

DETAIL VESSEL AND PIPING INSPECTION REPORT

(Imperial)

GENERAL PRESSURE VESSEL INFORMATION

Company:	Pioneer Natural Resources Canada Inc.		LSD:	BC	C-32-H/94-H-8
Area/Facility:	Chinchaga Gas Plant		Inspection Date	06-Feb-02	Interval: 2 yrs
Vessel Name:	LPG Storage Bullet - South		A No:	BC	MTL No: VSL194
Internal Coating Type:			Next External:	2/6/2003	Next Internal: Feb, 2004
Vessel Orientation:	Horizontal		Internal Coating Lining:	0	
Vessel Type:	Horizontal Vessel		Fluid Type:		
Tag No:	V-352		Serial Number:	393508	
Separator Type:			Business Unit:		
Direct Fired Vessel:	N/A	Fired Tube:	Cost Centre:		
Current Status:	In Service		Flame Arrester Date Required:	Date	
Thermal Insulation:	No		Asbestos:	No	

PRESSURE VESSEL NAMEPLATE INFORMATION

MTL Number:	VSL194	Volume:	CRN Number:	Registered:	No
Serial Number:	393508		Size:	109.347 in	O.D. x 65 ft 95 in Overall
Drawing Number:			P & ID Number:		
Shell Material:			Bottom	Shell Thickness:	0.673 in
			Top	Shell Thickness:	0.673 in
Head Material:			End	Head Thickness:	0.436 in
			End	Head Thickness:	0.436 in
Tube Material:		Tube Size(OD):	In	TubeThickness:	In
Tubesheet Material:				Tubesheet Thickness:	In
Channel Material:		Channel Type:		Channel Thickness:	In
Design Pressure:	Shell:	250 psi	Operating Pressure:	Shell:	psi
	Tube:	psi		Tube:	psi
Design Temperature:	Shell:	125 F	Operating Temperature:	Shell:	F
	Tube:	F		Tube:	F
RT (XRay):			Heat Treatment:	No	
Code Parameters:	UW		Joint Efficiency:		
Manufacturer:	Trinity		Year Built:	1973	
Corrosion Allowance:	0.063		Manway:	No	

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VESSEL SHELL / HEADS / PIPING**External / Instrumentation Condition**

The vessel was snow covered during this inspection but the paint appeared to be in good condition. The ladder and catwalk are securely bolted. There was no evidence of process leaks. The instrument level gauge appears to be in good working condition. The east end hold down straps are also noted in good condition but the north jam nut is short.

Internal Condition

No internal access

Nozzle Condition

The nozzles are painted and appear to be in good condition. The bolted connection, gaskets and NPT connections also appear to be in good condition.

Flange Condition

The flanges are bolted properly and there was no visible evidence of leakage.

Internal Piping

Not Applicable

External Piping

The external piping appeared to be in good condition with adequate supports. The associated bolting and gaskets appear to be leak free. There was no evidence of mechanical overloading or excessive strain.

Pipe Support Condition

All of the supports are in place, secure and functioning properly.

Bolting Condition

All associated flange and bolting were intact and showed no evidence of deterioration, visible cracking or process leaks.

Firetube Condition

Not Applicable

Demister Pad Condition

Not Applicable

Anode Condition

Not Applicable

Vessel Support

The pile/structural support, fixed and sliding saddles were noted in good condition.

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VESSEL COATING INSPECTION*Type of Coating**Coating Manufactuer and Type**Location**Coating Condition***VESSEL NONDESTRUCTIVE TESTING**

NDE Type	UT Survey		
<i>Location of Test</i>			
Contractors Name	Rivest	<i>Qualifications</i>	
Last UT Survey Date	Feb 3, 2002	Interval	2 yrs
<i>Survey By</i> MTL Testing Inc.			
<i>Test Results</i>			

VESSEL STATUS

Suitable for Further Service?	No	Repairs Required?	No
<i>Owners Representative</i>		<i>Repairs Completed?</i>	
<i>Owners Date</i>		<i>Repairs Completed By</i>	
		<i>Repair Date</i>	

Recommendations	Next external inspection in 3 years Next PSV servicing in 3 years Next UT Survey in 3 years
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Details of Repairs	
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DETAILED VESSEL AND PIPING INSPECTION REPORT

(Imperial)

