




บริษัท ปตท.สผ. สยาม จำกัด

รายงานผลการปฏิบัติตามมาตรการป้องกันและแก้ไขผลกระทบสิ่งแวดล้อม และมาตรการติดตามตรวจสอบผลกระทบสิ่งแวดล้อม
โครงการติดตั้งท่อก๊าซจากฐานผลิตปิโตรเลียมหนองตูม-เอ (NTM-A) ไปยังฐานผลิตทุ่งใหญ่-เอ (TYI-A) แปลงเอส 1
จังหวัดพิษณุโลก และสุโขทัย
ฉบับเดือนมกราคม - ธันวาคม พ.ศ.2565

ภาคผนวกที่ 13

เอกสารการตรวจสอบและบำรุงรักษาแนวท่อก๊าซ

<div><div>PTTEP</div></div>	<h1>FLOWLINE SUMMARY REPORT</h1>		PS1/M INSPECTION TEAM					
FLOWLINE INFORMATION			NORMAL					
Tag number:		S1-LKUCA -FSTN-6-CAA-P-CO		Report number:		FL-6-CAA-CO-2022-02		
Line number:		CAA		Inspection date:		22 มี.ย. 2022		
Location: From-To		LKU-CA FSTN		Inservice date:		01 มี.ย. 2000		
P&ID number:		LKU-1-08-037RSV23 & LCA-1-08-002C		API Classification:		2.00		
Piping group:		Process		API MII (yrs):		5.00		
Service description:		Crude oil		WO number:		500358034		
THICKNESS SUMMARY			NORMAL					
CML-TP Number:		B-B3-S66-W67-U		Nominal thickness (mm):		7.92		
Distance Description:		726m 726000mm From W67 0mm		Lowest actual thickness (mm):		6.7		
Location Description:		1200 After S-106-35		Retirement thickness (mm):		2.00		
NPS (inch):		6.00		Selected corrosion rate (mm/yr):		0.00		
Material:		API 5L B		Remaining life (yrs):		15.88		
CML MII, RL/2 (yrs):		5.00		Next inspection date (NID):		01 มี.ย. 2025		
MAWP								
Piping inspection interval (months):			Derate Pressure rec (psig):					
t:ta-2(CRxInterval) (mm):			retired after derate pressure (mm):					
MAWP (psig):			Remaining Life after Pressure (months):					
EXTERNAL VISUAL INSPECTION SUMMARY						GOOD		
Damage mechanism check list								
Leak or Seepage		Good						
General corrosion		Good						
Vibration		Good						
Soil-to-Air Interface		N/A						
Corrosion under insulation (CUI)		N/A						
Corrosion under support (CUS)		Good						
Other		N/A						
Piping component check list								
Weld seam		Good						
Painting		N/A						
Insulation		N/A						
Pipe Support		Good						
Flange/Bolt/Nut/Gasket		N/A						
Instrument Component		N/A						
Deck Penetration		N/A						
Other		N/A						
INSPECTION SUMMARY				RECOMMENDATION DESCRIPTION				
<p>- 6" BL-CAA Crude flowline inspection was performed 60% INSP Coverage on subsection 5, 1 & 2 and the overall of this flowline results still in normal thickness with no any significant to low reading thickness or high corrosion rate on this period.</p> <p>The minimum remaining thickness at CML no.A-A2-S19-W19-W is 5.32 mm. with SCR 0.12 mm./yr. & RL is 27.72 yrs.</p> <p>Note; As previous inspection on Feb 22'2022.</p> <p>1.) Subsection no.A4, B1, C1 & D4 of this flowline have weld joint under block culvert shall be plan to inspect.</p> <p>2.) MFL Technique could not be done due to obstruct block culvert on inspection time as detail:</p> <p>-Section A5 at weld no.W35 still under block culvert C-166-02 and Under wrapping = 20 m.</p> <p>-Section D4 at weld no.W147 still under block culvert Not MFL = 10 m</p> <p>3.) External wrapping at weld no.W10 and still in good condition.</p> <p>4.) TFM Techniue was done for confirm internal condition at 39% of weld joints (Totally 78 welds) and found still in normal condition.</p>				<p>- Continue normal flowline 60% inspection (Sub-section 3, 4 & 5) of entire flowline length for plan in next year 2023.(Jun-23)</p> <p>- Plan to extent inspection 20% or Min.10 of welding joint by TFM Technique for detect internal weld metal loss within 12 months.(Feb-23)</p> <p>- Plan to extend for flowline under block culvert inspection shall be done at least once a year for general visual inspection or other NDE Technique should be executed for internal corrosion detection for pipe & weld.</p> <p>- For crude transfer flowlines, the normal maximum operating pressure shall not exceed 500 PSIG.</p> <p>Note: 6"BL-CAA is flowline criticality ranking 1st by production aspect.</p>				
REQUIRED ACTION								
Temporary repair				Repaint				
Permanent repair				Rerating				
				Derating				
Inspected by:		Manop N.			Date:		09 ก.ค. 2022	
API Inspector reviewed by:		Jirawat C.			Date:		11 ก.ค. 2022	
PTTEP Leader reviewed:		Apichat P.			Date:		24 ก.ค. 2022	





	<h1>FLOWLINE THICKNESS REPORT</h1>	PS1/M INSPECTION TEAM
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Tag No.:	S1-LKUCA -FSTN-6-CAA-P-CO		Total length (m):	2200	Installation date:	01 มี.ย. 2000	Service life (yrs):	22.66
Pipe size (in):	6		% Inspection:	20	1st Inspection date:	02 มี.ย. 2020	6th Inspection date:	08 มี.ย. 2015
Flowline No.:	CAA		No. of section (sections):	5	2nd Inspection date:	15 มี.ย. 2021	7th Inspection date:	03 มี.ย. 2016
From-To:	LKU-CA	FSTN	Length of section (m):	440	3rd Inspection date:	10 มี.ย. 2021	8th Inspection date:	05 มี.ย. 2017
Process:	P	Process	Length of subsection (m):	88	4th Inspection date:	22 ก.พ. 2022	9th Inspection date:	06 ส.ค. 2018
Service:	CO	Crude oil	Total spool (spools):	201	5th Inspection date:	22 มี.ย. 2022	10th Inspection	06 มี.ย. 2019

THICKNESS MEASUREMENT RESULT

[illegible]

				FLOWLINE THICKNESS REPORT													PS1/M INSPECTION TEAM				
Tag No.:				S1-LKUCA -FSTN-6-CAA-P-CO				Total length (m):				2200		Installation date:		01 มิ.ย. 2000		Service life (yrs):		22.66	
Pipe size (in):				6				% Inspection:				20		1st Inspection date:		02 มิ.ย. 2020		6th Inspection date:		08 มิ.ย. 2015	
Flowline No.:				CAA				No. of section (sections):				5		2nd Inspection date:		15 มิ.ย. 2021		7th Inspection date:		03 มิ.ย. 2016	
From-To:				LKU-CA		FSTN		Length of section (m):				440		3rd Inspection date:		10 มิ.ย. 2021		8th Inspection date:		05 มิ.ย. 2017	
Process:				P		Process		Length of subsection (m):				88		4th Inspection date:		22 ก.พ. 2022		9th Inspection date:		06 ส.ค. 2018	
Service:				CO		Crude oil		Total spool (spools):				201		5th Inspection date:		22 มิ.ย. 2022		10th Inspection		06 มิ.ย. 2019	
THICKNESS MEASUREMENT RESULT																					
Section	Subsection	Weld Joint	Distance (m)	CML Name	Location Desc	Nominal Thickness (mm)	Retired Thickness (mm)	Up/Down/Weld	MFL	Previous Inspection Date	Previous Thickness (mm)		Last Inspection Date	Last Thickness (mm)		SCR (mm/yr)	RL (yrs)	Temporary Repair			
											Top (0)	Bottom (180)		Top (0)	Bottom (180)						
		8	77	A-A1-S7-W8-U	1900 Before S-168-14	7.92	2.00	U		06 ส.ค. 2018	7.49	7.29	22 มิ.ย. 2022	7.38	7.25	0.01	508.86				
		8	77	A-A1-S8-W8-D	1900 Before S-168-14	7.92	2.00	D		06 ส.ค. 2018	7.69	7.69	22 มิ.ย. 2022	7.69	7.69	0.00	5146.10				
		8	77	A-A1-S8-W8-W	1900 Before S-168-14	7.92	2.00	W TFM													
		9	88	A-A1-S8-W9-U	6000 After C-168-11	7.92	2.00	U		06 ส.ค. 2018	7.49	7.39	22 มิ.ย. 2022	7.49	7.39	0.00	4874.62				
		9	88	A-A1-S9-W9-D	6000 After C-168-11	7.92	2.00	D		06 ส.ค. 2018	7.49	7.39	22 มิ.ย. 2022	7.49	7.39	0.00	4874.62				
		9	88	A-A1-S9-W9-W	6000 After C-168-11	7.92	2.00	W TFM													
		10	99	A-A1-S9-W10-U	100 Before C-168-10	7.92	2.00	U		06 ส.ค. 2018	7.39	6.89	22 มิ.ย. 2022	7.39	6.89	0.00	4422.15				
		10	99	A-A1-S10-W10-D	100 Before C-168-10	7.92	2.00	D		06 ส.ค. 2018	7.49	6.89	22 มิ.ย. 2022	7.49	6.89	0.00	4422.15				
		10	99	A-A1-S10-W10-W	100 Before C-168-10	7.92	2.00	W TFM					09 มิ.ย. 2021		7.61	0.01	380.45				
		11	110	A-A1-S10-W11-U	400 Before S-168-08	7.92	2.00	U		06 ส.ค. 2018	7.29	7.30	22 มิ.ย. 2022	7.29	7.30	0.00	4784.13				
		11	110	A-A1-S11-W11-D	400 Before S-168-08	7.92	2.00	D		06 ส.ค. 2018	7.59	6.89	22 มิ.ย. 2022	7.69	6.89	0.00	4422.15				
		11	110	A-A1-S11-W11-W	400 Before S-168-08	7.92	2.00	W TFM					09 มิ.ย. 2021		7.17	0.04	144.91				
		12	121	A-A1-S11-W12-U	400 Before S-168-06	7.92	2.00	U		06 ส.ค. 2018	7.29	7.29	22 มิ.ย. 2022	7.29	7.27	0.01	1021.60				
		12	121	A-A1-S12-W12-D	400 Before S-168-06	7.92	2.00	D		06 ส.ค. 2018	7.79	7.79	22 มิ.ย. 2022	7.79	7.79	0.00	5236.59				
		12	121	A-A1-S12-W12-W	400 Before S-168-06	7.92	2.00	W TFM					09 มิ.ย. 2021		7.35	0.03	197.32				
		13	132	A-A1-S12-W13-U	100 Before S-168-04	7.92	2.00	U		06 ส.ค. 2018	6.69	7.59	22 มิ.ย. 2022	6.69	7.59	0.00	4241.17				
		13	132	A-A1-S13-W13-D	100 Before S-168-04	7.92	2.00	D		06 ส.ค. 2018	6.89	7.19	22 มิ.ย. 2022	6.89	7.19	0.00	4422.15				
		13	132	A-A1-S13-W13-W	100 Before S-168-04	7.92	2.00	W TFM					09 มิ.ย. 2021		7.35	0.03	197.32				
A	A2	14	143	A-A2-S13-W14-U	1200 Before S-168-02	7.92	2.00	U		06 มิ.ย. 2019	6.79	7.29	22 มิ.ย. 2022	6.79	7.29	0.00	3839.87				
		14	143	A-A2-S14-W14-D	1200 Before S-168-02	7.92	2.00	D		06 มิ.ย. 2019	7.19	7.09	22 มิ.ย. 2022	7.19	7.09	0.00	4080.53				
		14	143	A-A2-S14-W14-W	1200 Before S-168-02	7.92	2.00	W TFM					09 มิ.ย. 2021		7.17	0.04	144.91				

