

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 - North	A No:	BC	MTL No: VSL193
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-351	Serial Number:	393504	
Separator Type:		Business Unit:		
Direct Fired Vessel:	N/A	Fired Tube:		
Current Status:	In Service	Flame Arrester Date Required:	Date	
Thermal Insulation:	No	Asbestos:	No	

PRESSURE VESSEL NAMEPLATE INFORMATION

MTL Number:	VSL193	Volume:	CRN Number:	Registered:	No
Serial Number:	393504		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	Tube Thickness:	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 connections, 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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Area/Facility:	Chinchaga Gas Plant	Inspection Date	06-Feb-02	Interval: 2 yrs
Vessel Name:	LPG Storage Bullet - North	A No:	BC	MTL No: VSL193

VESSEL COATING INSPECTION

Type of Coating

Coating Manufacturer and Type

Location

Coating Condition

VESSEL NONDESTRUCTIVE TESTING

NDE Type	UT Survey			
Location of Test				
Contractors Name	Rivest	Qualifications		
Last UT Survey Date	Feb 3, 2002	Interval	2 yrs	Next UT Date: Feb 3, 2004
Survey By	MTL Testing Inc.			
Test Results				

VESSEL STATUS

Suitable for Further Service?	Yes	Repairs Required?	No
Owners Representative		Repairs Completed?	
Owners Date		Repairs Completed By	
		Repair Date	

Recommendations

Next external inspection in 3 years
 Next PSV servicing in 3 years
 Next UT Survey in 3 years

Details of Repairs

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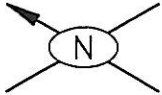
Company:	Pioneer Natural Resources Canada Inc.	LSD:	BC	C-32-H/94-H-8
Area/Facility:	Chinchaga Gas Plant	Inspection Date	06-Feb-02	Interval: 2 yrs
Vessel Name:	LPG Storage Bullet - North	A No:	BC	MTL No: VSL193