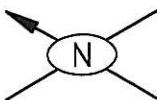
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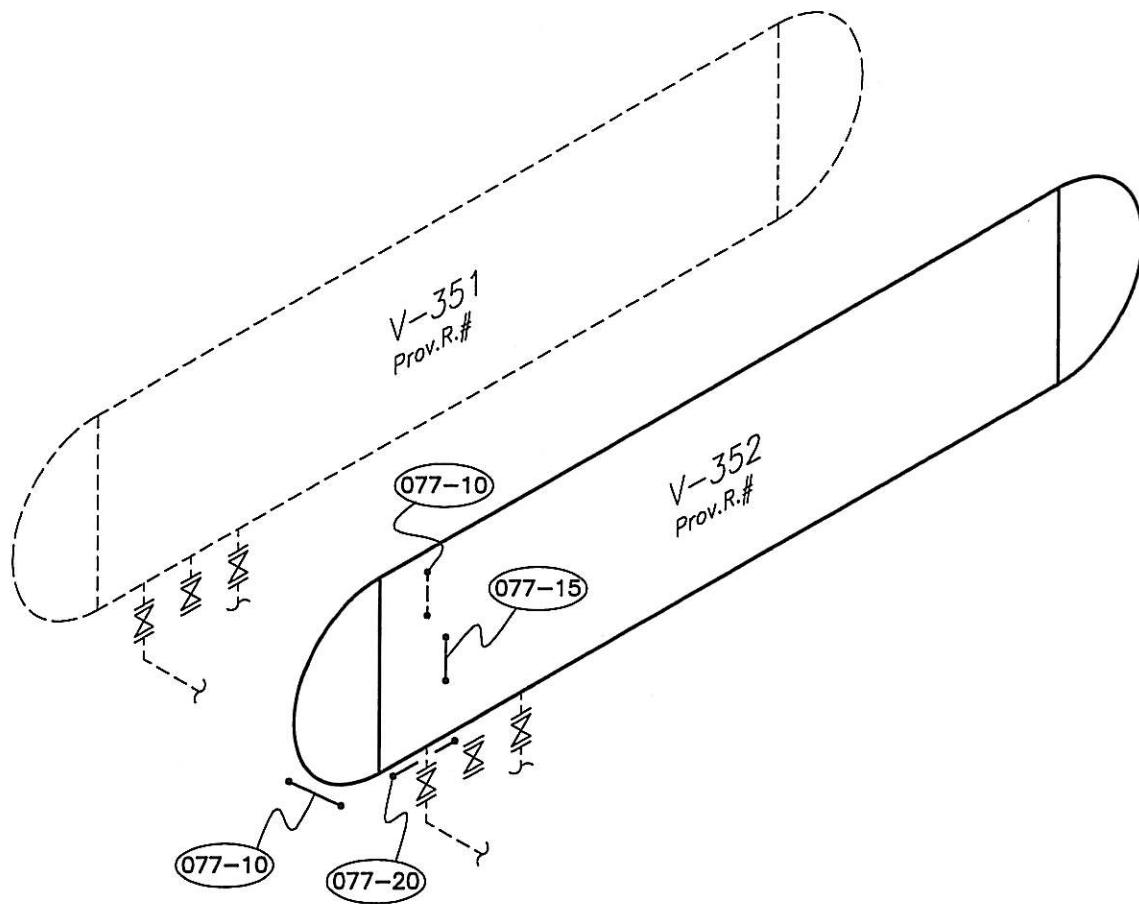
PSV DATA							
Side	Set Pressure psi	CRN Number	Manufacturer PSV Number	Model Serial Number	Capacity	Size Inches	Set Date
	250		Rego PNR193	3-73 991571		4 x 2.5	

CURRENT VESSEL PROCESS CONDITIONS

Name (Printed)	Signature	Date
Visual Inspector Paul Gorman	API510 	February 06, 2002
QA Supervisor: (Chief Inspector)		
QA Administrator:		
ABSA Inspector:		



P&ID. # _____
REF. # _____



VESSEL DATA

P.E. No. V-352 Serial No. 393508 Prov. Reg. No. _____ C.R.N. _____
Mfr. TRINITY Code/Div. _____ Para _____ Code Stamp _____ U
Yr. Blt. 1973 Yr. Inst. _____ Size 109.347" x 791. Service LPG PWHT _____