				FLOWLINE THICKNESS REPORT													PS1/M INSPECTION TEAM	
Tag No.:		S1-LKUCA -FSTN-6-CAA-P-CO			Total length (m):		2200			Installation date:		01 มิ.ย. 2000		Service life (yrs):		22.66		
Pipe size (in):		6			% Inspection:		20			1st Inspection date:		02 มิ.ย. 2020		6th Inspection date:		08 มิ.ย. 2015		
Flowline No.:		CAA			No. of section (sections):		5			2nd Inspection date:		15 มิ.ย. 2021		7th Inspection date:		03 มิ.ย. 2016		
From-To:		LKU-CA		FSTN	Length of section (m):		440			3rd Inspection date:		10 มิ.ย. 2021		8th Inspection date:		05 มิ.ย. 2017		
Process:		P		Process	Length of subsection (m):		88			4th Inspection date:		22 ก.พ. 2022		9th Inspection date:		06 ส.ค. 2018		
Service:		CO		Crude oil	Total spool (spools):		201			5th Inspection date:		22 มิ.ย. 2022		10th Inspection		06 มิ.ย. 2019		
THICKNESS MEASUREMENT RESULT																		
Section	Subsection	Weld Joint	Distance (m)	CML Name	Location Desc	Nominal Thickness (mm)	Retired Thickness (mm)	Up/Down/Weld	MFL	Previous Inspection Date	Previous Thickness (mm)		Last Inspection Date	Last Thickness (mm)		SCR (mm/yr)	RL (yrs)	Temporary Repair
											Top (0)	Bottom (180)		Top (0)	Bottom (180)			
		15	154	A-A2-S14-W15-U	1100 Before S-167-37	7.92	2.00	U		06 มิ.ย. 2019	7.09	7.19	22 มิ.ย. 2022	7.09	7.19	0.00	4080.53	
		15	154	A-A2-S15-W15-D	1100 Before S-167-37	7.92	2.00	D		06 มิ.ย. 2019	7.79	7.29	22 มิ.ย. 2022	7.79	7.29	0.00	4240.97	
		15	154	A-A2-S15-W15-W	1100 Before S-167-37	7.92	2.00	W TFM					09 มิ.ย. 2021		7.43	0.02	232.97	
		16	165	A-A2-S15-W16-U	1000 After S-167-35	7.92	2.00	U		06 มิ.ย. 2019	6.69	7.79	22 มิ.ย. 2022	6.69	7.41	0.00	3759.65	
		16	165	A-A2-S16-W16-D	1000 After S-167-35	7.92	2.00	D		06 มิ.ย. 2019	7.20	7.39	22 มิ.ย. 2022	7.20	7.39	0.01	416.88	
		16	165	A-A2-S16-W16-W	1000 After S-167-35	7.92	2.00	W TFM					09 มิ.ย. 2021		7.35	0.03	197.32	
		17	176	A-A2-S16-W17-U	1200 After S-167-34	7.92	2.00	U		06 มิ.ย. 2019	7.59	7.69	22 มิ.ย. 2022	7.59	7.69	0.00	4481.63	
		17	176	A-A2-S17-W17-D	1200 After S-167-34	7.92	2.00	D		06 มิ.ย. 2019	7.29	7.69	22 มิ.ย. 2022	7.29	7.69	0.00	4240.97	
		17	176	A-A2-S17-W17-W	1200 After S-167-34	7.92	2.00	W TFM					09 มิ.ย. 2021		7.35	0.03	197.32	
		18	187	A-A2-S17-W18-U	1000 After S-167-33	7.92	2.00	U		06 มิ.ย. 2019	7.30	7.09	22 มิ.ย. 2022	7.30	7.09	0.00	4080.53	
		18	187	A-A2-S18-W18-D	1000 After S-167-33	7.92	2.00	D		06 มิ.ย. 2019	6.89	7.30	22 มิ.ย. 2022	6.89	7.30	0.00	3920.09	
		18	187	A-A2-S18-W18-W	1000 After S-167-33	7.92	2.00	W TFM					09 มิ.ย. 2021		7.43	0.02	232.97	
		19	198	A-A2-S18-W19-U	1630 After S-167-32	7.92	2.00	U		06 มิ.ย. 2019	7.19	7.29	22 มิ.ย. 2022	7.19	7.29	0.00	4160.75	
		19	198	A-A2-S19-W19-D	1630 After S-167-32	7.92	2.00	D		06 มิ.ย. 2019	7.39	7.29	22 มิ.ย. 2022	7.39	7.29	0.00	4240.97	
		19	198	A-A2-S19-W19-W	1630 After S-167-32	7.92	2.00	W TFM					18 ก.พ. 2022		5.32	0.12	27.72	
		20	209	A-A2-S19-W20-U	1650 After S-167-30	7.92	2.00	U		06 มิ.ย. 2019	7.29	7.39	22 มิ.ย. 2022	7.29	7.39	0.00	4240.97	
		20	209	A-A2-S20-W20-D	1650 After S-167-30	7.92	2.00	D		06 มิ.ย. 2019	7.29	7.59	22 มิ.ย. 2022	7.29	7.59	0.00	4240.97	
		20	209	A-A2-S20-W20-W	1650 After S-167-30	7.92	2.00	W TFM					18 ก.พ. 2022		7.62	0.01	406.87	
		21	220	A-A2-S20-W21-U	1700 After S-167-28	7.92	2.00	U		06 มิ.ย. 2019	7.29	7.29	22 มิ.ย. 2022	7.29	7.29	0.00	4240.97	
		21	220	A-A2-S21-W21-D	1700 After S-167-28	7.92	2.00	D		06 มิ.ย. 2019	6.69	7.60	22 มิ.ย. 2022	6.69	7.54	0.00	3759.65	
		21	220	A-A2-S21-W21-W	1700 After S-167-28	7.92	2.00	W TFM					18 ก.พ. 2022		6.09	0.08	48.53	

				FLOWLINE THICKNESS REPORT													PS1/M INSPECTION TEAM	
Tag No.: S1-LKUCA -FSTN-6-CAA-P-CO						Total length (m): 2200			Installation date: 01 มิ.ย. 2000		Service life (yrs): 22.66							
Pipe size (in): 6						% Inspection: 20			1st Inspection date: 02 มิ.ย. 2020		6th Inspection date: 08 มิ.ย. 2015							
Flowline No.: CAA						No. of section (sections): 5			2nd Inspection date: 15 มิ.ย. 2021		7th Inspection date: 03 มิ.ย. 2016							
From-To: LKU-CA			FSTN			Length of section (m): 440			3rd Inspection date: 10 มิ.ย. 2021		8th Inspection date: 05 มิ.ย. 2017							
Process: P			Process			Length of subsection (m): 88			4th Inspection date: 22 ก.พ. 2022		9th Inspection date: 06 ส.ค. 2018							
Service: CO			Crude oil			Total spool (spools): 201			5th Inspection date: 22 มิ.ย. 2022		10th Inspection 06 มิ.ย. 2019							
THICKNESS MEASUREMENT RESULT																		
Section	Subsection	Weld Joint	Distance (m)	CML Name	Location Desc	Nominal Thickness (mm)	Retired Thickness (mm)	Up/Down/Weld	MFL	Previous Inspection Date	Previous Thickness (mm)		Last Inspection Date	Last Thickness (mm)		SCR (mm/yr)	RL (yrs)	Temporary Repair
											Top (0)	Bottom (180)		Top (0)	Bottom (180)			
A	A3	22	231	A-A3-S21-W22-U	1500 After S-167-27	7.92	2.00	U		08 มิ.ย. 2015	7.10	7.70	02 มิ.ย. 2020	7.10	7.70	0.01	507.72	
		22	231	A-A3-S22-W22-D	1500 After S-167-27	7.92	2.00	D		08 มิ.ย. 2015	7.19	7.40	02 มิ.ย. 2020	7.20	7.40	0.00	17.57	
		22	231	A-A3-S22-W22-W	1500 After S-167-27	7.92	2.00	W TFM					18 ก.พ. 2022		7.18	0.03	152.02	
		23	242	A-A3-S22-W23-U	1500 After S-167-25	7.92	2.00	U		08 มิ.ย. 2015	7.20	7.40	02 มิ.ย. 2020	7.20	7.30	0.02	258.84	
		23	242	A-A3-S23-W23-D	1500 After S-167-25	7.92	2.00	D		08 มิ.ย. 2015	7.50	7.80	02 มิ.ย. 2020	7.50	7.80	0.03	182.52	
		23	242	A-A3-S23-W23-W	1500 After S-167-25	7.92	2.00	W TFM					18 ก.พ. 2022		7.00	0.04	118.03	
		24	253	A-A3-S23-W24-U	1500 After S-167-22	7.92	2.00	U		08 มิ.ย. 2015	7.30	7.40	02 มิ.ย. 2020	7.30	7.40	0.03	175.88	
		24	253	A-A3-S24-W24-D	1500 After S-167-22	7.92	2.00	D		08 มิ.ย. 2015	7.70	7.70	02 มิ.ย. 2020	7.70	7.70	0.03	189.16	
		24	253	A-A3-S24-W24-W	1500 After S-167-22	7.92	2.00	W TFM					18 ก.พ. 2022		7.26	0.03	173.09	
		25	264	A-A3-S24-W25-U	1500 After S-167-20	7.92	2.00	U		08 มิ.ย. 2015	7.50	7.50	02 มิ.ย. 2020	7.50	7.50	0.01	547.56	
		25	264	A-A3-S25-W25-D	1500 After S-167-20	7.92	2.00	D		08 มิ.ย. 2015	6.90	7.59	02 มิ.ย. 2020	6.90	7.20	0.02	243.90	
		25	264	A-A3-S25-W25-W	1500 After S-167-20	7.92	2.00	W TFM					18 ก.พ. 2022		7.26	0.03	173.09	
		26	275	A-A3-S25-W26-U	1500 After S-167-18	7.92	2.00	U		08 มิ.ย. 2015	7.20	7.30	02 มิ.ย. 2020	7.20	7.30	0.03	172.56	
		26	275	A-A3-S26-W26-D	1500 After S-167-18	7.92	2.00	D		08 มิ.ย. 2015	7.00	7.70	02 มิ.ย. 2020	7.00	7.30	0.04	124.44	
		26	275	A-A3-S26-W26-W	1500 After S-167-18	7.92	2.00	W TFM					18 ก.พ. 2022		7.35	0.03	203.85	
		27	286	A-A3-S26-W27-U	2000 After S-167-16	7.92	2.00	U		08 มิ.ย. 2015	7.50	7.50	02 มิ.ย. 2020	7.50	7.50	0.01	547.56	
		27	286	A-A3-S27-W27-D	2000 After S-167-16	7.92	2.00	D		08 มิ.ย. 2015	6.99	7.70	02 มิ.ย. 2020	6.90	7.20	0.02	271.44	
		27	286	A-A3-S27-W27-W	2000 After S-167-16	7.92	2.00	W TFM					18 ก.พ. 2022		7.00	0.04	118.03	
		28	297	A-A3-S27-W28-U	2000 After S-167-14	7.92	2.00	U		08 มิ.ย. 2015	7.49	7.89	02 มิ.ย. 2020	7.50	7.90	0.00	18.58	
		28	297	A-A3-S28-W28-D	2000 After S-167-14	7.92	2.00	D		08 มิ.ย. 2015	7.59	7.79	02 มิ.ย. 2020	7.60	7.80	0.00	18.92	
		28	297	A-A3-S28-W28-W	2000 After S-167-14	7.92	2.00	W TFM					18 ก.พ. 2022		7.44	0.02	246.14	



	<h1>FLOWLINE THICKNESS REPORT</h1>	PS1/M INSPECTION TEAM
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Tag No.:	S1-LKUCA -FSTN-6-CAA-P-CO		Total length (m):	2200	Installation date:	01 มี.ย. 2000	Service life (yrs):	22.66
Pipe size (in):	6		% Inspection:	20	1st Inspection date:	02 มี.ย. 2020	6th Inspection date:	08 มี.ย. 2015
Flowline No.:	CAA		No. of section (sections):	5	2nd Inspection date:	15 มี.ย. 2021	7th Inspection date:	03 มี.ย. 2016
From-To:	LKU-CA	FSTN	Length of section (m):	440	3rd Inspection date:	10 มี.ย. 2021	8th Inspection date:	05 มี.ย. 2017
Process:	P	Process	Length of subsection (m):	88	4th Inspection date:	22 ก.พ. 2022	9th Inspection date:	06 ส.ค. 2018
Service:	CO	Crude oil	Total spool (spools):	201	5th Inspection date:	22 มี.ย. 2022	10th Inspection	06 มี.ย. 2019

THICKNESS MEASUREMENT RESULT

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	<h1>FLOWLINE THICKNESS REPORT</h1>	PS1/M INSPECTION TEAM
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Tag No.:	S1-LKUCA -FSTN-6-CAA-P-CO		Total length (m):	2200	Installation date:	01 มี.ย. 2000	Service life (yrs):	22.66
Pipe size (in):	6		% Inspection:	20	1st Inspection date:	02 มี.ย. 2020	6th Inspection date:	08 มี.ย. 2015
Flowline No.:	CAA		No. of section (sections):	5	2nd Inspection date:	15 มี.ย. 2021	7th Inspection date:	03 มี.ย. 2016
From-To:	LKU-CA	FSTN	Length of section (m):	440	3rd Inspection date:	10 มี.ย. 2021	8th Inspection date:	05 มี.ย. 2017
Process:	P	Process	Length of subsection (m):	88	4th Inspection date:	22 ก.พ. 2022	9th Inspection date:	06 ส.ค. 2018
Service:	CO	Crude oil	Total spool (spools):	201	5th Inspection date:	22 มี.ย. 2022	10th Inspection	06 มี.ย. 2019

