PACIFIC NORTHERN GAS
A TriSummit Utilities Company

GRANISLE PROPANE PLANT EMERGENCY RESPONSE PLAN

Revised: September 2022

Pacific Northern Gas Ltd.

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Phone: 604-691-5680

Granisle Propane Plant

Newman Avenue

Granisle, British Columbia

Site Latitude/Longitude: 54.5254 / 126.1200

Phone: 1-800-667-2297

E2-ID 3162

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DOCUMENT MANAGEMENT

Review and Updating

The *Granisle Propane Plant Emergency Response Plan* will be reviewed annually. The review will be carried out by the Manager, Environmental Health & Safety (EH&S).

The items that will be reviewed are:

- Changes in resources
- Changes in hazards and risks
- Changes to regulations
- Training
- Exercises
- Actual incidents

Note: Updating the Emergency Contact List does not constitute an official revision and therefore is not subject to the review procedure.

Any changes identified during the review process, after a training session or exercise, or when found by any PNG personnel, will be incorporated in the upcoming update of the Plan.

Manual holders are invited to advise the Manager, EH&S if they notice that pertinent information is incorrect, incomplete, or missing.

Revision Request Form

A Revision Request Form allows requests for changes to be made to the ERP. All requests for change must be coordinated through the PNG Manager, EH&S using the Revision Request Form.

REVISION REQUEST FORM		
Requested By:	**Date:**	
Department/Agency:		
Email:	**Phone Number:**	
Plan Name:	**Revision Type:** ❑ **Addition** ❑ **Deletion** ❑ **Correction**	
Section:	**Page Number:**	
Description of Revision: (Attach separate sheet if necessary.)		
Name of Requestor:		
Send to: Manager, EH&S Pacific Northern Gas 2550-1066 W. Hastings St Vancouver, BC V6E 3X2	**OR**	CustomerService@png.ca Fax: 604-697-6210
This section to be completed by Manager, EH&S.		
Date Received:	**Date Reviewed:**	
Issued as Revision: ❑ **Yes** ❑ **No**		
If revisions not accepted, explain reason:		

Revision Log

The Revision Log ensures all changes made to the ERP are accounted for and easily referenced. The Revision Log is managed by the PNG Manager, EH&S. All fields in the Revision Log must be completed.

Revision No.	Date	Section No.	Page No.	Summary of Revisions
001	February 2020	All	All	Significant revision to existing Granisle ERP to address regulatory changes in the *Environmental Emergency Regulations, 2019*.
002	July 2020	Document Management	Select	Inclusion of Revision Request form and Revision Log
		All	Select	Minor updates to flow, grammar, and accuracy
		1.3	1-1, 1-2	Additional references to surrounding areas added
		5.3	5-1	Revised notification protocol to address internal personnel changes
003	August 2021	Various	Various	Updated Senior Manager, Operations and Customer Service to Director, Operations and Customer Service
		Various	Various	Added in Director, Asset Management and Projects as Designate for Director, Operations and Customer Service
		All	All	Updated page number format to sequential numeric style
		5.3	16	Updated flow chart
		5.3	16	Clarified notification process
		10.0	50-51	Updated contact list
		Appendix C	59	Added image of shut-off valve
		Appendix D	61-63	Added in Granisle Propane System Diagram
004	September 2022	10.0		Updated Internal & External contact list
		Document Mgmt	ix	Updated Revision Log
		All	Select	Minor updates to grammar, and accuracy
		11.0		EPZ map

1 INTRODUCTION

1.1 Purpose

The purpose of the *Granisle Propane Plant Emergency Response Plan* (ERP) is to prepare Pacific Northern Gas Ltd. (PNG) to respond to hazards at the Granisle Propane Plant by:

- Ensuring immediate and competent responses to emergencies
- Minimizing danger to PNG employees and the public
- Minimizing damage to the environment and property
- Providing accurate and relevant information to stakeholders
- Preserving relevant records and equipment for any subsequent inquiries into the causes and circumstances of an emergency

1.2 Scope

The *Granisle Propane Plant Emergency Response Plan* applies to all releases or spills of propane resulting from the storage, use, or activities associated with the Granisle site.

PNG employees must be prepared for emergencies threatening life, the environment, or property. This means employees have an obligation to identify, assess, and report the impacts of emergency events. Emergencies will require individuals to perform functions outside of their normal day-to-day activities. In these situations, every attempt will be made to preserve organizational integrity by assigning tasks that parallel normal functions; however, it may be necessary to draw on employees' basic capacities and use them in areas of greatest need. Day-to-day functions that do not contribute directly to the emergency operation may be suspended or redirected for the duration of any emergency.

The *Granisle Propane Plant Emergency Response Plan* does not apply to:

- Incidents occurring during unloading – Superior Propane will activate their emergency procedures
- Emergencies impacting the propane distribution grid – PNG will utilize distribution grid emergency procedures

1.3 Granisle Propane Plant Surroundings

The Granisle Propane Plant is located on a flat section of fenced property with a topsoil base along Newman Avenue. The site is approximately 150 metres from Babine Lake and adjacent to the Granisle public works yard. The Plant is bordered by forests which could be considered a wildlife habitat. The slope of the site is slightly toward the adjacent lake. Babine Lake supplies water to the Village of Granisle residents. There is a small marina north of the plant and there could be boat traffic in the vicinity.

The Granisle Propane Plant is also located near the following:

1.3.1 Hospitals/Clinics

1.3.1.1 Granisle Community Health Centre

Although Granisle does not have any hospitals, the Granisle Health Clinic is located at 1 Hagen St., Granisle. The clinic is approximately 650 m from the Granisle Propane Plant. The clinic's hours of operation are Monday to Thursday 8:30AM – 4:00PM and Friday 8:30AM – 12:00PM.

1.3.2 Schools

1.3.2.1 Babine Elementary-Secondary School (BESS)

Babine Elementary-Secondary School is part of School District No. 91 (Nechako Lakes) and is located at 34 McDonald Ave., Granisle. The school is approximately 415 m from the Granisle Propane Plant. There are approximately 30 students enrolled from grades K to 12, as well as approximately 10 staff members. School is in session 9:00AM – 3:00PM, Monday to Friday. Staff members may be on the premises prior to and after school is in session. School is in session from September to June.

1.3.3 Residents

The Granisle Propane Plant is located within the Village of Granisle and, therefore, there are various residents located near the plant.

1.3.4 Public Location

1.3.4.1 Church of the Way

The Church of the Way is located at 1 Newman Ave., Granisle. The church holds Sunday service at 11:00AM, activities on Tuesday 10:00AM – 2:00PM, and youth group on Saturdays 7:00PM – 9:00PM.

1.3.4.2 Granisle Public Library

The Granisle Public Library is located at 2 Village Sq., McDonald Ave., Granisle. Hours of operation are Monday 3:00PM – 6:00PM, Tuesday 12:00PM – 4:00PM, Wednesday 10:00AM – 12:00PM, and Thursday and Friday 12:00PM – 4:00PM. The library is closed on Saturday and Sunday.

1.3.4.3 New Beach

New Beach is located south of the Granisle Propane Plant and can be accessed using the New Beach access road along Newman Avenue.

1.3.5 Commercial

1.3.5.1 Granisle Village Arena

The Granisle Village Arena is located at 3 Village Sq., Granisle. It is approximately 690 m from the Granisle Propane Plant.

1.3.5.2 Granisle Curling Club

The Granisle Curling Club is located at 1 McDonald Ave., Granisle. It is approximately 685 m from the Granisle Propane Plant.

1.3.5.3 Granisle & District Seniors Society Hall

The Granisle & District Seniors Society Hall is located at 19 Chapman St., Granisle. It is approximately 420 m from the Granisle Propane Plant.

1.3.5.4 Nurture RX Ltd. Pharmacy

The Nurture RX Ltd. Pharmacy is located at 13 Babine Dr., Granisle. It is approximately 275 m from the Granisle Propane Plant. The pharmacy's operation hours are Mondays, Tuesdays, and Thursdays 10:00AM – 5:00PM.

1.3.6 Industrial

1.3.6.1 Granisle Public Works Facility

The Public Works Yard is located at 5 Babine Dr., Granisle. The Granisle Public Works Facility is approximately 35 m from the Granisle Propane Plant. The hours of operation are 7:30AM – 5:00PM, Monday to Friday.

1.3.7 Municipal Government

1.3.7.1 Granisle Village Office

The Granisle Village office is located at 1 Village Sq., Granisle.

1.3.7.2 Granisle Fire Hall

The Granisle Fire Hall is located at 3 Village Sq., Granisle.

1.4 Emergency Management Priorities

1.4.1 PNG Priorities

PNG established and defined response priorities that encompass the importance placed on the overall well-being and safety of its employees and the public. Emergency response priorities support decision-making and help to determine the most effective and strategic response activities that should be undertaken during an incident.

Required actions will be conducted using the “PEAR” priority structure shown below. By putting people first, this priority sequence follows the principle that for personnel to respond effectively, their safety must first be assured.

Figure 1 - "PEAR" Priority Structure

Using “PEAR”, response actions can be prioritized into the following categories:

1. SAVE LIVES	2. IMPLEMENT PROTECTIVE ACTIONS	3. RESTORE ESSENTIALS
• Treat the injured and warn personnel and the public to avoid further casualties. • Evacuate or shelter people from the effects of the emergency. • Protect wildlife, livestock, and pets where possible.	• Protect the environment and property from negative impacts. • Provide security for property, especially in evacuated areas.	• Restore utility infrastructure. • Restore field and corporate operations. • Help restore community socio-economic functions.

Resources will be made available on a continuous basis to respond to an emergency safely and promptly. All reports of emergencies will be investigated by properly trained and equipped PNG employees or contractors.

1.5 Authority

The *Granisle Propane Plant Emergency Response Plan* is designed as per the requirements of the *Environmental Emergency Regulation*, and the *Canadian Environmental Protection Act.* The regulation requires that a person must submit a notice and prepare an environmental emergency plan if the person “owns or has the charge, management or control” of a regulated substance at or above the threshold quantities specified in Schedule 1 of the Regulations. Based on those quantities, PNG must comply with the *Environmental Reporting Regulations* to operate and manage the Granisle Propane Plant.

When an emergency occurs involving the Granisle Propane Plant, the Emergency Response Plan (ERP) should be activated and appropriate reporting to designated authorities carried out.

All other applicable Regulations should be carried out according to the specific requirements of each agency, as per *Section 5.5 Regulatory Notification*.

2 EMERGENCY MANAGEMENT ORGANIZATION

PNG uses the Incident Command System (ICS) to control and coordinate emergency response. It provides a way of coordinating the efforts of agencies and resources as they work together towards safely responding, controlling, and mitigating an emergency incident. A Unified Command can be formed where each agency identifies an Incident Commander (IC), who will work in coordination with one another while maintaining authority over their own priorities and areas of responsibility.

During an emergency, a coordinated response will be carried out between PNG personnel, emergency services (police/fire department), and other involved stakeholders as required.

PNG's emergency response organization is designed to manage all levels of incidents at the Granisle Propane Plant.

Operations personnel: PNG Operations personnel and the PNG Incident Commander are responsible for activating and overseeing emergency response operations at the Granisle Propane Plant. The most senior onsite or their designate will assume the role of PNG Incident Commander.

Emergency services: The RCMP, Granisle Volunteer Fire Department, and/or BC Ambulance can support emergency response operations at the incident site, as required. The Granisle Volunteer Fire Department has the jurisdiction to decide and implement any required public safety measures.

Emergency Operations Centre (EOC): PNG's EOC will be activated as required, with appropriate internal and contracted subject matter experts brought in to support the site as well as manage the overall emergency response, including recovery. The EOC will support the mobilization of off-site resources, notify regulatory agencies, and liaise with other emergency management agencies to establish communication lines, integrate emergency plans, and coordinate capabilities and resources.

3 HAZARDOUS SUBSTANCE STORAGE

3.1 Propane Storage Facility

The Granisle Propane Plant is a storage facility that supplies propane gas to the propane utility distribution grid for the Village of Granisle. The Plant is serviced by the PNG Burns Lake District Office that is located a minimum of one hour from the Plant via highway. A Granisle resident contractor monitors the Plant.

The storage facility includes:

- One propane tank (34.61 tonnes; 18,000 US gallons; 68,137 litres)
- Two Algas 80/40 direct fired LP-gas vaporizers
- Two propane pumps with discharge relief valves to return the relieved liquid back to the tank
- Interconnecting pipes and valves
- Liquid propane transporter unloading bulkhead
- A control room building containing a hard-line telephone and the telemetry alarm panel

3.2 Substance Storage Quantity

Substance	Number of Containers	Maximum Expected Quantity	Largest Single Container
Liquefied Petroleum Gas (LPG) – Propane CAS Registry Number: 74-98-6 United Nations (UN) Number: 1978 & 1075	1	27.69 tonnes	34.61 tonnes (18,000 US gallons)

3.3 Propane Technical Data

The Safety Data Sheet (SDS) for propane is referenced in *Appendix F* of this Plan.

3.3.1 Propane Liquid State

- Odourized with ethyl mercaptan (a rotten-egg odour)
- Colourless
- Very cold, -42^{0}C (-43.6^{0}F)
- Will run downhill and into catch basins
- Will boil and vaporize as it absorbs heat from its surroundings

3.3.2 Propane Vapor State

- Vapor forms a visible water fog or cloud-like appearance
- Vapor will cling to the ground
- Vapor is heavier than air
- Wind or air movement will speed up vapor dispersion

3.3.3 Possible Hazardous Reactions

- Exposure to the product will cause frostbite
- Product can displace air and cause asphyxiation

3.4 Plant Alarms

There are multiple alarms for the Granisle Propane Plant:

- Distribution high pressure alarm
- Distribution low pressure alarm
- Vaporizer #1 failure alarm
- Vaporizer #2 failure alarm

3.5 Emergency Shut-off Valves

In the event of an emergency at the Plant, authorized personnel will initiate a system shut-down using the emergency shut-off switch for the tank and associated piping, when it is safe to do so.

