67	.20	67	PCT	8	P5	FB6	-.95		WAR					TEC	TEH	.560	ZBAZX	9	H	109
96	67	.26	111	PCT	11	P5	FB4	1.33		WAR					TEC	TEH	.560	ZBAZX	9	H	106
96	67	.27	89	PCT	11	P5	FB6	-1.15		WAR					TEC	TEH	.560	ZBAZX	9	H	106
110	67	.41	79	PCT	16	P5	FB4	-1.06		WAR					TEC	TEH	.560	ZBAZX	9	H	99
61	68	.15	79	PCT	6	P5	FB5	.79		WAR					TEC	TEH	.560	ZBAZX	17	H	71
93	68	.25	268	PCT	10	P5	FB5	-1.19		WAR					TEC	TEH	.560	ZBAZX	9	H	120
105	68	.31	76	PCT	12	P5	FB6	-1.03		WAR					TEC	TEH	.560	ZBAZX	9	H	122
107	68	.38	82	PCT	15	P5	FB5	-1.08		WAR					TEC	TEH	.560	ZBAZX	9	H	123
109	68	.33	97	PCT	13	P5	FB5	1.06		WAR					TEC	TEH	.560	ZBAZX	9	H	124
78	69	.34	246	PCT	13	P5	FB5	-1.49		WAR					TEC	TEH	.560	ZBAZX	12	H	7
82	69	.64	89	PCT	22	P5	FB4	1.49		WAR					TEC	TEH	.560	ZBAZX	9	H	145
87	70	.32	100	PCT	13	P5	FB5	1.38		WAR					TEC	TEH	.560	ZBAZX	12	H	31
93	70	.38	105	PCT	15	P5	FB5	-.96		WAR					TEC	TEH	.560	ZBAZX	12	H	32
90	71	.20	297	PCT	8	P5	FB4	-1.58		WAR					TEC	TEH	.560	ZBAZX	12	H	26
90	71	.25	83	PCT	10	P5	FB5	-1.44		WAR					TEC	TEH	.560	ZBAZX	12	H	26
77	72	.38	43	PCT	14	P5	FB4	.00		WAR					TEC	TEH	.560	ZBAZX	11	H	23
82	73	.21	243	PCT	9	P5	FB5	1.64		WAR					TEC	TEH	.560	ZBAZX	18	H	99
86	73	.52	82	PCT	18	P5	FB5	1.57		WAR					TEC	TEH	.560	ZBAZX	17	H	94
90	73	.27	250	PCT	11	P5	FB5	1.55		WAR					TEC	TEH	.560	ZBAZX	18	H	97
104	73	.18	109	PCT	8	P5	FB4	1.35		WAR					TEC	TEH	.560	ZBAZX	17	H	90
93	74	.36	278	PCT	14	P5	FB4	-1.16		WAR					TEC	TEH	.560	ZBAZX	18	H	103
62	77	.42	257	PCT	16	P5	FB5	-1.01		WAR					TEC	TEH	.560	ZBAZX	25	H	21

SG - C Service Induced Indications

McGuire 1 1EOC25

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11/27/2017 12:46:26

ROW	COL	VOLTS	DEG	IND	PER	CHN	LOCN	INCH1	INCH2	UTIL1	UTIL2	CRLEN	CRWID	CEG	BEGT	ENDT	PDIA	PTYPE	CAL	L	IDX		
63	88	.12	74	PCT	6	P5	FB4	-.97		WAR							TEC	TEH	.560	ZBAZX	30	H	34
66	93	.11	237	PCT	5	P5	05H	.39		WAR							TEC	TEH	.560	ZBAZX	30	H	45
33	104	.41	88	PCT	15	P5	04H	-1.54		WAR							TEC	TEH	.560	ZBAZX	29	H	137
29	124	.22	124	PCT	9	P5	04H	-1.68		WAR							TEC	TEH	.560	ZBAZX	29	H	223

