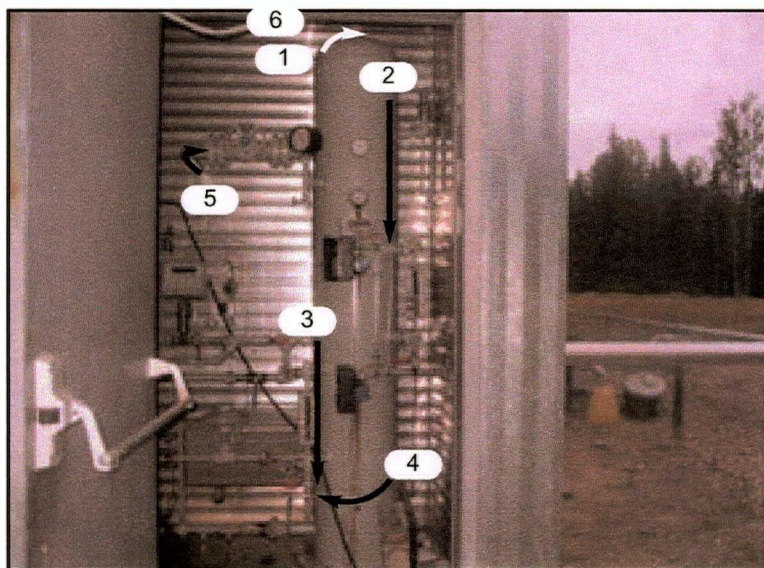


VESSEL UT LOCATIONS

Name: Vertical Separator
A: 0468818
S/N: 124-06-00
CRN: K2542.2
LSD: 12-34-51-19 W5M
Location: Ansel Field
Corr. Allow.: Nil
Size: 16"ID

MAWP: 1440psi
Des. Temp.: 100°F
Head Material: SA-516-70
Head Thick: 0.750"
Shell Material: SA-106-B
Shell Thick: 0.843"
Date Built: 2001
Manufacturer: Mar-Quinn Industries Ltd.

Note: Location 6 - 2" elbow above top head.
No access to bottom head.

Report For: Husky Energy
 Presented By: Alliance Engineering & Inspection Ltd.
 Address: 333-50 Avenue SE, Calgary, AB T2G 2B3
 Telephone: (403) 255-5100 Fax: (403) 255-5171 Web www.aeiltld.com

Report Date:11/11/2003

(Report in Inches, Corrosion Rates in MPY)
 Analysis: Statistical/Straight Line

Unit: HUSKY
 Eq/Circ ID: 0468818
 Eq Type:
 Class:
 RBI:
 Design Code: S8/D1

Flange Rating: 0 lb/in²
 Design Pressure: 1440 lb/in²
 Design Temperature: 100 °F

Description: VERTICAL SEPARATOR
 TAG # N/A

Summary: Group Name:
 Insp. Due Date = 09/08/2008
 Pred. Ret. Date = 03/29/2026

Group Description:
 RCR = 0.1 MPY
 Rem. Life (from last survey 09/09/2003) = 22.6 yrs

0 C.A. Status: No
 Total Caution TMLs = 0

TML No	Location Description	Ctn TML	First Survey Thick Nt	First Date	Previous Survey Thick Nt	Previous Date	Last Survey Thick Nt	Last Date	Shrt Term Rate	Long Term Rate	Best Rate	Max Hist CR	Retirement Thickness	Rep TML CR	TML Retirement Date	TML Inspection Date
1.01	TOP HEAD	N	0.750 NM	01/12/2001		N/A	0.866	09/09/2003	N/A	0	N/A	0	0.740 U	2.0	09/09/2066	09/08/2008
1.02	TOP HEAD	N	0.750 NM	01/12/2001		N/A	0.871	09/09/2003	N/A	0	N/A	0	0.740 U	2.0	03/10/2069	09/08/2008
1.03	TOP HEAD	N	0.750 NM	01/12/2001		N/A	0.869	09/09/2003	N/A	0	N/A	0	0.740 U	2.0	03/10/2068	09/08/2008
1.04	TOP HEAD	N	0.750 NM	01/12/2001		N/A	0.852	09/09/2003	N/A	0	N/A	0	0.740 U	2.0	09/09/2059	09/08/2008
1.05	TOP HEAD	N	0.750 NM	01/12/2001		N/A	0.868	09/09/2003	N/A	0	N/A	0	0.740 U	2.0	09/09/2067	09/08/2008
2.01	SHELL	N	0.843 NM	01/12/2001		N/A	0.915	09/09/2003	N/A	0	N/A	0	0.738 U	2.0	03/10/2092	09/08/2008
2.02	SHELL	N	0.843 NM	01/12/2001		N/A	0.918	09/09/2003	N/A	0	N/A	0	0.738 U	2.0	09/09/2093	09/08/2008
2.03	SHELL	N	0.843 NM	01/12/2001		N/A	0.919	09/09/2003	N/A	0	N/A	0	0.738 U	2.0	03/10/2094	09/08/2008
2.04	SHELL	N	0.843 NM	01/12/2001		N/A	0.908	09/09/2003	N/A	0	N/A	0	0.738 U	2.0	09/08/2088	09/08/2008
2.05	SHELL	N	0.843 NM	01/12/2001		N/A	0.909	09/09/2003	N/A	0	N/A	0	0.738 U	2.0	03/10/2089	09/08/2008
2.06	SHELL	N	0.843 NM	01/12/2001		N/A	0.905	09/09/2003	N/A	0	N/A	0	0.738 U	2.0	03/10/2087	09/08/2008
2.07	SHELL	N	0.843 NM	01/12/2001		N/A	0.896	09/09/2003	N/A	0	N/A	0	0.738 U	2.0	09/09/2082	09/08/2008
2.08	SHELL	N	0.843 NM	01/12/2001		N/A	0.893	09/09/2003	N/A	0	N/A	0	0.738 U	2.0	03/10/2081	09/08/2008
2.09	SHELL	N	0.843 NM	01/12/2001		N/A	0.898	09/09/2003	N/A	0	N/A	0	0.738 U	2.0	09/09/2083	09/08/2008
2.10	SHELL	N	0.843 NM	01/12/2001		N/A	0.892	09/09/2003	N/A	0	N/A	0	0.738 U	2.0	09/08/2080	09/08/2008
2.11	SHELL	N	0.843 NM	01/12/2001		N/A	0.894	09/09/2003	N/A	0	N/A	0	0.738 U	2.0	09/09/2081	09/08/2008
2.12	SHELL	N	0.843 NM	01/12/2001		N/A	0.896	09/09/2003	N/A	0	N/A	0	0.738 U	2.0	09/09/2082	09/08/2008
3.01	SHELL	N	0.843 NM	01/12/2001		N/A	0.847	09/09/2003	N/A	0	N/A	0	0.738 U	2.0	03/10/2058	09/08/2008
3.02	SHELL	N *	0.843 NM	01/12/2001		N/A	0.830	09/09/2003	N/A	4.9	N/A	4.9	0.738 U	4.9	06/19/2022	09/08/2008
3.03	SHELL	N *	0.843 NM	01/12/2001		N/A	0.832	09/09/2003	N/A	4.1	N/A	4.1	0.738 U	4.1	08/13/2026	09/08/2008

Corrosion Monitoring E rc ID Analysis Report

Report For: Husky Energy
 Presented By: Alliance Engineering & Inspection Ltd.
 Address: 333-50 Avenue SE, Calgary, AB T2G 2B3
 Telephone: (403) 255-5100 Fax: (403) 255-5171 Web www.aeiltd.com

Report Date: 11/11/2003

(Report in Inches, Corrosion Rates in MPY)
 Analysis: Statistical/Straight Line

Unit: HUSKY
 Eq/Circ ID: 0468818
 Eq Type:
 Class:
 RBI:
 Design Code: S8/D1

Flange Rating: 0 lb/in²
 Design Pressure: 1440 lb/in²
 Design Temperature: 100 °F

Description: VERTICAL SEPARATOR
 TAG # N/A

Summary: Group Name:

Insp. Due Date = 09/08/2008

Pred. Ret. Date = 03/29/2026

Group Description:

