PETROGAS FERNDALE STORAGE TERMINAL TANKCAR OFFLOADING CHECKLIST

DRY

Tank car Number:	TILX 302812	Spot: <u>1-3</u>
Prior to Offloading		
A. Operator must have	ents: 49 CFR 174.67(i) e an unobstructed view of tankcar and offloading components through the capability to halt the flow of product immediately. ttended at all times while offloading connections are attached. Ded	
II. Preparation Requirement A. Derailer in place, blue	ents: 29 CFR part 1910, subpart H; 49 CFR 172.330; 49 CFR 173 ue flags applied, handbrake set, wheels chocked, and ground stra	3.31(a) (3); 49 CFR 174.67 p attached.
A The tankcar must be	g Requirements: — Ferndale Storage Terminal Policy gauged, sampled, and sample results reviewed prior to offloadin — NOT BROKEN or MISSING	OUTAGE # 16.5 TEMP # 58 SHIPPER # 936465
 Ferndale Storage Ter 	minal Policy "NA" "Vircircled, indicates no discretist below. If needed, use the back of this form. Office staff will ensure the back of this form.	
Operator has read and i	understands all the above requirements	
*** Operator's Signature	e:	Date: <u>4/2/19</u>
After Offloading		
and or independ of	re Activity: 49 CFR 172.330; 172.504; 173.24b; 49 CFR 173.31(
Verify there is no lead F. Verify Four prescribe		
II. Post Offloading Inspec	ction Activity: 49 CFR 173.24b; 49 CFR 173.31(d); 49 CFR 174.	.67(k)
Dome protective hou Dome protective hou Dome protective hou All plugs on liquid ar	using lid is attached and opens and closes properly. f dome lid is attached and in proper working order. using wall openings (port holes) are equipped with operational clos using pin has an attachment chain and is in good condition. nd vapor valves are in place with chains attached (sample valve pla w have no missing or damaged parts and no visible signs of leakag	ug does not need a chain).
Safety valve is visible Thermometer well of Top platforms and ra Tankcar hand brake K. Tankcar is stenciled	ly in good condition and clear of paperwork, trash, and objects. ap and "O" ring seal are in good condition and thermometer well ca ailing are in good condition (not bent or broken). b, wheels, brake pads, ladders, and all other external parts appear if properly on both sides with the following: Liquefied Petroleum Gas live inspection / test dates are current. (Document below if past due	to be in good condition. s & Non-Odorized.
III. Appropriate Action (Con	nplete this section and turn form in with other applicable pape	erwork for this tankcar):
☐ A. Tankcar is empty, do☐ B. Tankcar is empty an	ome lid pinned closed, gates in place, port holes covered, tankcar and bad ordered. Description of defect (if needed, use back of this t	is OK and ready to release. form):
*** Operator's Signature:	:	TE 4-2-19
NOTE: PER DOT REGU	LATIONS, CIVIL AND CRIMINAL PENALTIES CAN BE L	EVIED FOR TANKCARS THAT

Revised 07/08/2016

GC 1

Sample Name 1-3 TILX 302812 TAYLOR,BC

4100 Unick Rd Ferndale, WA 98248

Sample Information: (check one)	Tank	Pipeline	Tankcar_	Truck
Other (describe):				

Instrument:

Agilent-GC-One

Injection date:

4/2/2019 8:20:51 PM

Acq. method:

GC1 M

Sequence:

GC1 SEQ 2019-04-02 20-06-46

Last changed:

4/26/2017 9:25:43 AM

Calib. data modified:

4/26/2017 10:09:09 AM

Data file:

C:\Chem32\1\Data\2019-03\GC1 SEQ 2019-04-02 20-06-46\001F0201.D

Name	RT [min]	Wt %	LV %	Mol %	
Methane		0.000	0.000	0.000	_
Ethane	1.912	0.112	0.160	0.165	Freeze Testminutes
Propane	2.486	98.297	98.411	98.626	
Propylene		0.000	0.000	0.000	Total Area 5080979
I-Butane	3.541	1.425	1.286	1.085	Total Peaks 6
N-Butane	4.572	0.153	0.133	0.117	
Butene-1		0.000	0.000	0.000	
I-Butylene		0.000	0.000	0.000	Specific Gravity 0.5082
T-Butene-2		0.000	0.000	0.000	Vapor Pressure 187
I-Pentane	7.769	0.007	0.006	0.005	Vapor riessure 107
C-Butene-2		0.000	0.000	0.000	
N-Pentane	9.649	0.005	0.004	0.003	
1,3-Butadiene		0.000	0.000	0.000	
	Sum	100.000			

Results in Wt %

N-Butane	0.153	C4 Olefins	< 0.001
Propane	98,297	Olefins	< 0.001
	10.001	C1 - C3s	98.41
Propylene	< 0.001	Butanes	1.578
		Pentanes	0.012

Copper Strip: (circle one) 1A 1B C A 2B 3C N/A

PETROGAS FERNDALE STORAGE TERMINAL TANKCAR OFFLOADING CHECKLIST

DRY

Tank	car Number:	CGTX 64797	Spot: <u>2-4</u>
Prior	to Offloading	€	
Atte	endance Requireme Operator must have Operator must have	ents: 49 CFR 174.67(i) an unobstructed view of tankcar and offloading components through the capability to halt the flow of product immediately. tended at all times while offloading connections are attached. Dec	
		ents: 29 CFR part 1910, subpart H; 49 CFR 172.330; 49 CFR 17 ue flags applied, handbrake set, wheels chocked, and ground stra	
Z / A. T	he tankcar must be	g Requirements: – Ferndale Storage Terminal Policy gauged, sampled, and sample results reviewed prior to offloadin – NOT BROKEN or MISSING	OUTAGE # 17.5 TEMP # 56 SHIPPER # 137277
– F If discr	erndale Storage Ter epancies are found, l	list below. If needed, use the back of this form. Office staff will en	
Operat	or has read and i	understands all the above/requirements	
*** Op	erator's Signature	e: Js	Date: <u>4/2/19</u>
-	Offloading		
I. Po	st Offloading Closu	re Activity: 49 CFR 172.330; 172.504; 173.24b; 49 CFR 173.31	(d); 49 CFR 174.67(k)
B. C. D. F.	Close and hand tigh Verify there is no lea Verify Four prescrib	alves. ighten all valve plugs iten all protective housings and covers. akage of liquid or vapor from any point. ed placards are properly placed in placard holders that are in good sonable distance, not dirty, torn, or faded. <u>Material I.D. number or</u>	
II. Po	st Offloading Inspe	ction Activity: 49 CFR 173.24b; 49 CFR 173.31(d); 49 CFR 174	.67(k)
C.D.E.F.	Vent cover on top or Dome protective ho Dome protective ho All plugs on liquid at All items listed below	using lid is attached and opens and closes properly. f dome lid is attached and in proper working order. using wall openings (port holes) are equipped with operational clo- using pin has an attachment chain and is in good condition. nd vapor valves are in place with chains attached (sample valve pl w have no missing or damaged parts and no visible signs of leaka	lug does not need a chain).
b. The c. Rel d. Gau	Thermometer well or Top platforms and rankcar hand brake Tankcar is stenciled	ly in good condition and clear of paperwork, trash, and objects, ap and "O" ring seal are in good condition and thermometer well cailing are in good condition (not bent or broken). e, wheels, brake pads, ladders, and all other external parts appear I properly on both sides with the following: Liquefied Petroleum Gallve inspection / test dates are current. (Document below if past du	to be in good condition. as & Non-Odorized.
III. Appr	opriate Action (Cor	nplete this section and turn form in with other applicable pape	erwork for this tankcar):
□ A. B.	Tankcar is empty, d Tankcar is empty ar	ome lid pinned closed, gates in place, port holes covered, tankcar nd bad ordered. Description of defect (if needed, use back of this	is OK and ready to release. form):
*** Ope	erator's Signature	: BB	ATE: 4/2/19
NOTE	: PER DOT REGU	ILATIONS, CIVIL AND CRIMINAL PENALTIES CAN BE L O OR IMPROPERLY SECURED FOR SHIPMENT. 49 CF	EVIED FOR TANKCARS THAT

Sample Name 2-4 CGTX 64797 SBEAMER, AB

4100 Unick Rd Ferndale, WA 98248

Sample Information: (check one)	Tank	Pipeline	Tankcar_	Truck
Other (describe):				

instrument:

Agilent-GC-Two

Injection date:

4/2/2019 8:35:18 PM

Acq. method:

GC2.M

Sequence:

GC2 SEQ 2019-04-02 19-53-00

Last changed:

8/16/2017 2:43:27 AM

Calib. data modified:

8/16/2017 2:43:04 AM

Data file:

C:\Chem32\2\Data\2019-03\GC2 SEQ 2019-04-02 19-53-00\NV-F0303.D

Name	RT [min]	Wt %	LV %	Mol %		
Methane		0.000	0.000	0.000		
Ethane	1.860	0.202	0.288	0.298	Freeze Test	minutes
Propane	2.410	97.285	97.453	97.782		
Propylene	3.082	0.009	0.008	0.009	Total Area	4524135
l-Butane	3.396	(2.232)	2.015	1.702	Total Peaks	9
N-Butane	4.367	0.211	0.184	0.161		
Butene-1	5.721	0.025	0.022	0.020		
I-Butylene	6.028	0.033	0.028	0.026	Specific Gravity	0.5086
T-Butene-2	6.941	0.001	0.001	0.001	Vapor Pressure	187
I-Pentane		0.000	0.000	0.000	vapor Fressure	107
C-Butene-2		0.000	0.000	0.000		
N-Pentane		0.000	0.000	0.000		
1,3-Butadiene	10.203	0.002	0.002	0.002		
	Sum	100.000				

Results in Wt %

N-Butane	0.211	C4 Olefins	0.061
Propane	97.285	Olefins	0.061
	0.000	C1 - C3s	97.487
Propylene	0.009	Butanes	2.443
		Pentanes	< 0.001

3C N/A Copper Strip: (circle one) 1A



DRY

Tank c	ar Number:		PROX 29928			Spot: 2	<u>2-3</u>
Prior	to Offloading						
A.B.	indance Requirement Operator must have ar Operator must have the Tankcar must be atten	unobstructed vie e capability to hal	ew of tankcar and off t the flow of product	immediately.	•	,	0 _5
II. Prep	paration Requirement Derailer in place, blue t	s: 29 CFR part 1 lags applied, han	910, subpart H; 49 (dbrake set, wheels (CFR 172.330; 49 CF chocked, and ground	R 173,31(a d strap atta	a) (3); 49 CFR 174.6 ched.	7
Z A. TI	ging and Sampling R ne tankcar must be gar eal applied securely – N	iged, sampled, a	ind sample results re		oading	OUTAGE # TEMP # SHIPPER #	21 54 10654685
IV. List o	liscrepancies found	orior to offloadir	ng in the space pro	ovided below:			
	rndale Storage Termir pancies are found, list			circled, indicates no soften of staff w			
Operato	or has read and und	lerstands all ti	he above require	ments			
*** Ope	erator's Signature:	(2-1		рн Da	te: <u>4/2/19</u>	
After (Offloading	14					
I. Pos	t Offloading Closure	Activity: 49 CFR	R 172.330; 172.504;	173.24b; 49 CFR 17	'3.31(d); 49	CFR 174.67(k)	
B.C.D.F.	Securely close all valve Install and wrench tight Close and hand tighten Verify there is no leaka Verify <i>Four</i> prescribed and visible at a reason	en all valve plugs all protective hou ge of liquid or vap placards are prop	usings and covers. oor from any point. oerly placed in placar		- 51	50000	n good
II. Pos	t Offloading Inspectio	on Activity: 49 C	CFR 173.24b; 49 CFI	R 173.31(d); 49 CFF	R 174.67(k)		
知 B. 1 D C. 1 D D. 1 D E. 7	Dome protective housing Vent cover on top of do Dome protective housing Dome protective housing All plugs on liquid and All items listed below had Valves.	me lid is attached ng wall openings (ng pin has an atta vapor valves are i	d and in proper work (port holes) are equi chment chain and is n place with chains	ing order. pped with operationa in good condition. attached (sample va	lve plug do	es not need a chain).
b. Ther c. Relie	mometer well of valve. ging device.			385			
G. H. J. K.	Safety valve is visibly ir Thermometer well cap Top platforms and railir Tankcar hand brake, w Tankcar is stenciled pro Tank and Safety Valve	and "O" ring seal ig are in good cor heels, brake pads operly on both sid	are in good conditiondition (not bent or bestient), and all others, and all others with the following	n and thermometer v roken). ner external parts ap : Liquefied Petroleui	well cap is pear to be n Gas & N	in good condition.	
III. Appro	priate Action (Compl	ete this section a	and turn form in wi	th other applicable	paperwor	k for this tankcar):	
A C	Tankcar is empty, dom Tankcar is empty and b	e lid pinned close ad ordered. Des	d, gates in place, po scription of defect (if	rt holes covered, tar needed, use back o	nkcar is OK f this form)	and ready to releas	ie.
-	rator's Signature:	TIONS	mm	'm	DATE:_	4/2/19	
NOTE:	PER DOT REGULA	TIONS, CIVIL A	AND CRIMINAL P	ENALTIES CAN	BE LEVIE	D FOR TANKCA	RS THAT

