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

FLORIDA PUBLIC SERVICE COMMISSION
OFFICE OF COMMISSION CLERK

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]

***This document number has been assigned to a confidential document.**
For further information, contact the Office of Commission Clerk.

E-MAIL: CLERK@PSC.STATE.FL.US PHONE NO. (850) 413-6770 FAX NO. (850) 717-0114

EXHIBIT NO. 101

CONFIDENTIAL

DOCKET NO:	20190001-EI
WITNESS:	Jeffrey Swartz
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

CONFIDENTIAL

Bartow Spring 2017 Pressure Plate Installation

08-Mar-17 08:52 AM

Activity ID	Activity Name	Original Duration	Start	Finish	Predecessors	Successors
Mon 3-6						
PM-210	Perform Blade Stub QC inspections [OSC]	84.0	06-Mar-17 07:00 PM A	10-Mar-17 07:00 AM	PM-200	PM-220
PM-320	Rough milling and stress relief (Vendor)	24.0	06-Mar-17 07:00 AM A	08-Mar-17 07:00 AM*		
Fri 3-10						
PM-220	Ship Blade Stubs to Site [OSC]	48.0	10-Mar-17 07:00 AM	12-Mar-17 07:00 AM	PM-210	PM-080, TGR-240
PM-390	Turning complete (Vendor)	24.0	10-Mar-17 07:00 AM	11-Mar-17 07:00 AM*		PM-430
Sun 3-12						
PM-430	Hole drilling complete (Vendor)	24.0	12-Mar-17 07:00 AM	13-Mar-17 07:00 AM*	PM-390	PM-090
Wed 3-15						
PM-500	Milling, key drill, flow guide attachment - 1st set (Vendor)	24.0	15-Mar-17 07:00 PM	16-Mar-17 07:00 PM*		PM-520
Fri 3-17						
PM-080	Install Blade Stubs	48.0	17-Mar-17 07:00 AM	19-Mar-17 07:00 AM	PM-220, PRE-47	TGR-260, TGR-250
PRE-47	TGRM & FS Remobilized to Site	0.0	17-Mar-17 07:00 AM*	17-Mar-17 07:00 AM		TGR-240, PM-080
Sat 3-18						
TGR-240	Set up Low Speed Balance equipment	24.0	18-Mar-17 07:00 AM	19-Mar-17 07:00 AM	TGR-130, CWHP-030, DP-020, GOV-10, GEN-55, PM-010, TGR	TGR-250, TGR-290
TGR-290	Scaffold Support for Low Speed Balance Machine	12.0	18-Mar-17 01:00 PM	19-Mar-17 01:00 AM	TGR-240	
PM-520	Milling key drill, flow guide attachment - 2nd set (Vendor)	24.0	18-Mar-17 07:00 PM	19-Mar-17 07:00 PM*	PM-500	PM-530
Sun 3-19						
TGR-250	Move rotor to Low Speed Balance machine	6.0	19-Mar-17 07:00 AM	19-Mar-17 01:00 PM	TGR-240, TGR-280, TGR-160, CWHP-030, DP-020, GOV-10, G	TGR-260, TGR-260QC
TGR-260	Low Speed Balance Rotor	12.0	19-Mar-17 01:00 PM	20-Mar-17 01:00 AM	TGR-250, PM-080, TGR-160, CWHP-030, DP-020, GOV-10, GE	TGR-270, TGR-260QC
PM-530	Inspect, Prep for Ship (Vendor)	36.0	19-Mar-17 07:00 PM	21-Mar-17 07:00 AM*	PM-520	PM-590
Mon 3-20						
TGR-260QC	Evaluate Balance Data	24.0	20-Mar-17 01:00 AM	21-Mar-17 01:00 AM	TGR-260, TGR-250, TGR-160, CWHP-030, DP-020, GOV-10, G	TGR-270, CWHP-090, TGR-261QC
Tue 3-21						
CWHP-090	CWHP - Review the as-found slow speed rotor unbalance report	4.0	21-Mar-17 01:00 AM	21-Mar-17 05:00 AM	TGR-260QC	CWHP-100
TGR-261QC	Rebalance Rotor (Contingency)	0.0	21-Mar-17 01:00 AM	21-Mar-17 01:00 AM	TGR-260QC	TGR-270
CWHP-100	CWHP - Review the as-change and/or as-left slow speed balance shot repo	4.0	21-Mar-17 05:00 AM	21-Mar-17 09:00 AM	CWHP-090	TGR-270, CWHP-110
PM-590	Ship Pressure Plate & Flow Guide to site (Vendor)	24.0	21-Mar-17 07:00 AM	22-Mar-17 07:00 AM	PM-530	PM-090
CWHP-110	CWHP - Check to ensure all balance weights are locked with either peening	7.0	21-Mar-17 09:00 AM	21-Mar-17 04:00 PM	CWHP-100	TGR-270