RCR = 0.1 MPY

Rem. Life (from last survey 09/09/2003) = 22.6 yrs

0 C.A. Status: No

Total Caution TMLs = 0

TML No	Location Description	Ctn TML	First Survey Thick Nt	First Date	Previous Survey Thick Nt	Previous Date	Last Survey Thick Nt	Last Date	Shrt Term Rate	Long Term Rate	Best Rate	Max Hist CR	Retirement Thickness	Rep TML CR	TML Retirement Date	TML Inspection Date
3.04	SHELL	N *	0.843 NM	01/12/2001		N/A	0.846	09/09/2003	N/A	0	N/A	0	0.738 U	2.0	09/08/2057	09/08/2008
3.05	SHELL	N	0.843 NM	01/12/2001		N/A	0.848	09/09/2003	N/A	0	N/A	0	0.738 U	2.0	09/09/2058	09/08/2008
3.06	SHELL	N	0.843 NM	01/12/2001		N/A	0.865	09/09/2003	N/A	0	N/A	0	0.738 U	2.0	03/10/2067	09/08/2008
3.07	SHELL	N	0.843 NM	01/12/2001		N/A	0.873	09/09/2003	N/A	0	N/A	0	0.738 U	2.0	03/10/2071	09/08/2008
3.08	SHELL	N	0.843 NM	01/12/2001		N/A	0.886	09/09/2003	N/A	0	N/A	0	0.738 U	2.0	09/09/2077	09/08/2008
3.09	SHELL	N	0.843 NM	01/12/2001		N/A	0.876	09/09/2003	N/A	0	N/A	0	0.738 U	2.0	09/08/2072	09/08/2008
3.10	SHELL	N	0.843 NM	01/12/2001		N/A	0.902	09/09/2003	N/A	0	N/A	0	0.738 U	2.0	09/09/2085	09/08/2008
3.11	SHELL	N	0.843 NM	01/12/2001		N/A	0.884	09/09/2003	N/A	0	N/A	0	0.738 U	2.0	09/08/2076	09/08/2008
3.12	SHELL	N	0.843 NM	01/12/2001		N/A	0.884	09/09/2003	N/A	0	N/A	0	0.738 U	2.0	09/08/2076	09/08/2008
4.01	BOTTOM HEAD	N	0.750 NM	01/12/2001		N/A	0.892	09/09/2003	N/A	0	N/A	0	0.740 U	2.0	09/09/2079	09/08/2008
4.02	BOTTOM HEAD	N	0.750 NM	01/12/2001		N/A	0.892	09/09/2003	N/A	0	N/A	0	0.740 U	2.0	09/09/2079	09/08/2008
4.03	BOTTOM HEAD	N	0.750 NM	01/12/2001		N/A	0.884	09/09/2003	N/A	0	N/A	0	0.740 U	2.0	09/09/2075	09/08/2008
4.04	BOTTOM HEAD	N	0.750 NM	01/12/2001		N/A	0.880	09/09/2003	N/A	0	N/A	0	0.740 U	2.0	09/09/2073	09/08/2008
4.05	BOTTOM HEAD	N	0.750 NM	01/12/2001		N/A	0.877	09/09/2003	N/A	0	N/A	0	0.740 U	2.0	03/10/2072	09/08/2008
4.06	BOTTOM HEAD	N	0.750 NM	01/12/2001		N/A	0.874	09/09/2003	N/A	0	N/A	0	0.740 U	2.0	09/09/2070	09/08/2008
4.07	BOTTOM HEAD	N	0.750 NM	01/12/2001		N/A	0.876	09/09/2003	N/A	0	N/A	0	0.740 U	2.0	09/09/2071	09/08/2008
4.08	BOTTOM HEAD	N	0.750 NM	01/12/2001		N/A	0.872	09/09/2003	N/A	0	N/A	0	0.740 U	2.0	09/09/2069	09/08/2008
4.09	BOTTOM HEAD	N	0.750 NM	01/12/2001		N/A	0.879	09/09/2003	N/A	0	N/A	0	0.740 U	2.0	03/10/2073	09/08/2008
4.10	BOTTOM HEAD	N	0.750 NM	01/12/2001		N/A	0.873	09/09/2003	N/A	0	N/A	0	0.740 U	2.0	03/10/2070	09/08/2008
4.11	BOTTOM HEAD	N	0.750 NM	01/12/2001		N/A	0.884	09/09/2003	N/A	0	N/A	0	0.740 U	2.0	09/09/2075	09/08/2008
4.12	BOTTOM HEAD	N	0.750 NM	01/12/2001		N/A	0.886	09/09/2003	N/A	0	N/A	0	0.740 U	2.0	09/08/2076	09/08/2008

Corrosion Monitoring Equipment ID Analysis Report

Report For: Husky Energy
 Presented By: Alliance Engineering & Inspection Ltd.
 Address: 333-50 Avenue SE, Calgary, AB T2G 2B3
 Telephone: (403) 255-5100 Fax: (403) 255-5171 Web www.aeilt.com

Report Date: 11/11/2003

(Report in Inches, Corrosion Rates in MPY)
 Analysis: Statistical/Straight Line

Unit: HUSKY
 Eq/Circ ID: 0468818
 Eq Type:
 Class:
 RBI:
 Design Code: S8/D1

Flange Rating: 0 lb/in²
 Design Pressure: 1440 lb/in²
 Design Temperature: 100 °F

Description: VERTICAL SEPARATOR
 TAG # N/A

Summary: Group Name:
 Insp. Due Date = 09/08/2008
 Pred. Ret. Date = 03/29/2026

Group Description:
 RCR = 0.1 MPY
 Rem. Life (from last survey 09/09/2003) = 22.6 yrs

0 C.A. Status: No
 Total Caution TMLs = 0

TML No	Location Description	Ctn TML	First Survey Thick Nt	First Date	Previous Survey Thick Nt	Previous Date	Last Survey Thick Nt	Last Date	Shrt Term Rate	Long Term Rate	Best Rate	Max Hist CR	Retirement Thickness	Rep TML CR	TML Retirement Date	TML Inspection Date
5.01	2" ELBOW	N *	0.154 NM	01/12/2001		N/A	0.173	09/09/2003	N/A	0	N/A	0	0.135 U	2.0	09/09/2022	09/08/2008
5.02	2" ELBOW	N *	0.154 NM	01/12/2001		N/A	0.175	09/09/2003	N/A	0	N/A	0	0.135 U	2.0	09/09/2023	09/08/2008
5.03	2" ELBOW	N *	0.154 NM	01/12/2001		N/A	0.171	09/09/2003	N/A	0	N/A	0	0.135 U	2.0	09/09/2021	09/08/2008
5.04	2" ELBOW	N *	0.154 NM	01/12/2001		N/A	0.175	09/09/2003	N/A	0	N/A	0	0.135 U	2.0	09/09/2023	09/08/2008
5.05	2" ELBOW	N *	0.154 NM	01/12/2001		N/A	0.180	09/09/2003	N/A	0	N/A	0	0.135 U	2.0	03/10/2026	09/08/2008
6.01	2" ELBOW	N *	0.154 NM	01/12/2001		N/A	0.170	09/09/2003	N/A	0	N/A	0	0.135 U	2.0	03/10/2021	09/08/2008
6.02	2" ELBOW	N *	0.154 NM	01/12/2001		N/A	0.172	09/09/2003	N/A	0	N/A	0	0.135 U	2.0	03/10/2022	09/08/2008
6.03	2" ELBOW	N *	0.154 NM	01/12/2001		N/A	0.177	09/09/2003	N/A	0	N/A	0	0.135 U	2.0	09/08/2024	09/08/2008
6.04	2" ELBOW	N *	0.154 NM	01/12/2001		N/A	0.173	09/09/2003	N/A	0	N/A	0	0.135 U	2.0	09/09/2022	09/08/2008
6.05	2" ELBOW	N *	0.154 NM	01/12/2001		N/A	0.179	09/09/2003	N/A	0	N/A	0	0.135 U	2.0	09/08/2025	09/08/2008

Report For: Husky Energy
Presented By: Alliance Engineering & Inspection Ltd.
Address: 333-50 Avenue SE, Calgary, AB T2G 2B3
Telephone: (403) 255-5100 Fax: (403) 255-5171 Web www.aeiltld.com

Report Date: 11/11/2003

(Report in Inches, Corrosion Rates in MPY)
Analysis: Statistical/Straight Line

Unit: HUSKY
Eq/Circ ID: 0468818
Design Code: S8/D1
Eq Type:
Class:
RBI:

Flange Rating: 0 lb/in²
Design Pressure: 1440 lb/in²
Design Temperature: 100 °F

Description: VERTICAL SEPARATOR
TAG # N/A

TML Corrosion Rates are each the Maximum of:

(A) -- Calculated Corrosion Rates x 1.00	:	Varies
(B) -- Default Corrosion Rate	:	2.0 MPY

Representative Corrosion Rate is the Maximum of:

(A) -- Average Corrosion Rate x 1.10	:	Not Used.
(B) -- Average Max 25.0% of TMLs, Min of 2	:	Not Used.
(C) -- Formula Corrosion Rate (Sigma = 1.28)	:	Not Used.
(D) -- Default Corrosion Rate	:	0.1 MPY

Representative Corrosion Rate = 0.1 MPY

TML thickness readings have not been compensated for high Temperatures.
TML thickness readings have not been compensated for growths.

TML Life calculations are based on the maximum of the Rep. TML CR and the RCR using Short
Term and Long Term Corrosion Rates.

Nominal thickness is used for TML corrosion rate calculations with less than 3 surveys.

Minimum time between inspections required for corrosion rate calculation is 6 months.

TML Inspection Interval is:

(A) -- Minimum(TML Life / 2.00, 5.0 years)

Eq/Circ ID Last Survey Date is based on the LAST of the last 0% of TML survey dates (Min 1).

Eq/Circ ID Estimated life = 22.6 years from the most recent survey date.
(Estimated Life based on the ave of the earliest 25% (Min 1) TML retirement dates.)

Predicted Eq/Circ ID Retirement date is 03/29/2026

Recommended Eq/Circ Internal Inspection Date is 09/08/2008
Internal Inspection Interval is the minimum(Remaining life / 2.0, 5.0 years).

Caution TML Logic: TML Corrosion Rate > 15.0 MPY .OR. TML Remaining Life < 1.00 Years.
There are 0 Caution TMLs in this Eq/Circ ID.

ALBERTA MUNICIPAL AFFAIRS

Alberta Boilers Safety Association

200, 4208 - 97 Street

Edmonton AB T6E 5Z9

Partial/ Partiel ☐

468818

AD-25 (sdc 1) 99/08

MANUFACTURER'S DATA REPORT

FOR PRESSURE VESSEL

DÉCLARATION DE CONFORMITÉ DU CONSTRUCTEUR

D'APPAREILS SOUS PRESSION

Upon shipment of a pressure vessel, this form fully and correctly filled in must be mailed to the office of the Chief Inspector in the province of installation in accordance with the regulations under the Act, governing the construction and installation of pressure vessels.

Au moment de l'expédition d'un appareil sous pression, ce formulaire complété correctement, doit être envoyé au bureau de l'inspecteur en chef de la province d'installation tel que prévu dans les règlements de la loi sur les appareils sous pression.

