C3

PETROGAS FERNDALE STORAGE TERMINAL
TANKCAR OFFLOADING CHECKLIST

DRY

Tank car Number: **TILX 302812** Spot: **1-3**

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

☑ A. The tankcar must be gauged, sampled, and sample results reviewed prior to offloading
☐ E. Seal applied securely – NOT BROKEN or MISSING

OUTAGE # **16.5**
TEMP # **58**
SHIPPER # **936465**

IV. List discrepancies found prior to offloading in the space provided below:

– Ferndale Storage Terminal Policy "**NA**" (If circled, indicates no discrepancies found).
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:** _____ DH **Date: 4/2/19**

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 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:

a. 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.
☐ B. Tankcar is empty and bad ordered. Description of defect (if needed, use back of this form):

***** Operator's Signature:** _____ DATE: 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

Petrogas Ferndale Terminal

Reference #:_____

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
Propane	2.486	98.297	98.411	98.626
Propylene		0.000	0.000	0.000
I-Butane	3.541	1.425	1.286	1.085
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
T-Butene-2		0.000	0.000	0.000
I-Pentane	7.769	0.007	0.006	0.005
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		

Freeze Test 1h _____minutes

Total Area	5080979
Total Peaks	6
Specific Gravity	0.5082
Vapor Pressure	187

Results in Wt %

N-Butane	0.153	C4 Olefins	< 0.001
Propane	98.297	Olefins	< 0.001
Propylene	< 0.001	C1 - C3s	98.41
		Butanes	1.578
		Pentanes	0.012

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

GC Performed By: (initials) AW

C3

PETROGAS FERNDALE STORAGE TERMINAL — DRY
TANKCAR OFFLOADING CHECKLIST

Tank car Number: **CGTX 64797** Spot: **2-4**

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 # 17.5
TEMP # 56
SHIPPER # 137277

- ☑ A. The tankcar must be gauged, sampled, and sample results reviewed prior to offloading
- ☑ E. Seal applied securely – NOT BROKEN or MISSING

IV. List discrepancies found prior to offloading in the space provided below:

– Ferndale Storage Terminal Policy "NA" (If circled, indicates no discrepancies found).
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:** _____ JS **Date:** **4/2/19**

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 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:
  - a. 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.
- ☐ B. Tankcar is empty and bad ordered. Description of defect (if needed, use back of this form):

*** **Operator's Signature:** _____ DATE: 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

Petrogas Ferndale Terminal

Reference #:_____

GC 2

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
Propane	2.410	97.285	97.453	97.782
Propylene	3.082	0.009	0.008	0.009
I-Butane	3.396	2.232	2.015	1.702
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
T-Butene-2	6.941	0.001	0.001	0.001
I-Pentane		0.000	0.000	0.000
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		

Freeze Test 18 minutes

Total Area	4524135
Total Peaks	9
Specific Gravity	0.5086
Vapor Pressure	187

Results in Wt %

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

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

GC Performed By: (initials) AM

C3

PETROGAS FERNDALE STORAGE TERMINAL
TANKCAR OFFLOADING CHECKLIST

DRY

Tank car Number: **PROX 29928** Spot: **2-3**

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

☑ A. The tankcar must be gauged, sampled, and sample results reviewed prior to offloading
☐ E. Seal applied securely – NOT BROKEN or MISSING

OUTAGE # 21
TEMP # 54
SHIPPER # 10654685

IV. List discrepancies found prior to offloading in the space provided below:

– Ferndale Storage Terminal Policy "NA" (If circled, indicates no discrepancies found).
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:** _____ DH **Date: 4/2/19**

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 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:
a. 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.
☐ B. Tankcar is empty and bad ordered. Description of defect (if needed, use back of this form):

