



Canadian Petroleum Engineering Inc.

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May 1, 2023

Pauline de Jong
Regulator
Office of the Regulator of Oil and Gas Operations
PO Box 1320
Yellowknife, NT
X1A 2L9

Re: Revised Application for an Operations Authorization for the Abandonment of
the Aurora College Training Well G-04
Application OA 2022-001-AC

Dear Ms. de Jong

Canadian Petroleum Engineering on behalf of Aurora College is submitting a revised application for OA -2022-001-AC in response to the regulator questions IR3 resulting from our original application. This application contains a revised Well Abandonment program, Safety Plan, Environmental Protection Plan, Emergency Response Plan (Contingency Plan) and a CPE HSE manual. The Professional Project Management Plan (PPMP) which CPE has developed in order to meet APEGA requirements is also attached.

These documents identify how CPE will safely manage the well abandonment project.

CPE will provide additional information as required.

Sincerely

Lorne Hammer
Director CPE

Application
For
Operations Authorization 2022 – 001 – AC
Revision 3

Well Abandonment of Aurora College
Training Well G-04

Submitted by: Aurora College

Prepared by: Canadian Petroleum Engineering Inc.

April 28, 2023

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APPLICATION FOR AN OPERATIONS AUTHORIZATION FOR THE ABANDONMENT OF
THE AURORA COLLEGE TRAINING WELL G-04

1. COMPLETED AND SIGNED OA APPLICATION

APPLICATION FOR AN OPERATIONS AUTHORIZATION

INSTRUCTIONS:

Send one electronic copy of this form and supporting technical documentation by email to orogo@gov.nt.ca. If you wish to communicate with OROGO in hard copy, please do so using the courier address found at www.orogo.gov.nt.ca.

APPLICATION

(Name of Operator)

Hereby applies for authorization under Section 10 of the *Oil and Gas Operations Act* and Part 2 of the *Oil and Gas Drilling and Production Regulations* using equipment and procedures described in the application.

Changes in equipment or procedures, outside the scope of this application, require approval in order that this authorization remains valid.

LicenceType Other Operating Licence No. NWT-OL-2014-019

Region Gwich'in

Field

Anticipated date of commencement: March 27, 2023 Proposed Duration 0.25 months

Scope of Work

The surface abandonment of the well will begin at the beginning of the last week of March, 2023. All of the abandonment operation will be completed during that week.

The first step in the abandonment to occur will be moving in an E-log truck and running a cement valuation log to determine the quality of cement and casing. It is anticipated that good cement will be present in the well as all casing strings were cemented full length once run and good cement returns at surface were observed while cementing each casing string.

Following the e-logging, a pressure truck will go to the location and the production casing will be pressure tested as per OROGO's Well Suspension and Abandonment Guidelines and Interpretation Notes. This will require the casing to be pressured up to 7000 kPa and held for 10 minutes with less than 10% leak off.

Cut and Cap:

A bulldozer and an excavator will be used to excavate around the casing to a depth of about two meters below ground level to provide access for cutting off the casing strings. The conductor casing, surface casing and production casing will be cut by a certified welder. Once the casing is cut, the wellhead and cut of casing will be removed using either the excavator or a picker truck. A vented cap will then be installed, and the cellar backfilled using the material on site that was previously excavated. The vented cap is installed onto the well to prevent any pressure from building up inside the well and to restrict access to the casings.



DECLARATION BY APPLICANT

Applicant Aurora College

Title of Application Application for an Operations Authorization for the Abandonment of the Aurora College Training Well G-04

Pursuant to subsection 15(1) of the *Oil and Gas Operations Act*, the Applicant declares that in respect of the above-referenced Application:

- a) the equipment and installations that are to be used in the work or activity to be authorized are fit for the purposes for which they are to be used, the operating procedures relating to them are appropriate for those uses, and the personnel who are to be employed in connection with them are qualified and competent for their employment; and,
- b) the Applicant shall ensure, so long as the work or activity that is authorized continues, that the equipment and installations continue to be fit for the purposes for which they are used, the operating procedures continue to be appropriate for those uses, and the personnel continue to be so qualified and competent.

Dated this 7th day of December 2022.

Signature of Responsible Officer 

Name and Title of Officer Jonathon Michel, Director

Please complete this declaration and enclose with the application to the Office of the Regulator of Oil and Gas Operations for an authorization under paragraph 10(1)(b) of the *Oil and Gas Operations Act*.

2. CONFIRMATION OF BENEFITS PLAN APPROVAL/WAIVER

Aurora College has attempted to submit a request for a waiver of the requirement for a benefits plan covering the proposed well abandonment of Aurora College Training Well G-04 on February 5, 2023.

Aurora College has contacted the Minister, Industry, Tourism and Investment several times to request an update on this application. The latest request was in mid April; no response has been received as yet.

Aurora College is a vibrant northern college committed to excellence in education and research, Aurora College strives to demonstrate leadership in the delivery of relevant and meaningful education and research rooted in strong connections to Northern land, tradition, community, and people. Aurora College is a public college delivering adult and post-secondary education programs at three campuses and through a network of community learning centers. Aurora College offers a variety of programs designed to meet the labor market needs of the North while providing students with the support, skills and education required to achieve success in their chosen careers. Over the next four years, Aurora College is transforming into a polytechnic university to increase access to quality post-secondary education for NWT residents. With a presence in every NWT community there will be a place for everyone at the polytechnic university.

3. INFORMATION TO SUPPORT THE REGULATOR IN DETERMINING THE AMOUNT OF PROOF OF FINANCIAL RESPONSIBILITY REQUIRED FOR THE PROPOSED ACTIVITY

Aurora College proposes to submit an Irrevocable Letter of Credit (ILOC) in the amount of \$60,000 Canadian to the Office of the Regulator of Oil and Gas Operations as a Proof of Financial Responsibility. The amount proposed is based upon the Worst Case Scenario presented as point b. below.

- a. Worst Credible Case scenario
- There are a number of small risks that could occur during the surface well abandonment operation. The most credible and likely situation would be a diesel fuel spill from one of the pieces of equipment on site. It would be limited to approximately 500 liters which would be the maximum size of a portable fuel tank mounted on a piece of construction equipment. The probability of a spill on site is very low. The spill volume of the spill is known. The consequences of the spill are minimal.
- Mitigation of the spill would require that any free fuel pooled or in small puddles be immediately cleaned up by a vacuum truck or other portable pumping system and segregated in a dedicated tank. Absorbent pads could then be used to soak up any remaining fuel on the location surface. Removal of soil underneath the spill site would be removed using the track hoe on location. The depth of soil removed would be determined by the amount of fuel spilled, the amount of fuel picked up by the pump system and absorbent pads and by visual observation of the spill site. Soil would be removed until no trace of contamination is evident.
- In the case of a 500-liter spill, the cost of cleanup (containing, clean up and loading and hauling of the impacted soil) would be approximately \$15, 000 with an additional \$10,000 for hauling and disposal of the soils

at an approved disposal site. The cost of monitoring and testing over time may be an additional \$10,000. The total cost in this scenario would not be more than \$35,000.

b. Worst Case scenario

The worst reasonable case scenario that could occur during the surface well abandonment would be similar to the worst credible case scenario described above. In this case however, the fuel spill from the portable fuel tank would cause a fire which could consume the vehicle with the fuel leak. Destruction of the vehicle would result in much of the fuel spilled being consumed by the fire. The firefighting operation on the location would likely require that a larger area be contained and cleaned up. Leakage or melting of some components of the vehicle would cause a more extensive cleanup as more soil would need to be removed and disposed of from the site. In this case, the cost of cleanup (containing, clean up and loading and hauling of the impacted soil) would be approximately \$40,000 with an additional \$10,000 for disposal costs. Monitoring and testing of the site might cost another \$15,000 over several years. The total cost in this scenario would not be more than \$65,000.

4. DESCRIPTION OF SCOPE OF PROPOSED ACTIVITY

Summary of Planned Operations:

The surface abandonment of the well will begin at the beginning of August, 2023. All of the abandonment operation will be completed during that week.

The first step in the abandonment to occur will be moving in a pressure testing truck. The pressure truck will go to the location and the production casing will be pressure tested as per OROGO's Well Suspension and Abandonment Guidelines and Interpretation Notes. This will require the casing to be pressured up to 7000 kPa and held for 10 minutes with less than 10% leak off.

The next step in the operation is bringing in an E-log truck and running a cement valuation log to determine the quality of cement and casing. It is anticipated that good cement will be present in the well as all casing strings were cemented full length once run and good cement returns at surface were observed while cementing each casing string.

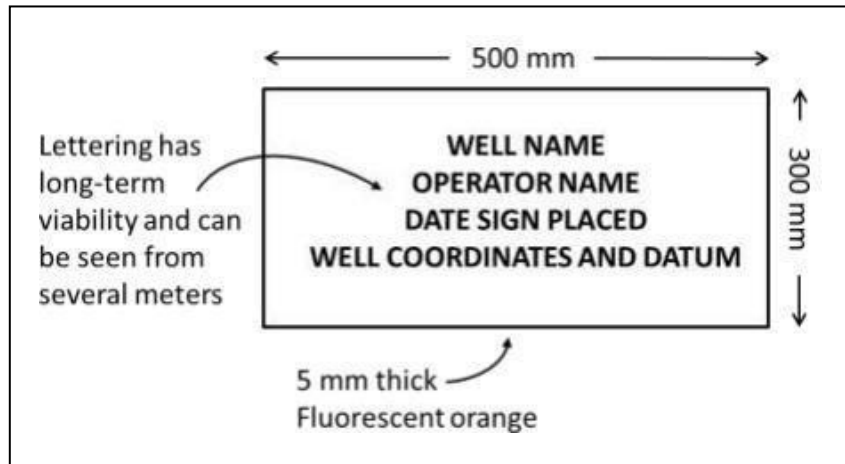
Cut and Cap:

A bulldozer and an excavator will be used to excavate around the casing to a depth of about two meters below ground level to provide access for cutting off the casing strings. The conductor casing, surface casing and production casing will be cut by a certified welder. Once the casing is cut, the wellhead and cut of casing will be removed using either the excavator or a picker truck. A vented cap will then be installed, and the cellar backfilled using the material on site that was previously excavated. The vented cap is installed onto the well to prevent any pressure from building up inside the well and to restrict access to the casings.

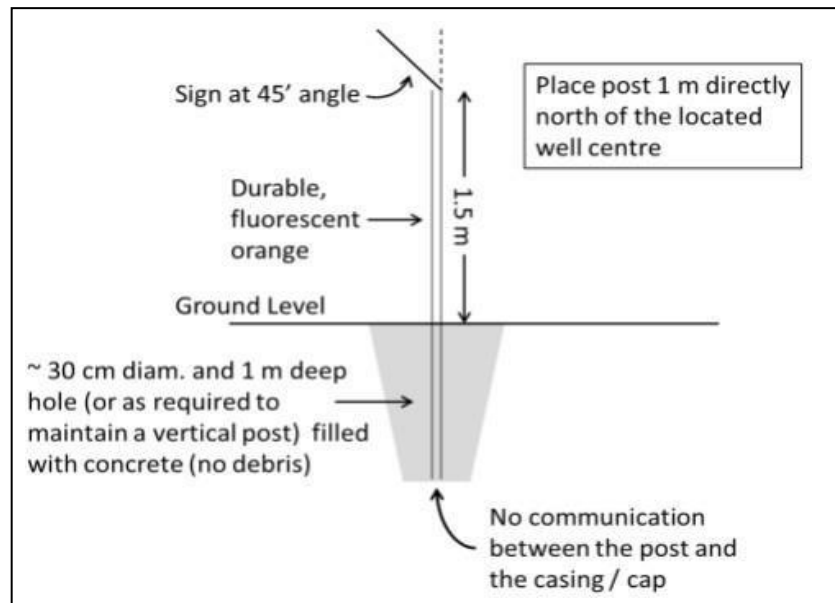
OROGO cut and cap requirements as referred to in the Well Suspension and Abandonment Guidelines and Interpretation Notes will be adhered to.

Signage Installation:

After completing the cut and cap, the abandoned well will be marked with a durable post and signage in accordance with OROGO's Well Suspension and Abandonment Guidelines and Interpretation Notes and as shown in the figures below. The post will be installed 1 meter directly North of the abandoned well and is typically cemented in the ground. The sign will be installed at a 45-degree angle from the post.



Sign Requirements



Post Requirements

Backfilling the Cellar:

After the signage has been installed, the cellar will be backfilled. This will be done with the original cellar material as it will still be on location. The backfilling will likely be done with a small skid steer or by using the excavator if it is still on site.

Site Monitoring:

The site will be monitored as required to assess if any further work is needed. Gas migration testing will be conducted during the summer months of 2023 to identify if any follow-up work is required.

PROGRAM

Cut and Cap Procedures

The abandonment and equipment removal procedure for Aurora College Training well G-04 is planned as follows:

1. Read and record SIP(s). Check and monitor LEL and H₂S levels at wellhead and investigate for evidence of gas migration at surface. Examine surface casing vent for blow or suction. Record and report findings. If present, stop work and hold a safety meeting to review working procedures. If required, contact the Calgary office for further direction. Proceed with work only when conditions are able to be managed safely.
2. Move in pressure test truck and rig into wellhead. Pressure test casing string to 7000 kPa and record all pressures. Hold pressure for 10 minutes. A successful pressure test will require that pressure declines less than 10% over the 10 minutes.
3. Move in e-line logging truck and rig up lubricator on top of wellhead. Pressure test lubricator with N₂. Run cement evaluation tool and log from plugged back total depth to surface. Rig out loggers.
4. Review the cement evaluation log to confirm that all potable water zones penetrated and cased off by the 177.88 mm casing are isolated. Confirm cement exists between the 177.8 mm casing and surface casing that will be a pressure seal.
5. Move in and rig up swabbing unit and support equipment. Remove well cap on wellhead above master valve and rig in swabbing lubricator. Pressure test lubricator to 7000 kPa.
6. Run in hole to about 50 meters depth with swab mandrel and cups and pull test swab. Flow swabbed fluid back to storage tank. Adjust depth of swab pulled based on fluid flowback. Swab well down as far as possible. Record total volume removed. Total wellbore volume = 7.45 m³
7. Fluid from well should be pumped from storage tank to an identified tank that can be transported to an approved wastewater disposal site as described in the waste management plan. Plastic totes with a 1m³ capacity may be the simplest solution for storage and transport.
8. Refill well with fresh water from Inuvik water system.
9. Rig out swab equipment. Replace well cap on wellhead.
10. If cement evaluation is positive, move to Step 11 of Program. If cement evaluation indicates that hydraulic isolation does not exist, proceed with Contingency plan.
11. Proceed with cut and cap program.

12. Move in 'B'-ticket welder and backhoe. If required, depending on ground conditions, a dozer may be required to assist in the excavation.
13. Remove all plugs and function test all wellhead valves to confirm there is no pressure built up in the wellhead or casing. Disassemble the SCV piping assembly and visually inspect that the vent is not plugged with cement or other debris.
14. Review corporate ground disturbance package and policies with all on-site personnel prior to commencing excavation around the wellhead. Excavate a 6.0m x 2.5m bell hole around the wellhead ensuring that walls of the bell hole are properly sloped for safe entry and egress and to prevent sloughing in. Check and monitor LEL and H₂S levels and investigate for evidence of gas migration.
15. While exercising caution, weld cut a small hole about 30 cm below the surface casing bowl and investigate for trapped gas and fluids. Check and monitor LEL and H₂S levels. **With closed hooks and shackles, connect backhoe bucket to wellhead and pull into tension slightly more than the weight of the wellhead.**
16. Cut the conductor casing and remove as long a section as possible to expose the surface casing string.
17. Cut off the casing strings so that the top of the cut and capped casings will be a minimum of 1.5 meters below the surveyed ground elevation.
18. Weld cut three (3) windows in the surface casing to access the innermost casing string ensuring that 50% of the circumferential metal remains to prevent possible collapse of the surface casing from the weight of the wellhead. While exercising caution, weld cut the innermost string.

NOTE: Innermost string should not drop as it is cemented full length. Be aware that it could drop once completely cut. Do not place pry bars, hands or fingers in the windows.
19. Complete weld cut of the surface casing, lift and remove wellhead from bellhole with backhoe.
 20. Fabricate the protective cap and slip-on collar (A wedding cake style cap is desired).
 21. Dress the casing stubs. Install and seal weld a 12.7 mm steel plate "donut" and vent assembly over the surface casing and production casing annulus and install the previously fabricated steel plate and vent assembly over the inner most casing string.
 22. Install and weld the Protective Cap to the surface casing.
 23. Install and weld a steel rod extension 2.5 metres long on to a plate. Weld a plate to the top of the rod at a 45-degree angle. Install the rod/plate assembly at a depth of 1 metre below ground level. The rod /plate is to be located 1 metre due north of the well center.
 24. The rod/plate assembly is to extend to 1.5 metres above surface and the well location is to be weld inscribed on the steel plate. Document the cut and cap details on the Daily Report and take a digital photograph of the assembly.
 25. Backfill and compact the excavation.

26. Clean up lease and rig out and release all services.

Aurora College Training Well G-04 Remedial Cementing

This operation will occur if the cement bond log indicates that hydraulic isolation does not exist over the 177.8 mm casing or if the casing will not pressure test.

1. Move in and rig up Service rig c/w pump tank, BOP's etc. Conduct a service rig inspection prior to conducting any further work in the location. Conduct a safety meeting with all personnel to review cement squeeze operations.
2. Remove upper section of wellhead at the upper 7 1/16" flange, Rig in pre pressure tested BOP's, pressure test the flange connection to 7000kPa.
3. Move in wireline equipment and rig up above BOP's. Pick up lubricator.
4. If a cement squeeze is required, proceed as follows:
5. Make up wireline conveyed perforating guns and RIH and perforate just above the last hydraulically isolated interval. Depth for perforating will be confirmed with CPE Calgary prior to perforating.
6. Set retainer on wireline about 5 meters above perforated interval.
7. Pick up and RIH to the retainer with tubing and establish feed rate or pressure test.
8. If the perforations pressure test to 7000 Kpa for 10 minutes. If the pressure test holds POH and dump bail 8 or more vertical meters of cement on the retainer. Rig out wireline and service rig and release these services.

If a feed rate can be established, then proceed as follows:

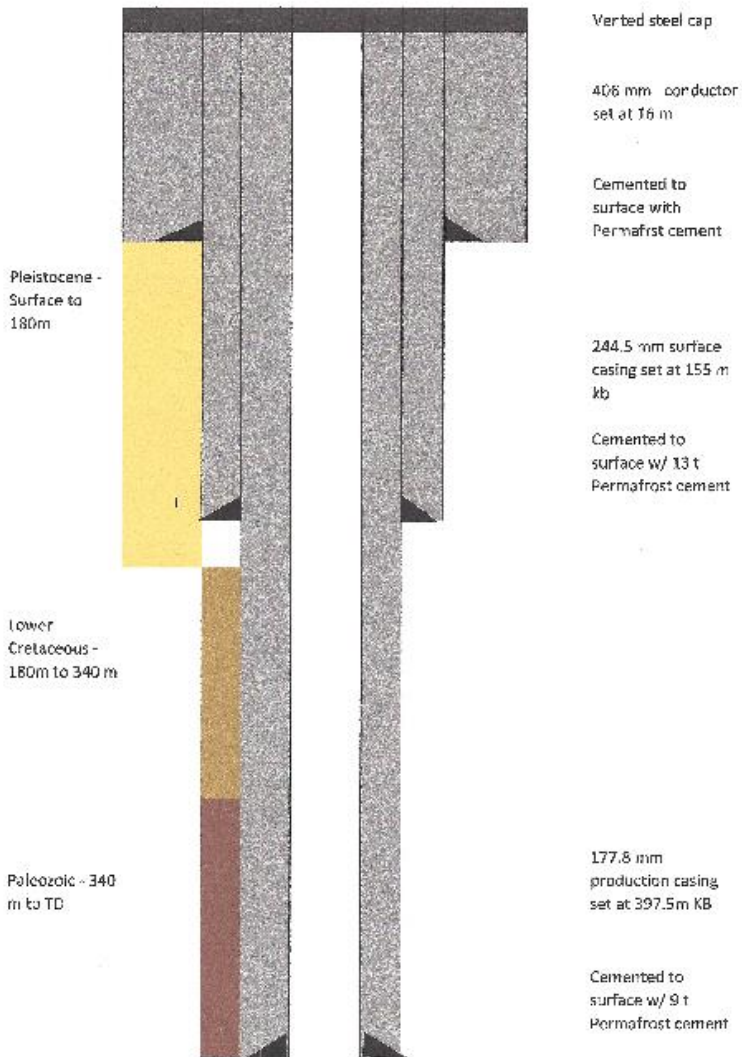
9. If circulation to surface is obtained cement must be pumped to surface. Following cementing the retainer must be capped with 8 m of cement.
10. If the perforations take fluid, and a feed rate can be established conduct a cement squeeze using the retainer. Adjust the volume and blend after discussions with Calgary and a Service Provider.
11. If circulation to surface is not successful, attempt must be made to establish a feed rate, if a feed rate can be established a cement squeeze must be conducted.

Note: Formation fracture pressure is estimated using 18 kPa/m for gradient. Cement density is greater than overburden density. Pressure that can be exerted on formation is low before fracturing occurs so consult with Calgary office on maximum squeeze pressure that must not be exceeded.

12. Post cementing the retainer must be pressure tested and capped with cement.
13. If a casing issue is indicated by a lack of pressure integrity, then RIH with a test packer and isolate the point of casing damage. Establish a feed rate and check for circulation to surface.

14. If circulation to surface is established, then the annulus from the point of damage to surface should be cemented.
15. Set a bridge plug and top the bridge plug with a cement plug in the casing that covers the damage with its top at least 10 meters above the bridge plug.