Manufactured by Construit par	Name and address of Manufacturer/ Nom et adresse du constructeur Mar-Quinn Industries Ltd. 7115 Sparrow Drive Leduc, Alberta T9E-7L1
Manufactured for Construit pour	Name and address of Purchaser or Consignee/ Nom et adresse du client ou de son représentant Renaissance Energy LTD. 3000, 425 1st S.W. Calgary, AB T2P-3L8
Ultimate owner Utilisateur	Name and address/ Nom et adresse Renaissance Energy LTD. 3000, 425 1st S.W. Calgary, AB T2P-3L8
Location of installation Lieu d'installation	Address/ Adresse Unknown

Pressure vessel/ Appareil

Type/ Genre Vertical Separator	Overall Length/ Longueur totale 1981mm s/s	Serial No./ N° de série 124-06-00	Yr. built/ Année de fabrication 2001
Provincial Registration No. - C.R.N./ N° d'enregistrement provincial - N.E.C. K2542.213	National Board No./ N° National Board N/A		Drawing No./ N° de dessin #117 REV 1

The chemical and physical properties of all parts meet the requirements of material specifications of the A.S.M.E. Code.
Les propriétés chimiques et physiques de toutes les composantes respectent les exigences des spécifications de matériaux de code ASME.

The design, construction and workmanship conform to CSA B51. La conception, la construction et la façon sont conformes à ACNOR B51.	ASME Section VIII	Division I	Addenda/Supplément 1999	Code case No. N° de cas N/A
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Manufacturer's partial data reports properly identified and signed by authorized inspectors have been furnished for the following items of the report, and attached to this report:
Les rapports partiels du constructeur adéquatement identifiés et signés par les inspecteurs autorisés ont été produits pour les items suivants du rapport, et attachés à ce rapport:

Names of parts/ Nom de la composante	Item No./ N° d'item	Manufacturer's Name/ Nom du constructeur	Identifying Stamp/ Estampe d'identification
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Shell/ Virole

Description	Material Matériau	Thickness Epaisseur	Corr. Allow. Surépais. de corr.	Diameter Diamètre	Longitudinal Joints Joints longitudinaux			P.V./H.T. Traitement therm.		Girth Joints Joints de conférence		Number of courses Nombre de sections
					Type	R.T. Radiog.	Efficiency Efficacité	Temp.	Time Durée	Type	R.T. Radiog.	
Pipe	SA-106-B	21.4mm	0mm	406mm	sm/s	N/A	1.0	N/A	N/A	#1	*Spot	1

Heads/ Têtes

Description	Material Matériau	Min. Thick. Epais. min.	Corr. Allow. Surépais. de corr.	Crown Radius Rayon couron.	Knuckle Radius Petit rayon	Ellipse Ratio Rapp. ellipse	Conical Apex Angle Angle conique	Hemisp. Radius Ray. Hémisph.	Flat Diameter Diam. plat	Side to pressure Côté sous pression
Top	SA-516-70N	19.05mm	0mm	N/A	N/A	2:1	N/A	N/A	N/A	Concave
Bottom	SA-516-70N	19.05mm	0mm	N/A	N/A	2:1	N/A	N/A	N/A	Concave
Removable bolts used (describe other fastenings) Boulons amovibles utilisés (décrire tout autre attache)					Mat'l Spec./ Spéc. du mat. N/A			Grade N/A		Size/ Dimension N/A

Pressure - Temperature/ Pression - température

Pressure Vessel Part Partie de l'appareil	Constructed for max. allowable working pression Construit pour une pression maximale de marche permise	At max. temp. A une temp. max.	Min. Temp. (when less than -29°C) Temp. min. (inférieure à -29°C)	Test pressure (hydro-pneumatic or combination) Pression d'épreuve (hydro-pneumatique ou combinaison)
Vessel Proper	1440 psig 9928 kPa	100F 38C	-20F -29C	2160 psig 14893 kPa

Tubé Section/ Faisceau tubulaire

④468818

AB-25 (Side 2) 08

Tubesheet/ Plaque tubulaire	Material/ Matériau	Diameter/ Diamètre	Nominal Thickness/ Épaisseur nominale	Corr. Allow. Surépais. corrosion	Attachment/ Mode d'attachement
N/A	N/A	N/A	N/A	N/A	N/A
Tube material/ Matériau des tubes	Diameter/ Diamètre	Nominal Thickness (gauge)/ Épaisseur nominale (calibre)	Number/ Nombre	Type (Straight or U) Type (Droit ou U)	Heating Surface/ Surface de chauffe
N/A	N/A	N/A	N/A	N/A	N/A

Jacket/ Chemise

Type of jacket/ Genre de chemise	Jacket closure/ Fermeture de chemise	Proof Test/ Pression d'épreuve	Heating Surface/ Surface de chauffe	Sketch/ Schéma
N/A	N/A	N/A	N/A	N/A

Safety Valve Outlets/ Soupapes de sûreté

Number/ Nombre	Dimension	Location/ Endroit
C8	25.4mm	top of shell

Nozzles and Openings/ Tubulures et ouvertures

Purpose/ But	Number/ Nombre	Dimension	Type	Material/ Matériau	Nominal Thickness/ Épaisseur nominale	Reinforcement material/ Matériau de renfort	How attached/ Genre d'attaches	Location/ Endroit
Gas Inlet	1	50.8mm	600# RFWN	SA-105N / SA-106B	5.5mm	N/A	UW16.1c	Shell
Drain	1	50.8mm	pipe	SA-106-B	5.5mm	N/A	UW16.1c	Bottom head
Water out / Oil out / PSV	3	25.4mm	CPLG	SA-105-N	6000#	N/A	UW16.1a	Shell
Water& OILLC / HLLSD / INSP.	3	50.8mm	CPLG	SA-105-N	3000#	N/A	UW16.1a	Shell
Water LG / Oil LG	4	19.05mm	CPLG	SA-105-N	6000#	N/A	UW16.1a	Shell
Temperature, Pressure	2	19.05mm	CPLG	SA-105N	6000#	N/A	UW 16.1a	Shell
Gas Outlet	1	50.8mm	600#RFWN	SA-105N / SA-106B	5.5mm	N/A	UW16.1c	Top Head

Supports/ Supports

Skirt/ Jupe	Lugs/ Oreilles	Legs/ Pieds	Other/ Autres (Description)	Attached/ Attachées
Yes/ Oui No/ Non ☒ ☐	No./ Nbre N/A	No./ Nbre N/A	N/A	(Where and How/ Méthode et endroit) Welded to bottom Head

Remarks/ Observations (Cubical capacity/ Volume)

Volume: 0.219 cubic meter
Impact test exempt as per UG 20 (f) 1 thru 5
Hydrostatic test on vessel conducted in the vertical position
Construction DWG# 123-95-00-A REV 0

Certificate of Compliance/ Certificat de conformité

We certify that the statements made in this data report are correct and that the said vessel has been constructed in accordance with the Provincial Registered design below and the requirements of standard CSA B51.

Nous certifions que les données de la déclaration de conformité sont correctes et que l'appareil a été construit en accord avec l'enregistrement provincial ci-dessous et les exigences de la norme ACNOR B51.

Provincial Registered Design
Enregistrement provincial K2542.213

Manufacturer
Constructeur Mar-Quinn Industries Ltd.

Signature [Signature] Date Jan 12/01

Certificate of Shop Inspection/ Certificat d'inspection en usine

I, the undersigned, a duly authorized Boiler and Pressure Vessel Inspector
Je, soussigné, inspecteur autorisé de chaudières et appareil sous pression
employed by
employé par Alberta Boilers Safety Association

off de Alberta

have inspected the above vessel and state that to the best of my knowledge and belief, the manufacturer has constructed the vessel in accordance with the Provincial registration CRN K2542.213 and the requirements of standard CSA B51.

ai inspecté l'appareil précité et autant que je sache, crois que le constructeur a construit l'appareil en accord avec l'enregistrement provincial NEC N/A et les exigences de la norme ACNOR B51.

Inspector's Name
Nom de l'inspecteur Metro Denys AB #132

Signature [Signature] Date 2001-01-12

Certificate of Compliance - Field Work/ Certificat de conformité - Installation au chantier

We certify that the field installation of all parts of the vessel conforms with the requirements of Provincial Regulations.

Nous certifions que l'installation au chantier de toutes les composantes de l'appareil est conforme aux règlements provinciaux.

Installer's Name
Nom de l'installateur

Signature _____

Date _____

Certificate of Field Inspection/ Certificat d'inspection - Installation au chantier

I, the undersigned, a duly authorized Boiler and Pressure Vessel Inspector
Je, soussigné, inspecteur autorisé de chaudières et appareil sous pression
employed by _____

have inspected the items not covered by the Shop Inspection Certificate and the installation of the items and state that to the best of my knowledge and belief the construction and assembly of the items are in accordance with the Provincial Regulations.

ai inspecté les composantes non couvertes par le certificat d'inspection en usine et l'installation de l'appareil et, autant que je sache, la construction et l'assemblage de l'appareil sont en accord avec les règlements provinciaux.