TGR-270	Remove rotor from LSB machine	6.0	21-Mar-17 04:00 PM	21-Mar-17 10:00 PM	TGR-260, TGR-260QC, CWHP-100, CWHP-110, TGR-261QC	LPA-600
LPA-600	Final clean & inspect rotor for installation	6.0	21-Mar-17 04:00 PM	21-Mar-17 10:00 PM	TGR-270, LPC-430, TGR-160, CWHP-030, DP-020, GOV-10, GI	LPA-610
Wed 3-22						
PM-090	Install Pressure Plate and Flow Guide (Lower Half)	18.0	22-Mar-17 11:00 AM	23-Mar-17 05:00 AM	PM-590, PM-430	LPA-610
Thr 3-23						
LPA-610	Install rotor	4.0	23-Mar-17 05:00 AM	23-Mar-17 09:00 AM	LPD-300, LPA-600, LPC-440, PM-090, TGR-130, CWHP-030, D	PED3-600, LPA-620, PED4-600, PM-100, SU-500
LPA-620	Float rotor & record	3.0	23-Mar-17 09:00 AM	23-Mar-17 12:00 PM	LPA-610	LPA-630
PED3-600	Install U/H bearing & tension	3.0	23-Mar-17 09:00 AM	23-Mar-17 12:00 PM	LPA-610	PED3-610, CWHP-120
PED4-600	Install U/H bearing & tension	3.0	23-Mar-17 09:00 AM	23-Mar-17 12:00 PM	PED4-420, PED4-460, PED4-340, PED4-470, PED4-430, PED4-	PED4-610, CWHP-130
CWHP-120	CWHP - #3 bearing clearance	0.0	23-Mar-17 09:00 AM	23-Mar-17 09:00 AM	PED3-600	PED3-610
CWHP-130	CWHP - #4 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 12:00 PM	23-Mar-17 04:00 PM	LPA-620	LPA-640, PM-100
LPA-640	Install & tension U/H blade ring/diaphragm/steam chamber	7.0	23-Mar-17 04:00 PM	23-Mar-17 11:00 PM	LPA-630	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 06:00 AM	LPA-640, LPD-300	LPA-660, LPA-670
Fri 3-24						
LPA-660	Set U/H flow cones (GEN & GOV)	4.0	24-Mar-17 06:00 AM	24-Mar-17 10:00 AM	LPA-650	LPA-700
LPA-670	Tension inner casing bolting (int. & ext.)	12.0	24-Mar-17 06:00 AM	24-Mar-17 06:00 PM	LPA-650	PED3-610, LPA-680, CWHP-220
PED3-610	Install U/H gland	2.0	24-Mar-17 06:00 AM	24-Mar-17 08:00 AM	LPA-670, PED3-600, CWHP-120	PED4-610, LPA-710, PED3-620
PED4-610	Install U/H gland	2.0	24-Mar-17 02:00 PM	24-Mar-17 04:00 PM	PED3-610, PED4-600, CWHP-130	LPA-710, PED4-620
LPA-680	Install bolt covers on inner casing	5.0	24-Mar-17 06:00 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 inn	0.0	24-Mar-17 06:00 PM	24-Mar-17 06:00 PM	LPA-670	LPA-710
LPA-690	Connect hood spray unions	2.0	24-Mar-17 11:00 PM	25-Mar-17 01:00 AM	LPA-680	LPA-700, SU-500
Sat 3-25						
LPA-700	Remove dance floor	8.0	25-Mar-17 01:00 AM	25-Mar-17 09:00 AM	LPA-680, LPA-690, LPA-660	LPA-710, CWHP-230
LPA-710	Install outer hood	6.0	25-Mar-17 09:00 AM	25-Mar-17 03:00 PM	PED3-610, PED4-610, LPA-700, CWHP-230, CWHP-220	LPA-720, LPA-730, PED4-620, PED3-620, PED-650, LPA-830
CWHP-230	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-720	Install Scaffolding for cross over (for assembly) - Customer	12.0	25-Mar-17 03:00 PM	26-Mar-17 03:00 AM	LPA-710	LPA-730, SU-500, LPA-750
LPA-730	Tension outer hood bolting	6.0	25-Mar-17 03:00 PM	25-Mar-17 09:00 PM	LPA-710, LPA-720	LPA-740
PED3-620	Tension gland bolting	2.0	25-Mar-17 03:00 PM	25-Mar-17 05:00 PM	LPA-710, PED3-610	PED3-630
PED4-620	Tension gland bolting	2.0	25-Mar-17 03:00 PM	25-Mar-17 05:00 PM	LPA-710, PED4-610	PED4-630
PED4-630	Tension bellows bolting	2.0	25-Mar-17 03:00 PM	25-Mar-17 05:00 PM	PED4-620	PED4-640
PED3-630	Tension bellows bolting	2.0	25-Mar-17 05:00 PM	25-Mar-17 07:00 PM	PED3-620	PED3-640
PED4-640	Record gland clearances (radial)	2.0	25-Mar-17 05:00 PM	25-Mar-17 07:00 PM	PED4-630	PED-660