*** **Operator's Signature:** _____ DATE: 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

Petrogas Ferndale Terminal

Reference #:_____

GC 2

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
Ethane	1.861	0.110	0.157	0.162
Propane	2.409	99.644	99.627	99.652
Propylene		0.000	0.000	0.000
I-Butane	3.399	0.097	0.087	0.073
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
T-Butene-2		0.000	0.000	0.000
I-Pentane	7.370	0.000	0.000	0.000
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		

Freeze Test 1+ minutes

Total Area	4561411
Total Peaks	6
Specific Gravity	0.5074
Vapor Pressure	189

Results in Wt %

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

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

GC Performed By: (initials) AM

C3

PETROGAS FERNDALE STORAGE TERMINAL
TANKCAR OFFLOADING CHECKLIST

DRY

Tank car Number: **PROX 32193** Spot: **1-4**

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 # 17
TEMP # 60
SHIPPER # 936463

- ☑ A. The tankcar must be gauged, sampled, and sample results reviewed prior to offloading
- ☑ E. Seal applied securely – NOT BROKEN or MISSING

IV. List discrepancies found prior to offloading in the space provided below:

– Ferndale Storage Terminal Policy "NA" (If circled, indicates no discrepancies found).
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:** _____ JS **Date: 4/2/19**

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 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:
  - a. 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.
- ☐ B. Tankcar is empty and bad ordered. Description of defect (if needed, use back of this form):

*** **Operator's Signature:** _____ DATE: 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

Petrogas Ferndale Terminal

Reference #:_____

GC 1

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
Ethane	1.910	0.069	0.099	0.102
Propane	2.487	98.294	98.430	98.654
Propylene		0.000	0.000	0.000
I-Butane	3.541	1.471	1.328	1.120
N-Butane	4.574	0.152	0.133	0.116
Butene-1		0.000	0.000	0.000
I-Butylene		0.000	0.000	0.000
T-Butene-2		0.000	0.000	0.000
I-Pentane	7.774	0.008	0.007	0.005
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		

Freeze Test 12 minutes

Total Area	5049934
Total Peaks	6
Specific Gravity	0.5082
Vapor Pressure	187

Results in Wt %

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

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

GC Performed By: (initials) AM

C3

PETROGAS FERNDALE STORAGE TERMINAL
TANKCAR OFFLOADING CHECKLIST

DRY

Tank car Number: **GATX 58803** Spot: **2-2**

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 # **23**
TEMP # **53**
SHIPPER # **1654695**

- ☑ A. The tankcar must be gauged, sampled, and sample results reviewed prior to offloading
- ☑ E. Seal applied securely – NOT BROKEN or MISSING

IV. List discrepancies found prior to offloading in the space provided below:

– Ferndale Storage Terminal Policy "NA" (If circled, indicates no discrepancies found).
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:** _____ VH **Date: 4/2/19**

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 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:
  - a. 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.
- ☐ B. Tankcar is empty and bad ordered. Description of defect (if needed, use back of this form):

*** **Operator's Signature:** _____ DATE: 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

Petrogas Ferndale Terminal

Reference #:_____

GC 1

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
Ethane	1.905	0.464	0.659	0.678
Propane	2.479	99.322	99.074	98.967
Propylene		0.000	0.000	0.000
I-Butane	3.535	0.049	0.044	0.037
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
T-Butene-2		0.000	0.000	0.000
I-Pentane		0.000	0.000	0.000
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		

Freeze Test 1' + minutes

Total Area	5152785
Total Peaks	5
Specific Gravity	0.5066
Vapor Pressure	196

Results in Wt %

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

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

GC Performed By: (initials) AM

C3

PETROGAS FERNDALE STORAGE TERMINAL
TANKCAR OFFLOADING CHECKLIST

DRY

Tank car Number: **TILX 305718** Spot: **1-1**

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

☐ A. The tankcar must be gauged, sampled, and sample results reviewed prior to offloading
☐ E. Seal applied securely – NOT BROKEN or MISSING