Inspector's Name
Nom de l'inspecteur

Signature _____ Date _____

FACILITY	Ansell Field	DATE	May 2, 2008	REPORT #	IR080502JNE
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VESSEL STATIC DATA					
Prov. Insp. #	A 0468818		CRN	K2542.213	
Equipment Location (LSD)	12-34-051-19 W5M			Equip Tag #	002036
Equipment Description	Vertical Separator			Serial #	124-06-00
Manufacturer	Mar-Quinn Industries Ltd.			Vessel Class	-
MAWP	1440 psi	/9928 KPag / psig	@	100°F / 38°C °C / °F	MDMT -20°F / -29°C °C / °F
CODE : UM	☐	U	☐	U2	☐
RT :	1	☐	2	☒	3
4	☐				
Diameter	406mm 16"	Length	(S/S)	1981mm 78"	OAL mm/in
Shell Mat'l	SA106-B	Thickness	0.843" 21.4mm	mm	Corr Allowance 0 mm/in
Head Mat'l	SA516-70	Thickness	0.750" 19.05mm	mm	Corr Allowance 0 mm/in
Nozzle Mat'l		Thickness		mm/in	Corr Allowance mm/in
Internal Coating :	YES ☐	NO ☒	Internal Clad :	YES ☐	NO ☒
Capacity	.219 m ³				
Manway :	YES ☐	NO ☒	Inspection Port :	YES ☐	NO ☒
Skirt	☒	Legs	☐	Saddle	☐
Nozzle Rating	600	lb ANSI	Painted :	YES ☒	NO ☐
Insulated	: YES ☐ NO ☒				

PROCESS DATA		
Product Description	Sweet Gas	
Sweet	☒	Sour ☐ PPM:
Operating Pressure	KPag / psig	Operating Temperature 60°F °C / °F

PSV STATIC DATA							
Tag / Serial No.	Location	Inlet	Outlet	Set Pressure	Capacity SCFM / Lbs/Hr / GPM	Manufacturer	Model / Type
890	Vessel	1"	1"	1440 psi	2927 SCFM	Mercer	9117D5 11714E

INSPECTION HISTORY							
RBI Category	A ☐ B ☐ C ☐ D ☐	Last Inspection Date	W.O. #				
Inspection Task List #		Inspection Type	Inspection Reason	Integrity Inspection 3H			
Inspection Techniques Required		Next Inspection Type	Due Date				
VE	VI	RT	UT	MT	PT	PT	TT
Outstanding Repairs							

INSPECTION SUMMARY

An external inspection was performed to verify the vessels integrity.
No concerns were found and the vessel is considered acceptable for continued service.

RECOMMENDATIONS

-None

REPAIRS COMPLETED

Object Name	Cause	Damage	Repair Activity
None			

VESSEL STATUS

Integrity Status	☒ Suitable for Continued Service	☐ Immediate Repairs Required	☐ Replace
		☐ Future Repairs Required	
Inventory Status	☒ In service Fully Utilized	☐ Idle	☐ Surplus
		☐ Scrap	
This IR completes a thorough inspection. Reschedule as indicated		☒	Partial IR only. Do not reschedule ☐

PRESSURE VESSEL INSPECTION REPORT

PAGE : 2 of 3

FACILITY	Ansell Field	DATE	May 2, 2008	REPORT #	IR080502JNE
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INSPECTION OBSERVATIONS**NONCOMPLIANCES OR INSPECTION DEFICIENCIES ISSUED**

-None at time of inspection.

EXTERNAL VISUAL INSPECTION

The vessel is painted and is in good condition with no notable corrosion being found.
The nameplate, piping, bolting and external attachments are in good condition.
The vessel is protected with a PSV that is attached and in good condition.
The gauges are clear and in good condition.
The vessel appears to be secure and level.
The overall condition of this vessel is good.

Fuel gas scrubber CRN#OH 1531.231 / Ser#125-01-00 is in good condition and is protected by a current PSV.
UT readings show no evidence of corrosion and are within tolerances of the nominal.

EXTERNAL NDE EXAMINATION

-An external ultrasonic corrosion survey was completed. No relevant indications were noted at the time of inspection. For more details see formal UT report by Hunt Inspection - Project C2780

INTERNAL VISUAL INSPECTION

-There was no internal Visual at time of inspection.

INTERNAL NDE EXAMINATION

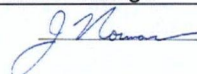
-There was no internal NDE at time of inspection.

PRESSURE TEST

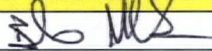
Test Completed	☐ Yes ☐ No	Test Acceptable	☐ Yes ☐ No	Test Report #
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INSPECTOR CERTIFICATION

I, the undersigned certify that the above equipment has been inspected in accordance with the assigned task list and that statements within this report are correct and represent inspection findings

Inspectors Name	Joel Norman	Inspector's Signature	
Inspection Company	Hunt Inspection Ltd.	Date	May 02, 2008

LEAD INSPECTOR'S ACCEPTANCE & SCHEDULE CONFIRMATION

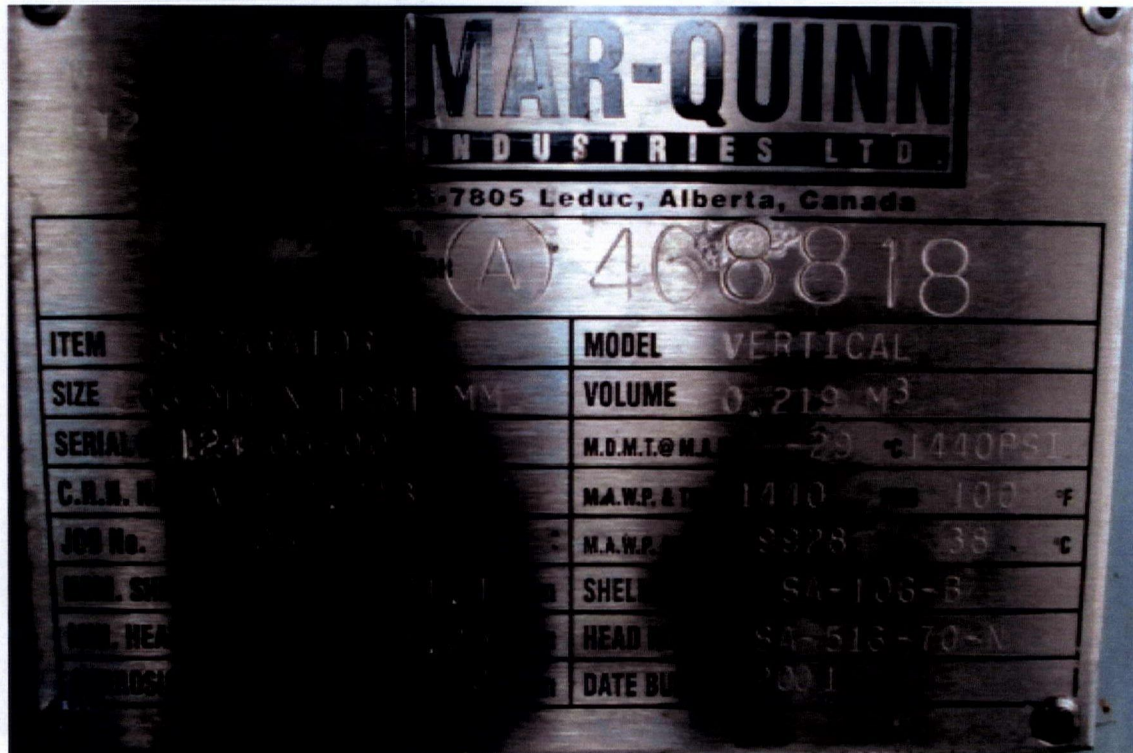
Lead Inspector	Bob Marchak	Signature		Date	10-10-2008
Vessel Inspection Interval	5 Years	Leave "as-is"	☐	Change to	
PSV Inspection Interval	5 Years	Leave "as-is"	☐	Change to	

Office Use Only Report Entered to SEQA Database by
Static Data Verified by

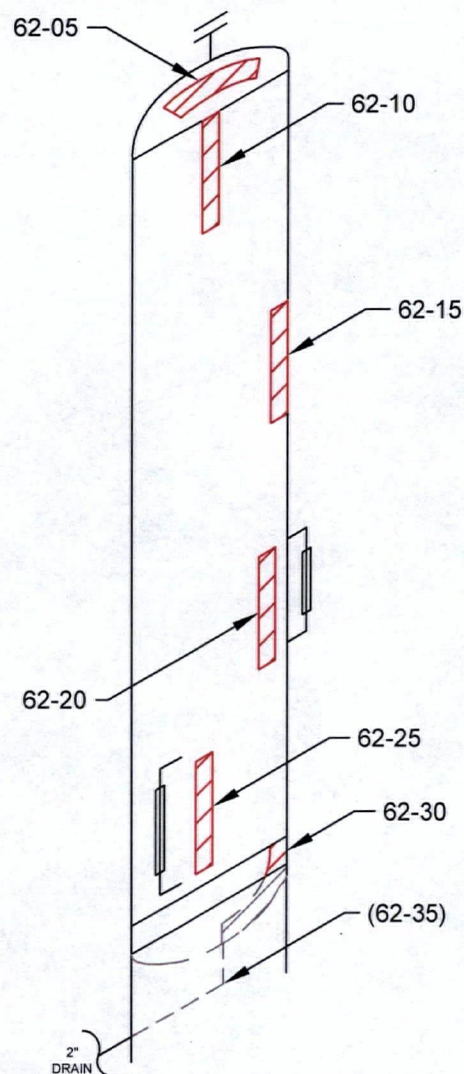
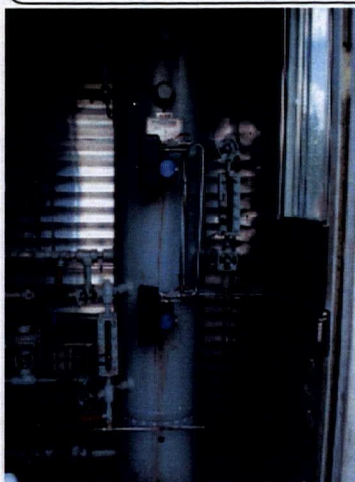
Date
Date

FACILITY	Ansell Field	DATE	May 2, 2008	REPORT #	IR080502JNE
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Data Plate Photo



ITEM:

VERTICAL SEPARATOR**A 0468818**
HUNT
INSPECTION LTD.