The emergency shut-down valve location can be found in *Appendix C* along with a system diagram in *Appendix D*.

3.6 Risks to Granisle Propane Plant

Though mitigation and preventive measures have been taken to protect the Granisle Propane Plant, it is exposed to a range of natural and human induced hazards, each with the ability to negatively impact the public, personnel, environment, and operations.

Natural hazards are naturally occurring physical phenomena caused either by rapid or slow onset events which can be geophysical (earthquakes, landslides), hydrological (floods), climatological (extreme temperatures, wildfires), meteorological (storms, wave surges), or biological (pandemics).

Human-induced hazards (mechanical failure, transport accidents, vandalism) are events that are caused by humans; these are acts of commission in that a person, intentionally or not, does something that creates the hazard. These can also be acts of omission, such as building design.

The worst-case scenario for the Granisle Propane Plant would be a tank fire with BLEVE, which would have the longest impact distance outside the boundary of the facility.

An uncontrolled, unmitigated release of a full tank of propane (27.69 tonnes) could also be considered worst-case scenario.

Hazards that could impact the propane plant and potentially result in a hazardous scenario:

- Purposeful tampering with infrastructure
- Vehicle accident impacting the infrastructure
- Mechanical failure
- Interface fire

4 RESPONSE ACTIONS

4.1 First On Site (Granisle Resident Contractor)

The First On Site is responsible for the initial actions, until relieved by a more senior or qualified PNG employee, or until support from emergency services or other response agencies arrive at the Incident Site.

The Granisle Resident Contractor will likely be dispatched to the Propane Plant to provide support for the emergency response until PNG personnel arrive at the site.

A coordinated response will be carried out between PNG, emergency services, and other involved agencies.

Initial Actions:	
❑	Take steps to address personal safety.
❑	Assess situation by looking for visual, odour or instrumental indications that an incident has occurred.
❑	Remove any sources of ignition, if safe to do so and not done so already.
❑	Notify PNG Operations and describe the situation (See *Section 10* for Contact Lists).
❑	Call 9-1-1. Provide the following information: • Type of response personnel required (fire, RCMP etc.) • Specific event/incident that has happened or is in progress • Weather conditions and direction of wind (in relation to access to the plant) • Details to enable responders to access the site with appropriate caution and safety including recommended approach direction for any responders
❑	Evacuate the area by clearing people and stopping traffic, as required. Ensure that Granisle Public Works and IDA Nurture Rx Pharmacy have been notified.
❑	If instructed by PNG, engage the emergency shut-off switch.
❑	Support emergency services (fire, RCMP, etc.) in response operations, as able and as directed by the Incident Commander (IC).
❑	Report potential safety and operational issues to the on-site Incident Commander (IC).
❑	Provide regular status updates to the Service Group Leader or Manager On-Call until PNG Personnel arrive onsite.
❑	Hand off and brief the PNG Incident Commander (IC) on the details of the emergency.
❑	Document all actions taken.

4.2 Initial Assessment of Incident

PNG Operations personnel will likely be dispatched to the incident site to take responsibility and provide support for the emergency response. PNG Operations personnel will evaluate all incidents and investigate alarms (where applicable). Many incidents may not be considered emergencies after an investigation is conducted. Upon completion of the incident evaluation, Operations personnel will determine the incident level and then implement the appropriate immediate actions.

The severity of the situation defines the level of emergency, the potential hazards to the public and the environment, and the appropriate response.

For specific hazard types or incident nature refer to *Section 6 Hazard and Response Guidelines* for guidance.

4.3 PNG Incident Commander[1]

The most senior PNG Operations personnel on duty will lead the PNG emergency response operations, assume the role of PNG Incident Commander and update the Director, Operations and Customer Service, or their designate, the Director, Asset Management and Projects. If emergency services have arrived onsite first, obtain a briefing from the Incident Commander and assume control of PNG response operations when safe to do so.

Initial Actions:	
❑	Take steps to address personal safety.
❑	Obtain a briefing from PNG First On Site or the Emergency Services Incident Commander.
❑	Establish Unified Command with the first responder (fire department/RCMP) Incident Commander(s) if present.
❑	Determine who is onsite (i.e., PNG contractors, emergency services, etc.).
❑	Maintain check-in/check-out log.
❑	Conduct an initial assessment of the incident and the actual and potential impacts.
❑	Remove any sources of ignition, if not done so already.
❑	Request additional personnel to be dispatched to the site and emergency responders to be notified, as necessary. Provide the following information: • Specific event/incident that has happened or is in progress • Weather conditions and direction of wind (in relation to access to the plant) • Type of response personnel required (fire, RCMP, PNG resources, etc.) • Recommended approach direction for any responders • Recommended evacuation zone or distance from the event • Likelihood of escalation or potential duration of the event in progress

[1] For a complete list of Incident Commander actions, see *Appendix B.1 – Incident Commander* of the *PNG Core Emergency Response Plan*.

Initial Actions:	
❑	Ensure that Granisle Public Works and IDA Nurture Rx Pharmacy have been notified.
❑	Notify the Manager, Customer Service and/or the Director, Operations and Customer Service, or their designate, the Director, Asset Management and Projects, or request Dispatch to contact one or both.
❑	Identify safe and restricted working areas.
❑	Establish an Incident Command Post (ICP) at a safe location either on or offsite, if not already established.
Ongoing Actions:	
❑	Coordinate the development and execution of the Incident Action Plan (IAP) (collaboratively if under Unified Command).
❑	Develop tactical objectives.
❑	Determine personnel and equipment resources required to implement the IAP.
❑	Document and communicate the IAP to Manager, Customer Service.
❑	Push the emergency shut-off switch for the tank and associated piping when it is safe to do so.
❑	Ensure that the Manager, Customer Service and/or Manager On-Call informs all regulatory agencies of the incident. Note: The Ministry of Transportation and Infrastructure (MoTI) should be notified if highway is closed.
❑	For a leak or spill, ensure notification of the Manager, EH&S.
❑	Support emergency services (police/fire department) in public safety measures as directed by the Fire Department Incident Commander (IC).
❑	Participate in Unified Command with Granisle Fire Department and/or RCMP if established.
❑	Manage and direct all tactical resources to carry out the IAP.
❑	Once gas is under control, verify that there is no secondary leakage.
❑	Update, document, and communicate the Incident Action Plan (IAP) every operational period. When EOC activated, coordinate production and updating of the IAP with the EOC.
❑	Provide regular briefings to the Manager, Customer Service, Manager On-Call, or the Operations Section of the EOC on the site activities.
❑	Ensure that a log of all emergency response activities and decisions is maintained.
❑	In conjunction with the Incident Commander (IC) from emergency services (fire department/police), determine when the site is safe.
❑	Confirm with the Manager, Customer Service to proceed with “All Clear” activities and recovery.
❑	Give the “All Clear” to all site personnel.
❑	Coordinate recovery activities at the site. For a leak or spill, consult the Manager, EH&S to determine the required reporting and clean-up activities.
❑	Complete and submit copies of the *PNG Incident Investigation Report* available in the Core ERP.

Initial Actions:	
❑	Ensure collection of evidence related to the incident.

4.4 PNG Manager, Customer Service

Initial Actions:	
❑	Obtain a briefing from the Emergency Services Incident Commander.
❑	Review the initial assessment of the incident and the actual and potential impacts; ensure the response and recovery strategies are designed and implemented to meet the PEAR response goals.
❑	Determine the level of emergency (refer to *Section 5.4*).
❑	Support Incident Commander as requested.
❑	Contact the Director, Operations and Customer Service, or their designate, the Director, Asset Management and Projects, to update and activate the EOC, if required.
❑	Conduct notifications and provide appropriate status updates to regulatory and ancillary agencies (refer to *Section 5.5 Regulatory Notification*), including but not limited to: • WorkSafe BC • Technical Safety BC (Formerly BC Safety Authority) • Ministry of Environment & Climate Change Strategy • Environment and Climate Change Canada • BC Utilities Commission (BCUC) • Emergency Management BC (EMBC) **Note**: MoTI should be notified promptly in case of an emergency which has closed, or has the potential to close, Hwy 118.
❑	For a leak or spill, ensure notification of the Manager, EH&S.
❑	Conduct regular re-analysis of incident needs and risks to determine if emergency level should be increased or decreased.
❑	Conduct intermittent briefings with Director, Operations and Customer Service, or their designate, the Director, Asset Management and Projects (in person & conference call) on the IAP and pertinent items.

Post Incident Activities: (if EOC not activated)	
❑	Confirm with Incident Commander and/or Unified Command to proceed with “All Clear” activities and recovery.
❑	Support recovery activities at the site. • For a leak or spill, consult the Manager, EH&S to determine the required reporting and clean-up activities.
❑	Complete and submit copies of *PNG Incident Investigation Report.*
❑	Ensure collection of evidence related to the incident.
❑	Ensure that initial (paper) notification and follow-up reporting is completed. Refer to *Section 5.5 Regulatory Notification*.

4.5 EOC Director[2]

The EOC Director has the overall responsibility for managing the emergency response activities and determining the requirement to activate the EOC to:

- Support site activities.
- Address consequences, including public safety and/or environmental impacts, or potential impacts.
- Manage communications.

A detailed description of roles and responsibilities for the EOC Director and Section Chiefs are noted in the *Core Emergency Response Plan* and should be referenced in conjunction with the actions below.

Ongoing Actions:	
❑	Determine the impact of the emergency on employees, the public, customers, the environment, and assets.
❑	Develop an overall corporate strategy for dealing with the event.
❑	Ensure the response and recovery strategies are designed and implemented to achieve the PEAR goals.
❑	Support Incident Commander and/or Unified Command.
❑	Confirm notifications and provide appropriate status updates to regulatory and ancillary agencies (Refer to *Section 5.5 Regulatory Notification*), including but not limited to: • WorkSafe BC • Technical Safety BC (Formerly BC Safety Authority) • Ministry of Environment • Environment Canada • Emergency Management BC (EMBC)
❑	Ensure that communications have been made to the appropriate stakeholders, and provide status updates to other agencies and organizations, including but not limited to: • Village of Granisle • MoTI • Regional District of Bulkley-Nechako
❑	Work with regulatory agencies and other emergency management agencies to establish communication lines and work together to coordinate capabilities and resources.
❑	Provide information and updates to the Section Chiefs in the EOC and to PNG Corporate (Vancouver office).
❑	Conduct regular re-analysis of incident needs and risks to determine if emergency level should be increased or decreased.
❑	Conduct briefings with Corporate on the IAP and pertinent items, as required.
❑	Distribute regular situation reports to maintain awareness and track completion of IAP.

[2] For a complete list of EOC Director actions, see *Appendix B.4 – EOC Director* of the *PNG Core Emergency Response Plan*.

Post Incident Activities:	
❑	Confirm with Incident Commander and/or Unified Command to proceed with “All Clear” activities and recovery.
❑	Support recovery activities at the site. • For a leak or spill, consult the Manager, EH&S to determine the required reporting and clean-up activities.
❑	Complete and submit copies of *PNG Incident Investigation Report*.
❑	Ensure collection of evidence related to the incident.
❑	The EOC Director is responsible to ensure that initial (paper) notification and follow-up reporting is completed. Refer to *Section 5.5 Regulatory Notification*.

5 INCIDENT NOTIFICATION & CLASSIFICATION

5.1 Plant Alarms

The low distribution pressure alarm, high distribution pressure alarm, vaporizer #1 failure alarm, and vaporizer #2 failure alarm at the Plant are programmed to a phone system to provide prompt, direct notification of an alarm. If the call is unanswered, it automatically proceeds to the next number. In order, the alarm notifications are made to:

1. PNG Operations staff (primary)
2. PNG Operations staff (secondary)
3. Measurement Department (not on the call list)

Upon receipt of a call, the PNG operator self-dispatches or requests the Granisle Resident Contractor to attend the site and notifies the Area Manager or the Manager On-Call.

5.2 PNG Call Centre

PNG's Contact Centre may be notified of an emergency involving the Granisle Propane Plant by the fire department, a customer, or a member of the public.

When such a call comes in, the dispatcher will:

- ❑ Ask a series of questions to confirm the nature of the emergency.
- ❑ Provide basic instructions to the caller to ensure their personal safety.
- ❑ Notify PNG Operations personnel.
- ❑ Assist with notifications with the Emergency Services (Police/Fire Department).
- ❑ Assist with internal notifications to PNG personnel and management.

Dispatchers may also be notified of an emergency by the Granisle Resident Contractor or PNG personnel.

5.3 Internal Notification Process

At the onset of an incident, the Incident Commander (or delegate) will notify the Manager On-Call or the Director, Operations and Customer Service, or their designate, the Director, Asset Management and Projects, as soon as possible. The Manager On-Call will notify the Director, Operations and Customer Service, or their designate, the Director, Asset Management and Projects, if not already notified.

Having multiple points of contact and backups ensures the internal notification process at the start of an incident is seamless and prevents confusion if certain points of contact are unavailable.

The Incident Commander and the Manager On-Call (and/or Director, Operations and Customer Service, or their designate, the Director, Asset Management and Projects) will together:

1. Activate the ERP.
2. Determine the appropriate activation of the ICP and EOC.

The Manager On-Call mobilizes the initial resources for the site and the ICP.

