

FILED 2/18/2020
DOCUMENT NO. 00967-2020
FPSC - COMMISSION CLERK

FLORIDA PUBLIC SERVICE COMMISSION
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DOCUMENT NUMBER ASSIGNMENT*

FILED DATE: 2/18/2020
DOCKET NO.: 20200001-EI
DOCUMENT NO.: 00967-2020
DOCUMENT DESCRIPTION:

CONFIDENTIAL

(CONFIDENTIAL) Hearing Exhibit No. 101 from 2/5/20 DOAH Hearing. [CLK Note: See DN 10935-2019 for Exh Nos. 1, 68-75, 80, 82, 100]

JD 4/7/2026
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DOCKET NO: 20190001-EI

WITNESS: Jeffrey Swartz

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PARTY: Duke

DESCRIPTION: Late filed deposition Exhibit No. 2

DOCUMENTS: Panel deposition of Jeffrey Swartz, Anthony Salvarezza and C. Wayne Toms, August 30, 2019.

PROFFERED BY: Office of Public Counsel

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Bartow Spring 2017 Pressure Plate Installation

08-Mar-17 08:52 AM

Task ID	Description	Start	End	Resources	Dependencies
PM-210	Perform Blade Stub QC Inspections [CSC]	04.0 05-Mar-17 07:00 PM	10-Mar-17 07:00 AM	PM-200	PM-200
PM-200	Rough mill and stress relief (Vendor)	24.0 05-Mar-17 07:00 AM	08-Mar-17 07:00 AM		
PM-220	Ship Blade Stub to Site [CSC]	48.0 10-Mar-17 07:00 AM	12-Mar-17 07:00 AM	PM-210	PM-200, TGR-240
PM-360	Turning complete (Vendor)	24.0 10-Mar-17 07:00 AM	11-Mar-17 07:00 AM		PM-430
PM-430	Hole drilling complete (Vendor)	24.0 12-Mar-17 07:00 AM	13-Mar-17 07:00 AM	PM-360	PM-430
PM-430	Milling, key drill, flow guide attachment - 1st set (Vendor)	24.0 15-Mar-17 07:00 PM	18-Mar-17 07:00 PM		PM-430
PM-490	Install Blade Stub	48.0 17-Mar-17 07:00 AM	18-Mar-17 07:00 AM	PM-220, PRE-47	FIR-250, TGR-250
PRE-47	TGRN & F&E Remounted to Site	0.0 17-Mar-17 07:00 AM	17-Mar-17 07:00 AM		TGR-240, PM-220
TGR-240	Set up Low Speed Balance equipment	24.0 18-Mar-17 07:00 AM	18-Mar-17 07:00 AM	TGR-130, CWHP-200, DF-020, GOV-10, GEN-05, PM-510, TGR	TGR-250, TGR-260
TGR-260	Scuffed Support for Low Speed Balance Machine	12.0 18-Mar-17 07:00 PM	18-Mar-17 07:00 AM	TGR-240	
PM-500	Milling, key drill, flow guide attachment - 2nd set (Vendor)	24.0 18-Mar-17 07:00 PM	18-Mar-17 07:00 PM	PM-500	PM-500
TGR-260	Move rotor to Low Speed Balance machine	8.0 19-Mar-17 07:00 AM	19-Mar-17 07:00 AM	TGR-240, TGR-260, TGR-160, CWHP-630, DF-020, GOV-10, G	TGR-260, TGR-260CC
TGR-280	Low Speed Balance Rotor	12.0 19-Mar-17 07:00 AM	20-Mar-17 07:00 AM	TGR-250, PM-280, TGR-160, CWHP-630, DF-020, GOV-10, GE	TGR-270, TGR-280CC