STETTLER, AB (403) 742-4868
LACOMBE, AB (403) 782-7855
BROOKS, AB (403) 501-8029
GRANDE PRAIRIE, AB (866) 422-9732

TECHNICIAN:

JOEL NORMAN
SNT LEVEL III
CGSB 48.9712
LEVEL III # 6951
DATE: **05/02/08**DWG # **62**CLIENT: **HUSKY ENERGY**LSD: **12-34-051-19-W5M**

INSPECTOR: BOB MARCHAK

LOCATION: ANSELL FIELD

DISTRICT UNIT: FH-FW

BLDG/SKID:

PROCESS: SWEET

CODE: ASME SEC VIII DIV 1

SPECIFICATION: AS PER ASME SE 797

TECHNIQUE: UT-1-1, REV. 1

METHOD: UT CONTINUOUS / A SCAN

SURFACE COND: PAINTED

SURFACE TEMP: AMBIENT

VESSEL INFORMATIONVESSEL #: **A 0468818**

CRN #: K2542.2

SERIAL #: 12406-00

MANUFACTURER: MAR-QUINN INDUSTRIES

DATE BUILT: 2001

CLIENT ID / TAG: BC 002036

M.A.W.P.: 1440 PSI

M.A.W.T.: 100 °F

JOINT EFFICIENCY/RT: RT 2

STRESS RELIEVED: NO

INSULATED: NO

MANWAY: NO

VESSEL SPECIFICATIONS

	OD	NOMINAL	MATERIAL	CA
VESSEL HEAD	16"	.750"	SA-516-70	0"
VESSEL SHELL	16"	.844"	SA-106-B	0"
BOOT HEAD	-	-	-	-
BOOT SHELL	-	-	-	-

COMMENTS:

PROJECT:

C2780



ULTRASONIC CORROSION SURVEY

Survey Name: HUSKY ENERGY

LSD: 12-34-051-19W5 Dwg: 62

Vessel Number: A0468818

Manufacturer: MAR-QUINN INDUSTRIES

Survey Date: 5/02/08

District Unit: FH-FW

Vessel Name: VERTICAL SEPARATOR

Serial Number: 12406-00

Inspector: BOB MARCHAK

Location: ANSELL FIELD

Year Built: 2001

Shell MAWP PSI: 1440 MAWT F: 100

Process: SWEET

Skid: -

Tag Number: BC002036

Tube MAWP PSI: 0 MAWT F: 0

Project #: C2780

CRN: K2542.2

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								
62-05	Top	Head	Baseline	0.826	0.848	0.855	0.863	0.859	0.849	2008	0.850	0.826	0.7500	0.0000	0.5258	2009	2028
Shape	Ellipsoidal	Shell Side	Previous										Comments-->				
OD	16		Current	0.826	0.848	0.855	0.863	0.859	0.849	2008	0.850	0.826					
Spec.	VIII Div 1												ST Loss MPY				
Material	SA 516 - 70												LT Loss MPY 0.000				
													OK				
62-10	Upper	Shell	Baseline	0.855	0.853	0.856	0.849	0.845	0.844	2008	0.850	0.844	0.8440	0.0000	0.6347	2009	2028
Shape	Cylindrical	Shell Side	Previous										Comments-->				
OD	16		Current	0.855	0.853	0.856	0.849	0.845	0.844	2008	0.850	0.844					
Spec.	VIII Div 1												ST Loss MPY				
Material	SA 106 - B												LT Loss MPY 0.000				
													OK				
62-15	Mid	Shell	Baseline	0.912	0.911	0.898	0.895	0.887	0.884	2008	0.898	0.884	0.8440	0.0000	0.6347	2009	2028
Shape	Cylindrical	Shell Side	Previous										Comments-->				
OD	16		Current	0.912	0.911	0.898	0.895	0.887	0.884	2008	0.898	0.884					
Spec.	VIII Div 1												ST Loss MPY				
Material	SA 106 - B												LT Loss MPY 0.000				
													OK				
62-20	Lower	Shell	Baseline	0.898	0.890	0.880	0.884	0.888	0.886	2008	0.888	0.880	0.8440	0.0000	0.6347	2009	2028
Shape	Cylindrical	Shell Side	Previous										Comments-->				
OD	16		Current	0.898	0.890	0.880	0.884	0.888	0.886	2008	0.888	0.880					
Spec.	VIII Div 1												ST Loss MPY				
Material	SA 106 - B												LT Loss MPY 0.000				
													OK				



ULTRASONIC CORROSION SURVEY

Survey Name: HUSKY ENERGY

LSD: 12-34-051-19W5 Dwg: 62 Vessel Number: A0468818
District Unit: FH-FW Vessel Name: VERTICAL SEPARATOR
Location: ANSELL FIELD Year Built: 2001
Skid: - Tag Number: BC002036
CRN: K2542.2

Survey Date: 5/02/08
Inspector: BOB MARCHAK
Process: SWEET
Project #: C2780
Manufacturer: MAR-QUINN INDUSTRIES
Serial Number: 12406-00
Shell MAWP PSI: 1440 MAWT F: 100
Tube MAWP PSI: 0 MAWT F: 0
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								
62-25	Lower	Shell	Baseline	0.853	0.863	0.858	0.855	0.849	0.849	2008	0.855	0.849	0.8440	0.0000	0.6347	2009	2028
Shape	Cylindrical	Shell Side	Previous										Comments-->				
OD	16		Current	0.853	0.863	0.858	0.855	0.849	0.849	2008	0.855	0.849					
Spec.	VIII Div 1												ST Loss MPY				
Material	SA 106 - B											0.000	OK				
62-30	Bottom	Head	Baseline	0.783	0.815	0.817	0.829	0.818	0.797	2008	0.810	0.783	0.7500	0.0000	0.5258	2009	2028
Shape	Ellipsoidal	Shell Side	Previous										Comments-->				
OD	16		Current	0.783	0.815	0.817	0.829	0.818	0.797	2008	0.810	0.783					
Spec.	VIII Div 1												ST Loss MPY				
Material	SA 516 - 70											0.000	OK				
62-35	Drain	Nozzle	Baseline	0.216	0.203	0.208	0.202	0.202	0.193	2008	0.204	0.193	0.2180	0.0000	0.0860	2009	2028
Shape	90° Elbow	Shell Side	Previous										Comments-->				
OD	2.375		Current	0.216	0.203	0.208	0.202	0.202	0.193	2008	0.204	0.193					
Spec.	VIII Div 1												ST Loss MPY				
Material	SA 234 - WPB											0.000	Caution				
62-40		Piping	Baseline	0.143	0.144	0.145	0.147	0.147	0.147	2008	0.146	0.143	0.1540	0.0192	0.0825	2009	2028
Shape	90° Elbow	Shell Side	Previous										Comments-->				
OD	2.375		Current	0.143	0.144	0.145	0.147	0.147	0.147	2008	0.146	0.143					
Spec.	B31.3												ST Loss MPY				
Material	A 234 - WPB											0.000	OK				