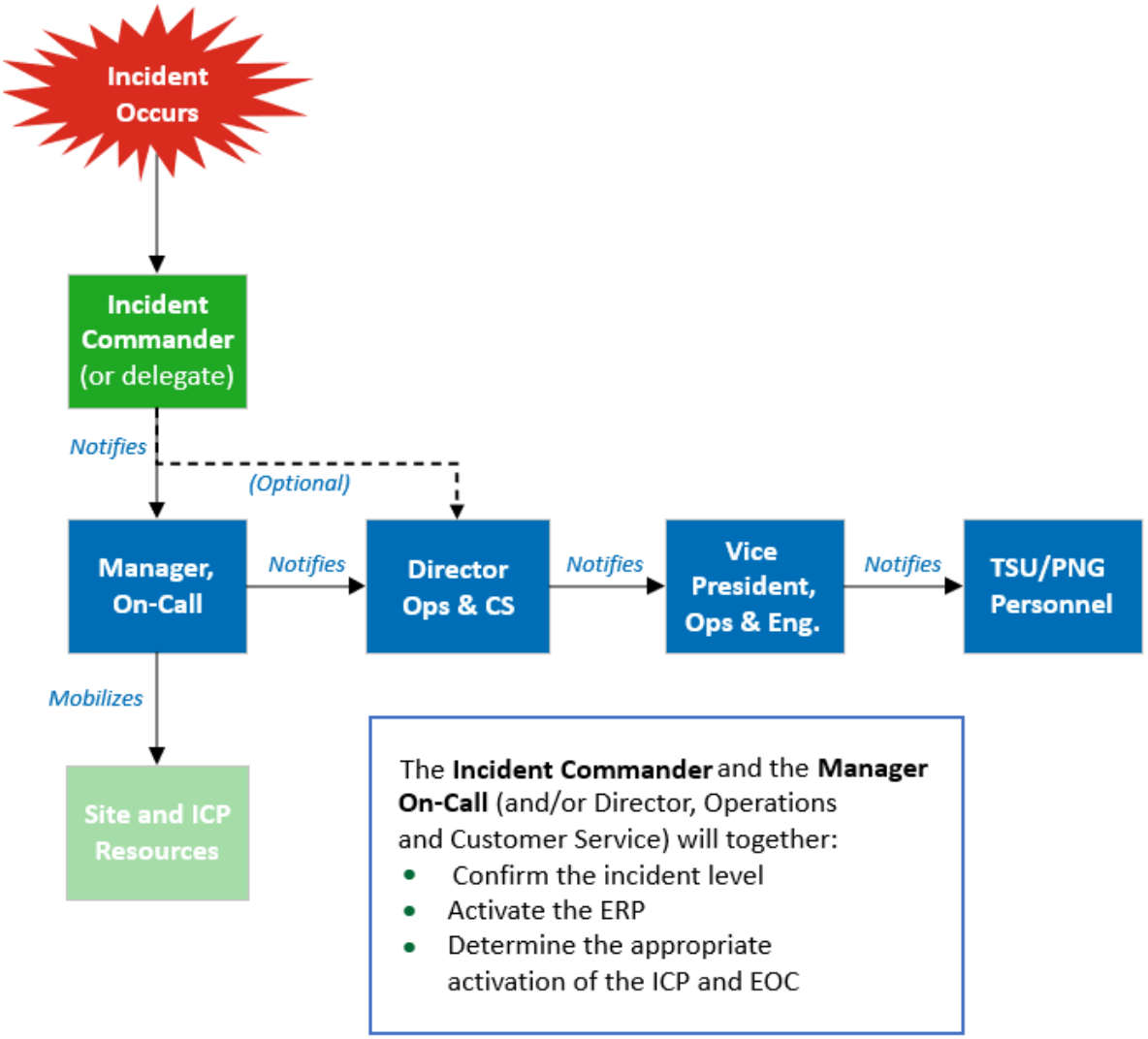
The Director, Operations and Customer Service, or their designate, the Director, Asset Management and Projects, notifies the Vice President (VP), Operations & Engineering.

The VP may notify key stakeholders within PNG and TriSummit Utilities, as appropriate.

Notifications to the Manager On-Call, the Director, Operations and Customer Service, or their designate, the Director, Asset Management and Projects, and the VP will likely be made by telephone. Resource notifications can be made via telephone or email. Text message remains an option.

The Director, Operations and Customer Service, or their designate, the Director, Asset Management and Projects, mobilizes the initial resources for the EOC.

Situation updates will be made through the ICP or, if activated, the EOC.



5.4 Incident Classification

5.4.1 Incident Levels

The classification of an incident level is determined based on the severity of the incident, the potential hazards to the public and the environment, and the appropriate response.

By categorizing incidents, key PNG responders can quickly and clearly communicate the severity of the incident to other PNG personnel, mutual aid partners, and regulatory agencies.

The Incident Classification Matrix is used to assess the potential consequences and probability of the incident occurring in order to assign it a risk score.

PNG categorizes emergency incidents into four (4) levels:

- Minor
- Level 1
- Level 2
- Level 3

A higher level is assigned when the incident meets one or more conditions of the higher level.

Minor

A Minor incident has no consequential impacts to the organization.

Level 1 - Moderate

Factors to consider may include:

- Are personnel at immediate risk?
- Is there immediate danger to the public or environment?
- Is the release of a hazardous substance confined to the PNG property?
- Is there low risk for incident escalation?
- Can it be exclusively handled by PNG personnel?
- Is the incident likely to create little or no media interest?

Level 2 - Major

Factors to consider may include:

- Is there a potential for risk to the public and environment?
- Is the control of hazardous substances still possible?
- Is the incident likely to require the involvement of external emergency services, local, or provincial agencies?
- Has the incident generated local or regional media attention?

Level 3 - Serious

Factors to consider may include:

- Is there immediate danger to the public or environment?
- Is there an uncontrolled release of a hazardous substance?
- Does the response require extensive involvement of external emergency services, local, or provincial agencies?
- Has the incident generated media interest: local, provincial or national?

5.4.2 Using the Incident Classification Matrix

The Incident Classification Matrix is used to determine the level of any incident, from Minor to a Level 3 emergency. The steps for determining the incident level risk score are:

1. Read through the descriptions under Consequence Ranking and check off the first description that best matches the situation. There can be multiple checks; however, only the highest ranked item is used in the calculation of an incident level.
2. The Probability Level is the likelihood that an incident can escalate. Review the Probability Chart and select the best choice based on what you know about the incident at the time of scoring.
3. Calculate the risk score by adding the Consequence and Probability values together. Compare the value to the Incident Classification Table to determine the incident level.

5.4.2.1 Incident Classification Matrix

Instructions: Start at the top and continue down until you check off any one box in both consequence and probability to determine the incident classification.

TABLE 1. CONSEQUENCE RANKING

RANK	CONSEQUENCE (any one of the following)
4	❑ Major on-site equipment or infrastructure loss ❑ Major act of violence, sabotage, or terrorism that impacts plant assets ❑ Reportable spill beyond site, uncontained and affecting environment ❑ Spill affecting public safety
3	❑ Threats of violence, sabotage, or terrorism ❑ Reportable spill beyond site, potentially affecting public safety, environment, or property ❑ HAZMAT worker exposure ❑ Major on-site equipment failure
2	❑ Major on-site equipment damage ❑ A security breach that has potential to impact people, property, or the environment ❑ Reportable spill potentially beyond site, not affecting public safety, environment, or property
1	❑ Moderate on-site equipment damage ❑ A security breach that impacts plant assets ❑ Reportable spill on location
0	❑ No consequential impacts
** For this consequence criteria, a probability score of 2 or higher must be used	

TABLE 2. PROBABILITY RANKING

RANK	PROBABILITY (any one of the following)
4	❑ Uncontrolled, with control unlikely in near term
3	❑ Escalation possible; under or imminent control
2	❑ Escalation unlikely; controlled or likely imminent control
1	❑ Escalation highly unlikely; controlled or imminent control
0	❑ Will not escalate; no hazard; no monitoring required

5.4.2.2 Defining Levels of Emergency

			Probability				
			4	3	2	1	0
			☐ Uncontrolled, with control unlikely in near-term	☐ Escalation possible; under, or imminent control	☐ Escalation unlikely; controlled, or likely imminent control	☐ Escalation highly unlikely; controlled, or imminent control	☐ Will not escalate; no hazard; no monitoring required
Consequence	4	☐ Major on-site equipment failure ☐ Major act of violence, sabotage, or terrorism which impacts plant assets ☐ Reportable liquid spill beyond site, uncontained and affecting environment ☐ Spill affecting public safety	Level 3	Level 3	Level 2	Level 2	Level 2
	3	☐ Threats of violence, sabotage, or terrorism ☐ Reportable spill beyond site, potentially affecting public safety, environment, or property ☐ HAZMAT worker exposure ☐ Major on-site equipment damage	Level 3	Level 2	Level 2	Level 2	Level 2
	2	☐ Moderate on-site equipment damage ☐ A security breach that has potential to impact people, property or the environment ☐ Reportable spill within plant	Level 2	Level 2	Level 1	Level 1	Minor
	1	☐ Minor on-site equipment damage ☐ A security breach that impacts plant assets ☐ Reportable spill within plant	Level 2	Level 1	Level 1	Minor	Minor
	0	☐ No consequential impacts	Level 1	Level 1	Minor	Minor	No Notification Required

5.5 Regulatory Notification

When an emergency at the Granisle Propane Plant occurs, there may be a requirement to notify regulatory agencies.

Appropriate actions should be taken to document and track the amount of product spilled and to note consequences and/or events that may be subject to regulatory reporting requirements.

Record and report the estimated spill volume, and submit to the Manager, EH&S.

5.5.1 Emergency Management BC

In the event of an emergency, the Manager On-Call is required to notify Emergency Management BC (EMBC).

5.5.1.1 Notification

When an environmental emergency occurs:

- The person(s) who causes or contributes to the environmental emergency at the site is required to notify PNG as soon as possible.
- PNG will verbally notify EMBC as soon as possible, by telephone.

5.5.1.2 Reporting Number

Spill Reporting Line: 1-800-663-3456

5.5.2 Environment and Climate Change Canada (BC Reporting Line)

In the event of an emergency, the Manager On-Call is required to notify Environment and Climate Change Canada (ECCC).

5.5.2.1 Notification

When an environmental emergency occurs:

- The person(s) who causes or contributes to the environmental emergency at the site is required to notify PNG as soon as possible.
- PNG will verbally notify ECCC as soon as possible, by telephone.

Manager, EH&S will provide a written report to ECCC within 30 days.

5.5.2.2 Reporting Number

Environment Canada Environmental Emergencies: 604-666-6100

5.5.3 Ministry of Environment & Climate Change Strategy

In the event of an emergency, the Manager On-Call is required to notify the Ministry of Environment & Climate Change Strategy.

5.5.3.1 Notification

Immediate notification is required if:

- Propane gas release is reportable if the quantity is greater than $5m^3$ (10 kg/25 l)
- All incidents occurring in a sensitive environment are reportable.

See *Appendix A Abbreviations and Definitions*, under *Major Release*.

5.5.3.2 Reporting Number

Spill Reporting Line: 1-800-663-3456

5.5.4 Ministry of Transportation & Infrastructure

In the event of an emergency, the Manager On-Call is required to notify the Ministry of Transportation & Infrastructure.

5.5.4.1 Notification

Immediate notification is required if:

- All incidents impacting Highway 118 – Central Lake Babine Highway are reportable.

5.5.4.2 Reporting Number

Spill Reporting Line: 1-800-663-3456

5.5.5 Technical Safety BC

In the event of an emergency, the Manager On-Call may be required to notify Technical Safety BC.

5.5.5.1 Notification

Immediate notification is required, in cases of:

- Injury or loss of life
- Fire or explosion
- Significant interruption of service to customers (>100 customers)
- Significant break or failure of a fitting or other component, regardless of the cause, resulting in an unplanned, uncontrolled release of propane
- Pressure vessel failure
- CO related incidents where the ambient CO levels are over 100 ppm and/or when medical attention is administered
- Evacuation of a public assembly building (i.e., school, church, hospital, apartments, hotels, care homes, etc.)

Media attention, specifically if TV or provincial/national media are confirmed to be onsite.

5.5.5.2 Reporting Number

24/7 Reporting Line: 1-866-566-7233

5.5.6 WorkSafe BC

In the event of an emergency, the Manager On-Call may be required to notify WorkSafe BC.

5.5.6.1 Notification

An employer must immediately notify of the occurrence of any accident that:

- Resulted in serious injury that required medical intervention
- Resulted in fatality to any PNG employee, contractor, or third party
- Resulted in a fire due to the actions of a PNG employee
- Resulted in a pressure vessel failure (i.e., boiler)
- Resulted in a significant system damage caused by a third party or PNG
- Involved in the major release of a hazardous substance that posed serious risk to the health of workers

5.5.6.2 Reporting Number

- Vancouver: 604-276-3100
- Toll free: 1-888-621-7233
- After hours: 604-273-7711
- After hours toll-free: 866-922-4357

5.5.7 British Columbia Utilities Commission (BCUC)

In the event of an emergency, the Vice President, Operations and Engineering or designate, may be required to notify the British Columbia Utilities Commission.

5.5.7.1 Notification

The BCUC is to be notified if an incident results in any of the following:

- Injury or loss of life
- Fire
- Explosion
- Leaks that shut down a transmission line for greater than 8 hours or interrupt gas service to customers

5.5.7.2 Reporting Number

- Vancouver: 604-660-4700
- Toll Free: 1-800-663-1385

5.6 Public Notification

The *Environmental Emergency Regulation* requires PNG to provide members of the public who may be adversely affected by an environmental emergency involving the Granisle Propane Plant with safety information. This includes information before, during, and after an emergency and will be communicated by the Manager, Customer Service, or designate.

5.6.1 Before an Emergency

For a detailed overview of the information PNG provides before an emergency incident, see the *PNG Public Safety Awareness Plan*.

5.6.2 During and After an Emergency

In the event of an emergency, the decision to evacuate is made by the attending fire department and/or RCMP. Local authorities have a responsibility to protect lives. The local authority will be engaged through Unified Command and/or the PNG EOC in conjunction with the local authority's own EOC.

Under Unified Command, the PNG Incident Commander provides technical advice and recommendations on public safety measures, including the need to evacuate and the suggested areas (HPZ) that should be protected. PNG employees may participate in the door-to-door evacuations if imminent danger exists to the public or when requested by emergency services.

