

## LNG – General site rules

SWP-100

### 1.0 Purpose

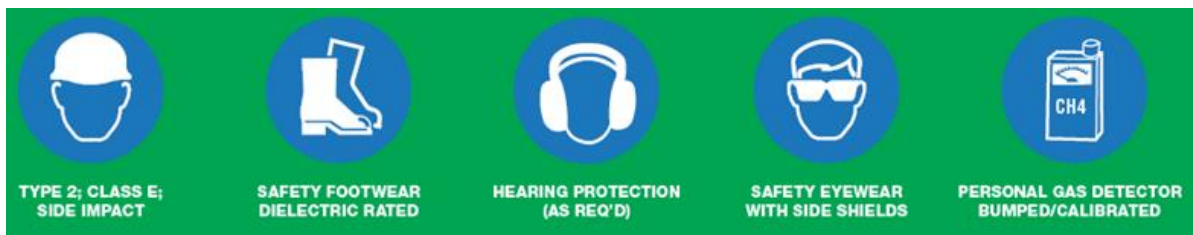
- 1.1 To provide workers with guidelines to work safely at the Yukon Energy Corporation Whitehorse Gas generating facility (WG0).

### 2.0 Minimum mandatory personal protective equipment (PPE)

**Note** - Accidental contact of LNG with skin or eyes may cause a freezing injury similar to a burn.

2.1 The following PPE must be worn at the WG0:

- Safety headwear; Class E, type II;
- Safety footwear with dielectric rating;
- Safety eyewear with side shields;
- Personal gas detector; bumped and calibrated; and
- Hearing PPE (as req'd).



2.2 When working with/near LNG, take the following precautions:

- Wear proper clothing and protective gear while working around LNG; especially if making/breaking connections.
- DO NOT allow liquid to splash, spill or leak.
- Protect your eyes and face; cover skin wherever the possibility of contact with liquid, cold equipment or cold gas exists.
- DO use clean, easily removable insulated gloves and long sleeves for arm protection
- DO use cuff-less trousers, worn over the boots to allow spilled liquid to be shed away from the body.

### 3.0 General site requirements

See Appendix A – WGO plant layout

- 3.1 Review the WGO plant layout. Know the following:
- Location of entrances and exits.
  - Location of phones.
  - Location of 1<sup>st</sup> aid kits and eye wash equipment.
  - Location of fire extinguishers.
- 3.2 All contractors, and their employees, are required to complete both the YEC Environment/Health and Safety and LNG orientations; **prior to starting work at YEC.** The following exceptions apply:
- LNG delivery drivers; complete the LNG orientation only.
  - LNG supplier representatives (training or auditing drivers); complete the LNG orientation only.
  - persons entering the LNG facility to gather data only (e.g., consultants); complete the LNG orientation only.
- 3.3 Recommend that all workers also receive a site orientation.
- 3.4 All YEC workers are required to complete the LNG orientation.
- 3.5 **PERMISSION IS REQUIRED TO ENTER WGO.**  
All workers are required to check in/out with the System Control Center (SCC) Operator-in-charge (OIC).  
See Appendix B – YEC check in/out protocol.
- 3.6 All persons working alone are required to start a ‘person-check’ with the SCC OIC; and, contact the SCC OIC every two (2) hours after the original person-check. This check-in procedure must continue until the worker has completed their work; or, is leaving WGO.
- For clarity –
- More than 1 worker on site; workers are not working on the same task or in the same immediate area – **‘PERSON-CHECK’ IS REQUIRED.**
  - More than 1 worker on site; all are working on the same task or in the same immediate area – ‘person-check’ is not required while the criteria is met.
- 3.7 All workers are required to inform the Operations department<sup>1</sup> of the following:

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<sup>1</sup> Inform one (or more) of the following Operations personnel: Leadhand, Mechanical Maintenance, Sr. Maintenance Mechanic, Plant Operator-in-Charge, Mgr., Operations, or Director, Operations.

- Scope of work;
- Date(s) of the work;
- Duration of the work;
- Number of workers; and
- Equipment requirements.

3.8 All work at the WG0 must be approved and coordinated by the Operations department.

3.9 All workers are required to complete a documented job safety analysis (JSA); **prior to starting work.**

3.10 All workers are required to have an emergency response plan; **prior to starting work.**

3.11 WG0 gates must be closed when not in use.

3.12 WG0 gate(s) must be locked when there are no workers on site.

#### 4.0 General safety requirements

4.1 DO NOT use components (valves, gauges, fittings, etc.) or piping as steps or footholds. Always use appropriate equipment to access components for maintenance or repair.

4.2 Some of the WG0 components are pressurized. Follow all applicable procedures, practices, and safety precautions when working with/near pressurized equipment.

4.3 Locate the 'RED' Emergency Shutdown (ESD) button(s) in your WG0 work area(s). These are used to shut down parts of WG0 when an abnormal or unsafe condition is detected. For example, ESD at LNG offload pad, shuts down fueling system; ESD at WG1, shuts down WG1 only.

