Oct 22

Technical Standards and Safety Authority
www.tssa.org

14th Floor Centre Tower
3300 Bloor Street West
Toronto Ontario M8X 2X4
Fax: 416.231.4903
Customer Service: 1.877.682.8772

Level 1 Risk and Safety Management Plan (RSMP)

Technical Standards and Safety Act
Propane Storage and Handling Regulation

This Level 1 RSMP applies to:
- a facility with a total propane storage capacity of 5,000 USWG or less; or
- a facility with a fixed propane storage capacity of exactly 5,000 USWG and no more than 500 USWG of portable propane storage capacity on site.

Failure to fully complete this form may result in rejection.
Making a false statement may result in a fine or prosecution under the *Technical Standards and Safety Act*

Licence Number: 000157729

Check applicable type of propane operations.

☑ Cylinder ☐ Motor Fill ☐ Filling Plant ☐ Card/Keylock

Submit along with this completed application a Facility Site Plan and a Map of the Surrounding Area.

[redacted]

SECTION A: GENERAL INFORMATION

The Undersigned applies to TSSA for a review for an RSMP under Ontario's *Technical Standards and Safety Act*, Propane Storage and Handling Regulation.

A

Company Name: O-I Canada Corp
Ontario Corporation No., if applicable:
Operator Name (if different from above): O-I Canada Corp site # 6379342
Telephone No.: 905-796-4301
Fax No.: 905-796-4343
E-mail:

B

Street No.: 100
Street Name / 911 Number / Address, if applicable: West Drive
Town / City or Township / County: Brampton
Province: On
Postal Code: L6T 2J6

Mailing address if different from above.

C

Street No.: same
Street Name / 911 Number / Address, if applicable:
Town / City or Township / County:
Province: On
Postal Code:

Information on Container Refill Centre or Filling Plant
Location of facility.

D

Street No.: 100
Street Name / 911 Number / Address, if applicable: West Drive
Nearest Major Intersection: Clarke BLVD & HWY 410
Town / City or Township / County: Brampton
Province: On
Postal Code: L6T 2J5

Name of Licence Holder: O-I Canada Corp
Name of a Senior Management person as defined in the regulation holding the Record of Training (ROT): Cameron Heasley
ROT type: PTI 400-4 Cert # 107263 (PP0-3)
Municipality (or municipalities if the facility or its hazard distance touches multiple borders): City of Brampton
Hours of operation: [redacted]

This document is valid until the next licence renewal date. You are required by law to notify TSSA of any change of information.

Declaration: I am aware that it is an offence to give false information in this document and I hereby declare that the information I have given here is true and complete.

	Print name	Signature	Date (dd-mm-yyyy)
Name of Licence Holder	O-I Canada Corp		
Name of Senior Management person as defined in the Regulation holding the Record of Training	Cameron Heasley	Cameron Heasley	12-10-2011

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SECTION A: GENERAL INFORMATION (cont'd)

Indicate the year the facility was established.	Indicate the year of any significant modifications, as defined in s.1, O.Reg 211/01, since establishment.
1990	2010

Identify the psig rating and serial number for each fixed propane storage tank on site.

	PSIG	Serial Number
Tank 1:	250	R7903
Tank 2:		
Tank 3:		

Enter capacity of propane in USWG, fixed, portable, and mobile, and provide detailed inventory that includes the number of tank/vessel for each type (fixed, portable, and mobile) and the capacity of each tank/vessel, on a separate document.

Fixed: 3000 Portable: 432.9 Mobile: 0

[redacted]

Declaration: I am aware that it is an offence to give false information in this document and I hereby declare that the information I have given here is true and complete.

Name of person completing this form (please print)	Official Title	
Mimo Stanghini	Engineering Services Manager	
Signature	Telephone No.	Date (dd-mm-yyyy)
	905-796-4365	12-10-2011

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SECTION A: GENERAL INFORMATION (cont'd)
Activity Information

Name of Propane Supplier(s)			
Superior Propane - Regional Operation Centre			[redacted]
Street No.	Street Name / 911 Number / Address, if applicable		
251	Woodland Road East Unit 217		
Town / City or Township / Country		Province	Postal Code
Guelph		On	N1H 8J1
Telephone No.	Fax No.	Contact Name	
877-873-7467	519-836-7766	Mike Mullins	
E-mail			
mullinsm@superiorpropane.com			

Name of Propane Transporter. If same as above, please check box. ☐			
Superior Propane			[redacted]
Street No.	Street Name / 911 Number / Address, if applicable		
7022	Wellington Road 124 S		
Town / City or Township / Country		Province	Postal Code
Guelph		On	N1H 6L3
Telephone No.	Fax No.	Contact Name	
519-831-6564	519-836-7766	Jason Swan	
E-mail			
swanj@superiorpropane			

Off-site Cylinder and/or Mobile Storage	Capacity stored off-site, in USWG	For Office Use - Party No.
None		
Street No.	Street Name / 911 Number / Address, if applicable	
Town / City or Township / Country	Province	Postal Code
Telephone No.	Fax No.	Contact Name

Note: Customer storage is not considered off-site storage.

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Mimo Stanghini	Engineering Services Manager	
Signature	Telephone No.	Date (dd-mm-yyyy)
	905-796-4365	12-10-2011

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SECTION B: EMERGENCY AND PREPAREDNESS RESPONSE PLAN

The licence holder will complete Section B in consultation with the local Fire Services.

Description of the maximum volume, types and storage location of other hazardous materials on site, if any.

Diesel Fuel 1 tank 1128 Gallons

Diesel Fuel 2 tanks 1135 gallons each= 2270 gallons

For a total of 3398 gallons of diesel fuel

Description of fire and emergency equipment indicated on facility site map.

ABC Powered, Dry Chemical, C02, pressured Extinguishers, wet & dry sprinklers (250000 Gal of water(Tower), Deluge System in plant product forming area

40 - ABC fire extinguisher located at the propane dispenser

List of fire protection controls (e.g., fire detection systems, fire notification systems, alarm systems, automatic shut off devices, fusible links, etc.) and describe their function, use and operation.

1- Fusible link on ISC - isolation valve between the tank and the downstream propane dispensing equipment.

2. Emergency Stop Button - at propane dispenser location. This shuts down the pump and closes a solenoid valve upstream of hoses.

3. Power supply breaker inside the main building. This cuts all power to the propane system - shuts down pump; closes solenoid valve.

4- Control Fire Detection System throughout the plant

Maintenance and testing schedule for fire protection controls and devices.

Maintenance and testing is undertaken by Superior Propane according to Superior 's Maintenance Standards. Schedule for key equipment is:

1- Pumps - (pumps every 3 months pump motor: check belts monthly; grease pump every 6 months).

2- ISC valve (test for closure every 6 months.) 3. Simplex Grinnell checks fire extinguishers monthly

4- Storage tank Relief Valves - inspected every 2 years; replacement schedule as per provincial regulations.

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Name of person completing this form (please print)	Official Title	
Mimo Stanghini	Engineering Services Manager	
Signature	Telephone No.	Date (dd-mm-yyyy)
	905-796-4365	12-10-2011

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SECTION B: EMERGENCY AND PREPAREDNESS RESPONSE PLAN (cont'd)

1. Contacts for Emergency Response

1. Facility Contact Personnel - Key Contact

Name	For Office Use - Party No.
Ken Hori	
Official Title	
Warehouse Supervisor	
Telephone No.	**Fax No.**
905-796-4324	905-796-4343
E-mail	
ken.hori@o-i.com	
Role and responsibilities in emergency	
Co-ordinate site response plan (ERP)	

2. Facility Contact Personnel - Alternate Contact

Name	For Office Use - Party No.
Walter Dovigo@o-i com	
Official Title	
Manufacturing Development Manager	
Telephone No.	**Fax No.**
905-796-4356	905-796-4343
E-mail	
walter.dovigo@o-i com	
Role and responsibilities in emergency	
Co-ordinate site response plan (ERP)	

3. Local Fire Services - Key Contact

Name	For Office Use - Party No.
Brian Maltby	
Official Title	
Fire Chief Official	
Telephone No.	**Fax No.**
905-874-2741	905-874-2735
E-mail	
brian.maltby@brampton.ca	
Role and responsibilities in emergency	
none	

4. Local Fire Services - Alternate Contact

Name	For Office Use - Party No.
Matt Pegg	
Official Title	
Deputy Fire Chief	
Telephone No.	**Fax No.**
905-874-2723	905-874-2727
E-mail	
matt.pegg@brampton.ca	
Role and responsibilities in emergency	
Potential Incident Commander	

5. Facility 24-Hour Contact Person

Name	For Office Use - Party No.
Mimo Stanghini	
Official Title	
Engineering Services Manager	
Cell No.	**Fax No.**
416-771-9056	905-796-4343
E-mail	
mimo.stanghini@o-i.com	
Role and responsibilities in emergency	
Co-ordinate site response plan (ERP)	

6. Name of Facility Manager

Name	For Office Use - Party No.
Cameron Heasley	
Official Title	
Plant Manager	
Telephone No.	**Fax No.**
905-796-4301	905-796-4343
E-mail	
Cameron.heasley@o-i.com	
Role and responsibilities in emergency	
Co-ordinate site response plan (ERP)	

7. Propane Supplier Key Contact Person

Name	For Office Use - Party No.
Superior Propane Hot Line	
Official Title	
Telephone No.	**Fax No.**
877-873-7467	N/A
E-mail	
n/a	
Role and responsibilities in emergency	
Identify and dispatch Superior Propane and or LPGERC emergency response personal as required	

8. Municipal Contact

Name	[redacted]
Peter Fay	
Official Title	
Clerk	
Telephone No.	**Fax No.**
905-874-2172	905-874-2119
E-mail	
peter.fay@brampton ca	
Municipality	
City of Brampton	

Declaration: I am aware that it is an offence to give false information in this document and I hereby declare that the information I have given here is true and complete.