Wellbore After Cut and Cap Operation



Regulatory and Other

Well abandonment procedures and gas migration testing will comply with OROGO (NWT Office of the Oil and Gas Regulator Operations) Well Suspension and Abandonment Guidelines and Interpretation Notes and with Section 6 of the Oil and Gas Drilling and Production Regulations (OGDPR).

- 1. All safety practices followed by Canadian Petroleum Engineering must be adhered to while on the lease.
- 2. Ensure a copy of the CPE Emergency Response Plan is on lease at all times and has been reviewed by all personnel related to the supervision of the abandonment.
- 3. When recording shut in tubing and casing pressures at the wellhead, use either a recently calibrated test gauge or a deadweight measurement instrument.
- 4. Prior to moving equipment on location, take necessary steps to ensure the lease and access road are in acceptable condition.
- 5. Fax or email daily workover /completion reports to Lorne Hammer and Ron McCosh at (403) 233-0859, email lhammer@cpe.ab.ca

Safety

A safety meeting is to be held with all service company personnel prior to each job.

Wellsite supervisor must notify Contractors of known hazards of which Contractor(s) may be unaware. Wellsite supervisor must ensure that workers are aware of their responsibilities and duties under OH&S regulations and that the workers comply with regulations. All service companies supplying materials will review Material Safety Data Sheets at this meeting for all products supplied and maintain these Material Safety Data Sheets available for worker's examination on location in compliance with WHIMIS regulations. All safety meetings will be recorded on the CPE daily report and on the daily tour sheet.

ENGINEERING AND OPERATIONS CONTACTS

Position	Name	Telephone	Number	EMail
Project Manager	Lorne Hammer	Office	403-263-0752	lhammer@cpe.ab.ca
		Cellular		
Completions Superintendent	Ron McCosh	Office	403-263-0752	rmccosh@cpe.ab.ca
		Cellular		
Completions Supervisor	TBD	Cellular		
Aurora College	Jonathon Michel	Office	867-777-7878	Jmichel@auroracollege.nt.ca

EMERGENCY RESPONSE CONTACTS

Position	Name	Location	Telephone	Email
Orogo Executive Director	Ms. Pauline De Jong	Yellowknife	1(867) 767-9097	Pauline_DeJong@gov.nt.ca
Chief Safety Officer	Michael Martin	Yellowknife	1(867) 446-2235	Mike_Martin@gov.nt.ca
Inuvik Regional Hospital		Inuvik	1(867) 678-8000	
Inuvik RCMP		Inuvik	1(867)777-1111	GDIV_INUVIK_DETACHMENT@rcmp-grc.gc.ca
Inuvik Fire Department		Inuvik	1(867)777-2222	
OROGO Incident Report Line			1(867) 445-8551	
NWT Spill Reporting Line			1(867) 920-8130	
GNWT OH&S			1(867) 920-3888	

Gas Migration Testing

Gas migration testing has to be conducted to ensure the safety of workers conducting the abandonment and to ensure that downhole problems do not exist with the well. Gas Migration testing can only take place when ground is not frozen. Gas Migration testing for the Aurora College G-04 well will be conducted in early August 2023.

These procedures are based upon AER Directive 20 – Well Abandonment (Appendix 2 – Suggested Procedures for Gas migration Testing)

Testing is to be done only in frost-free months. Periods immediately after rainfall must be avoided.

If less than full-scale readings are obtained, the soil horizon should be examined to ensure that readings are not the result of contaminated soils due to spills of diesel fuel, solvents, oil, etc. If contaminated soil is suspected, retesting is recommended.

Instrumentation should be calibrated regularly and checked daily when in use.

Sample testing points are to be selected to ensure that potential gas migration is detected.

Recommended Test Point Locations

- two within 30 cm of wellbore on opposite sides
- at 5 m intervals outward from the wellbore every 90° (a cross with the wellbore at centre) to a distance of 20 m

Recommended Equipment

- equipment capable of penetrating a minimum of 50 cm deep and a maximum of 64 millimetres (mm) in diameter
- calibrated explosion meter or other instrument capable of detecting hydrocarbon at 1 per cent lower explosive limit (LEL)
 - Gas detector capable of reading to 2 ppm methane
- equipment or material to seal hole at surface while soil gases are being evacuated from the soil through the instrument

Testing Procedures

- Perform instrument check (calibration, voltage, zero, etc.).
- Make a hole a minimum of 50 cm deep.

- Isolate the hole from atmospheric contaminations.
- Insert hose, wand, or other equipment a minimum of 30 cm into hole, maintaining a seal at surface to prevent atmospheric gas and soil gas mixing.
- Withdraw soil gas sample. The volume, rate, etc., will depend on the instrumentation being used. Ensure that a sufficient sample is removed to purge lines and instrumentation.
- Record observations.
- Purge instrument and lines

Program Schedule

	2022		2023				
	December	January	Feb - May	June	July	August	September
Activity							
Submit OA Application	9						
Submit ACW Application	15						
IR responses		1 - 31	All	1 - 30			
Receive Approvals to proceed					14		
Well Abandonment Op'ns					31		
Gas Migration Testing						3	
Pressure test csg& whd						4	
Cement Evaluation log						5	
Replace wellbore fluid						6	
Excavate around wellhead						7	
Cut & Cap well						8	
Level well site						9	

5. SAFETY PLAN

Introduction:

This safety plan is developed to meet the requirements of Section 8 of the Oil and Gas Drilling and Production Regulations of the Government of the Northwest Territories.

Project and worker safety for this project will adhere to the Occupational Health and Safety Regulations developed under the Safety Act of the Government of the Northwest Territories.

The planned well abandonment is defined as a low hazard, low risk type of well operation. Hydrocarbons were not encountered during the drilling of this well. The well was drilled to 401mKB. Production casing (177.8mm) casing was run and cemented full length with cement returns to surface. The well was not completed, and the casing was never perforated. The Training Well site was last inspected in July 2022 and the wellhead pressure gauge indicated that no pressure was contained in the well.

The safety plan proposed for the well abandonment will specifically identify safety hazards associated with the planned well operations. This well is classified as a “non-oil and gas well” and the abandonment will be conducted as per Well Suspension and Abandonment Guidelines and Interpretation Notes section 6Ai, 6A and 6E.

The CPE safety plan will be supported by our Environmental Protection Plan, Emergency Response Plan and our HSE Manual. These manuals provide detailed information and can be used to manage any situation that could occur on the Aurora College location.

The wellsite is located on an industrial lot north of the town of Inuvik. The lot is cleared, levelled, and graveled, but does not have any utility services. No surface development has been done on the lot. The wellhead is enclosed by fencing. There are no buildings, structures or facilities on site.

Operations to abandon this well are planned to take place in March 2023.

Operations Management System

Canadian Petroleum Engineering (CPE) utilizes an Operations Management System (OMS) which defines the major sections of the OMS and our underlying principles and expectations. OMS establishes common expectations for addressing risks inherent in our operations and it is used to address all aspects that may impact personnel and process safety, security, health and environmental performance.

CPE conducts risk assessments to identify and address potential hazards using accurate information on our operations and regulatory requirements. Assessed risks are prioritized and managed as appropriate for the nature and magnitude of the risk. Decisions are clearly documented and followed up.

Managers and supervisors are expected to credibly demonstrate leadership and commitment for operations safety and all other activities.

CPE's OMS will be applied to this project. Application includes:

- Risk Assessment – a risk assessment will be prepared to ensure risks are identified and managed
- Design and Construction – detailed construction and well operations plans and programs will be developed and reviewed by the project team
- Information and Documentation – daily reports will be completed by the wellsite supervisor. Operations records will be maintained. The final status of the well will be documented and a final well report filed
- Personnel and Training – training competency and safety of employees and subcontractors will be managed
- Operations and Maintenance – inspection and maintenance programs for equipment will be in place and reviewed
- Third Party Services – suppliers that provide services to the project will be overseen to ensure they meet CPE operations management standards
- Incident Investigation – All incidents will be reported, documented, investigated and lessons learned shared as appropriate
- Community Awareness and Emergency Preparedness – Community consultation will take place prior to operations activity as appropriate.
- Emergency preparedness and response plans will be in place prior to onsite operations taking place.

Performance Management

The various activities associated with this overall safety plan will be monitored and recorded during execution as follows:

- Work permits will be reviewed and assessed for completeness
- Tailgate safety meetings will take place before each well activity. Safety meeting notes will be recorded and submitted with the overall well report.
- Higher risk activities will have special forms and checklists to verify safety controls are in place for each task.
- Daily pre-use inspections for equipment will be completed and noted in appropriate daily logs
- Equipment maintenance history will be reviewed prior to mobilization to ensure it is current
- A hazard identification and a worker behavioral observation program will be in place during operations. The number of observations and hazards will be tracked as a measure of worker participation.
- Emergency response drills such as a vehicle accident and muster drills will be recorded.

Hazard Assessment

Prior to the start of all operations, pre-job hazard identification and inspections will be completed. All onsite hazards and risks associated with the execution of the operations plan will be identified and discussed with contractors and workers.

As part of all work activities for this project, a Job Safety Analysis (JSA) process will be utilized at pre-job safety meetings to ensure worksite hazards are identified and controlled before the job starts. All safety meetings will be documented and included in the daily report.

The safety plan requires reviewing abandonment well operations and identifying potential hazards associated with each well activity.

An operations zoom meeting will occur approximately 7-10 days before actual operations on site begin. The operations procedures will be reviewed, and all subcontractors will discuss operational hazards associated with each work activity. All potential hazards not previously identified will be added to the updated safety plan.

Safety Risk Management

This section of the safety plan will identify the operations for the abandonment of Aurora College's training well. Each operational procedure will be reviewed for job risks and hazards. Recommendations and solutions will be offered to minimize safety risks.

General hazards associated with vehicles such as fuel spills and driving safety, will apply to all subcontracted vehicle operations including the e-line truck, pressure truck, excavator, welder and all supervisors vehicles. Fuel will not be stored on location. Contractor vehicles will be responsible for arriving on location with their own fuel.

Fuel Spills/ Fuel Leaks. All vehicles will be visually inspected prior to entering the wellsite. Drip pans will be put under all vehicles on site to catch any inadvertent leaks of vehicle fluids. Ground area will be visually inspected when vehicles leave to ensure that fuel has not been spilled or leaked. Fuel spills/leaks will be cleaned up using absorbent pads, or leaks on snow will be cleaned up by removing and segregating any snow in water tight containers or a specific tank..

Driving vehicles on location around the wellhead. The Supervisor will meet all vehicles at the entrance to the location. The supervisor will discuss with the operator where the vehicle will be driven and the potential hazards. Equipment will be safely positioned and orientated in the most efficient operating position near the wellhead.

All personnel on location will discuss slips trips and fall hazards of working around the wellhead and on or near the contractor equipment. General worksite safety will be documented in the daily report. Safety meeting notes will be included in the final well report.

All personnel on site will be required to wear appropriate PPE at all times.

Abandonment Program - Operations Summary

1. General site review prior to abandonment operations. Obtain field coordinates for well centre. (NAD83)
2. Run a cement bond log to confirm cement quality over the length of the 177.8 mm casing.
3. Pressure test 177.8 mm casing to confirm casing integrity. (7000kPa for 10mins)
4. Excavate the area around the casing 2.5m below ground level.
5. Secure wellhead with certified slings and chains to ensure it is controlled by the excavator or picker truck as the casing is cut.
6. Welder to cut the conductor, surface and production casing strings at a minimum depth of 1.5m below ground level. Wellhead and cut casing will be removed and set aside.
7. Casing stubs will be capped to prevent access and a vented cap will be installed to prevent the casing from containing pressure.
8. Return site to ground level. Backfill bell hole over the abandoned casing.
9. Install an abandonment sign 1m North of the abandoned well as per the abandonment guidelines.
10. Gas Migration testing will be done in the summer of 2023.

Detailed Well Abandonment Operations-Hazard Identifications.

Wellhead and General Site Review

Wellsite Supervisor arrives on location with the Excavation Operator for the first site inspection. Wellhead is enclosed by fencing. Visually inspect the wellhead equipment and ensure all wellhead equipment in place. Report any missing components to CPE Calgary Office before proceeding with operations plan. Remove fencing and set off to the side of the well location.

The site was last inspected in July 2022. The pressure gauge on the wellhead during the inspection showed no pressure on the well.

Determine field verified coordinates for the well center. (NAD83)

Report coordinates in the daily report.

Hazard Identification

Review Wellhead Diagram.

Check for missing or damaged wellhead components. Check all valves on wellhead and to confirm they are all in the closed position. Open SCV and observe for blow or suction. Report wellhead status and equipment condition to CPE office.

Gas Monitoring.

A portable gas monitor will be used during all well operations to confirm there are no combustible gases. Gas readings should be zero. If during any part of the abandonment operation they are not zero contact CPE office before continuing well operations.

Casing Well Pressure

Observe the pressure gauge on the wellhead. Note well bore fluid could be frozen. Contract a steamer to thaw. Read and record well pressure. Well pressure should be zero. Contact CPE office if not zero.

Note: It is not expected that there will be any pressure inside the well.

Observe the ground around the wellhead.

Ground should not be disturbed and should be similar with existing ground level on the well site. Contact the local utility companies to confirm there are no buried lines to be aware of during the excavation.

Cement Bond Log

A cement bond log is required to determine cement quality. Rig up lubricator on top of wellhead. Test with N2. Log casing. Rig out loggers. Evaluate cement bond log results.

Hazard Identification

Driving and positioning the truck. Operations supervisor will meet with truck operator prior to driving on location. A safety meeting with the operator will determine the best method of positioning the truck for logging operations.

Slips trips and fall awareness. General safety around the wellhead and the logging truck.

Working around wellhead. Operations supervisor to discuss the hazards around the wellhead and the well details prior to running logging tools. Gas detection will be monitored.

Handling of tools and logging operations. Operations supervisor to review logging operator's procedures for safely handling the logging tools. Review e-line truck safety plan. Identify any additional hazards associated with the logging operation. Discuss work plan of logging operations and identify safety concerns of logging operator before proceeding with logging run.

After logging is complete remove tools from the well. Operator and wellsite supervisor to review cement bond log. Determine intervals of quality cement strength. If cement bond log shows quality cement bond proceed to pressure testing the casing in well.

Casing Pressure Test.

Pressure test the production casing to 7000kPa for 10 minutes. A pressure decline of more than 700kPa over the 10 minute test will result in a casing pressure test failure. Remedial action will be required. Contact CPE.

Pressure testing to 7000kPa is well below the burst and collapse rating of the casing. Record volume of fluid pumped into the well and pressure readings over the 10 minute testing period.

Hazard Identification

Driving equipment near wellhead. Wellsite supervisor will assist truck driver in positioning pressure truck near wellhead for testing operations.

A safety meeting will discuss pressure testing tool safety and operations safety prior to pressure testing. Identify hazards associated with testing operations and equipment.

Rig up contactors pressure testing equipment. The pressure truck will pressure test all connections made to the wellhead prior to beginning the pressure test. Any connections that fail the truck pressure test will be fixed and retested prior to conducting the pressure test.

Review pressure test results. If casing test is successful proceed to the well abandonment.

Excavation around the Well

Excavate a bell shaped hole around the wellhead to a depth of 2m below ground level to expose the conductor casing. Soil removed from the bell hole will be used to back fill once the abandonment is complete.

Operator and supervisor to discuss the best method to excavate the bell-shaped hole. Excavation needs to be a minimum of 2m below ground level so the casing can be cut off at the required depth. Sides of the excavation to be gradually sloped and stable to allow the welder to access the casing with welding equipment. A stable base around the casing should be compacted for the welder work area.

If ground is frozen a bulldozer may be needed to assist in the excavation.

Personal gas detection monitors will be used at all times while conducting these operations. If gas is present stop well operations and contact CPE office.

Contact local utilities to confirm there are no newly buried lines near the excavation.

Hazard Identification

Review equipment and operational hazards associated with excavation operations and equipment.

Discuss safest method to remove soil around wellhead. Operator to be careful in removing soil to not damage casing. Soil removed to be piled to the side of the location for backfilling after abandonment operation is complete.

Excavation must be completed so that the sides of the hole are gradually sloped and stable. A welder will be working in the hole. The sides need to be gradually sloped and stable to prevent collapsing. The sloped sides must allow for a welder and equipment to safely get in/out of the excavation hole.

Cut Casing and Remove Wellhead

Prior to cutting casing the wellhead will be tied off and supported with certified slings and chains attached to the excavator or a picker truck. The wellhead should be pulled slightly into tension as the casing is cut. When the casing is completely cut the backhoe or picker truck will support and control the casing/wellhead components and remove them from the hole.

An experienced Class B welder will be contracted for this work. The field welder should be experienced in cutting multiple casings to abandon wells.

Welder to cut the three casing strings approximately 1.5m below ground level. A large section of the conductor casing will be cut first to expose the surface casing. Remove as much of this casing as possible to allow easy access to the surface casing. Before cutting the surface casing cut a small hole in the surface casing about 30cm below the casing bowl. Confirm there is no gas inside the surface casing using a portable gas monitor. Continue to monitor for gas at all times.

The surface casing will be partially cut to expose the inner casing. Three equally spaced windows will be cut in the surface casing. A minimum of 50% of the surface casing should be left intact to support the wellhead prior to cutting the inner casing. The remainder of the surface casing will be cut after the inner string is completely cut. The wellhead will be held in tension by the backhoe or picker truck during the cutting operations. Remove wellhead from bell hole and set aside for disposal.

The inner casing should not drop in the well when it is completely cut as the casing was cemented full length and should be supported by cement.

Welder and backhoe/picker truck operator (controlling the wellhead during casing cutting operations) must safely work together to ensure cut wellhead is controlled and held in place. The wellhead will be pulled slightly in tension during the casing cutting. Once the cutting is complete the wellhead will be removed from the bell hole and set to the side of the location.

The wellhead equipment removed during the abandonment will be properly disposed.

The operations supervisor will conduct a pre-job safety meeting to ensure that the welder and backhoe or picker truck contractor are aware of their responsibilities to safely complete this task. Communication between these contractors as they perform this well operation is extremely important. This job will be split into multiple operations to ensure each casing cut is safely completed.

Hazard Identification

A hot work permit will be required for this operation.

Gas detection monitors will be required during these operations.

Communication between the back-hoe operator and the welder will be extremely important during the casing cutting operation. Each contractor must understand their responsibilities during these operations. A pre-job safety meeting will be used to ensure all workers understand how the casing cutting operation will proceed.

Welder and welder's helper will be working in the bell hole to cut casing. Ensure stable footing is available in the work area to prevent slips and falls while cutting casing.

Ensure the lifting equipment is properly rated and certified for lifting and controlling the cut wellhead. Visually inspect all equipment prior to use.

Workers should be aware that as the conductor casing is cut pieces of casing mayfall to the ground as the conductor pipe is removed from the surface casing. Caution should be used in handling these pieces of conductor casing.

When cutting the casing the welder should cut casing at a glancing angle and not at an angle perpendicular to the casing. Hot material will then be directed away from the cutting area and away from the welder. Welder should be the only person in the bell hole when the final cut is made on the inner string.

Casing cut from the well should be removed from the bell hole and placed away from the area as it is cut. Additional debris in the bell hole will create a potential hazard for the welder.

Capping Cut Casing.

A steel plate and vent assembly will be installed to restrict access to the surface casing/production casing annulus. A vented cap will be installed on the inner casing string. The vented caps will not allow pressure to build up inside the casing.

Backfill the bell shaped hole

Excavator to backfill hole with previously removed material. Return the abandoned well surface site to existing ground level. Material to be packed down as the hole is filled.

Hazard Identification

Operator to ensure ground around hole is stable enough to support machinery during back filling operation.

Abandonment Sign Installation

Abandonment sign to be made ahead of well operations based on the Well Suspension and Abandonment Guidelines and Interpretation Notes.

Well sign is to be installed 1m North of the abandoned well. Sign to be cemented vertically in the ground 1m below surface and sign post to extend 1m above ground. Abandonment sign to be installed as per operations program.

Well Abandonment is Complete.

Gas Migration Testing

To be done in the summer of 2023 when the ground is not frozen.

General Work Management

Construction and drilling operations involve a number of personnel safety risks that must be managed and controlled. Work authorizations (e.g., work permits) will be used to manage any higher risk activities, including:

- Working at Heights
- Confined Space Entry
- Energy Isolation
- Hot Work
- Lifting and Rigging
- Excavating and Trenching

There are personnel safety risks whenever heavy equipment movement and operations take place. These risks can broadly be categorized as “Line of Fire” and will also be rigorously managed through controls such as:

- Use of pre-job meetings and pre-move meetings to review hazards and controls
- Vehicle walk-arounds and pre-use inspections
- Establishing exclusion zones around operating equipment
- Establishing no-go zones between equipment

- Use of dedicated spotters following IRP 12 for spotting heavy equipment
- Audible alarms, such as back-up alarms
- Where possible, barricaded wellhead area

CPE's Upstream Safety Management System documents the company's approach to managing a wide variety of safety risks in greater detail.

Worksite Safety - Structures, Equipment and Facilities

The wellsite is located on a lot in an industrial area used for short term storage of materials. There are no buildings or facilities on this location. The lot itself is cleared, levelled, and graveled, but does not have any utility services. No surface development has been done on the lot.

Well Control

Loss of control of a well control resulting in a flow of hydrocarbons to surface can represent a serious risk to personnel safety and the environment. This scenario is not likely to occur on this project as the original abandoned well had no hydrocarbons present during the original drilling operation.