4.4 The LNG substation is a separate YEC facility with other rules and requirements for entry. DO NOT enter the substation unless trained and authorized to do so.

4.6 Permits are required for the following work:

- All work that requires equipment to be out of service; including auxiliary and adjacent equipment, which directly impacts or could impede operation of the WG0.
- All hot work as defined in YEC SWP-044; Hot Work and Permit.
- Use of power tools, cameras, and cell phones in the Class 1, Zone II area (hot work permit required).

## 5.0 Use of personal gas detectors

- 5.1 YEC uses the following Industrial Scientific personal gas detection equipment at WG0:
- Ventis MX4 personal gas detector; 3-gas (methane, O<sub>2</sub>, and CO); and
  - iNet docking station (DS) with calibration gas.

These systems are located at:

- Whitehorse diesel plant offices; 4 MX4 detectors; 1 DS.
  - Main office 1<sup>st</sup> floor; Safety/Operations Coordinator office; 2 MX4 detectors; 1 DS.
  - Electrical maintenance offices; 2 MX4 detectors; 1 DS.
- 5.2 All workers must be trained and deemed competent to use the iNet system.
- 5.3 MX4 detectors **must be bumped prior to use** (generally once per day); and calibrated every 30 days.
- 5.4 Prior to use, MX4 detectors must be ‘zeroed’ in fresh air and have the ‘peaks’ cleared; after successful bump testing and/or calibration (prior to use).

## 6.0 WG0 alarms

- 6.1 ‘Tridents’ located throughout the WG0 indicate the plant status:
- GREEN – plant in a normal condition;
  - YELLOW – plant alarm condition; 20% LFL detected; immediately leave WG0 and proceed to muster point at Millennium Trail gate (across from the YEC main office);
  - RED – plant alarm condition; 40% LFL detected or flame/fire; immediately leave WG0 and proceed to muster point at Millennium Trail gate; then cross Millennium Trail bridge adjacent to Nisutlin Drive.
- 6.2 Generator modules have an orange strobe that indicates (general) alarm condition; including, fire or gas detection.  
DO NOT enter modules when alarm activated; unless authorized by SCC OIC, and it is safe to do so.

**7.0 Work in Class 1, Zone II area**

See Appendix C – YEC LNG Area Classification Class I; Zone 2.

- 7.1 All work in the Class 1, Zone II area must be approved by the Operations department (Leadhand, Mechanical Maintenance; Sr, Maintenance Mechanic; Manager, Operations; or, Director, Operations)
- 7.2 Power tools, cameras, cell phones, flame producing tools (solder, oxyacetylene torch etc.) and hand tools that can cause a spark (steel shovels, hammers etc.) can only be used in the Class 1, Zone II area when a YEC Hot Work permit is completed and approved by Operations.
- 7.3 Use of brass hammers is permitted.

**8.0 Washroom facilities**

- 8.1 There are no washroom facilities at WGO. To use the washroom, please coordinate entry into one of the other Whitehorse generating facility buildings (Whitehorse Diesel plant; YEC corporate office).
- 8.2 A portable toilet is maintained at WGO during the summer months.

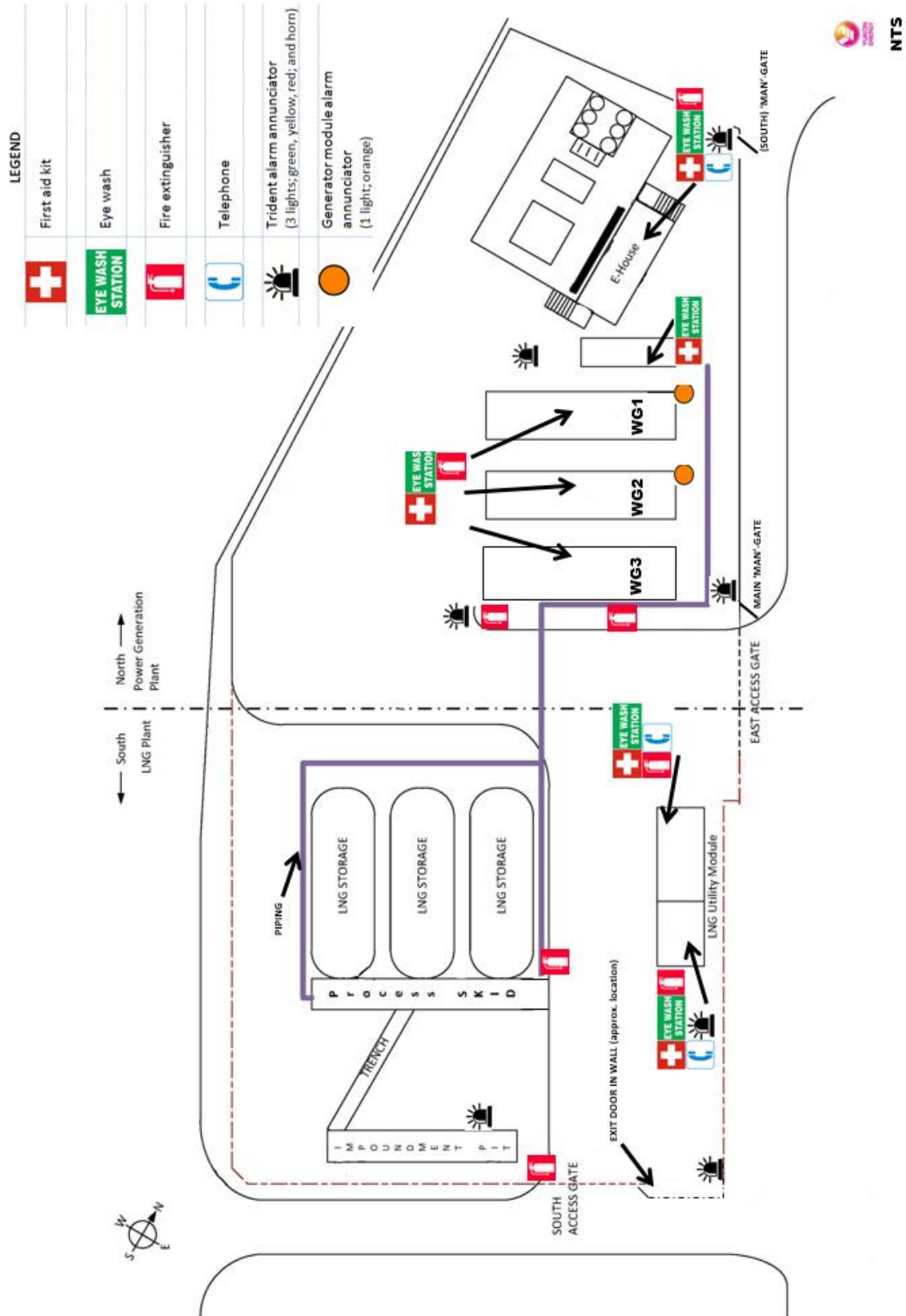
**9.0 Delivery drivers (including LNG)**