THICKNESS MEASUREMENT RESULT

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				FLOWLINE THICKNESS REPORT													PS1/M INSPECTION TEAM	
Tag No.: S1-LKUCA -FSTN-6-CAA-P-CO					Total length (m): 2200			Installation date: 01 มิ.ย. 2000		Service life (yrs): 22.66								
Pipe size (in): 6					% Inspection: 20			1st Inspection date: 02 มิ.ย. 2020		6th Inspection date: 08 มิ.ย. 2015								
Flowline No.: CAA					No. of section (sections): 5			2nd Inspection date: 15 มิ.ย. 2021		7th Inspection date: 03 มิ.ย. 2016								
From-To: LKU-CA			FSTN		Length of section (m): 440			3rd Inspection date: 10 มิ.ย. 2021		8th Inspection date: 05 มิ.ย. 2017								
Process: P			Process		Length of subsection (m): 88			4th Inspection date: 22 ก.พ. 2022		9th Inspection date: 06 ส.ค. 2018								
Service: CO			Crude oil		Total spool (spools): 201			5th Inspection date: 22 มิ.ย. 2022		10th Inspection: 06 มิ.ย. 2019								
THICKNESS MEASUREMENT RESULT																		
Section	Subsection	Weld Joint	Distance (m)	CML Name	Location Desc	Nominal Thickness (mm)	Retired Thickness (mm)	Up/Down/Weld	MFL	Previous Inspection Date	Previous Thickness (mm)		Last Inspection Date	Last Thickness (mm)		SCR (mm/yr)	RL (yrs)	Temporary Repair
											Top (0)	Bottom (180)		Top (0)	Bottom (180)			
		43	462	A-A5-S42-W43-U	3000 Before S-166-23	7.92	2.00	U		05 มิ.ย. 2017	7.29	7.00	22 มิ.ย. 2022	7.39	7.18	0.01	431.28	
		43	462	A-A5-S43-W43-D	3000 Before S-166-23	7.92	2.00	D		05 มิ.ย. 2017	7.59	7.59	22 มิ.ย. 2022	7.61	7.63	-0.00	18.95	
		43	462	A-A5-S43-W43-W	3000 Before S-166-23	7.92	2.00	W TFM										
B	B1	44	473	B-B1-S43-W44-U	2200 After S-166-21	7.92	2.00	U		06 ส.ค. 2018	7.59	7.39	22 มิ.ย. 2022	7.82	7.84	-0.05	19.66	
		44	473	B-B1-S44-W44-D	2200 After S-166-21	7.92	2.00	D		06 ส.ค. 2018	6.59	6.49	22 มิ.ย. 2022	6.90	6.88	-0.04	16.48	
		44	473	B-B1-S44-W44-W	2200 After S-166-21	7.92	2.00	W TFM										
		45	484	B-B1-S44-W45-U	Under Box Culvert	7.92	2.00	U										
		45	484	B-B1-S45-W45-D	Under Box Culvert	7.92	2.00	D										
		45	484	B-B1-S45-W45-W	Under Box Culvert	7.92	2.00	W TFM										
		46	495	B-B1-S45-W46-U	2800 After S-166-18	7.92	2.00	U		06 ส.ค. 2018	6.69	6.70	22 มิ.ย. 2022	6.71	6.92	-0.00	15.91	
		46	495	B-B1-S46-W46-D	2800 After S-166-18	7.92	2.00	D		06 ส.ค. 2018	7.30	7.39	22 มิ.ย. 2022	7.67	7.51	-0.01	18.61	
		46	495	B-B1-S46-W46-W	2800 After S-166-18	7.92	2.00	W TFM					10 มิ.ย. 2021		6.83	0.05	93.16	
		47	506	B-B1-S46-W47-U	2500 Before S-166-16	7.92	2.00	U		06 ส.ค. 2018	7.50	7.49	22 มิ.ย. 2022	7.65	7.63	-0.01	19.02	
		47	506	B-B1-S47-W47-D	2500 Before S-166-16	7.92	2.00	D		06 ส.ค. 2018	7.20	7.59	22 มิ.ย. 2022	7.52	7.68	-0.02	18.65	
		47	506	B-B1-S47-W47-W	2500 Before S-166-16	7.92	2.00	W TFM					10 มิ.ย. 2021		7.43	0.02	233.00	
		48	517	B-B1-S47-W48-U	2800 After S-166-14	7.92	2.00	U		06 ส.ค. 2018	7.39	7.59	22 มิ.ย. 2022	7.62	7.85	-0.02	18.99	
		48	517	B-B1-S48-W48-D	2800 After S-166-14	7.92	2.00	D		06 ส.ค. 2018	7.39	7.39	22 มิ.ย. 2022	7.57	7.72	-0.02	18.82	
		48	517	B-B1-S48-W48-W	2800 After S-166-14	7.92	2.00	W TFM					10 มิ.ย. 2021		7.70	0.01	544.77	
		49	528	B-B1-S48-W49-U	2800 After S-166-12	7.92	2.00	U		06 ส.ค. 2018	7.99	7.99	22 มิ.ย. 2022	7.98	7.92	0.02	327.91	
		49	528	B-B1-S49-W49-D	2800 After S-166-12	7.92	2.00	D		06 ส.ค. 2018	7.69	7.39	22 มิ.ย. 2022	7.49	7.51	-0.01	18.55	
		49	528	B-B1-S49-W49-W	2800 After S-166-12	7.92	2.00	W TFM					10 มิ.ย. 2021		7.87	0.00	2468.53	



Tag No.:	S1-LKUCA -FSTN-6-CAA-P-CO		Total length (m):	2200	Installation date:	01 มี.ย. 2000	Service life (yrs):	22.66
Pipe size (in):	6		% Inspection:	20	1st Inspection date:	02 มี.ย. 2020	6th Inspection date:	08 มี.ย. 2015
Flowline No.:	CAA		No. of section (sections):	5	2nd Inspection date:	15 มี.ย. 2021	7th Inspection date:	03 มี.ย. 2016
From-To:	LKU-CA	FSTN	Length of section (m):	440	3rd Inspection date:	10 มี.ย. 2021	8th Inspection date:	05 มี.ย. 2017
Process:	P	Process	Length of subsection (m):	88	4th Inspection date:	22 ก.พ. 2022	9th Inspection date:	06 ส.ค. 2018
Service:	CO	Crude oil	Total spool (spools):	201	5th Inspection date:	22 มี.ย. 2022	10th Inspection	06 มี.ย. 2019

THICKNESS MEASUREMENT RESULT

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	<h1>FLOWLINE THICKNESS REPORT</h1>	PS1/M INSPECTION TEAM
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Tag No.:	S1-LKUCA -FSTN-6-CAA-P-CO		Total length (m):	2200	Installation date:	01 มี.ย. 2000	Service life (yrs):	22.66
Pipe size (in):	6		% Inspection:	20	1st Inspection date:	02 มี.ย. 2020	6th Inspection date:	08 มี.ย. 2015
Flowline No.:	CAA		No. of section (sections):	5	2nd Inspection date:	15 มี.ย. 2021	7th Inspection date:	03 มี.ย. 2016
From-To:	LKU-CA	FSTN	Length of section (m):	440	3rd Inspection date:	10 มี.ย. 2021	8th Inspection date:	05 มี.ย. 2017
Process:	P	Process	Length of subsection (m):	88	4th Inspection date:	22 ก.พ. 2022	9th Inspection date:	06 ส.ค. 2018
Service:	CO	Crude oil	Total spool (spools):	201	5th Inspection date:	22 มี.ย. 2022	10th Inspection	06 มี.ย. 2019

THICKNESS MEASUREMENT RESULT

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	<h1>FLOWLINE THICKNESS REPORT</h1>	PS1/M INSPECTION TEAM
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Tag No.:	S1-LKUCA -FSTN-6-CAA-P-CO		Total length (m):	2200	Installation date:	01 มี.ย. 2000	Service life (yrs):	22.66
Pipe size (in):	6		% Inspection:	20	1st Inspection date:	02 มี.ย. 2020	6th Inspection date:	08 มี.ย. 2015
Flowline No.:	CAA		No. of section (sections):	5	2nd Inspection date:	15 มี.ย. 2021	7th Inspection date:	03 มี.ย. 2016
From-To:	LKU-CA	FSTN	Length of section (m):	440	3rd Inspection date:	10 มี.ย. 2021	8th Inspection date:	05 มี.ย. 2017
Process:	P	Process	Length of subsection (m):	88	4th Inspection date:	22 ก.พ. 2022	9th Inspection date:	06 ส.ค. 2018
Service:	CO	Crude oil	Total spool (spools):	201	5th Inspection date:	22 มี.ย. 2022	10th Inspection	06 มี.ย. 2019

THICKNESS MEASUREMENT RESULT


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Tag No.:	S1-LKUCA -FSTN-6-CAA-P-CO		Total length (m):	2200	Installation date:	01 มี.ย. 2000	Service life (yrs):	22.66
Pipe size (in):	6		% Inspection:	20	1st Inspection date:	02 มี.ย. 2020	6th Inspection date:	08 มี.ย. 2015
Flowline No.:	CAA		No. of section (sections):	5	2nd Inspection date:	15 มี.ย. 2021	7th Inspection date:	03 มี.ย. 2016
From-To:	LKU-CA	FSTN	Length of section (m):	440	3rd Inspection date:	10 มี.ย. 2021	8th Inspection date:	05 มี.ย. 2017
Process:	P	Process	Length of subsection (m):	88	4th Inspection date:	22 ก.พ. 2022	9th Inspection date:	06 ส.ค. 2018
Service:	CO	Crude oil	Total spool (spools):	201	5th Inspection date:	22 มี.ย. 2022	10th Inspection	06 มี.ย. 2019

THICKNESS MEASUREMENT RESULT

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				FLOWLINE THICKNESS REPORT													PS1/M INSPECTION TEAM	
Tag No.: S1-LKUCA -FSTN-6-CAA-P-CO					Total length (m): 2200			Installation date: 01 มิ.ย. 2000		Service life (yrs): 22.66								
Pipe size (in): 6					% Inspection: 20			1st Inspection date: 02 มิ.ย. 2020		6th Inspection date: 08 มิ.ย. 2015								
Flowline No.: CAA					No. of section (sections): 5			2nd Inspection date: 15 มิ.ย. 2021		7th Inspection date: 03 มิ.ย. 2016								
From-To: LKU-CA			FSTN		Length of section (m): 440			3rd Inspection date: 10 มิ.ย. 2021		8th Inspection date: 05 มิ.ย. 2017								
Process: P			Process		Length of subsection (m): 88			4th Inspection date: 22 ก.พ. 2022		9th Inspection date: 06 ส.ค. 2018								
Service: CO			Crude oil		Total spool (spools): 201			5th Inspection date: 22 มิ.ย. 2022		10th Inspection 06 มิ.ย. 2019								
THICKNESS MEASUREMENT RESULT																		
Section	Subsection	Weld Joint	Distance (m)	CML Name	Location Desc	Nominal Thickness (mm)	Retired Thickness (mm)	Up/Down/Weld	MFL	Previous Inspection Date	Previous Thickness (mm)		Last Inspection Date	Last Thickness (mm)		SCR (mm/yr)	RL (yrs)	Temporary Repair
											Top (0)	Bottom (180)		Top (0)	Bottom (180)			
		78	847	B-B5-S77-W78-U	600 Before S-106-14	7.92	2.00	U		05 มิ.ย. 2017	7.39	7.89	22 มิ.ย. 2022	7.39	7.89	0.00	5385.25	
		78	847	B-B5-S78-W78-D	600 Before S-106-14	7.92	2.00	D		05 มิ.ย. 2017	7.49	7.30	22 มิ.ย. 2022	7.49	7.30	0.02	264.76	
		78	847	B-B5-S78-W78-W	600 Before S-106-14	7.92	2.00	W TFM										
		79	858	B-B5-S78-W79-U	2500 Before S-106-13A	7.92	2.00	U		05 มิ.ย. 2017	7.79	6.89	22 มิ.ย. 2022	7.79	6.89	0.00	4885.39	
		79	858	B-B5-S79-W79-D	2500 Before S-106-13A	7.92	2.00	D		05 มิ.ย. 2017	7.30	7.50	22 มิ.ย. 2022	7.30	7.50	0.01	529.53	
		79	858	B-B5-S79-W79-W	2500 Before S-106-13A	7.92	2.00	W TFM					10 มิ.ย. 2021		7.52	0.02	290.16	
		80	869	B-B5-S79-W80-U	500 Before S-106-12	7.92	2.00	U		05 มิ.ย. 2017	7.49	7.70	22 มิ.ย. 2022	7.49	7.70	0.00	5485.22	
		80	869	B-B5-S80-W80-D	500 Before S-106-12	7.92	2.00	D		05 มิ.ย. 2017	7.49	7.50	22 มิ.ย. 2022	7.49	7.50	0.00	5485.22	
		80	869	B-B5-S80-W80-W	500 Before S-106-12	7.92	2.00	W TFM					10 มิ.ย. 2021		7.35	0.03	197.34	
		81	880	B-B5-S80-W81-U	500 Before S-106-10	7.92	2.00	U		05 มิ.ย. 2017	7.40	7.70	22 มิ.ย. 2022	7.40	7.70	0.02	269.76	
		81	880	B-B5-S81-W81-D	500 Before S-106-10	7.92	2.00	D		05 มิ.ย. 2017	6.89	7.90	22 มิ.ย. 2022	6.89	7.90	0.00	4885.39	
		81	880	B-B5-S81-W81-W	500 Before S-106-10	7.92	2.00	W TFM					10 มิ.ย. 2021		7.52	0.02	290.16	
		82	891	B-B5-S81-W82-U	300 Before S-106-08	7.92	2.00	U		05 มิ.ย. 2017	7.79	7.39	22 มิ.ย. 2022	7.79	7.39	0.00	5385.25	
		82	891	B-B5-S82-W82-D	300 Before S-106-08	7.92	2.00	D		05 มิ.ย. 2017	7.29	6.69	22 มิ.ย. 2022	7.29	6.69	0.00	4685.44	
		82	891	B-B5-S82-W82-W	300 Before S-106-08	7.92	2.00	W TFM					10 มิ.ย. 2021		6.43	0.07	62.50	
		83	902	B-B5-S82-W83-U	300 Before S-106-06	7.92	2.00	U		05 มิ.ย. 2017	7.40	7.40	22 มิ.ย. 2022	7.40	7.40	0.02	269.76	
		83	902	B-B5-S83-W83-D	300 Before S-106-06	7.92	2.00	D		05 มิ.ย. 2017	7.40	7.60	22 มิ.ย. 2022	7.40	7.60	0.02	269.76	
		83	902	B-B5-S83-W83-W	300 Before S-106-06	7.92	2.00	W TFM					10 มิ.ย. 2021		7.26	0.03	167.56	
C	C1	84	913	C-C1-S83-W84-U	400 Before S-106-04	7.92	2.00	U		06 ส.ค. 2018	7.19	7.50	22 มิ.ย. 2022	7.11	7.50	0.02	247.64	
		84	913	C-C1-S84-W84-D	400 Before S-106-04	7.92	2.00	D		06 ส.ค. 2018	10.40	10.39	22 มิ.ย. 2022	9.88	9.92	0.13	59.92	
		84	913	C-C1-S84-W84-W	400 Before S-106-04	7.92	2.00	W TFM					10 มิ.ย. 2021		7.09	0.04	128.94	