Sample Name 2-3 PROX 29928 LOCHEARN, AB

4100 Unick Rd Ferndale, WA 98248

Sample Information: (check one)	Tank	Pipeline	Tankcar_	Truck
Other (describe):				

Instrument:

Agilent-GC-Two

Injection date:

4/2/2019 8:20:48 PM

Acq. method:

GC2.M

Sequence:

GC2 SEQ 2019-04-02 19-53-00

Last changed:

8/16/2017 2:43:27 AM

Calib. data modified:

8/16/2017 2:43:04 AM

Data file:

C:\Chem32\2\Data\2019-03\GC2 SEQ 2019-04-02 19-53-00\NV-F0202.D

Name	RT [min]	Wt %	LV %	Mol %	
Methane	1.574	0.000	0.001	0.001	E
Ethane	1.861	0.110	0.157	0.162	Freeze Testminutes
Propane	2.409	99.644	99.627	99.652	
Propylene		0.000	0.000	0.000	Total Area 4561411
I-Butane	3.399	0.097	0.087	0.073	Total Peaks 6
N-Butane	4.368	0.148	0.128	0.112	
Butene-1		0.000	0.000	0.000	
I-Butylene		0.000	0.000	0.000	Specific Gravity 0.5074
T-Butene-2		0.000	0.000	0.000	Vapor Pressure 189
I-Pentane	7.370	0.000	0.000	0.000	Vapor Fressure 103
C-Butene-2		0.000	0.000	0.000	
N-Pentane		0.000	0.000	0.000	
1,3-Butadiene		0.000	0.000	0.000	
	Sum	100.000			

Results in Wt %

N-Butane	0.148	C4 Olefins	< 0.001
Propane	99.644	Olefins	< 0.001
	< 0.001	C1 - C3s	99.755
Propylene	< 0.001	Butanes	0.244
		Pentanes	< 0.001

Copper Strip: (circle one) 1A 1B 1C 2A 2B 3C N/A

GC Performed By: (initials)

Printed: 4/2/2019 8:33:22 PM

PETROGAS FERNDALE STORAGE TERMINAL TANKCAR OFFLOADING CHECKLIST

DRY

Tank car Numb	oer:	PROX 32193		Spot: <u>1-4</u>
Prior to Offloa	dina			
I. Attendance Re A. Operator n B. Operator n	equirements: 49 CFR 1 tust have an unobstructe tust have the capability to	74.67(i) d view of tankcar and offloading components o halt the flow of product immediately. nes while offloading connections are attached		· ·
II. Preparation Ro ☑ A. Derailer in	equirements: 29 CFR polace, blue flags applied,	art 1910, subpart H; 49 CFR 172.330; 49 CF handbrake set, wheels chocked, and groun	FR 173.31(a) d strap attac) (3); 49 CFR 174.67 hed.
A. The tankcar		s: – Ferndale Storage Terminal Policy ed, and sample results reviewed prior to offl N or MISSING	loading	OUTAGE # 17 TEMP # 60 SHIPPER # 936463
– Ferndale Sto	age Terminal Policy	oading in the space provided below: "NA" (If circled, indicates no eded, use the back of this form. Office staff was a specific to the staff was a specific to the space of the staff was a specific to the space of		
Operator has rea	d and understands	all the above requirements		
*** Operator's S	gnature:		JS Date	e: <u>4/2/19</u>
After Offloadin	9 //			
I. Post Offloadir	g Closure Activity: 49	CFR 172.330; 172.504; 173.24b; 49 CFR 1	73.31(d); 4 9	CFR 174.67(k)
C. Close and D. Verify there	wrench tighten all valve p nand tighten all protective is no leakage of liquid o prescribed placards are	e housings and covers.		
II. Post Offloadir	g Inspection Activity:	49 CFR 173.24b; 49 CFR 173.31(d); 49 CFF	R 174.67(k)	
D. Dome prote D. Dome prote D. Dome prote D. All plugs or	on top of dome lid is atta active housing wall opening active housing pin has an liquid and vapor valves aced below have no missing	hed and opens and closes properly. Inched and in proper working order. Ings (port holes) are equipped with operation In attachment chain and is in good condition. In are in place with chains attached (sample vaing or damaged parts and no visible signs of	alve plug doe	es not need a chain).
d. Gauging device G. Safety valv H. Thermome I. Top platfor J. Tankcar ha	e is visibly in good condit er well cap and "O" ring : ns and railing are in good nd brake, wheels, brake stenciled properly on both	ion and clear of paperwork, trash, and object seal are in good condition and thermometer d condition (not bent or broken), pads, ladders, and all other external parts are h sides with the following: Liquefied Petroleu test dates are current. (Document below if pa	well cap is h opear to be i m Gas & No	n good condition.
III. Appropriate Act	on (Complete this sect	ion and turn form in with other applicable	e paperwork	for this tankcar):
A. Tankcar is	empty, dome lid pinned c empty and bad ordered.	closed, gates in place, port holes covered, tai Description of defect (if needed, use back of	nkcar is OK and this form)	and ready to release.
*** 0			gray/ a manumer in	4/2/19
*** Operator's Sig		IL AND CRIMINAL PENALTIES CAN	DATE:	DEOR TANKCARS THAT
ARE OVERL	OADED OR IMPROP	ERLY SECURED FOR SHIPMENT. 4	9 CFR 107	.329, 107.331, 107.333

Revised 07/08/2016

Sample Name 1-4 PROX 32193 TAYLOR,BC

4100 Unick Rd Ferndale, WA 98248

Sample Information: (check one)	Tank	Pipeline	Tankcar_	✓	Truck
Other (describe):					

Instrument:

Agilent-GC-One

Injection date:

4/2/2019 8:35:16 PM

Acq. method:

GC1.M

Sequence:

GC1 SEQ 2019-04-02 20-06-46

Last changed:

4/26/2017 9:25:43 AM

Calib. data modified:

4/26/2017 10:09:09 AM

Data file:

C:\Chem32\1\Data\2019-03\GC1 SEQ 2019-04-02 20-06-46\001F0302.D

Name	RT [min]	Wt %	LV %	Mol %		
Methane		0.000	0.000	0.000	Freeze Test	5/
Ethane	1.910	0.069	0.099	0.102	Freeze Test	minutes
Propane	2.487	98.294	98.430	98.654		
Propylene		0.000	0.000	0.000	Total Area	5049934
I-Butane	3.541	1.471	1.328	1.120	Total Peaks	6
N-Butane	4.574	0.152	0.133	0.116		
Butene-1		0.000	0.000	0.000		
l-Butylene		0.000	0.000	0.000	Specific Gravity	0.5082
T-Butene-2		0.000	0.000	0.000	Vanar Proceura	187
I-Pentane	7.774	0.008	0.007	0.005	Vapor Pressure	107
C-Butene-2		0.000	0.000	0.000		
N-Pentane	9.648	0.006	0.005	0.003		
1,3-Butadiene		0.000	0.000	0.000		
	Sum	100.000				

Results in Wt %

N-Butane	0.152	C4 Olefins	< 0.001
Propane	98.294	Olefins	< 0.001
·		C1 - C3s	98.363
Propylene	< 0.001	Butanes	1.623
		Pentanes	0.014

Copper Strip: (circle one) 1A 1B 1 2A 2B 3C N/A

GC Performed By: (initials)



DRY

Tank car Number:	GATX 58803	Spot: <u>2-2</u>
Prior to Offloading		
B. Operator must have th	s: 49 CFR 174.67(i) n unobstructed view of tankcar and offloading components through e capability to halt the flow of product immediately. nded at all times while offloading connections are attached. Dedicate	
	ts: 29 CFR part 1910, subpart H; 49 CFR 172,330; 49 CFR 173.3 flags applied, handbrake set, wheels chocked, and ground strap a	
	lequirements: – Ferndale Storage Terminal Policy uged, sampled, and sample results reviewed prior to offloading NOT BROKEN or MISSING	OUTAGE # 23 TEMP # 53 SHIPPER # 1654695
– Ferndale Storage Termir	prior to offloading in the space provided below: nal Policy "NA" (If circled, indicates no discrepa below. If needed, use the back of this form. Office staff will ensur	
Operator has read and und	derstands all the above requirements	
*** Operator's Signature:	JON VH	Date: <u>4/2/19</u>
After Offloading		
A. Securely close all valve B. Install and wrench tight C. Close and hand tighter D. Verify there is no leaka Verify Four prescribed		ondition. Placards are in good
II. Post Offloading Inspection	on Activity: 49 CFR 173.24b; 49 CFR 173.31(d); 49 CFR 174.67	7(k)
B. Vent cover on top of do C. Dome protective housing D. Dome protective housing E. All plugs on liquid and of the control of	ng lid is attached and opens and closes properly, ome lid is attached and in proper working order. In many many many many many many many man	does not need a chain).
H. Thermometer well cap I. Top platforms and railir J. Tankcar hand brake, w L. K. Tankcar is stenciled pro	n good condition and clear of paperwork, trash, and objects. and "O" ring seal are in good condition and thermometer well cap ng are in good condition (not bent or broken). wheels, brake pads, ladders, and all other external parts appear to operly on both sides with the following: Liquefied Petroleum Gas & inspection / test dates are current. (Document below if past due)	be in good condition
III. Appropriate Action (Compl	ete this section and turn form in with other applicable paperv	work for this tankcar):
☐ A. Tankcar is empty, dom ☐ B. Tankcar is empty and b	te lid pinned closed, gates in place, port holes covered, tankcar is pad ordered. Description of defect (if needed, use back of this for	OK and ready to release, rm):
*** Operator's Signature: _	DATE	= 4/2/19
NOTE: PER DOT REGULA	TIONS CIVIL AND CRIMINAL DENALTIES CAN BE LEV	VIED FOR TANKCARS THAT

Sample Name GATX 58803 2-2 LOCHEARN AB

4100 Unick Rd Ferndale, WA 98248

Sample Information: (check one)	Tank	Pipeline	Tankcar_	Truck	
Other (describe):					

Instrument:

Agilent-GC-One

Injection date:

4/2/2019 4:42:59 PM

Acq. method:

GC1.M

Sequence:

GC1 SEQ 2019-04-02 16-41-49

Last changed:

4/26/2017 9:25:43 AM

Calib. data modified:

4/26/2017 10:09:09 AM

Data file:

