



4810-93 Street, Edmonton, Alberta T6E 5M4  
Phone: (780) 469-2401 Fax: (780) 468-2422

Report No: DC1001237

Client	Apache Canada Ltd.	Inspection Date	Sep 8, 2013
Prov. Reg. #	AB 2781543	Inspection Type	VI / UT
Equipment Type	Treater	Location	Zama
Tag/Equip.	Treater	LSD	AB 09-28-117-04W6
Status	In Service	Downhole LSD	09-28-117-04W6
Manufacturer	Natco Canada Ltd	Area	Northern
Serial Number	L-8-340	Year Built	1991
CRN #	K-6455.2	Service	Sour
Comp/Unit Id		Manway	None
Nat.Board #		Coating	No
Interim Insp'n		Interim Type	
Next Inspection		Next Insp Type	
Length		Height	
Volume		Client Reference	
Owner	Apache Canada Ltd.	RT	1 HT No
Foreman	Bryan Gibbs	RAE Job No.	3801
ABSA	Plant: H Vessel: K Process: W Special: B	ASME	Sec. VIII div. 1
History Log			

Component	Shell		
MAWP	75.0 PSI @ 250 °F	MDMT	5 °F @ 75.0 PSI
Material	SA-516-70N	Material Thickness	0.5 in
Diameter		Length	
Corrosion Allowance	0.125 in		



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Component	Heads		
MAWP		MDMT	
Material		Material Thickness	0.74 in
Diameter		Length	
Corrosion Allowance	0.125 in		

### Comments

This vessel was inspected to the Apache 4.4PRD-002VS Category 2 Fired Separator procedure.

Next inspection date, frequency and type to be determined by Apache Chief Inspector.

Figure: 1



LSD Sign

### Building Observations



Figure: 2



External View

#### Piping Observations

The attached piping was generally in serviceable condition. It was sufficiently supported with no damage, distortion or undue stress evident. Contents and flow direction were clearly marked. The threaded joints were properly connected, and exhibited no signs of leakage.

#### PSV Observations

The PSV was removed for service at the time of inspection.

#### External Observations

The Treater is located partially inside a building. The nameplate was legible and securely attached. The vessel was in the horizontal position and adequately supported. There are no makeshift structural attachments on the vessel shell or pressure containing components. There was no damage, distortion, or stress evident on piping connections.

The insulated/clad sections of the vessel showed no relevant indications of defects, damage or corrosion under insulation (CUI). The section of the shell not insulated/clad was fully painted, and the paint was in serviceable condition, with only minor scattered surface corrosion visible. The heads were insulated

The fire tube flange connection was fully bolted and showed no evidence of leakage. The sight glass on the firebox was clear and in serviceable condition. The flame arrestor appeared clean and in serviceable condition. The stack was bare steel. The stack to firetube exhaust flange was fully bolted and showed no signs of leakage.



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### Internal Observations

The treater was fully inspected internally and on both the hot and cold sides. The firetubes were also visually inspected as well as inspected with MPI. The firetubes were free of defects and there was no significant metal loss due to corrosion.

The treater shell was coated and the coating has failed throughout the vessel and needs to be removed and the entire vessel re-coated. The areas where the coating has failed are not currently exhibiting any sign of corrosion. There were large hard deposits of asphaltines and paraffin throughout the hot side. These were removed when possible however some were so well adhered removal was not possible. There was no pitting or corrosion under those deposits.

The firetube support structure was in place and secure. The hanging supports for the firetube were slightly bent however the roller mechanisms were in serviceable condition.

The removable panels were not removed prior to inspection. The hot side was quite clean and the shell could be fully assessed.

The cold side of the treater was still very dirty. Access was quite limited however a reasonable assessment of the shell could be made. There were large coating failures however no pitting in those areas has begun. There were no deposits on the cold side though some sludge was still evident. The electrostatic grid had fallen down and was re-attached prior to inspection.

The anodes were examined and found to be about 40% consumed. There were no issues with the treater however re-coating the vessel should be considered before corrosion takes place. The anode wooden rollers should be replaced each turnaround along with the anode.