	<h1>FLOWLINE THICKNESS REPORT</h1>	PS1/M INSPECTION TEAM
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Tag No.:	S1-LKUCA -FSTN-6-CAA-P-CO		Total length (m):	2200	Installation date:	01 มี.ย. 2000	Service life (yrs):	22.66
Pipe size (in):	6		% Inspection:	20	1st Inspection date:	02 มี.ย. 2020	6th Inspection date:	08 มี.ย. 2015
Flowline No.:	CAA		No. of section (sections):	5	2nd Inspection date:	15 มี.ย. 2021	7th Inspection date:	03 มี.ย. 2016
From-To:	LKU-CA	FSTN	Length of section (m):	440	3rd Inspection date:	10 มี.ย. 2021	8th Inspection date:	05 มี.ย. 2017
Process:	P	Process	Length of subsection (m):	88	4th Inspection date:	22 ก.พ. 2022	9th Inspection date:	06 ส.ค. 2018
Service:	CO	Crude oil	Total spool (spools):	201	5th Inspection date:	22 มี.ย. 2022	10th Inspection	06 มี.ย. 2019


THICKNESS MEASUREMENT RESULT


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				FLOWLINE THICKNESS REPORT													PS1/M INSPECTION TEAM	
Tag No.: S1-LKUCA -FSTN-6-CAA-P-CO					Total length (m): 2200			Installation date: 01 มิ.ย. 2000		Service life (yrs): 22.66								
Pipe size (in): 6					% Inspection: 20			1st Inspection date: 02 มิ.ย. 2020		6th Inspection date: 08 มิ.ย. 2015								
Flowline No.: CAA					No. of section (sections): 5			2nd Inspection date: 15 มิ.ย. 2021		7th Inspection date: 03 มิ.ย. 2016								
From-To: LKU-CA			FSTN		Length of section (m): 440			3rd Inspection date: 10 มิ.ย. 2021		8th Inspection date: 05 มิ.ย. 2017								
Process: P			Process		Length of subsection (m): 88			4th Inspection date: 22 ก.พ. 2022		9th Inspection date: 06 ส.ค. 2018								
Service: CO			Crude oil		Total spool (spools): 201			5th Inspection date: 22 มิ.ย. 2022		10th Inspection 06 มิ.ย. 2019								
THICKNESS MEASUREMENT RESULT																		
Section	Subsection	Weld Joint	Distance (m)	CML Name	Location Desc	Nominal Thickness (mm)	Retired Thickness (mm)	Up/Down/Weld	MFL	Previous Inspection Date	Previous Thickness (mm)		Last Inspection Date	Last Thickness (mm)		SCR (mm/yr)	RL (yrs)	Temporary Repair
											Top (0)	Bottom (180)		Top (0)	Bottom (180)			
		92	1001	C-C1-S91-W92-U	2200 Before S-096-21	7.92	2.00	U		06 ส.ค. 2018	10.09	10.79	22 มิ.ย. 2022	10.09	10.76	0.00	7317.93	
		92	1001	C-C1-S92-W92-D	2200 Before S-096-21	7.92	2.00	D		06 ส.ค. 2018	7.39	7.69	22 มิ.ย. 2022	7.39	7.65	0.00	4874.62	
		92	1001	C-C1-S92-W92-W	2200 Before S-096-21	7.92	2.00	W TFM					22 ก.พ. 2022		7.18	0.03	152.10	
		93	1012	C-C1-S92-W93-U	1200 Before S-096-21	7.92	2.00	U		06 ส.ค. 2018	7.40	7.39	22 มิ.ย. 2022	7.40	7.39	0.00	4874.62	
		93	1012	C-C1-S93-W93-D	1200 Before S-096-21	7.92	2.00	D		06 ส.ค. 2018	10.00	10.10	22 มิ.ย. 2022	10.00	9.88	0.08	99.00	
		93	1012	C-C1-S93-W93-W	1200 Before S-096-21	7.92	2.00	W TFM					22 ก.พ. 2022		7.26	0.03	173.17	
		94	1023	C-C1-S93-W94-U	500 After S-096-21	7.92	2.00	U		06 ส.ค. 2018	10.00	9.90	22 มิ.ย. 2022	10.00	9.90	0.02	357.30	
		94	1023	C-C1-S94-W94-D	500 After S-096-21	7.92	2.00	D		06 ส.ค. 2018	7.29	7.40	22 มิ.ย. 2022	7.29	7.40	0.00	4784.13	
		94	1023	C-C1-S94-W94-W	500 After S-096-21	7.92	2.00	W TFM					22 ก.พ. 2022		7.26	0.03	173.17	
		95	1034	C-C1-S94-W95-U	1500 Before S-096-19	7.92	2.00	U		06 ส.ค. 2018	7.89	7.39	22 มิ.ย. 2022	7.89	7.39	0.00	4874.62	
		95	1034	C-C1-S95-W95-D	1500 Before S-096-19	7.92	2.00	D		06 ส.ค. 2018	7.29	7.89	22 มิ.ย. 2022	7.29	7.65	0.00	4784.13	
		95	1034	C-C1-S95-W95-W	1500 Before S-096-19	7.92	2.00	W TFM					18 ก.พ. 2022		7.80	0.01	1049.76	
		96	1045	C-C1-S95-W96-U	1000 Before S-096-17	7.92	2.00	U		06 ส.ค. 2018	7.39	7.49	22 มิ.ย. 2022	7.39	7.49	0.00	4874.62	
		96	1045	C-C1-S96-W96-D	1000 Before S-096-17	7.92	2.00	D		06 ส.ค. 2018	7.59	7.49	22 มิ.ย. 2022	7.59	7.49	0.00	4965.11	
		96	1045	C-C1-S96-W96-W	1000 Before S-096-17	7.92	2.00	W TFM					18 ก.พ. 2022		7.44	0.02	246.14	
C	C2	97	1056	C-C2-S96-W97-U	1800 Before S-096-15	7.92	2.00	U		06 มิ.ย. 2019	7.60	7.09	22 มิ.ย. 2022	7.60	7.09	0.00	4080.53	
		97	1056	C-C2-S97-W97-D	1800 Before S-096-15	7.92	2.00	D		06 มิ.ย. 2019	7.29	7.40	22 มิ.ย. 2022	7.29	7.40	0.00	4240.97	
		97	1056	C-C2-S97-W97-W	1800 Before S-096-15	7.92	2.00	W TFM		10 มิ.ย. 2021		7.26	18 ก.พ. 2022		7.44	-0.26	18.38	
		98	1067	C-C2-S97-W98-U	1500 Before S-096-13	7.92	2.00	U		06 มิ.ย. 2019	7.09	6.99	22 มิ.ย. 2022	7.09	6.99	0.00	4000.31	
		98	1067	C-C2-S98-W98-D	1500 Before S-096-13	7.92	2.00	D		06 มิ.ย. 2019	7.39	7.39	22 มิ.ย. 2022	7.39	7.39	0.00	4321.19	
		98	1067	C-C2-S98-W98-W	1500 Before S-096-13	7.92	2.00	W TFM		10 มิ.ย. 2021		7.43	18 ก.พ. 2022		7.44	-0.01	18.38	

 PTTEP				FLOWLINE THICKNESS REPORT													PS1/M INSPECTION TEAM		
Tag No.:			S1-LKUCA -FSTN-6-CAA-P-CO			Total length (m):			2200			Installation date:		01 มี.ย. 2000		Service life (yrs):		22.66	
Pipe size (in):			6			% Inspection:			20			1st Inspection date:		02 มี.ย. 2020		6th Inspection date:		08 มี.ย. 2015	
Flowline No.:			CAA			No. of section (sections):			5			2nd Inspection date:		15 มี.ย. 2021		7th Inspection date:		03 มี.ย. 2016	
From-To:			LKU-CA		FSTN	Length of section (m):			440			3rd Inspection date:		10 มี.ย. 2021		8th Inspection date:		05 มี.ย. 2017	
Process:			P		Process	Length of subsection (m):			88			4th Inspection date:		22 ก.พ. 2022		9th Inspection date:		06 ส.ค. 2018	
Service:			CO		Crude oil	Total spool (spools):			201			5th Inspection date:		22 มี.ย. 2022		10th Inspection		06 มี.ย. 2019	
THICKNESS MEASUREMENT RESULT																			
Section	Subsection	Weld Joint	Distance (m)	CML Name	Location Desc	Nominal Thickness (mm)	Retired Thickness (mm)	Up/Down/Weld	MFL	Previous Inspection Date	Previous Thickness (mm)		Last Inspection Date	Last Thickness (mm)		SCR (mm/yr)	RL (yrs)	Temporary Repair	
											Top (0)	Bottom (180)		Top (0)	Bottom (180)				
		99	1078	C-C2-S98-W99-U	1500 Before S-096-11	7.92	2.00	U		06 มี.ย. 2019	7.50	7.20	22 มี.ย. 2022	7.50	7.20	0.01	416.88		
		99	1078	C-C2-S99-W99-D	1500 Before S-096-11	7.92	2.00	D		06 มี.ย. 2019	7.39	7.30	22 มี.ย. 2022	7.39	7.30	0.01	424.90		
		99	1078	C-C2-S99-W99-W	1500 Before S-096-11	7.92	2.00	W TFM					18 ก.พ. 2022		7.09	0.04	133.18		
		100	1089	C-C2-S99-W100-U	1000 Before S-096-09	7.92	2.00	U		06 มี.ย. 2019	7.39	7.49	22 มี.ย. 2022	7.39	7.42	0.00	4321.19		
		100	1089	C-C2-S100-W100-D	1000 Before S-096-09	7.92	2.00	D		06 มี.ย. 2019	7.49	7.69	22 มี.ย. 2022	7.49	7.65	0.00	4401.41		
		100	1089	C-C2-S100-W100-W	1000 Before S-096-09	7.92	2.00	W TFM					18 ก.พ. 2022		7.26	0.03	173.09		
		101	1100	C-C2-S100-W101-U	1000 Before S-096-07	7.92	2.00	U		06 มี.ย. 2019	6.99	7.89	22 มี.ย. 2022	6.99	7.76	0.00	4000.31		
		101	1100	C-C2-S101-W101-D	1000 Before S-096-07	7.92	2.00	D		06 มี.ย. 2019	7.79	7.50	22 มี.ย. 2022	7.66	7.62	0.01	563.21		
		101	1100	C-C2-S101-W101-W	1000 Before S-096-07	7.92	2.00	W TFM											
		102	1111	C-C2-S101-W102-U	900 Before S-096-05	7.92	2.00	U		06 มี.ย. 2019	7.59	7.50	22 มี.ย. 2022	7.59	7.50	0.01	440.94		
		102	1111	C-C2-S102-W102-D	900 Before S-096-05	7.92	2.00	D		06 มี.ย. 2019	7.79	7.89	22 มี.ย. 2022	7.79	7.89	0.00	4642.06		
		102	1111	C-C2-S102-W102-W	900 Before S-096-05	7.92	2.00	W TFM											
C	C3	103	1122	C-C3-S102-W103-U	700 Before S-096-03	7.92	2.00	U		08 มี.ย. 2015	7.69	7.69	02 มี.ย. 2020	7.70	7.70	0.00	19.26		
		103	1122	C-C3-S103-W103-D	700 Before S-096-03	7.92	2.00	D		08 มี.ย. 2015	7.99	6.99	02 มี.ย. 2020	7.60	7.00	0.00	16.89		
		103	1122	C-C3-S103-W103-W	700 Before S-096-03	7.92	2.00	W TFM					18 ก.พ. 2022		6.82	0.05	95.16		
		104	1133	C-C3-S103-W104-U	900 Before S-096-01	7.92	2.00	U		08 มี.ย. 2015	7.39	7.59	02 มี.ย. 2020	7.40	7.60	0.00	18.24		
		104	1133	C-C3-S104-W104-D	900 Before S-096-01	7.92	2.00	D		08 มี.ย. 2015	6.99	7.49	02 มี.ย. 2020	7.00	7.50	0.00	16.89		
		104	1133	C-C3-S104-W104-W	900 Before S-096-01	7.92	2.00	W TFM					18 ก.พ. 2022		7.18	0.03	152.02		
		105	1144	C-C3-S104-W105-U	900 Before S-095-60	7.92	2.00	U		08 มี.ย. 2015	7.59	7.79	02 มี.ย. 2020	7.30	7.40	0.06	91.12		
		105	1144	C-C3-S105-W105-D	900 Before S-095-60	7.92	2.00	D		08 มี.ย. 2015	7.59	7.60	02 มี.ย. 2020	7.20	7.40	0.08	66.48		
		105	1144	C-C3-S105-W105-W	900 Before S-095-60	7.92	2.00	W TFM					18 ก.พ. 2022		7.35	0.03	203.85		