OUTAGE # **19**
TEMP # **51**
SHIPPER # **372516**

IV. List discrepancies found prior to offloading in the space provided below:

– Ferndale Storage Terminal Policy **"NA"** (If circled, indicates no discrepancies found).
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:** _____ JG **Date: 4/2/19**

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 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:

a. 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.
☐ B. Tankcar is empty and bad ordered. Description of defect (if needed, use back of this form):

***** Operator's Signature:** _____ DATE: 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

Petrogas Ferndale Terminal

Reference #:_____

GC 1

Sample Name **1-1 TILX 305718 SCOTFORD,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 4:14:20 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

Data file: 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
Ethane	1.905	2.124	2.997	3.084
Propane	2.482	97.110	96.249	96.151
Propylene	3.203	0.014	0.014	0.015
I-Butane	3.535	0.534	0.477	0.401
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
T-Butene-2		0.000	0.000	0.000
I-Pentane	7.762	0.001	0.000	0.000
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		

Freeze Test 10 minutes

Total Area	5087900
Total Peaks	9
Specific Gravity	0.5044
Vapor Pressure	205

Results in Wt %

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

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

GC Performed By: (initials) AM

C3

PETROGAS FERNDALE STORAGE TERMINAL
TANKCAR OFFLOADING CHECKLIST

DRY

Tank car Number: **PROX 33310** Spot: **1-2**

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

- ☑ A. The tankcar must be gauged, sampled, and sample results reviewed prior to offloading
- ☑ E. Seal applied securely – NOT BROKEN or MISSING

OUTAGE # **17**
TEMP # **59**
SHIPPER # **936467**

IV. List discrepancies found prior to offloading in the space provided below:

– Ferndale Storage Terminal Policy "NA" (If circled, indicates no discrepancies found).
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:** _____ JG **Date: 4/2/19**

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 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:
  - a. 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.
- ☐ B. Tankcar is empty and bad ordered. Description of defect (if needed, use back of this form):

***** Operator's Signature:** _____ DATE: 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

Petrogas Ferndale Terminal

Reference #:_____

GC 1

Sample Name **1-2 PROX 33310 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 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

Data file: 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
Ethane	1.904	1.377	1.949	2.007
Propane	2.481	97.845	97.285	97.228
Propylene		0.000	0.000	0.000
I-Butane	3.535	0.624	0.559	0.470
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
T-Butene-2		0.000	0.000	0.000
I-Pentane	7.756	0.003	0.002	0.002
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		

Freeze Test 14 minutes

Total Area	5121973
Total Peaks	7
Specific Gravity	0.5055
Vapor Pressure	201

Results in Wt %

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

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

GC Performed By: (initials) AM

C3

PETROGAS FERNDALE STORAGE TERMINAL
TANKCAR OFFLOADING CHECKLIST

DRY

Tank car Number: **PROX 93594** Spot: **2-1**

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

- ☑ A. The tankcar must be gauged, sampled, and sample results reviewed prior to offloading
- ☑ E. Seal applied securely – NOT BROKEN or MISSING

OUTAGE # **20.25**
TEMP # **51**
SHIPPER # **10654697**

IV. List discrepancies found prior to offloading in the space provided below:

– Ferndale Storage Terminal Policy "NA" (If circled, indicates no discrepancies found).
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 Sorenson DS **Date: 4/2/19**

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 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:
  - a. 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.
- ☐ B. Tankcar is empty and bad ordered. Description of defect (if needed, use back of this form):

*** **Operator's Signature:** [signature] DATE: 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

Petrogas Ferndale Terminal

Reference #:_____

GC 2

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
Ethane	1.857	0.373	0.531	0.547
Propane	2.404	99.124	98.978	98.951
Propylene	3.081	0.061	0.059	0.064
I-Butane	3.393	0.181	0.163	0.137
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
T-Butene-2	7.201	0.000	0.000	0.000
I-Pentane	7.374	0.001	0.001	0.000
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		