If a drilling or completions operation were required however, the personnel on site and equipment would be prepared to both prevent and mitigate the risk of an uncontrolled flow to surface as follows:

- Well control training of key rig personnel
- Compliance with Drilling and Blowout Prevention Requirements and Procedures, which is an industry-recognized best practice
- Blowout preventer equipment that is inspected, maintained, and regularly tested
- Regular well control drills with the crew while on location

Equipment Integrity:

The primary equipment for the proposed work activity consists of construction equipment and oilfield specialty equipment including:

Bulldozer - Excavator

Pressure Testing Truck

Wireline Logging Truck

Portable Welding Unit

Picker Truck

All equipment used for this project will be inspected prior to mobilization.

Special programs will be in place for the maintenance and inspection of any lifting equipment such as pickers or cranes, including lifting gear (e.g., slings and shackles) required to use said equipment.

Daily pre-job inspections will be completed on heavy equipment prior to use.

Safety critical equipment such as fall protection equipment, self-contained breathing apparatus (SCBA) and fire extinguishers will be inspected regularly. No other safety equipment is required on this site.

Canadian Petroleum Engineering will only contract equipment suitable for these well operations. Local contractors will be given preference if equipment is certified and maintained.

Selecting Contractors/ Working with Contractors:

Contractors will be selected based on previous work experience in abandoning wells in the area. Certified and experienced equipment operators will be required. CPE will attempt to contract qualified local companies.

CPE will only contract companies that are experienced and qualified to perform the operations required to complete the abandonment of this well.

Safety records of each company or contractor will be reviewed prior to awarding work for this project.

Class B pressure welder will be selected for this work. No pressure welding is required but the Class B certification will ensure that an experienced welder with field welding experience will be selected to cut the casing strings for the well abandonment.

CPE will provide on the job leadership in safe work practices to all contractors and will ensure that all contractors are made aware of all potential hazards and safety expectations. CPE will ensure the importance of job safety is communicated and understood by all contractors. CPE will provide each of them with a copy of CPE's safety standards.

CPE will regularly monitor contractor work practices in order to ensure that contractors continue to implement sound safety practices required by their own safety programs, CPE standards, and OHS regulations. Pre job safety meeting are required prior to each well operation.

Where two or more contractors operate at the same site, each contractor will be

responsible for the health and safety of their respective workers, and their worker's compliance with all rules and regulations. CPE will verify that all contractors' workers have received the appropriate training and certification required for their duties.

Organizational Structure:

All work activity will be the responsibility of CPE to manage and execute. Construction equipment suppliers that will be needed to execute the program will be under contract with Aurora College and overseen by CPE representatives. The construction work will be managed by a construction or field supervisor who is directly accountable to the CPE Operations Superintendent who in turn reports to the Operations Manager. The responsibility for meeting the requirements of the safety plan rest with the Operations Superintendent.

Roles of Management Team

Operations Manager

- Responsible for managing and supervising project
- Part of team selecting services
- Reviews and approves of Well Operation Plan
- Reviews and approves Safety Plan
- Reviews and approves Emergency Response Plan
- Discusses and reviews daily well operation plan with Operations Superintendent.
- Reviews hazards identified with each operation.
- Provides daily activity report to Client

Operations Superintendent

- Reports to Operations Manager
- Responsible for implementation of operational plan
- Responsible for developing Safety Plan for Project
- Responsible for Safety plan being implemented at the wellsite
- Responsible for developing Emergency Response Plan
- Communicates with field supervisor and reviews operation plan prior to field operations.
- Provides technical support to operations supervisor as required.
- Assists Operations Supervisor with Emergency Response Plan when notified.

Field / Construction Supervisor

- Reports to Operations Superintendent
- Communicates daily wellsite/operations plans to Operations Superintendent
- Coordinates all field operations
- Records daily activity in CPE daily operations report
- Responsible for onsite safety for all operations.
- Issues safety work permits as required
- Inspects all contractors equipment as it arrives on location

- Reviews contractor's safety programs. Adds hazards not previously identified to the job safety plan as required.
- Conducts onsite safety meetings with all workers prior to all well operations
- Evaluates safety risk of each operation and identifies hazards
- Ensures all workers understand operational and safety risks with all operations

Reporting Structure

Each day of the project the wellsite supervisor completes a daily report documenting all wellsite activities. All safety meeting notes are included in the daily report. The daily report is sent to the CPE office for review by the operations superintendent and operations manager.

Each morning prior to the start of any work operations the wellsite supervisor and operations superintendent discuss the details of the previous day and the operations plan for the current day. Potential safety hazards associated with the planned activities will be discussed. Operating efficiencies and safe work practices learned from other operations will be implemented for current well operations if possible.

Operating a safe and efficient work site will be stressed

The operations manager is generally included in the morning workday planning discussion. If the operation manager is not able to participate in the morning meeting the operations superintendent and operations manager will meet at another time to discuss plans.



ENGINEERING AND OPERATIONS CONTACTS

Position	Name	Telephone	Number	Email
Project Manager	Lorne Hammer	Office	403-263-0752	lhammer@cpe.ab.ca
		Cellular		
Operations Superintendent	Ron McCosh	Office	403-263-0752	rmccosh@cpe.ab.ca
		Cellular	██████████	
Operations Supervisor	TBD	Cellular		
Aurora College	Jonathon Michel	Office	867-777-7878	Jmichel@auroracollege.nt.ca

EMERGENCY RESPONSE PREPAREDNESS

CANADIAN PETROLEUM ENGINEERING WILL UTILIZE OUR EMERGENCY RESPONSE PLAN AS A GUIDE TO RESPOND TO ANY EMERGENCIES OCCURRING ON THE AURORA COLLEGE TRAINING WELL SITE. THIS SECTION OF THE SAFETY PLAN WILL PROVIDE ENOUGH INFORMATION THAT THE WELLSITE SUPERVISOR CAN REACT TO AN EMERGENCY SITUATION AND START AN EMERGENCY RESPONSE TO ANY ACTIVITIES THAT MIGHT OCCUR ON THE LEASE DURING THE WELL ABANDONMENT OPERATION.

Supervisors will contact the Inuvik hospital to prior to the start of well operations to ensure medical transport and EMS is available.

EMERGENCY RESPONSE POLICY

Canadian Petroleum Engineering Inc. (CPE) Emergency Response Policy is to initiate immediate emergency response minimizing public and environmental exposure, and to protect all employees, contract personnel and assets.

In support of this policy, the following guidelines are identified:

1. Personnel and public safety are the primary concerns.
2. Notification of an emergency event concerning Canadian Petroleum Engineering personnel and relevant third parties is mandatory.
3. Containment of the event is critical to limit injury and damages.
4. Emergency management responsibilities will be assigned prior to the event occurring, wherever possible.
5. All external communications will be channeled through Aurora College.
6. Effective response depends on all aspects of the Emergency Response Plan being current, therefore all employees are responsible for reporting any errors or omissions in this Plan to CPE's Emergency Response Coordinator.
7. All personnel at the worksite or associated field locations are to be aware of the Emergency Response Plan and understand their responsibilities.

For an emergency involving a third party, respond in a best efforts response with the procedures most appropriate to the event as described in this Emergency Response Plan.

For an emergency in which CPE has a legal obligation to respond, respond immediately in accordance with this Emergency Response Plan to the extent required by law.

For an emergency in which CPE has no legal duty to respond, but where public perception or the name of the Company is involved in any way, or a definite threat exists to people or the environment, and prompt response is not forthcoming from others, respond to the extent required to control and contain the emergency and eliminate danger to the public.

For an emergency in which CPE has no association to the emergency, respond when requested by government authority, the public, or industry, without prejudice.

Report all emergencies in accordance with the procedures set out in this manual.

Onsite Response

Emergency First Response

The first person on emergency scene will raise an alarm.

The On-Scene Commander (Wellsite Supervisor) will act to:

1. Protect all personnel not directly related to the incident.
2. Contractor workers should move to a predetermined safe area or upwind alternate.
3. Locate all personnel onsite. Identify and assess all injuries.
4. Give first aid treatment as required. Do not move injured persons unless necessary to prevent further injury.
5. Contact appropriate emergency services: Ambulance, Hospital, Fire, RCMP.
Refer to **Emergency Contacts** tab.
6. Establish an On-Scene Command Post. Contact Canadian Petroleum Engineering provide information about incident and develop a plan to manage the emergency situation.

7. Initiate emergency management. Ensure that all teams (minimum of 2 persons per team), entering hazardous area are properly equipped with all appropriate safety and detection equipment. As appropriate, refer to the specific procedures outlined under **Uncontrolled Gas Release, Fire/Explosion, Spills, and Injury & Fatality** tabs of this manual.

8. Evaluate the emergency and determine the appropriate Severity Level:

Level 1 – There is no immediate Public Hazard. No danger outside company property or right of way. Immediate control of the hazard/source is possible, there is no threat to the public, minimal environmental impact, little or no news media interest and the situation can be handled entirely by company personnel. As a precaution, a voluntary evacuation of sensitive residents maybe initiated.

Level 2 – There is a Potential Hazard to the Public. There is a potential for the emergency to extend beyond company property. OROGO and the RCMP must be contacted through the Northwest Territories Emergency Program. Refer to the **Emergency Contacts** tab. Although imminent control of the emergency is probable, there is some threat to public, moderate environmental impact and news media interest. Establish roadblocks and begin general evacuation procedures.

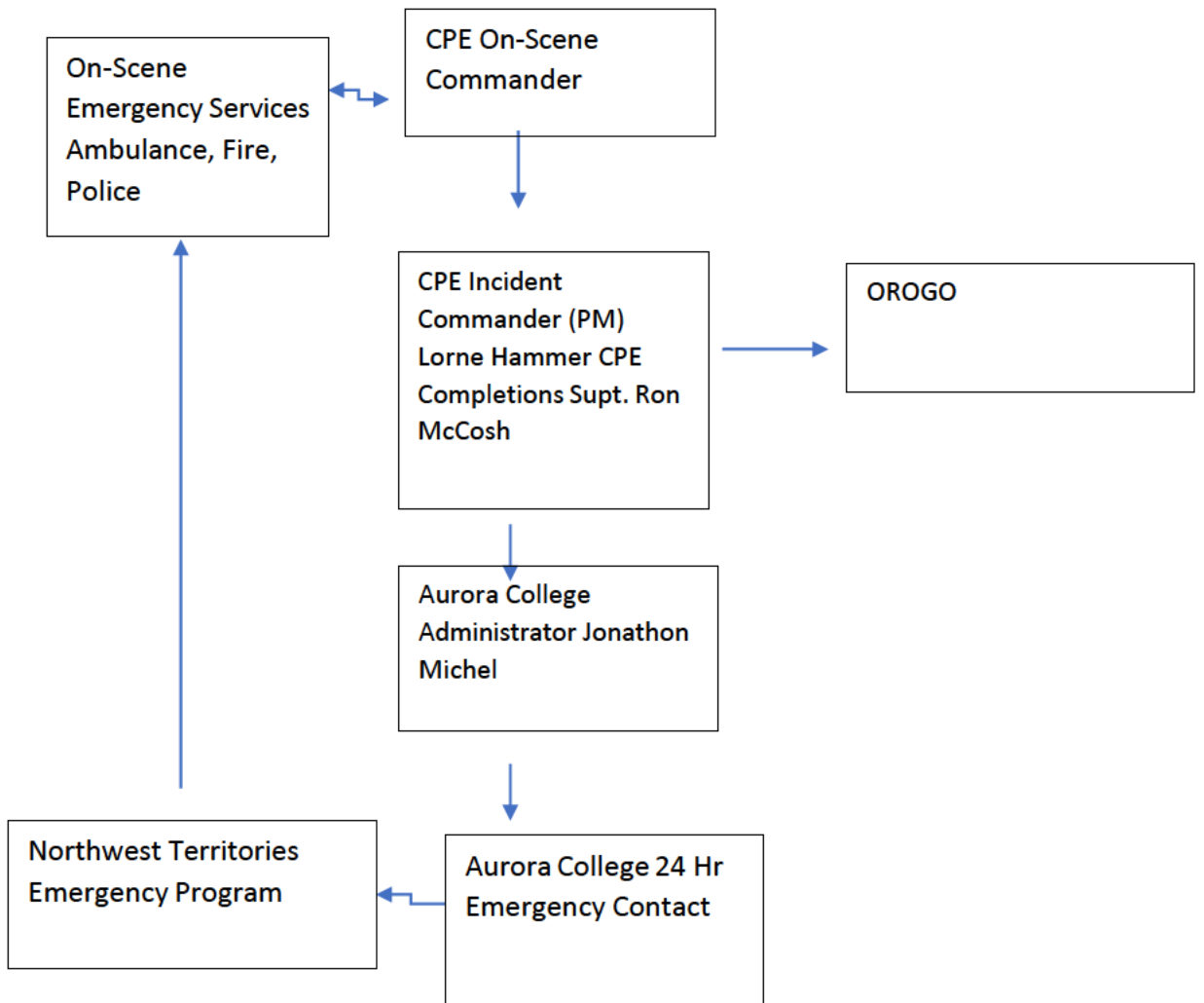
Level 3 – There is a Definite Public Hazard. There is an Uncontrolled Emergency, public safety is jeopardized, there is significant environmental impact, significant news media interest, immediate municipal and provincial government involvement and assistance is needed from outside parties. Complete evacuation procedures. Ignite an uncontrolled gas release if those criteria are met.

After the First Response, the On-Scene Emergency Commander will continue with the emergency management:

1. Begin an Incident Log – Refer to **Forms** tab of this manual.
2. Notify Incident Commander at Head Office – Refer to **Emergency Contacts** tab.
3. Continuously monitor whereabouts and status of all on-site personnel.
4. Continue with Emergency Response as required for specific emergency. Refer to procedures outlined under **Uncontrolled Gas Release, Fire/Explosion, Spills, and Injury & Fatality** tabs of this manual.

EMERGENCY COMMUNICATIONS

For any emergency, all emergency responders should follow the communications protocol outlined in the chart below. Contact details are provided on the following page.



EMERGENCY RESPONSE CONTACTS

Position	Name	Location	Telephone	Email
Orogo Executive Director	Ms. Pauline De Jong	Yellowknife	1(867) 767-9097	Pauline_DeJong@gov.nt.ca
Chief Safety Officer	Michael Martin	Yellowknife	1(867) 446-2235	Mike_Martin@gov.nt.ca
Inuvik Regional Hospital		Inuvik	1(867) 678-8000	
Inuvik RCMP		Inuvik	1(867)777-1111	GDIV_INUVIK_DETACHMENT@rcmp-grc.gc.ca
Inuvik Fire Department		Inuvik	1(867)777-2222	
OROGO Incident Report Line			1(867) 445-8551	
NWT Spill Reporting Line			1(867) 920-8130	
GNWT OH&S			1(867) 920-3888	

Management of the Emergency Response Plan

Operations on Paper Pre-Job Review Meeting

Prior to mobilizing equipment and preparing for well operations CPE will conduct a meeting to review the operation plan on paper. The meeting will take place in the CPE Calgary Office and involve the operations supervisor, completions superintendent and the project manager.

The operations plan will be reviewed in detail. As each step of the operations are reviewed safety hazards, environmental hazards are identified and noted. The potential and severity of the hazards will be discussed and plans developed to best manage the operation to minimize each potential hazard. The Safety Plan and Environmental Protection Plan will be completely reviewed with the onsite supervisor.

The onsite supervisor is responsible for ensuring the CPE safety and environmental policies are followed during the abandonment operations. The onsite supervisor will identify and communicate potential safety and environmental hazards to contractors prior to each well operation.

The Emergency Response Plan will be reviewed in the planning meeting to ensure the onsite supervisor understands how to manage an Emergency Response incident. The onsite supervisor must understand the first responder's role in any emergency that could occur during the abandonment operations. The Completions Supervisor is responsible for ensuring the field operations are managed to protect all workers and the environment.

During actual abandonment operations the morning meeting will be used as a management meeting to review the previous day operations and to discuss the planned operations for the day ahead. The daily report will document all operations, safety incidents and environmental incidents each day. These meetings will identify potential safety and environmental hazards and the team will discuss how they will be managed safely and efficiently.

Change Management

CPE has prepared an abandonment program that is part of this document. There are no indications that the OROGO regulations for abandoning wells is about to change in the near future. It is expected that the operations plan for this project will remain as planned.

The onsite supervisor will be experienced in well abandonment operations and qualified to complete this work. The operation of abandoning the Aurora College well will utilize a minimum number of contractors and equipment. Fit for purpose equipment will be selected to perform the specific work duties as outlined in the program. All equipment will be chosen to complete the abandonment operation in the most efficient manner possible.

Lessons learned from the pre-job meeting will be incorporated into an updated Emergency Response Plan and used to provide the best possible information for managing field operations safely.

The operation plan includes running a cement bond log and pressure testing the casing. Based on the results of these tests the operation plan could change. If these tests are not successful the well abandonment plan will need to be modified to include remedial work on the well. Equipment that is not part of this plan will be required and timing for the remedial work will be determined by the equipment availability. The abandonment operations will be suspended and project will be delayed.

6. ENVIRONMENTAL PROTECTION PLAN

Well History

Aurora College drilled the Aurora Training Well G-04 to provide a training facility in the town site of Inuvik that would be used for training of Northwest Territories residents in safe oilfield practices. Stakeholders from Inuvik, PITS, CAPP, Aurora College and Akita Drilling were in support of the test well. Aurora College approached stakeholders in the oil and gas industry and government and received wholehearted support from all groups.

The well was drilled on a site located within the town boundaries of Inuvik. The 400 meter well was spudded on July 30, 2001 and was completed on August 4, 2001. The training well casing was cemented full length at total depth with good cement returns to surface. The casing was not perforated and the well was never completed. A wellhead was installed and the well was suspended at the completion of the training courses.

The drilling contractor was Akita Equitak based out of Inuvik. Akita Equitak was a joint venture between the Inuvialuit Regional Corporation and Akita Drilling Ltd. The drilling rig used was Akita Rig # 15, the rig was rated to drill to 2000 meters.

Following several discussions between OROGO and Aurora College, Aurora College committed to submitting an Operations Authorization application for the G-04 training well by December 7 2022. An application to Alter the Condition of a Well (ACW) to follow shortly thereafter. OROGO approved this commitment and OROGO gave direction for the abandonment of the well by March 31, 2023.

This Environmental Protection Plan (EPP) is provided in accordance with Aurora College's and Canadian Petroleum Engineering's Environmental Standards. The EPP has been submitted to comply with Section 9 of the Oil and Gas Drilling and Production Regulations. The OROGO guide for Environmental Protection Plan Guidelines and Interpretation Notes has been used as a guide to prepare this document.

Site Description

The Aurora College Training Well G-04 was drilled on a site located within the town boundaries of Inuvik on Lot # 1001, Quad 107 Bn LTO 1227. The lot was leased to Aurora College for a ten (10) year period by the Municipal Corporation of the town of Inuvik for the training facility.

The lot is a developed industrial lot and is adjacent to Navy Road, which is now the Inuvik – Tuktoyaktuk Highway. The lot itself is cleared, levelled and gravelled but does not have any utility services. No surface development has been done on the lot. All vegetation on the lot has been removed and regrowth is limited to some weed growth. Surface access to the lot is readily available from the road named above.

This lot is used periodically for short term surface storage. Long term storage does not occur on the site. The nearest residence to the well is about 100 meters away on an adjacent Lot. It is on higher ground, possibly 5 meters higher than the well site.



There are no streams or lakes near to this location. The nearest waterbody is a branch of the Mackenzie River which is approximately 350m west of the wellsite. Drainage from the site towards the west is controlled by the elevated Navy Road and ditches which will prevent any flow away from the surface location.

Access to the wellhead is controlled by the presence of fencing around the wellhead which is locked. Valves on the wellhead are also chained and locked to prevent their movement.



Objective of the Environmental Protection Plan

This Environmental Protection plan is developed to meet the requirements of Section 9 of the Oil and Gas Drilling and Production Regulations of the Government of the Northwest Territories.

This EPP is intended to outline the environmental management and protection practices currently followed by CPE. The EPP clarifies the actions and responsibilities of employees and contractors to meet the intent of CPE's Environmental Policy and manage the environmental requirements relating to this project.

This plan is to be reviewed prior to project start up.

1.1 Scope

This EPP applies to the Aurora College Training Well G-04 well and associated project activities including: construction, abandonment and post-abandonment (herein referred to as the Project).

Environmental Policy and Standards

CPE is committed to protecting the environment in the vicinity of all of its operations and, in this regard, will do all of the following:

- Communicate the importance of environmental protection to all workers,
- Plan its activities to minimize land disturbance at worksites,
- Minimize energy use through efficient practices,
- Practice water conservation through proper management,
- Minimize waste through reduction, reuse, and recycling whenever possible,
- Protect water bodies from pollution through the use of careful work practices, suitable containers and effective barriers,
- Reduce air pollution and noise emissions through the use of modern well maintained equipment,
- Substitute harmful materials with less harmful ones whenever possible,
- Return the worksite to its natural state at the completion of the project,
- Meet or exceed all provincial and federal environmental standards.

2 CPE's Approach to Environmental Management

2.1 Operations Integrity Management System

CPE's Operations Management System (OMS) was developed in 1998 and has been subsequently reviewed and modified periodically. The OMS ensures that processes and procedures necessary to comply with the laws, regulations, and internal requirements related to Safety, Security, Health, and Environment (SSHE).

OMS is used in day-to-day work to develop common expectations that every CPE individual must

fulfill to proactively manage risk. OMS is followed over the complete life cycle of a project. It provides a systematic, structured and disciplined approach to identify and manage risk, measure progress, and ensure management and personal accountability.

CPE manages projects utilizing a professional project management plan. This plan controls how projects are managed at Canadian Petroleum Engineering. The Professional Project Management Plan is required by APEGA as a requirement of maintaining our Permit to Practice.

2.2 Environmental Management System

The purpose of the Environmental Management System is to enable CPE and its clients to conduct its operations in a manner that is compatible with the balanced environmental and economic needs of the communities in which it operates.