				FLOWLINE THICKNESS REPORT													PS1/M INSPECTION TEAM	
Tag No.: S1-LKUCA -FSTN-6-CAA-P-CO					Total length (m): 2200			Installation date: 01 มิ.ย. 2000		Service life (yrs): 22.66								
Pipe size (in): 6					% Inspection: 20			1st Inspection date: 02 มิ.ย. 2020		6th Inspection date: 08 มิ.ย. 2015								
Flowline No.: CAA					No. of section (sections): 5			2nd Inspection date: 15 มิ.ย. 2021		7th Inspection date: 03 มิ.ย. 2016								
From-To: LKU-CA			FSTN		Length of section (m): 440			3rd Inspection date: 10 มิ.ย. 2021		8th Inspection date: 05 มิ.ย. 2017								
Process: P			Process		Length of subsection (m): 88			4th Inspection date: 22 ก.พ. 2022		9th Inspection date: 06 ส.ค. 2018								
Service: CO			Crude oil		Total spool (spools): 201			5th Inspection date: 22 มิ.ย. 2022		10th Inspection: 06 มิ.ย. 2019								
THICKNESS MEASUREMENT RESULT																		
Section	Subsection	Weld Joint	Distance (m)	CML Name	Location Desc	Nominal Thickness (mm)	Retired Thickness (mm)	Up/Down/Weld	MFL	Previous Inspection Date	Previous Thickness (mm)		Last Inspection Date	Last Thickness (mm)		SCR (mm/yr)	RL (yrs)	Temporary Repair
											Top (0)	Bottom (180)		Top (0)	Bottom (180)			
		106	1155	C-C3-S105-W106-U	700 Before S-095-58	7.92	2.00	U		08 มิ.ย. 2015	7.40	7.39	02 มิ.ย. 2020	7.40	7.40	0.00	18.24	
		106	1155	C-C3-S106-W106-D	700 Before S-095-58	7.92	2.00	D		08 มิ.ย. 2015	7.39	6.69	02 มิ.ย. 2020	7.40	6.60	0.02	254.81	
		106	1155	C-C3-S106-W106-W	700 Before S-095-58	7.92	2.00	W TFM					18 ก.พ. 2022		7.00	0.04	118.03	
		107	1166	C-C3-S106-W107-U	600 Before S-095-56	7.92	2.00	U		08 มิ.ย. 2015	7.49	7.89	02 มิ.ย. 2020	7.20	7.60	0.06	89.40	
		107	1166	C-C3-S107-W107-D	600 Before S-095-56	7.92	2.00	D		08 มิ.ย. 2015	7.09	7.80	02 มิ.ย. 2020	7.00	7.60	0.02	276.99	
		107	1166	C-C3-S107-W107-W	600 Before S-095-56	7.92	2.00	W TFM					10 มิ.ย. 2021		7.35	0.03	197.34	
		108	1177	C-C3-S107-W108-U	600 Before S-095-54	7.92	2.00	U		08 มิ.ย. 2015	7.29	7.50	02 มิ.ย. 2020	7.30	7.50	0.00	17.90	
		108	1177	C-C3-S108-W108-D	600 Before S-095-54	7.92	2.00	D		08 มิ.ย. 2015	7.29	7.49	02 มิ.ย. 2020	7.30	7.50	0.00	17.90	
		108	1177	C-C3-S108-W108-W	600 Before S-095-54	7.92	2.00	W TFM					10 มิ.ย. 2021		7.26	0.03	167.56	
		109	1188	C-C3-S108-W109-U	600 Before S-095-52	7.92	2.00	U		08 มิ.ย. 2015	7.60	7.60	02 มิ.ย. 2020	7.60	7.60	0.01	557.53	
		109	1188	C-C3-S109-W109-D	600 Before S-095-52	7.92	2.00	D		08 มิ.ย. 2015	7.39	7.30	02 มิ.ย. 2020	7.40	7.30	0.01	527.64	
		109	1188	C-C3-S109-W109-W	600 Before S-095-52	7.92	2.00	W TFM					10 มิ.ย. 2021		7.61	0.01	380.50	
C	C4	110	1199	C-C4-S109-W110-U	500 Before S-095-50	7.92	2.00	U		03 มิ.ย. 2016	7.40	7.50	15 มิ.ย. 2021	7.42	7.26	0.03	154.40	
		110	1199	C-C4-S110-W110-D	500 Before S-095-50	7.92	2.00	D		03 มิ.ย. 2016	7.60	7.60	15 มิ.ย. 2021	7.67	7.71	0.01	435.30	
		110	1199	C-C4-S110-W110-W	500 Before S-095-50	7.92	2.00	W TFM					10 มิ.ย. 2021		7.87	0.00	2468.53	
		111	1210	C-C4-S110-W111-U	400 Before S-095-48	7.92	2.00	U		03 มิ.ย. 2016	6.90	7.70	15 มิ.ย. 2021	6.81	7.82	0.03	165.52	
		111	1210	C-C4-S111-W111-D	400 Before S-095-48	7.92	2.00	D		03 มิ.ย. 2016	7.80	7.10	15 มิ.ย. 2021	7.73	7.32	0.04	139.72	
		111	1210	C-C4-S111-W111-W	400 Before S-095-48	7.92	2.00	W TFM					10 มิ.ย. 2021		7.26	0.03	167.56	
		112	1221	C-C4-S111-W112-U	400 Before S-095-46	7.92	2.00	U		03 มิ.ย. 2016	7.40	7.50	15 มิ.ย. 2021	7.42	7.50	0.04	142.35	
		112	1221	C-C4-S112-W112-D	400 Before S-095-46	7.92	2.00	D		03 มิ.ย. 2016	7.10	7.50	15 มิ.ย. 2021	7.04	7.40	0.05	109.34	
		112	1221	C-C4-S112-W112-W	400 Before S-095-46	7.92	2.00	W TFM					10 มิ.ย. 2021		7.61	0.01	380.50	

				FLOWLINE THICKNESS REPORT													PS1/M INSPECTION TEAM	
Tag No.:		S1-LKUCA -FSTN-6-CAA-P-CO			Total length (m):		2200			Installation date:		01 มิ.ย. 2000		Service life (yrs):		22.66		
Pipe size (in):		6			% Inspection:		20			1st Inspection date:		02 มิ.ย. 2020		6th Inspection date:		08 มิ.ย. 2015		
Flowline No.:		CAA			No. of section (sections):		5			2nd Inspection date:		15 มิ.ย. 2021		7th Inspection date:		03 มิ.ย. 2016		
From-To:		LKU-CA		FSTN	Length of section (m):		440			3rd Inspection date:		10 มิ.ย. 2021		8th Inspection date:		05 มิ.ย. 2017		
Process:		P		Process	Length of subsection (m):		88			4th Inspection date:		22 ก.พ. 2022		9th Inspection date:		06 ส.ค. 2018		
Service:		CO		Crude oil	Total spool (spools):		201			5th Inspection date:		22 มิ.ย. 2022		10th Inspection		06 มิ.ย. 2019		
THICKNESS MEASUREMENT RESULT																		
Section	Subsection	Weld Joint	Distance (m)	CML Name	Location Desc	Nominal Thickness (mm)	Retired Thickness (mm)	Up/Down/Weld	MFL	Previous Inspection Date	Previous Thickness (mm)		Last Inspection Date	Last Thickness (mm)		SCR (mm/yr)	RL (yrs)	Temporary Repair
											Top (0)	Bottom (180)		Top (0)	Bottom (180)			
		113	1232	C-C4-S112-W113-U	1100 Before S-095-44	7.92	2.00	U		03 มิ.ย. 2016	7.50	7.69	15 มิ.ย. 2021	7.51	7.90	0.02	289.43	
		113	1232	C-C4-S113-W113-D	1100 Before S-095-44	7.92	2.00	D		03 มิ.ย. 2016	7.60	7.30	15 มิ.ย. 2021	7.45	7.72	0.01	1087.85	
		113	1232	C-C4-S113-W113-W	1100 Before S-095-44	7.92	2.00	W TFM					10 มิ.ย. 2021		7.36	0.03	201.24	
		114	1243	C-C4-S113-W114-U	1100 Before S-095-42	7.92	2.00	U		03 มิ.ย. 2016	7.00	7.60	15 มิ.ย. 2021	7.05	7.53	0.05	112.00	
		114	1243	C-C4-S114-W114-D	1100 Before S-095-42	7.92	2.00	D		03 มิ.ย. 2016	7.50	7.40	15 มิ.ย. 2021	7.42	7.20	0.06	86.49	
		114	1243	C-C4-S114-W114-W	1100 Before S-095-42	7.92	2.00	W TFM					10 มิ.ย. 2021		7.26	0.03	167.56	
		115	1254	C-C4-S114-W115-U	1000 Before S-095-40	7.92	2.00	U		03 มิ.ย. 2016	7.50	7.39	15 มิ.ย. 2021	7.40	7.41	0.00	18.24	
		115	1254	C-C4-S115-W115-D	1000 Before S-095-40	7.92	2.00	D		03 มิ.ย. 2016	7.20	7.00	15 มิ.ย. 2021	7.72	7.00	0.03	166.33	
		115	1254	C-C4-S115-W115-W	1000 Before S-095-40	7.92	2.00	W TFM					10 มิ.ย. 2021		7.26	0.03	167.56	
C	C5	116	1265	C-C5-S115-W116-U	1200 Before S-095-38	7.92	2.00	U		05 มิ.ย. 2017	7.39	7.79	22 มิ.ย. 2022	7.39	7.79	0.00	5385.25	
		116	1265	C-C5-S116-W116-D	1200 Before S-095-38	7.92	2.00	D		05 มิ.ย. 2017	6.89	7.80	22 มิ.ย. 2022	6.89	7.70	0.00	4885.39	
		116	1265	C-C5-S116-W116-W	1200 Before S-095-38	7.92	2.00	W TFM					10 มิ.ย. 2021		6.30	0.08	55.80	
		117	1276	C-C5-S116-W117-U	1000 Before S-095-36	7.92	2.00	U		05 มิ.ย. 2017	7.49	7.09	22 มิ.ย. 2022	7.49	7.09	0.00	5085.33	
		117	1276	C-C5-S117-W117-D	1000 Before S-095-36	7.92	2.00	D		05 มิ.ย. 2017	7.50	7.29	22 มิ.ย. 2022	7.50	7.29	0.00	5285.28	
		117	1276	C-C5-S117-W117-W	1000 Before S-095-36	7.92	2.00	W TFM					10 มิ.ย. 2021		6.83	0.05	93.16	
		118	1287	C-C5-S117-W118-U	1000 Before S-095-34	7.92	2.00	U		05 มิ.ย. 2017	7.09	7.99	22 มิ.ย. 2022	7.09	7.95	0.00	5085.33	
		118	1287	C-C5-S118-W118-D	1000 Before S-095-34	7.92	2.00	D		05 มิ.ย. 2017	7.39	7.50	22 มิ.ย. 2022	7.39	7.50	0.00	5385.25	
		118	1287	C-C5-S118-W118-W	1000 Before S-095-34	7.92	2.00	W TFM					10 มิ.ย. 2021		7.26	0.03	167.56	
		119	1298	C-C5-S118-W119-U	1000 Before S-095-32	7.92	2.00	U		05 มิ.ย. 2017	7.09	7.80	22 มิ.ย. 2022	7.09	7.75	0.00	5085.33	
		119	1298	C-C5-S119-W119-D	1000 Before S-095-32	7.92	2.00	D		05 มิ.ย. 2017	7.49	7.60	22 มิ.ย. 2022	7.49	7.49	0.00	5485.22	
		119	1298	C-C5-S119-W119-W	1000 Before S-095-32	7.92	2.00	W TFM					10 มิ.ย. 2021		7.70	0.01	544.77	

