NEXTera ENERGY SEABROOK

October 13, 2009

Docket No. 50-443
SBK-L-09193

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555-0001

Seabrook Station

10 CFR 50.55a Request: PR-1, Containment Building Spray Pump Testing on Recirculation Flow Path for the Third 10-Year Interval

Pursuant to 10 CFR 50.55a(a)(3)(i), NextEra Energy Seabrook, LLC (NextEra Energy Seabrook) hereby requests NRC approval of the following request for the third 10-year interval: use of the flow allowed by the recirculation flow path for In-Service Testing (IST) of the Containment Building Spray (CBS) Pumps in lieu of the flow specified in the ASME OM Code. The request is provided as Attachment 1 to this letter. Attachment 2 provides hydraulic test data to support the request.

NextEra Energy Seabrook requests approval by the end of the second 10-year interval, August 17, 2010.

A similar request for the second 10-year interval was approved by the NRC on May 30, 2003 (NRC Accession No. ML031070510). The circumstances and basis for the prior NRC approval have not changed. NextEra Energy Seabrook is near the end of its second 10-year interval using ASME OM Code, 1995 Edition, 1996 Addenda, and will be transitioning to the latest edition of the ASME OM Code incorporated by reference in 10CFR50.55a(b) - ASME OM Code, 2004 Edition, for the third 10-year interval which starts in August 2010. A line by line comparison has shown the new ASME OM Code, 2004 Edition to be consistent with ASME OM Code, 1995 Edition, 1996 Addenda for the issue described below.

ISTB-3300(e)(1) and (2) of ASME OM Code specify that reference values shall be established within +/-20% of the pump design flow. The initial design of the CBS system incorporated a 4-inch recirculation line for testing. This line is capable of flowing 68% of design flow (63% of Best Efficiency Point [BEP]). Relief Request PR-1 was submitted at the start of the second 10-year interval for Seabrook Station to test the CBS pumps using the original recirculation line at the reduced flow. This was accepted by the NRC for the second 10-year interval. NextEra Energy Seabrook is requesting acceptance

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of this lower flow rate for the third 10-year interval for Seabrook Station per 10 CFR 50.55a Request PR-1 attached to this letter.

If you have any questions regarding this submittal, please contact Mr. Michael O'Keefe, Licensing Manager, at (603) 773-7745.

Sincerely,

NextEra Energy Seabrook, LLC

Gene St. Pierre
Vice President - North

cc: S. J. Collins, NRC Region I Administrator
D. L. Egan, NRC Project Manager
W. J. Raymond, NRC Resident Inspector

Attachment 1 to SBK-L-09193

Proposed Alternative
in Accordance with 10 CFR 50.55a(a)(3)(i)

--Alternative Provides Acceptable Level of Quality and Safety--

Relief Request PR-1, CBS Pump Testing on Recirculation Flow Path

1. ASME Code Component(s) Affected

Containment Building Spray Pumps
CBS-P9A, CBS-P9B

2. Applicable Code Edition and Addenda

ASME OM Code 2004 Edition

3. Applicable Code Requirement

ISTB 3300 Reference Values

(e) Reference values shall be established in a region(s) of relatively stable pump flow.

(1) Reference values shall be established within +/-20% of pump design flow rate for the Comprehensive test.

(2) Reference values shall be established within +/-20% of pump design flow rate for Group A and Group B test, if practicable. If not practicable, the reference point flow rate shall be established at the highest practical flow rate.

4. Reason for Request

- Testing of the Containment Building Spray Pumps (CBS-P9A, CBS-P9B) is performed using a recirculation line that passes 68% of the Design Flow

The Containment Building Spray (CBS) system is designed to remove the energy discharged to the containment following a loss-of-coolant accident (LOCA) or main steam line break (MSLB) to prevent the containment pressure from exceeding design pressure and to reduce and maintain containment temperature and pressure within acceptable limits. The CBS pumps are motor-driven, horizontal, centrifugal pumps. The subject pumps are designed to take suction from either the Refueling Water Storage Tank (RWST) in the Emergency Core Cooling System (ECCS) injection mode or the containment recirculation

sump in the ECCS recirculation mode. The CBS pump discharges the flow back into the containment through the containment spray nozzles. Each train of the CBS system includes one 100% capacity pump.

As such, the CBS pumps are required to be inservice tested in accordance with Subsection ISTB of the 2004 Edition, of American Society of Mechanical Engineers (ASME) Code for the Operation and Maintenance of Nuclear Power Plants (OM Code). Subsection ISTB 3300(e)(1) of the OM Code requires that comprehensive tests reference values be established within ± 20% of pump design flow.