The Environmental Management System framework requires operations and development projects to identify how operations interact with the environment ('environmental aspects') and how that interaction is managed through measurement, stewardship, risk assessment, and risk mitigation.

Expectations related to the Environmental Management System include:

- ✓ Environmental Aspects are addressed and controlled, consistent with policy, regulatory requirements, and business plans.
- ✓ Applicable laws, regulations, permits, and other governmental requirements are anticipated and met, and the resulting operating requirements are documented and communicated to those affected. Compliance is periodically verified.
- ✓ Environmental performance, including emissions, discharges, and wastes, is tracked and stewarded to meet performance goals.
- ✓ Proper long-term shutdown or abandonment of facilities is planned and managed.

Protecting the Environment at the Aurora College Site

CPE manages field operations projects with a telephone meeting between the onsite supervisor and CPE supervisors prior to beginning each work day. The operations plan is reviewed in detail. Safety and Environment risks of each operation will be discussed along with best methods to manage the operations in a safe and efficient manner. The onsite supervisor will be responsible for monitoring all environmental incidents on the site. All incidents involving safety or environmental are recorded in the daily report. CPE management will be notified should any environmental incidents occur at the work site.

The goal of CPE when managing field operations is to not have any safety or environmental incidents. If an incident occurs the onsite supervisor must report the details of the incident verbally to CPE management team as soon as possible. Environmental incidents must be contained and cleaned up using the resources available. Additional equipment or materials may resources may be required. CPE will assist the onsite supervisor in obtaining the required resources to complete the cleanup.

The onsite supervisor will have a supply of sorbent pads to deal with small fuel leaks from

vehicles. All vehicles working on the project will have sufficient fuel on board to complete their job function. No fuel will be stored on site.

Large spills such as a portable fuel tank failure (potentially up to 500L) from a construction or oilfield vehicle requires the spilled fuel to be contained as quickly as possible using a fuel spill kit. Once the spill is contained members of the public that could be affected by the spill must be notified. The spill must then be cleaned up. Vehicle fluid spills of >20L must be reported to the NWT 24 hour spill report line 1-867-920-8130 within 24 hrs of the incident. The onsite supervisor will be equipped with a spill kit to manage this type of environmental issue.

2.3 Environmental Management Plan (EMP)

Environmental Aspects Assessment and Review

The Environmental Management Plan (EMP) is designed to identify environmental aspects and develop appropriate mitigations. The primary environmental aspects are air, land, vegetation, water, and wildlife. These aspects are managed through specific programs as identified through the EMP process.

The EMP is used to outline the environmental aspects, propose protective measures and assess programs or plans currently in place.

The environmental advisor and operations personnel identify the environmental aspects and conclude on appropriate mitigations on an annual basis. Aspects relevant for this project are discussed in Section 3.

3 Environmental Aspects, Protection, Impact and Mitigation Measures

This section examines the physical-chemical environment that CPE interacts with, in terms of air, climate and atmosphere, land, groundwater, soil, surface water, vegetation, and wildlife.

The following sections identify the principal interactions that CPE has with its surrounding environment. For each environmental aspect that is listed, a brief description of what CPE does to protect the environment is provided, including examples of recent initiatives. A summary table is given at the end of each section outlining the aspect, potential impacts of the interaction, and the protection and mitigation measures that are used to manage that interaction.

3.1 Air, Climate and Atmosphere

Environmental aspects related to air, climate and atmosphere are outlined in Table A.

Table A: Air and Atmosphere – Environmental Aspects, Potential Impact, Protection and Mitigation.

Environment	Potential Impact	Protection and Mitigation
Air, Climate and Atmosphere Aspects: Combustion Products from Equipment Engine Operations (Diesel and Gasoline)	Greenhouse gas emissions	Optimize use of combustion equipment on-site.
Noise & Illumination Aspects: Noise and light from operations.	Wildlife and community disturbance	Ensure good functioning order and proper maintenance of any machine. Consider substitution of noisier machines with quieter when practical. Consider installation of vibration damping materials to isolate equipment vibration. When practical, limit traffic to hours where impact is minimal. look for excessive light from light sources to outside of the lease. Participate in public consultation prior to commencing work to identify sensitive areas and schedules.

The Aurora College site is planned to be abandoned in the summer of 2023. The abandonment will be completed using oilfield and construction equipment purpose fit vehicles. These vehicles will drive on location perform their work and leave the location. Each vehicle will be equipped with mufflers to minimize the noise produced during the work period. Work will be done during the extended daylight time in the summer and additional lighting will not be required..

3.2 Land and Vegetation

Environmental aspects relating to land are outlined in Table B.

Land and water management practices are stringently followed by CPE. CPE works to ensure protection of the land and water from design and construction to operation and ultimately, through to closure and site reclamation.

Traditional knowledge from elders and community members and other stakeholders is important. Traditional knowledge provides CPE with information about local fish and wildlife habitats and cultural sites on or near proposed operations.

Table B: Land Environmental Aspects, Protection and Mitigation.

Environmental Aspect	Potential Impact	Protection and Mitigation Measures
<p>Land Use, Footprint</p> <p>Aspects: Tree and bush clearing, construction, erosion control and reclamation.</p>	<p>Land, vegetation, and/or habitat disturbance</p>	<p>No clearing during bird nesting season to avoid incubating eggs and nesting birds. Clear only the area that is required and utilize flagging of site to ensure clearing of planned areas. Share road access where possible. Non salvageable material resulting from clearing will be stored for use as rollback and reclamation material.</p>
<p>Water Use</p> <p>Aspects: Water diversion and water use</p>	<p>Impacts to watercourses or fish/fish habitat</p>	<p>Follow all requirements of issued licences for water diversion (location, flowrates and volume). Follow DFO Code of Practice requirements for small intakes as approved during project review.</p>

3.2 Groundwater and Soil

Spill prevention, reduction and effective clean-up are a priority for CPE. Spills can result from uncontrolled releases of crude oil, produced water and chemicals. Uncontrolled releases have the potential to affect land, surface water, and groundwater. CPE's policy is to manage all operations to prevent incidents. Preventative measures include spill awareness through training, learning from past incidents, upgrading key equipment, preventative maintenance, and carrying out both announced and random inspections.

The Aurora College well abandonment will excavate a bell hole and remove the soil immediately around the wellhead to a depth of approximately 2m. After the well is abandoned the soil removed will be returned to fill in the area above the abandoned well and return the site to the original ground level.

Environmental aspects relating to groundwater and soil are outlined in Table C.

Table C: Groundwater and Soil – Environmental Aspects, Protection and Mitigation

Environmental Impact	Potential Impact	Protection and Mitigation Measures
Groundwater and Soil	Soil or groundwater impacts Wildlife and vegetation impacts	Equipment is inspected to ensure there are no signs of spills or leaks and maintained in good operating condition Have spill kit on site
Aspects Spills / leaks from equipment or operations		Place spill trays where appropriate operation is planned to take place during frozen conditions Respond immediately to any releases All spills, regardless of volume, will be documented and reported as appropriate

3.3 Wildlife

Minimal wildlife interaction or sightings are anticipated as the well location is within Inuvik’s developed industrial area. Nevertheless, any and all wildlife sightings or encounters will be documented.

Environmental aspects relating to wildlife are presented in Table D.

Table D: Wildlife - Environmental Aspects, Protection and Mitigation

Environmental Aspect	Potential Impact	Protection and Mitigation Measures
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<p>Wildlife</p> <p>Aspects: Potential for interaction with wildlife</p>	<p>Wildlife disturbance, interaction</p>	<p>No clearing on sites during bird nesting season. Wildlife awareness and work place housekeeping is covered in site-specific orientation package. Activities in the area are limited to ensure protection of wildlife. Keep distance from wildlife and adhere to speed limits. Identify potential wildlife interactions that may occur prior to starting job and document on Job Safety Analysis. Have appropriate mitigation measures in place prior to starting job. Report wildlife strikes and sightings to Environment and Regulatory Advisor. Follow speed limits when traveling on roads</p>
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4. Waste

CPE will manage any waste generated from this project in accordance with the Government of Northwest Territories “Guideline for Hazardous Waste Management” and other guidance documents as required. Environmental Aspects relating to waste are present in Table E. CPE will incorporate waste elimination and waste minimization measures into the project design.

CPE will ensure that waste is:

characterized and classified properly.

handled and stored in a manner that is protective of the environment, manifested (if required) accurately and completely.

managed at facilities having the capabilities and approvals to do so.

Table E: Waste - Environmental Aspects, Protection and Mitigation

Environmental Aspect	Potential Impact	Protection and Mitigation Measures
<p>Waste</p> <p>Aspects: Improper disposal or segregation causing contamination or higher disposal costs.</p>	<p>Improper storage causing release and environmental impacts.</p> <p>Incorrect segregation increases costs and reduces recycling.</p> <p>Sending waste to an unapproved waste receiver</p>	<p>Store waste on-site in appropriate containers</p> <p>Ensure segregation of wastes based on treatment / recycle / disposal method</p> <p>Use only approved waste disposal facilities and transfer stations</p> <p>Waste receiver use tracked and stewarded (manifests)</p>

Treatment, Handling and Disposal of Waste Materials

As mentioned previously, CPE will ensure that waste is:

- characterized and classified properly;
- handled and stored in a manner that is protective of the environment;
- manifested (if required) accurately and completely; and
- managed at facilities having the capabilities and approvals to do so.

CPE will dispose of waste only at approved waste facilities.

If any waste generated as a part of this program cannot be disposed of locally, this waste will be transported to Alberta or British Columbia for disposal at an approved location. The likely disposal site will be Secure Energy’s disposal facility in Ft St John, BC.

Some industrial waste is expected as a part of the well abandonment program. The following table summarizes the anticipated waste for the program as well as the estimated volumes (if available) and planned handling method.

Waste	Waste Stream	Estimated Volume (m3)	Planned Handling Method
Casing	Cut off consisting of: 406 mm conductor, 244.5 mm casing and 177.8 mm casing	10	Load on trailer, disposal off site
Wellhead	Used wellhead	2	Load on trailer, disposal off site
Water Base Fluid	Wellbore fluid and pressure test fluid	3	Store in 1 m3 totes, disposal off site
Garbage or Recyclables	Garbage, waste and recyclables	2	Collection in wildlife-proof containers as appropriate; off-site disposal/recycling
Other Waste	Empty containers/drums, rags, oiled waste, spill response materials (if used)	2	Collection in approved containers (segregate various wastes); off-site recycling/disposal

5. Water Use and Management

CPE will not apply to the Mackenzie Valley Water Board for a Type B water license for this project. At this time, no water will be required for the abandonment project planned. It is possible that small amounts of water may be required for pressure testing however the water can be sourced from the domestic water supply in the town of Inuvik.

The following information on water use is provided to demonstrate that CPE and Aurora College follow best practices for water use when operating in northern areas.

5.1 Watercourse Crossings and Water Diversion

CPE ensures that measures are taken to avoid causing harm to fish and fish habitat as required by diversion including: Fisheries and Oceans Canada (DFO). CPE maintains compliance under the *Fisheries Act* and implements responsible techniques when crossing streams and diverting water. CPE understands the two DFO codes of practice which are applicable to water

- Interim code of practice: end-of-pipe fish protection screens for small water intakes in freshwater;

- Interim code of practice: temporary stream crossings.

When undertaking a project, CPE identifies all watercourses and waterbodies in the area of the project work and consults the DFO Aquatic Species at Risk map identify what the fish species may be and if they may be a species of special concern.

5.2 Water Management

CPE recognizes the cumulative effects that water use can have and as a part of any project work. Steps are taken at the program level to manage and track water usage. All actual usage and updates are submitted and maintained as per any issued approvals. CPE tracks both industrial and domestic water use in its programs. A table such as the following is used to identify what water quantities may be required in any project.

Activity Requiring Water	Estimated Water Use (m3)
<i>Industrial Water Use</i>	
Ice bridge	x
Ice road	x
Location	x
Drilling	x
Total Industrial Water	x
<i>Potable Water Use Estimate</i>	
Wellsite trailers	x
Camp	x
Rig boiler	x
Total Potable Water	x

Discharge Streams and Limits

Discharge streams for this project include:

- Waste (refer to Section 6 for estimated streams and quantities)
- Emissions:
 - Gas/vapor should not occur during well abandonment activities.
 - Vehicles will also use gasoline and/or diesel. Examples of vehicle usage include: e-logging trucks (water, waste), pressure testing truck, dozer and excavator construction vehicles, and welding and miscellaneous vehicles.
 - Flaring operations will not occur during the well abandonment operation

Environmental Studies

No environmental studies were undertaken to review environmental risks associated with the proposed training well abandonment project. The project is defined as a low risk abandonment of a non oil and gas well. Hydrocarbons were not encountered during drilling operations. The well was never perforated after the production casing was cemented. A wellhead was installed and the well was suspended. The well is located on a vacant lot used to store material on a short term basis

Structures and Facilities on the Site.

There are no structures or facilities on site associated with the Aurora College training well site. Valves on the wellhead are chained and locked to prevent movement. The well is completely enclosed by a fence with a locked entrance.

The site area is used as a short term storage site. Currently there is no materials stored on the site.

Chemical Substances

It should be noted that chemicals will not be required for the well abandonment project. The well has been filled with inhibited water. Fluids removed from the well will be pumped into a 1m³ tote and taken to an approved disposal site.

6 Incident Management

CPE maintains an Emergency Response Plan (ERP) that establishes a structured and systematic process for responding to events or situations that pose, or could pose, a threat to the people, environment, or assets. The ERP provides guidelines and information to assist CPE in effectively responding to an emergency. The ERP is based on government laws and regulations and the Incident Command System (ICS). If required, support from other service providers and agencies will support the tactical response efforts in a tiered approach.

6.1 First Response

Once an incident occurs the severity of the situation will be immediately determined by operations. During the initial response, operations will attempt to prevent further escalation of the incident or situation.

6.1.1-Tiered Response to Incidents

Local incident management at the field level follows a tiered approach. A tiered approach provides the seamless escalation of response efforts. When an incident occurs that warrants a tactical response, incident management is initiated locally in the field by the on-site Emergency Response Team (ERT). The ERT may activate an Incident Management Team (IMT), typically from other CPE personnel or the client, to support the ERT when necessary. The IMT may activate the Emergency Support Group (ESG) to manage the strategic issues and/or support subject-matter expertise.

6.2 Notification and Reporting

Initial incident notification must be timely and include internal and (when appropriate or necessary) external notifications and communications. Incident notification requirements are based on an incident's severity. The ERP is considered an aid document for the incident notification process. CPE also refers to any reporting matrix provided by the regulator in the event that one exists.

7 Organizational Structure, Awareness and Training

All work will be the responsibility of CPE to manage and execute. Construction and service suppliers that will be needed to execute the program will be under contract with CPE and overseen by a CPE representative.

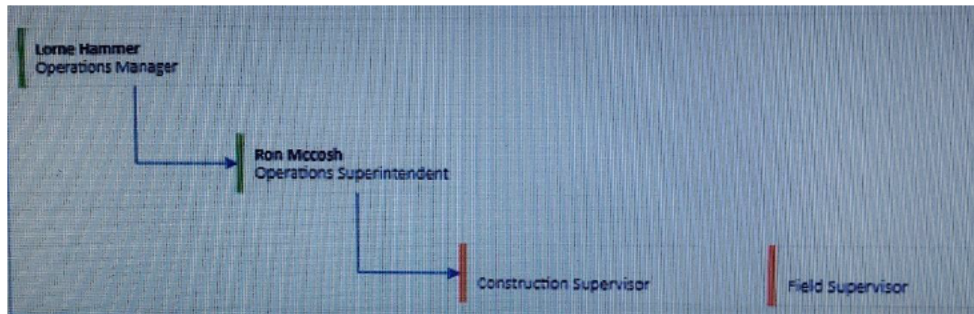
The wellhead excavation and abandonment work will be managed by a field supervisor who is directly accountable to the CPE Operations Superintendent who in turn reports to the Operations Manager.

The responsibility for meeting the requirements of the environmental protection plan rest with the Operations Superintendent.

Orientation for all on-site staff will also be completed to ensure requirements are understood.

CPE will manage this project according to our Environmental Policy and Standards.

All environmental incidents will be reported, investigated, details recorded and remediated as soon as it is safe to do so.



Position	Name	Telephone	Number	Email
Project Manager	Lorne Hammer	Office	403-263-0752	lhammer@cpe.ab.ca
		Cellular		
Operations Superintendent	Ron McCosh	Office	403-263-0752	rmccosh@cpe.ab.ca
		Cellular	██████████	
Operations Supervisor	TBD	Cellular		
Aurora College	Jonathon Michel	Office	867-777-7878	Jmichel@auroracollege.nt.ca

7 Information of proposed flaring and venting or burning of oil or gas

There is very little likelihood of any flaring or burning of gas or oil will be required during the routine surface abandonment of the Aurora College Training Well G-04. All indications during drilling were that no hydrocarbons of any type were present in the well.

The well was spudded in Pleistocene mudstone and shaley sediments. Lower Cretaceous age sediments were encountered at 180 m MD. The Lower Cretaceous is primarily shale with minor sandstone sediments. At 340 meters, Paleozoic shales were found with some sandstone and carbonate inclusions.

The Akita Rig 15 Pason gas detection system was used on this well to monitor background and drilled gas concentrations. Background gas varied from 0 to 1.0% over the drilling of the well.

No significant gas shows were encountered during the drilling of the well to TD of 401 meters KB. Neither trip gas nor connection gas was recorded while drilling.

8. PROOF OF INSURANCE

Aurora College has requested Proof of Insurance for inclusion in this OA application. It will be immediately forwarded to OROGO when it is received from the Insurers.

9. PRELIMINARY SCREENING INFORMATION

The Gwitch'in Land and Water Board performed a preliminary screening report concerning the Aurora College Training Well G-04 following the requirements Sec 124.1 of The Mackenzie Valley Resource Management Act (MVRMA) and tabled their response on or about June 15, 2001.

The Gwitch'in Land and Water Board stated that:

" In the Boards' opinion Aurora College (Aurora Campus) application for a water licence will not adversely harm the environment nor does it cause significant public concern. The amount of water used and the amount of sewage/gray water deposited is considered insignificant by the Board and does not require a licence. All known and potential impacts regarding the drill waste disposal sump can be mitigated through licence terms/conditions and compliance inspections. Set-up of a "Post-Closure Environmental Monitoring Program" on the sump will ensure the waste does not migrate off site.

10 ENGAGEMENT RECORD AND ENGAGEMENT PLAN OR SIMILAR INFORMATION

Aurora College (Jonathon Michel) contacted the Town of Inuvik and the Gwitch'in Tribal Council to request time for consultations at the town council and Tribal council meetings to present the plans for the abandonment of the Aurora College G-04 Training Well.

Aurora College subsequently had a telephone conversation with the Town of Inuvik regarding the drilling well remediation for Aurora Training Well G-04 in February 2023. The town official responded that all they require is an email correspondence confirming that the remediation is complete when that is done. They did not have questions or input beyond that.

The Town indicated that a consultation meeting regarding the Training Well G-04 was not required.

Aurora College (J Michel) spoke with the GTC (Mr. Darren Campbell) on March 14, 2023. Mr. Campbell indicated that as the well is located on municipal lands, the GTC does not have issue with the well abandonment operation and would look to engage a process only as adjacent land stakeholders through the Gwitch'in Land and Water Board for the closer of the water license if that is required. The GTC expressed appreciation for the call to them about this and stated that the GTC did not have questions or input for Aurora College at this time. Mr. Campbell indicated that further consultation is not required, but that he would appreciate notice or a telephone conversation on upcoming operations just to keep him aware of the progress with our program.

There is one landowner located adjacent to the Training Well G-04 well location. Aurora College will meet with him within the next two weeks to apprise him of the planned well abandonment. His comments and concerns and Aurora College's response will be shared with OROGO immediately following that meeting. Further followup meetings will be held with this individual as the project progresses so that he is aware of the planned timeline for the project and its possible scope and duration.

Aurora College appreciates any guidance that OROGO can provide on other consultations that would be valuable in support of its application.

11 AUDITED FINANCIAL STATEMENTS OF THE MOST RECENT
FISCAL YEAR END

Aurora College's Audited Financial Statement for the most recent Fiscal Year End can be found at
https://www.2020-2021_AC-AnnualReport-FINAL_Feb_2122.pdf

12 QUARTERLY FINANCIAL STATEMENTS FOR THE MOST
RECENT QUARTER

Aurora College does not prepare quarterly Financial Statements for distribution.

APPENDICES



Canadian Petroleum Engineering Inc. (CPE)

HSE Manual

Draft revisions

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CPE SAFETY POLICY

CPE is committed to promoting safety by selecting quality contractors, with proper training and equipment for the tasks to be undertaken, and always finding new ways to improve.

CPE management will ensure that all risks, which have been identified by on-site personnel, or during the course of any inspections, will be promptly and appropriately addressed.

All personnel at the worksite, at all levels, are responsible for safety. The health and safety of all workers and members of the public as well as environmental quality must be protected at all times.

CPE recognizes the three basic rights of workers outlined in the Canada Labour Code:

- The *Right to Know* about known or foreseeable workplace hazards through information, training and proper supervision.
- The *Right to Participate* in implementing health and safety policy through representation on a health and safety committee.
- The *Right to Refuse Dangerous Work* with reasonable cause and proper procedure.