C:\Chem32\1\Data\2019-03\GC1 SEQ 2019-04-02 16-41-49\001F0101.D

Name	RT [min]	Wt %	LV %	Mol %	
Methane	1.601	0.098	0.165	0.267	4 2 7
Ethane	1.905	0.464	0.659	0.678	Freeze Testminutes
Propane	2.479	99.322	99.074	98.967	
Propylene		0.000	0.000	0.000	Total Area 5152785
I-Butane	3.535	0.049	0.044	0.037	Total Peaks 5
N-Butane	4.564	0.068	0.059	0.051	•
Butene-1		0.000	0.000	0.000	
I-Butylene		0.000	0.000	0.000	Specific Gravity 0.5066
T-Butene-2		0.000	0.000	0.000	Van an Brassura 400
I-Pentane		0.000	0.000	0.000	Vapor Pressure 196
C-Butene-2		0.000	0.000	0.000	
N-Pentane		0.000	0.000	0.000	
1,3-Butadiene		0.000	0.000	0.000	
	Sum	100.000	10		

Results in Wt %

N-Butane	0.068	C4 Olefins	< 0.001
Propane	99.322	Olefins	< 0.001
Propylene	< 0.001	C1 - C3s	99.883
гторують	\ 0.001	Butanes	0.117
		Pentanes	< 0.001

Copper Strip: (circle one) 1A 1B 1C 2A 2B 3C N/A

GC Performed By: (initials)



DRY

Tank car Number:	Spot: <u>1-1</u>							
Prior to Offloading								
I. Attendance Requirem ☐ A. Operator must hav ☐ B. Operator must hav	nents: 49 CFR 174.67(i) e an unobstructed view of tankcar and offloading components through e the capability to halt the flow of product immediately. ttended at all times while offloading connections are attached. Dedica							
 Preparation Requirements: 29 CFR part 1910, subpart H; 49 CFR 172,330; 49 CFR 173.31(a) (3); 49 CFR 174.67 A. Derailer in place, blue flags applied, handbrake set, wheels chocked, and ground strap attached. 								
☐ A. The tankcar must be	g Requirements: - Ferndale Storage Terminal Policy gauged, sampled, and sample results reviewed prior to offloading / - NOT BROKEN or MISSING	OUTAGE # 19 TEMP # 51 SHIPPER # 372516						
– Ferndale Storage Te	nd prior to offloading in the space provided below: rminal Policy "NA" (If circled, indicates no discrepant list below. If needed, use the back of this form. Office staff will ensure							
Operator has read and	understands all the above requirements							
*** Operator's Signatur After Offloading	re: JG D	Date: <u>4/2/19</u>						
I. Post Offloading Close	ure Activity: 49 CFR 172.330; 172.504; 173.24b; 49 CFR 173.31(d);	49 CFR 174 67(k)						
C. Close and hand tig D. Verify there is no le F. Verify Four prescrib	ralves. tighten all valve plugs then all protective housings and covers. sakage of liquid or vapor from any point. bed placards are properly placed in placard holders that are in good co asonable distance, not dirty, torn, or faded. Material I.D. number on pla							
II. Post Offloading Inspe	ection Activity: 49 CFR 173.24b; 49 CFR 173.31(d); 49 CFR 174.67((k)						
B. Vent cover on top of C. Dome protective ho D. Dome protective ho E. All plugs on liquid a F. All items listed belo a. All valves.	busing lid is attached and opens and closes properly, of dome lid is attached and in proper working order. Susing wall openings (port holes) are equipped with operational closure busing pin has an attachment chain and is in good condition. Ind vapor valves are in place with chains attached (sample valve plug of whave no missing or damaged parts and no visible signs of leakage:							
b. Thermometer well c. Relief valve. d. Gauging device. G. Safety valve is visibly in good condition and clear of paperwork, trash, and objects. H. Thermometer well cap and "O" ring seal are in good condition and thermometer well cap is hand tight only. L. Top platforms and railing are in good condition (not bent or broken). L. Tankcar hand brake, wheels, brake pads, ladders, and all other external parts appear to be in good condition. L. Tankcar is stenciled properly on both sides with the following: Liquefied Petroleum Gas & Non-Odorized. L. Tank and Safety Valve inspection / test dates are current. (Document below if past due)								
III. Appropriate Action (Co	mplete this section and turn form in with other applicable paperw	ork for this tankcar\:						
A. Tankcar is empty, o	dome lid pinned closed, gates in place, port holes covered, tankcar is C nd bad ordered. Description of defect (if needed, use back of this form	DK and ready to release.						
*** Operator's Signature	e:DATE	1/2/19						
NOTE: PER DOT REGI	JLATIONS, CIVIL AND CRIMINAL PENALTIES CAN BE LEV OR IMPROPERLY SECURED FOR SHIPMENT. 49 CFR 1	TIED FOR TANKCARS THAT 07.329, 107.331, 107.333						

Cample Name	1 1	TILV	205740	SCOTFORD.	۸D
Sample Name	1-1		303/10	SCO I FORD	,AD

4100 Unick Rd

Ferndale, WA 98248

Sample Information: (check one) Tank____ Pipeline____ Tankcar_

Other (describe):_____

Instrument:

Agilent-GC-One

Injection date:

4/2/2019 4:14:20 PM

Acq. method:

GC1.M

Sequence:

GC1 SEQ 2019-04-02 15-46-15

Last changed:

4/26/2017 9:25:43 AM

Calib. data modified: 4/26/2017 10:09:09 AM

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C:\Chem32\1\Data\2019-03\GC1 SEQ 2019-04-02 15-46-15\001F0301.D

Name	RT [min]	Wt %	LV %	Mol %	
Methane	1.603	0.094	0.158	0.256	41
Ethane	1.905	(2.124)	2.997	3.084	Freeze Test minutes
Propane	2.482	97.110	96.249	96.151	
Propylene	3.203	0.014	0.014	0.015	Total Area 5087900
I-Butane	3.535	0.534	0.477	0.401	Total Peaks 9
N-Butane	4.565	0.107	0.092	0.081	
Butene-1		0.000	0.000	0.000	
I-Butylene	6.325	0.014	0.012	0.011	Specific Gravity 0.5044
T-Butene-2		0.000	0.000	0.000	Vapor Pressure 205
I-Pentane	7.762	0.001	0.000	0.000	vapoi riessure 203
C-Butene-2		0.000	0.000	0.000	
N-Pentane		0.000	0.000	0.000	
1,3-Butadiene	10.759	(0.001)	0.001	0.001	
	Sum	100.000			

Results in Wt %

N-Butane	0.107	C4 Olefins	0.015
Propane	97.11	Olefins	0.03
Propylene	0.014	C1 - C3s	99.343
	0.014	Butanes	0.641
		Pentanes	< 0.001

1C 2A 2B 3C N/A Copper Strip: (circle one) 1A 1B

GC Performed By: (initials)



DRY

Tank ca	ar Number:	PROX 33310	Spot: <u>1-2</u>		
Prior t	o Offloading				
I. Atter	ndance Requireme Operator must have Operator must have	ents: 49 CFR 174.67(i) an unobstructed view of tankcar and offloading components throughous the capability to halt the flow of product immediately. tended at all times while offloading connections are attached. Dedicated			
		ents: 29 CFR part 1910, subpart Η; 49 CFR 172.330; 49 CFR 173.31(ε ue flags applied, handbrake set, wheels chocked, and ground strap attac			
A. Th	e tankcar must be	Requirements: — Ferndale Storage Terminal Policy gauged, sampled, and sample results reviewed prior to offloading — NOT BROKEN or MISSING	OUTAGE # 17 TEMP # 59 SHIPPER # 936467		
– Fer	ndale Storage Teri	nd prior to offloading in the space provided below: minal Policy NA* (if circled, indicates no discrepance is below. If needed, use the back of this form. Office staff will ensure sections.)			
Operato	r has read and u	understands all the above requirements			
5.787 m 32	rator's Signature	e: frem JG Dat	te: <u>4/2/19</u>		
,,	Offloading				
/	_	re Activity: 49 CFR 172,330; 172,504; 173,24b; 49 CFR 173,31(d); 49	9 CFR 174.67(k)		
A. Securely close all valves. B. Install and wrench tighten all valve plugs C. Close and hand tighten all protective housings and covers. D. Verify there is no leakage of liquid or vapor from any point. F. Verify Four prescribed placards are properly placed in placard holders that are in good condition. Placards are in good condition and visible at a reasonable distance, not dirty, torn, or faded. Material I.D. number on placard is: 1075					
II. Post	Offloading Inspec	ction Activity: 49 CFR 173.24b; 49 CFR 173.31(d); 49 CFR 174.67(k)			
B. V. C. D. D. C. F. A	Vent cover on top of Dome protective how Dome protective how Ill plugs on liquid ar	using lid is attached and opens and closes properly. f dome lid is attached and in proper working order. using wall openings (port holes) are equipped with operational closures. using pin has an attachment chain and is in good condition. nd vapor valves are in place with chains attached (sample valve plug do v have no missing or damaged parts and no visible signs of leakage:			
b. Therr	nometer well f valve.				
G Gaug G S D H T D I T D J T	ing device. Safety valve is visible hermometer well coop platforms and rainkcar hand brake ankcar is stenciled	y in good condition and clear of paperwork, trash, and objects, ap and "O" ring seal are in good condition and thermometer well cap is alling are in good condition (not bent or broken). The wheels, brake pads, ladders, and all other external parts appear to be properly on both sides with the following: Liquefied Petroleum Gas & Nove inspection / test dates are current. (Document below if past due)	in good condition.		
III. Appro	oriate Action (Con	nplete this section and turn form in with other applicable paperwor	k for this tankcar):		
A. T. B. T	ankcar is empty, do ankcar is empty an	ome lid pinned closed, gates in place, port holes covered, tankcar is OK id bad ordered. Description of defect (if needed, use back of this form):	and ready to release.		
*** Opera	ator's Signature	DATE:	4/2/19		
	_	LATIONS, CIVIL AND CRIMINAL PENALTIES CAN BE LEVIE	D FOR TANKCARS THAT		
ARI	OVERLOADED	OR IMPROPERLY SECURED FOR SHIPMENT. 49 CFR 107	7.329, 107.331, 107.333		

4100 Unick Rd Ferndale, WA 98248

Sample Information: (check one)	Tank	Pipeline	Tankcar_	<u>/</u>	Truck	,	
Other (describe):							

Instrument:

Agilent-GC-One

Injection date:

4/2/2019 4:28:11 PM

Acq. method:

GC1.M

Sequence:

GC1 SEQ 2019-04-02 15-46-15

Last changed:

4/26/2017 9:25:43 AM

Calib. data modified:

4/26/2017 10:09:09 AM

Da	ta	fil	le:

C:\Chem32\1\Data\2019-03\GC1 SEQ 2019-04-02 15-46-15\001F0402.D

Name	RT [min]	Wt %	LV %	Mol %		
Methane	1.601	0.091	0.152	0.248	Freeze Test	
Ethane	1.904	1.377	1.949	2.007	Freeze Test\ ^T	minutes
Propane	2.481	97.845	97.285	97.228		
Propylene		0.000	0.000	0.000	Total Area	5121973
I-Butane	3.535	0.624	0.559	0.470	Total Peaks	7
N-Butane	4.565	0.059	0.051	0.045		
Butene-1		0.000	0.000	0.000		
I-Butylene		0.000	0.000	0.000	Specific Gravity	0.5055
T-Butene-2		0.000	0.000	0.000	Voner Proceure	201
I-Pentane	7.756	0.003	0.002	0.002	Vapor Pressure	201
C-Butene-2		0.000	0.000	0.000		
N-Pentane	9.629	0.002	0.001	0.001		
1,3-Butadiene		0.000	0.000	0.000		
	Sum	100.000				

Results in Wt %

N-Butane	0.059	C4 Olefins	< 0.001
Propane	97.845	Olefins	< 0.001
Propylene	< 0.001	C1 - C3s	99.312
	< 0.001	Butanes	0.683
		Pentanes	0.004

Copper Strip: (circle one) 1A 1B 1C 2A 2B 3C N/A

GC Performed By: (initials)