The flow path used to perform both the biennial comprehensive pump test and the quarterly Group A test are the same. The CBS pumps take suction from the Refueling Water Storage Tank (RWST) through a series of manual valves and a suction check valve and discharge water back to the RWST. The pump discharge flow path contains a piping run to a heat exchanger (CBS-E-16A or CBS-E-16B) and then continues to the containment spray ring header penetration(s) (X-14 and X-15). Upstream of this penetration is the return line to the RWST. In the return line, there is an air-operated valve (AOV) (open/close type) specific to each train (CBS-V31 and CBS-V32) with no remote throttling capability. The return lines for each train tie together into a common line that utilizes a similar type AOV (CBS-V33). This common line then connects to the RWST, which is located downstream. The Safety Injection pumps also utilize this common return line to the RWST. CBS pump flow is measured utilizing a flow indicator (FI-2340) located in the common return line to the RWST. Due to the design of the valves, there is no practical method to vary the resistance of test path to adjust flow. IST testing is performed at this fixed reference condition.

During the pre-operational test period, a test (PT 1-12.1) was performed to verify CBS system performance. PT 12.1 was performed utilizing a temporary manual throttle valve installed in a spool piece (for a temporary strainer) in the common RWST return line. This spool piece still exists as a bolted joint but the manual valves and strainer have been removed. Installation of a similar temporary throttle valve with the plant on-line to achieve additional flow points for the subject pumps is impractical due to the use of this line by other pumps such as the Safety Injection pumps. Installation of a temporary manual throttle valve during shutdown periods would require extensive and intrusive modifications.

Alternative means to vary system resistance in order to provide additional test data were evaluated. The local manual throttling of either CBS-V31, CBS-V32 or CBS-V33 was eliminated as an option due to the potential for valve damage since these valves incorporate a soft seat type design. Additionally, local manipulation of these valves at power would over ride the automatic signals that these valves receive to close to protect the containment spray flow path to containment.

The potential to vary system resistance utilizing a manual valve located in the pump suction lines was also evaluated. This option was eliminated due to the potential to cavitate the pumps and reduce net positive suction head (NPSH) margin for the pumps. As a result,

the Containment Spray Pumps (CBS-P9A, CBS-P9B) can only be tested on a recirculation flow path which is sized for approximately 63% (1900 GPM) of the Best Efficiency Point (BEP) Flow of 3000 GPM and approximately 68% of the required design flow of 2808 GPM.

Full flow testing would require system alignment to the containment spray headers and subsequent discharge to the containment. In order to perform full flow testing without alignment to the spray headers, temporary piping would be required to recirculate water to/from the ECCS Containment Sumps. This was performed one time previously, to verify CBS pump curve data (pre-operational test 1-PT-11, Containment Recirculation Sump Operability Demonstration). 1-PT-11 required modification of the sump by means of building a 2 to 3 foot high steel dyke around the top of the sump (at –26' elev. floor level) in order to hold the volume of water required to achieve the necessary pump NPSH without flooding the containment. The spray header piping would also require modification by means of removing the spool pieces downstream of valves CBS-V13 and CBS-V19 and connecting temporary pipe (minimum 8" diameter) from the 25' elevation in containment to the ECCS Sumps at –26' elevation. Recent (OR12) installation of the sump modifications under DCR 06-002, Debris Interceptors, has installed flow interceptors, further reducing the available volume of the sump for testing. Performing these temporary modifications to the CBS system or enlarging the recirculation piping and components to achieve 80% design flow is not warranted since there will be no improvement in our ability to detect pump degradation.

5. Proposed Alternative and Basis for Use

Testing of the subject pumps utilizing the recirculation flow path provides for substantial flow testing in a stable region of the pump curve, well above the minimum continuous flowrate specified by the pump manufacturer. Testing the CBS pumps at reference values established in this region of the pump curve will not cause damage to the pumps and will provide meaningful data to assess pump operational readiness.

In order to compensate for testing the subject pumps at a reduced flow rate during the comprehensive pump test, as required by ISTB 3300(e)(1), the CBS pumps are included in the Predictive Maintenance Monitored Equipment Program. This program includes thermography, enhanced vibration monitoring and analysis of the pump and periodic sampling and analysis of the lube oil. Station personnel will also perform Static Motor Testing using the Baker Advanced Winding Analyzer Series IV (AWAIV) equipment and Dynamic Motor Monitoring utilizing the Baker EXP3000 equipment. On-line testing using the EXP3000 utilizes a multitude of tests to determine the power quality, motor operating conditions, motor performance, and load originated issues.

If measured parameters are found outside of the normal operating range or were determined to be trending toward an unacceptably degraded condition, corrective actions are required. These corrective actions include monitoring additional pump parameters, review of

relevant data to determine the cause of the deviation, and potential removal from service.

Reference values for testing the Containment Spray pumps will be established and pump testing will be performed while operating on the installed recirculation loop. This program contains testing and analysis requirements beyond those required by the 2004 Edition of the ASME OM Code.