CPE will operate in compliance with all local laws and regulations. These include:

- Alberta Occupational Health & Safety Regulations,
- Alberta WCB Standards,
- Canada Labour Code Part II, (RSC 1985 c. L-2)
- Canada Occupational Safety and Health Regulations (SOR/86-304)

All materials, equipment, parts, machinery, facilities, and processes used at the worksite, will meet or exceed government regulations and any other engineering standards prepared by the following institutes:

- Canadian Standards Association (CSA)
- American National Standards Institute (ANSI)
- American Petroleum Institute (API)
- Industry Minimum Standards (IMS)
- Canadian Association of Drilling Contractors (CAODC)

- Industry Recommended Practices (IRP)
- National Institute for Occupational Safety and Health (NIOSH)

Copies of all applicable regulations and codes will be available at the worksite at all times.

CONTRACTOR SAFETY POLICY

CPE has responsibility for coordination of the industrial health and safety activities of the multiple contractors. In compliance with occupational health and safety regulations, CPE will insist on safe work performance throughout its operations, including all of the tasks carried out by contractors. CPE will ensure that:

- Prior to issuing a contract for services, CPE will review each prospective contractor's HSE policies to determine whether they meet the standards outlined in this document. The Contractor Evaluation Checklist in the Appendix of this document will be used. If the contractor's HSE work practices, equipment standards, and/or training requirements are found to be deficient, CPE will either select an alternate contractor, or will assume responsibility for ensuring that those work practices, equipment standards and training requirements are suitably upgraded before the contractor is allowed to begin work.
- Where two or more contractors operate at the same site, each contractor will be responsible for the health and safety of their respective workers, and their worker's compliance with all rules and regulations. CPE will verify that all contractors' workers have received the appropriate training and certification required for their duties.
- All contractors will be included in all relevant safety meetings. Contractors must comply with all government regulations and CPE safety standards and must ensure that their employees, and their sub-contractors, are competent and held to the same standards.
- CPE bid documents contain a section on safety so that CPE can give preference to selecting contractors with superior safety initiatives and an established history of safety.
- CPE will provide on the job leadership in safe work practices to all contractors and will ensure that all contractors are made aware of all potential hazards and safety expectations. CPE will ensure adequate safety communication with the contractors and will provide each of them with a copy of CPE's safety standards.
- CPE will regularly monitor contractor work practices in order to ensure that contractors continue to implement sound safety practices required by their own safety programs, CPE standards, and OHS regulations.
- CPE will follow-up on any noted contractor deficiencies and these will be included in the evaluation of the contractor's overall performance.

ENVIRONMENTAL POLICY AND STANDARDS

CPE is committed to protecting the environment in the vicinity of all of its operations and, in this regard, will do all of the following:

- Communicate the importance of environmental protection to all workers,
- Plan its activities to minimize land disturbance at worksites,
- Minimize energy use through efficient practices,
- Practice water conservation through proper management,
- Minimize waste through reduction, reuse, and recycling whenever possible,
- Protect water bodies from pollution through the use of careful work practices, suitable containers and effective barriers,
- Reduce air pollution and noise emissions through the use of modern well maintained equipment,
- Substitute harmful materials with less harmful ones whenever possible,
- Return the worksite to its natural state at the completion of the project,
- Meet or exceed all provincial and federal environmental standards.

CPE follows environmental protection procedures developed and/or sanctioned by the Canadian Association of Petroleum Producers. These can be accessed through:

<http://www.capp.ca/library/publications/environmentStewardship/Pages/default.aspx>

EMPLOYER RESPONSIBILITIES

As Prime Contractor at the worksite, CPE has the obligation to:

- Ensure the health and safety of all personnel at the worksite,
- Ensure that all workers are aware of their rights and responsibilities under the OHS Act.

As Prime Contractor, CPE recognizes its responsibility to do all of the following:

- Understand all applicable health and safety requirements identified in applicable legislation, as well as its Client's HSE standards.
- Ensure that all workers on site are appropriately qualified and trained.
- Participate in key Safety Meetings.
- Ensure that all applicable safety requirements are being met.
- Ensure all incidents and including "close calls", are reported within 24 hours to the Client's Project Manager.
- Review all incidents and "close calls" and, develop appropriate corrective action plans.
- Implement Project Safety in accordance with:
 - The CPE policies described in this document,
 - All applicable legislation,
 - The Client's HSE standards.
- Continually monitor, trend, and analyze Project Safety Performance.
- Conduct formal site health and safety inspections and document the results.
- Promptly implement effective corrective measures whenever deficiencies have been identified.
- Lead and/or assist in incident prevention, investigations, analyses, and preparations of reports and summaries.
- Implement any newly issued Client or regulatory Safety Bulletins related to ongoing activities.
- Remain constantly vigilant for potential hazards through the Hazard Management Process.
- Maintain files of all applicable safety documentations, including incident reports, inspection reports, hazard identifications, remedial actions, etc.
- Conduct and document all Safety Meetings.
- Prepare a site-specific Emergency Response Plan and ensure that all personnel on site are familiar with it, and are aware of their responsibilities in carrying it out. The Emergency Response Plan will include provision for the evacuation of injured or ill workers to the nearest health care facility.

- Supply and maintain adequate First Aid equipment and ensure qualified First Aid coverage for all work crews.
- Ensure that adequate and redundant means of emergency communications are available to all personnel at all times.
- Implement the Emergency Response Plan if and when the need arises.
- Lead Safety Awareness by example.

HSE RESPONSIBILITIES OF KEY PERSONNEL

CPE Project Manager Responsibilities

As the senior CPE representative for the project, the Project Manager has the following HSE responsibilities:

- Develop and implement a comprehensive Safety Program,
- At the beginning of the project, identify all hazards that are specific to the project. and ensure that these are considered during all project development decisions,
- Identify the basic environmental requirements with respect to community noise, discharges to air or water, and solid waste disposal,
- Communicate the corporate safety and environmental management philosophy, and specific targets, to the entire project team,
- Communicate the project objectives to the entire project team,
- Conduct regular work site visits,
- Conduct safety review of the completed facilities,
- Liaise with sub-contractors to ensure that they have appropriate safety programs in effect, and that all safety inspections are adequate,
- Ensure that prompt and appropriate medical attention is accessible at all times,
- Prepare a site specific emergency response plan.

Person In Charge (PIC) Responsibilities

As the senior CPE Inc. representative at the worksite, the Person In Charge (PIC) has the responsibility to:

- Keep an up to date record of all personnel on location,
- Participate in, and ensure the effectiveness of, all safety related meetings,
- Communicate safety and environmental management philosophy and specific targets to all onsite personnel,
- Identify any unusual exposures for physical loss or damage to property and personnel during drilling operations,
- Define and implement procedures for controlling and minimizing hazard losses during drilling,
- Conduct regular safety performance reviews and follow-up with necessary remedial action,
- Implement the HSE Plan outlined in this document in conjunction with the Client's HSE Plan,
- Implement the Emergency Response Plan.

CPE HSE Advisor Responsibilities

As the prime safety specialist on the project, the CPE HSE advisor will assist the PIC in all matters of safety. Specifically, he will:

- Review all contractor's safety plans,
- Liaise with contractors to ensure that appropriate safety measures are in effect and that safety inspections are adequate,
- Establish operational requirements with respect to community noise management, discharges to air or water and solid waste disposal,
- Communicate safety and environmental management philosophy and specific targets to onsite personnel,
- Conduct regular safety performance reviews and follow-up with necessary remedial actions,
- Ensure that all safety equipment is appropriate and well maintained,
- Develop and administer work permit procedures under the direction of the PIC,
- Conduct regular worksite inspections as required by the PIC.

Worker Responsibilities

Employees are responsible for knowing and following all safety procedures and reporting any existing or potential dangers or any problems associated with following established safety procedures.

Every worker is expected to participate actively in all health and safety matters and to:

- Check in and out with the PIC upon entering and leaving the location.
- Understand and follow all health and safety information provided in the orientation, safety meetings, and printed HSE materials provided,
- Refuse to carry out any work if he/she believes that doing so may be dangerous to himself/herself or to other workers,
- Take all reasonable care to protect the health and safety of himself/herself, other workers, the environment, and all equipment and facilities,
- Co-operate with his/her peers, supervisors and with CPE management for the purpose of protecting himself/herself, other workers, the environment, and company property,
- Take prompt action on site to control any existing safety risks that have been noticed,

- Point out, to the supervisor, any hazards to safety at the job site that have been noticed,
- ☐ Immediately report all injuries, accidents, “close calls”, and environmental damage to a supervisor,
- ☐ Recommend all “opportunities for improvement” to a supervisor.

VESSEL INSPECTION AND CERTIFICATION

CPE will ensure that a comprehensive inspection of the vessel is completed by a recognized certification agency, and that the vessel meets all requirements for habitation before the vessel is allowed to become continuously occupied. CPE will obtain formal assurance from the certifying agency that the vessel is in full compliance with Life at Sea (SOLAS) Convention and Life Saving Appliance (LSA) Code in terms of:

- Lifebuoys and life jackets, including their lights and signals,
- Immersion suits, anti exposure suits and thermal protective aids,
- Lifeboats including launching systems, propulsion systems, fittings, markings, and associated equipment,
- Life rafts including launching systems, fittings, markings, and associated equipment,
- Rescue boats,
- All emergency signalling systems,
- Embarkation ladders,
- Marine evacuation systems,
- Line throwing appliances,
- General emergency alarm system,
- Public address system, and
- IMO safety symbols and signage.

HAZARD IDENTIFICATION AND ASSESSMENT

Overview

A Hazard is any situation with the potential to do injury or damage to people, property, or the environment.

A Close Call is an undesired event occurs, with no visible injury or damage, but which could have resulted in a loss had the circumstances been slightly different.

An Opportunity for Improvement refers to any change that can be implemented proactively, which reduces the likelihood of a hazardous situation developing.

Recognizing potential hazards and taking steps to control them is a major part of CPE's Safety Program. A formal hazard identification system has been developed, and implemented, and is completed through the following methods:

- Safety Meetings,
- Pre job Assessments,
- Hazard Identification & Reporting,
- Safety Inspections and Audits.

Project Kick-Off Safety Meeting

The PIC will hold a Project Kick-Off Safety Meeting with all personnel prior to the start of operations. The meeting will introduce all workers to:

- CPE safety policy and objectives,
- Worksite rules and discipline,
- Specific worksite hazards,
- Safe working procedures,
- Worker participation in safety initiatives,
- Emergency response plans, including:
 - Emergency alarms,
 - Assigned emergency duties, muster stations,
 - Evacuation procedures, etc.

Weekly Safety Meetings

The PIC will conduct a Weekly Safety Meeting within two days of the rig being occupied, and then after the completion of each Weekly Safety Inspection. The meeting agenda will include the following items:

- A review of the any safety issues arising over the previous week, including the results of any Job Safety Analyses,
- An overview of the results of the completed Safety Inspection,
- Discussions of the hazard identification process and workers' responsibility to participate,
- An opportunity to discuss any safety issues raised by workers,
- Explanation of the actions that are being taken to reduce or eliminate any identified risks,

- Identification of those personnel who will be responsible for ensuring that the risk reduction measures are implemented,
- Agreement on how the completion of the risk reduction measures will be confirmed.

All supervisory personnel will be required to attend the Weekly Safety Meeting and will be encouraged to actively participate in all agenda items. Minutes of the meeting will be recorded and kept in the PIC's files for review by CPE management and by the Client's HSE personnel.

Daily Safety Meetings

The CPE PIC will conduct a daily Project Safety Meeting with all supervisory personnel coming on shift. The meeting agenda will include:

- Updates of ongoing safety issues, including Emergency Response preparedness,
- An overview of the next tasks to be carried out,
- An opportunity for all workers to raise and discuss any safety issues,
- Identification of any risks that have been identified through Job Safety Analyses.

Pre-Job Safety Meetings

At the completion of the Daily Safety Meeting, and prior to the commencement of any new tasks, Pre-Job Safety Meetings will be held among the various work teams. These meetings will each include a Job Safety Analysis (JSA), applicable to each task, will be reviewed and signed off by all involved workers. Any involved worker arriving at the work site after a Pre-Job Safety Meeting has been held, will review the meeting minutes and sign-off on them.

Tailgate Safety Meetings

These meetings are informal reviews of safety procedures and will be held, as required, immediately prior to the commencement of hazardous tasks. Their purpose is to confirm the safe work procedures discussed in earlier Pre-Job Safety meetings and to address any outstanding issues with the work plan.

Job Safety Analyses (JSA's)

The Job Safety Analysis (JSA) is a key step of proactive risk management and is held prior to the commencement of every potentially hazardous work assignment. The analysis is conducted in a meeting of

all persons who will be involved in a particular task, including the task supervisor. The work team is free to call on assistance and/or guidance from additional qualified personnel, including the HSE Advisor.

The objective of the Job Safety Analysis is to enable all involved workers to:

- Access and review any safety information associated with specific tasks,
- Identify and report any hazards associated with specific tasks,
- Estimate the likelihood and consequence of each hazard,
- Identify and recommend the options preventing or mitigating potential incidents,
- Implement recommendations for controlling and eliminating the hazards identified,
- Plan an appropriate response in the event of an emergency.

Prior to the commencement of any task, all workers assigned to the task will participate in a Job Safety Analysis, under the direction of their supervisor and/or HSE Advisor, that incorporates CPE's Job Safety Analysis (JSA) Procedures.

This is a process that ranks all identified hazards according to their respective probabilities of occurrence as well as the severity of their consequences.

CPE's criteria for severity of consequence are defined as follows:

- Catastrophic hazards could result in: death or serious injury to personnel, extensive or irreversible environmental damage, or a financial liability in excess of \$1,000,000.
- Critical hazards could result in: non-life threatening injury to personnel that may result in hospitalization, significant but reversible environmental damage, or a financial liability between \$100,000 and \$1,000,000.
- Marginal hazards could result in: injury to personnel that would not require hospitalization, readily reversible environmental damage, or financial liability between \$10,000 and \$100,000.
- Negligible hazards could not cause a lost time injury to personnel, but could cause minor and immediately reversible environmental damage, or financial liability of less than \$10,000.

CPE's criteria for probability of occurrence are defined as follows:

- Frequent hazards will occur immediately or within a very short period of exposure (80 to 100% probability of occurrence.) Example: Flying particles produced by a grinder.

- Probable hazards are likely to occur within a short interval (10 to 80% probability of occurrence.)
Example: A short circuit caused by weak insulation on an electrical power cable.
- Possible hazards are not likely but have a significant probability. (1 to 10% chance of occurrence.)
Example: Breakage of a tool or piece of equipment.
- Remote hazards are highly unlikely. Example: Leakage from a new sealed battery.

CPE’s JSA procedures make use of the Probability of Occurrence and the Severity of Consequence of each identified hazard in order to derive a Risk Rank from 1 to 4 according to the following table.

Risk Ranking Matrix					
Probability of Occurrence	Frequent	3	2	1	1
	Probable	3	2	2	1
	Possible	4	3	2	2
	Remote	4	4	3	3
Use to evaluate all hazards for the purposes of hazard management		Negligible	Marginal	Critical	Catastrophic
		Severity of Consequence			

Risk Mitigation shall be applied to all identified hazards according to their Risk Ranking as follows:

- Risk Rank 1 hazards are completely unacceptable and will be reduced to a level of 3 or 4 before the work is allowed to proceed.
- Risk Rank 2 hazards are undesirable and will be reduced to a level of 3 or 4 before the work is allowed to proceed.
- Risk Rank 3 hazards are acceptable provided that specific risk management procedures are in place to reduce the risks to the lowest practicable level.
- Risk Rank 4 hazards are acceptable as is with little or no risk management required. In the event that a number of hazards have been identified, those which have the highest probability of occurrence, and most severe consequences, will be addressed first.

The three stages at which the identified hazards can be managed are as follows:

- Pre-contact – Risk is reduced or eliminated before the occurrence of an incident.
- Contact – The amount of loss during an incident is minimized.
- Post-Contact – Damage resulting from an incident is prevented from escalating further through isolation.

The JSA process will begin with documenting each identified hazard, along with its probability of occurrence, severity of consequence and risk rank according to the Risk Ranking Matrix above. If the Risk Rank is not acceptable, appropriate hazard management shall be then be applied in order to reduce the Risk Rank. The hazard shall then be re-evaluated in order to determine a new Risk Rank.

There are three main methods for managing hazards. All three are routinely practiced, but should normally be employed in the following order of decreasing preference:

- Design Based – Modify, replace, or add appropriate barriers (safeguards) around the hazardous item in order to eliminate or minimize the risk. Any modifications and/or safeguards must meet or exceed CSA standards.
- Procedure Based – Modify or replace existing procedures in order to eliminate or minimize the risk of exposure to the hazards that could not be eliminated by re-design.
- PPE Based – Add to, or improve, the personal protective equipment (PPE) worn by workers in order to isolate them from hazards that cannot be practically eliminated by the other means listed above.

The hazard management process shall continue for each identified hazard until its Risk Rank has been reduced to an acceptable level. The work supervisor shall use the JSA form found in the Appendix of this document under the heading Checklists and Forms for documenting each JSA process.

Inspections

CPE recognizes that both formal and informal work site inspections, and audits, are an important objective method for recognizing potential hazards. CPE also recognizes that inspections and audits require the full participation of all workers, supervisors and management, who must take responsibility for identifying and attempting to control the hazards with their work areas.

Safety Inspections will be made at appropriate intervals in order to prevent the development of unsafe working conditions and unsafe work procedures. They will be carried out in accordance with the standards

set out by CAODC and the Alberta Occupational Health and Safety Act. The inspections will be fully documented on the inspection forms and checklists found in this document.

Contractor work site inspections are done in cooperation with the contractor and the client, and according to the standards set out by Canadian Petroleum Engineering Inc., government, and industry associations.

Formal inspections and audits will also be carried out internally by CPE.

In addition, external inspectors, such as insurance underwriter representatives or Workplace Health & Safety inspectors, may carry out formal inspections at varying frequencies, depending upon perceived risks and location. A copy of every completed external inspection and audit report form must be forwarded promptly to CPE management.

Supervisors have the responsibility for ensuring that inspections of equipment are conducted on a regular basis, as outlined in the associated guidelines (i.e. E.U.B. Guide 37). Inspections will include work site conditions, employee actions, and job procedures, in order to identify potential hazards and substandard conditions and practices. These inspections must be documented and include, but are not limited to the following:

- A Kick-Off Inspection will be carried out prior to the commencement of the first work on the project. The PIC will carry out a formal inspection of work site conditions in order to identify any potential hazards. A list of deficiencies will be prepared so that they can be addressed. No work will begin until the PIC has determined that it is safe to do so.
- Weekly Inspections of the worksite, worker practices, and job procedures will be carried out by the CPE HSE Advisor in order to identify potential hazards caused either by substandard conditions or unsafe practices. The results of the inspection will be reported on the Worksite Safety Plan Checklist found in the appendices of this document.
- Daily Informal Inspections will be carried out by the PIC. The PIC will document the time of the inspection, and the areas inspected, and will make note of any safety issues that were observed. He will document all actions that have been initiated to address any safety issues identified.

Hazard Identification & Reporting

Every worker has the opportunity and responsibility to promptly report any hazard that may have been overlooked by normal hazard identification procedures. All workers are encouraged to be vigilant for any safety issues and to bring them promptly to the attention of their immediate supervisor, or of the PIC.

All reported on-site hazards are recorded by the PIC and the information will include the date of the hazard identification, the individual reporting the hazard, a description of the type of hazard, a description of

possible consequences, action to be taken to control the hazard and their expected date of completion, as well as the recommended follow up, including any subsequent inspections. This information will be used by the PIC to ensure that:

- All critical information on hazards is documented so that the appropriate follow-up steps can be taken.
- The effectiveness of the follow-up steps can be verified in order to ensure that the hazard has been eliminated.

GENERAL SAFETY PRECAUTIONS

Hazard Elimination and Control

The PIC will ensure that all hazards are identified and controlled prior to the commencement of regular work and at practicable intervals thereafter as described in the OHS Code Part 2, Section 7 (Hazard Assessment). Hazards may be identified through inspections, audits, reports from workers, as well as by JSA's.

The PIC will ensure that hazards have been eliminated and/or reduced to acceptable levels prior to the commencement of work at the worksite. The hazard management process will continue throughout the period of the work in order to prevent the development of unsafe and unhealthy working conditions. The PIC will take particular care to identify and control new hazards that can result from new or changing work processes, or from significant changes or alterations to the work site.

All hazard assessments and the methods employed for controlling the identified hazards will be documented and dated using the Hazard Identification form found in the Appendix of this document.

If emergency action is required to eliminate or control an identified hazard, the PIC will:

- Ensure that only competent workers are assigned to correct the condition,
- Minimize worker exposure to the hazard while it is being corrected.

Training

CPE requires that all PICs meet the training and experience levels recommended by the Petroleum Services Association of Canada (PSAC).

In addition, CPE recommends the following optional training for supervisory personnel:

- Fire Fighting,
- Defensive Driving,
- Pressure Awareness (PITS).

All workers will have completed training and must hold valid certificates for:

- HUET (with Shark APP re-breather)
- Standard First Aid & CPR,
- WHIMS,

- Fall Protection.

The PIC will review the types and dates of all worker training in order to ensure that their training has been provided by approved agencies, and that all workers are appropriately qualified for their tasks. The PIC will maintain an up to date file of all worker training records.

In addition to the above, all personnel on site must have participated in a site orientation, and are expected to have reviewed the Worker Safety Handbook, and to be familiar with it.

All workers who may be expected to perform specialized tasks must have valid certification which qualifies them for those tasks.

There will be no exceptions to the training policy without the specific, written, approval of the Drilling Manager or the Completions Manager.

Orientations

Signs, posted at the entry to the worksite, will direct all new personnel to the PIC where they will be signed in. The PIC will ensure that all new personnel are promptly given a worksite orientation that will include:

- An overview of the site layout,
- Introduction to key personnel,
- Locations of hazardous areas,
- PPE requirements,
- Safety Standards,
- Emergency Response overview, including first aid services, fire protection equipment, emergency escape routes and muster areas.