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

CONFIDENTIAL

Bartow Spring 2017 Pressure Plate Installation

08-Mar-17 08:52 AM

Activity ID	Activity Name	Original Duration	Start	Finish	Predecessors	Successors
PED3-640	Record gland clearances (radial)	2.0	25-Mar-17 07:00 PM	25-Mar-17 09:00 PM	PED3-630	PED-650
LPA-740	Tension U/H flow cone bolting (GOV & GEN)	2.0	25-Mar-17 09:00 PM	25-Mar-17 11:00 PM	LPA-730	SU-500, LPA-760
PED-650	Check coupling alignment	16.0	25-Mar-17 09:00 PM	26-Mar-17 01:00 PM	PED3-640, LPA-710, PED4-640	BRG4-010, BRG4-010, CWHP-200, CWHP-210
Sun 3-26						
BRG4-010	Jack up rotor and secure	4.0	26-Mar-17 01:00 PM	26-Mar-17 05:00 PM	PED-650, PED-650, CWHP-200, CWHP-210	BRG4-020
CWHP-200	CWHP - As left HPIP-to-LP coupling alignment data	0.0	26-Mar-17 01:00 PM	26-Mar-17 01:00 PM	PED-650	BRG4-010
CWHP-210	CWHP - As left LP-to-GEN coupling alignment data	0.0	26-Mar-17 01:00 PM	26-Mar-17 01:00 PM	PED-650	BRG4-010
BRG4-020	Roll out #4 bearing	6.0	26-Mar-17 05:00 PM	26-Mar-17 11:00 PM	BRG4-010	BRG4-030
BRG4-030	Unbolt pads and make shim move	4.0	26-Mar-17 11:00 PM	27-Mar-17 03:00 AM	BRG4-020	BRG4-040
Mon 3-27						
BRG4-040	Roll in #4 bearing	6.0	27-Mar-17 03:00 AM	27-Mar-17 09:00 AM	BRG4-030	BRG4-050
BRG4-050	Tilt and twist #4 bearing	2.0	27-Mar-17 09:00 AM	27-Mar-17 11:00 AM	BRG4-040	BRG4-060
BRG4-060	Lower rotor into bearing	2.0	27-Mar-17 11:00 AM	27-Mar-17 01:00 PM	BRG4-050	BRG4-070
PED3-670	Install coupling spacer & coupling bolts	6.0	27-Mar-17 01:00 PM	27-Mar-17 07:00 PM	PED3-400, PED4-410, PED4-450, BRG4-080, PED4-470, PED3-450, PED3-430, PED3-460, PED4-460, PED3-420,	PED3-680
BRG4-070	Install bearing U/H	0.0	27-Mar-17 01:00 PM	27-Mar-17 01:00 PM	BRG4-060	BRG4-080
BRG4-080	Take coupling alignment (2 sets)	0.0	27-Mar-17 01:00 PM	27-Mar-17 01:00 PM	BRG4-070	PED4-670, PED3-670
PED4-670	Install bull gear & coupling bolts	6.0	27-Mar-17 01:00 PM	27-Mar-17 07:00 PM	BRG4-080	PED4-680
PED3-680	Tension coupling bolts	8.0	27-Mar-17 07:00 PM	28-Mar-17 03:00 AM	PED3-670	PED3-690
PED4-630	Tension coupling bolts	8.0	27-Mar-17 07:00 PM	28-Mar-17 03:00 AM	PED4-670	PED4-690
Tue 3-28						
PED3-690	Perform & record coupling hub run out	4.0	28-Mar-17 03:00 AM	28-Mar-17 07:00 AM	PED3-680	PED3-700
PED4-690	Perform & record coupling hub run out	4.0	28-Mar-17 03:00 AM	28-Mar-17 07:00 AM	PED4-680	PED4-700