Figure: 3



Firetube Nameplate

Figure: 4



Firetubes Bundles

Figure: 5



Firetube Internals

Figure: 6



Firetube Mitered Bends and Lug

Figure: 7



Bottom of Treater Shell

Figure: 8



Treater Access Panels

Figure: 9



Typical Coating Failure around Nozzles

Figure: 10



Gas Boot



Figure: 11



Instrumentation Nozzles

Figure: 12



Clumps of Asphaltines adhered to structure

Figure: 13



Anode Rollers

Figure: 14



Coating Failures

Figure: 15



Coating Failures and Adhered Deposits

Figure: 16



Anode Condition

Figure: 17



Oil Side Vapor Space

Figure: 18



Typical Coating Failure - Oil Side

Figure: 19



Lower Shell Oil Side

Figure: 20



Underside of Oil Side Channel

Figure: 21



Electrostatic Screen Attachments

Figure: 22



Lower Shell Overview





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UT1 Observations

Please see the attached Appendices for UT data report.

Recommendations

Based on the scope of this inspection, the vessel appears suitable for continued service.

Replace the anode rollers at the same time as the anodes.

This vessel has many large coating failures on both the hot and cold ends and should be completely re-coated at the next turnaround before corrosion and pitting begins. This re-coating will require approximately two weeks to complete however if timed with the turnaround at 3-10 several pieces of equipment could be blasted and coated within that window. Third party inspections for this size of remote field job are imperative in order to assure the full life of the coating. A loose budget for this vessel would be around \$100000 which would include dismantling, cleaning, blast, coating, remote mobilization etc.

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Inspector : Dwight Colp

Reviewed By: Administrative Review Only

5 year inspection interval max



		<b>RAE Engineering and Inspection Ltd</b> 4810 - 93 Street Edmonton, AB, T6E 5M4 ph: 780-469-2401 fx: 780-468-2422		Date:		9-Sep-13		<b>Ultrasonic Thickness Examination</b>									
				Page:		1 of 4											
		RAE Report #:		13-3801-NM-UT-01													
Client:		Apache Canada LTD		Project #:		3801											
Address:		421 7th Avenue SW, Calgary, Alberta T2P 4K9		Location/LSD:		09-28-117-04W6											
Client P.O.#:		NS		Procedure:		UT-1 - #701B											
Client Representative:		NS		Acceptance Code:		Client Spec., Thickness											
<b>JOB DESCRIPTION</b>																	
Items Tested:		1		Material:		Carbon Steel		Nominal Thickness:		Varies							
Item Number:		A2781543		Surface		<input checked="" type="checkbox"/> Painted <input type="checkbox"/> Bare Steel <input type="checkbox"/> Machined											
Item Description:		Treater		Condition:		<input type="checkbox"/> As Ground <input type="checkbox"/> Shot Blasted <input type="checkbox"/> As Welded											
				Surface Temp:		<input type="checkbox"/> < 0° C <input checked="" type="checkbox"/> 0-120° C <input type="checkbox"/> 120-260° C <input type="checkbox"/> >260° C											
<b>EQUIPMENT, TECHNIQUE &amp; CALIBRATION</b>																	
Instrument Mfr:		GE		Model:		38DLPLUS		S/N:		120389703		Cal. Due:		25-Oct-13			
Cal Block S/N:		379811		1 or 2 Point Cal:		<input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2		Calibrated Range:		0.100"-1.000"		Couplant:		UTX			
	Probe Model	Freq MHz	Angle	Dia. (in)	Probe Type		Manufacturer	Serial #	Cable length	Delay line	Vel. (m/sec)	Transfer Value	Ref dB	Ref %FSH	Scan dB	Range (mm)	
					Single	Dual											
1	NA	5.0	0°	0.25	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Stresstel	0257FC	4'	<input type="checkbox"/>	5850	NA	68	80	As Needed	25	
2					<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>							
3					<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>							
4					<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>							
<div style="margin-bottom: 20px;"> <b>Scope:</b> Conduct 0° straight beam ultrasonic's on the treater looking for any signs of wall thinning, internal corrosion, erosion, laminations or inclusions.         </div> <div> <b>Results:</b> Readings obtained from the vessel showed no signs of wall thinning, internal corrosion, erosion, laminations or inclusions at the time of inspection. TML 75 showed a low reading of 0.165" with a minimum wall loss of 0.189".         </div> <div style="margin-top: 20px;">           All readings from the inspection locations showed the thickness to be at or around nominal. There were no readings below the stated minimum thickness as per the corrosion allowance or below 12.5% wall loss on the associated piping as per ASTM specifications.         </div> <div style="margin-top: 20px;">           Please see the following page for pictures, the isometric drawing and the thickness readings.         </div>																	
Client Representative		NS		PRINT		SIGNATURE											
1 <sup>ST</sup> Technician		Nicolas Mora		PRINT				SIGNATURE		CGSB#:		710B-006		CGSB Level:		1L	
2 <sup>ND</sup> Technician				PRINT				SIGNATURE		CGSB#:				CGSB Level:			
										SNT#:				SNT Level:			