If the situation requires immediate public safety measures be taken, defined as those actions that must be taken "now", without any delay, to save lives from extreme risk, the PNG Incident Commander is authorized to begin notifying and evacuating without consulting the EOC Director. Notification to emergency services and/or the local authority of the tactical evacuation will be made by the EOC.

Once the immediate public safety measures have been completed and Unified Command has been established, further public safety planning can take place and actions instituted to further protect the public.

Aside from the initial public safety measures, broader community evacuation or issuance of public safety measures will fall under the jurisdiction of the Local Authority. PNG will assist the Local Authority to the extent possible. This assistance may include the sharing of personnel, resources, information, transportation, and reception centre set-up and management.

Permission to rescind the public safety measures will be decided jointly by the Emergency Services Incident Commander and the PNG Incident Commander.

"All Clear" messaging will be coordinated and delivered by emergency services and distributed.

5.6.2.1 Communicating Public Protection Measures

- By necessity, communication needs and platforms will be shaped by the nature of the incident. The local authority has the primary responsibility for the development and dissemination of notifications to the community that are specific to the incident, and should include:
    - Public notification and situation updates
    - Official communications to key audiences
    - Media relations

Under Unified Command, PNG will assist with the development and dissemination of public notifications, by providing the local authority with information regarding the nature of incident.

5.6.2.2 Recall of Evacuees

The PNG Incident Commander (in conjunction with the EOC Director) and the Emergency Services Incident Commander will decide jointly when to grant permission to return to the evacuated area.

Considerations to be made prior to issuing the “All Clear” signal can include:

- Confirmation with on-site responders and public protection responders that all evacuated areas are safe to re-enter (both for personnel and the public)
- Isolation of remaining hazards
- Cordoning off the incident area
- Ensuring that residences or businesses in the HPZ are clear of gas before persons are permitted to return
- Assurance that equipment and debris have been removed from public roadways
- Notifications that the incident is over (downgraded):
    - Coordinate with government agencies, via the Information Officer, to announce the rescind of evacuation (‘all clear’)
    - Notify affected or evacuated area residences and businesses
- Supporting the provision of transportation to evacuated persons
- Reimbursing costs incurred by persons due to the incident

Evacuation rescind messaging will be coordinated and delivered by the local authority using the appropriate communication channels. The PNG EOC will support the communications relating to the recall of evacuees; in areas where the authority with jurisdiction for evacuations is unable to issue communications, PNG will lead the development and issuance of communications.

6 HAZARD AND RESPONSE GUIDELINES

PNG employees should use the following as guidance, as applicable, to inform their response. The checklists present the minimum requirements for task considerations that must be done. Additional tasks can be added as the incident demands. Some tasks are one-time actions, while others are ongoing or repetitive actions for the duration of the incident.

These procedures apply to specific hazards that have the potential to occur on or near the Granisle Propane Plant. For Granisle Propane Plant operation-specific procedures, see the *Granisle Propane Storage Facility Plant Manual & Operation Procedures*.

6.1 Implementing Public Protective Measures Based on the Incident Specific HPZ

IMPLEMENTING PUBLIC PROTECTIVE MEASURES BASED ON THE INCIDENT-SPECIFIC HPZ

SCOPE

The Hazard Planning Zone (HPZ) is used to identify where immediate response actions are required in the event of an incident.
Depending on the incident-specific HPZ, some or all the noted activities may be actioned.
Procedure is referenced after Initial Make Safe Actions (immediate actions) are completed and the incident-specific HPZ is identified.

ACTIVITIES

- ❑ Communicate need for public protective measures (evacuation) to emergency services and community.
  - Support the emergency services to notify the public that evacuation is advised. See *Section 6.3 Evacuation*.
- ❑ If gas is escaping, identify sources of ignition and remove them if possible and safe to do so.
- ❑ Establish a safety perimeter based on the HPZ.
- ❑ Consider the request of closure of air space, roads, rail, and waterways, as appropriate.
- ❑ Identify the Roadblock Leader.
- ❑ Coordinate the elimination of hazards from damaged property and/or utilities on site.
- ❑ Obtain frequent weather forecast updates.
- ❑ Request security resources to maintain safety perimeter and, if required, protection of PNG and public property.
- ❑ Communicate to ICP and/or EOC Scribe all actions taken, and ensure that a log of all activities and decisions is maintained.

Roadblocks

- ❑ Establish roadblocks to limit access.
- ❑ Consider access/egress of responders and evacuees.
- ❑ Position vehicle in a highly visible area to oncoming traffic.
- ❑ Use intersecting crossroads as much as possible to maximize the monitoring of traffic flow.

IMPLEMENTING PUBLIC PROTECTIVE MEASURES BASED ON THE INCIDENT-SPECIFIC HPZ

- ❑ Do not completely block road.
- ❑ Engage the four-way flashers on vehicle.
- ❑ Wear traffic vest to maintain visibility to traffic.
- ❑ Record names, addresses, and contact information of evacuees leaving the area; ask those leaving the area to register at the identified reception centre.
- ❑ Ensure that only resources and equipment approved by the Incident Commander are allowed to enter the secured area.
- ❑ Record names, contact information, and locations of those entering the area.
- ❑ If an evacuation is underway, **only** first responders and approved response personnel are to enter the area.
- ❑ Attend to the roadblock until relieved.

Rovers

- ❑ Monitor gas migration above and below ground; verify boundary of the safety perimeter.
- ❑ Support first responders (fire, police, etc.) in instigating and communicating protective measures.
- ❑ Advise impacted public to evacuate if emergency services are not present on site.
- ❑ Begin notification of public with those in closest proximity to the incident location and downwind of the location.
  - Proceed to those located within the remainder of HPZ.
  - Utilize messaging in *Section 6.3 Evacuation*.
  - PNG personnel do not have authority to order the public to evacuate the premises. If evacuation is refused, record name and address and notify the police.
- ❑ If contact cannot be made through a personal visit, request resources to conduct a thorough survey of the area.
- ❑ Check on an ongoing basis for gas migration above and below ground, and for accumulation in nearby buildings and fixtures.
- ❑ Repeat until gas is controlled and accumulations are vented.
- ❑ Follow Site Safety Plan - monitor gas levels, check in, etc. **Responder safety is the first priority.**

6.2 Notice to Airmen (NOTAM) Request

NOTICE TO AIRMEN (NOTAM) REQUEST PROCEDURE

SCOPE

If airspace is impacted by the incident, it may be necessary to contact NAV CANADA to request that a Notice to Airmen (NOTAM) be issued to inform aircraft of the potential dangers. NAV CANADA is responsible for the collection, evaluation, and dissemination of NOTAMs.

It is the responsibility of the EOC to assess the likelihood of risk to aircraft. This assessment should be conservative since aircraft such as low-flying helicopters and hot-air balloons may be at significant risk from natural gas plumes or fires.

ACTIVITIES

- ❑ The Planning Section and Operations Section work together to determine:
  - Location of incident in latitude and longitude
  - Radius of plume
  - Estimate of altitude of plume in feet above ground level
  - Estimate of speed and direction of plume (in knots and degrees if possible)
- ❑ **Contact NAV CANADA Flight Information Centre at 1-866-992-7433**
  - Inform the duty officer that PNG requests a NOTAM due to significant release of propane/gas fire/gas explosion.
  - Give the location, radius, altitude, and movement information above.
  - Clearly communicate units of measure of information shared.
  - Provide the EOC's contact information. If there are any further questions, the duty officer MUST be able to contact PNG to confirm.
  - Record the NOTAM number for future reference, if provided.
  - Do not hang up until the duty officer does so.
- ❑ Inform the NAV CANADA Information Centre (1-866-992-7433) if the location, radius, altitude, or movement information changes significantly, as the NOTAM must be amended:
  - Quote the NOTAM number and provide the amended information.
- ❑ Inform the NAV CANADA Information Centre (1-866-992-7433) when gas determined under control or fire has dispersed.
  - Quote the NOTAM number and request that the NOTAM be cancelled.

6.3 Evacuation

EVACUATION PROCEDURE

SCOPE

The following provides guidance to supporting, and where necessary, conducting an evacuation.

Depending on the specific incident, some or all the noted activities may be actioned.

**The following is to be referenced after Initial Make Safe Actions (immediate actions) are completed and the incident-specific HPZ is identified.*

Note:

If the situation requires immediate public safety measures be taken, defined as those actions that must be taken "now", without any delay, to save lives from extreme risk, the PNG Incident Commander is authorized to begin notifying and evacuating the public without consulting the EOC Director. Notification to emergency services and/or the local authority of the tactical evacuation will be made by the EOC.

ACTIVITIES

- ❑ Assess incident, identify hazard (gas, heat, etc.), and determine current/potential risk to responders and public.
- ❑ Determine if immediate public safety measures are needed.
- ❑ Determine appropriate initial public safety measures – evacuation order or alert, within the pre-determined zone.
- ❑ Communicate public safety measure information to emergency services and/or local authority.
- ❑ Support emergency services (fire, police, etc.) in instigating and communicating evacuation, as required.
- ❑ Identify egress route:
  - Establish access control (roadblocks) to the HPZ.
- ❑ Advise impacted public to evacuate if emergency services are not present on site:
  - PNG personnel do not have authority to order the public to evacuate the premises. If evacuation is refused, record names and addresses and notify the police.
- ❑ Identify a reception centre, determined in conjunction with the local authority, and communicate location to evacuees.
- ❑ Arrange rovers or a helicopter to search the area to locate transients, hunters, trappers, recreational users, and other area operators who may be at risk.
- ❑ Provide the Contact Centre with instructions to relay to residents to aid in the safe evacuation of individuals within the specified area(s):
  - Align with emergency services/local authority messaging; if unavailable, see the sample messaging at the end of the procedure.
- ❑ Assist with the coordination of support services, inclusive of transportation to the reception centre, food, lodging, emotional support, information about the incident, and family reunification.
- ❑ Monitor environmental parameters for the specified area(s) to aid in the determination of

EVACUATION PROCEDURE

when an evacuation rescind can be issued.

- ❑ Update first responder/local authority frequently.
- ❑ Coordinate with the local authority to plan and execute re-entry into the impacted area.

6.3.1 Speaking Notes: Instructions for Evacuation

***Prior to alerting residents of an evacuation:**

- Determine whether it is safe for residents to leave the area in their vehicles, or whether evacuation by foot is required.
- Identify a designated safety meeting area or muster point for evacuees to gather and wait, particularly if it is not safe to travel by vehicle and/or they require transportation assistance to the identified reception centre.
- Ensure you have a detailed safe travel route to the safety meeting area, muster point, or reception center (as applicable).

If evacuation is recommended, communicate the following to residents and members of the public in the hazard area. The EOC will provide you with the information required to "fill in the blanks" for the specific incident you are responding to.

- Hi, my name is [*insert name*], I work with Pacific Northern Gas.
- We are responding to an incident in the area. For your safety, we recommend you evacuate the area immediately.
- Please inform your family or anyone else in your home/building, gather your pets, and evacuate the area immediately.

Provide location of safe meeting area and any instructions for a specific route they should take.

If you have confirmed it is safe to travel by vehicle:

- It is still safe for you to evacuate in your own vehicle. If you could please safely make your way in your vehicle (if driving) to the identified safe meeting area or muster point at *[provide location of safe meeting area, and any instructions for a specific route they should take]* and wait for me to arrive. I will need to provide you with additional information so you can stay updated regarding the incident and for further instructions.

Once you have met the evacuees at the safe meeting area or muster point:

- Confirm who has been evacuated and from where.

For individuals going to the reception centre advise:

- A reception centre has been set up at *[reception centre facility name and address]*. It is recommended that you head to the reception centre as soon as possible and register yourself and your family.

If you have confirmed it is unsafe to travel by vehicle, and residents are required to evacuate by foot:

- For your safety, because of the nature of the incident, it is unsafe for you to travel by vehicle. Please make your way by foot to the identified safe meeting area or muster point and wait for me to arrive. This is where we will be picked up and taken to the reception centre.
- I will need to provide you with a few additional details, so you can stay updated regarding the incident and evacuation instructions.

Once you have met the evacuees at the safe meeting area or muster point, collect the following details:

- Confirm who has been evacuated and from where.

6.4 Environmental Spill

ENVIRONMENTAL SPILL

SCOPE

The following provides guidance to responding to an environmental spill (defined as any event that has the potential to adversely affect the natural environment and/or human health and safety).

Depending on the specific incident, some or all the noted activities may be actioned.

**Reference the following checklist after the Initial Make Safe Actions (immediate actions) are completed and the incident-specific HPZ is identified.*

Note:
Any environmental damage shall be remedied in consultation with relevant stakeholders and third parties.

ACTIVITIES

- ❑ Working together with the fire department, establish an evacuation zone (refer to Granisle Propane Plant Hazard Planning Zone map in *Appendix B*) at least 100 m (330 ft) in all directions, including Babine Lake:
  - Consider requesting Notice to Airmen (NOTAM) for float planes on the lake.
  - For large spills, evacuate downwind at least 800 m (1/2 mile)[3].
- ❑ Stay upwind, uphill, and/or upstream:
  - Propane is heavier than air and will collect in low or confined areas, and migrate to underground open conduits and drains.
- ❑ Eliminate all ignition sources, if safe to do so. All equipment used when handling the product must be grounded.
- ❑ Stop leak, if safe to do so, by shutting off appropriate valves.
- ❑ Request fire department, if able and safe to do so, to use water to reduce vapors or to divert vapor cloud drift:
  - **Do not** direct water at spill, source of leak, or safety devices.
  - **Avoid** allowing water runoff to contact spilled material.

