## **TOP 5 CRITICAL EQUIPMENT READINESS PROGRAM**

## FCA DEPLOYMENT

													DEPLOYME	<u> </u>							
FS Code:	A6-U1	5-FS001.1	Equipment 15-K-10	Т													Asset Holder : RCC		Status Updated : 07 May 2009		
						Fail	ure N	lode	Risk	Ass	essn	nent									
Sequence Number			Credible Wa	ys of Equi	oment Fai	lure											Impact On The Sysytem	Total Cons. (USD)	Likelihood	Crit. Code	RAM Crit.
3	F	Fouling problem pada tahun 2004, 200	07, 2008		_												RCC Shut down 23 hari (5+11+7) dan harus evakuasi	2.096.545,25	0.5 - 4 YRS3	A4C	Н
Strategi		Action	Critical Issue	PIC	Frek	1	2	3	4	5	6	7	8	9	10	11	12 Remark				
Maint. & Reliabitas	_	Monitoring vibrasi trusth bearing	Vibrasi tinggi yang di akibatka adanya kenaikan pressure pa 1st stage discharge MAB (nor pressure 14 kg/cm²)	la <sub>nal</sub> JPK Re	l 1 minggu	ı V	٧	٧	٧	٧	٧	٧	٧	٧	٧	٧	٧				
	2	Penggantian catridge filter lube oil	Adanya kenaikan delta P lube	oil JPK	6 bulan					٧						٧					
		Monitoring analisa steam product	Ada kenaikan silica content dalam steam product	Ops.	1/ hari	٧	٧	٧	٧	٧	٧	٧	٧	٧	٧	٧	٧				
	_	Mengatur injeksi chemical	Ada kenaikan silica content dalam steam product	Ops.	1/ hari	٧	٧	٧	٧	٧	٧	٧	٧	٧	٧	٧	v				
		Mengatur level HBW di steam drum (15-V-101/101B/117) & mengatur continuos blowdown	Ada kenaikan silica content dalam steam product	Ops.	1/ hari	٧	٧	٧	٧	٧	٧	٧	٧	٧	٧	٧	٧				
Operational		Monitoring temperatur lube oil	Adanya kebuntuan di seal coo lube oil	Ops.	2/shift	٧	٧	٧	٧	٧	٧						٧				
	_	Moniting pressure lube oil	Ada kebuntuan di filter lube oi	Ops.	2/shift	٧	٧	٧	٧	٧	٧	٧	٧	٧	٧	٧	٧				
	_	Monitoring level lube oil	Adanya kebocoran lube oil di sistem	Ops.	2/shift	٧	٧	٧	٧	٧	٧	٧	٧	٧	٧	٧	٧				
		Analisa Lube Oil	lube oil mengalami kontamina	si Ops.	1 bulan	٧	٧	٧	٧	٧	٧	٧	٧	٧	٧	٧	<b>V</b>				
		Menjalankan oil purifier pump secara berkala	water content pada lube oil melibihi batas maksimum (ma 0,5% volume)	c. Ops.	1 bulan	٧	٧	٧	٧	٧	٧	٧	٧	٧	٧	٧	٧				
Improvement		Injeksi chemical	Adanya deposit silica pada tur		continue	٧	٧	٧	٧	٧	٧	٧	٧	٧	٧	٧	√				
		Memasang fasilitas wet washing	Adanya deposit silica pada tur	bin JPK	1x psg				٧												
Mat'l Req.		December	OTV		Did	D.	ITIN'	OTY	MCL	01	02	02	04   6	т.т.	LIC.	PIC	Downst				
Kimap	Chan	Description Description	QTY Re	ą. UI	PM	RU	ITIN	QIY	MSL	QT	Q2	Q3 (	Q4 S	TAT	US	PIC	Remark				
	Shoe as Thrust F	ssembly off Journal bearing assembly			+			-							-						
۷.	iiius( F	au soi										-	$\dashv$		$\dashv$						
OPI COACH																					
Approval		MANAJER PRODUKSI				NAAN		D D =	LIAR	II IT\	,							MANIA	JER JPK		
		WWW.SERV FRODUNG		MANAJER RELIABILITY													WINIVA	JER OF IX			
		lwan Soemantri					Sya	hyul	li SB									Nur F	lendro		