Freeze Test 17 minutes

Total Area	4578255
Total Peaks	10
Specific Gravity	0.5070
Vapor Pressure	193

Results in Wt %

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

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

GC Performed By: (initials) AM

C3

PETROGAS FERNDALE STORAGE TERMINAL
TANKCAR OFFLOADING CHECKLIST

DRY

Tank car Number: **PROX 36405** Spot: **2-6**

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

- ☑ A. The tankcar must be gauged, sampled, and sample results reviewed prior to offloading
- ☑ E. Seal applied securely – NOT BROKEN or MISSING

OUTAGE # **18.5**
TEMP # **54**
SHIPPER # **133028**

IV. List discrepancies found prior to offloading in the space provided below:

– Ferndale Storage Terminal Policy "NA" (If circled, indicates no discrepancies found).
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:** _____ VH **Date: 4/2/19**

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 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:
  - a. 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.
- ☐ B. Tankcar is empty and bad ordered. Description of defect (if needed, use back of this form):

***** Operator's Signature:** _____ DATE: 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

Petrogas Ferndale Terminal

Reference #:_____

GC 2

Sample Name **2-6 PROX 36405 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 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
Ethane	1.855	2.303	3.251	3.349
Propane	2.406	96.294	95.456	95.482
Propylene	3.071	0.005	0.005	0.005
I-Butane	3.392	1.202	1.074	0.904
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
T-Butene-2	7.011	0.000	0.000	0.000
I-Pentane		0.000	0.000	0.000
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		

Freeze Test 1+ minutes

Total Area	4543057
Total Peaks	12
Specific Gravity	0.5046
Vapor Pressure	204

Results in Wt %

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

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

GC Performed By: (initials) JG

C3

PETROGAS FERNDALE STORAGE TERMINAL — DRY
TANKCAR OFFLOADING CHECKLIST

Tank car Number: **GATX 218332** Spot: **2-5**

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

- ☐ A. The tankcar must be gauged, sampled, and sample results reviewed prior to offloading
- ☑ E. Seal applied securely – NOT BROKEN or MISSING

OUTAGE # 17.75
TEMP # 55
SHIPPER # 133023

IV. List discrepancies found prior to offloading in the space provided below:

– Ferndale Storage Terminal Policy "NA" (If circled, indicates no discrepancies found).
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:** _____ VH **Date:** 4/2/19

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 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:
  - a. 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.
- ☐ B. Tankcar is empty and bad ordered. Description of defect (if needed, use back of this form):

*** **Operator's Signature:** _____ DATE: 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

Petrogas Ferndale Terminal

Reference #:_____

GC 2

Sample Name **2-5 GATX 218332 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 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
Ethane	1.854	1.951	2.758	2.843
Propane	2.406	96.610	95.934	96.006
Propylene	3.071	0.005	0.005	0.006
I-Butane	3.391	1.225	1.097	0.924
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
T-Butene-2	7.006	0.000	0.000	0.000
I-Pentane	7.468	0.000	0.000	0.000
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		

Freeze Test 1+ minutes

Total Area	4492194
Total Peaks	13
Specific Gravity	0.5052
Vapor Pressure	200

Results in Wt %

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

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

GC Performed By: (initials) JG

C3

PETROGAS FERNDALE STORAGE TERMINAL
TANKCAR OFFLOADING CHECKLIST

DRY

Tank car Number: **TILX 306047** Spot: **1-6**

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
- ☑ A. The tankcar must be gauged, sampled, and sample results reviewed prior to offloading
- ☐ E. Seal applied securely – NOT BROKEN or MISSING

OUTAGE # **19**
TEMP # **57**
SHIPPER # **80016**

IV. List discrepancies found prior to offloading in the space provided below:

– Ferndale Storage Terminal Policy "**NA**" (If circled, indicates no discrepancies found).
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:** _____ JB **Date: 4/2/19**

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 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:
  - a. 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.
- ☐ B. Tankcar is empty and bad ordered. Description of defect (if needed, use back of this form):