DRY

Prior to Offloading I. Attendance Requirements: 49 CFR 174.67(i) A. Operator must have an unobstructed view of tankcar and offloading components throughout entire period of offloading. B. Operator must have the capability to halt the flow of product immediately. C. Tankcar must be attended at all times while offloading connections are attached. Dedicated camera monitoring is OK. II. Preparation Requirements: 29 CFR part 1910, subpart H; 49 CFR 172,330, 49 CFR 173.31(a) (3); 49 CFR 174.67 A. Derailer in place, blue flags applied, handbrake set, wheels chocked, and ground strap attached. III. Gauging and Sampling Requirements: - Ferndale Storage Terminal Policy OUTAGE # 20.25 E. Seal applied securely - NOT BROKEN or MISSING III. Seal applied securely - NOT BROKEN or MISSING III. Essel applied securely - NOT BROKEN or MISSING III. Stidiscrepancies found prior to offloading in the Race provided below: - Ferndale Storage Terminal Policy III. Seal applied securely - NOT BROKEN or MISSING III. Post Offloading Closure Activity: 49 CFR 172.330, 172.504; 173.24b; 49 CFR 173.31(d); 49 CFR 174.67(k) A Securely close all valives. A Securely close all valives. B. Install and versich tighten all valive plugs C. Close and hand tighten all valive plugs C. Close an	Та	nk d	car Number:		PROX 9359	4	_	Spot: 2	<u>?-1</u>
Attendance Requirements: 49 CFR 174.67(i) A Operator must have an unobstructed view of tankcar and offloading components throughout entire period of offloading. C C Tankcar must be actended at all times while offloading connections are attached. Dedicated camera monitoring is OK. C Tankcar must be attended at all times while offloading connections are attached. Dedicated camera monitoring is OK. C Tankcar must be attended at all times while offloading connections are attached. Dedicated camera monitoring is OK. C Tankcar must be attended at all times while offloading connections are attached. Dedicated camera monitoring is OK. C Tankcar must be gauged, sandled, handbrake set, wheels chocked, and ground strap attached. C Detailer in place, blue flags applied, handbrake set, wheels chocked, and ground strap attached. C Detailer in place, blue flags applied, handbrake set, wheels chocked, and ground strap attached. C Detailer in place, blue flags applied, handbrake set, wheels chocked, and ground strap attached. C Detailer in place, blue flags applied, handbrake set, wheels chocked, and ground strap attached. C Detailer in place, blue flags applied, handbrake set, wheels chocked, and ground strap attached. C Detailer in place, blue flags applied, handbrake set, wheels chocked, and ground strap attached. C Detailer in place, blue flags applied, handbrake set, wheels chocked, and ground strap attached. C Detailer in place, blue flags applied, handbrake set, wheels chocked, and ground strap attached. C Detailer in place, blue flags applied, handbrake set, wheels chocked, and ground strap attached. C Detailer in place, blue flags applied and sample results reviewed prior to offloading. C Close and hand tighten all protective housings and covers. C Detailer in place, blue flags are in ground to applied to the place and sample applied blue at a resonable distance, not dirty, torn or faded. Material LD. number on placard is: 10. Verify there is no leakage of fliquid or vapor from any point. C Detailer in place, blue fla	Pi	rior	to Offloading						
Gauging and Sampling Requirements: — Ferndale Storage Terminal Policy	I	Atte A. B.	endance Requirem Operator must have Operator must have	e an unobstructed verthe to he	iew of tankcar and o alt the flow of produ	ct immediately.	_		_
A. The tankcar must be gauged, sampled, and sample results reviewed prior to offloading TEMP # 10654e E. Seal applied securely – NOT BROKEN or MISSING Temperature NOT BROKEN or MISSING									7
Ferndale Storage Terminal Policy If discrepancies are found, list below. If needed, use the back of this form. Office staff will ensure shipper is notified. Operator has read and understands all the above requirements ****Operator's Signature: David Sovenson Des Date: 4/2/19 After Office ding I. Post Office all valves. B. Install and wrench tighten all valve plugs C. Close and hand tighten all valve plugs C. Close and hand tighten all protective housings and covers. D. Verify Four prescribed placards are properly placed in placard holders that are in good condition. Placards are in good condition and visible at a reasonable distance, not dirty, torn, or faded. Material I.D. number on placard is: 10. Post Office ding Inspection Activity: 49 CFR 173.24b; 49 CFR 173.31(d); 49 CFR 174.67(k) A. Dome protective housing lid is attached and opens and closes properly. B. Vent cover on top of dome lid is attached and opens and closes properly. C. Dome protective housing wall openings (port holes) are equipped with operational closures. D. Dome protective housing pin has an attachment chain and is in good condition. E. All plugs on liquid and vapor valves are in place with chains attached (sample valve plug does not need a chain). F. All items listed below have no missing or damaged parts and no visible signs of leakage: a. All valves. b. Thermometer well C. B. G. Safety valve is visibly in good condition and clear of paperwork, trash, and objects. H. Thermometer well cap and "O' ring seal are in good condition and thermometer well cap is hand tight only. I. Top platforms and railling are in good condition (not bent or broken). J. Tankcar is stenciled properly on both sides with the following: Liquefled Petroleum Gas & Non-Odorized. L. Tank and Safety Valve inspection / test dates are current. (Document below if past to below if past on the top with the following: Liquefled Petroleum Gas & Non-Odorized. L. Tank and Safety Valve inspection / test dates are current. (Document below if past obeover). A. Tankcar is e	\mathbf{z}	A. T	he tankcar must be	gauged, sampled,	and sample results	-	oading	TEMP#	
After Offloading I. Post Offloading Closure Activity: 49 CFR 172.330; 172.504; 173.24b; 49 CFR 173.31(d); 49 CFR 174.67(k) A. Securely close all valves. B. Install and wrench tighten all protective housings and covers. D. Verify Four prescribed placards are properly placed in placard holders that are in good condition. Placards are in good condition and visible at a reasonable distance, not dirty, torn, or faded. Material I.D. number on placard is: 10. Post Offloading Inspection Activity: 49 CFR 173.24b; 49 CFR 173.31(d); 49 CFR 174.67(k) A. Dome protective housing lid is attached and opens and closes properly. B. Vent cover on top of dome lid is attached and in proper working order. C. Dome protective housing pin has an attachment chain and is in good condition. E. All plugs on liquid and vapor valves are in place with chains attached (sample valve plug does not need a chain). F. All items listed below have no missing or damaged parts and no visible signs of leakage: A. All valves. G. Safety valve is visibly in good condition and clear of paperwork, trash, and objects. H. Thermometer well cap and "O" ring seal are in good condition and thermometer well cap is hand tight only. I. Top platforms and railing are in good condition (not bent or broken). J. J. Tankcar hand brake, wheels, brake pads, ladders, and all other external parts appear to be in good condition. K. Tankcar is stenciled properly on both sides with the following: Liquefied Petroleum Gas & Non-Odorized. L. Tank and Safety Valve inspection / test dates are current. (Document below if past due) III. Appropriate Action (Complete this section and turn form in with other applicable paperwork for this tankcar): A. Tankcar is stenciled properly on both sides with the following: Liquefied Petroleum Gas & Non-Odorized. A. Tankcar is stenciled properly on both sides with the following: Liquefied Petroleum Gas & Non-Odorized. A. Tankcar is stenciled properly on both sides with the following: Liquefied Petroleum Gas & Non-Odorized.		– Fe	erndale Storage Ter	minal Policy	("NA")	f circled, indicates no			
After Offloading I. Post Offloading Closure Activity: 49 CFR 172.330; 172.504; 173.24b; 49 CFR 173.31(d); 49 CFR 174.67(k) A. Securely close all valves. B. Install and wrench tighten all valve plugs C. Close and hand tighten all protective housings and covers. D. Verify there is no leakage of liquid or vapor from any point. F. Verify Four prescribed placards are properly placed in placard holders that are in good condition. Placards are in good condition and visible at a reasonable distance, not dirty, torn, or faded. Material I.D. number on placard is: 1075 II. Post Offloading Inspection Activity: 49 CFR 173.24b; 49 CFR 173.31(d); 49 CFR 174.67(k) A. Dome protective housing lid is attached and opens and closes properly. B. Vent cover on top of dome lid is attached and opens and closes properly. C. Dome protective housing wall openings (port holes) are equipped with operational closures. D. Dome protective housing pin has an attachment chain and is in good condition. E. All plugs on liquid and vapor valves are in place with chains attached (sample valve plug does not need a chain). F. All items listed below have no missing or damaged parts and no visible signs of leakage: All valves. D. Thermometer well C. Safety valve is visibly in good condition and clear of paperwork, trash, and objects. H. Thermometer well cap and "O" ring seal are in good condition and thermometer well cap is hand tight only. J. Tankcar is stenciled properly on both sides with the following: Liquefied Petroleum Gas & Non-Odorized. L. Tank and Safety Valve inspection / test dates are current. (Document below if past due) III. Appropriate Action (Complete this section and turn form in with other applicable paperwork for this tankcar): A. Tankcar is empty, dome lid pinned closed, gates in place, port holes covered, tankcar is OK and ready to release.	Op	erat	or has read and	understands all	the above requi	rements			
I. Post Offloading Closure Activity: 49 CFR 172.330; 172.504; 173.24b; 49 CFR 173.31(d); 49 CFR 174.67(k) A. Securely close all valves. B. Install and wrench tighten all valve plugs C. Close and hand tighten all protective housings and covers. D. Verify there is no leakage of liquid or vapor from any point. F. Verify Four prescribed placards are properly placed in placard holders that are in good condition. Placards are in good condition and visible at a reasonable distance, not dirty, torn, or faded. Material I.D. number on placard is: 1075 II. Post Offloading Inspection Activity: 49 CFR 173.24b; 49 CFR 173.31(d); 49 CFR 174.67(k) A. Dome protective housing lid is attached and opens and closes properly. B. Vent cover on top of dome lid is attached and in proper working order. C. Dome protective housing wall openings (port holes) are equipped with operational closures. D. Dome protective housing wall openings (port holes) are equipped with operational closures. D. Dome protective housing pin has an attachment chain and is in good condition. E. All plugs on liquid and vapor valves are in place with chains attached (sample valve plug does not need a chain). F. All items listed below have no missing or damaged parts and no visible signs of leakage: All valves. b. Thermometer well c. Relief valve. d. Gauging device. G. Safety valve is visibly in good condition and clear of paperwork, trash, and objects. H. Thermometer well cap and "O" ring seal are in good condition and thermometer well cap is hand tight only. I. Top platforms and railing are in good condition (not bent or broken). J. Tankcar hand brake, wheels, brake pads, ladders, and all other external parts appear to be in good condition. K. Tankcar is stenciled properly on both sides with the following: Liquefied Petroleum Gas & Non-Odorized. L. Tank and Safety Valve inspection / test dates are current. (Document below if past due) III. Appropriate Action (Complete this section and turn form in with other applicable paperwork for this tankcar): A. Tankc	***	Оре	erator's Signatur	e: <u>Pav</u>	ud Sovense	on_	DS Date	e: <u>4/2/19</u>	
A. Securely close all valves. Install and wrench tighten all valve plugs C. Close and hand tighten all protective housings and covers. D. Verify there is no leakage of liquid or vapor from any point. F. Verify Four prescribed placards are properly placed in placard holders that are in good condition. Placards are in good condition and visible at a reasonable distance, not dirty, torn, or faded. Material I.D. number on placard is: 11. Post Offloading Inspection Activity: 49 CFR 173.24b; 49 CFR 173.31(d); 49 CFR 174.67(k) A. Dome protective housing lid is attached and opens and closes properly. B. Vent cover on top of dome lid is attached and in proper working order. C. Dome protective housing wall openings (port holes) are equipped with operational closures. D. Dome protective housing pin has an attachment chain and is in good condition. E. All plugs on liquid and vapor valves are in place with chains attached (sample valve plug does not need a chain). F. All items listed below have no missing or damaged parts and no visible signs of leakage: All valves. b. Thermometer well c. Relief valve. d. Gauging device. G. Gasfety valve is visibly in good condition and clear of paperwork, trash, and objects. H. Thermometer well cap and "O" ring seal are in good condition and thermometer well cap is hand tight only. I. Top platforms and railing are in good condition (not bent or broken). J. Tankcar hand brake, wheels, brake pads, ladders, and all other external parts appear to be in good condition. K. Tankcar is stenciled properly on both sides with the following: Liquefied Petroleum Gas & Non-Odorized. L. Tank and Safety Valve inspection / test dates are current. (Document below if past due) 11. Appropriate Action (Complete this section and turn form in with other applicable paperwork for this tankcar): A. Tankcar is empty, dome lid pinned closed, gates in place, port holes covered, tankcar is OK and ready to release.	<u>A1</u>	fter	Offloading						
D. Verify there is no leakage of liquid or vapor from any point. F. Verify Four prescribed placards are properly placed in placard holders that are in good condition. Placards are in good condition and visible at a reasonable distance, not dirty, torn, or faded. Material I.D. number on placard is: 1. Post Offloading Inspection Activity: 49 CFR 173.24b; 49 CFR 173.31(d); 49 CFR 174.67(k) A. Dome protective housing lid is attached and opens and closes properly. B. Vent cover on top of dome lid is attached and in proper working order. C. Dome protective housing wall openings (port holes) are equipped with operational closures. D. Dome protective housing pin has an attachment chain and is in good condition. E. All plugs on liquid and vapor valves are in place with chain sattached (sample valve plug does not need a chain). F. All items listed below have no missing or damaged parts and no visible signs of leakage: A. All valves. b. Thermometer well C. Gauging device. G. Safety valve is visibly in good condition and clear of paperwork, trash, and objects. H. Thermometer well cap and "O" ring seal are in good condition and thermometer well cap is hand tight only. I. Top platforms and railing are in good condition (not bent or broken). J. Tankcar hand brake, wheels, brake pads, ladders, and all other external parts appear to be in good condition. K. Tankcar is stenciled properly on both sides with the following: Liquefied Petroleum Gas & Non-Odorized. L. Tank and Safety Valve inspection / test dates are current. (Document below if past due) III. Appropriate Action (Complete this section and turn form in with other applicable paperwork for this tankcar): A. Tankcar is empty, dome lid pinned closed, gates in place, port holes covered, tankcar is OK and ready to release.	I.	Pos	st Offloading Closu	ure Activity: 49 CF	FR 172.330; 172.504	4; 173.24b; 49 CFR 17	'3.31(d); 49	CFR 174.67(k)	
A. Dome protective housing lid is attached and opens and closes properly. B. Vent cover on top of dome lid is attached and in proper working order. C. Dome protective housing wall openings (port holes) are equipped with operational closures. D. Dome protective housing pin has an attachment chain and is in good condition. E. All plugs on liquid and vapor valves are in place with chains attached (sample valve plug does not need a chain). F. All items listed below have no missing or damaged parts and no visible signs of leakage: All valves. b. Thermometer well c. Relief valve. d. Gauging device. G. Safety valve is visibly in good condition and clear of paperwork, trash, and objects. H. Thermometer well cap and "O" ring seal are in good condition and thermometer well cap is hand tight only. I. Top platforms and railing are in good condition (not bent or broken). J. Tankcar hand brake, wheels, brake pads, ladders, and all other external parts appear to be in good condition. K. Tankcar is stenciled properly on both sides with the following: Liquefied Petroleum Gas & Non-Odorized. Tank and Safety Valve inspection / test dates are current. (Document below if past due) III. Appropriate Action (Complete this section and turn form in with other applicable paperwork for this tankcar): A. Tankcar is empty, dome lid pinned closed, gates in place, port holes covered, tankcar is OK and ready to release.	Z	B. C. D. F.	Install and wrench t Close and hand tight Verify there is no le Verify Four prescrib	ighten all valve plug nten all protective h akage of liquid or va ed placards are pro	ousings and covers. apor from any point. operly placed in plac	ard holders that are in	_		n good
 C. Dome protective housing wall openings (port holes) are equipped with operational closures. D. Dome protective housing pin has an attachment chain and is in good condition. E. All plugs on liquid and vapor valves are in place with chains attached (sample valve plug does not need a chain). F. All items listed below have no missing or damaged parts and no visible signs of leakage: All valves. B. Thermometer well C. Relief valve. d. Gauging device. G. Safety valve is visibly in good condition and clear of paperwork, trash, and objects. H. Thermometer well cap and "O" ring seal are in good condition and thermometer well cap is hand tight only. I. Top platforms and railing are in good condition (not bent or broken). J. Tankcar hand brake, wheels, brake pads, ladders, and all other external parts appear to be in good condition. K. Tankcar is stenciled properly on both sides with the following: Liquefied Petroleum Gas & Non-Odorized. L. Tank and Safety Valve inspection / test dates are current. (Document below if past due) III. Appropriate Action (Complete this section and turn form in with other applicable paperwork for this tankcar): A. Tankcar is empty, dome lid pinned closed, gates in place, port holes covered, tankcar is OK and ready to release. 	H.	Pos	st Offloading Inspe	ection Activity: 49	CFR 173,24b; 49 C	FR 173.31(d); 49 CFF	R 174.67(k)		
Tank and Safety Valve inspection / test dates are current. (Document below if past due) III. Appropriate Action (Complete this section and turn form in with other applicable paperwork for this tankcar): A. Tankcar is empty, dome lid pinned closed, gates in place, port holes covered, tankcar is OK and ready to release.	MAN a b c d.	B. C. D. E. F. All The Reli Gau	Vent cover on top on Dome protective how Dome protective how All plugs on liquid and All items listed below valves. In the company of the control of the co	of dome lid is attache dusing wall openings dusing pin has an at nd vapor valves are w have no missing	ed and in proper wo s (port holes) are eq tachment chain and e in place with chain or damaged parts a	rking order. uipped with operationa is in good condition. s attached (sample va nd no visible signs of l	lve plug doe eakage:	es not need a chain).
△ A. Tankcar is empty, dome lid pinned closed, gates in place, port holes covered, tankcar is OK and ready to release.		G. H. J. K.	Safety valve is visib Thermometer well of Top platforms and r Tankcar hand brake Tankcar is stenciled	cap and "O" ring sea railing are in good co e, wheels, brake pao I properly on both s	al are in good condit ondition (not bent or ds, ladders, and all ides with the followi	ion and thermometer v broken). other external parts ap ng: Liquefied Petroleur	well cap is h pear to be i n Gas & No	n good condition.	
	III. A	Appro	opriate Action (Cor	mplete this section	and turn form in	with other applicable	paperwork	for this tankcar):	
								and ready to releas	e.
*** Operator's Signature: Mate: 4/2/19		-		/	MARIA	m		4/2/19	-