[3] As per the recommended public safety measures outlined in the 2016 Emergency Response Guidebook (Transport Canada)

6.5 Fire at the Plant/Tanker

FIRE AT THE PLANT/TANKER
The following provides guidance to mitigate impacts to PNG infrastructure in the event of a fire at the plant/tanker. **Depending on the specific incident, some or all the noted activities may be actioned.**
ACTIVITIES
❑ Working together with the fire department, ensure an evacuation zone of 1600 m[4] in all directions, including Babine Lake (refer to Granisle Propane Plant Hazard Planning Zone map in *Appendix B*): o Consider requesting a NOTAM for float planes on the lake. See *Section 6.2 Notice to Airmen (NOTAM) Request.* ❑ Do not extinguish fire unless confident that the leak can be stopped. ❑ For a large fire, use unmanned hose holders or monitor nozzles to cool the tank; if this is not feasible, withdraw from area and let fire burn. ❑ Ask the fire department, if able and safe to do so, to continue applying water spray or fog to containers and piping that has been exposed to fire, until the temperature and tank pressure have returned to normal: o **Do not** direct water at source of leak or safety devices. o Withdraw **immediately** in case of rising sound from venting safety devices or discolouration of tank.

[4] As per the recommended public safety measures outlined in the 2016 Emergency Response Guidebook (Transport Canada)

6.6 Wildland Fire in Vicinity of PNG Assets

WILDLAND FIRE IN THE VICINITY OF PNG ASSETS

SCOPE

The following provides guidance to mitigate impacts to PNG infrastructure in the event of a wildland fire in the vicinity (advance planning), as well as response and recovery activities.

Depending on the specific incident, some or all the noted activities may be actioned.

Protective activities should only be used if the projected time of fire impact at site allows for sufficient time to safely leave the site.

ADVANCE PLANNING ACTIVITIES

- ❑ Obtain and assess current wildfire location and forecasts from Ministry of Forests, Lands, Natural Resource Operations & Rural Development (FLNRORD) or Emergency Management BC (EMBC).
- ❑ Activate the EOC to support advance planning activities and communications internally and externally.
- ❑ Review safe working procedures with personnel, including requirements located in the *Wildfire Regulation* related to working near wildfires or when wildfire risk is high:
  - If an area is under the threat of fire activity, work as appropriate to ensure minimum personal risk; evacuate all unnecessary personnel.
  - Suspend site projects and maintenance work not critical to operations.
- ❑ Assess and identify risk to infrastructure.
- ❑ Consider appropriate protective and precautionary activities to protect the system before the wildfire reaches the area:
  - Set up sprinklers (there is a water connection from the municipal works yard available for emergencies).
  - Conduct additional vegetation management surrounding the Plant; request the Provincial Wildfire Centre to coordinate and assist with back burn of property line vegetation.
  - Deploy dirt and sand to bury above-ground infrastructure.
  - Install fire blankets to above-ground valve sites.
  - Apply gel/foam to infrastructure (if approved and non-corrosive).
  - Coordinate, as required with FLNRORD (or other authority), permission to access restricted areas to implement protective measures to PNG infrastructure.
  - Request the Provincial Wildfire Centre lay down fire retardant if resources are available.
- ❑ Make appropriate internal stakeholder notifications and provide updates on the situation.
- ❑ Notify the Regional District of Buckley-Nechako, EMBC, and/or Provincial Regional Emergency Operations Centre (PREOC) of the presence of the propane tank at Granisle and the potential risk to infrastructure and responder and public safety.
- ❑ Participate in EMBC coordination call to glean additional situational awareness and communicate impacts, if any, and possible or actual consequences (public safety and utility).
- ❑ Collaborate on protective strategies with external agencies, including FLNRORD and EMBC.
- ❑ Consider consequence management strategies.

WILDLAND FIRE IN THE VICINITY OF PNG ASSETS

- ❑ Shut off supply valves in the plant yard:
  - Note: Superior Propane will not assist in the offloading of the 18,000 US gallon propane tank.
- ❑ Review isolation strategies.
- ❑ Locate and service valves which may be needed to isolate potential wildland fire areas.
- ❑ Confirm operability of valves.
- ❑ Shut down site projects and maintenance work not critical to operations.
- ❑ If an area is under the threat of fire activity, work as appropriate to ensure minimum personal risk.
- ❑ Review safe working procedures when working around wildfires with personnel.
- ❑ Confirm site is secured.
- ❑ Evacuate all unnecessary personnel.

EVACUATION ALERT/ORDER ISSUED

- ❑ Receive the Evacuation Alert or an Evacuation Order issued for the area:
  - Review Evacuation Alert with FLNRORD to confirm safe and appropriate personnel presence at the Plant and protective strategies.
  - If escalated to Evacuation Order, re-confirm with FLNRORD to confirm safe and appropriate personnel presence at the Plant and protective strategies.
- ❑ Station personnel at strategic locations to implement shutoff plans:
  - Evacuate non-essential personnel from incident site two (2) hours prior to fire arrival.
  - Contact Call Centre and EOC when clear of site and in the safe zone.
- ❑ Continue actions as if evacuation areas will continue to be served by gas until a directive from the appropriate public authority is received.
- ❑ Upon notification of an evacuation, isolate section of pipeline/pump station/valve.
- ❑ Prepare (advance planning) plan for re-entry once authorities have approved access to the area, including:
  - Conduct inspection, survey, repair, regasification, and relight activities.
- ❑ Issue public safety information regarding actions to be taken before, during, and after an evacuation.

POST-WILDLAND FIRE ACTIONS

- ❑ Await instruction from FLNRORD Incident Commander when it is safe to return to the area:
  - Coordinate working in the area.
  - Conduct recovery and restoration activities in collaboration with the local government EOC and the Provincial Regional Emergency Operations Centre (PREOC).
- ❑ Deploy field observers to gather damage intelligence as soon as possible.
- ❑ Instruct all personnel on possible hazards in the area before entering the area.
- ❑ Inspect the affected area and/or the site previously threatened by the wildfire for fire damage.
- ❑ Conduct a ground patrol of infrastructure.

WILDLAND FIRE IN THE VICINITY OF PNG ASSETS

- ❑ Conduct an inspection of the area affected and/or previously threatened by the wildfire for fire damage to the Plant, services, and meters:
  - Ensure communications have been established at the site.
  - Accompany outside agency inspectors when the premises are being inspected.
  - Ensure appropriate firefighting equipment is available at the site.
  - Check a 20 m perimeter around the site for any open or smoldering fires, and ensure they are extinguished.
  - Conduct an environmental assessment for impacts arising from the use of fire gel or foam.
  - Inspect each distribution installation to determine the extent of damage.
- ❑ Coordinate the elimination of hazards from damaged property and/or utilities on site:
  - Assess any fire damaged trees around the work area and remove any that are deemed potentially hazardous.
- ❑ Repair any damaged infrastructure.
- ❑ Begin the regasification procedure:
  - Purge all distribution mains and service lines.
  - Ensure electrical services have been re-established.
- ❑ Electrical service must be available before calls are accepted to restore gas to individual premises.

EVACUATION ALERT/ORDER ISSUED

- ❑ Implement isolation plans as required.
- ❑ Repair any damaged infrastructure.
- ❑ Implement regasification and relight plans:
  - Ensure electrical services have been re-established; electrical service must be available before service will be restored to individual premises.

6.7 Security Threat

SECURITY THREAT GUIDELINES

SCOPE

The following provides guidance to responding to a security threat or incident.

Depending on the specific incident, some or all the noted activities may be actioned.

Situations that may activate this procedure include:

- Threat or suspicious activity
- Trespassing
- Vandalism
- Sabotage (including terrorism consequences)
- Cyber attack/control systems security threat (e.g., SCADA)

Note:
If a threat against PNG infrastructure is received, assume it is valid until the RCMP have investigated and determined otherwise. If any person is in immediate danger or could become in immediate danger as a result of a threat to PNG personnel or property, contact RCMP immediately.

ACTIVITIES

- ❑ Notify the control centre immediately of any suspicious activities, such as:
  - Suspicious individuals
  - Suspicious vehicles parked at or near the incident site
  - Suspicious packages located at or near infrastructure or an incident site
  - Signs of unauthorized access including vandalism or breach of security
- ❑ If the situation is judged to be UNSAFE in any way:
  - Withdraw to what is judged to be a safe distance.
  - Immediately contact RCMP (911).
  - Do not engage any individuals in any way.
  - Await the arrival of the RCMP at the incident site.
- ❑ If the situation is considered SAFE:
  - Request that RCMP (911) be called to the site.
  - Try to preserve any possible evidence found that may indicate malicious activity.
  - Do not touch or move suspicious devices.
  - Remain on site to serve as a point of contact for the authorities.
  - Cooperate and support the RMCP investigation of the site.
- ❑ The decision to remain on site to assist the investigations is voluntary. PNG does not expect its personnel to assist if they prefer not to do so.
- ❑ Inventory damages/property loss and estimate cost of repair or replacement.
- ❑ Make notes of evidence obtained.
- ❑ Obtain duplicate photos taken during the investigation.
- ❑ Support documentation and reporting.

7 FORMS

An Incident Action Plan (IAP) and an Incident Diary will be created for every emergency event.

The Incident Diary is a master log that chronicles the event, decisions made, rationale, and stakeholders consulted, both internal and external.

IAPs provide a coherent means of communicating the overall incident objectives for both the incident site and EOC activities.

The objectives considered in the design of the IAP are:

- The safety of PNG responders and Emergency Services (police/fire department)
- The safety of the public
- Minimizing of damage to property and the environment
- Collating and gathering accurate detailed information
- Ensuring accurate information flow occurs in a timely and focused manner
- Coordinating response activities
- Mobilizing the right resources, internally and externally, quickly and effectively
- Preventing the incident from expanding
- Representing the company and its interests
- Communicating with stakeholders
- Supporting the restoration of service

FORM: Incident Diary

1. Incident Name:	
2. Date Prepared:	
3. Operational Period: No. _____ **Date:** **Start Time:** **End Time:** **Time Zone: ❑ Mountain ❑ Pacific**	
4. Prepared By:	**5. Approved By: _____ (Name)** **_____ (Signature)** **❑ Incident Commander** **❑ EOC Director**
6. Current Weather Summary (at Incident Site):	
7. Event Log:	

Time (24hr)	Major Events	Parties Involved	
		PNG	Agency

8. Page __ of __	**9. Preparer: _____ (Initials)**

7.1 Incident Action Plan

An IAP documents the following:

- Measurable operational objectives to be achieved in a specified timeframe (the Operational Period)
- Tasks required to accomplish each objective
- The appropriate individual, department, or EOC section assigned to each task for completion within a specified timeframe
- Resource requirements
- Potential risks or challenges that may be encountered in accomplishing each objective

An IAP is developed at the incident site, either by the PNG Incident Commander or collaboratively under Unified Command. The EOC generates its own IAP, referencing the incident site IAP to ensure duplication of effort is eliminated. The appropriate delegation of tasks is made to the EOC from the incident site, and vice versa.

Incident Action Plans enable a coordinated response at the incident site during Unified Command and ensures that the incident site and EOC are working in concert.

The Incident Commander, EOC Director and EOC Section Chiefs are responsible for ensuring that accurate and up-to-date information is used in the IAP. The Incident Commander shall ensure the site IAP and Incident Diary are maintained and updated; the EOC Lead will ensure the EOC IAP is maintained and updated and the overall Incident Diary is maintained and updated. The EOC Lead is responsible to save both the incident site and the EOC IAPs and Incident Diary, ensuring it is available if required for legal, analytical, or historical purposes.

FORM: Incident Action Plan (IAP)

1. Incident Name:	2. Incident Number:	3. Date/Time Initiated: Date: Time:

4. Operational Period: No. _____
Date:
Start Time: **End Time:**
Time Zone: ❑ Mountain ❑ Pacific

5. Map/Sketch (include sketch, showing the total area of operations, the incident site/area, impacted and threatened areas, overflight results, trajectories, impacted shorelines, or other graphics depicting situational status and resource assignment)**:**

6. Situation Summary and Health and Safety Briefing (for briefings or transfer of command)**:** Recognize potential incident Health and Safety Hazards and develop necessary measures (remove hazard, provide personal protective equipment, warn people of the hazard) to protect responders from those hazards.