PED3-700	Record oil bores	2.0	28-Mar-17 07:00 AM	28-Mar-17 09:00 AM	PED3-690	PED3-730, PED4-730
PED4-700	Record oil bores	2.0	28-Mar-17 07:00 AM	28-Mar-17 09:00 AM	PED4-690	PED4-730, PED3-730
PED3-730	Install coupling guard & set/record clearances	4.0	28-Mar-17 09:00 AM	28-Mar-17 01:00 PM	PED4-700, PED3-700	PED3-740
PED4-730	Install coupling guard & set/record clearances	4.0	28-Mar-17 09:00 AM	28-Mar-17 01:00 PM	PED4-700, PED3-700	PED4-740
PED3-740	Record bearing fillet dimensions	2.0	28-Mar-17 01:00 PM	28-Mar-17 03:00 PM	PED3-730	PED3-750
PED4-740	Record bearing fillet dimensions	2.0	28-Mar-17 01:00 PM	28-Mar-17 03:00 PM	PED4-730	PED4-750
PED3-750	Install instrumentation (customer)	4.0	28-Mar-17 03:00 PM	28-Mar-17 07:00 PM	PED3-740	PED3-760, CWHP-240, CWHP-250, CWHP-280, CWHP-290
PED4-750	Install instrumentation (customer)	4.0	28-Mar-17 03:00 PM	28-Mar-17 07:00 PM	PED4-740	PED4-760, CWHP-260, CWHP-270, CWHP-280
CWHP-240	CWHP - Setting of #3 bearing vibrometer and loop test	2.0	28-Mar-17 07:00 PM	28-Mar-17 09:00 PM	PED3-750	PED3-760
CWHP-250	CWHP - Loop test of #3 bearings TC	2.0	28-Mar-17 07:00 PM	28-Mar-17 09:00 PM	PED3-750	PED3-760
CWHP-260	CWHP - Setting of #4 bearing vibrometer and loop test	2.0	28-Mar-17 07:00 PM	28-Mar-17 09:00 PM	PED4-750	PED4-760
CWHP-270	CWHP - Loop test of #4 bearings TC	2.0	28-Mar-17 07:00 PM	28-Mar-17 09:00 PM	PED4-750	PED4-760
CWHP-280	CWHP - Setting of LP differential expansion probes and loop test	2.0	28-Mar-17 07:00 PM	28-Mar-17 09:00 PM	PED3-750, PED4-750	PED3-760, PED4-760
CWHP-290	CWHP - Loop test of #2 bearing vibrometer	2.0	28-Mar-17 07:00 PM	28-Mar-17 09:00 PM	PED3-750	PED3-760
PED3-760	Final clean/inspection of pedestal	4.0	28-Mar-17 09:00 PM	29-Mar-17 01:00 AM	PED3-750, CWHP-240, CWHP-250, CWHP-280, CWHP-290	PED3-770, CWHP-300
PED4-760	Final clean/inspection of pedestal	4.0	28-Mar-17 09:00 PM	29-Mar-17 01:00 AM	PED4-750, CWHP-260, CWHP-270, CWHP-280	PED4-770, CWHP-310
Wed 3-29						
CWHP-300	CWHP - Prior to close-out, cleanliness inspection of the HPIP-to-LP coupling	2.0	29-Mar-17 01:00 AM	29-Mar-17 03:00 AM	PED3-760	PED3-770
CWHP-310	CWHP - Prior to close-out, cleanliness inspection of the LP-to-GEN coupling	2.0	29-Mar-17 01:00 AM	29-Mar-17 03:00 AM	PED4-760	PED4-770