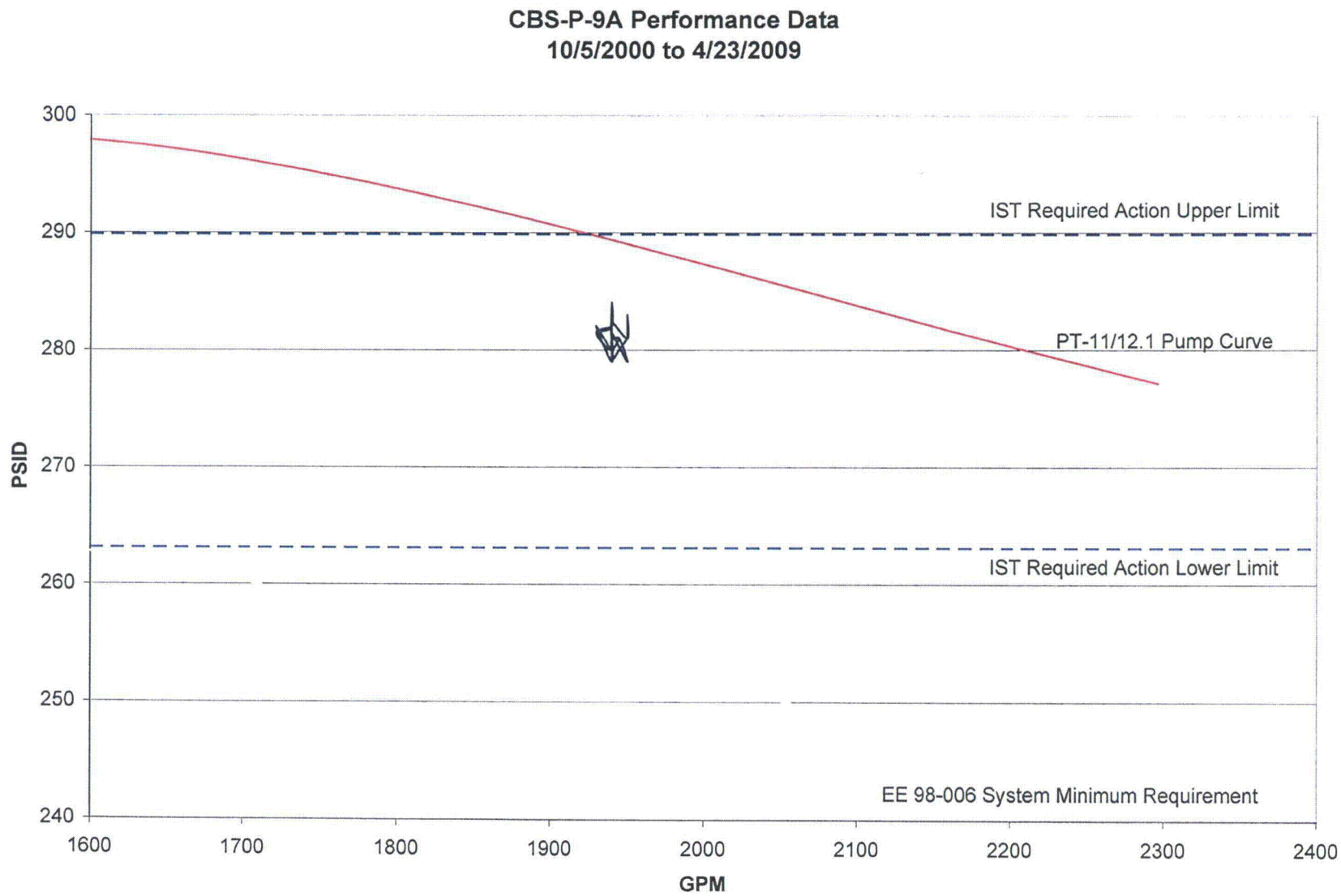
6. Duration of Proposed Alternative

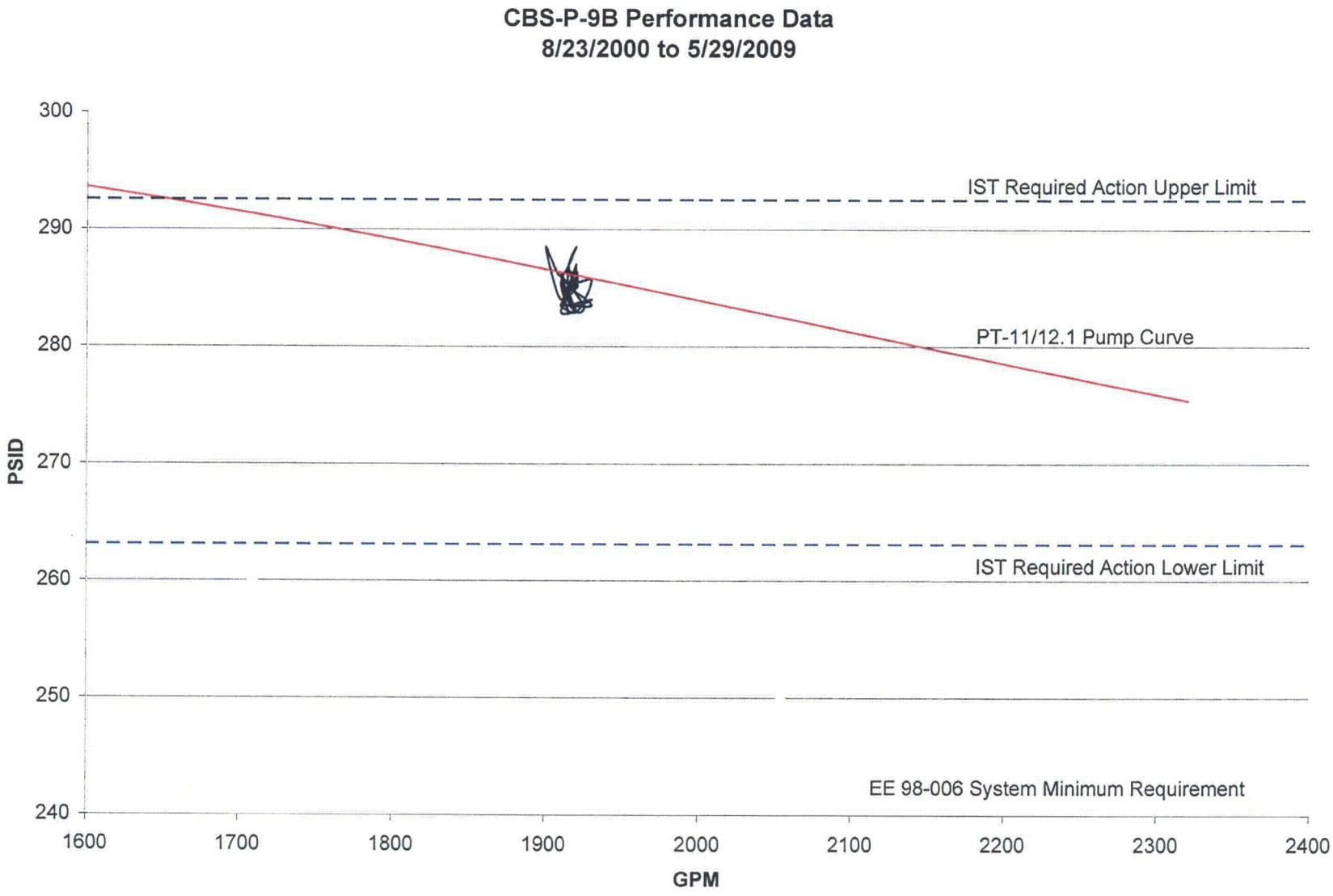
The compensatory actions associated with this alternative method for testing will extend for the Third Interval.

7. Precedents

Reference TAC MB 6676 NRC Letter dated May 30, 2003 (ML031070510) and NYN-02109 Letter dated October 28, 2002 (ML023100271).

Attachment 2
Relief Request PR-1 Hydraulic Data


CBS-P-9A Performance Data
10/5/2000 to 4/23/2009
300
290
280
270
260
250
240
PSID
1600
1700
1800
1900
2000
2100
2200
2300
2400
GPM
IST Required Action Upper Limit
PT-11/12.1 Pump Curve
IST Required Action Lower Limit
EE 98-006 System Minimum Requirement


CBS-P-9B Performance Data
8/23/2000 to 5/29/2009
IST Required Action Upper Limit
PT-11/12.1 Pump Curve
IST Required Action Lower Limit
EE 98-006 System Minimum Requirement
PSID
300
290
280
270
260
250
240
1600
1700
1800
1900
2000
2100
2200
2300
2400
GPM