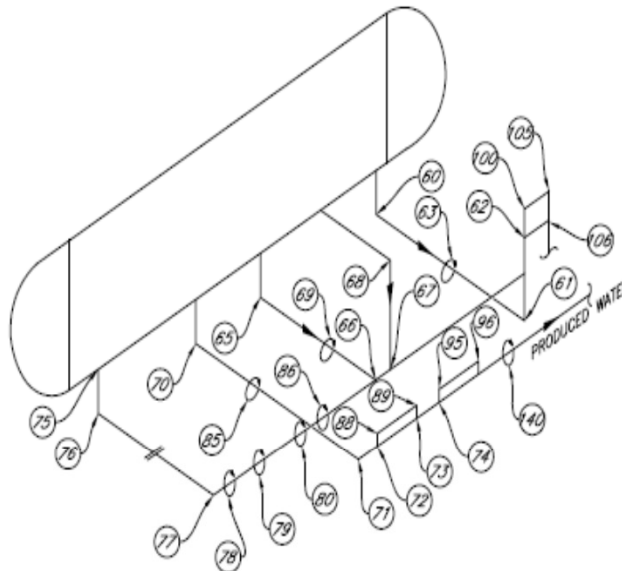
RAE Engineering and Inspection Ltd  
4810 - 93 Street Edmonton, AB, T6E 5M4  
ph: 780-469-2401 fx: 780-468-2422

Date:	9-Sep-13
Page:	2 of 4
RAE Report #:	13-3801-NM-UT-01
Project #:	3801
Location/LSD:	09-28-117-04W6
Procedure:	UT-1 - #701B
Acceptance Code:	Client Spec., Thickness

**Ultrasonic Thickness Examination**


Client:	Apache Canada LTD
Item Number:	A2781543
Item Description:	Treater

Continuation Page:




TREATER  
A 2781543


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IT MUST BE RETURNED IMMEDIATELY UPON REQUEST.		<b>REV</b> 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 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38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 34
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		<b>RAE Engineering and Inspection Ltd</b> 4810 - 93 Street Edmonton, AB, T6E 5M4 ph: 780-469-2401 fx: 780-468-2422						Date:		9-Sep-13		<b>Ultrasonic Thickness Examination</b>						
								Page:		3 of 4								
Client:		Apache Canada LTD						RAE Report #:		13-3801-NM-UT-01								
Item Number:		A2781543						Project #:		3801								
Item Description:		Treater						Location/LSD:		09-28-117-04W6								
								Procedure:		UT-1 - #701B								
								Acceptance Code:		Client Spec., Thickness								
Readings in: inches								TML Data										
TML	Description						1	2	3	4	5	6	7	8	9	10	11	12
60	3" STD 90° Elbow						0.236	0.212	0.225	0.218	0.211	0.223						
	Nom.	0.216	Min.	0.189	Direc.	T-B									Min. =	0.211	Ave. =	0.221
61	2" STD 90° Elbow						0.218	0.225	0.203	0.203	0.207	0.203						
	Nom.	0.154	Min.	0.135	Direc.	B-T									Min. =	0.203	Ave. =	0.210
62	2" STD Tee						0.298	0.308	0.294	0.284	0.298	0.334						
	Nom.	0.154	Min.	0.135	Direc.	B-T									Min. =	0.284	Ave. =	0.303
63	2" STD Band						0.215	0.200	0.211	0.242								
	Nom.	0.154	Min.	0.135	Direc.	RHR									Min. =	0.200	Ave. =	0.217
65	3" STD 90° Elbow						0.210	0.200	0.205	0.201	0.199	0.205						
	Nom.	0.216	Min.	0.189	Direc.	T-B									Min. =	0.199	Ave. =	0.203
66	3" STD Tee						0.243	0.245	0.271	0.264	0.265	0.269						
	Nom.	0.216	Min.	0.189	Direc.	S-N									Min. =	0.243	Ave. =	0.260
67	3" STD Tee						0.266	0.271	0.274	0.269	0.270	0.259						
	Nom.	0.216	Min.	0.189	Direc.	S-N									Min. =	0.259	Ave. =	0.268
68	3" STD 90° Elbow						0.233	0.215	0.226	0.222	0.215	0.232						
	Nom.	0.216	Min.	0.189	Direc.	T-B									Min. =	0.215	Ave. =	0.224
69	3" STD Band						0.202	0.217	0.208	0.208								
	Nom.	0.216	Min.	0.189	Direc.	RHR									Min. =	0.202	Ave. =	0.209
70	4" STD 90° Elbow						0.252	0.254	0.258	0.264	0.253	0.260						
	Nom.	0.237	Min.	0.207	Direc.	T-B									Min. =	0.252	Ave. =	0.257
71	3" STD 90° Elbow						0.236	0.245	0.219	0.223	0.218	0.232						
	Nom.	0.216	Min.	0.189	Direc.	S-N									Min. =	0.218	Ave. =	0.229
72	3" STD Tee						0.277	0.270	0.271	0.273	0.270	0.253						
	Nom.	0.216	Min.	0.189	Direc.	S-N									Min. =	0.253	Ave. =	0.269
73	3" STD Tee						0.245	0.264	0.265	0.269	0.275	0.268						
	Nom.	0.216	Min.	0.189	Direc.	S-N									Min. =	0.245	Ave. =	0.264
74	3" STD Tee						0.276	0.285	0.281	0.269	0.272	0.263						
	Nom.	0.216	Min.	0.189	Direc.	S-N									Min. =	0.263	Ave. =	0.274
75	3" STD Band						0.202	0.176	0.165	0.176	0.174	0.184						
	Nom.	0.216	Min.	0.189	Direc.	T-B									Min. =	0.165	Ave. =	0.180
76	3" STD Band						0.211	0.204	0.210	0.212								
	Nom.	0.216	Min.	0.189	Direc.	RHR									Min. =	0.204	Ave. =	0.209
77	3" STD 90° Elbow						0.278	0.277	0.281	0.258	0.216	0.229						
	Nom.	0.216	Min.	0.189	Direc.	S-N									Min. =	0.216	Ave. =	0.257
78	3" STD Band						0.211	0.203	0.190	0.206								
	Nom.	0.216	Min.	0.189	Direc.	B-T									Min. =	0.190	Ave. =	0.203
Client Representative		NS						SIGNATURE						Scan Direction: T=Top, B=Bottom, N=North, S=South, E=East, W=West, L=Left, R=Right, RHR=Right Hand Rule				
1 <sup>ST</sup> Technician		Nicolas Mora						SIGNATURE						CGSB#:		CGSB Lvl:		
2 <sup>ND</sup> Technician		PRINT						SIGNATURE						SNT#:		SNT Lvl:		
		PRINT						SIGNATURE						SNT#:		SNT Lvl:		