				FLOWLINE THICKNESS REPORT													PS1/M INSPECTION TEAM	
Tag No.:		S1-LKUCA -FSTN-6-CAA-P-CO			Total length (m):		2200			Installation date:		01 มิ.ย. 2000		Service life (yrs):		22.66		
Pipe size (in):		6			% Inspection:		20			1st Inspection date:		02 มิ.ย. 2020		6th Inspection date:		08 มิ.ย. 2015		
Flowline No.:		CAA			No. of section (sections):		5			2nd Inspection date:		15 มิ.ย. 2021		7th Inspection date:		03 มิ.ย. 2016		
From-To:		LKU-CA		FSTN	Length of section (m):		440			3rd Inspection date:		10 มิ.ย. 2021		8th Inspection date:		05 มิ.ย. 2017		
Process:		P		Process	Length of subsection (m):		88			4th Inspection date:		22 ก.พ. 2022		9th Inspection date:		06 ส.ค. 2018		
Service:		CO		Crude oil	Total spool (spools):		201			5th Inspection date:		22 มิ.ย. 2022		10th Inspection		06 มิ.ย. 2019		
THICKNESS MEASUREMENT RESULT																		
Section	Subsection	Weld Joint	Distance (m)	CML Name	Location Desc	Nominal Thickness (mm)	Retired Thickness (mm)	Up/Down/Weld	MFL	Previous Inspection Date	Previous Thickness (mm)		Last Inspection Date	Last Thickness (mm)		SCR (mm/yr)	RL (yrs)	Temporary Repair
											Top (0)	Bottom (180)		Top (0)	Bottom (180)			
		120	1309	C-C5-S119-W120-U	800 Before S-095-30	7.92	2.00	U		05 มิ.ย. 2017	7.59	7.70	22 มิ.ย. 2022	7.59	7.70	0.00	5585.20	
		120	1309	C-C5-S120-W120-D	800 Before S-095-30	7.92	2.00	D		05 มิ.ย. 2017	7.49	7.80	22 มิ.ย. 2022	7.49	7.80	0.00	5485.22	
		120	1309	C-C5-S120-W120-W	800 Before S-095-30	7.92	2.00	W TFM					10 มิ.ย. 2021		7.52	0.02	290.16	
		121	1320	C-C5-S120-W121-U	800 Before S-095-28	7.92	2.00	U		05 มิ.ย. 2017	7.40	7.40	22 มิ.ย. 2022	7.40	7.18	0.04	118.81	
		121	1320	C-C5-S121-W121-D	800 Before S-095-28	7.92	2.00	D		05 มิ.ย. 2017	7.40	6.99	22 มิ.ย. 2022	7.40	6.99	0.00	4985.36	
		121	1320	C-C5-S121-W121-W	800 Before S-095-28	7.92	2.00	W TFM					11 มิ.ย. 2021		7.87	0.00	2468.85	
		122	1331	C-C5-S121-W122-U	800 Before S-095-26	7.92	2.00	U		05 มิ.ย. 2017	7.39	7.70	22 มิ.ย. 2022	7.39	7.70	0.00	5385.25	
		122	1331	C-C5-S122-W122-D	800 Before S-095-26	7.92	2.00	D		05 มิ.ย. 2017	7.39	7.70	22 มิ.ย. 2022	7.39	7.70	0.00	5385.25	
		122	1331	C-C5-S122-W122-W	800 Before S-095-26	7.92	2.00	W TFM					11 มิ.ย. 2021		7.35	0.03	197.37	
D	D1	123	1342	D-D1-S122-W123-U	1000 Before S-095-24	7.92	2.00	U		06 ส.ค. 2018	7.40	7.39	22 มิ.ย. 2022	7.40	7.39	0.00	4874.62	
		123	1342	D-D1-S123-W123-D	1000 Before S-095-24	7.92	2.00	D		06 ส.ค. 2018	7.70	7.40	22 มิ.ย. 2022	7.70	7.40	0.01	488.37	
		123	1342	D-D1-S123-W123-W	1000 Before S-095-24	7.92	2.00	W TFM					11 มิ.ย. 2021		7.09	0.04	128.95	
		124	1353	D-D1-S123-W124-U	700 Before S-095-22	7.92	2.00	U		06 ส.ค. 2018	7.09	7.50	22 มิ.ย. 2022	7.09	7.50	0.00	4603.14	
		124	1353	D-D1-S124-W124-D	700 Before S-095-22	7.92	2.00	D		06 ส.ค. 2018	7.29	7.59	22 มิ.ย. 2022	7.29	7.45	0.00	4784.13	
		124	1353	D-D1-S124-W124-W	700 Before S-095-22	7.92	2.00	W TFM					22 ก.พ. 2022		7.71	0.01	590.85	
		125	1364	D-D1-S124-W125-U	800 Before S-095-20	7.92	2.00	U		06 ส.ค. 2018	7.39	7.40	22 มิ.ย. 2022	7.39	7.40	0.00	4874.62	
		125	1364	D-D1-S125-W125-D	800 Before S-095-20	7.92	2.00	D		06 ส.ค. 2018	7.70	7.19	22 มิ.ย. 2022	7.70	7.19	0.00	4693.63	
		125	1364	D-D1-S125-W125-W	800 Before S-095-20	7.92	2.00	W TFM					22 ก.พ. 2022		7.35	0.03	203.95	
		126	1375	D-D1-S125-W126-U	1500 After S-095-19	7.92	2.00	U		06 ส.ค. 2018	7.29	7.39	22 มิ.ย. 2022	7.29	7.39	0.00	4784.13	
		126	1375	D-D1-S126-W126-D	1500 After S-095-20	7.92	2.00	D		06 ส.ค. 2018	7.29	7.29	22 มิ.ย. 2022	7.29	7.29	0.00	4784.13	
		126	1375	D-D1-S126-W126-W	1500 After S-095-21	7.92	2.00	W TFM					22 ก.พ. 2022		7.71	0.01	590.85	

				FLOWLINE THICKNESS REPORT													PS1/M INSPECTION TEAM		
Tag No.:			S1-LKUCA -FSTN-6-CAA-P-CO			Total length (m):			2200			Installation date:		01 มิ.ย. 2000		Service life (yrs):		22.66	
Pipe size (in):			6			% Inspection:			20			1st Inspection date:		02 มิ.ย. 2020		6th Inspection date:		08 มิ.ย. 2015	
Flowline No.:			CAA			No. of section (sections):			5			2nd Inspection date:		15 มิ.ย. 2021		7th Inspection date:		03 มิ.ย. 2016	
From-To:			LKU-CA		FSTN	Length of section (m):			440			3rd Inspection date:		10 มิ.ย. 2021		8th Inspection date:		05 มิ.ย. 2017	
Process:			P		Process	Length of subsection (m):			88			4th Inspection date:		22 ก.พ. 2022		9th Inspection date:		06 ส.ค. 2018	
Service:			CO		Crude oil	Total spool (spools):			201			5th Inspection date:		22 มิ.ย. 2022		10th Inspection		06 มิ.ย. 2019	
THICKNESS MEASUREMENT RESULT																			
Section	Subsection	Weld Joint	Distance (m)	CML Name	Location Desc	Nominal Thickness (mm)	Retired Thickness (mm)	Up/Down/Weld	MFL	Previous Inspection Date	Previous Thickness (mm)		Last Inspection Date	Last Thickness (mm)		SCR (mm/yr)	RL (yrs)	Temporary Repair	
											Top (0)	Bottom (180)		Top (0)	Bottom (180)				
		127	1386	D-D1-S126-W127-U	700 Before S-095-16	7.92	2.00	U		06 ส.ค. 2018	8.00	6.99	22 มิ.ย. 2022	7.84	6.99	0.00	4512.65		
		127	1386	D-D1-S127-W127-D	700 Before S-095-16	7.92	2.00	D		06 ส.ค. 2018	7.59	7.60	22 มิ.ย. 2022	7.59	7.60	0.00	5055.60		
		127	1386	D-D1-S127-W127-W	700 Before S-095-16	7.92	2.00	W TFM					22 ก.พ. 2022		7.35	0.03	203.95		
		128	1397	D-D1-S127-W128-U	700 Before S-095-14	7.92	2.00	U		06 ส.ค. 2018	7.50	7.19	22 มิ.ย. 2022	7.38	7.09	0.03	197.34		
		128	1397	D-D1-S128-W128-D	700 Before S-095-14	7.92	2.00	D		06 ส.ค. 2018	7.20	7.80	22 มิ.ย. 2022	7.20	7.64	0.01	470.27		
		128	1397	D-D1-S128-W128-W	700 Before S-095-14	7.92	2.00	W TFM					22 ก.พ. 2022		7.18	0.03	152.10		
		129	1408	D-D1-S128-W129-U	3000 After S-095-14	7.92	2.00	U		06 ส.ค. 2018	7.19	7.59	22 มิ.ย. 2022	7.19	7.59	0.00	4693.63		
		129	1408	D-D1-S129-W129-D	3000 After S-095-14	7.92	2.00	D		06 ส.ค. 2018	7.49	7.69	22 มิ.ย. 2022	7.49	7.69	0.00	4965.11		
		129	1408	D-D1-S129-W129-W	3000 After S-095-14	7.92	2.00	W TFM					22 ก.พ. 2022		7.44	0.02	246.27		
D	D2	130	1419	D-D2-S129-W130-U	1700 Before S-095-12	7.92	2.00	U		06 มิ.ย. 2019	7.09	7.59	22 มิ.ย. 2022	7.09	7.59	0.00	4080.53		
		130	1419	D-D2-S130-W130-D	1700 Before S-095-12	7.92	2.00	D		06 มิ.ย. 2019	7.30	7.29	22 มิ.ย. 2022	7.30	7.29	0.00	4240.97		
		130	1419	D-D2-S130-W130-W	1700 Before S-095-12	7.92	2.00	W TFM					22 ก.พ. 2022		7.44	0.02	246.27		
		131	1430	D-D2-S130-W131-U	2000 After S-095-10	7.92	2.00	U		06 มิ.ย. 2019	7.59	7.30	22 มิ.ย. 2022	7.59	7.30	0.02	212.45		
		131	1430	D-D2-S131-W131-D	2000 After S-095-10	7.92	2.00	D		06 มิ.ย. 2019	7.09	7.29	22 มิ.ย. 2022	7.09	7.29	0.00	4080.53		
		131	1430	D-D2-S131-W131-W	2000 After S-095-10	7.92	2.00	W TFM					22 ก.พ. 2022		7.35	0.03	203.95		
		132	1441	D-D2-S131-W132-U	2200 After S-095-08	7.92	2.00	U		06 มิ.ย. 2019	7.49	6.99	22 มิ.ย. 2022	7.49	6.99	0.00	4000.31		
		132	1441	D-D2-S132-W132-D	2200 After S-095-08	7.92	2.00	D		06 มิ.ย. 2019	7.19	7.59	22 มิ.ย. 2022	7.19	7.59	0.00	4160.75		
		132	1441	D-D2-S132-W132-W	2200 After S-095-08	7.92	2.00	W TFM					22 ก.พ. 2022		7.18	0.03	152.10		
		133	1452	D-D2-S132-W133-U	2500 After S-095-06	7.92	2.00	U		06 มิ.ย. 2019	7.49	7.29	22 มิ.ย. 2022	7.49	7.29	0.00	4240.97		
		133	1452	D-D2-S133-W133-D	2500 After S-095-06	7.92	2.00	D		06 มิ.ย. 2019	7.70	7.29	22 มิ.ย. 2022	7.70	7.29	0.00	4240.97		
		133	1452	D-D2-S133-W133-W	2500 After S-095-06	7.92	2.00	W TFM					22 ก.พ. 2022		7.71	0.01	590.85		