RT _____ Insulated _____ NO

Repairs _____

Reason _____

Reason _____

Nominal Thickness & Material

Head: .436" (11.1mm) Mat'l: _____ C.A.: 1.6mm

Head: _____

Shell: .6733" (17.1mm) _____

Shell: _____

Chan Hd: _____

Chan Sh: _____

Boot Hd: _____

Boot Sh: _____

MAWP Shell Side 250PSI @ Temp. 125°F

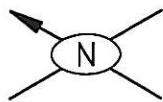
MAWP Tube Side _____ @ Temp. _____

COMMENTS: _____

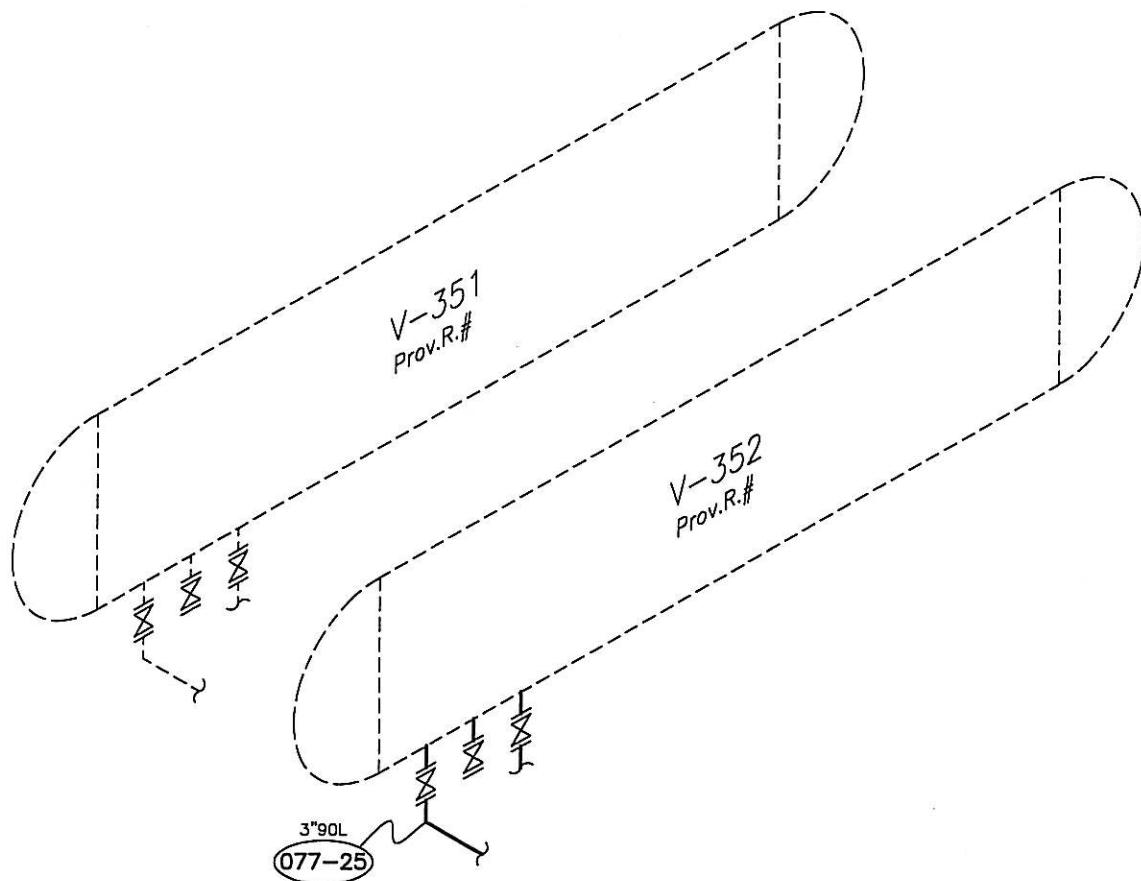
PIONEER NATURAL RESOURCES CANADA INC.
CHINCHAGA GAS PLANT
LSD C-32-H / 94-H-8

LPG STORAGE TANK

TECH.: J.O.	REV.DATE:	DWG DATE: 99/08
CAD: WO	REVISION:	DRAWING: 077



P&ID # _____
REF. # _____



PIPING DATA

THICKNESS MEASUREMENT LOCATION:	SIZE	PROC.	LINE #	SPEC.	SCH.	NOM.THK.	API * CORR. ALLW.	** CALCULATED CORR.ALLW.	MIN.THK.	CAL.THK.	FLG. RATING
077-25	3"				40	5.5mm	ASTM	4.8mm			

PIONEER NATURAL RESOURCES CANADA INC.
CHINCHAGA GAS PLANT
LSD C-32-H \ 94-H-8

LPG STORAGE TANKS PIPING

TECH.: JO	REV.DATE:	DWG.DATE: 99/12
CAD: WO	REVISION:	DRAWING: 077A

PIONEER NATURAL RESOURCES CANADA INC.
CHINCHAGA GAS PLANT

RIVEST TESTING INC.