PRINT	SIGNATURE	SNT#:	SNT Lvl:
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		<b>RAE Engineering and Inspection Ltd</b> 4810 - 93 Street Edmonton, AB, T6E 5M4 ph: 780-469-2401 fx: 780-468-2422				Date: 9-Sep-13		<b>Ultrasonic Thickness Examination</b>								
		Page: 1 of 2		RAE Report #: 13-3801-NM-UT-14												
		Client: Apache Canada LTD		Project #: 3801		Address: 421 7th Avenue SW, Calgary, Alberta T2P 4K9		Location/LSD: 09-28-117-04W6		Client P.O.#: NS		Procedure: UT-1 - #701B				
Client Representative: NS		Acceptance Code: Client Spec., Thickness														
<b>JOB DESCRIPTION</b>																
Items Tested: 1		Material: Carbon Steel		Nominal Thickness: Varies												
Item Number: A2781543		Surface: <input type="checkbox"/> Painted <input type="checkbox"/> Bare Steel <input type="checkbox"/> Machined														
Item Description: Treater Fire Tubes		Condition: <input type="checkbox"/> As Ground <input type="checkbox"/> Shot Blasted <input type="checkbox"/> As Welded														
		Surface Temp: <input type="checkbox"/> < 0° C <input checked="" type="checkbox"/> 0-120° C <input type="checkbox"/> 120-260° C <input type="checkbox"/> >260° C														
<b>EQUIPMENT, TECHNIQUE &amp; CALIBRATION</b>																
Instrument Mfr: GE		Model: 38DLPLUS		S/N: 120389703		Cal. Due: 25-Oct-13										
Cal Block S/N: 379811		1 or 2 Point Cal: <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2		Calibrated Range: 0.100"-1.000"		Couplant: UTX										
	Probe Model	Freq MHz	Angle	Dia. (in)	Probe Type		Manufacturer	Serial #	Cable length	Delay line	Vel. (m/sec)	Transfer Value	Ref dB	Ref %FSH	Scan dB	Range (mm)
					Single	Dual										
1	NA	5.0	0°	0.25	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Stresstel	0257FC	4'	<input type="checkbox"/>	5850	NA	68	80	As Needed	50
2					<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>						
3					<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>						
4					<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>						
<div> <b>Scope:</b> Conduct 0° straight beam ultrasonic's on the treater fire tubes looking for any signs of wall thinning, internal corrosion, erosion, laminations or inclusions.         </div> <div> <b>Results:</b> Readings obtained from the vessel showed no signs of wall thinning, internal corrosion, erosion, laminations or inclusions at the time of inspection.         </div> <div>           All readings from the inspection locations showed the thickness to be at or around nominal. There were no readings below the stated minimum thickness as per the corrosion allowance or below 12.5% wall loss on the associated piping as per ASTM specifications.         </div> <div>           Please see the following page for thickness readings.         </div>																
Client Representative		NS		PRINT		SIGNATURE										
1 <sup>ST</sup> Technician		Nicolas Mora		PRINT		SIGNATURE		CGSB#:		710B-006		CGSB Level:		1L		
2 <sup>ND</sup> Technician		PRINT		SIGNATURE		CGSB#:		CGSB Level:		SNT#:		SNT Level:				

		<b>RAE Engineering and Inspection Ltd</b> 4810 - 93 Street Edmonton, AB, T6E 5M4 ph: 780-469-2401 fx: 780-468-2422				Date: 9-Sep-13		<b>Ultrasonic Thickness Examination</b>								
		Page: 1 of 2		RAE Report #: 13-3801-NM-UT-15												
		Client: Apache Canada LTD		Project #: 3801		Address: 421 7th Avenue SW, Calgary, Alberta T2P 4K9		Location/LSD: 09-28-117-04W6		Client P.O.#: NS		Procedure: UT-1 - #701B				
Client Representative: NS		Acceptance Code: Client Spec., Thickness														
<b>JOB DESCRIPTION</b>																
Items Tested: 1		Material: Carbon Steel		Nominal Thickness: Varies												
Item Number: A2781543		Surface: <input checked="" type="checkbox"/> Painted <input type="checkbox"/> Bare Steel <input type="checkbox"/> Machined														
Item Description: Treater Fire Tubes		Condition: <input type="checkbox"/> As Ground <input type="checkbox"/> Shot Blasted <input type="checkbox"/> As Welded														
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<b>EQUIPMENT, TECHNIQUE &amp; CALIBRATION</b>																
Instrument Mfr: GE		Model: 38DLPLUS		S/N: 120389703		Cal. Due: 25-Oct-13										
Cal Block S/N: 379811		1 or 2 Point Cal: <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2		Calibrated Range: 0.100"-1.000"		Couplant: UTX										
	Probe Model	Freq MHz	Angle	Dia. (in)	Probe Type		Manufacturer	Serial #	Cable length	Delay line	Vel. (m/sec)	Transfer Value	Ref dB	Ref %FSH	Scan dB	Range (mm)
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2					<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>						
3					<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>						
4					<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>						
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Client Representative		NS		PRINT		SIGNATURE										
1 <sup>ST</sup> Technician		Nicolas Mora		PRINT		SIGNATURE		CGSB#:		710B-006		CGSB Level:		1L		
2 <sup>ND</sup> Technician		PRINT		SIGNATURE		CGSB#:		CGSB Level:		SNT#:		SNT Level:				