PM-600	Inspect, Prep for Ship (Vendor)	36.0 19-Mar-17 07:00 PM	21-Mar-17 07:00 AM	PM-600	PM-600
TGR-280	Final clean & inspect rotor for installation	8.0 21-Mar-17 07:00 AM	21-Mar-17 07:00 AM		PM-600
TGR-200CC	Evaluate Balance Data	24.0 25-Mar-17 07:00 AM	21-Mar-17 07:00 AM	TGR-260, TGR-250, TGR-160, CWHP-630, DF-020, GOV-10, G	TGR-270, CWHP-200, TGR-260CC
CWHP-200	CWHP - Review the as-found slow speed rotor unbalance report	4.0 21-Mar-17 07:00 AM	21-Mar-17 07:00 AM	TGR-200CC	CWHP-100
TGR-260CC	Retainance Rotor (Contingency)	0.0 21-Mar-17 07:00 AM	21-Mar-17 07:00 AM	TGR-260CC	TGR-270
CWHP-100	CWHP - Review the discharge and/or shaft AC speed balance and report	4.0 21-Mar-17 07:00 AM	21-Mar-17 07:00 AM	CWHP-400	TGR-270, CWHP-110
PM-600	Ship Pressure Plate & Flow Guide to site (Vendor)	24.0 21-Mar-17 07:00 AM	22-Mar-17 07:00 AM	PM-600	PM-600
CWHP-110	CWHP - Check to ensure all balance weights are bolted with ether peening	7.0 21-Mar-17 07:00 AM	21-Mar-17 07:00 AM	CWHP-100	TGR-270
TGR-270	Remove rotor from LSB machine	8.0 21-Mar-17 07:00 PM	21-Mar-17 10:00 PM	TGR-260, TGR-260CC, CWHP-100, CWHP-110, TGR-260CC	LPA-600
LPA-600	Final clean & inspect rotor for installation	8.0 21-Mar-17 07:00 PM	21-Mar-17 10:00 PM	TGR-270, LPA-430, TGR-160, CWHP-630, DF-020, GOV-10, G	LPA-610
PM-630	Install Pressure Plate and Flow Guide (Lower Half)	18.0 22-Mar-17 11:00 AM	23-Mar-17 09:00 AM	PM-600, PM-630	LPA-610
LPA-610	Install rotor	4.0 23-Mar-17 09:00 AM	23-Mar-17 09:00 AM	LPA-610, LPA-620, LPA-630, LPA-640, LPA-650, LPA-660, LPA-670, LPA-680, LPA-690, LPA-700, LPA-710, LPA-720, LPA-730, LPA-740, LPA-750, LPA-760, LPA-770, LPA-780, LPA-790, LPA-800, LPA-810, LPA-820, LPA-830, LPA-840, LPA-850, LPA-860, LPA-870, LPA-880, LPA-890, LPA-900, LPA-910, LPA-920, LPA-930, LPA-940, LPA-950, LPA-960, LPA-970, LPA-980, LPA-990	PED3-600, LPA-620, PED4-600, PM-100, SU-600
LPA-630	Final rotor & record	3.0 23-Mar-17 09:00 AM	23-Mar-17 12:00 PM	LPA-610	LPA-610
PED3-600	Install LH bearing & lenson	3.0 23-Mar-17 09:00 AM	23-Mar-17 12:00 PM	LPA-610	PED3-610, CWHP-120
PED4-600	Install LH bearing & lenson	3.0 23-Mar-17 09:00 AM	23-Mar-17 12:00 PM	PED4-430, PED4-460, PED4-340, PED4-470, PED4-430, PED4	PED4-610, CWHP-120
CWHP-120	CWHP - R0 bearing clearance	0.0 23-Mar-17 09:00 AM	23-Mar-17 09:00 AM	PED3-600	PED3-610
CWHP-130	CWHP - R1 bearing clearance	0.0 23-Mar-17 09:00 AM	23-Mar-17 09:00 AM	PED4-600	PED4-610