Item Desc.: C-32-H/94-H-8 / LPG STORAGE TANK
Equip. No.: N/A Ser. No.: 393508

Prov. Reg.: N/A

Pt.Desc.: E.HEAD

Point No.: 077-05

Nominal: 11.100 Mths. Rem. To Min. Nom:
Corr. Allowance: 1.600 Min. Cal. Wall Thk.:
Min. Nominal: 9.500

Good For Continued Service: YES
Additional Assessment Of Data: YES
Suggested Max Insp. Interval In Mths.: 12

Survey Dates: 1999-12

Data Readings 1 11.400 ____.
2 11.600 ____.
3 11.800 ____.
4 11.500 ____.
5 11.500 ____.
6 11.600 ____.

Data Evaluation

Lowest Reading : 11.400
Average - Low 3 : 11.467
Thk. Remaining Above Min. : 1.900
Indv. Short Term Rate (mm/yr) :
Short Term Rate (mm/yr) :
LongTerm Rate (mm/yr) :

Pt.Desc.: E.UPPER SHELL

Point No.: 077-10

Nominal: 17.100 Mths. Rem. To Min. Nom:
Corr. Allowance: 1.600 Min. Cal. Wall Thk.:
Min. Nominal: 15.500

Good For Continued Service: YES
Additional Assessment Of Data: YES
Suggested Max Insp. Interval In Mths.: 12

Survey Dates: 1999-12

Data Readings 1 18.700 ____.
2 18.700 ____.
3 18.800 ____.
4 18.700 ____.
5 18.600 ____.
6 18.800 ____.

Data Evaluation

Lowest Reading : 18.600
Average - Low 3 : 18.667
Thk. Remaining Above Min. : 3.100
Indv. Short Term Rate (mm/yr) :
Short Term Rate (mm/yr) :
LongTerm Rate (mm/yr) :

PIONEER NATURAL RESOURCES CANADA INC.
CHINCHAGA GAS PLANT

RIVEST TESTING INC.

Item Desc.: C-32-H/94-H-8 / LPG STORAGE TANK
Equip. No.: N/A Ser. No.: 393508

Prov. Reg.: N/A

Pt.Desc.: E.CTR.SIDE SHELL

Point No.: 077-15

Nominal: 17.100 Mths. Rem. To Min. Nom:
Corr. Allowance: 1.600 Min. Cal. Wall Thk.:
Min. Nominal: 15.500

Good For Continued Service: YES
Additional Assessment Of Data: YES
Suggested Max Insp. Interval In Mths.: 12

Survey Dates: 1999-12

Data Readings 1 18.300 ____.
2 18.300 ____.
3 18.200 ____.
4 18.200 ____.
5 18.200 ____.
6 18.300 ____.

Data Evaluation

Lowest Reading : 18.200
Average - Low 3 : 18.200
Thk.Remaining Above Min. : 2.700
Indv. Short Term Rate (mm/yr) :
Short Term Rate (mm/yr) :
LongTerm Rate (mm/yr) :

Pt.Desc.: E.CTR.BTM.SHELL

Point No.: 077-20

Nominal: 17.100 Mths. Rem. To Min. Nom:
Corr. Allowance: 1.600 Min. Cal. Wall Thk.:
Min. Nominal: 15.500

Good For Continued Service: YES
Additional Assessment Of Data: YES
Suggested Max Insp. Interval In Mths.: 12

Survey Dates: 1999-12

Data Readings 1 17.700 ____.
2 17.800 ____.
3 17.800 ____.
4 17.800 ____.
5 17.900 ____.
6 18.300 ____.

Data Evaluation

Lowest Reading : 17.700
Average - Low 3 : 17.767
Thk.Remaining Above Min. : 2.200
Indv. Short Term Rate (mm/yr) :
Short Term Rate (mm/yr) :
LongTerm Rate (mm/yr) :

PIONEER NATURAL RESOURCES CANADA INC.
CHINCHAGA GAS PLANT

RIVEST TESTING INC.

Item Desc.: C-32-H/94-H-8 / LPG STORAGE TANK
Equip. No.: N/A Ser. No.: 393508

Prov. Reg.: N/A

Pt.Desc.: 3"90L T-B

Point No.: 077-25

Line No.: N/A

Nominal: 5.500 Mths. Rem. To Min. Nom:

Good For Continued Service: YES

Corr. Allowance: ASTM Min. Cal. Wall Thk.:

Additional Assessment Of Data: YES

Min. Nominal: 4.813

Suggested Max Insp. Interval In Mths.: 12

Survey Dates: 1999-12

Data Readings	1	5.600	____.
	2	6.000	____.
	3	5.800	____.
	4	5.700	____.
	5	5.700	____.

Data Evaluation

Lowest Reading : 5.600

Average - Low 3 : 5.667

Thk. Remaining Above Min. : 0.787

Indv. Short Term Rate (mm/yr) :

Short Term Rate (mm/yr) :

LongTerm Rate (mm/yr) :

Comments:

ASSUMED NOMINAL