Sample Name 2-1 PROX 93594 LOCHEARN, AB

4100 Unick Rd Ferndale, WA 98248

Sample Information: (check one)	Tank	Pipeline	Tankcar_	Truck	
Other (describe):					

Instrument:

Agilent-GC-Two

Injection date:

4/2/2019 4:28:22 PM

Acq. method:

GC2.M

Sequence:

GC2 SEQ 2019-04-02 15-42-00

Last changed:

8/16/2017 2:43:27 AM

Calib. data modified:

8/16/2017 2:43:04 AM

Data file:

C:\Chem32\2\Data\2019-03\GC2 SEQ 2019-04-02 15-42-00\NV-F0404.D

Name	RT [min]	Wt %	LV %	Mol %		
Methane	1.570	0.052	0.089	0.144	_ 4	
Ethane	1.857	0.373	0.531	0.547	Freeze Testminute	:S
Propane	2.404	99.124	98.978	98.951		
Propylene	3.081	0.061	0.059	0.064	Total Area 457825	5
I-Butane	3.393	0.181	0.163	0.137	Total Peaks 10	
N-Butane	4.360	0.207	0.180	0.157		
Butene-1	5.684	0.000	0.000	0.000		
I-Butylene	6.056	0.000	0.000	0.000	Specific Gravity 0.5070	
T-Butene-2	7.201	0.000	0.000	0.000	Vapor Pressure 193	
I-Pentane	7.374	0.001	0.001	0.000	vapor ressure	
C-Butene-2		0.000	0.000	0.000		
N-Pentane		0.000	0.000	0.000		
1,3-Butadiene		0.000	0.000	0.000		
	Sum	100.000				

Results in Wt %

N-Butane	0.207	C4 Olefins	< 0.001
Propane	99.124	Olefins	< 0.001
·	0.061	C1 - C3s	99.549
Propylene	0.061	Butanes	0.388
		Pentanes	< 0.001

Copper Strip: (circle one) 1A 1B 1C 2A 2B 3C N/A GC Performed By: (initials)



DRY

Tank car Number:	PROX 36405	Spot: <u>2-6</u>
Prior to Offloading		
A. Operator must ha	ments: 49 CFR 174.67(i) Ive an unobstructed view of tankcar and offloading components throug Ive the capability to halt the flow of product immediately. attended at all times while offloading connections are attached. Dedic	
	ments: 29 CFR part 1910, subpart H; 49 CFR 172.330; 49 CFR 173. blue flags applied, handbrake set, wheels chocked, and ground strap	
A. The tankcar must be	ing Requirements: – Ferndale Storage Terminal Policy be gauged, sampled, and sample results reviewed prior to offloading ely – NOT BROKEN or MISSING	OUTAGE # 18.5 TEMP # 54 SHIPPER # 133028
 Ferndale Storage T 	und prior to offloading in the space provided below: erminal Policy "NA" (If circled, indicates no discrept, list below. If needed, use the back of this form. Office staff will ensure.	
Operator has read and	d understands all the above requirements	
*** Operator's Signatu	ure:	Date: <u>4/2/19</u>
After Offloading		
I. Post Offloading Clo	sure Activity: 49 CFR 172.330; 172.504; 173.24b; 49 CFR 173,31(d	i); 49 CFR 174,67(k)
C. Close and hand to D. Verify there is no Verify Four presci	valves. In tighten all valve plugs Ighten all protective housings and covers. Il leakage of liquid or vapor from any point. Ir libed placards are properly placed in placard holders that are in good Ighten all liber are properly placed. In the liber and liber and liber are in good leasonable distance, not dirty, torn, or faded. In the liber and liber are in good leasonable distance, not dirty, torn, or faded.	
II. Post Offloading Insp	pection Activity: 49 CFR 173.24b; 49 CFR 173.31(d); 49 CFR 174.6	57(k) .
B. Vent cover on top C. Dome protective I D. Dome protective I E. All plugs on liquid	housing lid is attached and opens and closes properly. of dome lid is attached and in proper working order. housing wall openings (port holes) are equipped with operational clost housing pin has an attachment chain and is in good condition. and vapor valves are in place with chains attached (sample valve plu low have no missing or damaged parts and no visible signs of leakage	ig does not need a chain).
G. Safety valve is vis H. Thermometer wel I. Top platforms and J. Tankcar hand bra K. Tankcar is stencil	sibly in good condition and clear of paperwork, trash, and objects. I cap and "O" ring seal are in good condition and thermometer well cad railing are in good condition (not bent or broken). ke, wheels, brake pads, ladders, and all other external parts appear to the properly on both sides with the following: Liquefied Petroleum Gas Valve inspection / test dates are current. (Document below if past due	o be in good condition. & Non-Odorized.
III. Appropriate Action (C	omplete this section and turn form in with other applicable paper	rwork for this tankcar):
A. Tankcar is empty, B. Tankcar is empty	dome lid pinned closed, gates in place, port heres covered, tankcar is and bad ordered. Description of defect (if needed, use back of this for	s OK and ready to release. orm):
		4/2/19
*** Operator's Signatu	re: DAT	
NOTE: PER DOT REG	JULA HOISO, CIVIL AND CRIMINAL PENALTIES CAN BE LE	EVIED FOR THINKCARS THAT

Sample Name	2-6 PROX	36405	SBEAMER	AB

4100 Unick Rd Ferndale, WA 98248

Sample Information: (check one)	Tank	Pipeline	Tankcar_V	Truck
Other (describe):				