TOP 5 Critical Equipment Readiness Program ECA DEPLOYMENT

	Code: A6-U15-FS001 Equipment 15-K-102A/B Asset Holder																				
ra Code . Ab-	015-F3001	Equipment	10-K-102A	/B	Failure I	الم ما	n Diel	l. A a a		4							Asset Holder				
					Failure	vioa	e KISI	K ASS	essi	nent									1		
Sequence Number		Cred	ible Ways o	f Equipm	ent Failur	е											Impact On The Sysytem	Total Cons. (USD)	Likelihood	Crit. Code	RAM Crit.
1	Adanya kenaikan vibrasi pda Bearing blov																Steam product loss ± 240T/H	232.267	0 - 0,5yrs	A3D	Н
Strategi	Action													Remark							
	Bearing inspection and recorded.PDF	Adanya kenaikan vi	Rel.	1/minggu	٧	٧	٧	٧	٧	٧ .	٧	٧ .	٧	٧	۱						
	2. Axial vibration Monitoring	Adanya kenaikan vi bearing lock nut loo		Rel.	1/minggu	٧	٧	٧	٧	٧	٧ .	٧	٧ .	٧	٧	٧١					
	Bearing temperature monitoring	emperatur cotor,	Rel.	1/minggu	٧	٧	٧	٧	٧	٧	٧	٧ .	٧	٧	٧١						
	4. Regreasing	JPK	2/minggu	٧	٧	٧	٧	٧	٧ .	٧	٧ .	٧	٧	٧١							
Operational	1. Pengaturan discharge pressure Adanya kenaikan vibrasi OPS Continue v v v v v v v v v v v v v v v v v v v														٧١						
Improvement	Memasang jaringan speed indikator yang dapat dimonitoring di DCS	Adanya indikasi flo stabil	w yang tidak	JPK	1 kali							٧									
Mat'l Req. Kimap	Description	QTY Reg.	HII	PM	DH	TIN	QTY I	MSI I	Q1 I	02 (	23 (	Q4 S	TATU	IIS	PIC	Remark					
1.	Description		QTT Req.	UI PM RUTIN QTY MSL Q1 Q2 Q3 Q4 STATUS PIC Remark																	
															_						
																	+				
OPI COACH											<u> </u>										
Approval																	_				
	MANAJER PRODUKSI					MAN	IAJER	REL	JABI	LITY								MA	ANAJER JPK		
	Iwan Soemantri					Syal	hyuli	SB									Nur Hendro				

TOP 5 Critical Equipment Readiness Program ECA DEPLOYMENT

FS Code:	A6-U15-FS001 Equipment 16-K-101 Asset Hold Failure Mode Risk Assessment																			Asset Holder				
							Failu	ıre M	ode	Risk	Ass	essn	nent											
Sequence Numb	oer			Cre	dible Ways	of Equip	ment Fail	ure												Impact On The Sysytem	Total Cons. (USD)	Likelihood	Crit. Code	RAM Crit.
2	(	Gov	vernor & Bearing Problem																	Loss product LPG,Propylene, & polygasoline	7.929.833	0,5 -4 yrs	A4C	Н
Strategi			Action	Critical Is	sue	PIC	Frek	1	2	3	4	5	6	7	8	9	10	11	12	Remark				
Maint. & Reliabitas		1.	Monitoring vibrasi trusth bearing	Vibrasi tinggi yang adanya kenaikan pr 1st stage discharge pressure 14 kg/cm <sup>2</sup> )	essure pada MAB (norma	JPK,Rel	1 minggu	٧	٧	٧	٧	٧	٧	٧	٧	٧	٧	٧	٧					
		2. I	Penggantian catridge filter lube oil	Adanya kenaikan de	elta P lube oil	JPK	6 bulan			٧						٧								
		3 1	Monitoring analisa steam product	Ada kenaikan silica dalam steam produc		Ops.	1/ hari	٧	٧	٧	٧	٧	٧	>	٧	٧	٧	٧	٧					
	Ī		Mengatur injeksi chemical	Ada kenaikan silica dalam steam produc	content	Ops.	1/ hari	٧	٧	٧	٧	٧	٧	٧	٧	٧	٧	٧	٧					
	-	1	Mengatur level HBW di steam drum (15-V-101/101B/117) & mengatur continuos blowdown	Ada kenaikan silica dalam steam produc	content	Ops.	1/ hari	٧	٧	٧	٧	٧	٧	٧	٧	٧	٧	٧	٧					
Operational	_	3. I	Monitoring temperatur lube oil	Adanya kebuntuan lube oil	di seal cooler	Ops.	2/shift	٧	٧	٧	٧	٧	٧	٧	٧	٧	٧	٧	٧					
			Moniting pressure lube oil	Ada kebuntuan di fil		Ops.	2/shift	٧	٧	٧	٧	٧	٧	٧	٧	٧	٧	٧	٧					
	8	3. <sup>I</sup>	Monitoring level lube oil	Adanya kebocoran sistem	lube oil di	Ops.	2/shift	٧	٧	٧	٧	٧	٧	٧	٧	٧	٧	٧	٧					
	9	9.	Analisa Lube Oil	lube oil mengalami	kontaminasi	Ops.	1/ bulan	٧	٧	٧	٧	٧	٧	٧	٧	٧	٧	٧	٧					
	-		Menjalankan oil purifier pump secara berkala	water content pada melibihi batas maks 0.5% volume)		Ops.	1/bulan	٧	٧	٧	٧	٧	٧	٧	٧	٧	٧	٧	٧					
Improvement			Injeksi chemical	Adanya deposit silic			continue	٧	٧	٧	٧	٧	٧	٧	٧	٧	٧	٧	٧					
Mat'l Reg.			Memasang fasilitas wet washing	Adanya deposit silic	a pada turbin	JPK	1x psg			٧														
Kimap			Description  mbly off Journal bearing assembly		QTY Req.	UI	PM	RU	TIN	QTY	MSL	Q1	Q2	Q3	Q4	STA	TUS	PI	С	Remark				
	Thrust	rad	SEI																					
OPI COACH						L		<u> </u>																
Approval																								
	MANAJER PRODUKSI MANAJER RELIABILITY																M	ANAJER JPK						
			Iwan Soemantri					Sya	hyuli	i SB										ı	Nur Hendro			