7. Prepared by:
Name:_____ Position/Title: _____ Date/Time: _____
IAP, Page 1 Signature: _____

IAP Form Continued

1. Incident Name:	2. Incident Number:	3. Date/Time Initiated: Date: Time:

8. Objectives/Priorities: (What high-level activities are necessary to complete during this next operational period?)

a)

Tasks		Responsible	

b)

Tasks		Responsible	

c)

Tasks		Responsible	

d)

Tasks		Responsible	

e)

Tasks		Responsible	

7. Prepared by:

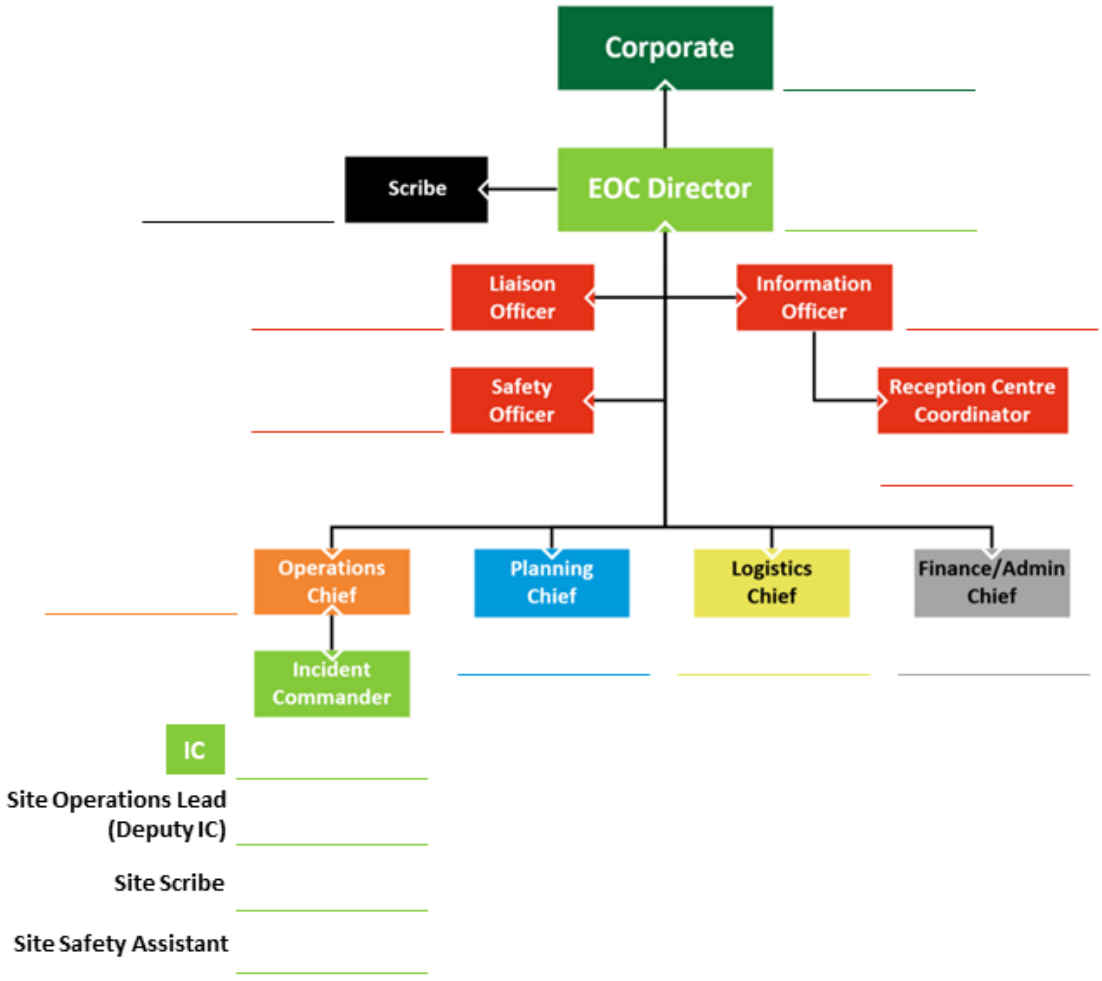
Name:_____ Position/Title: _____ Date/Time: _____

IAP, Page 2 Signature: _____

IAP Form Continued

1. Incident Name:	2. Incident Number:	3. Date/Time Initiated: Date: Time:

9. Current Organization (fill in additional organization as appropriate):



10. Distribution: ICP ☐ EOC ☐ Corporate ☐ TSU ☐ External: _____

7. Prepared by:

Name:_____ Position/Title: _____ Date/Time: _____

IAP, Page 3 Signature: _____

IAP Form Continued

PACIFIC NORTHERN GAS

1. Incident Name:	2. Incident Number:	3. Date/Time Initiated: Date: Time:

11. Resource Summary:

Resource	Resource Identifier	Date/Time Ordered	ETA	Arrived	Notes (location/assignment/status)
				❑	
				❑	
				❑	
				❑	
				❑	
				❑	
				❑	
				❑	
				❑	
				❑	
				❑	
				❑	
				❑	
				❑	
				❑	

7. Prepared by:

Name:_____ Position/Title: _____ Date/Time: _____

IAP, Page 4 Signature: _____

8 EVENT RECOVERY

8.1 Incident Recovery

Recovery activities should be initiated as soon as possible, preferably while response operations are still underway. Actions taken during response operations should be decided on, whenever possible, with event recovery in mind.

Recovery operations include, but are not limited to:

- Assessing of structures
- Repairing or replacing structures
- Coordinating the restoration of utilities
- Restoring damaged units to production
- Employee assistance
- Clean-up of debris
- Investigating and reporting

Damage assessment and clean-up of the incident site should begin as soon as it is deemed safe and possible. PNG Operations personnel and engineers will be involved in this assessment.

8.2 Clean-Up

Actions should be taken to return the incident site to its original condition. External contractors will be engaged to advise and assist in environmental clean-up and remediation, as required. The Manager, EH&S, is available to advise.

8.3 Post-Incident Investigations

Post-incident or near-miss investigations will be conducted as per PNG protocols.

An incident review should be conducted by the EOC Director or the Director, Operations and Customer Service, or their designate, the Director, Asset Management and Projects, (with other involved stakeholders, as appropriate) to determine the cause and action to be taken to avoid reoccurrence, including a review of the Emergency Response Plan with updates as required.

The expected outcomes of the examination are:

- A review of the actual response versus the information found in the Plan.
- Identification of areas to improve the overall emergency response development of an action plan to implement these improvements.

A synopsis of the Post-Incident Report will be distributed at the discretion of the Director, Operations and Customer Service, or their designate, the Director, Asset Management and Projects. As requested, PNG will participate in external incident debrief sessions and share lessons learned, as appropriate.

9 TRAINING AND EXERCISE

PNG has established a comprehensive *Emergency Response Training and Exercise Plan* which defines and prescribes training requirements based on competencies and the anticipated role individuals may fill in an emergency response.

9.1 Training

The Manager, EH&S, is accountable for and ensures the delivery of training on the *Granisle Propane Plant Emergency Response Plan* to appropriate personnel. Training will include what to expect during a response to an emergency at the Granisle Propane Plant and will review the Incident Command System including PNG personnel's role(s) and responsibilities.

PNG also provides training to Granisle emergency services; for more information, see section 3.2.2 Stakeholder Engagement of the *Public Safety Awareness Plan.*

9.2 Exercises

The Manager, EH&S will ensure exercises are conducted annually as per regulatory requirements and as needed to validate the *Granisle Propane Plant Emergency Response Plan*. Each exercise will be evaluated for areas to improve the emergency response and an action plan developed to implement the improvements.

Records of the annual exercises and plan updates can be found with the Plan at the Granisle Plant. Records and are also available from the PNG office in Vancouver.

10 CONTACT LIST

Emergency Services		
Resource	**Phone (from Plant)**	**Other**
Granisle Fire Department	911	250-697-2917
RCMP (Granisle Detachment)	911	250-697-2333
British Columbia Ambulance Services (BCAS)	911	1-800-461-9911
Fire Department Services – District of Houston (Mutual Aid Partners to Granisle)	911	250-845-2250

PNG Emergency Contacts		
Resource	**Phone**	**Other**
PNG Emergency Line (24/7)	1-800-663-1173	
Customer Service Technician • Desmond Wilson	250-692-3108	Cell: 250-692-9939
Service Group Leader I • Patrick Carl	250-692-3108	Cell: 250-692-9512
Manager, Customer Service • Chad Taylor	778-640-4791	Cell: 250-847-0142
Manager, EH&S • Emily Ortis	604-691-5678	Cell: 604-328-0433
Terrace Regional EOC	250-638-5349	
PNG Burns Lake Office	250-692-3108	

External Stakeholders, Communities & Resources		
Resource	**Phone**	**Other**
CANUTEC Spill Reporting	1-613-996-6666	From cell: *666
Granisle Resident Contractor: Alan Domonkos	250-697-6361	Cell: 250-697-6266
Village of Granisle	250-697-2248	250-697-2849
Bulkley-Nechako Regional District	250-692-3195	1-800-320-3339
Babine Lake Elementary-Secondary School	250-697-2222	
Lake Babine Nation	250-692-4700	Toll Free: 1-888-692-4700
Propane Supplier/Shipper		
Superior Propane | 24/7 call centre	1-877-873-7467	

Facilities Immediately Adjacent (within 100 meters radius)		
Facility	**Phone**	**Other**
Granisle Public Works Facility	250-697-2489	After hours 250-876-8027
IDA Nurture Rx Pharmacy	250-697-2264	778-978-0499 (Owner's cell) Fax: 250-697-2216

Facilities within the 200 to 800 meter radius		
Facility	**Phone**	**Other**
Babine Elementary-Secondary School	250-997-2222	
Church of the Way	250-697-6334	
Granisle Public Library	250-697-2713	
Granisle Village Arena	250-697-2248	
Granisle Curling Club	250-697-6373	
Granisle Seniors Centre	250-697-2322	

Regulatory Authorities**		
Resource	**Phone**	**Other**
Technical Safety BC	1-866-566-7233	
WorkSafe BC	1-888-621-7233	
Environment Canada – BC office	1-800-668-6767 (Business hours)	
Emergency Management BC (EMBC)	1-800-663-3456 Call to report to all three agencies.	
BC Ministry of Environment (report of spill)		
BC Ministry of Transportation & Infrastructure		

Refer to Section 5.5 Regulatory Notification for details on Regulatory Notifications

APPENDIX A ABBREVIATIONS AND DEFINITIONS

In emergency planning, terms may have different meanings depending on who is using them. The following defined words or phrases are defined for the purposes of emergency response and preparedness at the PNG Granisle Propane Plant.

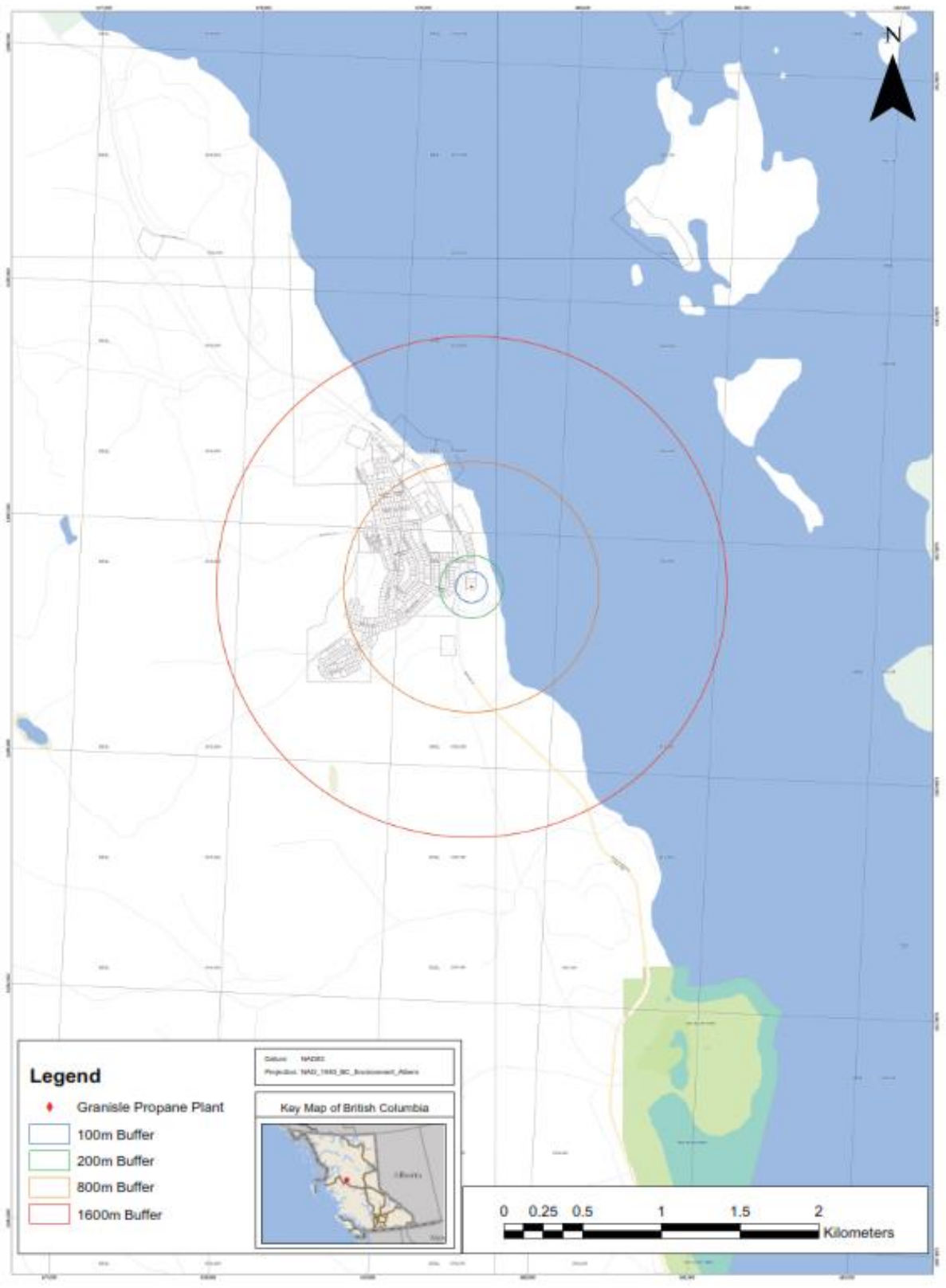
BCEMS	BC Emergency Management System The BCEMS provides a framework for emergency management for the entire province of BC, enabling coordination among agencies and facilitating collaboration among affected entities.
BLEVE	Boiling Liquid Expanding Vapour Explosion A BLEVE is an explosion caused by a liquid that is boiling and continuing to produce a flammable vapor; occurs when vessels containing flammable materials with high vapor pressures are exposed to significant external heat.
CANUTEC	Canadian Transport Emergency Centre A resource in the form of a Dangerous Goods Initial Emergency Response Guidebook and a 24-hour emergency telephone number for information on Dangerous Goods in Canada.
CEPA	The *Canadian Environmental Protection Act,* 1999.
Critical functions	Those functions or processes required to maintain safe operating status of the Plant.
CSA	Canadian Standards Association.
EMBC	Emergency Management British Columbia The coordinating agency for the BC provincial government's emergency management activities. Previously known as Provincial Emergency Program (PEP).
EOC	Emergency Operations Centre The physical location at which the coordination of information and resources to support site responders and incident management activities normally take place. An EOC may be a temporary facility or may be located in a more central or permanently established facility.