Instrument:

Agilent-GC-Two

Injection date:

4/2/2019 12:41:50 PM

Acq. method:

GC2.M

Sequence:

GC2 SEQ 2019-04-02 11-50-43

Last changed:

8/16/2017 2:43:27 AM

Calib. data modified:

8/16/2017 2:43:04 AM

Data file:

C:\Chem32\2\Data\2019-03\GC2 SEQ 2019-04-02 11-50-43\NV-F0404.D

Name	RT [min]	Wt %	LV %	Mol %	
Methane	1.570	0.057	0.095	0.154	Fronze Test 1+ minutes
Ethane	1.855	2.303	3.251	3.349	Freeze Testminutes
Propane	2.406	96.294	95.456	95.482	
Propylene	3.071	0.005	0.005	0.005	Total Area 4543057
I-Butane	3.392	1.202	1.074	0.904	Total Peaks 12
N-Butane	4.361	0.128	0.111	0.097	
Butene-1	5.708	0.005	0.004	0.004	
I-Butylene	6.016	0.006	0.005	0.005	Specific Gravity 0.5046
T-Butene-2	7.011	0.000	0.000	0.000	Vapor Pressure 204
I-Pentane		0.000	0.000	0.000	vapor riessure 204
C-Butene-2	7.910	0.000	0.000	0.000	
N-Pentane	9.265	0.000	0.000	0.000	
1,3-Butadiene	10.124	0.000	0.000	0.000	
	Sum	100.000			

Results in Wt %

N-Butane	0.128	C4 Olefins	0.011
Propane	96.294	Olefins	0.011
•		C1 - C3s	98.653
Propylene	0.005	Butanes	1.33
		Pentanes	< 0.001

Copper Strip: (circle one) 1A 1B 1C 2A 2B 3C N/A

Performed By: (initials)



DRY

Tank	car Number:	GATX 218332	Spot: <u>2-5</u>
Prior	to Offloading		
I. Att	Operator must have Operator must have	ents: 49 CFR 174.67(i) an unobstructed view of tankcar and offloading components throughou the capability to halt the flow of product immediately. tended at all times while offloading connections are attached. Dedicate	
II. Pre	paration Requirem Derailer in place, bl	ents: 29 CFR part 1910, subpart H; 49 CFR 172.330; 49 CFR 173.31(a ue flags applied, handbrake set, wheels chocked, and ground strap atta	a) (3); 49 CFR 174.67 ched.
6 AT	he tankcar must be	g Requirements: – Ferndale Storage Terminal Policy gauged, sampled, and sample results reviewed prior to offloading – NOT BROKEN or MISSING	OUTAGE # 17.75 TEMP # 55 SHIPPER # 133023
– F	erndale Storage Ter	minal Policy (If circled, indicates no discrepance list below. If needed, use the back of this form. Office staff will ensure staff.)	
Operat	or has read and	understands all the attove requirements	
*** O p	erator's Signatur	e: VH Da	te: <u>4/2/19</u>
After	Offloading		
I. Po	st Offloading Closu	re Activity: 49 CFR 172.330; 172.504; 173.24b; 49 CFR 173.31(d); 49	9 CFR 174.67(k)
B. C. D. F. condition	Close and hand tight Verify there is no leave Verify Four prescrib	alves. ighten all valve plugs iten all protective housings and covers. akage of liquid or vapor from any point. ed placards are properly placed in placard holders that are in good cond sonable distance, not dirty, torn, or faded. Material I.D. number on place	
II. Po	st Offloading Inspe	ction Activity: 49 CFR 173.24b; 49 CFR 173.31(d); 49 CFR 174.67(k)	
a. All b. The c. Rel	Vent cover on top o Dome protective ho Dome protective ho All plugs on liquid as	using lid is attached and opens and closes properly. f dome lid is attached and in proper working order. using wall openings (port holes) are equipped with operational closures. using pin has an attachment chain and is in good condition. nd vapor valves are in place with chains attached (sample valve plug down have no missing or damaged parts and no visible signs of leakage:	
G. H. T. S. K. L.	Safety valve is visib Thermometer well of Top platforms and r Tankcar hand brake Tankcar is stenciled	ly in good condition and clear of paperwork, trash, and objects. ap and "O" ring seal are in good condition and thermometer well cap is ailing are in good condition (not bent or broken). by wheels, brake pads, ladders, and all other external parts appear to be a properly on both sides with the following: Liquefied Petroleum Gas & N alve inspection / test dates are current. (Document below if past due)	in good condition.
III. Appı	opriate Action (Con	nplete this section and turn form in with other applicable paperwor	k for this tankcar):
A. B.	Tankcar is empty, d Tankcar is empty ar	ome lid pinned closed, gates in place, port holes covered, tankcar is Ok nd bad ordered. Description of defect (if needed, use back of this form)	and ready to release.
			1/2 10
-	erator's Signature		42-19
NOTE	: PER DOT REGU	ILATIONS, CIVIL AND CRIMINAL PENALTIES CAN BE LEVIE	D FOR TANKCARS THAT

Sample Name 2-5	GATX 218332	SBEAMER AB
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4100 Unick Rd Ferndale, WA 98248

Sample Information: (check one)	Tank	Pipeline	Tankcar_V	Truck
Other (describe):				

instrument:

Agilent-GC-Two

Injection date:

4/2/2019 12:27:49 PM

Acq. method:

GC2.M

Sequence:

GC2 SEQ 2019-04-02 11-50-43

Last changed:

8/16/2017 2:43:27 AM

Calib. data modified:

8/16/2017 2:43:04 AM

Data file:

C:\Chem32\2\Data\2019-03\GC2 SEQ 2019-04-02 11-50-43\NV-F0303.D

Name	RT [min]	Wt %	LV %	Mol %	
Methane	1.569	0.032	0.055	0.089	Freeze Test 1 minutes
Ethane	1.854	1.951	2.758	2.843	Freeze Testminutes
Propane	2.406	96.610	95.934	96.006	
Propylene	3.071	0.005	0.005	0.006	Total Area 4492194
I-Butane	3.391	1.225	1.097	0.924	Total Peaks 13
N-Butane	4.360	0.162	0.140	0.122	
Butene-1	5.701	0.006	0.005	0.005	
I-Butylene	6.020	0.008	0.007	0.006	Specific Gravity 0.5052
T-Butene-2	7.006	0.000	0.000	0.000	Vapor Pressure 200
I-Pentane	7.468	0.000	0.000	0.000	vapor Pressure 200
C-Butene-2	7.972	0.000	0.000	0.000	
N-Pentane	9.028	0.000	0.000	0.000	
1,3-Butadiene	10.321	0.000	0.000	0.000	
	Sum	100.000			

Results in Wt %

N-Butane	0.162	C4 Olefins	0.014
Propane	96.61	Olefins	0.014
		C1 - C3s	98.593
Propylene 0.005		Butanes	1.387
		Pentanes	< 0.001

Copper Strip: (circle one) 1A 1B 1C 2A 2B 3C N/A GC Performed By: (initials)

PETROGAS FERNDALE STORAGE TERMINAL TANKCAR OFFLOADING CHECKLIST

DRY

Tank	car Number:	TILX 306047	Spot: <u>1-6</u>
Prior	to Offloading		
I. Att	endance Requirem Operator must hav Operator must hav	nents: 49 CFR 174.67(i) e an unobstructed view of tankcar and offloading components throughout e the capability to halt the flow of product immediately. ttended at all times while offloading connections are attached. Dedicated	
II. Pre	paration Requirem Derailer in place, b	nents: 29 CFR part 1910, subpart H; 49 CFR 172.330; 49 CFR 173.31(a lue flags applied, handbrake set, wheels chocked, and ground strap attac) (3); 49 CFR 174.67 hed.
A. 7	he tankcar must be	g Requirements: – Ferndale Storage Terminal Policy gauged, sampled, and sample results reviewed prior to offloading – NOT BROKEN or MISSING	OUTAGE # 19 TEMP # 57 SHIPPER # 80016
– F	erndale Storage Te	nd prior to offloading in the space provided below: rminal Policy "NA" (If circled, indicates no discrepanci- list below. If needed, use the back of this form. Office staff will ensure s	,
Operat	or has read and	understands all the above requirements	
*** Op	erator's Signatur	re: JB Date	e: <u>4/2/19</u>
After	Offloading		
I. Po	st Offloading Clos	ure Activity: 49 CFR 172.330; 172.504; 173.24b; 49 CFR 173.31(d); 49	CFR 174,67(k)
B.C.D.F.	Close and hand tig Verify there is no le Verify <i>Four</i> prescrib	ralves. tighten all valve plugs hten all protective housings and covers. hakage of liquid or vapor from any point. hed placards are properly placed in placard holders that are in good cond hatensale distance, not dirty, torn, or faded. Material I.D. number on placa	4.0
II. Po	st Offloading Inspe	ection Activity: 49 CFR 173.24b; 49 CFR 173.31(d); 49 CFR 174.67(k)	
B. C. D. D. E. F. All b. The c. Rel	Vent cover on top of Dome protective ho Dome protective ho All plugs on liquid a	pusing lid is attached and opens and closes properly. If dome lid is attached and in proper working order. Sousing wall openings (port holes) are equipped with operational closures. Sousing pin has an attachment chain and is in good condition. Ind vapor valves are in place with chains attached (sample valve plug down whave no missing or damaged parts and no visible signs of leakage:	es not need a chain).
GH. J.	Safety valve is visib Thermometer well of Top platforms and in Tankcar hand brake Tankcar is stenciled	oly in good condition and clear of paperwork, trash, and objects. cap and "O" ring seal are in good condition and thermometer well cap is brailing are in good condition (not bent or broken). e, wheels, brake pads, ladders, and all other external parts appear to be in the properly on both sides with the following: Liquefied Petroleum Gas & Notate inspection / test dates are current. (Document below if past due)	n good condition.
III. Appr	opriate Action (Co	mplete this section and turn form in with other applicable paperworl	c for this tankcar):
Ø A. □ B.	Tankcar is empty, of Tankcar is empty a	dome lid pinned closed, gates in place, port holes covered, tankcar is OK and bad ordered. Description of defect (if needed, use back of this form):	and ready to release.
-	rator's Signature		4/4/19
NOTE	: PER DOT REGU	JLÁTIONS, CIVIL AND CRIMINAL PENALTIES CAN BE LEVIE	D FOR TANKCARS THAT

Sample Name	1-6 TII X	306047	SCOTFORD	AB
Outilpio Hairio	1 0 11-/	000011		

4100 Unick Rd Ferndale, WA 98248

Sample Information: (check one)	Tank	Pipeline	Tankcar	Truck

Other (describe):

Instrument:

Agilent-GC-One

Injection date:

4/2/2019 12:27:28 PM

Acq. method:

GC1.M

Sequence:

GC1 SEQ 2019-04-02 11-50-40

Last changed:

4/26/2017 9:25:43 AM

Calib. data modified:

4/26/2017 10:09:09 AM

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L.J		LøL	111	v	

C:\Chem32\1\Data\2019-03\GC1 SEQ 2019-04-02 11-50-40\001F0301.D

Name	RT [min]	Wt %	LV %	Mol %	4 /
Methane	1.601	0.082	0.138	0.224	1 <i>t</i>
Ethane	1.905	0.931	1.322	1.363	Freeze Testminutes
Propane	2.482	97.322	97.051	97.146	
Propylene	3.205	0.022	0.021	0.023	Total Area 5089650
I-Butane	3.535	1.383	1.243	1.048	Total Peaks 8
N-Butane	4.566	0.259	0.224	0.196	
Butene-1		0.000	0.000	0.000	
I-Butylene	6.319	0.000	0.000	0.000	Specific Gravity 0.5068
T-Butene-2		0.000	0.000	0.000	Vapor Pressure 196
I-Pentane	7.755	0.000	0.000	0.000	Vapor Pressure 190
C-Butene-2		0.000	0.000	0.000	
N-Pentane		0.000	0.000	0.000	
1,3-Butadiene		0.000	0.000	0.000	
	Sum	100.000			