*** **Operator's Signature:** _____ DATE: 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

Petrogas Ferndale Terminal

Reference #:_____

GC 1

Sample Name **1-6 TILX 306047 SCOTFORD 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 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

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

Name	RT [min]	Wt %	LV %	Mol %
Methane	1.601	0.082	0.138	0.224
Ethane	1.905	0.931	1.322	1.363
Propane	2.482	97.322	97.051	97.146
Propylene	3.205	0.022	0.021	0.023
I-Butane	3.535	1.383	1.243	1.048
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
T-Butene-2		0.000	0.000	0.000
I-Pentane	7.755	0.000	0.000	0.000
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		

Freeze Test 14 minutes

Total Area	5089650
Total Peaks	8
Specific Gravity	0.5068
Vapor Pressure	196

Results in Wt %

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

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

GC Performed By: (initials) JG

C3

PETROGAS FERNDALE STORAGE TERMINAL
TANKCAR OFFLOADING CHECKLIST

DRY

Tank car Number: **TILX 306846** Spot: **1-5**

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

- ☑ A. The tankcar must be gauged, sampled, and sample results reviewed prior to offloading
- ☑ B. Seal applied securely – NOT BROKEN or MISSING

OUTAGE # **19**
TEMP # **55**
SHIPPER # **80015**

IV. List discrepancies found prior to offloading in the space provided below:

– Ferndale Storage Terminal Policy "NA" (If circled, indicates no discrepancies found).
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:** _____ ZR **Date: 4/2/19**

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 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:
  - a. 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.
- ☐ B. Tankcar is empty and bad ordered. Description of defect (if needed, use back of this form):

***** Operator's Signature:** _____ DATE: 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

Petrogas Ferndale Terminal

Reference #:_____

GC 1

Sample Name **1-5 TILX 306846 SCOTFORD 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 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
Ethane	1.906	0.778	1.106	1.141
Propane	2.484	97.482	97.318	97.498
Propylene	3.206	0.019	0.019	0.020
I-Butane	3.536	1.541	1.387	1.169
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
T-Butene-2		0.000	0.000	0.000
I-Pentane	7.746	0.000	0.000	0.000
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		

Freeze Test 1+ minutes

Total Area	5009764
Total Peaks	8
Specific Gravity	0.5072
Vapor Pressure	192

Results in Wt %

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

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

GC Performed By: (initials) JG

C3

PETROGAS FERNDALE STORAGE TERMINAL
TANKCAR OFFLOADING CHECKLIST

DRY

Tank car Number: **PROX 36382** Spot: **2-4**

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 # **18.5**
TEMP # **52**
SHIPPER # **133022**

☑ A. The tankcar must be gauged, sampled, and sample results reviewed prior to offloading
☑ E. Seal applied securely – NOT BROKEN or MISSING

IV. List discrepancies found prior to offloading in the space provided below:

– Ferndale Storage Terminal Policy "NA" (If circled, indicates no discrepancies found).
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:** _____ DS **Date: 4/2/19**

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 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:
a. 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.
☐ B. Tankcar is empty and bad ordered. Description of defect (if needed, use back of this form):

*** **Operator's Signature:** _____ DATE: 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

Petrogas Ferndale Terminal

Reference #:_____

GC 2

Sample Name **2-4 PROX 36382 S. BEAMER, 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 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
Ethane	1.858	2.211	3.122	3.217
Propane	2.409	96.418	95.622	95.659
Propylene	3.076	0.005	0.005	0.005
I-Butane	3.395	1.163	1.040	0.876
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
T-Butene-2	6.996	0.000	0.000	0.000
I-Pentane	7.415	0.000	0.000	0.000
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		

Freeze Test 17 minutes

Total Area	4538115
Total Peaks	12
Specific Gravity	0.5047
Vapor Pressure	203

Results in Wt %

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

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

GC Performed By: (initials) JG

C3

PETROGAS FERNDALE STORAGE TERMINAL
TANKCAR OFFLOADING CHECKLIST

DRY

Tank car Number: **GATX 58603** Spot: **1-4**

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 # 21
TEMP # 55
SHIPPER # 7516290