ULTRASONIC CORROSION SURVEY

Survey Name: HUSKY ENERGY

LSD: 12-34-051-19W5 Dwg: 62

District Unit: FH-FW

Location: ANSELL FIELD

Skid: -

Vessel Number: A0468818

Vessel Name: VERTICAL SEPARATOR

Year Built: 2001

Tag Number: BC002036

CRN: K2542.2

Manufacturer: MAR-QUINN INDUSTRIES

Serial Number: 12406-00

Shell MAWP PSI: 1440 MAWT F: 100

Tube MAWP PSI: 0 MAWT F: 0

Vessel CA: 0.0000

Survey Date: 5/02/08

Inspector: BOB MARCHAK

Process: SWEET

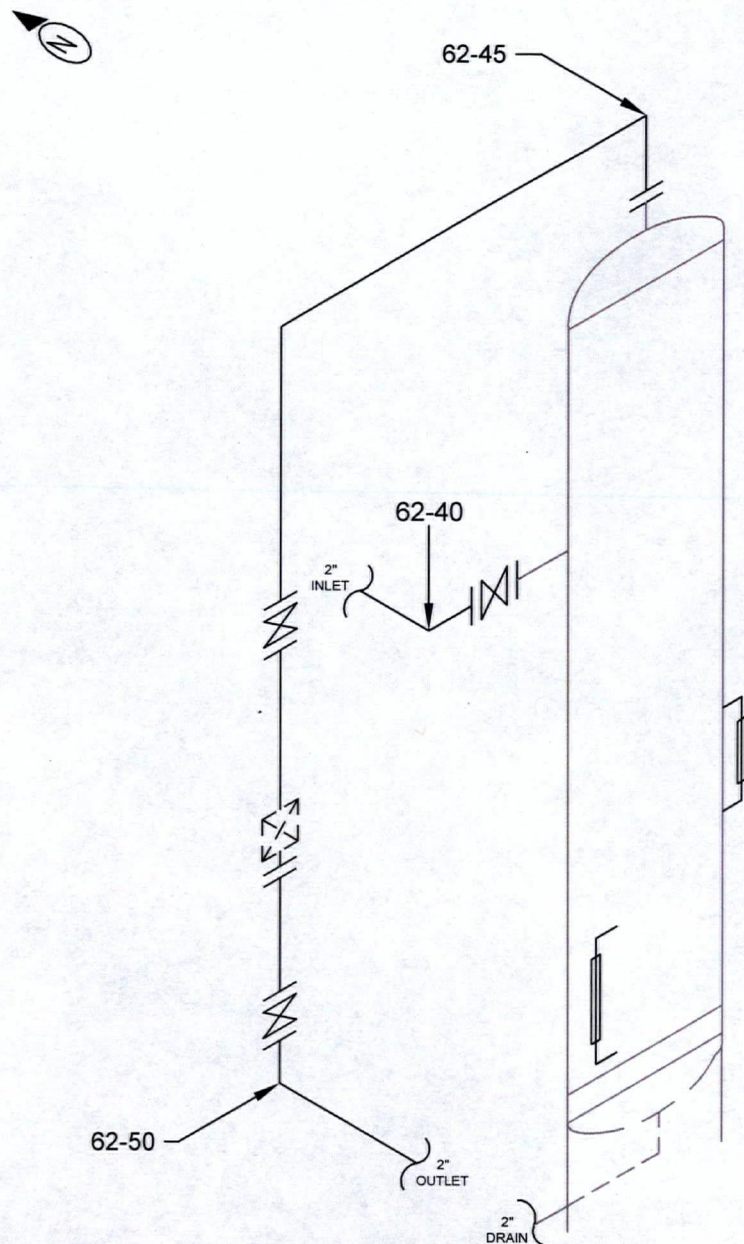
Project #: C2780

Band	Description			Readings						Year	Avg Inches	Min Inches	Nominal	CA	TMIN	Recommended Next Inspection	Recommended Retirement Date
				1	2	3	4	5	6								
62-45		Piping	Baseline	0.166	0.162	0.162	0.161	0.162	0.159	2008	0.162	0.159	0.1540	0.0192	0.0825	2009	2028
Shape	90° Elbow	Shell Side	Previous										Comments-->				
OD	2.375		Current	0.166	0.162	0.162	0.161	0.162	0.159	2008	0.162	0.159					
Spec.	B31.3								ST Loss MPY				OK				
Material	A 234 - WPB								LT Loss MPY		0.000						
62-50		Piping	Baseline	0.166	0.169	0.172	0.164	0.160	0.159	2008	0.165	0.159	0.1540	0.0192	0.0825	2009	2028
Shape	90° Elbow	Shell Side	Previous										Comments-->				
OD	2.375		Current	0.166	0.169	0.172	0.164	0.160	0.159	2008	0.165	0.159					
Spec.	B31.3								ST Loss MPY				OK				
Material	A 234 - WPB								LT Loss MPY		0.000						

ITEM:

VERTICAL SEPARATOR - PIPING

A 0468818



STETTLER, AB (403) 742-4868
LACOMBE, AB (403) 782-7855
BROOKS, AB (403) 501-8029
GRANDE PRAIRIE, AB (866) 422-9732

TECHNICIAN:

JOEL NORMAN
SNT LEVEL III
CGSB 48.9712
LEVEL III # 6951

DATE: 05/02/08

DWG # 62A

CLIENT:**HUSKY ENERGY**

LSD:

12-34-051-19-W5M

INSPECTOR :

BOB MARCHAK

LOCATION :

ANSELL FIELD

DISTRICT UNIT :

FH-FW

BLDG/SKID:

•

PROCESS:

SWEET

CODE:

ASME B31.3

SPECIFICATION:

AS PER ASME SE 797

TECHNIQUE:

UT-1-1, REV. 1

METHOD:

UT CONTINUOUS / A SCAN

SURFACE COND:

PAINTED

SURFACE TEMP:

AMBIENT

PIPING INFORMATION

[illegible]

COMMENTS:

PROJECT:

C2780

Husky Energy

PRESSURE VESSEL INSPECTION REPORT

QPS# 2128

W# 6023051 CT

66048051

PAGE : 1 of 2

FACILITY	Ansell Gas Plant Field	DATE	AUGUST 18, 2003	REPORT #	030818-DD-I
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VESSEL STATIC DATA					
Prov. Insp. #	468818	CRN	K 2542.213	Equip Tag #	
Equipment Location (LSD)	12-34-S1-19W5	Serial #	124-06-00	Vessel Class	
Equipment Description	3 PHASE SEPARATOR	Year Built	2001	MDMT	-20 °C / °F
Manufacturer	MAR-QUINN IND. LTD.	MAWP	1440 KPag / psig @ 100 °C / °F	CODE : UM	☐ U ☐ U2 ☐
RT	1 ☐ 2 ☐ 3 ☐ 4 ☐	PWHT	YES ☐ NO ☐	Diameter	406 Mm/in
Length	(T/T) Mm/in	OAL	1981 Mm/in	Vertical	☒ Horizontal ☐
Shell Mat'l	SA-106B	Thickness	21.4 Mm/in	Corr Allowance	0 Mm/in
Head Mat'l	SA-516-70N	Thickness	19.05 Mm/in	Corr Allowance	0 Mm/in
Nozzle Mat'l		Thickness	Mm/in	Corr Allowance	Mm/in
Internal Coating	YES ☐ NO ☒	Internal Clad	YES ☐ NO ☒	Capacity	m ³
Manway	YES ☐ NO ☒	Inspection Port	YES ☒ NO ☐	Skirt	☒ Legs ☐ Saddle ☐
Nozzle Rating	lb ANSI	Painted	YES ☒ NO ☐	Insulated	YES ☐ NO ☒

PROCESS DATA					
Product Description	SOLUTION GAS	Sweet	☒ Sour ☐ PPM:		
Operating Pressure	330 KPag / psig	Operating Temperature	60 °C / °F		
PSV STATIC DATA					
Tag / Serial No.	Location	Size Inlet Outlet	Set Pressure	Capacity SCFM / Lbs/Hr / GPM	Manufacturer Model / Type Service Date
890	VESSEL	1" 1"	1440	2927	MERCER 2001

INSPECTION HISTORY					
RBI Category	A ☐ B ☐ C ☐ D ☐	Last Inspection Date	W.O. #	6023521	
Inspection Task List #		Inspection Type	VE, UT	Inspection Reason	INTEGRITY
Inspection Techniques Required		Next Inspection Type	VE, UT	Due Date	2008
VE	VI	RT	UT	MT	PT
PT	TT				
Outstanding Repairs					

INSPECTION SUMMARY	
VISUAL AND UT INSPECTION DID NOT REVEAL ANY DEFECTS AT TIME OF INSPECTION.	

RECOMMENDATIONS	
- RE REMOVE BULL PLUG AND CLEAN THREADS. RE-INSTALL PLUG.	

REPAIRS COMPLETED			
Object Name	Cause	Damage	Repair Activity

VESSEL STATUS			
Integrity Status	☒ Suitable for Continued Service	☐ Immediate Repairs Required	☐ Replace
		☐ Future Repairs Required	
Inventory Status	☒ In service Fully Utilized	☐ Idle	☐ Surplus
			☐ Scrap
This IR completes a thorough inspection. Reschedule as indicated		☒	Partial IR only. Do not reschedule ☐

PRESSURE VESSEL INSPECTION REPORT

PAGE : 2 of 2

FACILITY Ansell Gas Plant Field	DATE AUGUST 18, 2003	REPORT # 030818-DD-I
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INSPECTION OBSERVATIONS NONCOMPLIANCES OR INSPECTION DEFICIENCIES ISSUED

--

EXTERNAL VISUAL INSPECTION

- VESSEL IS BOLTED TO THE SKID. - PAINTED SURFACES ARE ACCEPTABLE. - PIPING IS SECURE AND IS PROPERLY SUPPORTED. - MINOR LEAKAGE ON 2" BULL PLUG ABOVE NAME PLATE. - SIGHT GLASSES ARE IN GOOD WORKING CONDITION.

EXTERNAL NDE EXAMINATION

UT CARRIED OUT BY ALLIANCE ENGINEERING. NO SIGNIFICANT FINDINGS.
--

INTERNAL VISUAL INSPECTION

--

INTERNAL NDE EXAMINATION

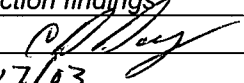
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PRESSURE TEST

Test Completed ☐ Yes ☐ No	Test Acceptable ☐ Yes ☐ No	Test Report #
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INSPECTOR CERTIFICATION

I, the undersigned certify that the above equipment has been inspected in accordance with the assigned task list and that statements within this report are correct and represent inspection findings.

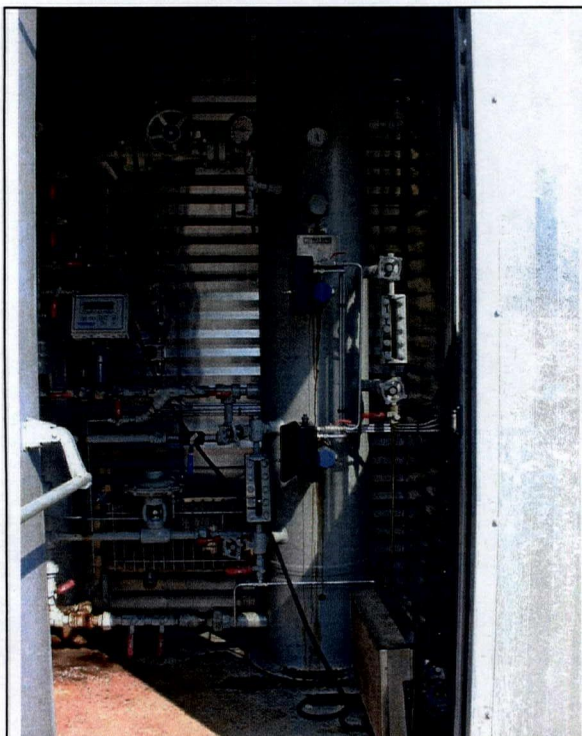
Inspectors Name DOUG DAVEY	Inspector's Signature 
Inspection Company ALLIANCE ENG. + INSP.	Date NOV 7/03