Results in Wt %

N-Butane	0.259	C4 Olefins	< 0.001
Propane	97.322	Olefins	0.022
	0.022	C1 - C3s	98.357
Propylene	0.022	Butanes	1.642
		Pentanes	< 0.001

Copper Strip: (circle one) 1A 1B 1C 2A 2B 3C N/A GC Performed By: (initials)

PETROGAS FERNDALE STORAGE TERMINAL TANKCAR OFFLOADING CHECKLIST

DRY

Tank car Number:	TILX 306846	Spot: <u>1-5</u>			
Prior to Offloading					
I. Attendance Requirem A. Operator must hav B. Operator must hav	nents: 49 CFR 174.67(i) e an unobstructed view of tankcar and offloading components e the capability to halt the flow of product immediately. ttended at all times while offloading connections are attached				
	nents: 29 CFR part 1910, subpart H; 49 CFR 172.330; 49 CF lue flags applied, handbrake set, wheels chocked, and ground				
A. The tankcar must be	g Requirements: - Ferndale Storage Terminal Policy gauged, sampled, and sample results reviewed prior to offly - NOT BROKEN or MISSING	OUTAGE # 19 pading TEMP # 55 SHIPPER # 80015			
 Ferndale Storage Te If discrepancies are found, 	rminal Policy "NA" (If circled, indicates no list below. If needed, use the back of this form. Office staff vunderstands all the above requirements				
Operator has read and	understands an the above requirements				
*** Operator's Signatu	re:	ZR Date: <u>4/2/19</u>			
After Offloading					
I. Post Offloading Clos	ure Activity: 49 CFR 172.330; 172,504; 173.24b; 49 CFR 17	3.31(d); 49 CFR 174.67(k)			
D. Verify there is no le					
II. Post Offloading Inspe	ection Activity: 49 CFR 173.24b; 49 CFR 173.31(d); 49 CFF	R 174.67(k)			
B. Vent cover on top of C. Dome protective hold E. All plugs on liquid a a. All valves.	pusing lid is attached and opens and closes properly. of dome lid is attached and in proper working order. pusing wall openings (port holes) are equipped with operation ousing pin has an attachment chain and is in good condition. and vapor valves are in place with chains attached (sample valve no missing or damaged parts and no visible signs of land to the chains attached.	lve plug does not need a chain)			
H. Thermometer well J. Top platforms and Tankcar hand brak Tankcar is stencile	oly in good condition and clear of paperwork, trash, and object cap and "O" ring seal are in good condition and thermometer railing are in good condition (not bent or broken). e, wheels, brake pads, ladders, and all other external parts are d properly on both sides with the following: Liquefied Petroleu alve inspection / test dates are current. (Document below if pa	well cap is hand tight only. pear to be in good condition. m Gas & Non-Odorized.			
III. Appropriate Action (Complete this section and turn form in with other applicable paperwork for this tankcar):					
	dome lid pinned closed, gates in place, port holes covered, tal nd bad ardered. Description of defect (if needed, use back o				
*** Operator's Signature		DATE: 4/2/19			
	JLATIONS, CIVIL AND CRIMINAL PENALTIES CAN D OR IMPROPERLY SECURED FOR SHIPMENT. 4				

Sample Name 1-5 TILX 306846 SCOTFORD AB

4100 Unick Rd Ferndale, WA 98248

Sample Information: (check one)	Tank	Pipeline	Tankcar_	<u>/</u>	Truck	
Other (describe):						

Instrument:

Agilent-GC-One

Injection date:

4/2/2019 12:41:18 PM

Acq. method:

GC1.M

Sequence:

GC1 SEQ 2019-04-02 11-50-40

Last changed:

4/26/2017 9:25:43 AM

Calib. data modified: 4/26/2017 10:09:09 AM

Data file:

C:\Chem32\1\Data\2019-03\GC1 SEQ 2019-04-02 11-50-40\001F0401.D

Name	RT [min]	Wt %	LV %	Mol %	
Methane	1.602	0.018	0.030	0.048	_ 1+
Ethane	1.906	0.778	1.106	1.141	Freeze Testminutes
Propane	2.484	97.482	97.318	97.498	
Propylene	3.206	0.019	0.019	0.020	Total Area 5009764
I-Butane	3.536	1.541	1.387	1.169	Total Peaks 8
N-Butane	4.566	0.161	0.140	0.123	
Butene-1		0.000	0.000	0.000	
I-Butylene	6.323	0.001	0.000	0.000	Specific Gravity 0.5072
T-Butene-2		0.000	0.000	0.000	Vapor Pressure 192
I-Pentane	7.746	0.000	0.000	0.000	Vapor i lessure 102
C-Butene-2		0.000	0.000	0.000	
N-Pentane		0.000	0.000	0.000	
1,3-Butadiene		0.000	0.000	0.000	
	Sum	100.000			

Results in Wt %

N-Butane	0.161	C4 Olefins	< 0.001
Propane	97.482	Olefins	0.02
·	0.019	C1 - C3s	98.297
Propylene	0.019	Butanes	1.702
		Pentanes	< 0.001

Copper Strip: (circle one) 1A 1B 2B 3C N/A

GC Performed By: (initials)



DRY

Tank	car Number:	PROX 36382	Spot: <u>2-4</u>			
Prior	to Offloading					
Ø A. ☑ B.	Operator must have Operator must have	ents: 49 CFR 174,67(i) e an unobstructed view of tankcar and offloading components throughout e the capability to halt the flow of product immediately. ttended at all times while offloading connections are attached. Dedicated				
		ents: 29 CFR part 1910, subpart H; 49 CFR 172.330; 49 CFR 173.31(a lue flags applied, handbrake set, wheels chocked, and ground strap attac				
□ / A. T	he tankcar must be	g Requirements: – Ferndale Storage Terminal Policy gauged, sampled, and sample results reviewed prior to offloading – NOT BROKEN or MISSING	OUTAGE # 18.5 TEMP # 52 SHIPPER # 133022			
– F	erndale Storage Ter	rminal Policy "NA" (If circled, indicates no discrepancie list below. If needed, use the back of this form. Office staff will ensure sl	es found). hipper is notified.			
<u>Operat</u>	or has read and	understands all the above requirements				
*** Op	erator's Signatur	e: Ds Dat	e: <u>4/2/19</u>			
<u>After</u>	Offloading					
I. Po	st Offloading Close	ure Activity: 49 CFR 172.330; 172.504; 173.24b; 49 CFR 173.31(d); 49	CFR 174,67(k)			
B.C.D.F.	Close and hand tigli Verify there is no le Verify Four prescrib	alves. ighten all valve plugs nten all protective housings and covers. akage of liquid or vapor from any point. sed placards are properly placed in placard holders that are in good condi sonable distance, not dirty, torn, or faded. Material I.D. number on placa				
II. Po	st Offloading Inspe	ection Activity: 49 CFR 173,24b; 49 CFR 173,31(d); 49 CFR 174,67(k)				
a. All b. The c. Reli	Vent cover on top of Dome protective ho Dome protective ho All plugs on liquid a	busing lid is attached and opens and closes properly. If dome lid is attached and in proper working order. Busing wall openings (port holes) are equipped with operational closures. Busing pin has an attachment chain and is in good condition. Individual to the condition of t	es not need a chain).			
	Safety valve is visib Thermometer well of Top platforms and in Tankcar hand brake Tankcar is stenciled	oly in good condition and clear of paperwork, trash, and objects. cap and "O" ring seal are in good condition and thermometer well cap is he railing are in good condition (not bent or broken). e, wheels, brake pads, ladders, and all other external parts appear to be in a properly on both sides with the following: Liquefied Petroleum Gas & Notatve inspection / test dates are current. (Document below if past due)	n good condition.			
III. Appropriate Action (Complete this section and turn form in with other applicable paperwork for this tankcar):						
A. B.	Tankcar is empty, of Tankcar is empty at	lome lid pinned closed, gates in place, port holes covered, tankcar is OK nd bad ordered. Description of defect (if needed, use back of this form):	and ready to release.			
*** Ope	erator's Signature	e:	4.2-19			

NOTE: PER DOT REGULATIONS, CIVIL AND CRIMINAL PENALTIES CAN BE LEVIED FOR TANKCARS THAT ARE OVERLOADED OR IMPROPERLY SECURED FOR SHIPMENT. 49 CFR 107.329, 107.331, 107.333

Sample Name 2-4 PROX 36382 S. BEAMER, A	Sample Name	2-4 PROX	36382 S.	BEAMER,	AB
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4100 Unick Rd

Ferndale, WA 98248

Sample Information: (check one) Tank____ Pipeline___ Tankcar_ V Truck____

Other (describe):

Instrument:

Agilent-GC-Two

injection date:

4/2/2019 9:50:29 AM

Acq. method:

GC2.M

Sequence:

GC2 SEQ 2019-04-02 08-53-08

Last changed:

8/16/2017 2:43:27 AM

Calib. data modified:

8/16/2017 2:43:04 AM

Data file:

C:\Chem32\2\Data\2019-03\GC2 SEQ 2019-04-02 08-53-08\NV-F0404.D

Name	RT [min]	Wt %	LV %	Mol %	
Methane	1.574	0.046	0.077	0.126	17
Ethane	1.858	(2.211)	3.122	3.217	Freeze Testminutes
Propane	2.409	96.418	95.622	95.659	
Propylene	3.076	0.005	0.005	0.005	Total Area 4538115
I-Butane	3.395	1.163	1.040	0.876	Total Peaks 12
N-Butane	4.364	0.144	0.124	0.108	
Butene-1	5.712	0.005	0.005	0.004	
I-Butylene	6.016	0.007	0.006	0.005	Specific Gravity 0.5047
T-Butene-2	6.996	0.000	0.000	0.000	Vapor Pressure 203
I-Pentane	7.415	0.000	0.000	0.000	Vapor Pressure 203
C-Butene-2	8.139	0.000	0.000	0.000	
N-Pentane		0.000	0.000	0.000	
1,3-Butadiene	10.184	0.000	0.000	0.000	
	Sum	100.000			

Results in Wt %

N-Butane	0.144	C4 Olefins	0.013
Propane	96.418	Olefins	0.013
	0.005	C1 - C3s	98.675
Propylene	0.005	Butanes	1.307
		Pentanes	< 0.001

Copper Strip: (circle one) 1A 1B 1C 2A 2B 3C N/A

GC Performed By: (initials)

Page 1 of 1

PETROGAS FERNDALE STORAGE TERMINAL TANKCAR OFFLOADING CHECKLIST

DRY

Tank car Number:	GATX 58603	Spot: <u>1-4</u>
Prior to Offloading		
I. Attendance Require A. Operator must h B. Operator must h	ements: 49 CFR 174.67(i) ave an unobstructed view of tankcar and offloading components th ave the capability to halt the flow of product immediately. e attended at all times while offloading connections are attached. D	
	ements: 29 CFR part 1910, subpart H; 49 CFR 172.330; 49 CFR blue flags applied, handbrake set, wheels chocked, and ground st	
A. The tankcar must	ling Requirements: – Ferndale Storage Terminal Policy be gauged, sampled, and sample results reviewed prior to offload rely – NOT BROKEN or MISSING	OUTAGE # 21 ding TEMP # 55 SHIPPER # 7516290
– Ferndale Storage	Dund prior to offloading in the space provided below: Terminal Policy "NA" (If circled, indicates no dis ad, list below. If needed, use the back of this form. Office staff will be added to the back of this form.	
Operator has read an	d understands all the above requirements	
*** Operator's Signat	rure:	Date: 4/2/19
After Offloading		
I. Post Offloading Clo	osure Activity: 49 CFR 172.330; 172.504; 173.24b; 49 CFR 173.3	31(d); 49 CFR 174.67(k)
C. Close and hand D. Verify there is no Verify Four preson	Il valves. ch tighten all valve plugs tighten all protective housings and covers. leakage of liquid or vapor from any point. cribed placards are properly placed in placard holders that are in governmentable distance, not dirty, torn, or faded. Material I.D. number	
II. Post Offloading Ins	spection Activity: 49 CFR 173.24b; 49 CFR 173.31(d); 49 CFR 1	74.67(k)
B. Vent cover on to Dome protective D. Dome protective E. All plugs on liqui	housing lid is attached and opens and closes properly. p of dome lid is attached and in proper working order. housing wall openings (port holes) are equipped with operational of housing pin has an attachment chain and is in good condition. d and vapor valves are in place with chains attached (sample valve elow have no missing or damaged parts and no visible signs of lead	plug does not need a chain).
G, Safety valve is view H. Thermometer we I. Top platforms ar J. Tankcar hand br	sibly in good condition and clear of paperwork, trash, and objects. ell cap and "O" ring seal are in good condition and thermometer well d railing are in good condition (not bent or broken). ake, wheels, brake pads, ladders, and all other external parts appe led properly on both sides with the following: Liquefied Petroleum (Valve inspection / test dates are current. (Document below if past of the states are current).	ar to be in good condition. Gas & Non-Odorized.
III. Appropriate Action (0	Complete this section and turn form in with other applicable pa	aperwork for this tankcar):
	v, dome lid pinned closed, gates in place, port holes covered, tanko v and bad ordered. Description of defect (if needed, use back of the	
*** Operator's Signatu	ure:	DATE: 4.2.19