PED3-770	Install pedestal covers	8.0	29-Mar-17 03:00 AM	29-Mar-17 11:00 AM	PED3-760, CWHP-300	SU-500, LPA-760, LPA-750
PED4-770	Install pedestal covers	8.0	29-Mar-17 03:00 AM	29-Mar-17 11:00 AM	PED4-760, CWHP-310	SU-500, LPA-760, LPA-750
SU-500	MHI Release LOTO	1.0	29-Mar-17 11:00 AM	29-Mar-17 12:00 PM	SU-560, PED3-770, PED4-770, LPA-720, LPA-740, PM-100, LPA	SU-530, SU-600
LPA-750	Remove FME on cross over flanges	2.0	29-Mar-17 11:00 AM	29-Mar-17 01:00 PM	LPA-720, LPA-740, PED3-770, PED4-770	LPA-760
SU-600	LOTO Lube Oil Strainer Install (Customer)	4.0	29-Mar-17 12:00 PM	29-Mar-17 04:00 PM	SU-500	SU-610
LPA-760	Install cross over	8.0	29-Mar-17 01:00 PM	29-Mar-17 09:00 PM	LPA-750, PED3-770, PED4-770	LPA-770
SU-610	Install Lube Oil Strainers	4.0	29-Mar-17 04:00 PM	29-Mar-17 08:00 PM	SU-600	SU-620
SU-620	Remove LOTO Lube Oil Strainer (Customer)	4.0	29-Mar-17 08:00 PM	30-Mar-17 12:00 AM	SU-610	SU-530
LPA-770	Tension IP side bolting of cross over	8.0	29-Mar-17 09:00 PM	30-Mar-17 05:00 AM	LPA-760	LPA-780
Thr 3-30						
SU-530	Lube oil circulation	24.0	30-Mar-17 12:00 AM	31-Mar-17 12:00 AM	SU-500, SU-620	SU-630
LPA-780	Tension LP side bolting of cross over	8.0	30-Mar-17 05:00 AM	30-Mar-17 01:00 PM	LPA-770	LPA-790
LPA-790	Release tension bolts	4.0	30-Mar-17 01:00 PM	30-Mar-17 05:00 PM	LPA-780	LPA-800
LPA-800	Close out turbine & Install man ways	8.0	30-Mar-17 05:00 PM	31-Mar-17 01:00 AM	LPA-790	LPA-810
Fri 3-31						
SU-630	LOTO Lube Oil Strainer Rmv (Customer)	4.0	31-Mar-17 12:00 AM	31-Mar-17 04:00 AM	SU-530	SU-640
LPA-810	Make-up & torque LP Induction piping	4.0	31-Mar-17 01:00 AM	31-Mar-17 05:00 AM	LPA-800	LPA-840, 4S-SUT-225, LPA-860, LPA-850
SU-640	Remove Lube Oil Strainers	4.0	31-Mar-17 04:00 AM	31-Mar-17 08:00 AM	SU-630	SU-650
LPA-850	Install insulation from LP Induction	6.0	31-Mar-17 05:00 AM	31-Mar-17 11:00 AM	LPA-810	LPA-830
LPA-860	Install insulation from Gland Steam lines	6.0	31-Mar-17 05:00 AM	31-Mar-17 11:00 AM	LPA-810	SU-510, LPA-830
4S-SUT-225	PERFORM FINAL CLOSEOUT FME INSPECTIONS	30.0	31-Mar-17 05:00 AM	01-Apr-17 11:00 AM	LPA-810	4S-SUT-045
SU-650	Remove LOTO Lube Oil Strainer (Customer)	4.0	31-Mar-17 08:00 AM	31-Mar-17 12:00 PM	SU-640	4S-SUT-045
SU-510	Install roof sections (Customer)	16.0	31-Mar-17 11:00 AM	01-Apr-17 03:00 AM	LPA-860	LPA-840
Sat 4-1						