Environmental emergency	Under *section 193, CEPA 1999* defines an environmental emergency as: (a) An uncontrolled, unplanned or accidental release in contravention of regulations made under this Part, of a substance into the environment; or (b) The reasonable likelihood of such a release into the environment.
Environment Emergency Plan (E2 Plan)	An emergency plan established to address prevention, preparedness, and response and recovery actions of an incident or emergency.
ESD	Emergency Shut-off Device
ERG	Emergency Response Guide (2016) The ERG is issued by Transport Canada, for use by fire fighters, police, and other emergency services personnel who may be the first to arrive at the scene of a transportation incident involving dangerous goods. It is primarily a guide to aid emergency services in quickly identifying the specific or generic hazards of the material(s) involved in the incident and protecting themselves and the general public during the initial response phase of the incident.
Evacuation	An organized departure of persons from an area of danger to a safe location.
Emergency services	Emergency services include police, fire, and/or ambulance personnel who respond to and support emergencies at the incident site.
FLNRORD	BC Ministry of Forests, Lands, and Natural Resource Operations and Rural Development
HPZ	Hazard Planning Zone
IAP	Incident Action Plan Incident Action Plans provide a coherent means of communicating the overall incident objectives for both the incident site and EOC activities.
IC	Incident Commander The individual responsible for all incident activities, including the development of strategies and tactics and the ordering and the release of resources. The IC has overall authority

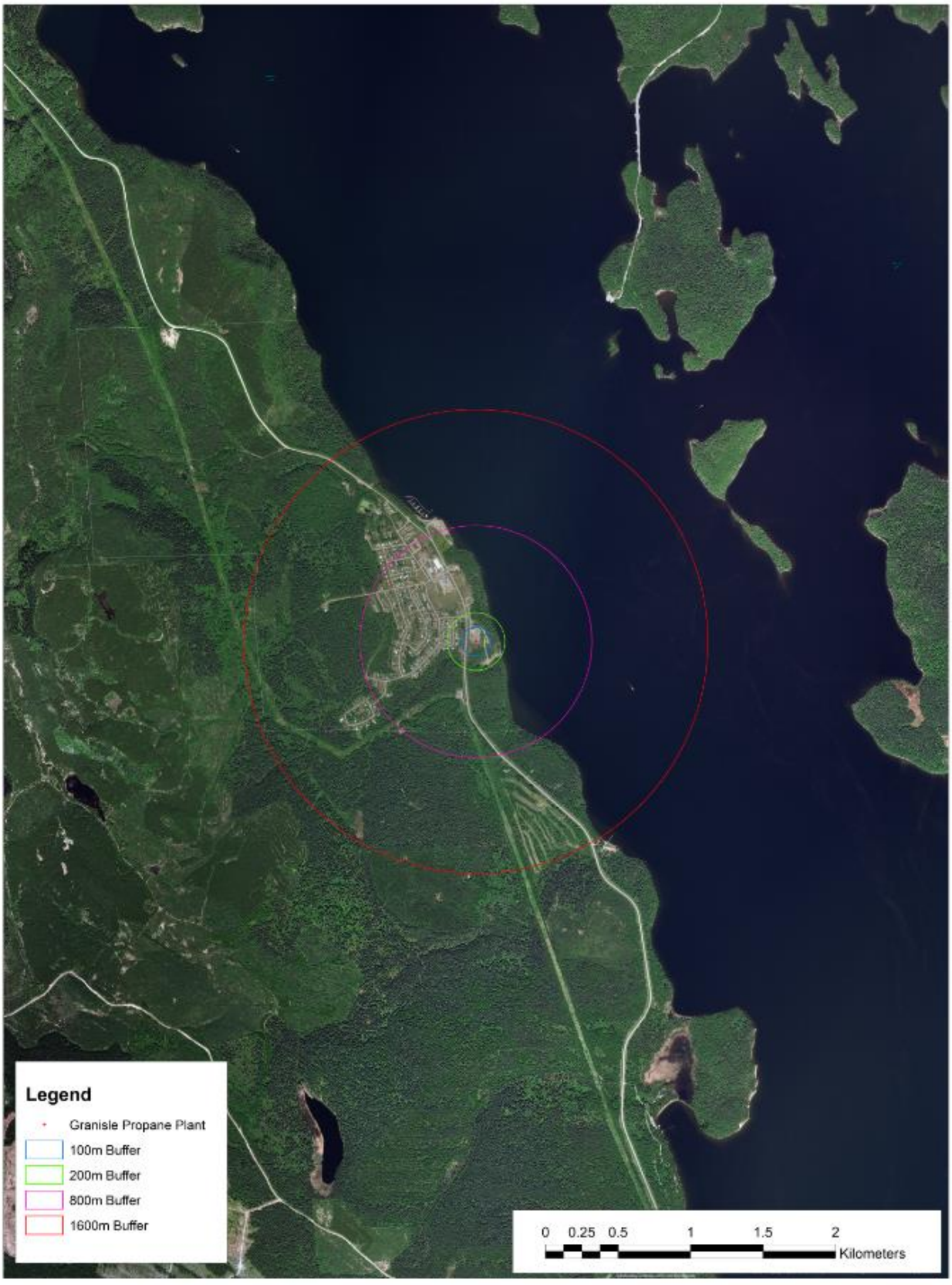
	and responsibility for conducting incident operations and is responsible for the management of all incident operations at the incident site.
ICP	Incident Command Post The field location at which the primary tactical-level, on-scene incident command functions are performed.
ICS	Incident Command System The combination of facilities, equipment, personnel, procedures, and communications operating within a common organizational structure, designed to aid in the management of resources during incidents.
LEL	Lower Explosive Limit, aka Lower Flammable Limit Note: 20% LEL = 1% Gas in Air = 10,000 PPM
LFL	Lower Flammable Limit, aka Lower Explosive Limit
LPG	Liquefied Petroleum Gas, also called Propane
Major Release	10 kgs or more of uncontained product
NOTAM	Notice to Airmen
Offsite	The area beyond the Plant property boundary
Onsite	The area within the Plant property boundary
Operational Period	An operational period is the length of time set by EOC management to achieve the objectives identified in the Incident Action Plan. The operational period may vary in length and will be determined largely by the dynamics of the emergency event. Commonly an operational period is 8-12 hours. It should not exceed 24 hours.
PPE	Personal Protective Equipment
PREOC	Provincial Regional Emergency Operation Centre
SCBA	Self-Contained Breathing Apparatus
SDS	Safety Data Sheet

UC	Unified Command The application of ICS used when there is more than one agency with incident jurisdiction or when incidents cross political jurisdictions.

APPENDIX B GRANISLE PROPANE PLANT HAZARD PLANNING ZONE (HPZ) MAP

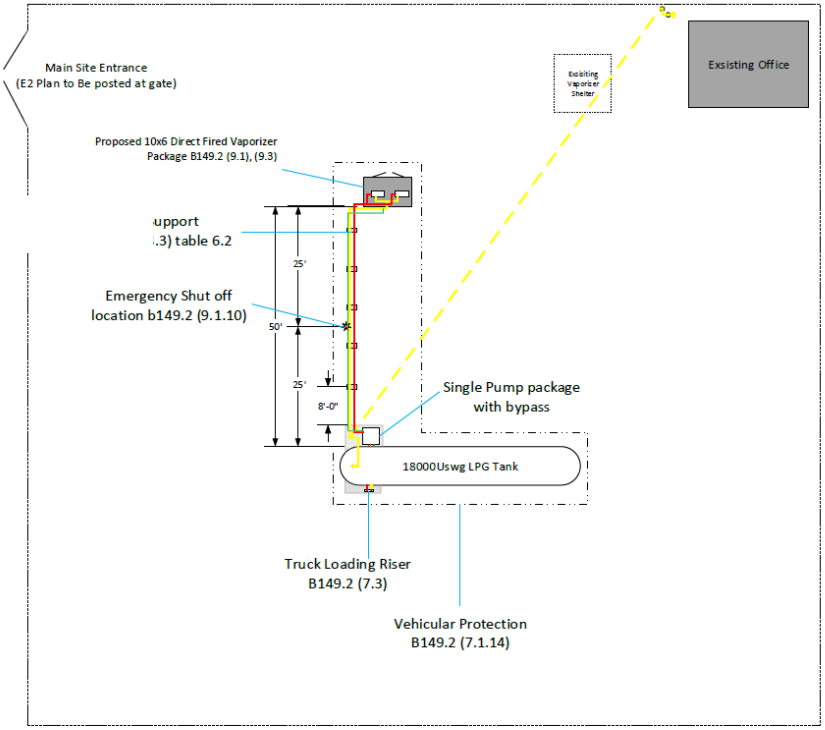


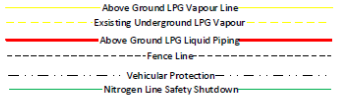
Granisle Propane Plant HPZ (Satellite view)



APPENDIX C EMERGENCY SHUT-OFF VALVE

APPENDIX D GRANISLE PROPANE SYSTEM DIAGRAM



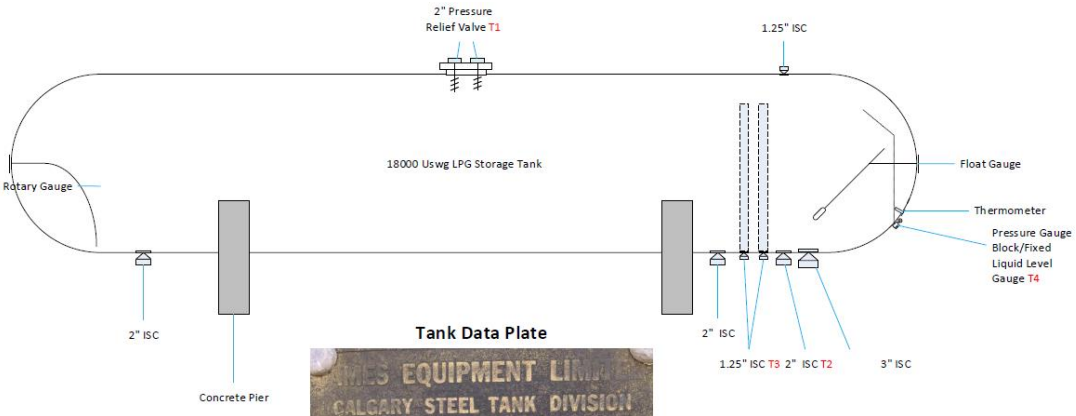


An emergency shut down system shall be installed on a propane system utlizing a direct-fired vapourizer and shall be activated from a point which is 25' from the storage tank and vaporizer as per the b149.2 (9.1.10)

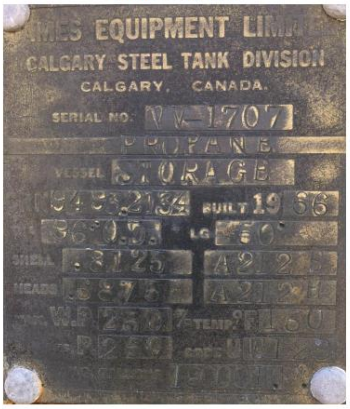
Clearance requirements for a 18000Uswg to property lines, sources of ignition and buildings are approved at the discretion of the authority having jurisdiction B149.2 (7.10.2), (7.10.3) Table 7.4

All Piping and components are to conform to the CSA B149.1-15 Natural Gas and Propane installation and the CSA B149.2-15 Propane Handling and Storage Codes

Pacific Northern Gas Ltd. / Superior Propane	Pacific Northern Gas Granisle LPG Facility		
	Site Layout		
	SIZE	Area	DWG NO / REV 0
June 8 2020	SCALE 1" = 20'	Drawn by: Shane Milne	SHEET 1 OF 7



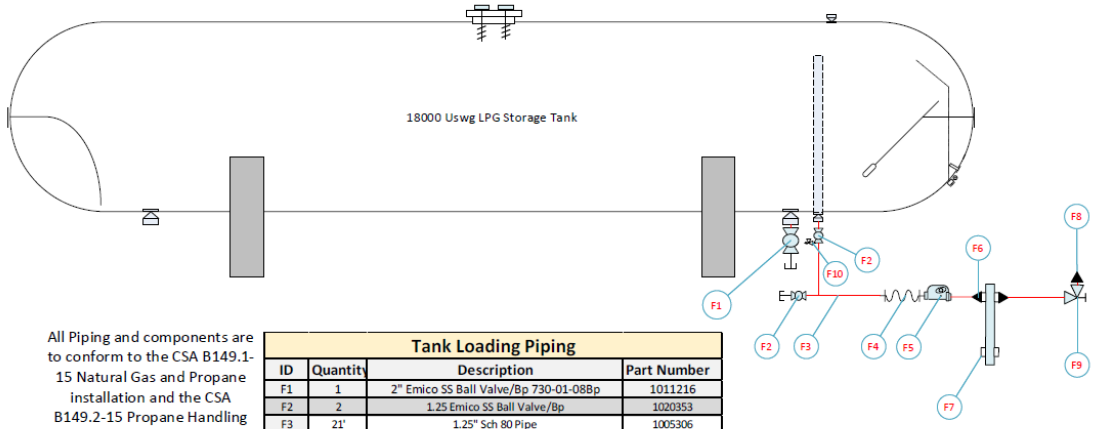
Tank Data Plate



All Piping and components are to conform to the CSA B149.1-15 Natural Gas and Propane installation and the CSA B149.2-15 Propane Handling and Storage Codes

Tank Refurbishment			
ID	Quantity	Description	Part Number
T1	2	2" PRV H284-250	1022324
T2	3	2" ISC C477-16-25 ISC	1008854
T3	3	1.25" ISC C407-10-08	1006952
T4	1	Pressure Gauge Block J415-1	1007001

Pacific Northern Gas Ltd. / Superior Propane	Pacific Northern Gas Granisle LPG Facility		
	18000 Uswg Tank P&ID		
	SIZE	Area	DWG NO / REV 0
June 8 2020	SCALE	Drawn by: Shane Milne	SHEET 2 OF 7