Name of person completing this form (please print)	Official Title	
Mimo Stanghini	Engineering Services Manager	
Signature	**Telephone No.**	**Date (dd-mm-yyyy)**
	905-796-4365	12-10-2011

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SECTION B: EMERGENCY AND PREPAREDNESS RESPONSE PLAN (cont'd)

2. Additional Safety Measures

Describe any other measures in place at the facility that exceed the minimum Code and Standards requirements.

Emergency Stop Button cuts the power to the dispenser located at the Propane tank. shutting down the solenoid stopping the flow of propane

ABC Powered, Dry Chemical, C02, pressured extinguishers. wet & dry sprinklers (250000 Gallons of water (Tower) Deluge System in product forming area.

Control Fire Detection System throughout the plant

Declaration: I am aware that it is an offence to give false information in this document and I hereby declare that the information I have given here is true and complete.

Name of person completing this form (please print)	Official Title	
Mimo Stanghini	Engineering Services Manager	
Signature	Telephone No.	Date (dd-mm-yyyy)
	905-796-4365	12-10-2011

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SECTION B: EMERGENCY AND PREPAREDNESS RESPONSE PLAN (cont'd)

3. Record of Emergency Training Provided - For most recent 12-month period.

Training on Emergency Response Plan and Procedures provided to facility key contacts.

Training Date (dd-mm-yyyy)	Print Name of Training Provider:
None	Print Name of Instructor:
Training Date (dd-mm-yyyy)	Print Name of Training Provider:
	Print Name of Instructor:
Training Date (dd-mm-yyyy)	Print Name of Training Provider:
	Print Name of Instructor:

Training on the facility's Emergency Management Procedures provided to staff.

Training Date (dd-mm-yyyy)	Print Name of Training Provider:
None	Print Name of Instructor:
Training Date (dd-mm-yyyy)	Print Name of Training Provider:
	Print Name of Instructor:
Training Date (dd-mm-yyyy)	Print Name of Training Provider:
	Print Name of Instructor:

On-site specific training provided to certificate holders / persons with Records of Training.

Training Date (dd-mm-yyyy)	Print Name of Training Provider: Superior Propane — Please Note - a ROT is valid for 3 years
None	Print Name of Instructor: Reg Adamson
Training Date (dd-mm-yyyy)	Print Name of Training Provider:
	Print Name of Instructor:
Training Date (dd-mm-yyyy)	Print Name of Training Provider:
	Print Name of Instructor:

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Name of person completing this form (please print)	Official Title	
Mimo Stanghini	Engineering Services Manager	
Signature	Telephone No.	Date (dd-mm-yyyy)
	905-796-4365	12-10-2011

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SECTION B: EMERGENCY AND PREPAREDNESS RESPONSE PLAN (cont'd)

4. Emergency Training Plan for Coming Year

Training on Emergency Response Plan and Procedures provided to facility key contacts.

Target Date (dd-mm-yyyy) Q4-2011	Print Name of Training Provider: Superior Propane or Alternate	Please note: Canadian Propane Gas Association
	Print Name of Instructor: to be arranged	is currently developing the course
Target Date (dd-mm-yyyy)	Print Name of Training Provider:	content and it and its provider should be available to
	Print Name of Instructor:	teach in the fourth quarter of this year.
Target Date (dd-mm-yyyy)	Print Name of Training Provider:	
	Print Name of Instructor:	

Training on the facility's Emergency Management Procedures provided to staff.

Target Date (dd-mm-yyyy) Q4-2011	Print Name of Training Provider: Key Contact to train staff	
	Print Name of Instructor: to be arranged	
Target Date (dd-mm-yyyy)	Print Name of Training Provider:	
	Print Name of Instructor:	
Target Date (dd-mm-yyyy)	Print Name of Training Provider:	
	Print Name of Instructor:	

On-site specific training provided to certificate holders / persons with Records of Training.

Target Date (dd-mm-yyyy) 27-06-2011	Print Name of Training Provider: Superior Propane	Please note - a ROT is valid for 3 years
	Print Name of Instructor: Reg Adamson	Owner to call if more training is required in 2011
Target Date (dd-mm-yyyy)	Print Name of Training Provider:	
	Print Name of Instructor:	
Target Date (dd-mm-yyyy)	Print Name of Training Provider:	
	Print Name of Instructor:	

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Name of person completing this form (please print)	Official Title	
Mimo Stanghini	Engineering Services Manager	
Signature	Telephone No.	Date (dd-mm-yyyy)
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SECTION B: EMERGENCY AND PREPAREDNESS RESPONSE PLAN (cont'd)

The licence holder will complete Section B in consultation with the local Fire Services.

5. Emergency Response Communications Plan

Warnings and Actions

Describe who gives warnings to whom, and how and when the warning will be given (including public notification as appropriate).

The operator or Alternate will contact emergency services by calling 911 and will provide warnings outlined in the attached: "Propane Emergency Response Procedures" placard (to be posted on site and part of the employee training). If it is safe to do so, activate the fire alarm and advise neighbours.

The owner/operator may also contact Superior Propane via the emergency number identified in the ERP.

Describe what action is to be taken and by whom when a warning is issued (including details of a meeting place in a safe identified area and activating the evacuation plan, if necessary).

The owner /operator or alternate should first follow the actions in the ERP provided herein. Stage evacuation, if the release of propane cannot be stopped by cutting electrical power may be required. Note a specific muster point is not advisable, since a propane plume can blow in any direction.

Actions will be taken by an on duty ROT person(s)

Communication with Emergency Response Authorities

Describe when and how the licence holder will give early warning to emergency response authorities (including a process to ensure that a call is placed to 911).

When the system is operational, a ROT person will be on duty and be in the propane tank area. This person will be able to visually ascertain any abnormal/ accident event and implement the appropriate emergency response actions. When the system is not in operation, the ISC valve (main isolation valve) is closed, and the propane system is unattended. Any accident involving the propane tank during such times will require the intervention of random, nearby individuals.

Describe provisions for fire department entry when there are no operations or staffing at the propane site.

The propane tank system is located in a wide open area that is easily accessible.

The fire access routes are identified in the attached site plan.

Describe how the licence holder will ensure continual flow of updated information to authorities.

The critical information required from the license holder is (a) how to shut the system down and (b) the fill level in the tank (if known)

Fill level is relevant from a time-to-BLEVE perspective (a near empty tank will BLEVE sooner than a full tank if there is a fire impingement on the tank).

This information will be provided to the authorities by site Engineering Services Manager Mimo Stanghini or alternate.

How long will it take the facility liaison person to respond to the site.

It would take 30 minutes to reach the facility in case of an emergency

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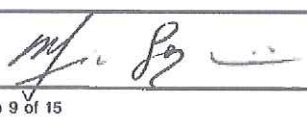
Name of person completing this form (please print)	Official Title	
Mimo Stanghini	Engineering Services Manager	
Signature 	Telephone No. 905-796-4365	Date (dd-mm-yyyy) 12-19-2011

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SECTION B: EMERGENCY AND PREPAREDNESS RESPONSE PLAN (cont'd)

The licence holder will complete Section B in consultation with the local Fire Services.

6. Building and Site Security and Procedures

		Yes	No
1.	Does the propane location have controlled access to limit unnecessary risk and entry (lock out procedures)?	☑	☐
2.	Is there adequate night lighting at the site?	☑	☐
3.	Are procedures in place that ensure access routes, aisles, storage area, filling areas and the grounds are kept clear from unwanted materials?	☑	☐
4.	Are there procedures that capture and record the daily inspection of hoses and inspection requirements for filling systems and mechanical devices used in the transfer of propane?	☑	☐
5.	Does the facility have procedures that include a process to isolate and purge any overfilled propane cylinders?	☐	☑
6.	Are weighing systems validated for accuracy?	☐	☑
7.	Are storage areas clearly marked with the vessels' capacity status (i.e., filled, empty, purged and other hazardous materials)?	☑	☐
8.	Are quality assurance procedures in place to ensure that all valves are closed after the propane cylinders are filled?(e.g., QCC valves)	☑	☐
9.	Is the schedule of maintenance and testing activities retained on site?	☑	☐

7. Water Supply

The propane licence holder should work with the local fire department to determine water supply capabilities that are available based on the propane facility's location.

		Yes	No	
1.	Is a pressurized water system available at the propane facility site?	☑	☐	
2.	Can the municipal fire department pump 375 GPM (1420 LPM) of water at this location?	☑	☐	
3.	What is the unobstructed distance to the closest water supply that could be used for firefighting activities? (distance in metres only)	Tower 250000 gallon		277.4 @ map.
4.	What is the unobstructed distance to the closest approved water supply with year round access if there are no hydrants? (distance in metres only)	N/A		

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Name of person completing this form (please print)	Official Title	
Mimo Stanghini	Engineering Services Manager	
Signature	Telephone No.	Date (dd-mm-yyyy)
	905-796-4365	12-10-2011

Section B - Emergency and Preparedness Response Plan – Appendix

O - I Canada Corp, Brampton, Ontario, L6T 2J5

Question 1: Controlled Access to propane filling station

Posts used to protect from vehicular traffic

Cabinet is closed and locked when filling station not in use.