Date:	8/9/13	WO #:	3801	Sketch/Notes: V W AT - 1 HT	
Inspected By:	Dwight Colo	Cert. #:	IPV000692		
Coordinator:	Glehn Morey				
Ops Foreman:	Bryan Gibbs				
Region:	Northern	Area:	Zama		
Facility:	9-28 battery				
Location, LSD:	9-28-117-04wb				
Description:	<input checked="" type="checkbox"/> Vessel <input type="checkbox"/> Exchanger <input type="checkbox"/> Tank <input type="checkbox"/> Heater Service Fluid: <input type="checkbox"/> Sweet <input checked="" type="checkbox"/> Sour Fluid Name: _____ Unit Name / #: _____ Equip #: _____ Equip. Name: Treater Jurisdiction #: A2781543 CRN: K6455.2 Manufacturer: Natco Canada Year Built: 1921 S/N: 1-8-340				
Scope:	A visual internal (VI) inspection was performed on all accessible shell and head surfaces, nozzles, welds, etc.				
Manway:	gasket surfaces: <input checked="" type="checkbox"/> compliant with code manway nozzle: <input checked="" type="checkbox"/> no pitting, erosion, etc.				Comment: _____ Comment: _____
Shell and Head Surfaces:	coated <input checked="" type="checkbox"/> continuous and well-adhered			Comment: NUMEROUS FAULTS	
	uniform corrosion: <input checked="" type="checkbox"/> insignificant amount			Comment: _____	
	pitting corrosion: <input checked="" type="checkbox"/> none noted			Comment: _____	
	erosion: <input checked="" type="checkbox"/> none noted			Comment: _____	
	mechanical damage: <input checked="" type="checkbox"/> none noted			Comment: _____	
Welds:	uniform corrosion: <input type="checkbox"/> insignificant amount			Comment: _____	
	pitting corrosion: <input type="checkbox"/> none noted			Comment: _____	
	welding defects: <input type="checkbox"/> none noted			Comment: _____	
NDT:	<input checked="" type="checkbox"/> NDT was performed by: Team / BAE Type: <input type="checkbox"/> MPI ( <input type="checkbox"/> WF <input type="checkbox"/> B&W <input type="checkbox"/> Dry) <input type="checkbox"/> LPI <input type="checkbox"/> UT <input type="checkbox"/> RT <input type="checkbox"/> Other: _____ Extent: _____ Results: _____				
Nozzles:	obstructions: <input checked="" type="checkbox"/> none noted			Comment: _____	
	corrosion: <input checked="" type="checkbox"/> none noted			Comment: _____	
	erosion: <input checked="" type="checkbox"/> none noted			Comment: _____	
Attachments:	<input checked="" type="checkbox"/> vortex breaker <input checked="" type="checkbox"/> secure <input type="checkbox"/> good condition			Comment: _____	
	<input checked="" type="checkbox"/> impingement plate <input checked="" type="checkbox"/> secure <input type="checkbox"/> good condition			Comment: _____	
	<input type="checkbox"/> internal piping <input type="checkbox"/> secure <input type="checkbox"/> good condition			Comment: _____	
	<input type="checkbox"/> demister <input type="checkbox"/> secure <input type="checkbox"/> good condition			Comment: _____	
	<input type="checkbox"/> heating coil <input type="checkbox"/> secure <input type="checkbox"/> good condition			Comment: _____	
	<input type="checkbox"/> <input type="checkbox"/> secure <input type="checkbox"/> good condition			Comment: _____	
	<input type="checkbox"/> <input type="checkbox"/> secure <input type="checkbox"/> good condition			Comment: _____	
	<input type="checkbox"/> <input type="checkbox"/> secure <input type="checkbox"/> good condition			Comment: _____	
	<input type="checkbox"/> <input type="checkbox"/> secure <input type="checkbox"/> good condition			Comment: _____	
Notes:	NO INTEGRITY CONCERNS LOTS OF COATING FAULTS FURTHER SUPPORT TURNBUCKLES BOND				
Recommended Actions:	1. REPAIR WOODEN AND ROUGHS 2. PLAN FOR RE COAT 3.				

Additional notes are attached: ☐

Item ☒ is suitable for service.  
☐ is NOT

Inspector's  
Signature: \_\_\_\_\_