IST PUMP DATA LOG

CBS-P9A

Activity No. 1-CBS-OT-006 **RDS No.** 4 **Procedure No.** OX1406.02

Flowpath: Recirc/RWST **Range Limits:** OM ☑ ASME ☐ Restricted ☑

Entry Date	Test Date	Hydraulic Test Parameters		Vibration Data Points					Speed	Test Results (ACC/AL/RA)	Comments	Completed by
		DP	Q	1	2	3	4	5				
5/26/2009	4/23/2009	281.5 psid	1930 gpm	Vibration Units:					na rpm	ACC	None	Couture Date 5/26/2009
11/18/2008	10/20/2008	284 psid	1940 gpm	Vibration Units:					na rpm	ACC	None	Couture Date 11/18/2008
9/2/2008	7/28/2008	279 psid	1940 gpm	Vibration Units:					na rpm	ACC	None	Couture Date 9/2/2008
6/9/2008	5/9/2008	279 psid	1940 gpm	Vibration Units:					na rpm	ACC	None	Couture Date 6/9/2008
2/19/2008	2/11/2008	281.5 psid	1940 gpm	Vibration Units:					na rpm	ACC	None	Couture Date 2/19/2008
1/7/2008	11/19/2007	280 psid	1940 gpm	Vibration Units:					na rpm	ACC	None	Couture Date 1/7/2008
9/18/2007	8/27/2007	279 psid	1930 gpm	Vibration Units:					na rpm	ACC	None	Couture Date 9/18/2007
6/27/2007	6/4/2007	279 psid	1940 gpm	Vibration Units:					na rpm	ACC	None	Couture Date 6/27/2007
1/3/2007	12/18/2006	281.5 psid	1940 gpm	Vibration Units:					n/a rpm	ACC	None	Couture Date 1/3/2007
10/11/2006	9/26/2006	279 psid	1950 gpm	Vibration Units: in/sec					N/A rpm	ACC	None	Parry Date 10/11/2006
8/23/2006	7/4/2006	281 psid	1945 gpm	Vibration Units:					n/a rpm	ACC	None	Parry Date 8/23/2006
4/13/2006	4/10/2006	281 psid	1940 gpm	Vibration Units:					N/A rpm	ACC	None	Parry Date 4/13/2006
1/27/2006	1/16/2006	284 psid	1940 gpm	Vibration Units:					N/A rpm	ACC	None	Couture Date 1/27/2006
11/8/2005	10/24/2005	282 psid	1940 gpm	Vibration Units:					N/A rpm	ACC	None	Couture Date 11/8/2005
8/4/2005	8/1/2005	279 psid	1950 gpm	Vibration Units:					N/A rpm	ACC	None	Couture Date 8/4/2005
3/3/2005	2/15/2005	281.5 psid	1940 gpm	Vibration Units:					N/A rpm	ACC	None	Couture Date 3/3/2005
12/2/2004	11/22/2004	281 psid	1940 gpm	Vibration Units:					n/a rpm	ACC	None	Masters Date 12/2/2004
9/2/2004	8/29/2004	280 psid	1940 gpm	Vibration Units: in/sec					n/a rpm	Acc	None	Parry Date 9/2/2004
6/30/2004	6/7/2004	281 psid	1935 gpm	Vibration Units:					N/A rpm	ACC	None	Couture Date 6/30/2004
3/26/2004	3/17/2004	282 psid	1930 gpm	Vibration Units: in/sec					N/A rpm	ACC	None	Parry Date 3/26/2004

Similar to:
ES1804.055 Form O

IST PUMP DATA LOG

CBS-P9A

Activity No. 1-CBS-OT-006 **RDS No.** 4 **Procedure No.** OX1406.02

Flowpath: Recirc/RWST **Range Limits:** OM ☑ ASME ☐ Restricted ☑

Entry Date	Test Date	Hydraulic Test Parameters		Vibration Data Points					Speed	Test Results (ACC/AL/RA)	Comments	Completed by
		DP	Q	1	2	3	4	5				
1/8/2004	12/22/2003	279 psid	1940 gpm	Vibration Units: in/sec					N/A rpm	ACC	None	Parry Date 1/8/2004
10/1/2003	9/29/2003	281 psid	1940 gpm	Vibration Units:					N/A rpm	ACC	None	Gwinn Date 10/1/2003
7/16/2003	7/10/2003	280 psid	1940 gpm	Vibration Units:					N/A rpm	ACC	None	Gwinn Date 7/16/2003
4/30/2003	4/17/2003	281 psid	1945 gpm	Vibration Units:					N/A rpm	ACC	None	Gwinn Date 4/30/2003
1/23/2003	1/20/2003	281 psid	1940 gpm	Vibration Units:					N/A rpm	ACC	None	McCormack Date 1/23/2003
11/7/2002	11/1/2002	281 psid	1940 gpm	Vibration Units:					N/A rpm	ACC	None	Klapes Date 11/7/2002
8/14/2002	8/9/2002	279 psid	1940 gpm	Vibration Units:					N/A rpm	ACC	None	Klapes Date 8/14/2002
6/17/2002	6/13/2002	279 psid	1940 gpm	Vibration Units:					N/A rpm	ACC	None	Klapes Date 6/17/2002
5/20/2002	5/18/2002	281 psid	1950 gpm	Vibration Units:					N/A rpm	ACC	None	Klapes Date 5/20/2002
2/27/2002	2/22/2002	281 psid	1945 gpm	Vibration Units:					N/A rpm	ACC	None	Klapes Date 2/27/2002
12/6/2001	11/30/2001	283 psid	1950 gpm	Vibration Units:					N/A rpm	ACC	None	Klapes Date 12/6/2001
9/11/2001	9/7/2001	281 psid	1950 gpm	Vibration Units:					N/A rpm	ACC	None	Klapes Date 9/11/2001
6/20/2001	6/15/2001	282.3 psid	1940 gpm	Vibration Units:					N/A rpm	ACC	None	Klapes Date 6/20/2001
3/29/2001	3/23/2001	280 psid	1940 gpm	Vibration Units:					N/A rpm	ACC	None	Klapes Date 3/29/2001
1/7/2001	12/30/2000	281.5 psid	1930 gpm	Vibration Units:					N/A rpm	ACC	None	Klapes Date 1/7/2001
10/10/2000	10/5/2000	282 psid	1940 gpm	Vibration Units:					N/A rpm	ACC	Baseline for RDS #04	Klapes Date 10/10/2000