Question 2: Adequate Night Lighting

Site has night lighting

Question 3: Procedures for keeping access routes etc. clear

Included in Superior Propane Daily Start-up Procedures for Operating a Transfer Facility

Question 4: Procedures for inspecting hoses and equipment

Included in Superior Propane Daily Start-up Procedures for Operating a Transfer Facility

Part of PTI Propane Pump Attendant training module

Question 5: Procedures for isolating and purging any overfilled cylinders (No purging in place, only fills pre-filled cylinders and fills by the 80% fill- fixed liquid level

Appendix E of Superior Propane "Propane Dispenser Operating Procedures"

Question 6: Validating weighing systems for accuracy

Daily scale check included as part of PTI Propane Pump Attendant training manual

Annual check completed. No scales at this facility, fills by the fixed liquid level 80% level

Question 7: Storage Areas marked for "empties", "fulls" & other hazardous materials

Operator to provide signage

Question 8: Quality Assurance Procedures to ensure that valves are closed after filling

Valve closure step included in PTI Propane Pump Attendant training manual

Question 9: Schedule of Maintenance and Testing Activities

Maintenance and Testing schedule on Pg 4 of RSMP

Superior Propane completes annual inspection

Testing included as part of SP Dispenser Operating Procedures

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SECTION B: EMERGENCY AND PREPAREDNESS RESPONSE PLAN (cont'd)

The licence holder will complete Section B in consultation with the local Fire Services.

8. Licence holder and local Fire Services Review

To be completed by the Local Fire Services

Has the local fire service had an opportunity to review the Emergency Response and Preparedness Plan? Yes ☐ No ☐

If not, please explain (e.g., no fire services).
COPY SENT TO BRIAN MALTBY CHIEF FIRE OFFICIAL
BRAMPTON FIRE & EMERGENCY SERVICES

Fire services comments, if any:

To be completed by the Licence Holder

In response to the above comments, the following action(s) is required:

The licence holder will respond to the Local Fire Services comments by: _____ (dd-mm-yyyy)

LOCAL FIRE SERVICES

The undersigned has reviewed Section B of the Risk and Safety Management Plan Fire Services.

Print name / Local Fire Services Name	Signature	Date (dd-mm-yyyy)

Declaration: I am aware that it is an offence to give false information in this document and I hereby declare that the information I have given here is true and complete.

Name of person completing this form (please print)	Official Title	
Mimo Stanghini	Engineering Services Manager	
Signature	Telephone No.	Date (dd-mm-yyyy)
	905-796-4365	12-10-2011

Dave Kennedy
<dave.kennedy@fsntraining.com>

10/25/2011 02:18 PM

To RSMP Submissions <propanelicensing@tssa.org>
cc
bcc
Subject FW: Level 1 RSMP for O-I Canada, 100 West Dr. Brampton, ON - Fire Services Review

TSSA Licensing: Please find below a copy of the letter that was sent to Brian Maltby at Brampton Fire requesting the review and comment for O-I. As you can see they require payment before they will actually do the review.

Dave Kennedy
FSN Training & Development Inc.
14 Forestview Trail
Newmarket, ON L3Y 4W1
Tel: 905-642-8579
Fax: 905-642-8578
www.fsntraining.com

From: Dave Kennedy [mailto:dave.kennedy@fsntraining.com]
Sent: 2011/10/19 1:21 PM
To: Maltby, Brian
Subject: RE: Level 1 RSMP for O-I Canada, 100 West Dr. Brampton, ON

Hi Brian: Please find attached the Level 1 RSMP for O-I Canada on West Dr. in Brampton for your review and comment. We have sent it to your in several files to make it easier to download. Once you have had a chance to review the content please let us know if there are any additions required. Thank you.

Content

RSMP Cover Page
TSSA Level 1 RSMP form (2 attachments)
Appendix to Section B page 10 of TSSA form.
Aerial Map
Site Plan
MSDS for Gasoline
MSDS for Propane
Record of Training (ROT)
Facility License
Superior Propane Dispenser Operating Procedures
Superior Propane Emergency Response Placard

Dave Kennedy
FSN Training & Development Inc.
14 Forestview Trail
Newmarket, ON L3Y 4W1

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SECTION C: SUBMISSIONS

Applicant must include a Facility Site Plan and Map of Surrounding Area

Facility Site Plan.

The licence holder will submit a copy of the original facility site plan updated with the following information:

1. The storage location of fixed, portable, and mobile vessels.
2. The maximum volume, types and storage location of hazardous materials.
3. Location of permanent structures on site.
4. Access and egress points and location of barriers.
5. Location of fire and emergency equipment (e.g., sprinkler systems, extinguishers, suppression systems) on site and location of fire hydrant or water supply where available.
6. Location of emergency shut off/shut down switches/valves.

Map of Surrounding Area.

The licence holder will submit a scaled aerial map of the surrounding area showing the following information:

7. The capacity and placement of the single largest propane storage vessel, including its setback from the front, rear and side property lines.
8. GPS co-ordinates of the single largest vessel.
9. Visual indication of the single largest fixed vessel and a circle made using the distance in Table 1 as the radius from the single largest fixed vessel.
10. Clear indication of the municipality or municipalities present within the circle.
11. Visual indication of property line information.
12. The location and name of roads within or abutting the site.
13. Key note to the drawing indicating the facility's municipal address, municipal lot number(s) and concession lines as applicable, and the date the map was prepared.
14. Address and contact information for each municipality (municipal clerk or secretary-treasurers of planning board). (Refer to page 5.)
15. Complete **"Required Mapping Information from Updated Site Plan"** in table below .

Required Mapping Information from Updated Site Plan

Date Map Prepared (dd-mm-yyyy)	Capacity of single largest propane storagevessel (USWG)
23-09-2011	3000 USWG
Tank setback coordinates. Indicate placement on the map.	
Front: 346.9	Right side property line: 295.7 m
Rear: 144.7	Left side property line: 234.6 m
GPS coordinates of single largest vessel: 43.703608 -79.73245	

Declaration: I am aware that it is an offence to give false information in this document and I hereby declare that the information I have given here is true and complete.

Name of person completing this form (please print)	Official Title	
Mimo Stanghini	Engineering Services Manager	
Signature	Telephone No.	Date (dd-mm-yyyy)
	905-796-4365	12-10-2011

Technical Standards and Safety Authority
www.tssa.org

14th Floor - Centre Tower
3300 Bloor Street West
Toronto Ontario M8X 2X4
Fax: 416.231.4903
Customer Service: 1.877.682.8772

SECTION C: SUBMISSIONS (cont'd)

Applicant must include a Facility Site Plan and Map of Surrounding Area

Table 1: Distance Table

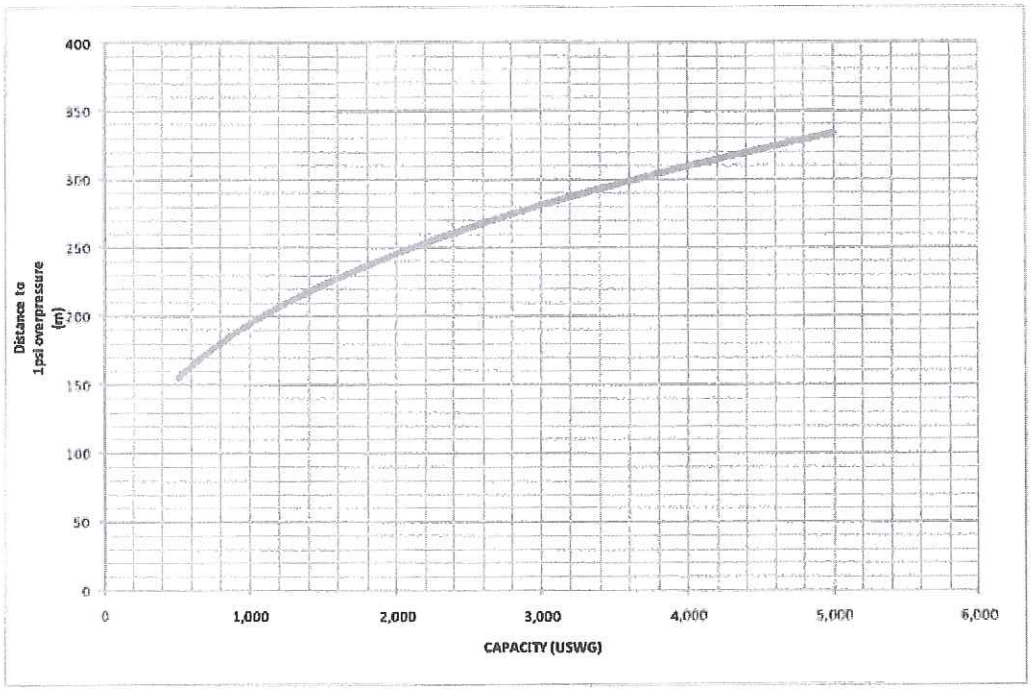
Water Capacity (litres)	Nominal Water Capacity (USWG)	Distance to 1 psi overpressure (m)
1,890	500	155
3,780	1,000	195
4,920	1,300	213
6,620	1,750	235
7,130	1,885	241
7,560	2,000	246
18,900	5,000	333

Formula: $D = 16.94 \times (1.524 \times C)^{1/3}$

D = Distance to overpressure of 1 psi (meters)
C= Tank Total Capacity in USWG

Parameters: Density of Propane is 0.5033 kg per litre @ 15 C
Assume all vessels are 80% full
1 gallon [US, liquid] = 0.003785411784 cubic meter
1 cubic metre = 264.17 USWG

Hazard Distance Chart (EPA-TNT model)



Declaration: I am aware that it is an offence to give false information in this document and I hereby declare that the information I have given here is true and complete.