Limiting Site Access

No visitors will be allowed on the worksite without authorization.

Upon arrival at the worksite, all visitors must immediately receive a Safety Orientation.

Visitors must not move about the site without appropriate PPE, and an escort assigned by the PIC.

Working Alone

No worker at the worksite will be allowed to be Working Alone as described in Part 28 of the Alberta OHS code.

CPE Drug and Alcohol Policy

All personnel at CPE worksites are bound by CPE's policy of zero tolerance for drug and alcohol while on the job. Every employee and contractor shall abstain from alcohol for at least 10 hours prior to going on duty.

If any worker has reasonable cause to believe that any co-worker is not in compliance with this policy, he/she shall notify a supervisor and/or the PIC.

The PIC shall have the authority to prevent any worker who is suspected of not being in compliance with CPE's drug and alcohol policy, from mobilizing to the worksite, or to remove that worker from the worksite, until drug and/or alcohol testing can be completed.

If the PIC confirms that any employee or contractor is not in compliance with CPE's policy for zero tolerance of drugs and alcohol while on the job, then the PIC must report that occurrence to CPE management.

All CPE employees and contractors shall be advised of CPE's right to conduct post-incident testing for drug and alcohol should this be deemed necessary.

Lighting

The CPE PIC will ensure that:

- The worksite will be illuminated sufficiently to enable all work to be done safely,
- Light sources above working or walking surfaces will be protected against damage,
- Emergency lighting will be available in the event of failure of the normal lighting system and that emergency lighting will be sufficient to enable workers to:
 - Leave the work site safely,
 - Implement any emergency procedures required,
 - Restore normal lighting.

Workplace Housekeeping

The PIC will ensure that the following conditions prevail throughout the worksite in order to enhance safety:

- All hazardous sites will be clearly marked and access to hazardous sites will be restricted to those personnel who have the appropriate training for the hazard, and who have good reason to be present there.
- Floors, stairs and walkways will be kept clean and free of mud, oil, ice or other slippery substances.
- Doors and walkways will be kept clear and unobstructed.
- No person will be permitted in areas where reduced visibility, as a result of steam, smoke, or other airborne substances, can result in injury to the worker. All required precautions will be taken when correcting that situation.
- Adequate lighting will be provided, and maintained, in all work areas.
- All projecting nails, screws, and other sharp points will be removed from scrap or other exposed materials.
- Hand tools, power cables and portable equipment will be removed from the rig floor, stairs and parts of the derrick when not in use. All tools and equipment will be properly stored in designated storage sites.
- High platforms and access ladders will be provided with the appropriate protective barriers to reduce the chance of falls.
- Where guardrails are impractical, workers will wear an approved safety harness and line.
- All elevating devices will be properly maintained and maintenance records will be kept on site.
- Toe boards will be installed to reduce the chance of tools or other equipment falling from heights.
- Tools being used where workers are below the work platform will have safety lines attached.
- The worksite will be inspected daily and any spill, garbage, or litter will be cleaned up immediately and properly stored until disposal.
- First aid facilities will meet all requirements of the Occupational Health & Safety Regulations.
- All accidents and injuries will be reported to the onsite Supervisor and to the appropriate regulatory authorities.
- All toilets and washing facilities will meet Alberta OHS Code Part 24 (Toilets and Washing Facilities),
- Appropriate HSE information, bulletins and posters will be displayed at the worksite to provide visual reminders about the importance of good HSE practices.
- Where applicable, a Safety Committee will be appointed by the Supervisor for the purpose of advising management on worksite safety issues, and for providing all personnel with leadership in protecting health and safety. The Safety Committee will hold weekly meetings and keep minutes of these meetings.

Personal Behaviour Standards

Safety rules at the worksite apply to every employee, regardless of whether or not they are on duty. The following rules on personal behaviour are strictly enforced at all times because they impact the safety of all:

- Employees who may be a hazard to themselves, or others, because they show inattention to safety caused by lack of sleep, or some other cause, will be asked to leave the work site.
- The possession, or use, of intoxicating or mind-altering substances at the work site is forbidden.
- No employee will be allowed to work if he/she appears to be under the influence of mind-altering substances.
- Smoking is restricted to specially designated areas.
- Smoking in bed is forbidden.
- All gambling, irresponsible behaviour, or practical jokes, are forbidden.
- Any employee with a communicable disease will not be allowed to remain at the work site.
- Each employee will keep his/her locker clean and the locker will contain only the clothing or equipment needed for work.
- Adequate clothing is required when working in cold weather environments.
- Discrimination and/or any form of harassment will not be tolerated.

Workplace Violence

CPE promotes a safe and enjoyable workplace; and will not tolerate any violence between workers. The PIC will ensure that the standards in OHS Part 27 (Violence) are closely adhered to and that:

- Violence will be a regular topic in general Safety Meetings
- All workers are aware of CPE policy with regards to workplace violence,
- All workers are encouraged to promptly report any signs of violence, even if it does not involve them,
- All reports of violence are documented and promptly and fully investigated,
- Provide appropriate support to any victims, including assurance of no recriminations, and professional support if required,
- Any investigation of any incident involving violence will be conducted in the same way as the investigation of any potential hazard and will include appropriate procedures for risk assessment, risk control and opportunity for improvement.

The PIC will ensure that all workers are instructed in:

- How to recognize workplace violence,
- The CPE policy and procedures for minimizing or eliminating workplace violence,
- The appropriate responses to workplace violence, including obtaining assistance, and
- The Procedures for reporting, investigating and documenting incidents of workplace violence.

As stated in the OHS Code, Part 27, Section 392 (Response to Incidents), the PIC will advise all workers to consult a health professional of the worker's choice, for treatment or referral, if the workers:

- Report an injury or adverse symptom resulting from workplace violence, or
- Are exposed to workplace violence.

CPE will review any incident relating to personal behaviour standards and will take any disciplinary action that is appropriate towards the perpetrator. Depending on the circumstances, this may range from a warning, a suspension or dismissal from work, or reporting to the authorities.

In accordance with OHS Part 27 Subsection 329(1), CPE will keep on file, the report on the investigation of any incident of violence, for at least two years after the incident.

Musculoskeletal Injuries (MSI)

Musculoskeletal Injuries (MSI) refer to injuries to the bones, joints, ligaments, muscles and other soft tissues and can result from one event, or from an accumulation of events. Symptoms of MSI can include pain when the worker tries to use the injured part. In addition, it can include tenderness to the touch, any sensation of heat or burning, tingling or numbness, heaviness or weakness, and/or cramping or spasm in the injured part. The PIC will ensure that:

- The topic of MSI is regularly included in Safety Meetings,
- All Job Safety Assessments include the risk of MSI,
- Appropriate mechanical assistance is provided to reduce the risk of MSI,
- Strength demands match the physical capabilities of workers,
- That there is limited exposure to hand-arm vibrations from power equipment
- All workers are appropriately trained in identifying
- All workers are appropriately instructed in proper work habits and ergonomics training as described in the OHS Explanation Guide Part 14, Section 211 (Musculoskeletal Injuries):
 - Appropriate work positions, keeping heavier loads close to the body,

- Proper use of all equipment,
- Using larger muscle groups for higher forces and smaller muscle groups for precision work,
- Variety in movements and tasks to avoid muscle tension from repetitive actions.
- All workers are instructed in the stages of development of MSI so that they the appropriate steps can be taken to curtail its development and begin healing. The stages are:
 - Stage One: Discomfort that may persist for weeks or months but is reversible. Symptoms may occur during work and ease away from work. There is limited interference with work tasks.
 - Stage Two: Discomfort may persist for months but symptoms are more prolonged. There may be physical signs and sleep may be disturbed. Work tasks may be difficult to perform.
 - Stage Three: Discomfort may persist for months or years and persist even while at rest. Daily living, and sleep are disrupted. Even light duties at work are impossible and the likelihood of recovery is poor.
- All workers are instructed to report MSI to their supervisor at the earliest stages and to seek appropriate treatment.
- As specified in the OHS Code Part 14, Section 211, Musculoskeletal Injuries, MSI will be documented in the same way as any workplace hazard so that:
 - Appropriate follow-up steps can be taken to reduce the risk to other workers doing similar activities in the same or similar jobs,
 - The effectiveness of the follow-up steps in reducing the hazard can be verified.

Prior to lifting any heavy loads a JSA will be conducted in order to determine the appropriate equipment and procedures required to handle the load in the safest way possible.

Any injury resulting from lifting must be immediately reported to the on-site medic. The medic will determine which corrective measures will be taken to address the injury.

First Aid

During the orientations, all personnel on site will be advised of the location(s) of all First Aid equipment and First Aid services available on site.

The PIC will ensure that a suitable First Aid room is designated on site and that this facility is:

- Easily located using appropriate signage throughout the worksite,

- Readily accessible and available at all times,
- Maintained in a clean, dry and servicable condition,
- Protected from the environment,
- Clearly identified as a source of first aid equipment and supplies,
- Fitted with emergency communications equipment for summoning help.

The PIC will maintain an up to date list of all First Aiders at the work site and will ensure that the First Aid facilities at the worksite will, at all times, meet the requirements for high hazard work as defined in the OHS Code, Schedule 2, Table 7, High Hazard Work. These following standards will be met or exceeded:

Standards For First Aid Services At CPE Worksites

Workers On Site Per Shift	Close Work Site (up to 20 minutes from medical aid)	Distant Work Site (20 to 40 minutes from medical aid)	Isolated Work Site (more than 40 minutes to medical aid)
2 to 9	1 Emergency First Aider; a No. 1 First Aid Kit	1 Emergency First Aider; a No. 1 First Aid Kit; 3 blankets	1 Standard First Aider; No. 2 First Aid Kit; 3 blankets
10 to 19	1 Emergency First Aider; 1 Standard First Aider; a No. 2 First Aid Kit	1 Emergency First Aider; 1 Standard First Aider; a No. 2 First Aid Kit, 3 blankets	2 Standard First Aiders; No. 2 First Aid Kit; 3 blankets
20 to 49	1 Emergency First Aider; 1 Standard First Aider; a No. 2 First Aid Kit	1 Emergency First Aider; 1 Standard First Aider; a No. 2 First Aid Kit; 3 blankets	2 Standard First Aiders; No. 2 First Aid Kit; 3 blankets
50 to 99	2 Emergency First Aiders; 1 Standard First Aider; a No. 3 First Aid Kit	2 Emergency First Aiders; 1 Standard First Aider; a No. 3 First Aid Kit; 3 blankets	3 Standard First Aiders; No. 3 First Aid Kit; 3 blankets
100 to 199	2 Emergency First Aiders; 2 Standard First Aiders; a No. 3 First Aid Kit; a designated area for First Aid services	2 Emergency First Aiders; 2 Standard First Aiders; a No. 3 First Aid Kit; 3 blankets; a stretcher; splints; a designated area for First Aid services	3 Standard First Aiders; 1 Advanced First Aider, No. 3 First Aid Kit; 3 blankets; a stretcher; splints; a designated area for First Aid services

Clothing Standards

Personnel at the worksite, who are not directly involved in the operation, and are under constant supervision, and are present at a time at which there is no chance of a hydrocarbon release, are not required to wear fire retardant outer wear. They are not however, permitted to wear clothing with fusible fabrics such as nylon, or other synthetic static-generating materials. Acceptable clothing can be made from cotton, wool or leather

that fully covers arms and legs. An example of someone in this category would be an individual taking an organized tour of the facility.

Personnel at the worksite who are directly involved in supervision, drilling, servicing, construction, operation, maintenance, or repair must wear acceptable fire retardant outer wear at all times and must refrain from wearing clothing with unsuitable fusible fabrics, such as nylon, as inner wear. In most cases, long pants and long sleeve shirts under fire retardant outer wear will be worn to provide an additional layer of insulation, and increased protection, in the event of a fire. In cases of extreme heat however, this requirement may be temporarily relaxed to allow shorts and short sleeved shirts.

All workers who might come in contact with moving machinery, as specified by Alberta OHS Code Part 25 Section 362 (Contact by Clothing etc.) shall ensure that they cannot become entangled in the machinery. Therefore, they will not be allowed to wear:

- Loose fitting clothing,
- Dangling jewellery or similar adornments,
- Long head or facial hair.

Personal Protective Equipment (PPE)

Standard PPE will be worn by all workers at the worksite at all times. Standard PPE for all workers at the worksite will include all of the following items:

- Hard hats,
- Safety glasses c/w side shields,
- Fireproof (Nomex 3) coveralls,
- Safety boots (extending at least 6" above the heel),
- Safety glasses,
- Work gloves.

In addition to the standard PPE listed above, specialized PPE will be required for hazardous tasks identified in Job Safety Analyses (JSA). Specialized PPE will be provided by the drilling contractor and, depending on the specialized tasks, may include one or more of the following:

- Face mask,
- Rubber gloves,
- Hearing protection,

- Fall protection,
- Breathing mask or breathing apparatus.

PPE provided for workers' hands, arms, legs and torso will be properly fitting and will be appropriate to the work as described in OHS Code Part 18, Section 242 Limb and Body Protection, Section 243 Skin Protection, and Section 244 Respiratory Dangers. Specific hazards may include risk of burns, cuts, electrical shock, amputation, absorption of chemicals, as well as the usual workplace hazards of slippery surfaces, workplace temperature extremes and risk of impact by objects.

All required PPE at the worksite will comply with the CSA standards described in OHS Code Part 18, Section 29 (Compliance with Standards).

The PIC will ensure that all required PPE at the worksite will be:

- Stored in a readily accessible location,
- Stored in a manner that prevents its contamination,
- Maintained in a clean and sanitary condition,
- Inspected before and after each use to ensure that it remains fully functional,
- Serviced and used according to manufacturer's recommendations.

Any PPE contaminated by hazardous materials will be immediately cleaned according to the manufacturers specifications, or replaced.

The PIC will enforce, by whatever means necessary, the wearing of appropriate PPE by all workers at all times.

The PIC will ensure that all workers are trained and qualified for the care and use of any PPE that they require on the job.

The PIC will ensure that sufficient and suitable breathing apparatus are available for all personnel required to carry out any potential emergency responses, which may include an uncontrolled gas release, fire, explosion, and rescue. Emergency workers will not be exposed to harmful substances in excess of the occupational exposure limits as described in the OHS Code Part 37, Section 752 Breathing Equipment. The emergency workers' PPE will comply with the OHS code Part 18, Section 251, Equipment For Immediate Danger.

Work Permit System

The Work Permit system is a procedure based method for minimizing risk to personnel during specific operations. A Work Permit, issued by the PIC, will be required for any job that has significant hazards identified during a Job Safety Analysis.

Work Permits will be required for:

- Hot Work – Where there is a risk of ignition resulting from metal cutting, welding, air gouging, riveting, drilling, grinding and chipping.
- Electrical Work – Where there is risk of electrical shock to any personnel, or a risk of disruption of electrical power to other areas.
- Confined Space Entry – Where personnel will be entering a designated “Confined Space”.
- Removal or Disablement Of Safety Devices – Where a specific task requires a temporary removal or de-activation of a safety device.
- Cold Work – For any hazardous tasks other than those listed above.

Each Work Permit will include the following information:

- Date, time of issue, and time of expiry of the permit,
- Specific location of the work,
- Worker doing the work,
- Description of the work to be done,
- Any toxic, corrosive, flammable, or other dangerous materials in the immediate work area,
- Whether the work area has been inspected and found free of the above materials;
- Fire protection requirements,
- Requirements for isolation: lockouts, disconnections, draining of liquids, venting of fumes, etc.
- Requirements for ventilation or purging with air, steam, or inert gas,
- Testing prior to, or during, the work for:
 - Harmful substances,
 - Combustible gases,
 - Oxygen deficiency,

- Other hazards, including any requirement for MSDS information
- Specific personal protective equipment,
- Preparations for emergency procedures and rescue should it become necessary,
- Special instructions on preparations, procedures and precautions,
- Name and job title of the person of the Work Permit issuer,
- Name and job title of the person receiving the Work Permit,
- Spaces for name and signature confirming that the work has been completed.

Each Work Permit issued must be posted at the location where the work is being conducted and must be returned to the issuer at the completion of that work, or at the end of the work shift.

A copy of every open Work Permit must be posted in the General Office and be readily available for review.

The PIC will provide copies of all Work Permits issued to the CPE Project Manager at the completion of the project.

Lockouts

A Lockout is a procedure based method for minimizing risk to personnel which prevents hazardous equipment from being accidentally energized or started, while it is being serviced, or awaiting service. All work requiring a Lockout will comply with OHS Code Part 15 (Managing the Control of Hazardous Energy). The following procedures will be in effect:

- Lockouts will be required for any equipment which could be hazardous to personnel if it was accidentally started or energized.
- A lockout must remain in place until the equipment has been properly serviced and no longer represents a hazard.
- Only qualified workers, with suitable training and experience, or workers under the immediate supervision of a qualified worker, will be allowed to work on jobs requiring lockouts.
- Only the worker who installed a specific lockout is authorized to remove it.
- In an emergency, or if the worker who installed the lockout is unavailable, only an alternate person, authorized by the PIC, may remove the lockout. However, any worker removing a lockout must first ensure that:
 - Each involved worker is accounted for
 - No worker can be harmed by the re-starting of the equipment or machinery.

For all tasks requiring a Lockout, all workers will employ the following procedures:

- Obtain the appropriate Work Permit,
- Use the appropriate tags and locks to mark and disable the equipment. Each lock must have a single key which is kept in the possession of the worker until the work is completed,
- Each supervisor, operator, trades person, and contractor, attaches their personal padlock,
- After each Lockout is installed, the equipment must pass a “bump test”, as described in OHS Code Part 15, Section 213 (Verifying Isolation) in order to ensure that the Lockout has effectively isolated the energy source,
- Upon completion of the job, all locks are removed in reverse order, trades persons and contractors first, then operators and finally supervisors.

When several workers are involved, or when multiple energy isolating devices are secured, the Lockout procedures described in OHS Code Part 15, Section 215 (Securing by a Group) can be more effective. The procedures include the following:

- Installation of all necessary Lockouts and placing the keys in a lockable container,
- Verification of the effective isolation by a second worker,
- Once effective isolation has been confirmed, each involved worker installs their personal lock on the lockable container to ensure that none of the Lockout keys can be removed, and the equipment cannot be re-activated, until all workers have removed their personal locks from the lockable container.

The removal of the final locks, and signing off on the Work Permit, indicates that the work has been completed and that all safety devices are operational.

Fire Protection Measures

The PIC will ensure that a comprehensive fire hazard analysis has been completed prior to the vessel becoming continuously inhabited. The analysis will ensure that:

- Any fire can be detected, contained and extinguished within its zone of origin,
- All means of escape and means of access for fire-fighting purposes are being kept free from obstructions at all times.
- All fire extinguishing appliances are operational and readily available,
- All flammable materials are kept adequately isolated from any ignition sources at all times.

The PIC will ensure that all workers will be familiar with the current Fire Procedures and Safety Regulations. The following procedures will be in place for the purpose of fire prevention:

- Smoke detectors will be installed in all rooms and work areas.
- Fire alarms and illuminated exit signs will be installed at each exit.
- Adequate firefighting equipment will be made available in a number of easily accessible locations such as building exits. Fire extinguisher types for specific types of fires are:
 - A – dry materials solids such as wood, rubber, paper,
 - B – petroleum products such as oil, fuel, grease or paint,
 - C – electrical equipment such as wiring, control panels and switches,
 - D – combustible metals such as magnesium, titanium or sodium.
- All personnel must be familiar with identifying types of fires and the appropriate means for controlling each of them.
- Permits to Work must be used to authorize any hot work in fire hazard areas.
- All heaters and electrical equipment must be kept in good working condition to reduce the risk of fire.
- All flammable materials such as fuel, solvents, oily rags, waste paper or wood must be stored only in fireproof containers and disposed of frequently.
- All employees must follow safe work practices around any flammable materials.
- Firefighting equipment must be inspected monthly, after any use, or in the event of suspected damage. A record must be kept of all fire equipment inspections.
- Where applicable, fire fighting drills, must be held weekly. Where fire drills are not required, fire safety meetings must be conducted.
- All employees must familiarize themselves with the designated Muster Sites.

During each formal and informal inspection, the PIC will identify any fire hazards or any conditions which could impede effective fire fighting or evacuation should the need arise. The PIC will then ensure that those hazards or conditions are promptly and appropriately addressed.

The PIC will document the type, condition, and location of all fire extinguishers at the worksite during each formal site inspection. All information on fire protection will be communicated to all personnel at the initial Orientation and will be communicated to all new personnel at subsequent Orientations.

The CPE HSE Advisor will ensure that all workers at the worksite shall have completed the appropriate training in the use of all firefighting equipment on the site.

The PIC will ensure that all workers who may be exposed to a flash fire, or electrical equipment flashover, will wear flame resistant outerwear and use all appropriate PPE appropriate to the specific hazard. In addition, all workers will wear non fusible fabrics against the skin beneath fire resistant outerwear.

When using a “Tiger Torch”, the operator must ensure that in the event that the flame is inadvertently extinguished, the burner is first turned off and any accumulated gas is adequately purged with air before re-ignition is attempted. Only personnel that have received adequate training in operating the device shall be allowed to do so. Care must be taken that all flammable materials are removed from the immediate area when the Tiger Torch is being used.

Smoking will be restricted to designated areas as identified by signage posted by the PIC.

Toxic And Corrosive Chemicals

The worksite may contain toxic chemicals and hazardous substances that can result in serious injury or death as a result of exposure. All personnel who are expected to work with hazardous materials will first need to provide proof of appropriate WHMIS training. Handling and storage of all hazardous materials will meet all WHMIS standards. This will include the use of appropriate equipment (including, but not restricted to, PPE) as well as handling procedures.

