



Ultrasonic Inspection Report

Job #:
Report #:
Inspection Date:

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--UT-BV-1

March 18, 2013

Client:	CNRL	Location:	Grand Forks Gas Plant
Procedure:	UT-0001	Item Inspected:	Vessel Flare Knock Out Drum C38332
Code:	ASME Section VIII Div 1		

Surface Condition:	Painted <input checked="" type="checkbox"/>	Sandblasted <input type="checkbox"/>	Machined <input type="checkbox"/>	As Cast <input type="checkbox"/>	As Forged <input type="checkbox"/>
	Weldment <input type="checkbox"/>	Other <input type="checkbox"/>	Material: C.S.		

Scanning Surface:	OD <input checked="" type="checkbox"/>	ID <input type="checkbox"/>	Other: <input type="checkbox"/>	Surface Temp (°C):	> 5° / < 60°
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Method:	Contact <input checked="" type="checkbox"/>	Immersion <input type="checkbox"/>	Other <input type="checkbox"/>		
Type:	P/E <input type="checkbox"/>	T/T <input type="checkbox"/>	Dual <input checked="" type="checkbox"/>	Automated <input type="checkbox"/>	TOFD <input type="checkbox"/>
Application:	Laminar <input checked="" type="checkbox"/>	Shear Wave <input type="checkbox"/>	Volumetric <input type="checkbox"/>	Thickness <input checked="" type="checkbox"/>	

Instrumentation:	Mfg: G.E.	Type: Krautkramer	Equip #: DMS2	Serial #: 020XP6
Calibration:	Date: 01/12/2013		Reference Flaw Size: Backwall	
Calibration Block (s):	Type:	Block#:	Type:	Block#:
	Type: .5" Stepwedge	Block#: 10-2192	Type:	Block#:

Couplant:	Brand: Sono Tech	Type: Echogel	Cable:	Type: Coaxial	Length: 36"
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PROBE						Settings - dB			Range - <input type="checkbox"/> IN. <input type="checkbox"/> MM		
Manufacturer	Type	Serial #	Angle	Frequency	Size	Ref Level	Scan Level	Transfer Value	Screen Size	Skip Value	Beam Travel
G.E.	Dual	0200LL	0	7.5Mhz	0	6db					

Scope and Inspection Results

Carry out UT examination of Flare Knock Out Drum at LSD: 04-01-013-13W4M.
 Check for corrosion of the heads, shell, bridle and associated piping to verify integrity for service and identify any areas of concern.

Results:
 UT examination was carried out; all readings taken were 10" band scans with three readings per TML location/band. Minimum, Maximum and Average readings were taken and recorded in each location.
 All readings were found to be at or above nominal on the heads, shell, bridle and associated piping.
 See attached Pictures, drawing and UTM Readings for locations and thicknesses recorded.

Recommendation:
 Continue to carry out UT corrosion survey and Visual inspections at the required inspection frequency.

Final Comment:
 Flare Knock Out Drum is fit for continued service.

Inspection Limitation(s): None

Time and Billing Information:

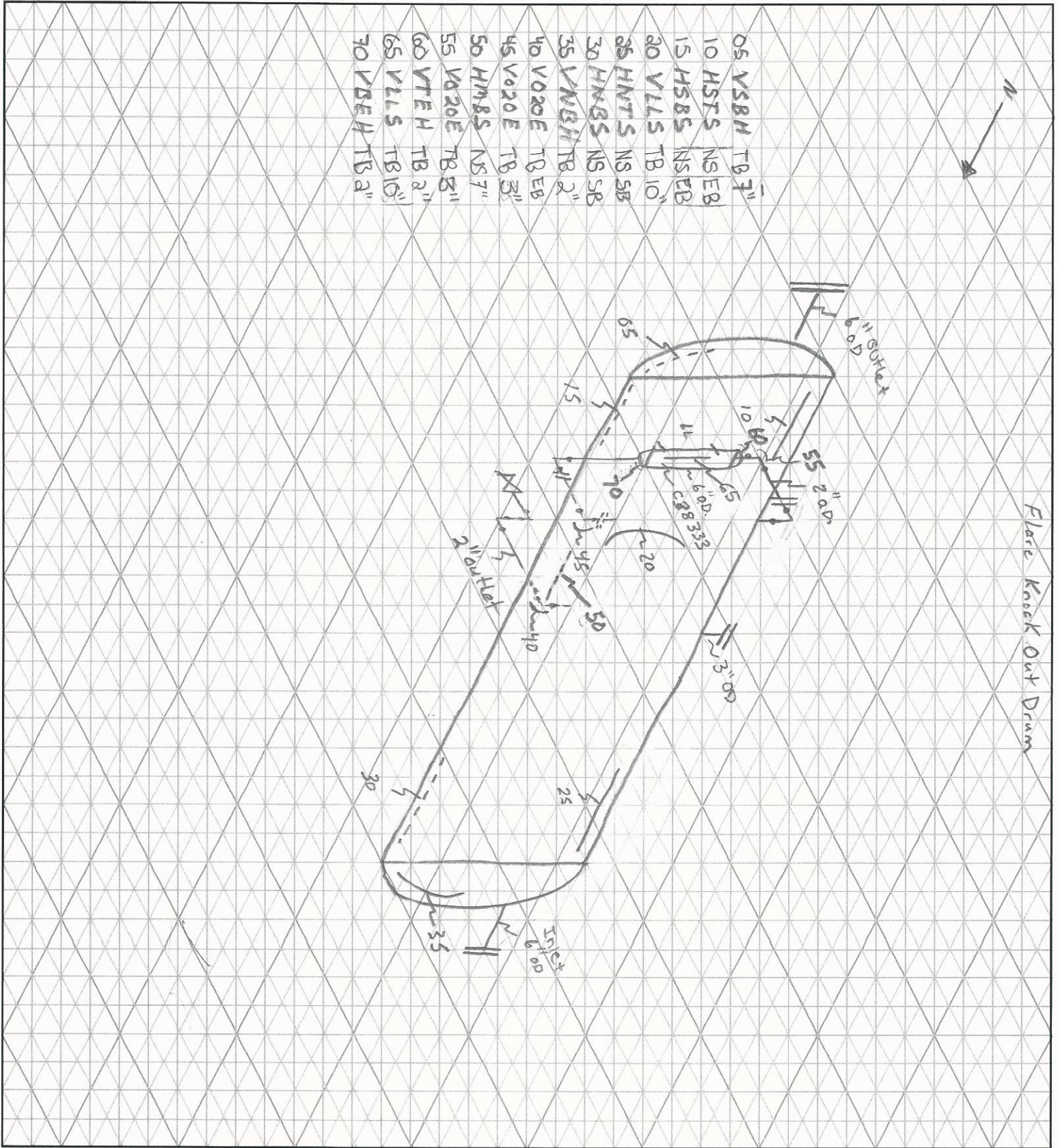
Vehicle #:	001	Kms:		Hrs		Tech. (Name):	Blair Verge	SNT-TC-1A:	1
Time In:	00:00	Time Out:	00:00			Tech. (Sign):		CGSB Level:	I
Time In:	00:00	Time Out:	00:00			Client (Name):		CGSB #:	5586
Personnel:	Eve Gelinas Blair Verge				Client (Sign):				

Additional Billing Information: : -



CORROSION INSPECTION SERVICES

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CUSTOMER: CNRL **FACILITY:** Grand Forks Gas Plant **LSID:** 04-01-013-13-w4m
P & ID: _____ **DRAWN BY:** B. Verge **DATE:** Mar 18/13 **DRAWING NO.:** _____

VESSEL INFORMATION:
 Equip. No. _____ Pro. Reg. No. (A) C38332 C.R.N. _____ Serial No. 80243 Yr. Inst. _____
 Code/Div. _____ Size: 5' ID / 10' O.D. Manufacturer: TORNADO Technologies inc Yr. Blt. 2006
 C. Stamp: NO Service: out of service PWHT: _____ J.E.: _____ Radiography: _____ Insulated: NO

HEAD: **SHELL:**
 Top Mat'l. _____ Top Nom: _____ Top C.A. _____ Material: _____ Nominal: _____ C.A. _____
 Btm Mat'l. _____ Btm Norm: _____ Btm C.A. _____

BOOT: **CHANNEL:**
 Head Mat'l: _____ Head Nom. _____ Head C.A. _____ Top Mat'l. _____ Top Nom. _____ Top C.A. _____
 Shell Mat'l: _____ Shell Nom. _____ Shell C.A. _____ Btm Mat'l. _____ Btm Nom. _____ Btm C.A. _____
 MAWP Shell Side: _____ @ Temp. _____ MAWP Tube Side: _____ @ Temp. _____

PIPING INFORMATION:
 Circuit No. _____ Line No. (s) **(PLEASE PUT LINE NUMBERS ON APPLICABLE LINES ON THE DRAWING)**
 Piping Class: _____ Service: _____ Yr. Blt. _____
 MAWP: _____ @ Temp. _____ Size & Schedule of Piping **(PLEASE PUT APPROPRIATE SIZES AND SCHEDULES OF PIPING ON DRAWING)**

UT Readings for C38332 Flare Knock Out Drum

	<u>Minimum</u>	<u>Maximum</u>	<u>Average</u>
LOC 5	0.386	0.392	0.388
LOC 10	0.381	0.384	0.383
LOC 15	0.382	0.383	0.383
LOC 20	0.39	0.391	0.391
LOC 25	0.379	0.381	0.38
LOC 30	0.378	0.383	0.381
LOC 35	0.376	0.38	0.378
LOC 40	0.21	0.231	0.228
LOC 45	0.207	0.235	0.219
LOC 50	0.389	0.391	0.389
LOC 55	0.205	0.221	0.212
LOC 60	0.273	0.327	0.282
LOC 65	0.289	0.294	0.289
LOC 70	0.277	0.32	0.283