

STORAGE TANK INSPECTION REPORT

LSD: b-49-C/93-P-2

Date: June 16, 2014

Equipment ID: 66153946

STORAGE TANK STATIC DATA									
Plant: Wolverine De-Hy				Op Unit: FH-NB-01				System:	
Equipment Description: Produced H2O Tank 400bbl								Equip Tag #:	
Manufacturer: Biltoms								Serial #: STTK-DD-T2-15209	
CODE : API 650 API 12F				RT: 1 2 3 4				Vessel Class:	
Diameter: 11'10"		Length: (T/T) mm/in		Height: 20'		Year Built: 2009			
MDMT: °C / °F		PWHT		YES NO		Vertical Horizontal			
Shell Mat'l:		Thickness:		mm / in		Corr Allowance: mm / in			
Roof Mat'l:		Thickness:		mm / in		Corr Allowance: mm / in			
Floor Mat'l:		Thickness:		mm / in		Corr Allowance: mm / in			
Internal Coating: YES NO		Internal Clad: YES NO		Capacity: BBL					
Manway: YES NO		Inspection Port: YES NO		Skid Legs Ground					
Nozzle Rating lb ANSI		Painted: YES NO		Insulated: YES NO					
PROCESS DATA									
Product Description: Produced Water								SOUR	
Operating Pressure: kPa / PSI				Operating Temperature: °C / °F					
PSV / VACUUM BREAKER STATIC DATA									
Serial No.	Location	Size Inlet Outlet		Set Pressure	Capacity SCFM / Lbs/Hr / GPM	Manufacturer	Model / Type	Service Date	

INSPECTION SUMMARY

This tank sits elevated on steel pilings, inside a steel secondary containment. There was a liner present inside the containment and appeared to be in good condition at time of inspection. The external surfaces of this tank are spray foam insulated, and the insulation was in good condition. The underside of the tank is also insulated and was also in good condition. The tank was secured to its foundation and grounded as required. The associated piping is insulation clad and the cladding/seals were in good condition in visible areas. The data plate was legible and intact. There were no visible signs of leaks, deformation or external damage present at time of inspection. The tank was opened and cleaned as part of the 2014 turn around. The internal surfaces of the tank are coated with Devco 253HS. The lower shell surfaces were not cleaned well but there was no apparent damage or visible coating holidays present at time of inspection. The level float was in fair condition, with no guide wires present. An electric heater coil was present and was in good condition. A random UT survey was conducted on the floor surface, with average thickness readings of 0.402", including coating thickness (Shell 0.375" nom., coating 0.030"ave.)

This tank is fit for continued service until the next scheduled inspection interval of 4 years.

RECOMMENDATIONS

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NONCONFORMANCES / INSPECTION DEFICIENCIES

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INSPECTION PLANNING

Inspection Strategy	Availability	Inspection Interval
Inspection Date	Date of Last Inspect	Date of Next Inspect

REPORT CERTIFICATION

The signatures below certify that inspections/tests have been completed in accordance with the identified inspection strategy and that the specified equipment is considered fit for service until the date of next inspection.			
Inspected by	Warren Fast Husky Energy Inc.	Date	June 27, 2014
Reviewed and Approved by		Date	
Criticality Assessment Rerun	2018	Inspection Planning Rerun	
Assessed Next Inspection Date			

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DETAILED INSPECTION VISUAL EXTERNAL

ID	Description	Condition	Location	NCR	Comments
T1	General Other (Please Explain)				
T2	General Corrosion				
T3	General Leaks				
T4	Vibration				
T5	Dissimilar Flange Rating				
T6	Ladder/Stairway				
T7	Platform				
T8	Electrical Ground	GOOD			
T9	Cathodic Protection				
T10	Painted Inactive Corrosion				
T11	Coating/Painting	GOOD			
T12	Level Gauge	GOOD			
T13	Bottom				
T14	Secondary Containment				
T15	Shell				
T16	Roof				
T17	Agitator/Mixer				
T18	Jacket				
T31	Support Other (Please explain)				
T32	Foundation	GOOD			
T33	Anchor Bolts				
T34	Windgirders				
T41	Connections Other (Please explain)				
T42	Small Branches				
T43	Nozzles				
T44	Swing Lines				
T45	Manways/Hatches				
T46	Reinforcing Pads				
T47	Inadequate Thread Engagement				
T48	Bolting	GOOD			
T50	Flanges	GOOD			
T51	Leak Clamps				
T61	Insulation Other (Please explain)				
T62	Damage				
T63	Penetrations				
T64	Insulation Jacket	GOOD			
T65	Banding				
T66	Seals/Joints				
T71	Relief Devices Other (Please explain)				
T72	Relief Devices Corrosion				
T73	Relief Devices Leaks				
T74	Restricted Inlet/Outlet				

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DETAILED INSPECTION VISUAL INTERNAL