The PIC will ensure that:

- No controlled products will be allowed on the worksite unless they have the appropriate supplier or work site labels and that the labels are attached and clearly legible as described in the OHS Code Part 29, section 398 (Label Required),
- Any controlled products which are generated at the worksite will be appropriately labelled, stored and handled in accordance with WHMIS standards, by qualified personnel as described in OHS Code Part 29, Section 396, Hazardous Waste.
- All harmful substances are identified and exposed workers are informed of the:
 - Corresponding health hazards of those harmful substances,
 - Measured airborne concentrations of those harmful substances,
 - Appropriate procedures for minimizing exposure to those harmful substances,
- The respective MSDSs are readily available for all controlled substances in use or in storage at the worksite,

- Only appropriately trained and qualified personnel may handle, store, use and dispose of any hazardous materials at the worksite,
- The procedures for handling, storage, use and disposal of all hazardous materials meet their specific WHMIS and MSDS requirements,
- Worker exposure to harmful substances complies with all requirements of the OHS Code, Part 4 (Chemical Hazards, Biological Hazards and Harmful Substances).

Total exposure to harmful substances depends on many factors but includes:

- Rate of absorption by inhalation, ingestion or skin absorption during exposure,
- Duration of the exposure,
- Effect of simultaneous exposure to multiple substances.

Airborne chemical hazards at the worksite can arise from any mists, vapours, gasses, as well as solids in the form of dusts, fumes and smoke. Exposure to airborne chemicals most commonly affects the lungs but other organs can be damaged as well as the absorbed chemicals are passed into the bloodstream.

Non-airborne chemical hazards at the worksite can include solvents, caustic liquids and powders which can result in chemical burns. Skin damage is often the most immediate result of contact with non-airborne chemical hazards but many of these can also be absorbed through the skin and damage other tissue and organs.

The Occupational Exposure Limits (OELs) for numerous harmful substances, including ones that can be found at the worksite, are listed in the OHS Code Explanation Guide Schedule 1, Table 2. The table includes the substance name, its corresponding CAS (Chemical Abstracts Service) number, the 8-hour and 15-minute occupational exposure limits, as well as the specific type of interaction with the body.

All JSA's will adhere to the Alberta OHS Code Part 4, Section 16 (Chemical Hazards, Biological Hazards and Harmful Substances) when considering worker safety in upcoming tasks. The following procedures will be adhered to:

- Worker exposure to any harmful substance must be kept as low as reasonably practical and may not exceed its occupational exposure limit.
- The 8-hour occupational exposure limit for any harmful substance must not be exceeded during any 24-hour period.
- No exposure to a harmful substance may exceed the 15-minute occupational exposure limit.

- For multiple exposures to a harmful substance:
 - No single exposure may exceed the 15-minute occupational limit,
 - Each 15-minute limit exposure must be followed by a period of no less than 60 minutes during which exposure to the substance is at or below its 8-hour exposure limit,
 - No worker can be subjected to more than four occasions of a 15-minute exposure limit to a harmful substance in any 24-hour period,
 - The 8-hour exposure limit must not be exceeded in any 24-hour period.
- For harmful substances that do not have any established limits, worker exposure must be kept as low as reasonably practicable.
- For harmful substances that have established 8-hour exposure limits, but do not have established 15-minute exposure limits, the following will apply:
 - The 8-hour exposure limit must not be exceeded,
 - Exposure of 3 times the 8-hour exposure limit must not exceed a total of 30 minutes during any 24 hour period,
 - An exposure of 5 times the 8-hour exposure limit must not be exceeded,
 - Any exposure immediately dangerous to life and health must not be allowed.

Eye wash stations will be available on the rig floor, cement mixing areas and any other areas in where there is risk of eye contamination. Any worker who becomes contaminated by hazardous materials must immediately remove the contamination by washing or other means and must then report to the on-site medic for further evaluation and treatment.

Highly Flammable and/or Explosive Gasses

The following is a list of some of the highly flammable and/or explosive materials that may be found at the worksite:

- Acetylene,
- Vapors of gasoline, alcohol, ethers, and lacquer solvents,

Explosive gasses may be encountered in high concentrations in confined spaces such as tanks, drums, manholes or trenches and areas where there are leaks in piping, either above or below the ground.

The concentration of airborne contaminants, and the degree of oxygen deficiency, will be measured by qualified personnel in order to determine the level of hazard.

The minimum requirement for gas monitoring is a three head (LEL, H₂S, and O₂) electronic handheld monitor with both audio and visual alarms that meets CSA Standards C22.2 No. 152 or ISA-S12.13. The PIC will confirm that the Service Rig Contractor is supplying and maintaining approved monitoring equipment and employing personnel who are properly qualified in their use.

All highly flammable an/or explosive materials will be labelled, transported, stored and disposed of, in accordance with the procedures outlined in their corresponding Workplace Hazardous Materials Information System (WHIMS) and Material Safety Data Sheets (MSDS).

All personnel who will working with highly flammable and/or explosive materials must have completed Workplace Hazardous Materials Information System (WHIMS) and MSDS training and hold valid certification.

A Job Safety Analysis (JSA) must have been completed before any work proceeds with highly flammable and/or explosive materials.

The PIC will issue a Work Permit only when he is assured that all of the safety measures identified in the JSA have been implemented.

Fall Protection

All work at heights will comply with OHS Code Part 9 (Fall Protection). All safety equipment for work at heights will comply with OHS Code Part 9, Section 145 (CSA Standards). A Fall Protection Plan must be in place for temporary or permanent work areas if a worker may fall:

- For 3 or more meters, or
- For less than 3 meters but still be exposed to an injury as a result of the fall.

The Fall Protection Plan will be in place before there is any risk of a fall and it will specify all of the following:

- All fall hazards at the worksite,
- Fall protection systems to be used,
- Procedures for assembling, maintaining, inspecting, using and disassembling the fall protection systems, and
- The rescue procedures to be employed if a fallen worker is suspended by a personal fall arrest system, or by safety nets, or otherwise needs to be rescued.

The PIC will ensure that each worker at height is appropriately trained in Fall Protection as defined in OHS Code Part 9 Section 144 (Instruction of Workers).

protected from falling by one or more of the following:

- A guardrail around the work area,
- If a guardrail is not reasonably practicable, protection will be through an appropriate travel restraint system and/or fall arresting device that meets the applicable CSA standards described in the OHS Code Part 9, Section 145 CSA standards:
 - CSA Standard CAN/CSA Z259.10-M90 (R1998), Full Body Harnesses
 - CSA Standard CAN/CSA-Z259.1-95 (R1999), Safety Belts and Lanyards
 - CSA Standard CAN/CSA-259.1-95 (R1999), Safety Belts and Lanyards
 - CSA Standard CAN/CSA-Z259.11-M92 (R1998), Shock Absorbers for Personal Fall-Arrest Systems
 - CSA Standard Z259.2.1-98, Fall Arresters, Vertical Lifelines, and Rails

Safety belts may only be used as a part of a travel restraint or a fall restrict system. Full body harnesses must be used in every other application.

All lanyards or safety straps must comply with the OHS Code Part 9, Section 147 (Lanyards and Safety Belts) and be made of appropriate material that cannot be severed, abraded, or burned by tools or corrosive agents. Conductive lanyards may not be used for work near energized conductors.

Lanyards must:

- Be the shortest length that will still permit unimpeded performance of the worker's duties.
- Not be connected in series but directly to the anchor point.
- Be secured to an anchor point that is no lower than the worker's shoulder height, or as high as is reasonably practicable.

A personal fall arrest system must limit the maximum arresting force on a worker to 8 kilonewtons while ensuring enough clearance so that the fallen worker cannot hit the ground or an object below the work area as described in the OHS Code Explanation Guide Part 9, Section 150 (Clearance and Maximum Arresting Force).

Any anchor plate with multiple attachment points designed to support combinations of suspension lines, tie-back lines and lifelines must be certified in writing by a professional engineer.

All temporary anchor points for use in a travel restraint system must:

- Have an ultimate load capacity of at least 3.5 kilonewtons per worker in any direction in which the load may be applied, and
- Be installed, used and removed according to the manufacturer's specifications, and
- Be marked as being for temporary travel restraint only.

Temporary anchor points must be removed upon completion of the temporary work, or by the time specified by the manufacturer.

Permanent travel restrain anchor points and fall arrest anchor points must:

- Have an ultimate load capacity of at least 22.2 kilonewtons per worker in any direction in which the load may be applied,
- Be installed and used according to the manufacturer's specifications.

Each vertical lifeline must:

- Be secured to an anchor point that is not used to support anything else,
- Not have a breaking load capacity of less than 27 kilonewtons,
- Extend downward to within 1.2 metres of the ground level or a safe lower surface,
- Be free of knots or splices (except for a stopper know at the lower end),
- Be used by only one worker at a time unless it is part of the fall arrest system of a fixed ladder or has been certified for more than one worker by a professional engineer,
- Have protection form abrasion by rough or sharp edges,
- Be made of suitable material that cannot be damaged by tools or chemical agents,
- Not be made of conductive material if it is to be used near an energized conductor, and
- Minimize the amount of swing of a falling worker.

Horizontal lifeline systems must meet the requirements of:

CSA Standard Z259.13-04, Flexible Horizontal Lifeline systems, or
CSA Standard Z259.16-04, Design of Active Fall-Protection Systems.

Horizontal lifelines must be designed, installed and used in accordance with:

- The manufacturer's specifications, or
- Specifications certified by a professional engineer.

A life jacket or personal floatation device must be used in combination with an appropriate fall protection system if a falling worker could fall into water and thus be exposed to risk of drowning.

All equipment used as part of a fall protection system must be:

- Inspected by the worker as required by the manufacturer before it is used on each work shift,
- Kept free from substances and conditions that could contribute to its deterioration, and
- Re-certified according to the manufacturer's specifications.

Any safety equipment that shows any wear or damage that could compromise its effectiveness will be immediately tagged and promptly destroyed or returned to the manufacturer.

After any personal fall arrest system has stopped a fall, it will be removed from service.

Any personal fall arrest system that is removed from service may not be returned to service unless the manufacturer, or a professional engineer, has certified that it is safe to use.

Scaffolds

Only trained personnel may construct scaffolds, and only from appropriate materials. All Scaffolds and Temporary Work Platforms must comply with the OHS Code Part 23 (Scaffolds and Temporary Work Platforms). The following procedures will be followed when using scaffolds:

- Scaffolding must be securely suspended or attached to a permanent structure.
- Scaffolding must be inspected before each use.
- Toe boards and handrails must be used on any accessible area over 1.2 metres (4 feet) above grade or floor level, or over any hazardous condition.

- Where guardrails are impractical, workers above 3 metres over grade or floor level, must be protected with appropriate safety harnesses.
- Aluminum scaffolding must not be used in areas where there is a danger of fire due to sparks.
- Scaffolding that is incomplete or otherwise unsafe must be fenced off and marked with warning signs at all access points.
- Poles from dismantled scaffolds should be stored horizontally to eliminate risk from falling.

Temporary Work Platforms

If work must be conducted from a temporary work platform mounted on mobile equipment such as a forklift or crane boom, the following standards will apply for the work platform:

- The vehicle must not be capable of tipping while the platform is extended and loaded. The operator of the vehicle supporting the work platform must remain at the controls at all times while a worker is in the work platform.
- No person may remain in the work platform while the vehicle supporting it is moving horizontally.
- The platform must:
 - Be securely attached to the lifting carriage of the vehicle,
 - Not be capable of accidental vertical or lateral movement,
 - Be commercially manufactured and/or certified by a professional engineer,
 - Have appropriate guardrails and toe boards,
 - Have appropriate screens or barriers that prevent the worker from touching the drive mechanism.
- Any worker on an elevated working platform that is supported by a vehicle, must use a personal fall arrest system as described in the OHS Code Part 9, Section 141 (Elevated Work Platforms, Aerial Devices, Man Baskets).

Ladders

Ladders must not be used if alternate safer access to the workspace is available. Boxes, chairs, tables, or similar supports must not be used in place of a ladder. The following procedures will be followed when using ladders:

- Before use, all ladders must be inspected to ensure that they are in good condition, with non-slip devices installed at the base.

- Ladders must not be painted or coated in a way that could cover any defects.
- Only CSA or ANSI approved ladders may be used.
- Ladder rungs and footwear must be clean and dry.
- Metal ladders must not be used near electrical equipment or lines.
- Ladders must be secured near the top to prevent slipping.
- The distance between the base of a portable ladder and the supporting wall should be approximately one quarter of the distance to the top.
- If a ladder must be placed in front of a door, the door should be properly secured or guarded while the ladder is in place.
- In the event that the ladder has side rails, the side rails must extend one meter above the work surface.
- Workers must not stand on, or work from, the top two rungs of a ladder.
- For heights over 3 metres, the worker must use a safety belt and line.
- Tools and materials must be carried up a ladder on a belt, or in some other way that leaves both hands free for climbing the ladder.

Welding

CPE follow the regulations described in Part 10, Section 171.1 of the Alberta OHS Code and ensure that only qualified personnel are allowed to carry out welding jobs. The following procedures will be followed for all welding jobs:

- All welding jobs require a Hot Work Permit,
- The area immediately surrounding a weld must be tested for flammable gasses before the work begins,
- All welding torches, hoses, and regulators must be in good condition,
- Welders and helpers must be properly protected with approved eye and face protection and appropriate clothing,
- Good ventilation must be provided for all welding jobs,
- A welder's helper must stand by with a fire extinguisher at all times while welding is in progress,
- Hot tapping a pipeline is not allowed,
- Completed welds must be inspected and pressure tested before use,
- When welding tanks, contents must not be added, removed or otherwise agitated during the work,

- Lines to and from tanks must be double blocked and bled and/or blanks installed,
- Welding on tanks must be done at least one metre below the level of the liquid, unless the tank has been previously drained and purged of flammable gasses,
- Field welding on fuel tanks and other enclosed tanks, such as accumulators or oil bunkers must be performed in a shop.

Hot Work

Hot Work refers to any work in which a flame is used or sparks or other sources of ignition may be produced. The definition applies to work activities which can result in a risk of ignition of flammable substances as defined in Part 10 Section 169 (Hot Work) of the Alberta OHS code.

No Hot Work may proceed until:

- A Hot Work Permit is issued by the PIC. The Permit must fully describe:
 - The nature of the hazard,
 - The type and frequency of atmospheric testing required during the work,
 - The protective equipment required,
- The hot work location is suitably cleared or isolated from, combustible materials,
- Proper procedures are in place for continuous performance of the hot work,
- Testing shows that no flammable vapours exceed 20% of their Lower Explosive Limit (LEL) and that any dust is below its minimum ignitable limit.

Cold Work

Cold Work Permits are required for any hazardous work which is not associated with a risk of ignition. Cold Work Permits will be issued to authorize any tasks which have been identified as hazardous in a Job Safety Analysis, a Safety Meeting, an inspection, or by any other means.

Piping Containing Harmful Substances

A Cold Work Permit will be required for any work on piping which may contain a harmful substance as defined in the OHS Code. The Permit will stipulate that the location of the work will be suitably isolated from the harmful substance under pressure using:

- A system of blanking or blinding, or
- A double block and bleed isolation system that utilizes two blocking seals on either side of the isolation point and an operable pressure bleed valve located between the seals.

Noise Exposure

CPE will follow the regulations described in Part 16 of the Alberta OHS Code and will ensure that all reasonably practicable measures are used to reduce the noise to which workers are exposed.

Noise measurements will be measured by a competent person, in accordance with CSA Standard Z107.56-94 (R1999), Procedures for the Measurement of Occupational Noise Exposure.

The PIC will ensure that in any areas with a noise level over 85 decibels:

- Suitable warning signs are posted,
- All workers in the area are provided with, and instructed in the use of, hearing protection that meets CSA Standard z94.2-02, Hearing Protection Devices.

Compressed Gas Cylinders

Compressed Gas Cylinders will be handled in accordance with Part 10, Sections 171.2 through 174 of the Alberta OHS Code and the following procedures will be followed:

- All cylinders must be treated as full and handled with extreme care to prevent damage.
- Shipping caps must be installed at all times on cylinders that are not currently in use.
- Flame, boiling water, or electric arc must not come in contact with cylinders.
- Heavy cylinders being moved without a mechanical aid may be rolled along the bottom edge but must not be dragged.
- Cylinders should not be used for any other purpose other than for containing gas.
- Cylinders must be secured during storage, use, or transport to prevent them from being knocked over.
- Safety devices in the valves must not be tampered with.
- Damaged or leaking cylinders must be taken out of use immediately, placed in a well ventilated area, and clearly marked with danger signs until they can be safely disposed.
- Oxygen cylinders must be stored separately from flammable gas or other flammable materials.
- Oil and grease must be kept away from all oxygen cylinders and fittings.
- No other compressed gasses may be used as a substitute for compressed air.

Hazardous Energy

Hazardous Energy refers to any electrical, mechanical, hydraulic, pneumatic, chemical, nuclear, thermal, gravitational or any other form of energy that is capable of causing injury.

All work with Hazardous Energy must be conducted by qualified personnel.

All work around powered equipment will comply with the Alberta OHS Code Part 15 (Managing the Control of Hazardous Energy). Before any work begins, the machinery or powered equipment must:

- Come to a complete stop before any work begins,
- Be isolated by an energy isolating device,
- Be prevented from accidental re-activation by following approved Lockout Procedures as described in the OHS Code Part 15, Section 212 (Isolation) and in the Lockouts section of this manual.
- Have passed a “bump” test as described in the OHS Code Part 15, Section 213 (Verifying Isolation) to confirm that it can’t be accidentally restarted.

Any work on machinery, or powered equipment, which requires it to be operating at the time, must only be done in accordance with the manufacturer’s instructions for carrying out that work as described in the OHS Code Part 15, Section 212 (2).

Before any work proceeds on piping that can contain harmful substances and/or pressures, the sections to be worked on must be isolated by blanking, blinding, or double blocking and bleeding as described in the OHS Code Part 15, Section 215.4 (Isolating Piping).

Power Tools

Prior to the use of any power tools, all hazards must be identified and removed. The following procedures must be followed when using power tools:

- All power tools must be in good condition, with appropriate safety guards in place.
- Only qualified personnel are allowed to operate power tools.
- Whenever practical, cables and air lines should not obstruct walkways.
- Cords and air lines must be in good repair.
- All electrical tools must be properly grounded.

- Electrical tools must not be used in areas close to flammable materials.
- Eye protection must be worn around all power tools.
- Operators of power tools are only allowed to have short hair or wear properly fitted hair containment.
- Operators are not allowed to wear loose clothing that can catch in moving machinery.
- Before starting any machinery, the operator must ensure that the operation of the machinery does not pose any danger to himself or any co-worker in the immediate area.
- Power tools must be disconnected from air or electrical power sources before cleaning, repairs, or adjustments are carried out.

Electrical Hazards

Only qualified personnel, authorized with a Permit to Work, are allowed to carry out all electrical work. The following procedures will be followed for all electrical work:

- All electrical equipment must be properly grounded.
- The work area must be clearly posted with a danger notice to reduce risk to personnel.
- Power must be disconnected and proper lockout procedures must be followed before any electrical work begins.
- The work area must be cleared of flammable materials and enclosed spaces must be purged of flammable vapours.
- Trained rescue personnel and equipment must be readily accessible.
- In the event of a rescue operation, appropriate rescue procedures will be followed. These include shutting off electrical power and removal of victims from danger using an insulated device like a dry rope, piece of clothing, etc.

Confined Spaces

A Confined Space is any enclosed or partially enclosed space, with restricted access or egress, which is not intended for human occupancy, and which may form a trap or become a life-threatening environment. This may include, but is not limited to tanks, process vessels, pipe trenches, sewers, sumps and other similar spaces. Any confined space may include one or more of the following hazards:

- Lack, or excess, of oxygen.
- Poisonous gas (e.g. H₂S or carbon monoxide).
- Flammable gasses.
- Risk of electrical shock.

- Injury from moving machinery.
- Temperature extremes.

Until the atmosphere in any Confined Space has been confirmed as safe, it will be considered hazardous. The following criteria will be used to describe hazardous atmospheres in terms of oxygen content, concentration of flammable or explosive gasses (LEL), and H₂S content:

Confined Space Atmospheric Gas Concentration Hazards

High	Moderate	Low
O ₂ < 19.5%	19.5% < O ₂ < 20.9%	O ₂ = 20.9%
O ₂ > 23%	20.9% < O ₂ < 20.9%	
LEL > 20%	10% < LEL < 20%	LEL < 20%
H ₂ S > 20 ppm	10 ppm < H ₂ S < 20 ppm	H ₂ S < 10 ppm

Any work to be carried out in Confined Spaces will adhere regulations listed in the Alberta OHS Code Part 5 (Confined Spaces).

As much of the work will be completed as is possible, outside of the Confined Space, prior to entry.

Continuous ventilation will not be required in a confined space, which has a low hazard atmosphere, if:

- The atmosphere is continuously monitored and shown to contain clean breathable air, and
- The space has an internal volume greater than 1.8 m³ (64 cu ft) per occupant, and
- The space is occupied for less than 15 minutes, and
- The work inside the space generates no contaminants other than exhaled air.

When welding operations are being completed in a confined space, a minimum air exchange of 56.6 m³/min (2000cfm) will be ensured to control welding fumes and heat build up.

Work in Confined Spaces must only be performed by personnel, who are properly trained in Confined Space Entry, and who are familiar with all risks that might be encountered and with the use of the appropriate PPE safety procedures.