LPA-630	Set rotor on K chart clearances, record L	4.0 23-Mar-17 10:00 AM	23-Mar-17 04:00 PM	LPA-600	LPA-640, LPA-100
LPA-640	Install & lenson LH blade ring/Shaft/magnesium chamber	7.0 23-Mar-17 04:00 PM	23-Mar-17 11:00 PM	LPA-620	LPA-650
PM-100	Install Pressure Plate and Flow Guide (Upper Half)	18.0 23-Mar-17 04:00 PM	24-Mar-17 10:00 AM	LPA-610, LPA-630	SU-500
LPA-650	Install inner casing	7.0 23-Mar-17 11:00 PM	24-Mar-17 09:00 AM	LPA-640, LPA-630	LPA-650, LPA-670
LPA-670	Set LH flow cover (GEN & GOV)	4.0 24-Mar-17 09:00 AM	24-Mar-17 10:00 AM	LPA-650	LPA-700
LPA-670	Tension rod bearing bolting (int & ext.)	12.0 24-Mar-17 09:00 AM	24-Mar-17 09:00 PM	LPA-650	PED3-610, LPA-680, CWHP-220
PE23-610	Install LH gland	2.0 24-Mar-17 09:00 AM	24-Mar-17 09:00 AM	LPA-670, PED3-600, CWHP-120	PED4-610, LPA-710, PED4-620
PED4-610	Install LH gland	2.0 24-Mar-17 09:00 AM	24-Mar-17 09:00 AM	PED3-610, PED4-600, CWHP-120	LPA-710, PED4-620
LPA-680	Install bolt covers on inner casing	5.0 24-Mar-17 09:00 PM	24-Mar-17 11:00 PM	LPA-670	LPA-690, LPA-700
CWHP-220	CWHP - Prior to close-out, cleanliness inspection of LP inner cylinder (or in)	0.0 24-Mar-17 09:00 PM	24-Mar-17 09:00 PM	LPA-670	LPA-710
LPA-690	Close hood epoxy cure	2.0 24-Mar-17 11:00 PM	25-Mar-17 09:00 AM	LPA-680	LPA-700, SI-1000
LPA-720	Remove rotor from	8.0 25-Mar-17 07:00 AM	25-Mar-17 09:00 AM	LPA-680, LPA-690, LPA-670	LPA-710, CWHP-220
LPA-710	Install cutter head	8.0 25-Mar-17 09:00 AM	25-Mar-17 09:00 AM	PE23-610, PED4-610, LPA-700, CWHP-220, CWHP-220	LPA-720, LPA-730, PED4-620, PED3-630, PED-650, LPA-610
CWHP-220	CWHP - Prior to close-out, cleanliness inspection of LP outer cylinder (or LP	0.0 25-Mar-17 09:00 AM	25-Mar-17 09:00 AM	LPA-700	LPA-710
LPA-730	Install shafting for cross cover (for assembly) - Custom	12.0 25-Mar-17 09:00 PM	25-Mar-17 03:00 AM	LPA-710	LPA-730, SI-500, LPA-760
LPA-730	Tension outer hood bolting	8.0 25-Mar-17 03:00 PM	25-Mar-17 09:00 PM	LPA-710, LPA-720	LPA-740
PE23-620	Tension gland bolting	2.0 25-Mar-17 03:00 PM	25-Mar-17 03:00 PM	LPA-710, PED3-610	PED3-630
PE24-620	Tension gland bolting	2.0 25-Mar-17 03:00 PM	25-Mar-17 03:00 PM	LPA-710, PED4-610	PED4-630
PED4-630	Tension bellows bolting	2.0 25-Mar-17 03:00 PM	25-Mar-17 03:00 PM	PED4-620	PED4-640
PED3-630	Tension bellows bolting	2.0 25-Mar-17 03:00 PM	25-Mar-17 03:00 PM	PED3-620	PED3-640
PED4-640	Record gland clearances (trade)	2.0 25-Mar-17 03:00 PM	25-Mar-17 03:00 PM	PED4-630	PED-650