	<h1>FLOWLINE THICKNESS REPORT</h1>	PS1/M INSPECTION TEAM
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Tag No.:	S1-LKUCA -FSTN-6-CAA-P-CO		Total length (m):	2200	Installation date:	01 มี.ย. 2000	Service life (yrs):	22.66
Pipe size (in):	6		% Inspection:	20	1st Inspection date:	02 มี.ย. 2020	6th Inspection date:	08 มี.ย. 2015
Flowline No.:	CAA		No. of section (sections):	5	2nd Inspection date:	15 มี.ย. 2021	7th Inspection date:	03 มี.ย. 2016
From-To:	LKU-CA	FSTN	Length of section (m):	440	3rd Inspection date:	10 มี.ย. 2021	8th Inspection date:	05 มี.ย. 2017
Process:	P	Process	Length of subsection (m):	88	4th Inspection date:	22 ก.พ. 2022	9th Inspection date:	06 ส.ค. 2018
Service:	CO	Crude oil	Total spool (spools):	201	5th Inspection date:	22 มี.ย. 2022	10th Inspection	06 มี.ย. 2019

THICKNESS MEASUREMENT RESULT

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	<h1>FLOWLINE THICKNESS REPORT</h1>	PS1/M INSPECTION TEAM
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Tag No.:	S1-LKUCA -FSTN-6-CAA-P-CO		Total length (m):	2200	Installation date:	01 มี.ย. 2000	Service life (yrs):	22.66
Pipe size (in):	6		% Inspection:	20	1st Inspection date:	02 มี.ย. 2020	6th Inspection date:	08 มี.ย. 2015
Flowline No.:	CAA		No. of section (sections):	5	2nd Inspection date:	15 มี.ย. 2021	7th Inspection date:	03 มี.ย. 2016
From-To:	LKU-CA	FSTN	Length of section (m):	440	3rd Inspection date:	10 มี.ย. 2021	8th Inspection date:	05 มี.ย. 2017
Process:	P	Process	Length of subsection (m):	88	4th Inspection date:	22 ก.พ. 2022	9th Inspection date:	06 ส.ค. 2018
Service:	CO	Crude oil	Total spool (spools):	201	5th Inspection date:	22 มี.ย. 2022	10th Inspection	06 มี.ย. 2019

THICKNESS MEASUREMENT RESULT

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	<h1>FLOWLINE THICKNESS REPORT</h1>	PS1/M INSPECTION TEAM
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Tag No.:	S1-LKUCA -FSTN-6-CAA-P-CO		Total length (m):	2200	Installation date:	01 มี.ย. 2000	Service life (yrs):	22.66
Pipe size (in):	6		% Inspection:	20	1st Inspection date:	02 มี.ย. 2020	6th Inspection date:	08 มี.ย. 2015
Flowline No.:	CAA		No. of section (sections):	5	2nd Inspection date:	15 มี.ย. 2021	7th Inspection date:	03 มี.ย. 2016
From-To:	LKU-CA	FSTN	Length of section (m):	440	3rd Inspection date:	10 มี.ย. 2021	8th Inspection date:	05 มี.ย. 2017
Process:	P	Process	Length of subsection (m):	88	4th Inspection date:	22 ก.พ. 2022	9th Inspection date:	06 ส.ค. 2018
Service:	CO	Crude oil	Total spool (spools):	201	5th Inspection date:	22 มี.ย. 2022	10th Inspection	06 มี.ย. 2019

THICKNESS MEASUREMENT RESULT

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	<h1>FLOWLINE THICKNESS REPORT</h1>	PS1/M INSPECTION TEAM
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Tag No.:	S1-LKUCA -FSTN-6-CAA-P-CO		Total length (m):	2200	Installation date:	01 มี.ย. 2000	Service life (yrs):	22.66
Pipe size (in):	6		% Inspection:	20	1st Inspection date:	02 มี.ย. 2020	6th Inspection date:	08 มี.ย. 2015
Flowline No.:	CAA		No. of section (sections):	5	2nd Inspection date:	15 มี.ย. 2021	7th Inspection date:	03 มี.ย. 2016
From-To:	LKU-CA	FSTN	Length of section (m):	440	3rd Inspection date:	10 มี.ย. 2021	8th Inspection date:	05 มี.ย. 2017
Process:	P	Process	Length of subsection (m):	88	4th Inspection date:	22 ก.พ. 2022	9th Inspection date:	06 ส.ค. 2018
Service:	CO	Crude oil	Total spool (spools):	201	5th Inspection date:	22 มี.ย. 2022	10th Inspection	06 มี.ย. 2019

THICKNESS MEASUREMENT RESULT

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	<h1>FLOWLINE THICKNESS REPORT</h1>	PS1/M INSPECTION TEAM
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Tag No.:	S1-LKUCA -FSTN-6-CAA-P-CO		Total length (m):	2200	Installation date:	01 มี.ย. 2000	Service life (yrs):	22.66
Pipe size (in):	6		% Inspection:	20	1st Inspection date:	02 มี.ย. 2020	6th Inspection date:	08 มี.ย. 2015
Flowline No.:	CAA		No. of section (sections):	5	2nd Inspection date:	15 มี.ย. 2021	7th Inspection date:	03 มี.ย. 2016
From-To:	LKU-CA	FSTN	Length of section (m):	440	3rd Inspection date:	10 มี.ย. 2021	8th Inspection date:	05 มี.ย. 2017
Process:	P	Process	Length of subsection (m):	88	4th Inspection date:	22 ก.พ. 2022	9th Inspection date:	06 ส.ค. 2018
Service:	CO	Crude oil	Total spool (spools):	201	5th Inspection date:	22 มี.ย. 2022	10th Inspection	06 มี.ย. 2019

THICKNESS MEASUREMENT RESULT

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	<h1>FLOWLINE THICKNESS REPORT</h1>	PS1/M INSPECTION TEAM
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Tag No.:	S1-LKUCA -FSTN-6-CAA-P-CO		Total length (m):	2200	Installation date:	01 มี.ย. 2000	Service life (yrs):	22.66
Pipe size (in):	6		% Inspection:	20	1st Inspection date:	02 มี.ย. 2020	6th Inspection date:	08 มี.ย. 2015
Flowline No.:	CAA		No. of section (sections):	5	2nd Inspection date:	15 มี.ย. 2021	7th Inspection date:	03 มี.ย. 2016
From-To:	LKU-CA	FSTN	Length of section (m):	440	3rd Inspection date:	10 มี.ย. 2021	8th Inspection date:	05 มี.ย. 2017
Process:	P	Process	Length of subsection (m):	88	4th Inspection date:	22 ก.พ. 2022	9th Inspection date:	06 ส.ค. 2018
Service:	CO	Crude oil	Total spool (spools):	201	5th Inspection date:	22 มี.ย. 2022	10th Inspection	06 มี.ย. 2019

THICKNESS MEASUREMENT RESULT

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	<h1>FLOWLINE THICKNESS REPORT</h1>	PS1/M INSPECTION TEAM
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Tag No.:	S1-LKUCA -FSTN-6-CAA-P-CO		Total length (m):	2200	Installation date:	01 มี.ย. 2000	Service life (yrs):	22.66
Pipe size (in):	6		% Inspection:	20	1st Inspection date:	02 มี.ย. 2020	6th Inspection date:	08 มี.ย. 2015
Flowline No.:	CAA		No. of section (sections):	5	2nd Inspection date:	15 มี.ย. 2021	7th Inspection date:	03 มี.ย. 2016
From-To:	LKU-CA	FSTN	Length of section (m):	440	3rd Inspection date:	10 มี.ย. 2021	8th Inspection date:	05 มี.ย. 2017
Process:	P	Process	Length of subsection (m):	88	4th Inspection date:	22 ก.พ. 2022	9th Inspection date:	06 ส.ค. 2018
Service:	CO	Crude oil	Total spool (spools):	201	5th Inspection date:	22 มี.ย. 2022	10th Inspection	06 มี.ย. 2019

THICKNESS MEASUREMENT RESULT

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	<h1>FLOWLINE THICKNESS REPORT</h1>	PS1/M INSPECTION TEAM
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Tag No.:	S1-LKUCA -FSTN-6-CAA-P-CO		Total length (m):	2200	Installation date:	01 มี.ย. 2000	Service life (yrs):	22.66
Pipe size (in):	6		% Inspection:	20	1st Inspection date:	02 มี.ย. 2020	6th Inspection date:	08 มี.ย. 2015
Flowline No.:	CAA		No. of section (sections):	5	2nd Inspection date:	15 มี.ย. 2021	7th Inspection date:	03 มี.ย. 2016
From-To:	LKU-CA	FSTN	Length of section (m):	440	3rd Inspection date:	10 มี.ย. 2021	8th Inspection date:	05 มี.ย. 2017
Process:	P	Process	Length of subsection (m):	88	4th Inspection date:	22 ก.พ. 2022	9th Inspection date:	06 ส.ค. 2018
Service:	CO	Crude oil	Total spool (spools):	201	5th Inspection date:	22 มี.ย. 2022	10th Inspection	06 มี.ย. 2019

THICKNESS MEASUREMENT RESULT

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	<h1>FLOWLINE THICKNESS REPORT</h1>	PS1/M INSPECTION TEAM
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Tag No.:	S1-LKUCA -FSTN-6-CAA-P-CO		Total length (m):	2200	Installation date:	01 มี.ย. 2000	Service life (yrs):	22.66
Pipe size (in):	6		% Inspection:	20	1st Inspection date:	02 มี.ย. 2020	6th Inspection date:	08 มี.ย. 2015
Flowline No.:	CAA		No. of section (sections):	5	2nd Inspection date:	15 มี.ย. 2021	7th Inspection date:	03 มี.ย. 2016
From-To:	LKU-CA	FSTN	Length of section (m):	440	3rd Inspection date:	10 มี.ย. 2021	8th Inspection date:	05 มี.ย. 2017
Process:	P	Process	Length of subsection (m):	88	4th Inspection date:	22 ก.พ. 2022	9th Inspection date:	06 ส.ค. 2018
Service:	CO	Crude oil	Total spool (spools):	201	5th Inspection date:	22 มี.ย. 2022	10th Inspection	06 มี.ย. 2019

THICKNESS MEASUREMENT RESULT


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Tag No.:	S1-LKUCA -FSTN-6-CAA-P-CO		Total length (m):	2200	Installation date:	01 มี.ย. 2000	Service life (yrs):	22.66
Pipe size (in):	6		% Inspection:	20	1st Inspection date:	02 มี.ย. 2020	6th Inspection date:	08 มี.ย. 2015
Flowline No.:	CAA		No. of section (sections):	5	2nd Inspection date:	15 มี.ย. 2021	7th Inspection date:	03 มี.ย. 2016
From-To:	LKU-CA	FSTN	Length of section (m):	440	3rd Inspection date:	10 มี.ย. 2021	8th Inspection date:	05 มี.ย. 2017
Process:	P	Process	Length of subsection (m):	88	4th Inspection date:	22 ก.พ. 2022	9th Inspection date:	06 ส.ค. 2018
Service:	CO	Crude oil	Total spool (spools):	201	5th Inspection date:	22 มี.ย. 2022	10th Inspection	06 มี.ย. 2019