MHPSA - Waterfall View

TASK filters: In Progress, Not Started.

CONFIDENTIAL

Bartow Spring 2017 Pressure Plate Installation

08-Mar-17 08:52 AM

Activity ID	Activity Name	Original Duration	Start	Finish	Predecessors	Successors
LPA-830	Remove scaffolding for cross over (for assembly)	6.0	01-Apr-17 03:00 AM	01-Apr-17 09:00 AM	LPA-710, LPA-840, LPA-850, LPA-880	
LPA-840	Install insulation from cross over	0.0	01-Apr-17 03:00 AM	01-Apr-17 03:00 AM	LPA-810, SU-510	LPA-830
4S-SUT-045	OPERATIONS RELEASE LOTO - 4S STEAM TURBINE	4.0	01-Apr-17 11:00 AM	01-Apr-17 03:00 PM	4S-SUT-225, SU-650	4S-SUT-030, 4S-SUT-005
4S-SUT-005	LOTO RELEASED - STEAM TURBINE PRIME MOVER VALVE WORK LO	24.0	01-Apr-17 03:00 PM	02-Apr-17 03:00 PM	4S-SUT-045	4S-SUT-235, 4S-SUT-040, 4S-SUT-025, 4S-SUT-035, 4S-SUT-020, 4S-SUT-015
4S-SUT-030	4S STEAM TURBINE ON TURNING GEAR (12 HR MINIMUM)	12.0	01-Apr-17 03:00 PM	02-Apr-17 03:00 AM	4S-SUT-045	4S-SUT-040
Sun 4-2						
4S-SUT-235	START CIRC WATER PUMP ALPHA	1.0	02-Apr-17 03:00 PM	02-Apr-17 04:00 PM	4S-SUT-005	4S-SUT-245
4S-SUT-015	LOTO RELEASED - ALL HRSG ENERGY SOURCE LOTO	24.0	02-Apr-17 03:00 PM	03-Apr-17 03:00 PM	4S-SUT-005	4S-SUT-ECC, 4S-SUT-025
4S-SUT-035	OPERATIONS RELEASE LOTO - STEAM TURBINE GSU TRANSFORMEF	8.0	02-Apr-17 03:00 PM	02-Apr-17 11:00 PM	4S-SUT-005	4S-SUT-150
4S-SUT-020	WALKDOWN \WATERBOX SIDE #2 & CW PIPE INLET & DISCHARGE	24.0	02-Apr-17 03:00 PM	03-Apr-17 03:00 PM	4S-SUT-005	
4S-SUT-040	4S ST FILL GENERATOR WITH HYDROGEN	24.0	02-Apr-17 03:00 PM	03-Apr-17 03:00 PM	4S-SUT-005, 4S-SUT-030	4S-SUT-120
4S-SUT-245	START CIRC WATER PUMP BRAVO	1.0	02-Apr-17 04:00 PM	02-Apr-17 05:00 PM	4S-SUT-235	4S-SUT-255
4S-SUT-255	START CIRC WATER PUMP CHARLIE	1.0	02-Apr-17 05:00 PM	02-Apr-17 06:00 PM	4S-SUT-245	4S-SUT-120, 4S-SUT-265
4S-SUT-265	START CIRC WATER PUMP DELTA	1.0	02-Apr-17 06:00 PM	02-Apr-17 07:00 PM	4S-SUT-255	4S-SUT-275
4S-SUT-275	START CIRC WATER PUMP ECHO	1.0	02-Apr-17 07:00 PM	02-Apr-17 08:00 PM	4S-SUT-265	4S-SUT-285