LEAD INSPECTOR'S ACCEPTANCE & SCHEDULE CONFIRMATION

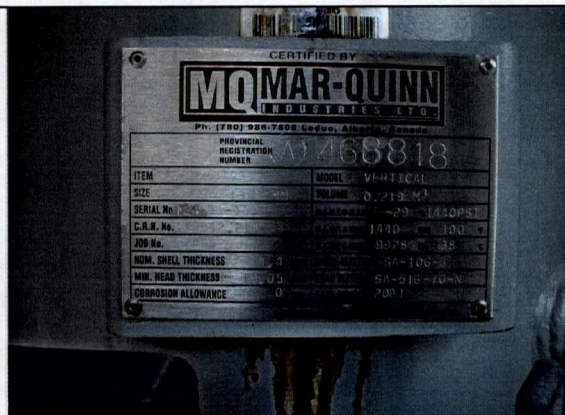
Lead Inspector	Signature	Date
Vessel Inspection Interval 5	Leave "as-is" ☐	Change to
PSV Inspection Interval 5	Leave "as-is" ☐	Change to

Office Use Only Report Entered to SEQA Database by
Static Data Verified by

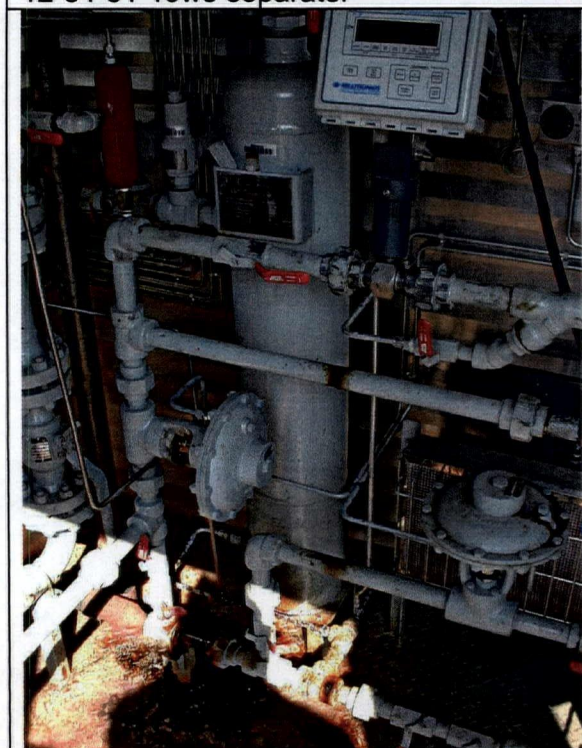
Date
Date



12-34-51-19w5 separator



Separator name plate



12-34-51-19w5 fuel gas scrubber



Fuel gas scrubber name plate

Certificate of Inspection

HUSKY ENERGY INC
425-1 STREET SW STE 3000
CALGARY, AB
T2P 3L8

PREFERRED RE-INSP. INTERVAL: Yr

YEAR BUILT: 2001
CRN: K2542.2
SERIAL #: 124-06-00

LOCATION: CALGARY (UNKNOWN STOCK)
DESCRIPTION: VERTICAL SEPARATOR
COMPANY CODE:
MANUFACTURER: MAR-QUINN INDUSTRIES LTD.

VOLUME: 0.219 M3
HEATING SURFACE:
SURFACE AREA:
Safety Valves

PART	MAX. AUTHORIZED WORKING PRESSURE	MAX. TEMP	MIN. TEMP	VALVE ID	SETTING	CAPACITY	LOCATION
VESSEL	9928 KPA	38 C	-29 C	SV1			TO BE INSTALLED

OWNER INSTRUCTIONS/REMARKS:

NOT SUBJECT TO ANNUAL FEES AS PER REGULATIONS PART 4 SECTION 28 (i)
VESSELS HAVING A CAPACITY OF 0.5 M3 OR LESS THAT ARE LOCATED IN WELL HEAD PLANTS OR BATTERIES;

OWNER TO VERIFY INTEGRITY OF VESSEL BY PERIODIC INSPECTION PROGRAM.

VERIFY THAT VESSEL/BOILER IS PROTECTED BY AN ACCEPTABLE ASME CODE PRESSURE RELIEF VALVE, OF ADEQUATE CAPACITY, SET AT NO MORE THAN MAXIMUM PRESSURE AUTHORIZED AND INSTALLED IN ACCORDANCE WITH THE SAFETY CODES ACT & REGULATIONS.

VESSEL/BOILER TO BE INSTALLED IN ACCORDANCE WITH THE SAFETY CODES ACT AND REGULATIONS.

Safety Codes Officer: DENYS, METRO

Signature: 

NOTE: REQUIREMENTS OF THE SAFETY CODES ACT AND THE REGULATIONS ISSUED THEREUNDER:

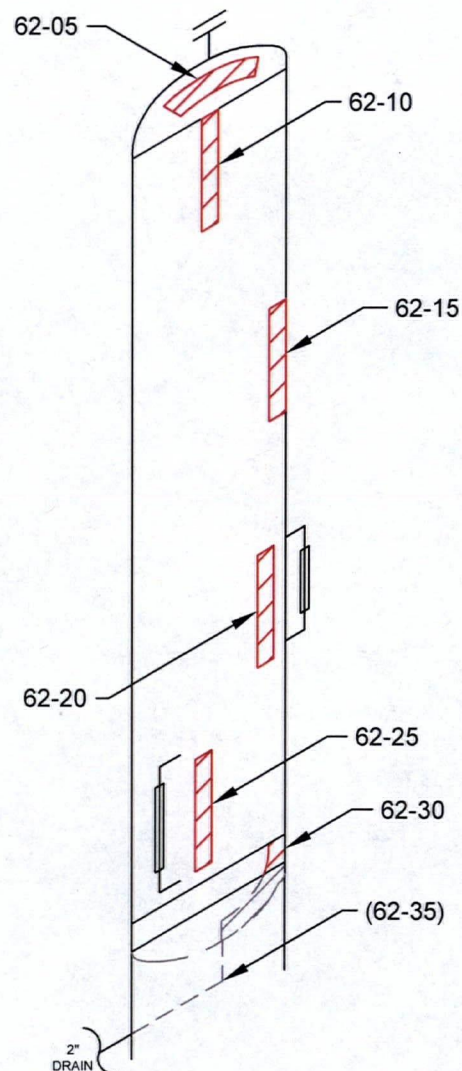
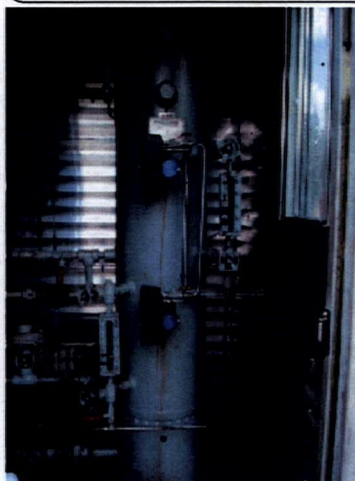
The owner or person in charge shall report all accidents involving a boiler, pressure vessel or pressure piping system to the district Safety Codes Officer immediately and shall send a full report in writing to the Administrator as required by the Act. No repairs or alterations may be made unless authorized by a Safety Codes Officer.

66048051

ITEM:

VERTICAL SEPARATOR

A 0468818



STETTLER, AB (403) 742-4868
 LACOMBE, AB (403) 782-7855
 BROOKS, AB (403) 501-8029
 GRANDE PRAIRIE, AB (866) 422-9732

TECHNICIAN:

JOEL NORMAN
 SNT LEVEL III
 CGSB 48.9712
 LEVEL III # 6951

DATE: **05/02/08**DWG # **62**CLIENT: **HUSKY ENERGY**LSD: **12-34-051-19-W5M**INSPECTOR: **BOB MARCHAK**LOCATION: **ANSELL FIELD**DISTRICT UNIT: **FH-FW**BLDG/SKID: **-**PROCESS: **SWEET**CODE: **ASME SEC VIII DIV 1**SPECIFICATION: **AS PER ASME SE 797**TECHNIQUE: **UT-1-1, REV. 1**METHOD: **UT CONTINUOUS / A SCAN**SURFACE COND: **PAINTED**SURFACE TEMP: **AMBIENT****VESSEL INFORMATION**VESSEL #: **A 0468818**CRN #: **K2542.2**SERIAL #: **12406-00**MANUFACTURER: **MAR-QUINN INDUSTRIES**DATE BUILT: **2001**CLIENT ID / TAG: **BC 002036**M.A.W.P.: **1440 PSI**M.A.W.T.: **100 °F**JOINT EFFICIENCY/RT: **RT 2**STRESS RELIEVED: **NO**INSULATED: **NO**MANWAY: **NO****VESSEL SPECIFICATIONS**

	OD	NOMINAL	MATERIAL	CA
VESSEL HEAD	16"	.750"	SA-516-70	0"
VESSEL SHELL	16"	.844"	SA-106-B	0"
BOOT HEAD	-	-	-	-
BOOT SHELL	-	-	-	-

COMMENTS:

PROJECT:

C2780



ULTRASONIC CORROSION SURVEY

Survey Name: HUSKY ENERGY

LSD: 12-34-051-19W5 Dwg: 62 Vessel Number: A0468818
District Unit: FH-FW Vessel Name: VERTICAL SEPARATOR
Location: ANSELL FIELD Year Built: 2001
Skid: - Tag Number: BC002036
CRN: K2542.2

Manufacturer: MAR-QUINN INDUSTRIES
Serial Number: 12406-00
Shell MAWP PSI: 1440 MAWT F: 100
Tube MAWP PSI: 0 MAWT F: 0
Vessel CA: 0.0000