Name of person completing this form (please print)	Official Title	
Mimo Stanghini	Engineering Services Manager	
Signature	Telephone No.	Date (dd-mm-yyyy)
	905-796-4365	12/06/2011

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Toronto Ontario M8X 2X4
Fax: 416.231.4903
Customer Service: 1.877.682.8772

SECTION C: SUBMISSIONS (cont'd)

Applicant must include a Facility Site Plan and Map of Surrounding Area

As an accompaniment to the Map of Surrounding Area, provide the following information about buildings and features present within the circle in Table 2.

Table 2: Buildings and Features

Buildings and Features Present within the Circle on the Map of the Surrounding Area AND Name and Address of Closest Building or Feature	* Number of Buildings and Features (mark with an "X")				Distance from Tank to Closest Building or Feature
	0	1	2-10	11+	
Industrial buildings or parks or golf courses Name: O 1 Canada Corp Address: 100 West Drive City: Brampton Province On Postal Code L6T 2J5		x			3.75 m
Residential building units specifically permanent single family dwellings, condominiums, and apartments. Name: None Address: City: Province Postal Code	x				0 m
Commercial building units specifically retail, restaurants, entertainment, theatres, and sporting complexes. Name: None Address: City: Province Postal Code	x				0 m
Commercial building units – continuous occupancy specifically hotels, campgrounds, and resorts. Name: None Address: City: Province Postal Code	x				0 m
Sensitive institutions specifically hospitals, schools and day cares, nursing and retirement homes, mental health institutions, and prisons. Name: None Address: City: Province Postal Code	x				0 m
Emergency responders specifically fire stations, ambulance stations, and police stations. Name: None Address: City: Province Postal Code	x				0 m

* For multi-unit buildings, count each unit as "1".

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Mimo Stanghini	Engineering Services Manager	
Signature	Telephone No.	Date (dd-mm-yyyy)
	905-796-4365	12-10-2011

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3300 Bloor Street West
Toronto Ontario M8X 2X4
Fax: 416.231.4903
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SECTION C: SUBMISSIONS (cont'd)

Applicant must include a Facility Site Plan and Map of Surrounding Area

Portable Storage Additional Information Sheet

Cylinder Size	Capacity in USWG	Quantity	Total Volume in USWG
# 420	123.9	0	0
# 100	29.5	0	0
# 40	11.75	0	0
# 33.3	9.62	45	432.9
# 30	8.8	0	0
# 20	5.8	0	0
# 10	2.9	0	0
# 5	1.5	0	0
Total Cylinder Capacity 432.9			

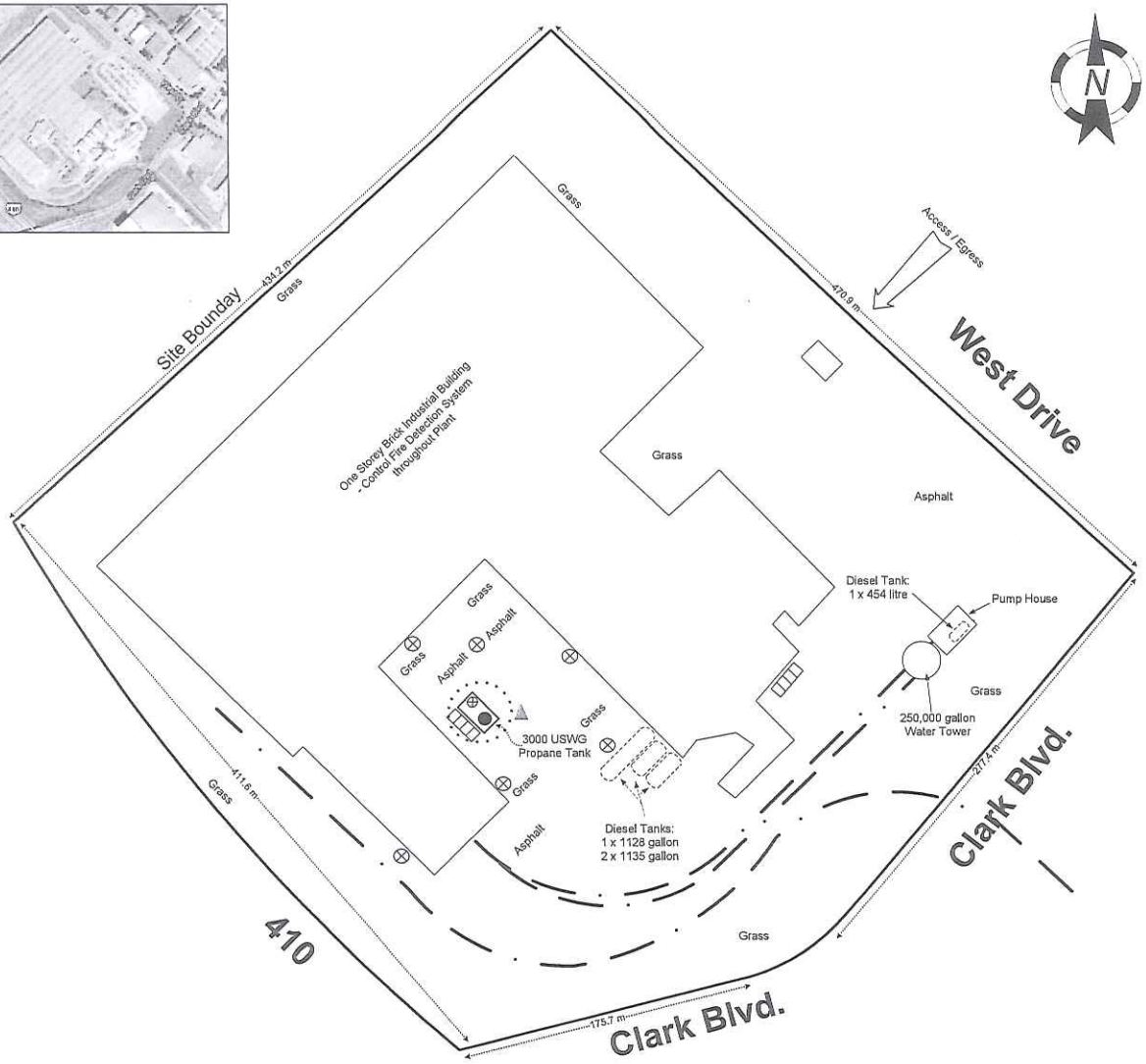
Tanks Stored On-site Not Connected for Use

Tank Size in USWG	Quantity	Total Volume in USWG
0	0	0
Total Tank Capacity 0		

Total Cylinder Capacity	432.9
Total Tank Capacity	3000 USWG Propane refill tank
Total Portable Capacity	432.9

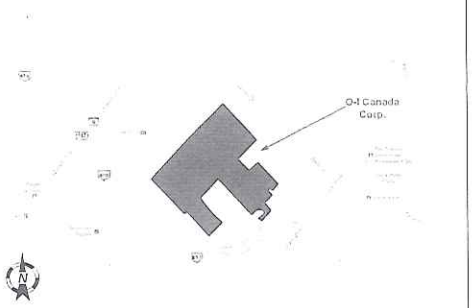
Declaration: I am aware that it is an offence to give false information in this document and I hereby declare that the information I have given here is true and complete.

Name of person completing this form (please print)	Official Title	
Mimo Stanghini	Engineering Services Manager	
Signature	Telephone No.	Date (dd-mm-yyyy)
	905-796-4365	12-10-2011



Scale (m)
0 50 100 150 200

Key Plan:



Notes:

1. Tank distances to property lines:

Property Line Setbacks	Distance
Northeast (Front)	346.9 m
Southeast	234.6 m
Northwest	295.7 m
Southwest	144.7 m

2. Fire Extinguisher
3. Fire Plug
4. Egress/Fire Access Route:
   Egress/access point off of West Drive.
5. E-Stop
6. Propane Cylinder Storage Area