4S-SUT-285	START CIRC WATER PUMP FOXTROT	1.0	02-Apr-17 08:00 PM	02-Apr-17 09:00 PM	4S-SUT-275	4S-SUT-130
Mon 4-3						
4S-SUT-ECC	ECC RELEASE UNIT FOR STARTUP SEQUENCE	1.0	03-Apr-17 03:00 PM	03-Apr-17 04:00 PM	4S-SUT-015	4S-SUT-100
4S-SUT-025	DEMIN SYSTEM IN SERVICE	1.0	03-Apr-17 03:00 PM	03-Apr-17 04:00 PM	4S-SUT-005, 4S-SUT-015	4S-SUT-050
4S-SUT-050	FILL HOTWELL / CHECK FOR LEAKAGE / FLUSH	8.0	03-Apr-17 04:00 PM	04-Apr-17 12:00 AM	4S-SUT-025	4S-SUT-060
Tue 4-4						
4S-SUT-060	FILL HOTWELL FOR STARTUP	4.0	04-Apr-17 12:00 AM	04-Apr-17 04:00 AM	4S-SUT-050	4S-SUT-070
4S-SUT-070	START CONDENSATE SYSTEM (DOSE CHEMISTRY)	2.0	04-Apr-17 04:00 AM	04-Apr-17 06:00 AM	4S-SUT-060	4S-SUT-080
4S-SUT-080	VERIFY 4A / 4B / 4C / 4D HRSG BFP IS VENTED & FILLED	4.0	04-Apr-17 06:00 AM	04-Apr-17 10:00 AM	4S-SUT-070	4S-SUT-090
4S-SUT-090	FILL 4A / 4B / 4C / 4D HRSGs	12.0	04-Apr-17 10:00 AM	04-Apr-17 10:00 PM	4S-SUT-080	4S-SUT-120, 4S-SUT-100
4S-SUT-100	SHUTDOWN 2 CTs FROM SIMPLE CYCLE OPERATIONS FOR ST STAR	2.0	04-Apr-17 10:00 PM	05-Apr-17 12:00 AM	4S-SUT-090, 4S-SUT-ECC	4S-SUT-120
Wed 4-5						
4S-SUT-120	4S STEAM TURBINE START 1st CT (4B) TO SET SEALS FOR PULLING \	3.0	05-Apr-17 12:00 AM	05-Apr-17 03:00 AM	4S-SUT-255, 4S-SUT-100, 4S-SUT-090, 4S-SUT-040	4S-SUT-130
4S-SUT-130	START 2ND CT (4D) AT APPROX 2200 RPMS - 4S STEAM TURBINE ST	1.0	05-Apr-17 03:00 AM	05-Apr-17 04:00 AM	4S-SUT-120, 4S-SUT-285	4S-SUT-150
4S-SUT-150	4S STEAM TURBINE BREAKER CLOSED	1.0	05-Apr-17 04:00 AM	05-Apr-17 05:00 AM	4S-SUT-130, 4S-SUT-035	4S-SUT-160, 4S-SUT-190
4S-SUT-190	4S STEAM TURBINE GSU THERMOGRAPHY	1.0	05-Apr-17 05:00 AM	05-Apr-17 06:00 AM	4S-SUT-150	4S-SUT-160
4S-SUT-160	4S STEAM TURBINE STARTUP & BLEND IN 3RD CT (4A) STATION @ 3:	4.0	05-Apr-17 06:00 AM	05-Apr-17 10:00 AM	4S-SUT-150, 4S-SUT-190	4S-SUT-170
4S-SUT-170	4S STEAM TURBINE STARTUP & BLEND IN 4TH CT (4C) STATION @ 4.	4.0	05-Apr-17 10:00 AM	05-Apr-17 02:00 PM	4S-SUT-160	4S-SUT-180
4S-SUT-180	4S STEAM TURBINE RELEASE TO FULL LOAD FOR VIBRATION ANALYS	2.0	05-Apr-17 02:00 PM	05-Apr-17 04:00 PM	4S-SUT-170	