SG - D Service Induced Indications

McGuire 1 1EOC25

MNS 20171001

11/27/2017 12:50:05

ROW	COL	VOLTS	DEG	IND	PER	CHN	LOCN	INCH1	INCH2	UTIL1	UTIL2	CRLEN	CRWID	CEG	BEGT	ENDT	PDIA	PTYPE	CAL	L	IDX
34	7	.76	61	PCT	17	207	TSH	.16				.41	.27		01H	TEH	.560	ZYAXP	6	H	186
31	8	.79	53	PCT	18	207	TSH	.20				.19	.27		01H	TEH	.560	ZYAXP	40	H	9
58	41	.14	250	PCT	7	P5	FB5	1.10		WAR					TEC	TEH	.560	ZBAZX	18	H	169
68	55	.18	261	PCT	8	P5	FB6	.80		WAR					TEC	TEH	.560	ZBAZX	18	H	97
103	56	.18	78	PCT	8	P5	FB4	-.83		WAR					TEC	TEH	.560	ZBAZX	14	H	120
72	57	.22	90	PCT	9	P5	FB4	-1.26		WAR					TEC	TEH	.560	ZBAZX	14	H	118
51	60	.21	104	PCT	8	P5	FB5	.90		WAR					TEC	TEH	.560	ZBAZX	19	H	85
92	65	.14	246	PCT	6	P5	FB4	-1.00		WAR					TEC	TEH	.560	ZBAZX	15	H	53
47	68	.17	98	PCT	7	P5	FB4	-.82		WAR					TEC	TEH	.560	ZBAZX	19	H	56
97	72	.16	242	PCT	7	P5	FB4	-.50		WAR					TEC	TEH	.560	ZBAZX	14	H	34
97	72	.17	290	PCT	7	P5	FB5	-.25		WAR					TEC	TEH	.560	ZBAZX	14	H	34
98	73	.26	276	PCT	11	P5	FB4	.99		WAR					TEC	TEH	.560	ZBAZX	2	H	27
87	74	.25	61	PCT	11	P5	FB4	1.22		WAR					TEC	TEH	.560	ZBAZX	26	H	20
56	75	.27	104	PCT	11	P5	FB5	-.35		WAR					TEC	TEH	.560	ZBAZX	30	H	136
110	77	.24	90	PCT	10	P5	FB4	-.61		WAR					TEC	TEH	.560	ZBAZX	25	H	67
89	78	.42	80	PCT	16	P5	FB5	-1.03		WAR					TEC	TEH	.560	ZBAZX	24	H	55
68	79	.31	84	PCT	11	P5	FB5	-1.16		WAR					TEC	TEH	.560	ZBAZX	31	H	117
100	79	.15	120	PCT	6	P5	FB7	.58		WAR					TEC	TEH	.560	ZBAZX	25	H	51
67	80	.18	288	PCT	8	P5	FB7	1.91		WAR					TEC	TEH	.560	ZBAZX	30	H	120
93	80	.26	66	PCT	11	P5	FB6	-.91		WAR					TEC	TEH	.560	ZBAZX	24	H	17
97	80	.19	276	PCT	8	P5	FB7	1.76		WAR					TEC	TEH	.560	ZBAZX	25	H	17
99	80	.64	69	PCT	22	P5	FB4	-.93		WAR					TEC	TEH	.560	ZBAZX	24	H	18
99	80	.29	67	PCT	12	P5	FB5	-1.16		WAR					TEC	TEH	.560	ZBAZX	24	H	18
99	80	.36	249	PCT	14	P5	FB7	1.96		WAR					TEC	TEH	.560	ZBAZX	24	H	18
107	80	.30	237	PCT	12	P5	FB4	.99		WAR					TEC	TEH	.560	ZBAZX	24	H	19
107	80	.38	81	PCT	15	P5	FB6	-.58		WAR					TEC	TEH	.560	ZBAZX	24	H	19
88	81	.19	299	PCT	8	P5	FB5	1.41		WAR					TEC	TEH	.560	ZBAZX	5	H	48

SG - D Service Induced Indications

McGuire 1 1EOC25

MNS 20171001

11/27/2017 12:50:05

ROW	COL	VOLTS	DEG	IND	PER	CHN	LOCN	INCH1	INCH2	UTIL1	UTIL2	CRLEN	CRWID	CEG	BEGT	ENDT	PDIA	PTYPE	CAL	L	IDX		
96	81	.40	282	PCT	15	P5	FB5	1.14		WAR							TEC	TEH	.560	ZBAZX	5	H	52
91	82	.30	75	PCT	12	P5	FB4	1.25		WAR							TEC	TEH	.560	ZBAZX	24	H	41
97	82	.22	246	PCT	9	P5	FB3	.56		WAR							TEC	TEH	.560	ZBAZX	24	H	42
112	83	.25	122	PCT	10	P5	FB4	.93		WAR							TEC	TEH	.560	ZBAZX	5	H	15
112	83	.20	100	PCT	8	P5	FB5	1.16		WAR							TEC	TEH	.560	ZBAZX	5	H	15
76	85	.18	123	PCT	7	P5	FB4	.90		WAR							TEC	TEH	.560	ZBAZX	3	H	27
77	86	.31	86	PCT	12	P5	FB5	-1.63		WAR							TEC	TEH	.560	ZBAZX	3	H	23
85	86	.29	88	PCT	11	P5	FB5	-1.65		WAR							TEC	TEH	.560	ZBAZX	3	H	22
87	90	.28	67	PCT	11	P5	FB4	-.89		WAR							TEC	TEH	.560	ZBAZX	24	H	24
59	92	.25	106	PCT	10	P5	FB4	1.46		WAR							TEC	TEH	.560	ZBAZX	31	H	57
45	98	.17	246	PCT	7	P5	FB5	-1.28		WAR							TEC	TEH	.560	ZBAZX	30	H	26
15	142	.18	307	PCT	8	P5	07H	.36		WAR							TEC	TEH	.560	ZBAZX	30	H	159