MHPSA - Waterfall View
TASK filters: In Progress, Not Started.

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Bartow Spring 2017 Pressure Plate Installation

08-Mar-17 08:52 AM

Task ID	Task Description	Start Date/Time	End Date/Time	Resources	Dependencies
PE23-64C	Record gland dimensions (radius)	3/9/2017 07:30 PM	28-Mar-17 09:00 PM	PE23-63B	PE23-65D
LPA-740	Transfer LPA/Non-spare setting (ODV & GDN)	3/9/2017 08:50 PM	28-Mar-17 11:00 PM	LPA-730	PE23-640, BR24-010, BR24-010, CWRP-200, CWRP-210
PE23-65D	Check coupling alignment	18/3/2017 08:30 PM	28-Mar-17 01:00 PM	PE23-640, LPA-710	PE23-640
Week 5-24					
BR24-010	Install rotor shaft seal	4/0/2017 01:30 PM	28-Mar-17 05:00 PM	PE23-65E, BR24-020, CWRP-210	BR24-020
CWRP-200	CWRP - As set MHP-40-LP coupling alignment data	8/0/2017 01:30 PM	28-Mar-17 01:00 PM	PE23-650	BR24-010
CWRP-210	CWRP - As set LPA/ODV coupling alignment data	8/0/2017 01:30 PM	28-Mar-17 01:00 PM	PE23-650	BR24-010
BR24-020	Roll out #4 bearing	8/0/2017 05:10 PM	28-Mar-17 11:00 PM	BR24-010	BR24-030
BR24-030	Unroll pads and make shim note	4/0/2017 11:00 PM	27-Mar-17 03:00 PM	BR24-020	BR24-040
Week 5-27					
BR24-040	Roll in #4 bearing	8/0/2017 09:00 AM	27-Mar-17 09:00 AM	BR24-030	BR24-060
BR24-050	TR and install #4 bearing	2/0/2017 09:00 AM	27-Mar-17 11:00 AM	BR24-040	BR24-070
BR24-060	Lower rotor into bearing	2/0/2017 11:00 AM	27-Mar-17 01:00 PM	BR24-050	BR24-070
PE23-670	Install coupling guard & coupling bolts	6/0/2017 01:00 PM	27-Mar-17 01:00 PM	PE23-620, PE23-610, PE23-610, BR24-040, BR24-040, PE23-620	PE23-660
BR24-070	Install bearing LH1	6/0/2017 01:00 PM	27-Mar-17 01:00 PM	BR24-060	BR24-080
BR24-080	Take coupling alignment (2 sets)	6/0/2017 01:00 PM	27-Mar-17 01:00 PM	BR24-070	PE23-670, PE23-670
PE23-670	Install ball gear & coupling bolts	6/0/2017 01:00 PM	27-Mar-17 01:00 PM	BR24-080	PE23-680
PE23-680	Transfer coupling bolts	8/0/2017 07:00 PM	28-Mar-17 03:00 AM	PE23-670	PE23-680
PE23-690	Transfer coupling bolts	8/0/2017 07:00 PM	28-Mar-17 03:00 AM	PE23-670	PE23-690
Week 5-29					
PE23-700	Perform & record coupling hub run out	4/0/2017 03:00 AM	28-Mar-17 07:00 AM	PE23-690	PE23-700
PE23-710	Perform & record coupling hub run out	4/0/2017 03:00 AM	28-Mar-17 07:00 AM	PE23-690	PE23-710
PE23-720	Record of bore	2/0/2017 07:00 AM	28-Mar-17 08:00 AM	PE23-700	PE23-720, PE23-730
PE23-730	Install coupling guard & set screw clearances	4/0/2017 08:00 AM	28-Mar-17 01:00 PM	PE23-700, PE23-700	PE23-740
PE23-740	Install coupling guard & set screw clearances	4/0/2017 08:00 AM	28-Mar-17 01:00 PM	PE23-700, PE23-700	PE23-740
PE23-750	Record bearing flat dimensions	2/0/2017 01:00 PM	28-Mar-17 03:00 PM	PE23-730	PE23-750
PE23-760	Record bearing flat dimensions	2/0/2017 01:00 PM	28-Mar-17 03:00 PM	PE23-730	PE23-760
PE23-770	Install instrumentation (couple)	4/0/2017 03:00 PM	28-Mar-17 07:00 PM	PE23-740	PE23-770, CWRP-240, CWRP-250, CWRP-260, CWRP-270
PE23-780	Install instrumentation (couple)	4/0/2017 03:00 PM	28-Mar-17 07:00 PM	PE23-740	PE23-780, CWRP-240, CWRP-250, CWRP-260, CWRP-270
CWRP-240	CWRP - Setting of #3 bearing ultrasonic and loop test	2/0/2017 07:00 PM	28-Mar-17 09:00 PM	PE23-760	PE23-790
CWRP-250	CWRP - Loop test of #3 bearings TC	2/0/2017 07:00 PM	28-Mar-17 09:00 PM	PE23-760	PE23-790