Comments: RDS # 04 revised for CBS-P-9A due to calibration tolerance/instrument uncertainty for DCR 99-36 pressure gauges (2%). All else from RDS 4 remains the same. Added instru uncertainty of 14 psid to TS Limit of 262 psid = 276 psid. This assumes the worst case.

Similar to:
ES1804:055 Form O

IST PUMP DATA LOG

CBS-P9A

Activity No. 1-CBS-OT-008 **RDS No.** 1 **Procedure No.** OX1406.02

Flowpath: Recirc/RWST **Range Limits:** OM ☑ ASME ☐ Restricted ☑

Entry Date	Test Date	Hydraulic Test Parameters		Vibration Data Points					Speed	Test Results (ACC/AL/RA)	Comments	Completed by
		DP	Q	1	2	3	4	5				
7/16/2003	7/10/2003	282.9 psid	1940 gpm	0.29	0.32	0.19	0.23	0.25	N/A rpm	ACC	None	Gwinn Date 7/16/2003
				Vibration Units: in/sec								
10/9/2001	9/7/2001	281.4 psid	1950 gpm	0.30	0.32	0.20	0.24	0.28	N/A rpm	ACC	Baseline for RDS #01	Klapes Date 10/9/2001
				Vibration Units: in/sec								

Comments: RDS # 01 for CBS-P-9A due to update of IST Program to ASME OM Code. New reference data from 01RO01158001. Added instr. uncertainty of 1.1 psid to TS limit of 262 psid = 263.1psid.

Similar to:
ES1804.055 Form O

IST PUMP DATA LOG

CBS-P9A

Activity No. 1-CBS-OT-008 RDS No. 2 Procedure No. OX1406.02

Flowpath: Recirc/RWST Range Limits: OM ☑ ASME ☐ Restricted ☑

Entry Date	Test Date	Hydraulic Test Parameters		Vibration Data Points					Speed	Test Results (ACC/AL/RA)	Comments	Completed by
		DP	Q	1	2	3	4	5				
2/4/2009	1/12/2009	282 psid	1940 gpm	0.28	0.28	0.19	0.22	0.23	na rpm	ACC	None	Couture Date 2/4/2009
				Vibration Units: in/sec								
3/31/2007	3/12/2007	281.3 psid	1940 gpm	0.29	0.32	0.18	0.21	0.26	n/a rpm	ACC	None	Couture Date 3/31/2007
				Vibration Units: in/sec								
5/18/2005	5/9/2005	283.5 psid	1940 gpm	0.30	0.30	0.19	0.24	0.27	N/A rpm	ACC	None	Couture Date 5/18/2005
				Vibration Units: in/sec								

Comments: RDS#2 just revises RDS#1 to increase the ALERT Vibration Limit to 0.350 ips as Relief Request PR-3 was approved.

