





# ULTRASONIC CORROSION SURVEY

Survey Name: CNRL

LSD: 16-34-074-11W6	Dwg: 109	Vessel Number: A3138847	Manufacturer: OPSCO	Survey Date: 1/31/11
District Unit: WEST COUNTY		Vessel Name: LINE HEATER - PIPING	Serial Number: HC.42.2000.2314.AB	Inspector: RAJ KHAN
Location: VALHALLA		Year Built: 1995	Shell MAWP PSI: 3130 MAWT F: 250	Process: SOUR
Skid: SKD0224		Tag Number: -	Tube MAWP PSI: 1480 MAWT F: 250	Project #: C70099
		CRN: N0291.2/N0292.2	Vessel CA: 0.0000	

Band	Description		Readings						Year	Avg Inches	Min Inches	Nominal	CA	TMIN	Recommended Next Inspection	Recommended Retirement Date
			1	2	3	4	5	6								
109-05	Piping	Baseline	0.456	0.430	0.433	0.431	0.424	0.429	2006	0.434	0.424	0.4380	0.0548	0.2540	2012	2031
Shape	90° Elbow	Shell Side	Previous	0.456	0.430	0.433	0.431	0.424	0.429	2006	0.434	0.424	Comments-->			
OD	3.5		Current	0.432	0.430	0.433	0.431	0.424	0.429	2011	0.430	0.424				
Spec.	B31.3			ST Loss MPY						0.000	OK					
Material	A 234 - WPB			LT Loss MPY						0.000						
109-10	Piping	Baseline	0.399	0.396	0.397	0.390	0.390	0.394	2006	0.394	0.390	0.4380	0.0548	0.2540	2012	2031
Shape	90° Elbow	Shell Side	Previous	0.399	0.396	0.397	0.390	0.390	0.394	2006	0.394	0.390	Comments-->			
OD	3.5		Current	0.399	0.395	0.397	0.390	0.390	0.394	2011	0.394	0.390				
Spec.	B31.3			ST Loss MPY						0.000	OK					
Material	A 234 - WPB			LT Loss MPY						0.000						
109-15	Piping	Baseline	0.445	0.450	0.445	0.452	0.450	0.455	2006	0.450	0.445	0.4380	0.0548	0.2540	2012	2031
Shape	Cylindrical	Shell Side	Previous	0.445	0.450	0.445	0.452	0.450	0.455	2006	0.450	0.445	Comments-->			
OD	3.5		Current	0.445	0.450	0.445	0.452	0.450	0.455	2011	0.450	0.445				
Spec.	B31.3			ST Loss MPY						0.000	OK					
Material	A 106 - B			LT Loss MPY						0.000						
109-20	Piping	Baseline	0.356	0.331	0.319	0.316	0.319	0.317	2006	0.326	0.316	0.3430	0.0429	0.0847	2012	2031
Shape	90° Elbow	Tube Side	Previous	0.356	0.331	0.319	0.316	0.319	0.317	2006	0.326	0.316	Comments-->			
OD	2.375		Current	0.338	0.331	0.319	0.316	0.319	0.317	2011	0.323	0.316				
Spec.	B31.3			ST Loss MPY						0.000	OK					
Material	A 234 - WPB			LT Loss MPY						0.000						



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		CRN: N0291.2/N0292.2	Vessel CA: 0.0000	

Band	Description		Readings						Year	Avg Inches	Min Inches	Nominal	CA	TMIN	Recommended Next Inspection	Recommended Retirement Date
			1	2	3	4	5	6								
<b>109-25</b>	Piping	<b>Baseline</b>	0.287	0.280	0.271	0.272	0.275	0.283	2006	0.278	0.271	0.3000	0.0375	0.1249	2012	2031
Shape	90° Elbow	Tube Side	<b>Previous</b>	0.287	0.280	0.271	0.272	0.275	0.283	2006	0.278	0.271	Comments-->			
OD	3.5		<b>Current</b>	0.286	0.280	0.271	0.272	0.275	0.283	2011	0.278	0.271				
Spec.	B31.3			<b>ST Loss MPY</b>						0.000	OK					
Material	A 234 - WPB			<b>LT Loss MPY</b>						0.000						
<b>109-30</b>	Piping	<b>Baseline</b>	0.303	0.296	0.299	0.301	0.300	0.297	2006	0.299	0.296	0.3000	0.0375	0.1249	2012	2031
Shape	90° Elbow	Tube Side	<b>Previous</b>	0.303	0.296	0.299	0.301	0.300	0.297	2006	0.299	0.296	Comments-->			
OD	3.5		<b>Current</b>	0.303	0.296	0.299	0.301	0.300	0.297	2011	0.299	0.296				
Spec.	B31.3			<b>ST Loss MPY</b>						0.000	OK					
Material	A 234 - WPB			<b>LT Loss MPY</b>						0.000						
<b>109-35</b>	Piping	<b>Baseline</b>	0.294	0.293	0.294	0.292	0.293	0.294	2006	0.293	0.292	0.3000	0.0375	0.1249	2012	2031
Shape	Cylindrical	Tube Side	<b>Previous</b>	0.294	0.293	0.294	0.292	0.293	0.294	2006	0.293	0.292	Comments-->			
OD	3.5		<b>Current</b>	0.294	0.293	0.294	0.292	0.293	0.294	2011	0.293	0.292				
Spec.	B31.3			<b>ST Loss MPY</b>						0.000	OK					
Material	A 106 - B			<b>LT Loss MPY</b>						0.000						
<b>109-40</b>	Piping	<b>Baseline</b>	0.307	0.305	0.300	0.291	0.291	0.293	2006	0.298	0.291	0.3000	0.0375	0.1249	2012	2031
Shape	90° Elbow	Tube Side	<b>Previous</b>	0.307	0.305	0.300	0.291	0.291	0.293	2006	0.298	0.291	Comments-->			
OD	3.5		<b>Current</b>	0.298	0.296	0.300	0.291	0.291	0.293	2011	0.295	0.291				
Spec.	B31.3			<b>ST Loss MPY</b>						0.000	OK					
Material	A 234 - WPB			<b>LT Loss MPY</b>						0.000						



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		1	2	3	4	5	6									
109-45	Piping	Baseline	0.286	0.288	0.288	0.283	0.278	0.280	2006	0.284	0.278	0.3000	0.0375	0.1249	2012	2031
Shape	90° Elbow	Tube Side	Previous	0.286	0.288	0.288	0.283	0.278	0.280	2006	0.284	0.278	Comments-->			
OD	3.5	Current	0.285	0.288	0.288	0.283	0.278	0.280	2011	0.284	0.278					
Spec.	B31.3		ST Loss MPY		0.000											
Material	A 234 - WPB		LT Loss MPY		0.000		OK									