CWRP-260	CWRP - Setting of #4 bearing ultrasonic and loop test	2/0/2017 07:00 PM	28-Mar-17 09:00 PM	PE23-760	PE23-790
CWRP-270	CWRP - Loop test of #4 bearings TC	2/0/2017 07:00 PM	28-Mar-17 09:00 PM	PE23-760	PE23-790
CWRP-280	CWRP - Setting of LP differential expansion probe and loop test	2/0/2017 07:00 PM	28-Mar-17 09:00 PM	PE23-760, PE23-750	PE23-780, PE23-780
CWRP-290	CWRP - Loop test of #2 bearing ultrasonic	2/0/2017 07:00 PM	28-Mar-17 09:00 PM	PE23-760	PE23-780
PE23-790	Final clean/inspection of pedestal	4/0/2017 09:00 PM	28-Mar-17 01:00 AM	PE23-750, CWRP-240, CWRP-250, CWRP-260, CWRP-270	PE23-770, CWRP-280
PE24-000	Final clean/inspection of pedestal	4/0/2017 09:00 PM	28-Mar-17 01:00 AM	PE23-750, CWRP-240, CWRP-250, CWRP-260, CWRP-270	PE23-770, CWRP-280
Week 5-30					
CWRP-300	CWRP - Final to close-out, clean/inspect of #3 MHP-40-LP coupling	2/0/2017 01:00 AM	28-Mar-17 03:00 AM	PE23-780	PE23-770
CWRP-310	CWRP - Final to close-out, clean/inspect of the LPA/ODV coupling	2/0/2017 01:00 AM	28-Mar-17 03:00 AM	PE23-780	PE23-770
PE23-770	Install pedestal covers	8/0/2017 03:00 AM	29-Mar-17 11:00 AM	PE23-780, CWRP-300	PE23-770, LPA-760, LPA-760
BU-500	Install pedestal covers	8/0/2017 03:00 AM	29-Mar-17 11:00 AM	PE23-780, CWRP-310	BU-500, LPA-760, LPA-760
LPA-750	Remove FINE oil cross over filter	1/0/2017 11:00 AM	29-Mar-17 12:00 PM	BU-500, PE23-770, PE23-770, LPA-720, LPA-740, PA-100, LPA-750	BU-500, BU-500
BU-500	LOT/Oil Strainer install (Customer)	2/0/2017 11:00 AM	29-Mar-17 01:00 PM	LPA-720, LPA-740, PE23-770, PE23-770	LPA-750
LPA-760	Install cross over	4/0/2017 12:00 PM	29-Mar-17 04:00 PM	BU-500	BU-510
BU-510	Install cross over	8/0/2017 01:00 PM	29-Mar-17 06:00 PM	LPA-750, PE23-770, PE23-770	LPA-770
BU-520	Install Lube Oil Strainer	4/0/2017 04:00 PM	29-Mar-17 06:00 PM	BU-500	BU-540
BU-530	Remove LOT/Oil Strainer (Customer)	4/0/2017 06:00 PM	29-Mar-17 12:00 PM	BU-510	BU-530
LPA-770	Install LP side bolting of cross over	8/0/2017 06:00 PM	30-Mar-17 06:00 PM	LPA-770	LPA-780
Week 5-31					
BU-540	Lube oil cross over	24/0/2017 12:00 AM	31-Mar-17 12:00 AM	BU-530, BU-530	BU-540
LPA-780	Transfer LPA/Non-spare setting of cross over	4/0/2017 06:00 AM	30-Mar-17 01:00 PM	LPA-770	LPA-780
LPA-790	Remove Lube Oil Strainer	4/0/2017 01:00 PM	30-Mar-17 05:00 PM	LPA-780	LPA-800
LPA-800	Close out Lube Oil Strainer	8/0/2017 05:00 PM	31-Mar-17 01:00 AM	LPA-790	LPA-810
Week 6-1					
BU-540	LOT/Oil Strainer (Customer)	4/0/2017 12:00 AM	31-Mar-17 04:00 AM	BU-530	BU-540
BU-550	Make-up & torque LP induction piping	4/0/2017 01:00 AM	31-Mar-17 06:00 AM	LPA-800	LPA-820, BU-SUT-225, LPA-830, LPA-840
BU-560	Remove Lube Oil Strainer	4/0/2017 06:00 AM	31-Mar-17 08:00 AM	BU-540	BU-560
LPA-800	Install insulation from LP induction	8/0/2017 05:00 AM	31-Mar-17 11:00 AM	LPA-810	LPA-830
LPA-810	Install insulation from Gland Steam line	8/0/2017 05:00 AM	31-Mar-17 11:00 AM	LPA-810	BU-SUT-440, LPA-830
BU-SUT-225	PERFORM FINAL CLOSURE/FINE INSPECTIONS	30/0/2017 05:00 AM	01-Apr-17 11:00 AM	LPA-810	BU-SUT-440
BU-560	Remove LOT/Oil Strainer (Customer)	4/0/2017 08:00 AM	31-Mar-17 12:00 PM	BU-540	BU-SUT-440
BU-570	Install roof sections (Customer)	15/0/2017 11:00 AM	01-Apr-17 03:00 AM	LPA-800	LPA-840