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

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.

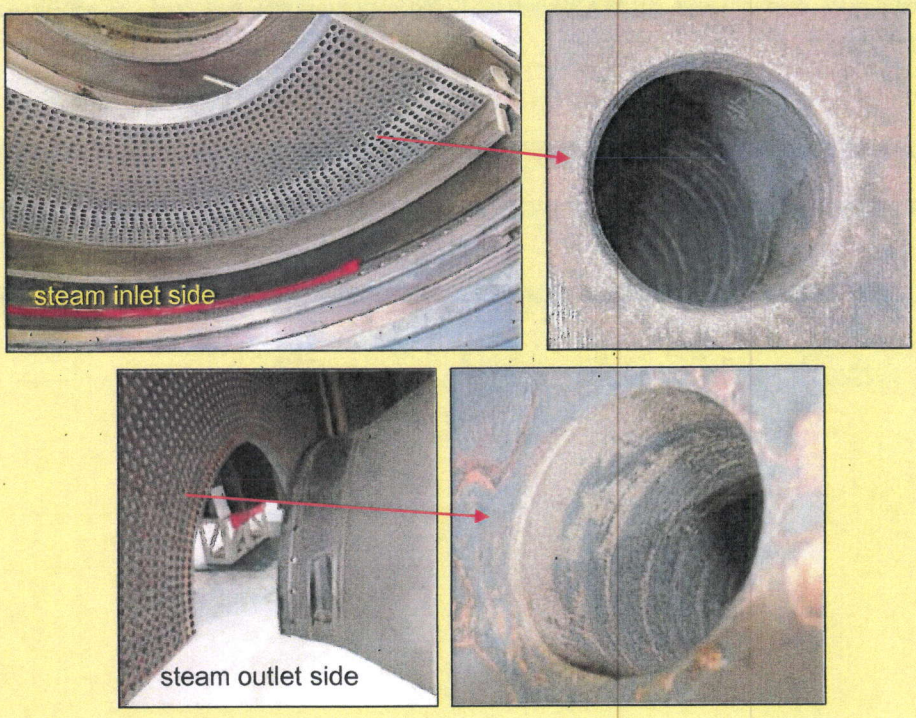

Fig.1 Pressure plate condition after 1.5 years of operation

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.

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.