FSN Training & Development

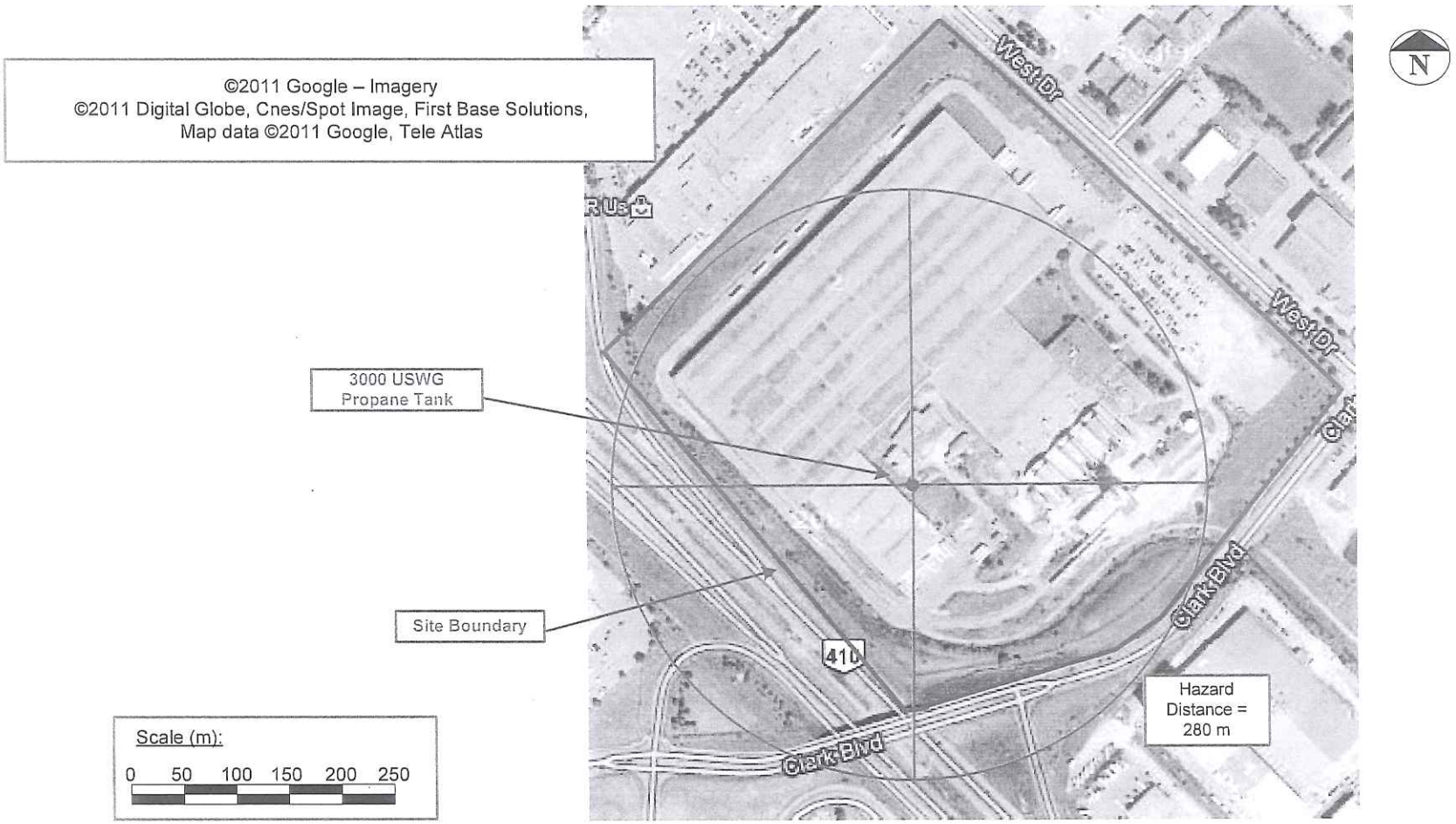
Site Plan

O-I Canada Corp.

100 West Drive, Brampton, ON L6T 2J5

PLAN 895 BLK BS & ERP43R10109 PART 1,
CITY OF BRAMPTON

Drawn by: L, Wills	Checked by:
Date: September 23, 2011	Rev 0



Setback Distances to Site Boundary Northeast: 346.9 m Southeast: 234.6 m Southwest: 144.7 m Northwest 295.7 m	*Municipality (ies) within the 1 psi overpressure circle:* City of Brampton	**Map of Surrounding Area**
Capacity of Propane Storage Tank: Capacity of Propane Storage Tank = 3000 USWG	*Municipal Contact:* Peter Fay Brampton City Hall, City Clerk's Office 2 Wellington Street W, Brampton, ON, L6Y 4R2 Tel: 905-874-2172 Fax: 905-874-2119 email: peter.fay@brampton.ca	O-I Canada Corp. 100 West Drive Brampton, ON L6T 2J5 *Plan 895 BLK BS & E RP43R10109 Part 1*
GPS Co-ordinates of Propane Storage Tank: GPS Co-ordinates = 43.703608,-79.73245		
Circular Distance to 1 psi overpressure: Denoted by circle centred on tank; radial distance = 280 m		*Drawn by:* L. Wills Date: September 23, 2011

PROPANE EMERGENCY RESPONSE PROCEDURES

EMERGENCY CONTACT NUMBERS (OR CALL 911)

Fire Department: _____

Police Department: _____

Superior Propane: 1-877-873-7467

Contact the Fire Department and the Police Department immediately if a propane emergency situation arises. Use a telephone outside the area affected by the leak.

PROPANE LEAKAGE WITH FIRE

FIRST CONTROL THE LEAK, THEN PUT OUT THE FIRE

1. Clear people from the immediate area.
2. Clear people from buildings, away from the propane tank, if applicable, and if it is safe to do so.
3. Do not extinguish fire unless fuel feeding the fire can be shut off.
4. Shut off power to dispenser and pump motor if it is safe to do so.
   - Via Emergency Stop (if available), or
   - Via Power Supply breaker
5. Close tank valve to stop flow of propane, if it is safe to do so.
6. Apply water to tank and piping exposed to heat.
7. Apply water to the vapour space of the tank to keep the tank cool. If there is insufficient water to keep the tank cool, evacuate the area.

PROPANE LEAKAGE WITHOUT FIRE

1. Clear people from the immediate area.
2. Clear people from buildings, away from the propane tank, if applicable, and if it is safe to do so.
3. Stay upwind from the vapour (wind at your back).
4. Shut off power to dispenser and pump motor if it is safe to do so.
   - Via Emergency Stop (if available), or
   - Via Power Supply breaker
5. Remove sources of ignition.
6. Close tank valve to stop flow of propane, if it is safe to do so.
7. Disperse gas with water spray and stay behind water spray for protection in case of ignition.

Superior Propane

Propane Dispenser Operating Procedures

Prepared by:
Ken Gillis
Safety and Technical Specialist (Ontario Region)

Prepared by:
Marcello Oliverio
Chief Engineer – Process Safety Management

Reviewed by:
John McCormack
National Regulatory Specialist

Superior Propane Our Energy Serving You

This document contains generic operating procedures for propane dispensing facilities. It fulfills the requirements of the Level 1 RSMP.

Procedures for the activities identified below are contained in the appendices that follow:

(Appendix A) Daily Start-up Procedure for Operating the Propane Transfer Facility.

(Appendix B) Testing the Emergency Stop System

(Appendix C) Filling Propane Cylinders by Weight

(Appendix D) Transfer Facility (Dispenser) Procedure for Filling a Motor Fuel Tank

(Appendix E) Handling of an Overfilled Cylinder

Appendix A

Daily Start-up Procedure for Operating the Propane Transfer Facility

Prerequisites:

- Review and be familiar with the PTI – 100 – 01 Propane Pump Attendant Training Program.
- Have the necessary Record of Training (ROT).

Stepwise Procedure:
(To be documented daily)

If you are not familiar with the terms or requirements of this procedure contact your supervisor.

Before opening the tank and cylinder cabinets:

1. Check the area to ensue that the access routes and area surrounding the propane tank(s) are clear and that there are no unwanted materials.

2. Check that there are no ignition sources within 3 metres (10 feet) of the filling area.

3. Dress properly for dispensing propane. Wear long sleeves, long pants, neoprene gloves, safety eyewear, and safety footwear. Do not wear nylon jackets or coats.

4. Walk around the area to visually identify potential hazards, to listen for audible leaks, and to detect the scent of propane odours. If a leak is suspected do not open the cabinet, contact your supervisor.

5. Ensure all operating and warning signs are clear and legible.

6. Check the tank level for sufficient propane levels.

7. Remove any garbage especially flammables/combustibles from the dispensing area.

8. Open the tank cabinet and inspect for any indications of propane leaks. If a leak is suspected contact your supervisor. Do not operate the dispenser.

Opening Primary Tank Valves:

1. Slowly open the tank ISC liquid supply by using the handle or cable attachment. Open other manual valves necessary to operate the dispenser pump. Again watch and listen for leaks.

2. Interlock the ISC control handle with the door. Ensure that the door cannot be closed while the ISC valve is open (code requirement). If the door is not interlocked as required, contact your supervisor.

3. Your site may have an E-Stop system that shuts down the motor and electric solenoids in the event of an emergency. This system should be tested weekly.

4. Visually check the hoses, nozzles and other mechanical devices. Do not operate the system if anything appears abnormal.

5. Record daily start-up procedure and propane level in tank.

6. You are now ready to operate the dispenser facility.

7. Close door (and ISC valve) when the system is unattended.

Appendix B

Testing the Emergency Stop System (Once per Week)

Prerequisites:

- Review and be familiar with the PTI – 100 – 01 Propane Pump Attendant Training Program.
- Have the necessary Record of Training (ROT).

Stepwise Procedure:
(To be documented weekly)

If you are not familiar with the terms or requirements of this procedure contact your supervisor.

1. Open all valves in the tank cabinet.
2. Ensure that all fill nozzles are closed and secured.
3. Start the pump and leave it pumping for the test. Do not operate the pump longer than required to complete this test.
4. Immediately push the E-stop button.
5. Pump power and solenoids should close.
6. If all solenoids and the pump do not close, contact your supervisor. Do not operate the system.
7. Document the test once completed.

Appendix C

Filling Propane Cylinders by Weight

Prerequisites:

- Review and be familiar with the PTI – 100 – 01 Propane Pump Attendant Training Program.
- Have the necessary Record of Training (ROT).

Stepwise Procedure:

If you are not familiar with the terms or requirements of this procedure contact your supervisor.

Before filling any cylinder, the cylinder must receive a pre-fill visual examination or inspection.

1. Check the inspection date stamped on the cylinder shell or collar. Make sure it's within the last 10 years.

2. Make sure the Dangerous Goods shoulder label is on the cylinder. If the cylinder is going to a workplace, it must also have a WHMIS label on the cylinder.