MHPSA - Waterfall View
TASK filters: In Progress, Not Started.

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Bartow Spring 2017 Pressure Plate Installation

08-Mar-17 08:52 AM

LPA-870	Remove scaffolding for crane area (for assembly)	6:0	01-Apr-17 03:00 AM	01-Apr-17 08:00 AM	LPA-710, LPA-810, LPA-820, LPA-830	
LPA-840	Install insulation from crane area	6:0	01-Apr-17 03:00 AM	01-Apr-17 03:00 AM	LPA-810, SJA-510	LPA-230
45-SUT-435	OPERATIONS RELEASE LOTO - 45 STEAM TURBINE	4:0	01-Apr-17 11:00 AM	01-Apr-17 03:00 PM	45-SUT-225, SJA-650	45-SUT-000, 45-SUT-005
45-SUT-436	LOTO RELEASED - STEAM TURBINE PRIME MOVER VALVE WORK LD	24:0	01-Apr-17 03:03 PM	02-Apr-17 03:06 PM	45-SUT-045	45-SUT-230, 45-SUT-010, 45-SUT-106, 45-SUT-030, 45-SUT-020, 45-SUT-015
45-SUT-430	45 STEAM TURBINE ON TURNING GEAR (12 HR MINIMUM)	12:0	01-Apr-17 03:00 PM	02-Apr-17 03:00 AM	45-SUT-045	45-SUT-040
Task 4.2						
45-SUT-236	START CIRC WATER PUMP ALPHA	1:0	02-Apr-17 03:00 PM	02-Apr-17 04:00 PM	45-SUT-005	45-SUT-245
45-SUT-116	LOTO RELEASED - ALL HRSG ENERGY SOURCE LOTO	24:0	02-Apr-17 03:00 PM	03-Apr-17 08:00 PM	45-SUT-005	45-SUT-000, 45-SUT-025
45-SUT-038	OPERATIONS RELEASE LOTO - STEAM TURBINE GBU TRANSFORMER	8:0	02-Apr-17 03:00 PM	02-Apr-17 11:00 PM	45-SUT-005	45-SUT-150
45-SUT-020	WALKDOWN WATERBOX SIDE #2 & ON PIPE INLET & DISCHARGE	24:0	02-Apr-17 03:00 PM	03-Apr-17 03:00 PM	45-SUT-005	
45-SUT-040	45 ST FILL GENERATOR WITH HYDROGEN	24:0	02-Apr-17 03:00 PM	03-Apr-17 03:00 PM	45-SUT-005, 45-SUT-020	45-SUT-120
45-SUT-245	START CIRC WATER PUMP BRAVO	1:0	02-Apr-17 04:00 PM	02-Apr-17 05:00 PM	45-SUT-205	45-SUT-265
45-SUT-225	START CIRC WATER PUMP CHARLIE	1:0	02-Apr-17 05:00 PM	02-Apr-17 06:00 PM	45-SUT-245	45-SUT-120, 45-SUT-285
45-SUT-295	START CIRC WATER PUMP DELTA	1:0	02-Apr-17 09:00 PM	02-Apr-17 07:00 PM	45-SUT-265	45-SUT-275
45-SUT-075	START CIRC WATER PUMP ECHO	1:0	02-Apr-17 07:00 PM	02-Apr-17 08:00 PM	45-SUT-265	45-SUT-265
45-SUT-285	START CIRC WATER PUMP FOXTROT	1:0	02-Apr-17 08:00 PM	02-Apr-17 09:00 PM	45-SUT-275	45-SUT-130