Similar to:
ES1804.055 Form O

IST PUMP DATA LOG

CBS-P9B

Activity No. 1-CBS-OT-007 **RDS No.** 2 **Procedure No.** OX1406.02

Flowpath: Recirc / RWST **Range Limits:** OM ☑ ASME ☐ Restricted ☑

Entry Date	Test Date	Hydraulic Test Parameters		Vibration Data Points					Speed	Test Results (ACC/AL/RA)	Comments	Completed by
		DP	Q	1	2	3	4	5				
7/7/2009	5/29/2009	283 psid	1920 gpm	Vibration Units:					na rpm	ACC	None	Couture Date 7/7/2009
3/23/2009	2/23/2009	285.5 psid	1910 gpm	Vibration Units:					na rpm	ACC	None	Couture Date 3/23/2009
1/8/2009	12/1/2008	283 psid	1915 gpm	Vibration Units:					na rpm	ACC	None	Couture Date 1/8/2009
10/7/2008	9/8/2008	283 psid	1920 gpm	Vibration Units:					NA rpm	ACC	None	Couture Date 10/7/2008
8/8/2008	6/16/2008	283 psid	1910 gpm	Vibration Units:					na rpm	ACC	None	Couture Date 8/8/2008
5/16/2008	3/27/2008	286 psid	1920 gpm	Vibration Units: in/sec					N/A rpm	ACC	None	Parry Date 5/16/2008
1/26/2008	12/31/2007	286 psid	1910 gpm	Vibration Units:					NA rpm	ACC	None	Parry Date 1/26/2008
10/31/2007	10/8/2007	283 psid	1920 gpm	Vibration Units:					na rpm	ACC	None	Couture Date 10/31/2007
7/27/2007	7/16/2007	283.5 psid	1925 gpm	Vibration Units:					na rpm	ACC	None	Couture Date 7/27/2007
6/1/2007	4/23/2007	286 psid	1910 gpm	Vibration Units:					na rpm	ACC	None	Couture Date 6/1/2007
2/12/2007	1/30/2007	283 psid	1920 gpm	Vibration Units:					na rpm	ACC	None	Couture Date 2/12/2007
1/2/2007	12/4/2006	283.5 psid	1910 gpm	Vibration Units:					n/a rpm	ACC	None	Couture Date 1/2/2007
9/28/2006	8/14/2006	283.5 psid	1930 gpm	Vibration Units:					N/A rpm	ACC	None	Parry Date 9/28/2006
6/13/2006	5/22/2006	285 psid	1915 gpm	Vibration Units:					N/A rpm	ACC	None	Parry Date 6/13/2006
1/4/2006	12/5/2005	283.5 psid	1920 gpm	Vibration Units:					N/A rpm	ACC	None	Couture Date 1/4/2006
9/26/2005	9/12/2005	284 psid	1930 gpm	Vibration Units:					N/A rpm	ACC	pmt 0507914	Couture Date 9/26/2005
7/1/2005	6/21/2005	283.5 psid	1910 gpm	Vibration Units:					NA rpm	ACC	CR 05-07984	Couture Date 7/1/2005
1/30/2005	1/4/2005	285 psid	1920 gpm	Vibration Units:					NA rpm	ACC	None	Couture Date 1/30/2005
10/28/2004	10/11/2004	286.5 psid	1920 gpm	Vibration Units:					N/A rpm	ACC	None	Couture Date 10/28/2004
9/1/2004	7/21/2004	285 psid	1915 gpm	Vibration Units: in/sec					N/A rpm	ACC	None	Parry Date 9/1/2004

Similar to:
ES1804.055 Form O

IST PUMP DATA LOG

CBS-P9B

Activity No. 1-CBS-OT-007 RDS No. 2 Procedure No. OX1406.02

Flowpath: Recirc / RWST Range Limits: OM ☑ ASME ☐ Restricted ☑

Entry Date	Test Date	Hydraulic Test Parameters		Vibration Data Points					Speed	Test Results (ACC/AL/RA)	Comments	Completed by
		DP	Q	1	2	3	4	5				
5/10/2004	4/26/2004	286.5 psid	1915 gpm	Vibration Units: in/sec					N/a rpm	ACC	See Comprehensive pump test on same say	Parry Date 5/10/2004
2/12/2004	2/5/2004	285.5 psid	1920 gpm	Vibration Units: in/sec					N/A rpm	ACC	None	Parry Date 2/12/2004
11/17/2003	11/10/2003	285.6 psid	1930 gpm	Vibration Units:					n/a rpm	ACC	None	Parry Date 11/17/2003
8/25/2003	8/19/2003	283 psid	1920 gpm	Vibration Units:					N/A rpm	ACC	None	Gwinn Date 8/25/2003
6/2/2003	5/27/2003	285.8 psid	1910 gpm	Vibration Units:					N/A rpm	ACC	None	Gwinn Date 6/2/2003
3/7/2003	3/3/2003	285 psid	1920 gpm	Vibration Units:					N/A rpm	ACC	None-retest WO#0236182	McCormack Date 3/7/2003
12/12/2002	12/9/2002	285.5 psid	1920 gpm	Vibration Units:					N/A rpm	ACC	None	Klapes Date 12/12/2002
9/23/2002	9/16/2002	285 psid	1915 gpm	Vibration Units:					N/A rpm	ACC	None	Klapes Date 9/23/2002
7/17/2002	6/24/2002	287 psid	1920 gpm	Vibration Units:					N/A rpm	ACC	None	Masters Date 7/17/2002
5/20/2002	5/18/2002	284 psid	1910 gpm	Vibration Units:					N/A rpm	ACC	01W000818	Parry Date 5/20/2002
4/8/2002	4/3/2002	288.5 psid	1900 gpm	Vibration Units:					N/A rpm	ACC	None	Klapes Date 4/8/2002
1/14/2002	1/9/2002	286 psid	1910 gpm	Vibration Units:					N/A rpm	ACC	None	Klapes Date 1/14/2002
10/19/2001	10/17/2001	288.5 psid	1920 gpm	Vibration Units:					N/A rpm	ACC	None	Klapes Date 10/19/2001
8/1/2001	7/25/2001	286.9 psid	1915 gpm	Vibration Units:					N/A rpm	ACC	W/ Compreh. CBS-OT009 -retest 01W000494	Klapes Date 8/1/2001
5/7/2001	5/2/2001	285 psid	1920 gpm	Vibration Units:					N/A rpm	ACC	None	Klapes Date 5/7/2001
2/13/2001	2/7/2001	286.5 psid	1920 gpm	Vibration Units:					N/A rpm	ACC	None	Klapes Date 2/13/2001
12/6/2000	11/25/2000	287 psid	1920 gpm	Vibration Units:					N/A rpm	ACC	None	Klapes Date 12/6/2000
8/30/2000	8/23/2000	287 psid	1920 gpm	Vibration Units:					N/A rpm	ACC	Baseline for RDS #02	Klapes Date 8/30/2000