CURRENT VESSEL PROCESS CONDITIONS

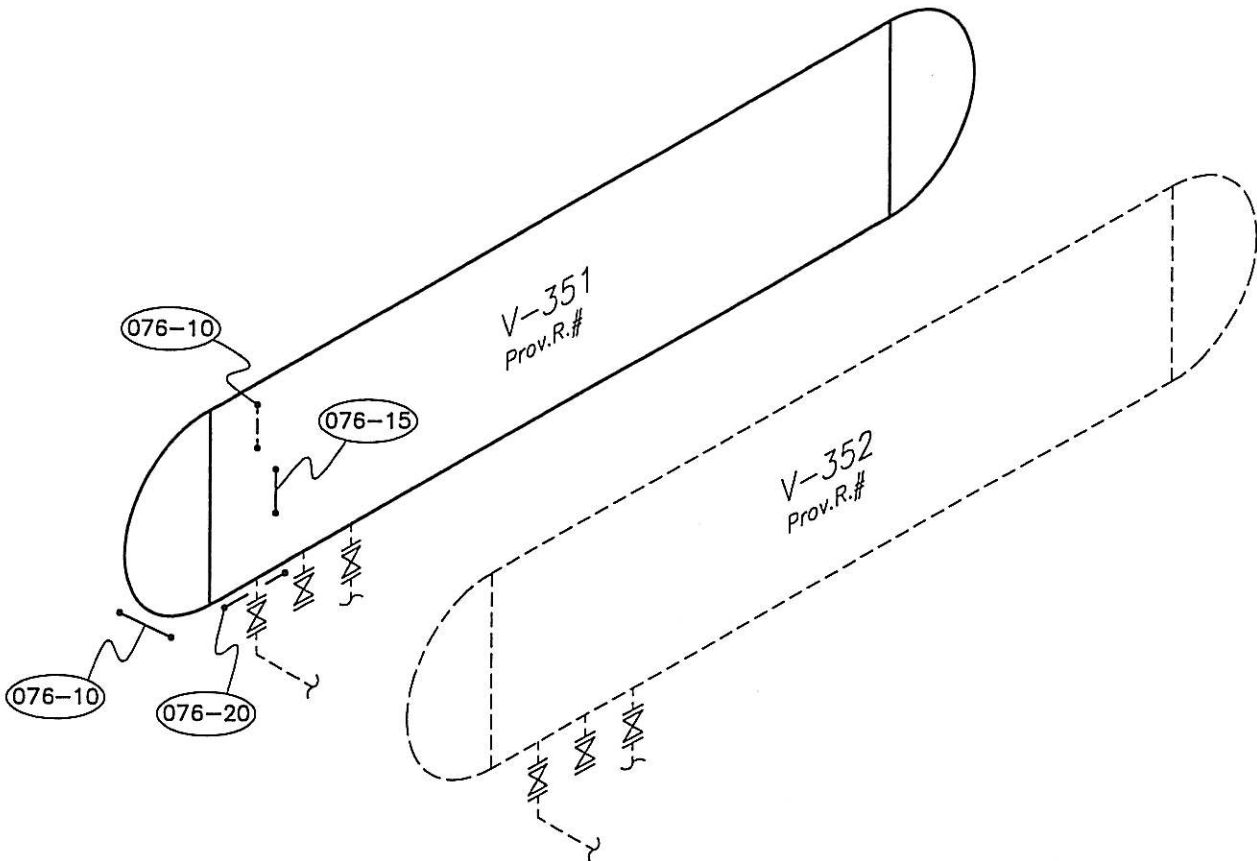
Propane

LPG

Name (Printed)	Signature	Date
Visual Inspector Paul Gorman API510	<i>Subscribed for Paul Gorman</i>	February 06, 2002
QA Supervisor: (Chief Inspector)		
QA Administrator:		
ABSA Inspector:		



P&ID. # _____
REF. # _____



VESSEL DATA