- 9.1 Repairs to trucks and/or trailers are not permitted at WGO.
- 9.2 Yukon Energy will not supply air to accommodate repairs to trucks and/or trailers.
- 9.3 In the event of a WGO evacuation (yellow or red), driver is required to shut off truck (if running).

**10.0 Reference documents**

YEC SWP-007; Travelling to remote locations or working alone  
YEC SWP-044; Hot Work and Permit  
YEC SWP-103; LNG - Personal Protective Equipment (PPE)  
YEC SWP-107; LNG – First Aid Measures  
YEC SWP-108; Work in Containment Pit  
YEC Power System Works Standards  
YEC JSA/Tailboard (including rescue plan)

Appendix A – WG0 plant layout



**Appendix B – YEC check in/out protocol.**

Contact SCC OIC at one of the following numbers:

- 867 393 5355; or
- 867 393 5324.

**Note** – these lines are recorded.

Use the following wording (or similar) when checking in with SCC OIC:

WORKER -

*This is [worker name] at the Whitehorse LNG facility informing [OIC name] at SCC, that I am checking into the LNG facility to [brief work description].*

SCC OIC reply –

*This is [OIC name] at SCC to [worker name] at the Whitehorse LNG facility; I understand that you are checking into the LNG facility to [brief work description]. Is that correct?*

WORKER reply – *That is correct.*

Use the following wording (or similar) when checking out with SCC OIC:

WORKER –

*This is [worker name] at the Whitehorse LNG facility; informing [OIC name] at SCC, that I have completed my work, all workers and equipment are in the clear, and I am checking out of the LNG facility; and, the gate is closed and locked.*

SCC OIC reply –

*This is [OIC name] at SCC to [worker name] at the Whitehorse LNG facility; I understand that you have completed your work, all workers and equipment are in the clear, and you are checking out of the LNG facility; and, the gate is closed and locked. Is that correct?*

WORKER reply – *That is correct.*

Use the following wording (or similar) when checking in multiple workers on the same crew or job:

WORKER -

*This is [worker name] at the Whitehorse LNG facility informing [OIC name] at SCC, that I am checking myself and [number of other workers] into the LNG facility to [brief work description].*

SCC OIC reply –

*This is [OIC name] at SCC to [worker name] at the Whitehorse LNG facility; I understand that you [and number of other workers] are checking into the LNG facility to [brief work description]. Is that correct?*

WORKER reply – *That is correct.*

Use the following wording (or similar) when checking out multiple workers on the same crew or job:

WORKER –

*This is [worker name] at the Whitehorse LNG facility; informing [OIC name] at SCC, that I have completed my work, all workers and equipment are in the clear, and I [and number of other workers] are checking out of the LNG facility; and, the gate is closed and locked.*

SCC OIC reply –

*This is [OIC name] at SCC to [worker name] at the Whitehorse LNG facility; I understand that you have completed your work, all workers and equipment are in the clear, and you [and number of other workers] are checking out of the LNG facility; and, the gate is closed and locked. Is that correct?*

WORKER reply – *That is correct.*



Appendix C – YEC LNG Area Classification (Class I; Zone 2)