Survey Date: 5/02/08
Inspector: BOB MARCHAK
Process: SWEET
Project #: C2780

Band	Description			Readings						Year	Avg Inches	Min Inches	Nominal	CA	TMIN	Recommended Next Inspection	Recommended Retirement Date
				1	2	3	4	5	6								
62-05	Top	Head	Baseline	0.826	0.848	0.855	0.863	0.859	0.849	2008	0.850	0.826	0.7500	0.0000	0.5258	2009	2028
Shape	Ellipsoidal	Shell Side	Previous										Comments-->				
OD	16		Current	0.826	0.848	0.855	0.863	0.859	0.849	2008	0.850	0.826					
Spec.	VIII Div 1												ST Loss MPY				
Material	SA 516 - 70												OK				
			LT Loss MPY								0.000						
62-10	Upper	Shell	Baseline	0.855	0.853	0.856	0.849	0.845	844.00	2008	0.850	0.844	0.8440	0.0000	0.6347	2009	2028
Shape	Cylindrical	Shell Side	Previous										Comments-->				
OD	16		Current	0.855	0.853	0.856	0.849	0.845	0.844	2008	0.850	0.844					
Spec.	VIII Div 1												ST Loss MPY				
Material	SA 106 - B												OK				
			LT Loss MPY								0.000						
62-15	Mid	Shell	Baseline	0.912	0.911	0.898	0.895	0.887	0.884	2008	0.898	0.884	0.8440	0.0000	0.6347	2009	2028
Shape	Cylindrical	Shell Side	Previous										Comments-->				
OD	16		Current	0.912	0.911	0.898	0.895	0.887	0.884	2008	0.898	0.884					
Spec.	VIII Div 1												ST Loss MPY				
Material	SA 106 - B												OK				
			LT Loss MPY								0.000						
62-20	Lower	Shell	Baseline	0.898	0.890	0.880	0.884	0.888	0.886	2008	0.888	0.880	0.8440	0.0000	0.6347	2009	2028
Shape	Cylindrical	Shell Side	Previous										Comments-->				
OD	16		Current	0.898	0.890	0.880	0.884	0.888	0.886	2008	0.888	0.880					
Spec.	VIII Div 1												ST Loss MPY				
Material	SA 106 - B												OK				
			LT Loss MPY								0.000						

ULTRASONIC CORROSION SURVEY

Survey Name: HUSKY ENERGY

Survey Date: 5/02/08

LSD: 12-34-051-19W5 Dwq: 62

Vessel Number: A0468818

Manufacturer: MAR-QUINN INDUSTRIES

Inspector: BOB MARCHAK

District Unit: FH-FW

Vessel Name: VERTICAL SEPARATOR

Serial Number: 12406-00

Process: SWEET

Location: ANSELL FIELD

Year Built: 2001

Shell MAWP PSI: 1440 MAWT F: 100

Project #: C2780

Skid: -

Tag Number: BC002036

Tube MAWP PSI: 0 MAWT F: 0

CRN: K2542.2

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								
62-25	Lower	Shell	Baseline	0.853	0.863	0.858	0.855	0.849	0.849	2008	0.855	0.849	0.8440	0.0000	0.6347	2009	2028
Shape	Cylindrical	Shell Side	Previous										Comments-->				
OD	16		Current	0.853	0.863	0.858	0.855	0.849	0.849	2008	0.855	0.849					
Spec.	VIII Div 1									ST Loss MPY			OK				
Material	SA 106 - B									LT Loss MPY		0.000					
62-30	Bottom	Head	Baseline	0.783	0.815	0.817	0.829	0.818	0.797	2008	0.810	0.783	0.7500	0.0000	0.5258	2009	2028
Shape	Ellipsoidal	Shell Side	Previous										Comments-->				
OD	16		Current	0.783	0.815	0.817	0.829	0.818	0.797	2008	0.810	0.783					
Spec.	VIII Div 1									ST Loss MPY			OK				
Material	SA 516 - 70									LT Loss MPY		0.000					
62-35	Drain	Nozzle	Baseline	0.216	0.203	0.208	0.202	0.202	0.193	2008	0.204	0.193	0.2180	0.0000	0.0860	2009	2028
Shape	90° Elbow	Shell Side	Previous										Comments-->				
OD	2.375		Current	0.216	0.203	0.208	0.202	0.202	0.193	2008	0.204	0.193					
Spec.	VIII Div 1									ST Loss MPY			Caution				
Material	SA 234 - WPB									LT Loss MPY		0.000					
62-40		Piping	Baseline	0.143	0.144	0.145	0.147	0.147	0.147	2008	0.146	0.143	0.1540	0.0192	0.0825	2009	2028
Shape	90° Elbow	Shell Side	Previous										Comments-->				
OD	2.375		Current	0.143	0.144	0.145	0.147	0.147	0.147	2008	0.146	0.143					
Spec.	B31.3									ST Loss MPY			OK				
Material	A 234 - WPB									LT Loss MPY		0.000					



ULTRASONIC CORROSION SURVEY

Survey Name: HUSKY ENERGY

LSD: 12-34-051-19W5 Dwg: 62

District Unit: FH-FW

Location: ANSELL FIELD

Skid: -

Vessel Number: A0468818

Vessel Name: VERTICAL SEPARATOR

Year Built: 2001

Tag Number: BC002036

CRN: K2542.2

Manufacturer: MAR-QUINN INDUSTRIES

Serial Number: 12406-00

Shell MAWP PSI: 1440 MAWT F: 100

Tube MAWP PSI: 0 MAWT F: 0

Vessel CA: 0.0000

Survey Date: 5/02/08

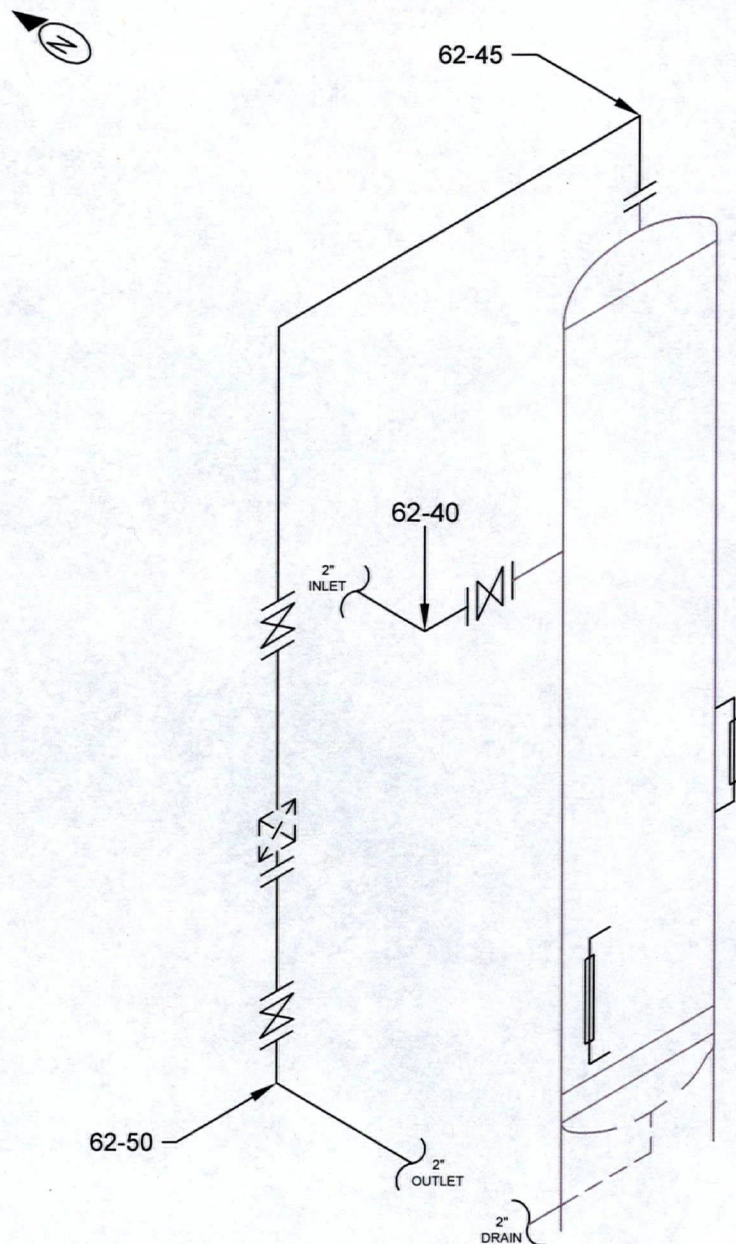
Inspector: BOB MARCHAK

Process: SWEET

Project #: C2780

Band	Description			Readings						Year	Avg Inches	Min Inches	Nominal	CA	TMIN	Recommended Next Inspection	Recommended Retirement Date
				1	2	3	4	5	6								
62-45	Piping	Baseline		0.166	0.162	0.162	0.161	0.162	0.159	2008	0.162	0.159	0.1540	0.0192	0.0825	2009	2028
Shape	90° Elbow	Shell Side	Previous										Comments-->				
OD	2.375		Current	0.166	0.162	0.162	0.161	0.162	0.159	2008	0.162	0.159					
Spec.	B31.3												ST Loss MPY				
Material	A 234 - WPB												LT Loss MPY 0.000				
													OK				
62-50	Piping	Baseline		0.166	0.169	0.172	0.164	0.160	0.159	2008	0.165	0.159	0.1540	0.0192	0.0825	2009	2028
Shape	90° Elbow	Shell Side	Previous										Comments-->				
OD	2.375		Current	0.166	0.169	0.172	0.164	0.160	0.159	2008	0.165	0.159					
Spec.	B31.3												ST Loss MPY				
Material	A 234 - WPB												LT Loss MPY 0.000				
													OK				

A 0468818



TECHNICIAN:

JOEL NORMAN
SNT LEVEL III
CGSB 48.9712
LEVEL III # 6951

DWG # 62A

LSD: 12-34-051-19-W5M

SURFACE TEMP: AMBIENT

PIPING INFORMATION

[illegible]

COMMENTS:

PROJECT:

C2780