P.E. No. V-351 Serial No. 393504 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

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. _____

Repairs _____
Reason _____
Reason _____

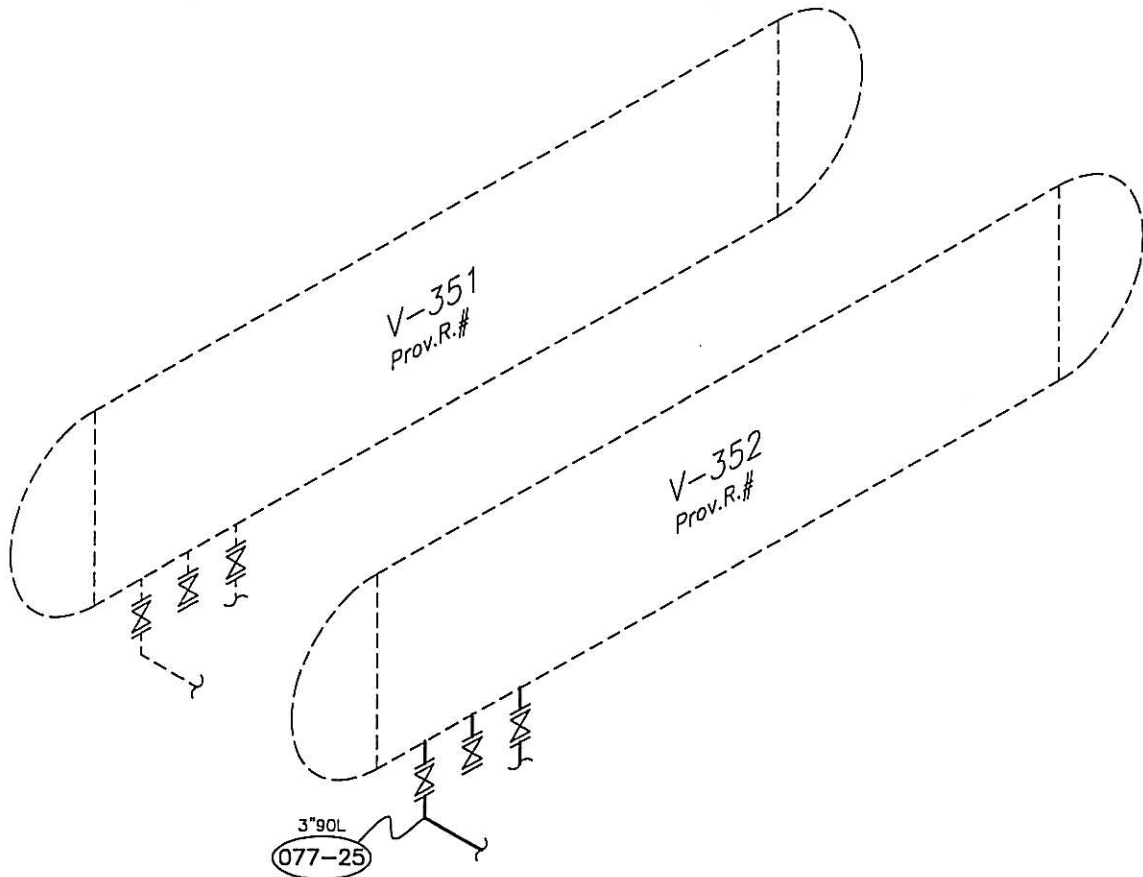
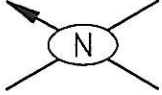
PIONEER NATURAL RESOURCES CANADA INC.
CHINCHAGA GAS PLANT
LSD C-32-H / 94-H-8