- ☑ A. The tankcar must be gauged, sampled, and sample results reviewed prior to offloading
- ☑ E. Seal applied securely – NOT BROKEN or MISSING

IV. List discrepancies found prior to offloading in the space provided below:

– Ferndale Storage Terminal Policy "NA" (If circled, indicates no discrepancies found).
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:** JS JS **Date:** 4/2/19

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 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:
  - a. 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.
- ☐ B. Tankcar is empty and bad ordered. Description of defect (if needed, use back of this form):

*** **Operator's Signature:** JS DATE: 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

Petrogas Ferndale Terminal

Reference #:_____

GC 1

Sample Name **1-4 GATX 58603 SCOTFORD, 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 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
Ethane	1.908	1.089	1.546	1.595
Propane	2.484	97.273	96.964	97.106
Propylene	3.207	0.027	0.026	0.028
I-Butane	3.536	1.487	1.336	1.126
N-Butane	4.566	0.098	0.085	0.074
Butene-1		0.000	0.000	0.000
I-Butylene	6.328	0.001	0.001	0.001
T-Butene-2		0.000	0.000	0.000
I-Pentane		0.000	0.000	0.000
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		

Freeze Test 1+ minutes

Total Area	5050765
Total Peaks	7
Specific Gravity	0.5066
Vapor Pressure	195

Results in Wt %

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

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

GC Performed By: (initials) JG

C3

PETROGAS FERNDALE STORAGE TERMINAL
TANKCAR OFFLOADING CHECKLIST

DRY

Tank car Number: **PROX 92350** Spot: **1-3**

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
TEMP # 55
SHIPPER # 80013

- ☑ A. The tankcar must be gauged, sampled, and sample results reviewed prior to offloading
- ☑ E. Seal applied securely – NOT BROKEN or MISSING

IV. List discrepancies found prior to offloading in the space provided below:

– Ferndale Storage Terminal Policy "NA" (If circled, indicates no discrepancies found).
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:** _____ JB **Date: 4/2/19**

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 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:
  - a. 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.
- ☐ B. Tankcar is empty and bad ordered. Description of defect (if needed, use back of this form):

***** Operator's Signature:** _____ DATE: 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

Petrogas Ferndale Terminal

Reference #:_____

GC 1

Sample Name **1-3 PROX 92350 SCOTFORD, 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 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

Data file: 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
Ethane	1.906	0.775	1.101	1.135
Propane	2.482	97.859	97.621	97.698
Propylene	3.207	0.020	0.020	0.021
I-Butane	3.537	1.212	1.090	0.918
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
T-Butene-2		0.000	0.000	0.000
I-Pentane		0.000	0.000	0.000
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		

Freeze Test 1+ minutes

Total Area	5150726
Total Peaks	7
Specific Gravity	0.5068
Vapor Pressure	195

Results in Wt %

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

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

GC Performed By: (initials) JG

C3

PETROGAS FERNDALE STORAGE TERMINAL
TANKCAR OFFLOADING CHECKLIST

DRY

Tank car Number: **GATX 202775** Spot: **2-3**

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

- ☑ A. The tankcar must be gauged, sampled, and sample results reviewed prior to offloading
- ☑ E. Seal applied securely – NOT BROKEN or MISSING

OUTAGE # **18**
TEMP # **54**
SHIPPER # **133154**

IV. List discrepancies found prior to offloading in the space provided below:

– Ferndale Storage Terminal Policy "NA" (If circled, indicates no discrepancies found).
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:** _____ JG **Date: 4/2/19**

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 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:
  - a. 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.
- ☐ B. Tankcar is empty and bad ordered. Description of defect (if needed, use back of this form):

***** Operator's Signature:** _____ DATE: 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