ID	Description	Condition	Location	NCR	Comments
V1	General Other (Please Explain)				
V2	Corrosion				
V3	Erosion				
V4	Distortion				
V5	Blisters				
V6	Deposits				
V7	Welds				
V8	Nozzles				
V9	Shell	GOOD			
V10	Roof				
V21	Internals Other (Please explain)				
V22	Annual Ring				
V23	Sump				
V24	Roof Support				
V25	Thermowells				
V26	Metallic Linings				
V27	Nonmetallic Linings	GOOD			
V28	Internal Steam Coil or other piping	GOOD			
V29	Level Gauge	FAIR			
V30	Other Welded Attachments				
T11	Floor	GOOD			

DETAILED INSPECTION OTHER TECHNIQUES

ID	Location	Observation/Measurement	Acceptance Criteria	NCR	Comments
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

DETAILED INSPECTION UT THICKNESS

CML	Nom. Thk	Current Reading	Short Term Corr Rate	Long Term Corr Rate	Remaining Life	Comments

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PHOTOS

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MADE IN CANADA	BILTON		INNISFAIR, ALBERTA
	Welding & Manufacturing Ltd.		
SERIAL NUMBER	STTK-PD-T2-15209 # D1004		
YEAR BUILT	2009		
NOMINAL DIAMETER	11'-10" OD	LENGTH	20'-0"
NOMINAL CAPACITY		BBL	400
WALL THICKNESS	5 1/16" SA-36	HEADS	
WALL THICKNESS	5 1/16" SA-36	FLOOR	3/8" SA-36
WALL THICKNESS		HEADS	
WALL THICKNESS		TEST	X-RAY / DPM
DESIGN PRESSURE	16.0 PSI	TEST	VACUUM / AIRSAP
NOTES	NIPENOE 253 HS ST FRICTION COEFF 0.12		

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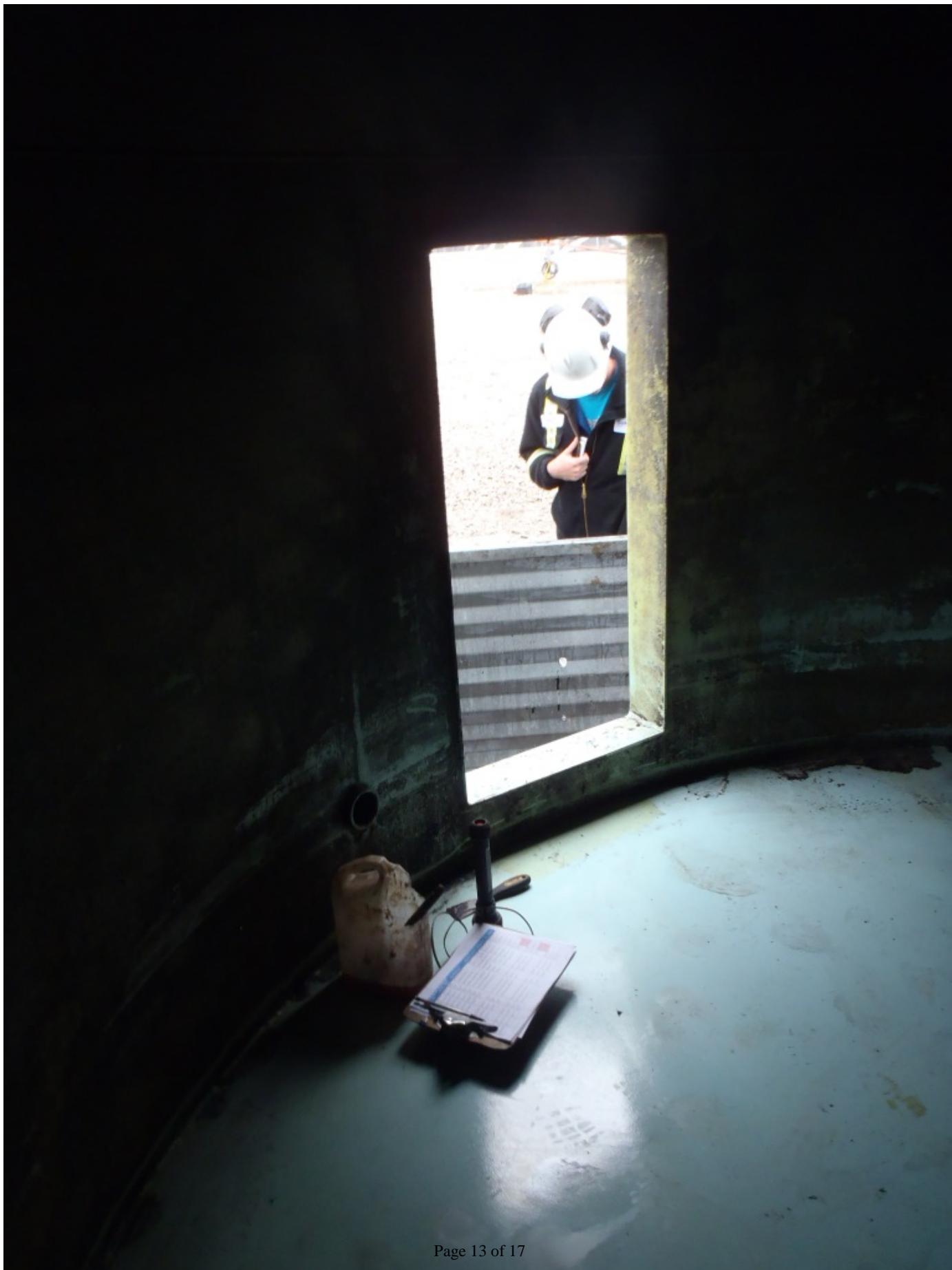