Comments: RDS # 02 revised for CBS-P-9B due to calibration tolerance/instrument uncertainty for DCR 99-36 pressure gauges (2%). All else from RDS 2 remains the same. Added instru uncertainty of 14 psid to TS Limit of 262 psid = 276 psid. This assumes the worst case.

Similar to:
ES1804.055 Form O

IST PUMP DATA LOG

CBS-P9B

Activity No. 1-CBS-OT-009 **RDS No.** 3 **Procedure No.** OX1406.02

Flowpath: Recirc / RWST **Range Limits:** OM ☑ ASME ☐ Restricted ☑

Entry Date	Test Date	Hydraulic Test Parameters		Vibration Data Points					Speed	Test Results (ACC/AL/RA)	Comments	Completed by
		DP	Q	1	2	3	4	5				
1/8/2009	12/1/2008	285.3 psid	1915 gpm	0.32	0.29	0.20	0.24	0.35	na rpm	ACC	None	Couture Date 1/8/2009
				Vibration Units:								
1/26/2008	12/31/2007	286.0 psid	1910 gpm	0.33	0.27	0.19	0.24	0.33	N/A rpm	ACC	None	Parry Date 1/26/2008
				Vibration Units: in/sec								
2/12/2007	1/30/2007	285.2 psid	1920 gpm	0.32	0.27	0.20	0.24	0.32	na rpm	ACC	None	Couture Date 2/12/2007
				Vibration Units: in/sec								
3/8/2006	2/28/2006	285 psid	1910 gpm	0.32	0.29	0.19	0.25	0.32	N/A rpm	ACC	None	Parry Date 3/8/2006
				Vibration Units: in/sec								
4/10/2005	3/29/2005	284.5 psid	1915 gpm	0.32	0.28	0.20	0.24	0.32	N/A rpm	ACC	None	Couture Date 4/10/2005
				Vibration Units: in/sec								
5/10/2004	4/26/2004	285 psid	1915 gpm	0.33	0.30	0.21	0.25	0.31	n/a rpm	Acc	NRC Approved Relief Request for 0.350 ips as new ALERT Level	Parry Date 5/10/2004
				Vibration Units: IPS								

Comments: RDS#3 just revises RDS#2 to increase the ALERT Vibration Limit to 0.350 ips as Relief Request PR-3 was approved.

Similar to:
ES1804.055 Form O

IST PUMP DATA LOG

CBS-P9B

Activity No. **1-CBS-OT-009** RDS No. **1** Procedure No. **OX1406.02**

Flowpath: Recirc / RWST **Range Limits:** OM ☑ ASME ☐ Restricted ☑

Entry Date	Test Date	Hydraulic Test Parameters		Vibration Data Points					Speed	Test Results (ACC/AL/RA)	Comments	Completed by
		DP	Q	1	2	3	4	5				
6/2/2003	5/27/2003	286.7 psid	1910 gpm	0.34	0.30	0.20	0.24	0.34	N/A rpm	ACC	None	Gwinn Date 6/2/2003
				Vibration Units: in/sec								
11/15/2002	5/18/2002	284 psid	1910 gpm	0.33	0.32	0.21	0.25	0.32	N/A rpm	AL	retest- WO#01C3570	Klapes Date 11/15/2002
				Vibration Units: in/sec								
7/17/2002	6/24/2002	284 psid	1920 gpm	0.31	0.30	0.19	0.25	0.32	N/A rpm	ACC	None	Masters Date 7/17/2002
				Vibration Units: in/sec								
7/26/2001	7/25/2001	286.9 psid	1915 gpm	0.35	0.28	0.20	0.26	0.26	N/A rpm	AL	Baseline data for RDS #1- Vib pt 1 in ALERT	Klapes Date 7/26/2001
				Vibration Units: in/sec								

Comments: RDS # 01 for CBS-P-9B due to update of IST Program to ASME OM Code. New reference data from 01RO01159001. NOTE: Vibration pt. #1 in ALERT range - see CR # 01-07360. Added instr. uncertainty of 1.1 psid to TS limit of 262 psid = 263.1psid.

Similar to:
ES1804.055 Form O