All Piping and components are to conform to the CSA B149.1-15 Natural Gas and Propane installation and the CSA B149.2-15 Propane Handling and Storage Codes

Tank Loading Piping

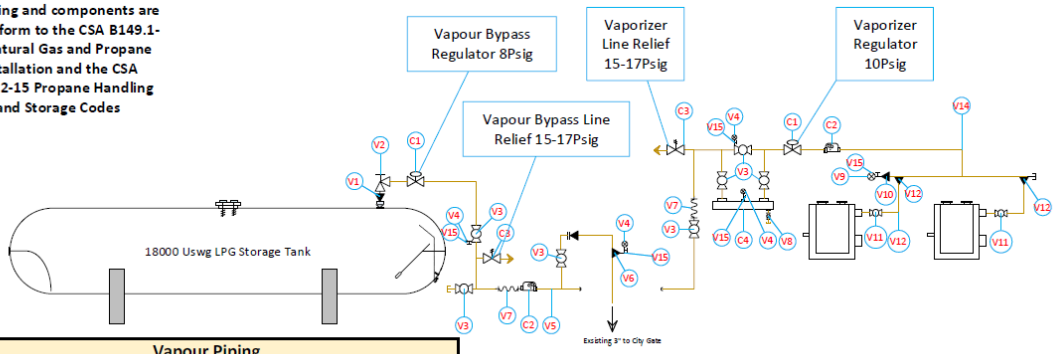
ID	Quantity	Description	Part Number
F1	1	2" Emico SS Ball Valve/Bp 730-01-08Bp	1011216
F2	2	1.25 Emico SS Ball Valve/Bp	1020353
F3	21'	1.25" Sch 80 Pipe	1005306
F4	1	1.25"x18" MP 350psig SS Flex Connector	
F5	1	1.25 Safety Shutoff Valve/Cable Actuateded N550-10	1007019
F6	2	2"x1.25" 3000# FS Bushing	1005932
F7	1	Steel Loading Bulkhead	
F8	1	1.25" Angle Valve ME815-10	1011580
F9	1	1.25"mipx1.75" Acme Adapter ME217	1021616
F10	1	H123 Hydrostatic Relief Valve (375psig)	1006984
	1	Bleed Valve MEJ400	1012815

Pacific Northern Gas Granisle LPG Facility

Tank Loading P&ID

June 8 2020 | SIZE | Area | DWG NO | REV 0 | SCALE | Drawn by: Shane Milne | SHEET 3 OF 7

All Piping and components are to conform to the CSA B149.1-15 Natural Gas and Propane installation and the CSA B149.2-15 Propane Handling and Storage Codes



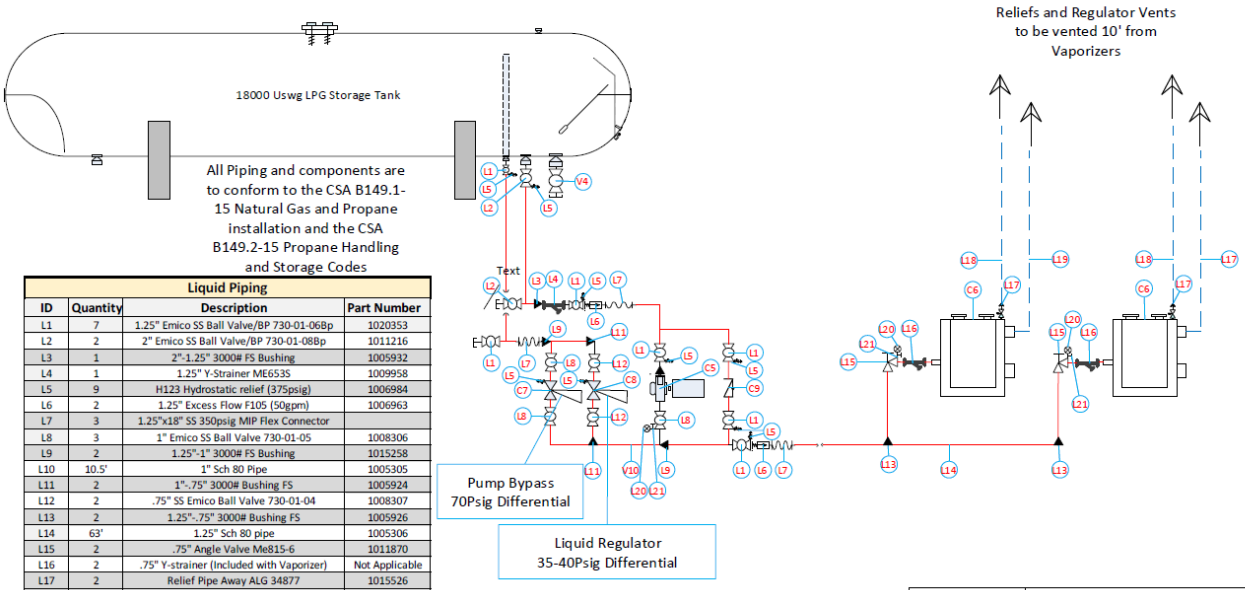
Vapour Piping

ID	Quantity	Description	Part Number
V1	1	2"x1.25 3000FS Bushing	1005932
V2	1	2" Angle Valve M3815-16	1011581
V3	6	2" SS Emico Ball Valve/BP 730-01-08Bp	1011216
V4	4	0-30 psig 4" Dial Liq filled Pressure Gauge 30B4L40SSI	1021578
V5	84'	2" Sch 40 Pipe	1005302
V6	1	.5"x.25" FS 3000# Bushing	1005916
V7	2	2"x18" MP 350Psig SS Flex Connector	
V8	1	.5" SS Emico Ball Valve 730-01-03	1008446
V9	1	0-300 psig 2.5" Dial Liq Fill Gauge 300B4L2SSS	1004731
V10	1	2"x.25" 3000# FS Bushing	1016975
V11	2	1" SS Emico Ball Valve 730-01-05	1008306
V12	2	2"x1" 3000#FS Bushing	1005931
V13	10.5'	1" Sch 80 Pipe	1005305
C1	2	1st Stage Regulator 630-104-78 (Vapour Bypass 8psig, Vaporizer Primary 10psig)	1009572
C2	1	2" Safety Shut off Valve Fisher N550-16	1007020
C3	2	Line relief 1805-51p	1006942
C4	1	54" Manchester Heavy End Trap Tan302211	1006341
V14	21'	2" Sch 80 Pipe	1005308
V15	5	.25" MipxFip Needle Valve 350psig Me831	1019137

Pacific Northern Gas Granisle LPG Facility

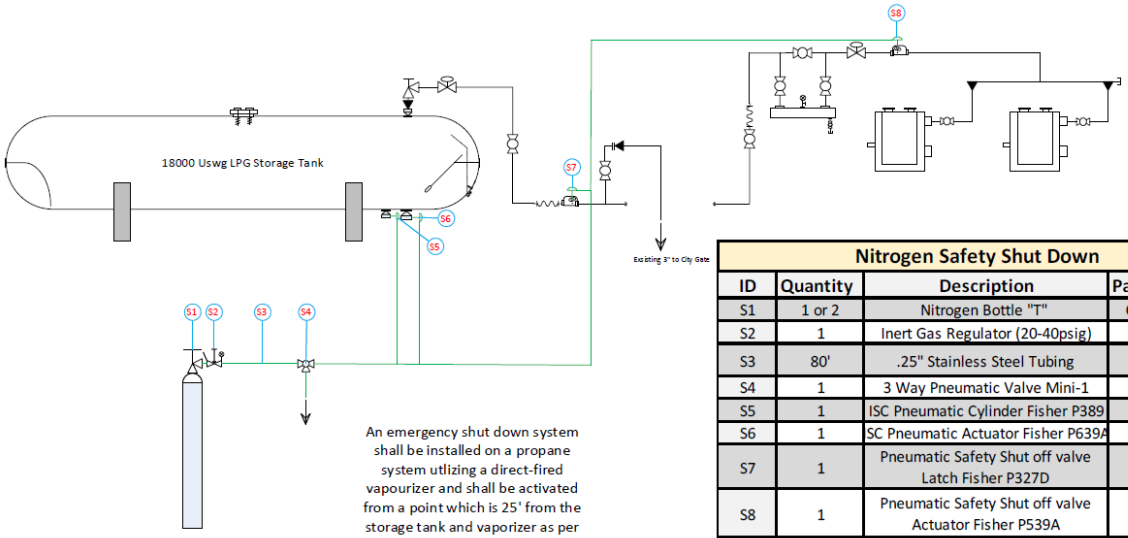
Vapour Piping P&ID

June 12 2020 | SIZE | Area | DWG NO | REV 0 | SCALE | Drawn by: Shane Milne | SHEET 4 OF 7



Liquid Piping			
ID	Quantity	Description	Part Number
L1	7	1.25" Emico SS Ball Valve/BP 730-01-06Bp	1020353
L2	2	2" Emico SS Ball Valve/BP 730-01-08Bp	1011216
L3	1	2"-1.25" 3000# FS Bushing	1005932
L4	1	1.25" Y-Strainer ME653S	1009958
L5	9	H123 Hydrostatic relief (375psig)	1006984
L6	2	1.25" Excess Flow F105 (50gpm)	1006963
L7	3	1.25"x18" SS 350psig MIP Flex Connector	
L8	3	1" Emico SS Ball Valve 730-01-05	1008306
L9	2	1.25"-1" 3000# FS Bushing	1015258
L10	10.5'	1" Sch 80 Pipe	1005305
L11	2	1"-.75" 3000# Bushing FS	1005924
L12	2	.75" SS Emico Ball Valve 730-01-04	1008307
L13	2	1.25"-.75" 3000# Bushing FS	1005926
L14	63'	1.25" Sch 80 pipe	1005306
L15	2	.75" Angle Valve Me815-6	1011870
L16	2	.75" Y-strainer (Included with Vaporizer)	Not Applicable
L17	2	Relief Pipe Away ALG 34877	1015526
L18	21'	1" Sch 40 Pipe	1005299
L19	21'	.75" Sch 40 Pipe	1005298
C5	1	Corken C12 Pump C12FD2A-B166	1022541
C6	2	Algas 80/40 Direct fired Vaporizer	600171
C7	1	Fisher 98H-29 Liquid Regulator (35-40psig)	1006947
C8	1	B166 Corken Pump Bypass (75psig)	Included with Pump
C9	1	Fisher G201-10 Backcheck	1006980
L20	3	0-300 psig 2.5" Dial Liq Fill Gauge 300B4L25SS	1004731
L21	3	.25" MipxFip Needle Valve 350psig Me831	1019137

Pacific Northern Gas Ltd. / Superior Propane	Pacific Northern Gas Granisle LPG Facility
	Liquid Piping P&ID
June 19 2020	SIZE: — Area: — DWG NO: — REV: 1
	SCALE: — Drawn by: Shane Milne SHEET: 5 OF 7



Nitrogen Safety Shut Down			
ID	Quantity	Description	Part Number
S1	1 or 2	Nitrogen Bottle "T"	Client Supplies
S2	1	Inert Gas Regulator (20-40psig)	
S3	80'	.25" Stainless Steel Tubing	
S4	1	3 Way Pneumatic Valve Mini-1	1009163
S5	1	ISC Pneumatic Cylinder Fisher P389	1007040
S6	1	SC Pneumatic Actuator Fisher P639A	1007045
S7	1	Pneumatic Safety Shut off valve Latch Fisher P327D	1007037
S8	1	Pneumatic Safety Shut off valve Actuator Fisher P539A	1007042
	8	.25"mip x .25"Comp SS Adapter	
	4	.25" Comp SS Tee	
	2	1/8"Mip x .25"Comp SS Adapter	

Pacific Northern Gas Ltd. / Superior Propane	Pacific Northern Gas Granisle LPG Facility
	Safety Shutdown P&ID
June 20 2020	SIZE: — Area: — DWG NO: — REV: 0
	SCALE: — Drawn by: Shane Milne SHEET: 6 OF 7

APPENDIX E EMERGENCY RESPONSE EQUIPMENT

Extinguisher ABC (30 lb)	All PNG trucks (1)
First Aid Kits	All PNG trucks (1)
Level A Hazardous Materials Spill Kit	All PNG vehicles Select facilities
Level B Hazardous Materials Spill Kit	Burns Lake PNG office 9630 Babine Lake Road, Burns Lake
Propane Calibrated Monitor	Burns Lake PNG office – gas monitor calibrated by propane
Self-Contained Breathing Apparatus (SCBA)	Burns Lake PNG office

APPENDIX F SAFETY DATA SHEET FOR PROPANE

Refer to Superior Propane Safety Data Sheet for the full SDS for Propane supplied by Superior Propane.

Summary of Physical and Chemical Properties	
Product Name	Propane
Synonyms	LPG (Liquefied Petroleum Gas); LP-Gas
Chemical Abstract Service (CAS) Number	74-98-6
United Nations (UN) Number	1978 & 1075
Appearance	Liquefied gas
Colour	Colourless
Odour	Odourized with ethyl mercaptan
Odour Threshold	Not available
Physical State	Gas
pH	Not applicable
Melting Point / Freezing Point	-188 ^{0}C (-306.4 ^{0}F)
Initial Boiling Point	-42 ^{0}C (-43.6 ^{0}F)
Boiling Point	-42 ^{0}C (-43.6 ^{0}F)
Flash Point	Not available
Evaporation Rate	Rapid
Flammability (solid, gas)	Extremely flammable gas
Lower Flammability Limit	2.1%
Upper Flammability Limit	9.5%
Vapor Pressure	Not available
Vapor Density	1.5 (air = 1)
Relative Density	Not applicable
Solubility	Insoluble in water
Auto-ignition Temperature	^{0}C (809.6 ^{0}F)
Critical Temperature	96.8 ^{0}C (209.5 ^{0}F)
Critical Pressure	4245 kPa (41.9 atm.)