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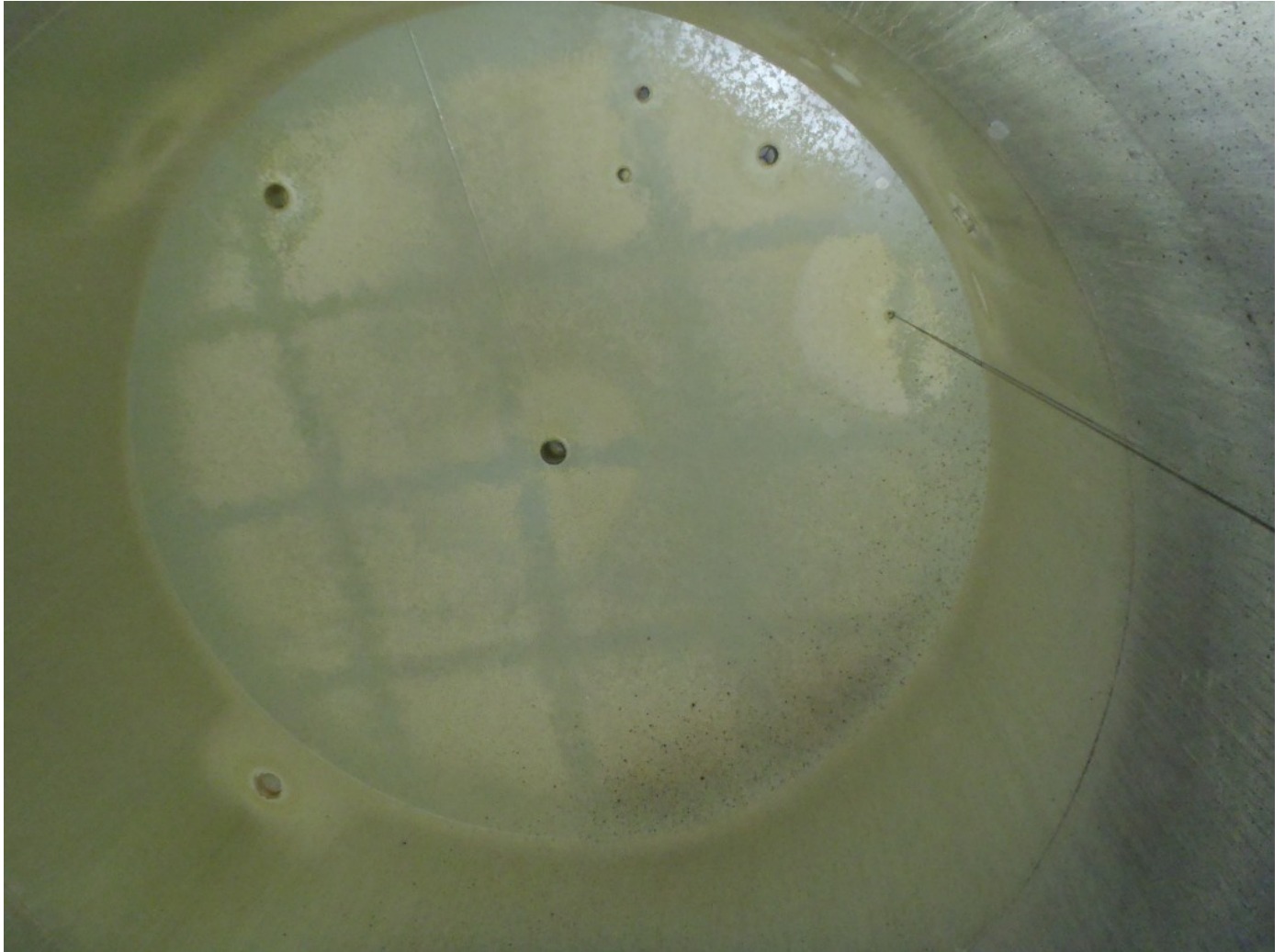


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