3. Look for corrosion, especially on the bottom of the cylinder. Check that no area on the cylinder is badly corroded or deeply pitted.

4. Look for dents. If they are large, deep, have sharp angles or include a weld, do not fill the cylinder.

5. Look for cuts, gouges, or digs that can reduce the thickness of the cylinder walls and weaken them.

6. Make sure the collar is protecting the cylinder service valve. Check that the welds securing the collar to the cylinder are not broken.

7. Make sure the footring is not bent and that it supports the cylinder in an upright, stable position. Check that the welds securing the footring to the cylinder are not cracked or broken.

8. If a cylinder is bulged or deformed from contact with fire, or if the paint has been scorched, the cylinder must be taken out of service.

Before starting to fill

16. Check that there are no ignition sources within 3 metres (10 feet) of the filling area.

17. Dress properly for dispensing propane. Wear long sleeves, long pants, neoprene gloves, safety eyewear and safety footwear. Do not wear nylon jackets or coats.

To fill a propane cylinder by weight:

1. Place the cylinder on the scale and weigh the cylinder before filling. If the weight of the cylinder exceeds the stamped tare weight on the cylinder, there may be some propane left in the cylinder.

2. Mark the weight down as Weight "in". Subtract the tare weight of the cylinder from the weight "in" to determine how much propane is left in the cylinder.

3. Inform the customer how much propane is in the cylinder, how much will be added, and what the cost will be.

4. Set the scale for the proper weight of the cylinder when filled. The filling weight is the:

   - Tare weight of the cylinder **plus**
   - the weight of the propane (42% of the stamped water capacity **plus**
   - the weight of the filling hose and nozzle.

5. Connect the filling nozzle to the cylinder service valve. Make sure the cylinder is placed on the centre of the scale platform.

6. Open the cylinder service valve, open the filling hose nozzle, and start the pump.

7. Check the cylinder service valve threads and valve stem for leaks using a commercial leak detection solution or a 50/50 mixture of soap and water. Expanding bubbles indicate a leak. If a leak is detected, stop the filling process until the leak is repaired.

8. Watch the scale beam closely. As soon as the beam starts to rise, close the filler hose nozzle. Turn off the pump.

9. Close the cylinder valve. To bleed off the small amount of propane between the filler hose nozzle and the cylinder service valve, slowly unscrew the filler hose nozzle from the cylinder service valve. Disconnect the filling hose nozzle from the cylinder service valve.

10. Close all valves after cylinder is filled.

11. Move the scale beam indicator until the beam "floats". Read the finished weight from the scale beam and record this as the weight "out".

If the cylinder is overfilled, the excess propane liquid must be removed before the cylinder is returned to the customer. Follow company procedure to safely remove the excess propane liquid.

If the cylinder weighs less that it should, follow the cylinder filling procedure to add more propane, or invoice the Customer for the amount of propane you put into the cylinder.

Note: the OPD may prevent filling the cylinder to 42% of its water capacity

MEASUREMENT CANADA LIMIT OF ERROR ALLOWABLE: 0.5%	
9.1kg cylinder = 45.5 grams	**20lb cylinder = 1.6 ounces**
13.6kg cylinder = 68.2 grams	**30lb cylinder = 2.4 ounces**
45.5kg cylinder = 227.3 grams	**100lb cylinder = 8.0 ounces**

Customers must be told how much propane was put into their cylinder. The amount of propane that you tell the Customer is in the cylinder must be within the 0.5% error limit set by Measurement Canada as shown in the above table.

To arrive at the amount of propane put into the cylinder, simply subtract the "IN" weight from the "OUT" weight you recorded. The difference is the amount of the propane put into the cylinder

Follow the Company's invoicing procedures to invoice the Customer for the amount of propane put in the cylinder

The invoice should indicate:

- The minimum charge, if applicable, or cost of propane; and
- The amount of propane delivered

Appendix D

Transfer Facility (Dispenser) Procedure for Filling a Motor Fuel Tank

Prerequisites

Review and be familiar with the PTI – 100 – 01 Propane Pump Attendant Training Program.
Have necessary Record of Training (ROT).

Stepwise Procedure:

If you are not familiar with terms or requirements of this procedure contact your supervisor.

1. Before filling, make sure the vehicle has a provincially accepted decal in place. This label may be located on the front windshield, rear window or side window. A vehicle with no label, or an expired label, cannot be legally filled with propane.

2. The filling area is a restricted zone. Make sure there are no ignition sources within 3 meters (10 feet) of the filling connection. This means **NO SMOKING, NO OPEN FLAMES, NO VEHICLES LEFT RUNNING, and NO PILOT LIGHTS LEFT ON**, such as those in travel trailers, RV's, catering trucks and cargo vans.

3. Remove the dust cap from the liquid filler valve on the vehicle tank. Check that the "O" ring or gasket in the filler valve is in place and clean.

4. Remove the transfer hose and nozzle from the holder at the dispenser and connect the nozzle to the vehicle filler valve. Tighten firmly by hand. Check for leaks.

5. Open the fixed liquid level gauge (spit valve) to allow an audible hiss as the propane vapour is released.

6. Start the pump, which will automatically reset the meter to zero. Depending on the dispenser system, begin filling by either (a) squeezing the nozzle trigger, or (b) setting the nozzle trigger latch and pushing in the deadman switch. Keep the nozzle trigger or deadman switch engaged during the entire filling process.

7. When a white fog is flowing steadily from the fixed liquid level gauge (spit valve), the tank is considered full.

8. Release the nozzle trigger or deadman switch immediately. Do not be tempted to round up either the volume or dollar amount.

9. Close the fixed liquid level gauge (spit valve) either with fingers or a spit valve wrench. Tighten enough to provide a positive seal. **DO NOT OVER TIGHTEN.**
10. Turn off the pump.
11. Disconnect the filler hose nozzle from the filler valve.
12. Return the filler nozzle to the dispenser holder.
13. Check the filler valve at the vehicle to ensure it's not leaking.
14. Replace the dust cap on the vehicle filler valve

Appendix E

Handling of an Overfilled Cylinder

Prerequisites

Review and be familiar with the PTI – 100 – 01 Propane Pump Attendant Training Program.
Have necessary Record of Training (ROT).

Stepwise Procedure:

If you are not familiar with terms or requirements of this procedure contact your supervisor.

If you suspect that a cylinder has been overfilled, do the following:

1. Tag the cylinder, identifying the time and date it was filled.
2. Carefully place the cylinder in the cylinder cage.
3. Call Superior Propane @ 1-877-873-7467 and report what has happened.

DO NOT RETURN THE FILLED CYLINDER TO THE CUSTOMER

Shell Canada Limited
Material Safety Data Sheet

Effective Date: 2010-05-07
Supersedes: 2007-05-25

Class B2 Flammable Liquid

Class D2A Carcinogenicity

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT:	**REGULAR UNLEADED GASOLINE**
SYNONYMS:	Automotive Fuel Petrol
PRODUCT USE:	Fuel
PRODUCT CODE:	**211-001**

SUPPLIER
Shell Canada Limited (SCL)
P.O. Box 100, Station M
400-4th Ave. S.W.
Calgary, AB Canada
T2P 2H5

TELEPHONE NUMBERS

Shell Emergency Number	1-800-661-7378
CANUTEC 24 HOUR EMERGENCY NUMBER	1-613-996-6666
For general information:	1-800-661-1600
	www.shell.ca

This MSDS was prepared by the Toxicology and Product Stewardship Section of Shell Canada Limited.
*An asterisk in the product name designates a trade-mark of Shell Brands International AG. Used under license.

2. COMPOSITION/INFORMATION ON INGREDIENTS

Component Name	CAS Number	% Range	WHMIS Controlled
Gasoline	86290-81-5	> 90	Yes
Benzene	71-43-2	< 1.5	Yes

See Section 8 for Occupational Exposure Guidelines.

3. HAZARDS IDENTIFICATION

Physical Description: Volatile Liquid Colourless Typical Gasoline Odour

Routes of Exposure: Exposure will most likely occur through skin contact or inhalation.

Hazards:

Vapour concentrations above the recommended exposure level are irritating to the eyes and respiratory tract, may cause headaches and dizziness, are anesthetic and may have other central nervous system effects.
Flammable Liquid.
Contains Benzene.
May cause cancer.

	Ingestion may result in vomiting. Avoid aspiration of vomitus into lungs as small quantities may result in aspiration pneumonitis. May be absorbed by skin contact. In rare cases may sensitize heart muscle causing heart arrythmia.
Handling:	Eliminate all ignition sources. Wear suitable gloves and eye protection. Bond and ground transfer containers and equipment to avoid static accumulation. Avoid prolonged exposure to vapours. Empty containers are hazardous, may contain flammable / explosive dusts, liquid residue or vapours. Keep away from sparks and open flames.

For further information on health effects, see Section 11.

4. FIRST AID MEASURES

Eyes:	Flush eyes with water for at least 15 minutes while holding eyelids open. If irritation occurs and persists, obtain medical attention.
Skin:	Wash contaminated skin with mild soap and water for at least 15 minutes. If irritation occurs and persists, obtain medical attention.
Ingestion:	DO NOT INDUCE VOMITING! OBTAIN MEDICAL ATTENTION IMMEDIATELY. Guard against aspiration into lungs by having the individual turn on to their left side. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs. Do not give anything by mouth to an unconscious person.
Inhalation:	Remove victim from further exposure and restore breathing, if required. Obtain medical attention.
Notes to Physician:	The main hazard following accidental ingestion is aspiration of the liquid into the lungs producing chemical pneumonitis.