THICKNESS MEASUREMENT RESULT

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	<div>MINIMUM REMAINING THICKNESS</div>							<div>PS1/M INSPECTION TEAM</div>
Inspection date	Section	CML Name	Previous Min thickness (mm)	Min thickness (mm)	ST_CR (mm/yr)	LT_CR (mm/yr)	RL (yrs)	Retirement date
22 มิ.ย. 2022	A1	A-A1-S12-W13-U	6.69	6.69	0.00	0.00	4241.17	31 ธ.ค. 2099
22 มิ.ย. 2022	B1	B-B1-S45-W46-U	6.69	6.71	-0.01	-0.00	15.91	16 พ.ค. 2038
22 มิ.ย. 2022	C1	C-C1-S86-W86-D	6.49	6.49	0.00	0.00	4060.18	31 ธ.ค. 2099
22 มิ.ย. 2022	D1	D-D1-S126-W127-U	6.99	6.99	0.00	0.00	4512.65	31 ธ.ค. 2099
22 มิ.ย. 2022	E1	E-E1-S160-W161-U	6.99	6.99	0.00	0.00	4512.65	31 ธ.ค. 2099
18 ก.พ. 2022	A2	A-A2-S19-W19-W		5.32	0.12	0.12	27.72	01 พ.ย. 2049
22 มิ.ย. 2022	B2	B-B2-S56-W57-U	6.39	6.39	0.00	0.00	3519.00	31 ธ.ค. 2099
22 มิ.ย. 2022	C2	C-C2-S97-W98-U	6.99	6.99	0.00	0.00	4000.31	31 ธ.ค. 2099
22 มิ.ย. 2022	D2	D-D2-S131-W132-U	6.99	6.99	0.00	0.00	4000.31	31 ธ.ค. 2099
22 มิ.ย. 2022	E2	E-E2-S166-W167-U	6.79	6.79	0.00	0.00	3839.87	31 ธ.ค. 2099
02 มิ.ย. 2020	A3	A-A3-S25-W25-D	6.90	6.90	0.00	0.02	243.90	31 ธ.ค. 2099
02 มิ.ย. 2020	B3	B-B3-S68-W68-D	6.90	6.20	0.14	0.00	29.91	23 เม.ย. 2050
02 มิ.ย. 2020	C3	C-C3-S106-W106-D	6.69	6.60	0.02	0.01	254.81	31 ธ.ค. 2099
02 มิ.ย. 2020	D3	D-D3-S137-W138-U	6.70	6.70	0.00	0.07	66.84	19 มี.ค. 2087
02 มิ.ย. 2020	E3	E-E3-S172-W173-U	6.69	6.70	-0.00	0.00	15.88	13 เม.ย. 2036
15 มิ.ย. 2021	A4	A-A4-S33-W34-U	7.40	6.46	0.19	0.15	23.87	24 เม.ย. 2045
15 มิ.ย. 2021	B4	B-B4-S71-W72-U	7.10	7.01	0.02	0.03	172.41	31 ธ.ค. 2099
15 มิ.ย. 2021	C4	C-C4-S110-W111-U	6.90	6.81	0.02	0.03	165.52	31 ธ.ค. 2099
15 มิ.ย. 2021	D4	D-D4-S143-W144-U	7.10	7.14	-0.01	0.02	320.61	31 ธ.ค. 2099
15 มิ.ย. 2021	E4	E-E4-S177-W177-D	7.00	6.97	0.01	0.04	115.35	31 ธ.ค. 2099
22 มิ.ย. 2022	A5	A-A5-S35-W36-U	6.69	6.63	0.01	0.01	389.36	31 ธ.ค. 2099
10 มิ.ย. 2021	B5	B-B5-S82-W82-W		6.43	0.07	0.07	62.50	25 พ.ย. 2083
10 มิ.ย. 2021	C5	C-C5-S116-W116-W		6.30	0.08	0.08	55.80	15 มี.ค. 2077
22 มิ.ย. 2022	D5	D-D5-S154-W154-D	7.00	7.00	0.00	0.02	249.77	31 ธ.ค. 2099
22 มิ.ย. 2022	E5	E-E5-S189-W190-U	7.00	7.00	0.00	0.01	499.54	31 ธ.ค. 2099

		MINIMUM REMAINING LIFE						PS1/M INSPECTION TEAM
Inspection date	Section	CML Name	Previous Min thickness (mm)	Min thickness (mm)	ST_CR (mm/yr)	LT_CR (mm/yr)	RL (yrs)	Retirement date
22 มิ.ย. 2022	A1	A-A1-S2-W2-D		8.23	-0.01	-0.01	21.05	04 ก.ค. 2043
22 มิ.ย. 2022	B1	B-B1-S45-W46-U	6.69	6.71	-0.01	-0.00	15.91	16 พ.ค. 2038
22 มิ.ย. 2022	C1	C-C1-S84-W85-U	10.40	9.30	0.28	0.14	25.73	09 มี.ค. 2048
11 มิ.ย. 2021	D1	D-D1-S123-W123-W		7.09	0.04	0.04	128.95	31 ธ.ค. 2099
22 มิ.ย. 2022	E1	E-E1-S159-W160-U	7.59	7.38	0.05	0.02	99.33	31 ธ.ค. 2099
18 ก.พ. 2022	A2	A-A2-S19-W19-W		5.32	0.12	0.12	27.72	01 พ.ย. 2049
22 มิ.ย. 2022	B2	B-B2-S59-W59-D	9.79	9.27	0.17	0.07	42.57	06 ม.ค. 2065
18 ก.พ. 2022	C2	C-C2-S97-W97-W	7.26	7.44	-0.26	-0.26	18.38	30 มิ.ย. 2040
27 ก.พ. 2022	D2	D-D2-S135-W135-W		7.09	0.04	0.04	133.33	31 ธ.ค. 2099
22 มิ.ย. 2022	E2	E-E2-S162-W163-U	7.40	7.40	0.00	0.00	18.24	13 ก.ย. 2040
02 มิ.ย. 2020	A3	A-A3-S22-W22-D	7.19	7.20	-0.00	0.00	17.57	21 ธ.ค. 2037
02 มิ.ย. 2020	B3	B-B3-S66-W67-U	6.69	6.70	-0.00	0.00	15.88	13 เม.ย. 2036
02 มิ.ย. 2020	C3	C-C3-S103-W103-D	6.99	7.00	-0.00	0.00	16.89	18 เม.ย. 2037
02 มิ.ย. 2020	D3	D-D3-S136-W137-U	6.79	6.80	-0.00	0.00	16.21	15 ส.ค. 2036
02 มิ.ย. 2020	E3	E-E3-S172-W173-U	6.69	6.70	-0.00	0.00	15.88	13 เม.ย. 2036
15 มิ.ย. 2021	A4	A-A4-S33-W34-U	7.40	6.46	0.19	0.15	23.87	24 เม.ย. 2045
15 มิ.ย. 2021	B4	B-B4-S70-W71-U	7.40	7.13	0.05	0.09	58.85	05 เม.ย. 2080
15 มิ.ย. 2021	C4	C-C4-S114-W115-U	7.39	7.40	-0.00	0.00	18.24	07 ก.ย. 2039
15 มิ.ย. 2021	D4	D-D4-S142-W143-U	7.30	7.62	-0.06	-0.00	18.99	04 มิ.ย. 2040
15 มิ.ย. 2021	E4	E-E4-S175-W176-U	7.30	7.61	-0.06	-0.00	18.95	23 พ.ค. 2040
22 มิ.ย. 2022	A5	A-A5-S37-W37-D	6.89	6.91	-0.00	-0.00	16.59	17 ม.ค. 2039
10 มิ.ย. 2021	B5	B-B5-S82-W82-W		6.43	0.07	0.07	62.50	25 พ.ย. 2083
10 มิ.ย. 2021	C5	C-C5-S116-W116-W		6.30	0.08	0.08	55.80	15 มี.ค. 2077
22 มิ.ย. 2022	D5	D-D5-S153-W154-U	7.20	7.20	0.00	0.06	86.59	31 ธ.ค. 2099
22 มิ.ย. 2022	E5	E-E5-S200-W200-D		10.05	-0.10	-0.10	27.20	26 ส.ค. 2049



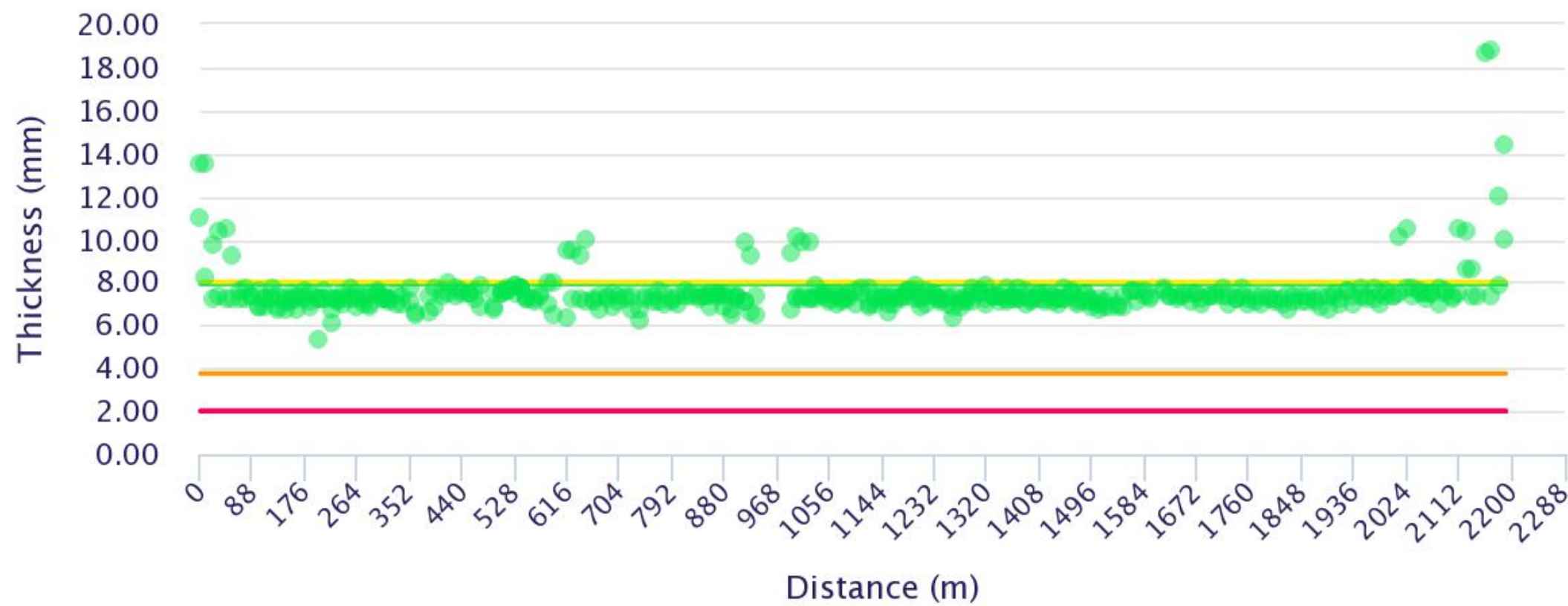
FLOWLINE THICKNESS REPORT

PS1/M
INSPECTION
TEAM

Tag No.:	S1-LKUCA -FSTN-6-CAA-P-CO		Total length (m):	2200	Installation date:	01 มิ.ย. 2000
Pipe size (in):	6		% Inspection:	20	1st Inspection date:	02 มิ.ย. 2020
Flowline No.:	CAA		No. of section (sections):	5	2nd Inspection date:	15 มิ.ย. 2021
From-To:	LKU-CA	FSTN	Length of section (m):	440	3rd Inspection date:	10 มิ.ย. 2021
Process:	P	Process	Length of subsection (m):	88	4th Inspection date:	22 ก.พ. 2022
Service:	CO	Crude oil	Total spool (spools):	201	5th Inspection date::	22 มิ.ย. 2022

THICKNESS MEASUREMENT RESULT

Distribution of Thickness along CAA










- tnom

Normal
- tdesign

Medium
- tretired_S1

High
- topert

Extreme
- 0.75topert

	<h1>FLOWLINE VISUAL INSPECTION REPORT</h1>				PS1/M INSPECTION TEAM	
Inspection date:	22 มิ.ย. 2022	Damage mechanism:	Ext-No anomaly found	Severity:	GOOD	
Line No:	CAA	Main component :	Pipe	Reporting by :	Manop N.	
Anomaly point:		WO number :	500358034	Reporting date :	04-07-2022 8:43:48 AM	
<div></div>						
Finding -By visual inspection, this flowline still in good condition. Photo 1. Section B2 Under block culvert from S-166-01 to S-106-47 (W.56 Wrapping) can't MFL inspection.			Recommendation - Plan to extend for flowline under block culvert inspection shall be done at least once a year for general visual inspection or other NDE Technique should be executed for internal corrosion detection for pipe & weld.			
Inspection date:	22 มิ.ย. 2022	Damage mechanism:	Ext-No anomaly found	Severity:	GOOD	
Line No:	CAA	Main component :	Pipe	Reporting by :	Manop N.	
Anomaly point:		WO number :	500358034	Reporting date :	04-07-2022 8:43:49 AM	
<div></div>						
Finding -By visual inspection, this flowline still in good condition. Photo 2. Section D1 Under block culvert from S-095-19 to S-095-16 can't MFL inspection.			Recommendation - Plan to extend for flowline under block culvert inspection shall be done at least once a year for general visual inspection or other NDE Technique should be executed for internal corrosion detection for pipe & weld.			

Inspected by:	Manop N.	Date:	
API Inspector reviewed by:	Jirawat C.	Date:	11 ก.ค. 2022
PTTEP Leader reviewed:	Apichat P.	Date:	24 ก.ค. 2022

Inspected by:	LKU Inspection Admin	Date:	10 ก.ย. 2020
API Inspector reviewed by:	Jirawat C.	Date:	11 ก.ค. 2022
PTTEP Leader reviewed:	Apichat P.	Date:	24 ก.ค. 2022