Task 4.3						
45-SUT-000	EOC RELEASE UNIT FOR STARTUP SEQUENCE	1:0	03-Apr-17 03:00 PM	03-Apr-17 04:00 PM	45-SUT-015	45-SUT-100
45-SUT-025	DEMIN SYSTEM IN SERVICE	1:0	03-Apr-17 03:00 PM	03-Apr-17 04:00 PM	45-SUT-005, 45-SUT-015	45-SUT-005
45-SUT-023	FILL HOTWELL / CHECK FOR LEAKAGE / FLUSH	8:0	03-Apr-17 04:00 PM	04-Apr-17 12:00 AM	45-SUT-025	45-SUT-080
Task 4.4						
45-SUT-020	FILL HOTWELL FOR STARTUP	4:0	04-Apr-17 12:30 AM	04-Apr-17 04:00 AM	45-SUT-020	45-SUT-070
45-SUT-070	START CONDENSATE SYSTEM (DOSE CHEMISTRY)	2:0	04-Apr-17 01:00 AM	04-Apr-17 08:00 AM	45-SUT-090	45-SUT-080
45-SUT-050	VERIFY ALL 4B (4C) 4D HRSG SPP'S VENTED & FILLED	4:0	04-Apr-17 08:00 AM	04-Apr-17 10:00 AM	45-SUT-070	45-SUT-060
45-SUT-090	FILL 4A, 4B, 4C, 4D HRSGs	12:0	04-Apr-17 10:00 AM	04-Apr-17 10:30 PM	45-SUT-080	45-SUT-120, 45-SUT-100
45-SUT-100	SHUT DOWN 2 CTs FROM SIMPLE CYCLE OPERATIONS FOR ST START	2:0	04-Apr-17 10:00 PM	05-Apr-17 12:00 AM	45-SUT-060, 45-SUT-000	45-SUT-130
Task 4.5						
45-SUT-120	45 STEAM TURBINE START 1H CT (4B) TO DEY SEALS FOR PULLING 1	3:0	05-Apr-17 12:00 AM	05-Apr-17 03:30 AM	45-SUT-256, 45-SUT-180, 45-SUT-060, 45-SUT-040	45-SUT-130
45-SUT-130	START 2ND CT (4D) AT APPROX 2200 RPMs - 45 STEAM TURBINE ST 1	1:0	05-Apr-17 03:00 AM	05-Apr-17 04:00 AM	45-SUT-120, 45-SUT-265	45-SUT-150
45-SUT-150	45 STEAM TURBINE BRENDEN CLOSED	1:0	05-Apr-17 04:00 AM	05-Apr-17 05:00 AM	45-SUT-130, 45-SUT-005	45-SUT-180, 45-SUT-180
45-SUT-180	45 STEAM TURBINE 025 11-20V RODDING	1:0	05-Apr-17 05:00 AM	05-Apr-17 06:00 AM	45-SUT-180	45-SUT-180
45-SUT-180	45 STEAM TURBINE STARTUP & BLEND IN 3RD CT (4A) STATION @ 3	4:0	05-Apr-17 05:00 AM	05-Apr-17 10:00 AM	45-SUT-150, 45-SUT-180	45-SUT-170
45-SUT-170	45 STEAM TURBINE STARTUP & BLEND IN 4TH CT (4C) STATION @ 4	4:0	05-Apr-17 10:00 AM	05-Apr-17 02:00 PM	45-SUT-180	45-SUT-180
45-SUT-160	45 STEAM TURBINE RELEASE TO FULL LOAD FOR VIBRATION ANALY	2:0	05-Apr-17 02:00 PM	05-Apr-17 04:00 PM	45-SUT-170	

MHPSA - Waterfall View
TASK filters: In Progress, Not Started.