LPG STORAGE TANK

COMMENTS: _____

TECH.: J.O.	REV. DATE:	DWG DATE: 99/08
CAD: WO	REVISION:	DRAWING: 076

P&ID # _____
REF. # _____



PIPING DATA

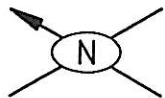
THICKNESS MEASUREMENT LOCATION:	SIZE	PROC.	LINE #	SPEC.	SCH.	NOM.THK.	API CORR. ALLW. * ** CALCULATED CORR.ALLW.	MIN.THK.	CAL.THK.	FLG. RATING
077-25	3"				40	5.5mm	ASTM	4.8mm		

COMMENTS: _____

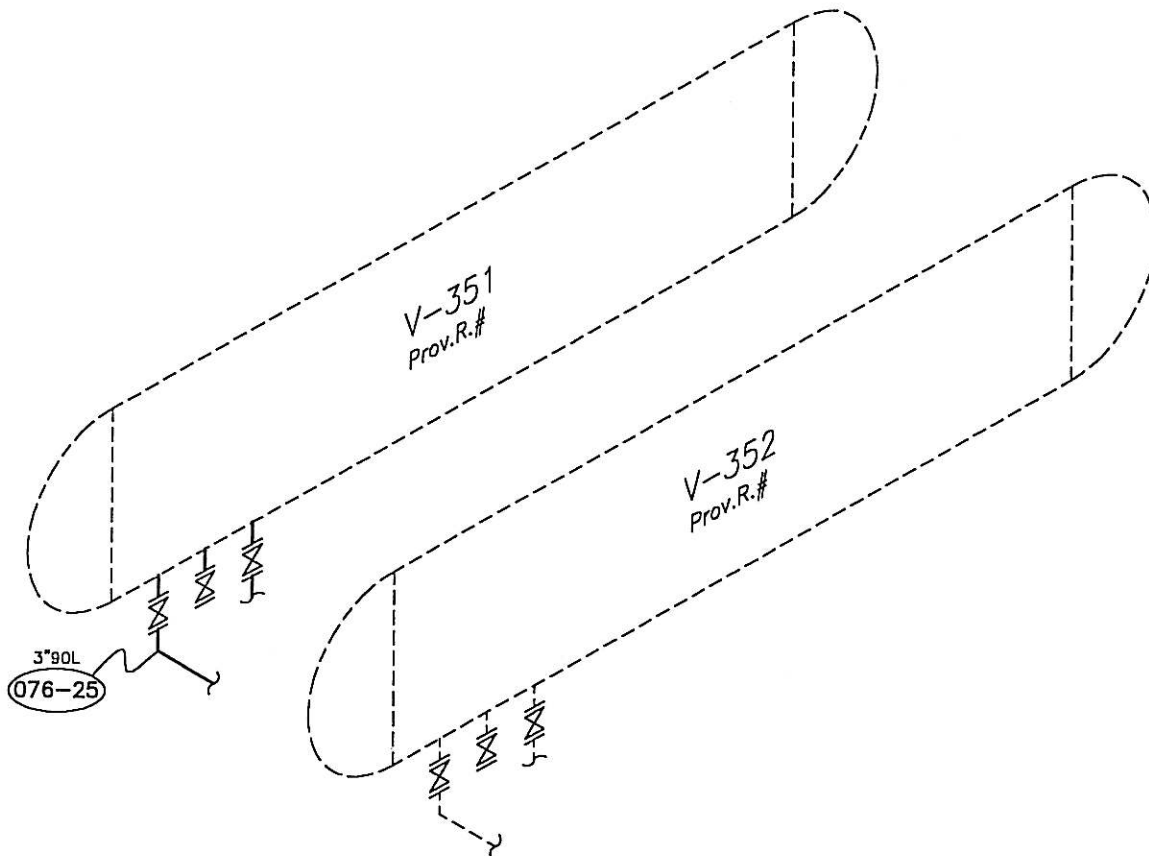
PIONEER NATURAL RESOURCES CANADA INC.
CHINCHAGA GAS PLANT
LSD C-32-H \ 94-H-8

LPG STORAGE TANKS PIPING

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



P&ID # _____
REF. # _____



PIPING DATA

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

COMMENTS: _____

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: 076A

Item Desc.: C-32-H/94-H-8 / LPG STORAGE TANK

Equip. No.: N/A

Ser. No.: 393504

Prov. Reg.: N/A

Pt.Desc.: E.HEAD

Point No.: 076-05

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	11.700	____.____
2	11.700	____.____
3	11.700	____.____
4	11.700	____.____
5	11.800	____.____
6	11.900	____.____

Data Evaluation

Lowest Reading : 11.700
Average - Low 3 : 11.700
Thk.Remaining Above Min. : 2.200
Indv. Short Term Rate (mm/yr) :
Short Term Rate (mm/yr) :
LongTerm Rate (mm/yr) :

Pt.Desc.: E.UPPER SHELL

Point No.: 076-10

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	18.700	____.____
4	18.700	____.____
5	18.600	____.____
6	18.700	____.____

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) :

Item Desc.: C-32-H/94-H-8 / LPG STORAGE TANK

Equip. No.: N/A

Ser. No.: 393504

Prov. Reg.: N/A

Pt.Desc.: E.CTR.SIDE SHELL

Point No.: 076-15

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

<u>Survey Dates:</u>		1999-12	
Data Readings	1	18.300	____.____
	2	18.200	____.____
	3	18.000	____.____
	4	18.100	____.____
	5	18.000	____.____
	6	18.100	____.____

Data Evaluation

Lowest Reading : 18.000
Average - Low 3 : 18.033
Thk.Remaining Above Min. : 2.500
Indv. Short Term Rate (mm/yr) :
Short Term Rate (mm/yr) :
LongTerm Rate (mm/yr) :

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

Point No.: 076-20

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

<u>Survey Dates:</u>		1999-12	
Data Readings	1	18.100	____.____
	2	18.000	____.____
	3	18.100	____.____
	4	18.100	____.____
	5	18.100	____.____
	6	18.300	____.____

Data Evaluation

Lowest Reading : 18.000
Average - Low 3 : 18.067
Thk.Remaining Above Min. : 2.500
Indv. Short Term Rate (mm/yr) :
Short Term Rate (mm/yr) :
LongTerm Rate (mm/yr) :

Item Desc.:	C-32-H/94-H-8 / LPG STORAGE TANK		
Equip. No.:	N/A	Ser. No.:	393504
		Prov. Reg.:	N/A

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

Point No.: **076-25**

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	6.500	_____
	2	6.400	_____
	3	6.500	_____
	4	6.700	_____
	5	6.500	_____

Data Evaluation

Lowest Reading : 6.400

Average - Low 3 : 6.467

Thk.Remaining Above Min. : 1.587

Indv. Short Term Rate (mm/yr) :

Short Term Rate (mm/yr) :

LongTerm Rate (mm/yr) :

Comments:

ASSUMED NOMINAL