5. FIRE FIGHTING MEASURES

Extinguishing Media:	Dry Chemical Carbon Dioxide Foam Water Fog
Firefighting Instructions:	Flammable. Clear area of unprotected personnel. Do not use a direct stream of water as it may spread fire. Product will float and can be reignited on surface of water. Vapour forms a flammable/explosive mixture with air between upper and lower flammable limits. Avoid breathing vapours. Use water to cool fire exposed containers. Vapours may travel along ground and flashback along vapour trail may occur. Do not enter confined fire space without adequate protective clothing and an approved positive pressure self-contained breathing apparatus. Delayed lung damage can be experienced after exposure to combustion products, sometimes hours after the exposure.
Hazardous Combustion Products:	Carbon dioxide, carbon monoxide and unidentified organic compounds may be formed upon combustion.

6. ACCIDENTAL RELEASE MEASURES

Issue warning "Flammable". Eliminate all ignition sources. Isolate hazard area and restrict access. Handling

equipment must be grounded. Work upwind of spill if it is safe to do so. Avoid direct contact with material. Wear appropriate breathing apparatus (if applicable) and protective clothing. Stop leak only if safe to do so. Dike and contain land spills; contain spills to water by booming. Use water fog to knock down vapours; contain runoff. Adsorb residue or small spills with adsorbent material and remove to non-leaking containers for disposal. Notify appropriate environmental agency(ies). After area has been cleaned up to the satisfaction of regulatory authorities, flush area with water to remove trace residue. Dispose of recovered material as noted under Disposal Considerations.

7. HANDLING AND STORAGE

Handling: Flammable. Fixed equipment as well as transfer containers and equipment should be grounded to prevent accumulation of static charge. Avoid breathing vapours and prolonged or repeated contact with skin. Vapours may accumulate and travel to distant ignition sources and flashback. Empty containers are hazardous, may contain flammable/explosive dusts, residues or vapours. Do not pressurize drum containers to empty them. Do not cut, drill, grind, weld or perform similar operations on or near containers. Provide adequate ventilation. Launder contaminated clothing prior to reuse. Wash with soap and water prior to eating, drinking, smoking, applying cosmetics or using toilet facilities.

Storage: Store in a cool, dry, well ventilated area, away from heat and ignition sources. Use explosion-proof ventilation to prevent vapour accumulation.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

The following information, while appropriate for this product, is general in nature. The selection of personal protective equipment will vary depending on the conditions of use.

OCCUPATIONAL EXPOSURE LIMITS (Current ACGIH TLV/TWA unless otherwise noted):

The exposure limits listed here are provided for guidance only. Consult local, provincial and territorial authorities for specific values.
Gasoline: 300 ppm (STEL: 500 ppm)
Benzene (skin) : 0.5 ppm (STEL: 2.5 ppm)
Benzene: Shell internal standard is 0.5 ppm or 1.6 mg/m3 (8-12 hour time-weighted average limit), 2.5 ppm or 8 mg/m3 (15-minute short term limit)
Skin Notation: Absorption through skin, eyes and mucous membranes may contribute significantly to the total exposure.

Mechanical Ventilation: Concentrations in air should be maintained below the occupational exposure limit if unprotected personnel are involved. Use explosion-proof ventilation as required to control vapour concentrations. Local ventilation recommended where general ventilation is ineffective in controlling airborne concentrations below the recommended occupational exposure limit. Make up air should always be supplied to balance air exhausted (either generally or locally). For personnel entry into confined spaces (i.e. bulk storage tanks) a proper confined space entry procedure must be followed including ventilation and testing of tank atmosphere.

PERSONAL PROTECTIVE EQUIPMENT:

Eye Protection: Chemical safety goggles and/or full face shield to protect eyes and face, if product is handled such that it could be splashed into eyes. Provide an eyewash station in the area.

Skin Protection: Avoid contact with skin. Use protective clothing and gloves manufactured from nitrile. Safety showers should be available for emergency use.

Respiratory Protection: Avoid breathing vapour or mists. If exposure has the potential to exceed occupational exposure limits, use an appropriate NIOSH-approved respirator. For high airborne concentrations, use a NIOSH-approved supplied-air respirator, either self-contained or airline breathing apparatus, operated in positive pressure mode.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Volatile Liquid
Appearance:	Colourless
Odour:	Typical Gasoline Odour
Odour Threshold:	< 0.25 ppm
Freezing/Pour Point:	Not available
Boiling Point:	35 - 220 °C
Density:	720 - 760 kg/m3 @ 15 °C
Vapour Density (Air = 1):	3.5
Vapour Pressure (absolute):	< 107 kPa @ 38 °C
Specific Gravity (Water = 1):	0.74
pH:	Not applicable
Flash Point:	TCC -30 °C
Lower Flammable Limit:	1.4 % (vol.)
Upper Flammable Limit:	7.6 % (vol.)
Autoignition Temperature:	280 °C
Viscosity:	< 1 mm2/s @ 38 °C
Evaporation Rate (n-BuAc = 1):	Not available
Partition Coefficient (log K_{OW}):	2.3
Water Solubility:	Insoluble
Other Solvents:	Hydrocarbon Solvents
Formula:	C4 - C11

10. STABILITY AND REACTIVITY

Chemically Stable:	Yes
Hazardous Polymerization:	No
Sensitive to Mechanical Impact:	No
Sensitive to Static Discharge:	Yes
Incompatible Materials:	Avoid contact with strong oxidizing agents and acids.
Conditions of Reactivity:	Avoid excessive heat, open flames and all ignition sources.

11. TOXICOLOGICAL INFORMATION

Ingredient (or Product if not specified)	Toxicological Data
Gasoline	LD50 Oral Rat > 18 mL/kg LD50 Dermal Rabbit > 5 mL/kg
Benzene	LD50 Oral Rat 690 - 3400 mg/kg LC50 Inhalation Rat 13700 ppm for 4 hours LD50 Dermal Rabbit > 8260 mg/kg

Routes of Exposure: Exposure will most likely occur through skin contact or inhalation.

Formulation: No data is specifically available for this product and therefore this toxicological information is based on testing completed with the ingredients.

Irritancy: Based on testing with similar materials, this product is not expected to be a primary skin irritant after exposure of short duration, would not be a skin sensitizer and would not be irritating to the eye.

Acute Toxicity: Vapour concentrations above the recommended exposure level are irritating to the eyes and respiratory tract, may cause headaches and dizziness, are anesthetic and may have other central nervous system effects.

Chronic Effects: Prolonged and repeated contact with skin can cause defatting and drying of the skin resulting in skin irritation and dermatitis. Prolonged exposure to high vapour concentration can cause headache, dizziness, nausea, blurred vision and central nervous system depression. Prolonged and repeated exposure may cause serious injury to blood forming organs, resulting in anemia and similar conditions. Myelodysplastic syndrome (MDS) has been observed in people exposed to very high levels (50 to 300 ppm) of benzene over a long period of time in the workplace. The relevance of these results to lower levels of exposure is not known.

Carcinogenicity and Mutagenicity: According to the International Agency for Research on Cancer (IARC) this product is considered to be possibly carcinogenic to humans. This product contains benzene. Carcinogenic hazard. Repeated exposure to benzene concentrations greater than the recommended TLV/TWA may reduce the cellular components of peripheral blood and bone marrow. Epidemiological studies indicate that long term inhalation of benzene vapour can cause leukaemia in man. Benzene has also produced chromosomal aberrations in peripheral blood lymphocytes. May cause heritable genetic damage.

12. ECOLOGICAL INFORMATION

Do not allow product or runoff from fire control to enter storm or sanitary sewers, lakes, rivers, streams, or public waterways. Block off drains and ditches.

Biodegradability: Inherently biodegradable.
Rapid volatilization.

Bioaccumulation: Potential for bioaccumulation.

Partition Coefficient (log K_{OW}): 2.3

Aquatic Toxicity: Product is expected to be toxic to aquatic organisms.

Ingredient:	Toxicological Data
Gasoline	LL50 (WAF method) Rainbow Trout (96hr) 1 - 10 mg/L. EL50 (WAF method) Daphnia Magna (48hr) 1 - 10 mg/L. EL50 - growth rate (WAF method) Algae (72hr) 1 - 10 mg/L.
Benzene	LL50 Rainbow Trout (96hr) 1 - 10 mg/L. EL50 Daphnia Magna (48hr) 10 - 100 mg/L. EL50 - growth rate Algae (72hr) 10 - 100 mg/L.

Definition(s): LL and EL are the lethal loading concentration and effective loading concentration respectively. The concentration represents the amount of substance added to the system to obtain a toxic concentration. They replace the traditional LC and EC for low solubility substances.
WAF is the water accommodated fraction. A slightly soluble hydrocarbon is stirred

into water and the insoluble portions are removed. The remaining solution is the water accommodated fraction.

13. DISPOSAL CONSIDERATIONS

Waste management priorities (depending on volumes and concentration of waste) are: 1. recycle (reprocess), 2. energy recovery 3. incineration, 4. disposal at a licenced waste disposal facility. Do not attempt to combust waste on-site. Incinerate at a licenced waste disposal site with approval of environmental authority.