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DEF20180001BARTOW LFE2-000003

Response to Bartow question from David Burney's email dated March 3rd, 2017

Q1 What are your expectations of the pressure plate life and concern with respect to erosion and wear that would cause to replacement or repair the pressure plate?

A1 Mitsubishi have operation experience with pressure plate on L-0 stage for about 1.5 years. The pressure plate condition after 1.5 years of operation is shown in Fig.1 below and there was no significant erosion observed on the pressure plate holes.

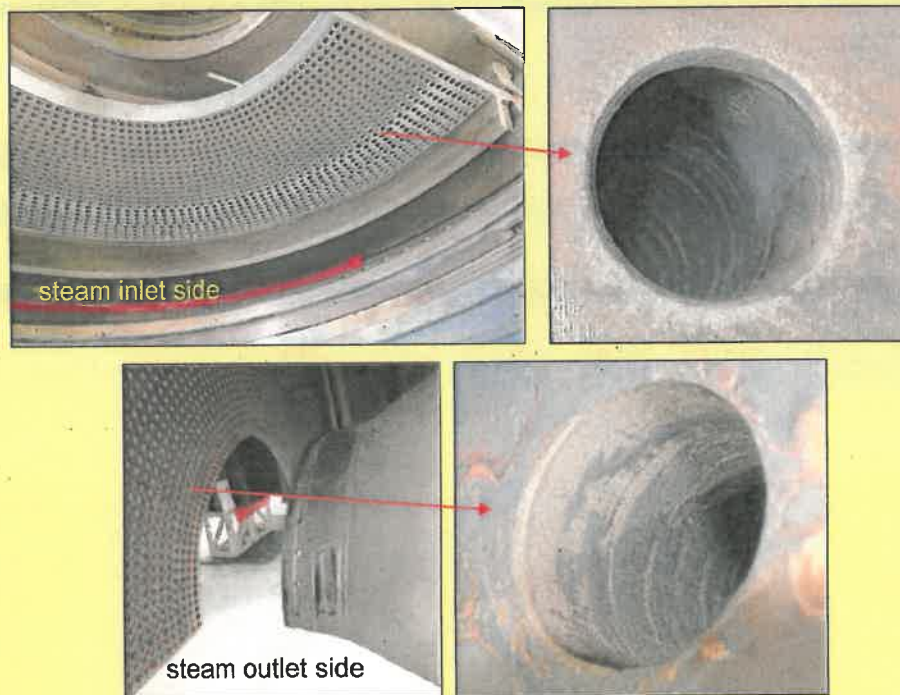


Fig.1 Pressure plate condition after 1.5 years of operation

Q2 Without disclosing customer names, give a reference list of the following questions below of units that have a similar design as Bartow CC that you have installed pressure plate?

- a. What kind of units?
- b. What kind of L-0 blades?
- c. How long pressure plate has been in service.

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A2 The application experience of pressure plate on L-0 stage is shown in Table-1.

Table-1 Application list of pressure plate

Plant	L-0 blade	Duration of service
A	Yes	about 1.5 years
B	Yes	about 1.5 years
C	Yes	about 1.5 years
D	Yes	about 1.5 years
E	Yes	about 1.5 years
F	Yes	about 1.5 years
G	Yes	about 1.5 years
H	Yes	about 1.5 years
I	Yes	about 1.5 years
J	Yes	about 0.5 year
K	Yes	about 1.0 year
L	Yes	about 1.2 years

Q3 What load will we see sonic flow in the pressure plate?

A3 The pressure plate exit flow will be supersonic at and above 63MW operation conditions.

Q4 What are the inspection recommendation intervals?

A4 Annual inspection of the pressure plate based on operational data review is recommended. A visual inspection of the pressure plate (steam outlet side) along with visual and PT inspection for exhaust spray pipe (support weld area), ladder of LP casing inside (weld area) with access through manway is recommended.

Q5 When will we know the results of the lateral and torsional rotor dynamic study?

A5 The study result of shaft critical speed and torsional vibration show no significant change in rotor dynamics characteristics of the rotor train. The differences are small such as LP 1st mode critical speed changes by 30 rpm and LP 2nd mode critical speed changes by approximately 50 rpm. Maximum impact on the torsional frequencies is around 1 Hz.

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