TOP 5 Critical Equipment Readiness Program ECA DEPLOYMENT

FS Code:    For the content of the c																							
FS Code:	le: 19-PG-0204-A2A1-4"-H25														Asset Holder								
							Failu	е Мо	de Ri	sk Ass	essm	ent											
Sequence Number	er			Cre	edible Ways	of Equipn	nent Failu	re										Impact On 1 Sysytem		tal Cons. (USD)	Likelihood	Crit. Code	RAM Crit.
1		Pipa	a mengalami Corrosion Under Insula	tion														Unit 19 & sto	0	2.822.590	4-30 yrs	A4B	н
Strategi			Action	Critical Is	ssue	PIC	Frek	1	2	3	5	6	7	8	9	10	11 1	_					
		1.	Mengganti pipa	Pipa bocor		JPK	1X				٧												
Maint. & Reliabitas		2.	Melapisi pipa dgn primer coat	Barrier rusak	Barrier rusak solasi rusak/terkontaminasi air						٧												
ividii it. & Reliabitas		3.	Mengganti isolasi	isolasi rusak/terkor							٧												
		4.	Monitoring CUI	CUI tidak terkontro	I	Rel	1/bulan	٧	٧	۷۱	/ v	٧	٧	٧	٧	٧	۷۱	/					
Operational																							
Operational												-											
						+					-		-					+					
Improvement			Analisa penggunaan insulation coating	Potensi insul. terko tinggi	ontaminasi	REL,JPK	1				٧												
Mat'l Reg.														<u> </u>									
Kimap			Description		QTY Req.	UI	PM	RU	TIN	QTY MS	SL Q1	Q2	Q3	Q4	STA	TUS	PIC	Remark					
1.	Rockv	vool																					
	Metal																				<u> </u>	·	
	Tappir Sealar		rew			1					-	+	1	<u> </u>	<b> </b>			_					
	Sealai Pipa C		3 4"			+					-	+	-	1		$\dashv$		+					
	Prime					<u> </u>																	
OPI COACH																							
Approval			MANAJER PRODUKSI					NAANI	A IED	DELLA	DII IT	V								N.A.	IANAJER JPK		
			MANAJER PRODUKSI	MANAJER RELIABILITY														W	MINAJER JPK				
			Iwan Soemantri					Syah	nyuli S	В										Nur Hendro			

Iwan Soemantri

TOP 5 Critica	OP 5 Critical Equipment Readiness Program  Code: BMS CO Boiler Asset I																ECA	DEPLOYME	ENT		
FS Code:				Equipment	BMS CO F	3oiler 💮											Asset Holder				
							Failu	ıre Mode	e Risk	( Asse	essm	ent									
Sequence Numb	ber			Cre	edible Ways	of Equip	ment Fail	ure									Impact On The Sysytem	(USD)	Likelihood	Crit. Code	RAM Crit.
LLCP-BC900917-5	502				ister macet,		di fuel gas	s failure									Steam product loss ± 240T/H	234.090,85	0 - 0,5yrs	A3D	Н
Strategi			Action	Critical Is	sue	PIC	Frek	1 2	2 3	4	5	6 7	8	9	10	11 1	2 Remark				
Maint. & Reliabitas		1. 2.																			
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Improvement									1	$\pm$											
Mat'l Req. Kimap			Description		QTY Req.	T UI	PM	RUTIN	LOT	V MCL	O1	Q2 Q3		ГСТА	THE	PIC	Remark				
1. Kimap			Description		QTT Req.	UI	PIVI	RUTIN	QI	Y WISL	QΙ	QZ Q3	S Q2	1 STA	103	PIC	Remark				
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OPI COACH																					
Approval		MAN	AJER PRODUKSI					MANAJ	IFR RI	FLIAR	II ITY	,						N	MANAJER JPK		
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Syahyuli SB

**Nur Hendro**