14. TRANSPORT INFORMATION

Canadian Road and Rail Shipping Classification:

UN Number	UN1203
Proper Shipping Name	GASOLINE
Hazard Class	Class 3 Flammable Liquids
Packing Group	PG II
Additional Information	Marine Pollutant
Shipping Description	GASOLINE Class 3 UN1203 PG II Marine Pollutant

15. REGULATORY INFORMATION

This product has been classified in accordance with the hazard criteria of the *Controlled Products Regulations* (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Class:	Class B2 Flammable Liquid Class D2A Carcinogenicity
DSL/NDSL Status:	This product, or all components, are listed on the Domestic Substances List, as required under the Canadian Environmental Protection Act. This product and/or all components are listed on the U.S. EPA TSCA Inventory.
Other Regulatory Status:	The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

16. OTHER INFORMATION

LABEL STATEMENTS

Hazard Statement :	Flammable Liquid. Contains Benzene. May cause cancer.
Handling Statement:	Eliminate all ignition sources. Wear suitable gloves and eye protection. Bond and ground transfer containers and equipment to avoid static accumulation. Avoid prolonged exposure to vapours. Empty containers are hazardous, may contain flammable / explosive dusts, liquid residue or vapours. Keep away from sparks and open flames.
First Aid Statement :	Wash contaminated skin with soap and water. Flush eyes with water.

If overcome by vapours remove to fresh air.
Do not induce vomiting.
Obtain medical attention.

Revisions: This MSDS has been reviewed and updated. Section 4 Section 5 Section 7 Section 8 Section 11 Section 15

Superior Propane
A division of Superior Plus LP

MATERIAL SAFETY DATA SHEET

GUARDIAN

SECTION 1 – PRODUCT INFORMATION

Product Name:	Propane	Supplier:	Superior Propane A Division of Superior Plus LP 1111 - 49th Avenue N.E. Calgary, AB T2E 8V2 Business: (403) 730-7500
Trade Name:	LPG (Liquefied Petroleum Gas), LP-Gas		
Chemical Formula:	C_3H_8		
WHMIS Classification:	Class A – Compressed Gas Class B, Division 1 – Flammable Gas	24-Hour Emergency Contact:	Canutec (613) 996-6666

Application and Use: Propane is commonly used as a fuel for heating, cooking, automobiles, forklift trucks, crop drying and welding and cutting operations. Propane is used in industry as a refrigerant, solvent and as a chemical feedstock.

SECTION 2 – HAZARDOUS INGREDIENTS

Propane	74-98-6	90% -99%	Not Applicable
Propylene	115-07-1	0% - 5%	Not Applicable
Ethane	74-84-0	0% - 5%	Not Applicable
Butane and heavier hydro carbons	106-97-8	0% - 2.5%	Not Applicable

Occupational Exposure Limit:
Based upon animal test data, the acute toxicity of this product is expected to be inhalation: 4 hour LC50 = 280,000 ppm (Rat)

Note: Composition is typical for HD-5 Propane per The Canadian General Standard Board CGSB 3.14 National Standard of Canada. Exact composition will vary from shipment to shipment.

SECTION 3 – CHEMICAL AND PHYSICAL DATA

Form:	Liquid and vapour while stored under pressure	pH:	Not available
Boiling Point:	-42°C @ 1 atm	Solubility in Water :	Slight, 6.1% by volume @ 17.8°C
Freezing Point:	-188°C	Specific Gravity:	0.51 (water = 1)
Evaporation Rate:	Rapid (Gas at normal ambient conditions)	Appearance/Odour:	Colourless liquid and vapour while stored under pressure. Colourless and odourless gas in natural state at any concentration. Commercial propane has an odourant added, ethyl mercaptan, which has an odour similar to boiling cabbage.
Vapour Pressure:	1435 kPa (maximum) @ 37.8°C		
Vapour Density:	1.52 (Air = 1)		
Coefficient of Water/ Oil Distribution:	Not available	Odour Threshold:	4800 ppm

With proper handling, transportation and storage, adding a chemical odourant such as ethyl mercaptan has proven to be a very effective warning device, but all odourants have certain limitations. The effectiveness of the odourant may be diminished by a person's sense of smell, by competing odours and by oxidation which may cause a potentially dangerous situation.

SECTION 4 – FIRE OR EXPLOSION HAZARD

Flash Point: -103.4°C

Method: Closed cup

Flammable Limits: Lower 2.4%, Upper 9.5%

Auto Ignition T emperature: 432°C

Hazardous Combustion Products: Carbon monoxide can be produced when primary air and secondary air are deficient while combustion is taking place.

Fire and Explosive Hazards : Explosive air -vapour allowed to leak to atmosphere.

Sensitivity to Impact: No

Sensitivity to Static Discharge: Yes

Fire Extinguishing Precautions: Use water spray to cool exposed cylinders or tanks. Do not extinguish fire unless the source of the escaping gas that is fueling the fire can be turned off. Fire can be extinguished with carbon dioxide and/or dry chemical (BC). Container metal shells require cooling with water to prevent flame impingement and the weakening of metal. If sufficient water is not available to protect the container shell from weakening, the area will be required to be evacuated. If gas has not ignited, liquid or vapour may be dispersed by water spray or flooding.

Special Fire Fighting Equipment: Protective clothing, hose monitors, fog nozzles, self-contained breathing apparatus.

SECTION 5 – REACTIVITY DATA

Stability: Stable

Conditions To Avoid: Keep separate from oxidizing agents. Gas explodes spontaneously when mixed with chloride dioxide.

Incompatibility: Remove sources of ignition and observe distance requirements for storage tanks from combustible material, drains and openings to building.

Hazardous Decomposition Products: Deficient primary and secondary air can produce carbon monoxide.

Hazardous Polymerization: Will not occur.

SECTION 6 – TOXICOLOGICAL PROPERTIES OF MATERIAL

Routes of Entry: Skin Contact, Eye Contact, Inhalation

Inhalation: Simple asphyxiant. No effect at concentrations of 10,000 ppm (peak exposures). Higher concentrations may cause central nervous system disorder and/or damage. Lack of oxygen may cause dizziness, loss of coordination, weakness, fatigue, euphoria, mental confusion, blurred vision, convulsions, breathing failure, coma and death. Breathing high vapour concentrations (saturated vapours) for a few minutes may be fatal. Saturated vapours may be encountered in confined spaces and/or under conditions of poor ventilation. Avoid breathing vapours or mist.

Skin and Eye Contact: Exposure to vapourizing liquid may cause frostbite (cold burns) and permanent eye damage.

Ingestion: Not considered to be a hazard.

Acute Exposure: Contact with Liquefied Petroleum Gas may cause frostbite or cold burns. Propane acts as a simple asphyxiant as oxygen content in air is displaced by the propane. At increasing concentration levels, propane may cause dizziness, headaches, loss of coordination, fatigue, unconsciousness and death.

Chronic Exposure: No reported effects from long term low level exposure.

Sensitization to Product: Not known to be a sensitizer.

Occupational Exposure Limits: American Conference of Governmental Industrial Hygienists (ACGIH) lists as a simple asphyxiant.

ACGIH TLV: 1000 ppm

Carcinogenicity, Reproductive Toxicity, Teratogenicity, Mutagenicity: No effects reported.

Other Toxicological Effects: None

SECTION 7 – PREVENTATIVE MEASURES

Eyes:	Safety glasses or chemical goggles are recommended when transferring product.
Skin:	Insulated gloves required if contact with liquid or liquid cooled equipment is expected. Wear gloves and long sleeves when transferring product.
Inhalation:	Where concentration in air would reduce the oxygen level below 18% air or exceed occupational exposure limits in section 6, self-contained breathing apparatus is required.
Ventilation:	Use in well-ventilated areas. Use with explosion proof mechanical ventilation in confined spaces or poorly ventilated areas.

SECTION 8 – EMERGENCY AND FIRST AID PROCEDURES

Eyes:	Should eye contact with liquid occur, flush eyes with lukewarm water for 15 minutes. Obtain immediate medical care.
Skin:	In case of "Cold Burn" from contact with liquid, immediately place affected area in lukewarm water and keep at this temperature until circulation returns. If fingers or hands are frostbitten, have the victim hold his hand next to his body such as under the armpit. Obtain immediate medical care.
Ingestion:	None considered necessary.
Inhalation:	Remove person to fresh air. If breathing is difficult or has stopped, administer artificial respiration. Obtain immediate medical care.
Spill or Leak:	Eliminate leak if possible. Eliminate source of ignition. Ensure cylinder is upright. Disperse vapours with hose streams using fog nozzles. Monitor low areas as propane is heavier than air and can settle into low areas. Remain upwind of leak. Keep people away. Prevent vapour and/or liquid from entering into sewers, basements or confined areas.

SECTION 9 – TRANSPORTATION, HANDLING AND STORAGE

- Transport and store cylinders and tanks secured in an upright position in a ventilated space away from ignition sources (so the pressure relief valve is in contact with the vapour space of the cylinder or tank).
- Cylinders that are not in use must have the valves in the closed position and be equipped with a protective cap or guard.
- Do not store with oxidizing agents, oxygen, or chlorine cylinders.
- Empty cylinders and tanks may contain product residue. Do not pressurize, cut, heat or weld empty containers.
- Transport, handle and store according to applicable federal and provincial codes and regulations.

Transportation of Dangerous Goods (TDG)
TDG Classification: Flammable Gas 2.1

TDG Shipping Name: Liquefied Petroleum Gas (Propane)

PIN Number: UN1075

SECTION 10 – PREPARATION INFORMATION

Prepared by: Superior Propane
Health Safety and Environment Team

Telephone: (403) 730-7500
Revision: January 17, 2011
Supersedes: March 1, 2008