	4 4 6 4 5 7 7			
Sample Name	1-4 GAIX	58603	SCOTFORD,	AB

4100 Unick Rd Ferndale, WA 98248

Sample Information: (check one) Tank____ Pipeline____ Tankcar_V Truck____

Other (describe):

Instrument:

Agilent-GC-One

Injection date:

4/2/2019 10:07:38 AM

Acq. method:

GC1.M

Sequence:

GC1 SEQ 2019-04-02 09-39-22

Last changed:

4/26/2017 9:25:43 AM

Calib. data modified:

4/26/2017 10:09:09 AM

Data file:

C:\Chem32\1\Data\2019-03\GC1 SEQ 2019-04-02 09-39-22\001F0302.D

Name	RT [min]	Wt %	LV %	Mol %		
Methane	1.605	0.026	0.043	0.070	Franzo Tost 1+	
Ethane	1.908	1.089	1.546	1.595	Freeze Test	minutes
Propane	2.484	97.273	96.964	97.106		
Propylene	3.207	0.027	0.026	0.028	Total Area	5050765
I-Butane	3.536	1.487	1.336	1.126	Total Peaks	7
N-Butane	4.566	0.098	0.085	0.074		
Butene-1		0.000	0.000	0.000		
l-Butylene	6.328	0.001	0.001	0.001	Specific Gravity	0.5066
T-Butene-2		0.000	0.000	0.000	Vapor Pressure	195
I-Pentane		0.000	0.000	0.000	vapor Pressure	190
C-Butene-2		0.000	0.000	0.000		
N-Pentane		0.000	0.000	0.000		
1,3-Butadiene		0.000	0.000	0.000		
	Sum	100.000				

Results in Wt %

N-Butane	0.098	C4 Olefins	< 0.001
Propane	97.273	Olefins	0.028
•	0.027	C1 - C3s	98.415
Propylene	0.027	Butanes	1.585
		Pentanes	< 0.001

Copper Strip: (circle one) 1A 1B 1C 2A 2B 3C N/A

GC Performed By: (initials)



DRY

Tank	car Number:		PROX 92350		Spot: <u>1-3</u>
-	to Offloading				
Att A.B. C.	Operator must have th	n unobstructed vie e capability to halt	w of tankcar and offloa the flow of product im	mediately.	out entire period of offloading. ted camera monitoring is OK.
II. Pre	paration Requirement Derailer in place, blue	s: 29 CFR part 19	910, subpart H; 49 CFF dbrake set, wheels cho	R 172.330; 49 CFR 173.3 cked, and ground strap at	1(a) (3); 49 CFR 174.67 tached.
A . 1	uging and Sampling F The tankcar must be ga Seal applied securely –	uged, sampled, ai	nd sample results revi	ninal Policy ewed prior to offloading	OUTAGE # <u>20</u> TEMP # <u>55</u> SHIPPER # <u>80013</u>
IV. List	discrepancies found	prior to offloadin	g in the space provi	ded below:	
– F	erndale Storage Termi	nal Policy	"NA" (If circ	led, indicates no discrepa rm. Office staff will ensur	
Operat	tor has read and un	derstands all ti	ne above requirement	<u>ents</u>	
*** On	erator's Signature:	The	micol	JB D	Pate: 4/2/19
9	o.a.o. o o.ga.a. o.				
<u>After</u>	Offloading				
I. Po	st Offioading Closure	Activity: 49 CFR	172.330; 172.504; 17	3.24b; 49 CFR 173.31(d);	49 CFR 174.67(k)
B. C.		ten all valve plugs n all protective hou age of liquid or vap placards are prop	isings and covers, or from any point, erly placed in placard h	nolders that are in good co Material I.D. number on pla	ondition, Placards are in good acard is: 1075
II. Po	st Offloading Inspecti	on Activity: 49 C	FR 173.24b; 49 CFR 1	73.31(d); 49 CFR 174.67	(k)
E.	Dome protective hous All plugs on liquid and All items listed below h	ome lid is attached ing wall openings (ing pin has an atta vapor valves are i	I and in proper working port holes) are equipp chment chain and is in n place with chains atta	order. ed with operational closur	
b. The	l valves. ermometer well ief valve. uging device.				
10 G.	Safety valve is visibly Thermometer well cap Top platforms and rail	and "O" ring seal ng are in good cor	are in good condition and ition of the indicate in good condition (not bent or broken)	and thermometer well capacen).	
J. K. L.	Tankcar is stenciled pr	operly on both sid	es with the following: L	r external parts appear to l iquefied Petroleum Gas 8 ument below if past due)	oe in good condition. Non-Odorized.
III. App	ropriate Action (Comp	lete this section a	and turn form in with	other applicable paperw	ork for this tankcar):
B.				noles covered, tankcar is or eded, use back of this for	
*** Ope	erator's Signature:	1	24	DATE	4.2.19
-			AND CRIMINAL PE		IED FOR TANKCARS THA

Sample Name 1-3 PROX 92350 S	SCOTFORD,	AB
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4100 Unick Rd Ferndale, WA 98248

Sample Information: (check one)	Tank	Pipeline	Tankcar_	<u>/</u>	Truck
Other (describe):					

Instrument:

Agilent-GC-One

Injection date:

4/2/2019 9:54:35 AM

Acq. method:

GC1.M

Sequence:

GC1 SEQ 2019-04-02 09-39-22

Last changed:

4/26/2017 9:25:43 AM

Calib. data modified: 4/26/2017 10:09:09 AM

LJaka	11177	

C:\Chem32\1\Data\2019-03\GC1 SEQ 2019-04-02 09-39-22\001F0201.D

Name	RT [min]	Wt %	LV %	Mol %	
Methane	1.602	0.064	0.108	0.176	1+
Ethane	1.906	0.775	1.101	1.135	Freeze Testminutes
Propane	2.482	97.859	97.621	97.698	
Propylene	3.207	0.020	0.020	0.021	Total Area 5150726
I-Butane	3.537	1.212	1.090	0.918	Total Peaks 7
N-Butane	4.569	0.069	0.060	0.053	
Butene-1		0.000	0.000	0.000	
I-Butylene	6.315	0.000	0.000	0.000	Specific Gravity 0.5068
T-Butene-2		0.000	0.000	0.000	Vapor Pressure 195
I-Pentane		0.000	0.000	0.000	Vapor Pressure 195
C-Butene-2		0.000	0.000	0.000	
N-Pentane		0.000	0.000	0.000	
1,3-Butadiene		0.000	0.000	0.000	
	Sum	100.000			

Results in Wt %

N-Butane	0.069	C4 Olefins	< 0.001
Propane	97.859	Olefins	0.02
·	0.02	C1 - C3s	98.718
Propylene	0.02	Butanes	1.281
		Pentanes	< 0.001

2B 3C N/A Copper Strip: (circle one) 1A 1B GC Performed By: (initials)

PETROGAS FERNDALE STORAGE TERMINAL TANKCAR OFFLOADING CHECKLIST

DRY

Tank	car Number:	GATX 202775	Spot: <u>2-3</u>
Prio	r to Offloading		
I. A	ttendance Requirem Operator must have Operator must have	ents: 49 CFR 174.67(i) e an unobstructed view of tankcar and offloading components throughous the capability to halt the flow of product immediately. ttended at all times while offloading connections are attached. Dedicate	
		ents: 29 CFR part 1910, subpart H; 49 CFR 172,330; 49 CFR 173.31(ue flags applied, handbrake set, wheels chocked, and ground strap atta	
Z A.	The tankcar must be	g Requirements: - Ferndale Storage Terminal Policy gauged, sampled, and sample results reviewed prior to offloading - NOT BROKEN or MISSING	OUTAGE # 18 TEMP # 54 SHIPPER # 133154
_	Ferndale Storage Ter	nd prior to offloading in the space provided below: rminal Policy "NA" (If circled, indicates no discrepand list below. If needed, use the back of this form. Office staff will ensure	,
Opera	ator has read and	understands all the above requirements	
*** O	perator's Signatur	e: /// JG Da	ate: <u>4/2/19</u>
Afte	r Offloading		
l. P	ost Offloading Closu	ure Activity: 49 CFR 172.330; 172.504; 173.24b; 49 CFR 173.31(d); 4	9 CFR 174.67(k)
C D F.	Install and wrench to Close and hand tight Verify there is no le Verify Four prescrib		
II. P	ost Offloading Inspe	ection Activity: 49 CFR 173.24b; 49 CFR 173.31(d); 49 CFR 174.67(k)
B C D E F A TI R G	Vent cover on top of Dome protective he Dome protective he All plugs on liquid a All items listed below the All valves. The promometer well belief valve.	busing lid is attached and opens and closes properly. If dome lid is attached and in proper working order. Busing wall openings (port holes) are equipped with operational closures Busing pin has an attachment chain and is in good condition. Individual wapper valves are in place with chains attached (sample valve plug down way and the way are in place with chains attached (sample valve plug down way are in place with chains attached (sample valve plug down way are in place with chains attached (sample valve plug down way are in place with chains attached (sample valve plug down way are in place with chains attached (sample valve plug down way are in place with chains attached (sample valve plug down way are in place with chains attached (sample valve plug down way are in place with chains attached (sample valve plug down way are in place with chains attached (sample valve plug down way are in place with chains attached (sample valve plug down way are in place with chains attached (sample valve plug down way are in place with chains attached (sample valve plug down way are in place with chains attached (sample valve plug down way are in place with chains attached (sample valve plug down way are in place with chains attached (sample valve plug down way are in place with chains attached (sample valve plug down way are in place with chains attached (sample valve plug down way are in plug down way are in place with way are in place with chains attached (sample valve plug down way are in place with way are in place way are in place with wa	oes not need a chain).
GH.J.K.L.	Safety valve is visib Thermometer well of Top platforms and in Tankcar hand brake Tankcar is stenciled	oly in good condition and clear of paperwork, trash, and objects. cap and "O" ring seal are in good condition and thermometer well cap is railing are in good condition (not bent or broken). e, wheels, brake pads, ladders, and all other external parts appear to be d properly on both sides with the following: Liquefied Petroleum Gas & Nalve inspection / test dates are current. (Document below if past due)	hand tight only. e in good condition. Non-Odorized.
III. App	propriate Action (Co	mplete this section and turn form in with other applicable paperwo	rk for this tankcar):
A. B.	Tankcar is empty, c Tankcar is empty a	lome lid pinned closed, gates in place, port holes covered, tankcar is Oł nd bad ordered. Description of defect (if needed, use back of this form	K and ready to release.):
-	erator's Signature	EX DATE: DATE:_	4.2.19