The following procedures will be followed for work in a confined space:

- Complete a Job Safety Analysis,
- Implement all appropriate Hazard Management procedures (Note that British Columbia OHS regulations Section 9.29 requires 7 days notification to the BCWCB prior to a worker entering a Confined Space that has been purged with inert gas)
- Obtain a Work Permit,
- Review all of the MSDS information for any hazardous materials that may be encountered,
- Prepare a rescue plan,
- Keep all unauthorized personnel and vehicles out of the area using appropriate signs and barriers,
- To the greatest extent possible, complete work outside of the Confined Space prior to entry,
- Ensure that all rescue equipment and personnel are ready before entry,
- Ensure that all work in a Confined Space must be conducted by a minimum of two personnel and monitored by at least one dedicated observer on the outside,
- Set up continuous monitoring of the atmosphere for oxygen levels and poisonous or explosive gasses,
- Ensure a clean and safe atmosphere in the Confined Space at all times (refer to OHS Code Part 5, Section 53 Ventilating and Purging)
- Use all appropriate equipment while working,
- Before leaving the Confined Space, ensure that no workers, tools or equipment have been left behind,
- Upon completion of the work, properly close out the Work Permit.

At all times, except when entry by workers is required, all Confined Spaces will be secured against entry by signs, or other effective means, which indicate the nature of the hazard, and the prohibition of entry.

Altering A Safety Device

A Work Permit will be required to remove or disable any safety equipment on the work site. This can be required under special circumstances such as: removing the crown saver when putting a snubbing unit in the derrick, or removing a belt guard when completing repairs or maintenance.

All Work Permit procedures will be closely adhered to, and the equipment will be returned to its normal state as soon as possible. The Work Permit will be closed off only after it has been confirmed that all safety devices have been returned to fully functionality.

LIFTING DEVICES, CRANES AND HOISTS

Capacity and Labelling

All major structural, mechanical and electrical components of a lifting device must be permanently and legibly identified as being component parts of a specific make and model of lifting device. The lifting device must be fitted with a permanent plate or weatherproof label that legibly shows:

- The manufacturer's rated load capacity,
- The manufacturer's name, and
- The model, serial number and year of manufacture or shipment.

Any lifting device that is not commercially manufactured must be certified as fit and safe by a professional engineer. It must be fitted with a permanent plate or weatherproof label that shows the rated load capacity according to the professional engineer's certification.

Each mobile crane or boom truck must be permanently fitted with a load chart showing its rated load capacity at all permitted boom angles and boom radii. If outriggers are installed, they must be extended and supported by solid footings before the crane is used.

Any structural repairs or modifications to lifting devices must be under the direction and control of a professional engineer. The repaired or modified components must be subsequently certified to confirm that they are not less than their original capacity. All structural repairs and modifications, and their certification, must be noted in the log book for that lifting device.

Each mobile crane must be equipped with an effective warning device that is readily accessible to the operator. The device must be sufficient to warn workers of the impending movement of the crane. If it is an audible device, the sound must be distinct in order to distinguish it from other sounds at the work site.

Competent Operators

Only competent workers, authorized by the onsite supervisor, will be allowed to operate any lifting device. The operator must be able to demonstrate competence in the operation of the equipment, use of the load charts, and code of signals.

Before operating the device, each operator must be familiar with all recent entries in the log book.

Any operator using a remote control to operate a lifting device must be visually distinguishable from the other workers at the worksite.

Log Books

Each lifting device must have an electronic or paper log book. The log book must be readily available to the operator and to an inspector at all times. Each entry in the log book must be signed by the person doing the work. Log book entries must include all of the following information:

- The date, time and description of any work or maintenance performed.
- The length of time in lifting service according to an hour-meter, or according to the manufacturer's instructions.
- The date, time and description of any defects noted.
- The date and time of each inspection, check, and test performed.
- The record of certification.
- Any matter or incident that may affect the safe operation of the lifting device.

The onsite supervisor must confirm daily that the log books are being correctly maintained.

Preventing Unsafe Operation

The operator must not move any equipment or load until he/she is assured that the working conditions are safe.

In the event of two or more cranes working at the same time, the operators must complete a formal JSA and develop procedures to minimize the potential for a collision between the cranes, their loads, or component parts.

The worksite supervisor will ensure that all operators are provided with accurate information with regard to determining the weight of loads to be lifted. Lift calculations must be completed for any lift exceeding 75% of a crane's rated capacity.

The worksite supervisor will take all reasonable and practicable measures to ensure that no suspended loads are allowed to pass over workers. In the event that no practical alternative exist in the circumstances, all workers must be effectively warned in advance of the danger if a load is to pass over them. The operator of the lifting device must be made aware of any workers under the suspended load.

Crane operations must be stopped when the wind speed at the elevation of the crane exceeds the limit recommended by the manufacturer's specifications, or specifications certified by a professional engineer.

Tag Lines

Tag lines must not be used in situations where their use could increase the danger to workers.

All tag lines must be of sufficient length to control the load and do prevent the load from striking any worker controlling a tag line.

Tag lines must be non-conductive synthetic material if there is any danger of contact with energized electrical equipment.

Travelling Loads

The operator of any travelling lifting device must ensure that the load is kept as low as possible.

Hand Signals

Only competent signallers may give hand signals to the operator of a lifting device.

Hoisting Containers

Any container used for lifted loads must be designed for that particular purpose and bear markings that indicate its maximum rating. An approved cage may be used to lift containers which do not meet those standards.

Personnel Baskets

Personnel baskets must be erected, used, operated and maintained in accordance with the commercial manufacturer's specifications or specifications certified by a professional engineer. Any personnel basket that is not commercially manufactured must be designed and certified by a professional engineer.

If it is not practicable to provide a separate personal fall arrest system with a vertical lifeline for each worker in a man basket, a separate support must be attached between the basket and hoist line and each worker must wear a separate personal fall arresting system attached to the man basket. The separate support must be capable of withstanding the combined weight of the personnel basket, equipment and all workers should the hook assembly fail.

Forklifts

The following procedures will be followed for forklift operations:

- Only trained personnel will be allowed to operate forklifts.
- Prior to using the forklift, the operator must inspect it to ensure that it is in safe operating condition.
- Forklifts must be equipped with an audible back-up alarm and rear view mirrors.
- Forklifts must have adequate lighting if used in poor light conditions.
- Forklifts must not be left unattended with an elevated load.
- The operator must not move a load if he does not have a clear view of the entire operation unless a competent signal person assists him/her.
- Loads must not exceed the safe working load recommended by the manufacturer.
- The operator must not lift any load over a person.
- No other person may ride on the forklift except the operator.
- The engine must be shut off prior to refuelling.
- The operator must immediately report any mechanical problems to a supervisor.

WILDLIFE

Wildlife Hazards

There may be occasions on which wildlife may present a hazard to workers either at the worksite, or on access roads. All wildlife hazards must be reported to the PIC who will include the hazard in a Safety Meeting agenda. If the hazard is significant, the PIC may immediately advise all personnel of the hazard, and then contact a Conservation Officer at one of the numbers listed in the Emergency Response Plan, so that the hazard can be immediately addressed. In order to minimize the risk of hazardous wildlife encounters, all personnel will:

- Use proper caution when driving to and from the worksite, especially at night and during conditions of poor visibility,
- Immediately report all large animal sightings to the PIC,
- Ensure that the entire worksite is kept clean, and free of all odours (especially food, and garbage) which can attract wildlife,
- Never proceed outside the camp on foot, alone, or without approval of the PIC,
- Never try to approach, harass, feed, or attract any wildlife in any manner.

Minimizing Impact on Wildlife

All forms of local wildlife are of particular importance to local communities and important guidelines and procedures have been established in order to minimize impact on it. A wildlife monitor will be onboard in order to report on any events which could impact local wildlife. The PIC will attempt to minimize the number of required flights for the operation. In addition, the PIC will ensure that all flight crews have been advised to:

- Avoid large concentrations of birds, especially in known sanctuaries and nesting areas,
- Minimize flights over known bird habitats,
- Avoid circling or hovering in the vicinity of large concentrations of birds,
- Follow the environmentally acceptable minimum flight altitudes whenever possible.

The following list provides a summary of environmentally acceptable minimum flight altitudes over:

- Areas likely to have birds: 650 m (2,100 ft),
- Known bird sanctuaries and colonies: 1,100 m (3,500 ft),
- Large mammals: 300 m (975 ft),
- Caribou herds: 650 m (2,100 ft),
- Parks, reserves and refuges: 650 m (2,100 ft),
- Beluga and Bowhead whales: 300 m (975 ft).

EMERGENCIES

Emergency Response Plan

The PIC will ensure that all emergencies are managed according to the CPE Emergency Response Plan. This plan establishes the responsibilities of key personnel for the procedures to be followed in the event of an emergency. The Emergency Response procedures several phases which normally occur sequentially:

- Implement an effective immediate response to control the emergency and minimize further risk to personnel, the environment and property.
- Readily access any emergency help that may be required to maintain control of the situation.
- Collect all relevant information associated with the emergency.
- Complete all required notifications of the occurrence of the emergency.
- Implement a recovery process, including any additional safety measures required, so that normal operations can resume.

Firefighting

The PIC will establish three firefighting teams which consist of suitably trained and qualified personnel. Each team will be assigned an experienced leader and will be supplied with two Scott SCBA's. Other personnel onboard will be assigned back-up roles to the firefighting teams which may include fetching fire extinguishers, running hoses and relaying communications.

The following personnel will have specially assigned Fire Duties:

- PIC will be in overall command and all emergency response will originate from him or his designate
- Chief Mechanic will be in charge of the maintenance team
- Marine Supervisor on scene commander will organize fire teams liaises with Control room
- On duty Watch Keeper will lead Fire Team 1
- On duty Crane Operator will lead Fire Team 2
- Off duty Crane Operator will lead Fire Team 3
- Medic will be in charge of medical team and report to control room
- Designated hotel staff will check rooms and make sure that all cabins are empty, doors are closed and report to medic team
- All team leaders will take head counts at their muster stations and report to control room
- The control room team will take head counts from all muster stations. When full head count is achieved PIC will broadcast on PA and radio

- HSE advisor will take head count of third party personnel or those without response duties at their muster station and report to control room.

Detailed descriptions of the teams, together with all the names of their members, will be recorded in the Station Bill onboard.

Visitors, third party personnel, and those without assigned firefighting duties will assemble in the mess hall or an alternate muster station as announced via the public address system under the leadership of the HSE Advisor.

Emergency Evacuation

Any rig abandonment or evacuation shall only be on verbal command from the PIC after all personnel have been mustered.

Incident Investigations – Opportunity For Improvement

The Alberta OHS Act Section 18 states that any safety related incident must be immediately reported to authorities if it:

- Results in a death or,
- Causes a worker to be admitted to hospital for more than two days or,
- Involves an unplanned or uncontrolled explosion, fire or flood that causes or has the potential to cause a serious injury or,
- Involves the collapse or upset of a crane, derrick or hoist or,
- Involves the collapse or failure of any component of a building or structure necessary for the structural integrity of the building or structure.

The PIC will ensure that the steps outlined in the CPE Emergency Response Plan are followed prior to beginning the investigation of any reportable incident and will ensure that any investigation proceeds in compliance with the Alberta OHS Act Sections 18 and 19.

In addition to the above, it is CPE policy to document and investigate any safety incident which caused, or had the potential to cause:

- Personal injury,

- Environmental damage,
- Significant property damage.

CPE expects all contractors to report all safety related incidents to the CPE PIC so that they can be documented and investigated.

It is CPE policy for all Incident Investigations to:

- Take place promptly in order to determine the potential for ongoing hazardous conditions,
- Collect all pertinent information on the incident,
- Analyze all significant causes,
- Determine and implement the proper remedial actions,
- Monitor the effectiveness of any remedial steps taken.

Line supervisors must be involved in all Incident Investigations because they:

- Have a personal interest,
- Know the people and situations well,
- Are able to obtain the required information,
- Initiated the process,
- Benefit from knowing the causes.

CPE's Incident Report Form, and the associated instructions for completion, will be utilized in order to ensure that all of the appropriate information on each incident is collected and easily accessible for further analysis.

CPE policy is to retain the records of all first aid incidents for no less than three years from the date of recording.

RECORDS MANAGEMENT AND DOCUMENTATION

CPE recognizes its obligations to protect its workers, the environment, as well as company assets, and is committed to a policy of continually improving its health and safety practices in its ongoing projects, as well as for future ones. In order to achieve these objectives, CPE will review all of the reports arriving from the rig as they come in, as well as conduct a comprehensive project review and analysis of the project upon its completion.

The PIC will ensure that all pertinent records are provided to CPE management, during the course of the operation and at the completion of the project on a schedule established with the Project Manager. The safety records provided will include all of the following documentation:

- Orientations,
- Safety meetings,
- Inspections,
- Work permits,
- Incident investigations.

These records will enable CPE to ensure that it can effectively:

- Manage the operation,
- Comply with legislated standards,
- Ensure client satisfaction,
- Enable benchmarking against other operators,
- Provide documentation, in the event it is required, for legal proceedings or other reasons.

CHECKLISTS AND FORMS

CPE Contractor Evaluation Checklist

CPE Worksite Safety Checklist

CPE Worksite Safety Checklist

This Checklist will be used by the Wellsite Supervisor during initial inspection of the wellsite. "Status" refers to the date of the inspection. "Corrected" refers to the date on which remedial steps have been completed on outstanding items.



Item

Status Corrected

General Safety Items

	Yes	No	n/a	Date
HUET training for all personnel verified				
Qualified HLO personnel verified and assigned				
Rescue boat operational and on standby				
Lifesaving equipment inspected				
CPE Safety Policy posted				
All contractor safety programs reviewed and approved				
Initial Safety Orientations completed				
First aid personnel and supplies in place				
Fire detection systems inspected				
Fire fighting equipment inspected				
Completed list of all personnel on location				
Fuel transfer equipment inspected				
Fuel transfer procedures reviewed and approved				
Plans for required safety meetings in place and communicated to all supervisors				
Vessel inspection and certification completed				
Work place safety inspection completed				
Cranes certified for operation				
Fall protection systems inspected				
PPE policy implemented				
All PPE issued				
WHMIS policy implemented				
Other:				
Other:				
Other:				
Other:				

Special Work Procedures In Place

	Yes	No	n/a	Date
Confined spaces procedures implemented				
Hot work procedures implemented				
Crane and forklift safety procedures in place				
Toxic and/or corrosive materials hazard management implemented				
Lockout procedures implemented				
Other:				
Other:				
Other:				

Emergency Response Preparations

	Yes	No	n/a	Date
All emergency response numbers identified and posted				
Fire extinguishers checked				
Site specific emergency response plan reviewed				
Other:				
Other:				
Other:				

Safety Meeting Topics

CPE Project Kick-Off Safety Meeting Topics

The following is a suggested list of topics that could be discussed at a project Kick-Off meeting. Topics may be added or deleted as required for each specific situation provided that a full safety orientation is attained.



Introduction

- Overview of project
- Overview of worksite
- Project schedule
- CPE expectations of contractors
- Contractors responsibilities
- Authority of CPE to terminate contractor work
- Rights and responsibilities of workers as per CPE Safety Manual

Safety (refer to the appropriate sections of the CPE Safety Manual for details)

- Introduction to Safety Handbook
- Training requirements
- Hours of work
- Tracking workers; requirements to check in and out of the worksite
- Safety Meetings
- Hazard identification and control
- PPE policy
- Types and locations of all onsite safety equipment
- Fire protection; smoking rules
- Locations of restricted work areas and restricted access areas
- Work Permits
- Lockouts
- Power tools and machinery
- Toxic and corrosive chemicals (WHMIS)
- Flammable and explosive gasses, compressed gas cylinders
- Lifting devices: cranes, hoists, forklifts
- Working at heights: scaffolds, ladders
- Welding and hot work
- Noise exposure
- Electrical hazards
- Confined space entry
- Altering safety devices
- Transport and handling of dangerous goods

Environmental Awareness (refer to CPE Safety Manual for details)

- CPE policy to minimize environmental impact
- Waste management
- Wildlife

Emergency Response Plan (refer to Site Specific Emergency Response Plan for details)

- Potential types of emergencies
- Firefighting
- Locations of safe areas
- Responsibilities of key personnel
- onsite Responsibilities of the head office
- Local emergency services

Accident Investigation (refer to CPE Safety Manual for details)

- Reporting incidents as well as "near misses" and opportunities for improvement
- Involvement of supervisors and workers
- Reporting to regulators

Work Permits

Safe Work Permit: Cold Work



Prepared By		Permit No:
Name:	Signed:	
Date:	Time:	

Permit Valid For:

Location of Work:
Start Time/Date:
End Time/Date:
Person doing the work:
Person supervising the work:

Work to be done:

Hazard Management:	Yes	No	N/A
Has a work site inspection been completed?			
Are there any toxic, corrosive, flammable or dangerous materials at the work site?			
Will there be work at heights?			
Will there be hot work? If yes, then a Hot Work Permit is required.			
Will there be exposure to unsafe noise?			
Will there be compressed gas?			
Will there be hazardous energy?			
Will there be power tools?			
Will there be electrical hazards?			
Will there be confined space entry? If yes, then a Confined Space Work Permit is required.			
Will there be crane operations?			
Will there be fork lift operations?			
Has a Job Safety Analysis been completed and hazards identified?			
Have all hazard management methods identified in the JSA been implemented (list all)?			
#1:			
#2:			
#3:			
#4:			
#5:			
Other:			
Other:			
Other:			

PPE Requirements	Yes	N/A
Eye protection details:		
Protective clothing details:		
Respiratory protection details:		
Fall protection details:		
Other:		
Other:		

Permit Instructions

This permit shall remain posted at the work site while the work is underway.
The permit issuer or designate shall inspect the worksite while the work is underway.
This permit shall be returned to the issuer immediately upon completion of the work or at the end of the work shift.

Safety Inspections:

Work site inspected by:		Date/time:
--------------------------------	--	-------------------

Work site inspected by:		Date/time:	
Work site inspected by:		Date/time:	

Safe Work Permit: Confined Space Entry



Prepared By		Permit No: <input style="width: 100px;" type="text"/>
Name:		Signed:
Date:	Time:	

Permit Valid For:

Locaton of Work:
Start Time/Date:
End Time/Date:
Person doing the work:
Person supervising the work:

Work to be done:

Prior to Entry of Confined Space:	Yes	No	N/A
For entry into areas purged with inert gas, WCB notification completed			
All associated work that can be done outside of confined space is completed			
Ventilation standards met			
Responsible supervisor assigned			
MSDS information reviewed for any hazardous substances in confined space			
Verified that workers have appropriate training completed			
Required lockouts completed			
Purging operations completed			
Stand-by personnel assigned			
Rescue plan reviewed and approved			
Rescue personnel available			
Helpers ready			
LEL & H2S monitors calibrated			
Atmospheric testing completed			
All entry points identified and secured against unauthorized entry			
Other:			
Other:			
Other:			

PPE Requirements	Yes	N/A
Eye protection details:		
Protective clothing details:		
Respiratory protection details:		
Fall protection details:		
Other:		
Other:		

After Completion of Confined Space Work:	Yes	No	N/A
Inspection of confined space completed			
All personnel accounted for			
All equipment accounted for			
Other:			
Other:			
Other:			

Permit Instructions

This permit shall remain posted at the work site while the work is underway.
The permit issuer or designate shall inspect the worksite while the work is underway.
This permit shall be returned to the issuer immediately upon completion of the work or at the end of the work shift.

Safety Inspections:

Work site inspected by:		Date/time:	
Work site inspected by:		Date/time:	

Work site inspected by:		Date/time:	
-------------------------	--	------------	--

Safe Work Permit: Hot Work



Prepared By		Permit No: <input style="width: 100px;" type="text"/>
Name:	Signed:	
Date:	Time:	

Permit Valid For:

Location of Work:
Start Time/Date:
End Time/Date:
Person doing the work:
Person supervising the work:

Work to be done:

Hazard Management:

	Yes	N/A
Have all process materials (liquid, gas) been removed from equipment?		
Has the equipment been adequately cleaned with steam, water, other?		
Has the equipment been purged with inert gas?		
Has adequate ventilation been provided?		
Has the equipment been protected by blanking, disconnection, blocking and draining?		
Have all electrical switches been locked out?		
Is open flame welding equipment permitted?		
Is electrical equipment permitted?		
Is gasoline, diesel or propane driven equipment permitted?		
Are there flammable materials at or below the work area?		
Is a suitable fire extinguisher at the site?		
Has a fire watch been assigned?		
Is wind speed or direction an issue for this work?		
Is gas testing necessary?		
Other:		
Other:		
Other:		

PPE Requirements

	Yes	N/A
Eye protection details:		
Protective clothing details:		
Respiratory protection details:		
Other:		
Other:		

Permit Instructions

This permit shall remain posted at the work site while the work is underway.
The permit issuer or designate shall inspect the worksite while the work is underway.
This permit shall be returned to the issuer immediately upon completion of the work or at the end of the work shift.

Safety Inspections:

Work site inspected by:		Date/time:	
Work site inspected by:		Date/time:	

Work site inspected by:		Date/time:	
-------------------------	--	------------	--

Incident Report



CPE Accident/Incident Report

PIC will use this form to collect information on an incident/accident and the subsequent follow-up.

Prepared By

Page 1 of 2

Name:		Phone:
Date:	Time:	

Incident Description:

Incident Type (check all that apply)

Lost Time			Injury/Illness		Property Damage	
Medical Aid					Other	

Injuries

Name	Occupation	Injury

Damage

Describe resultant damage to environment and/or company property:

Witnesses:

Name	Occupation	Contact Information

Additional Notes



CPE Accident/Incident Report

Project Manager will use this form to collect information on an incident/accident and the subsequent follow-up.

Incident Analysis:

Page 2 of 2

What conditions or acts contributed to the incident:

Post Incident Review

Led by:	
Investigation Team:	
Completed on (date):	
Management review by:	Date:
Management comments:	

Remediation and Prevention:

Actions that will be taken to repair all damage and to prevent recurrence of this or similar incidents:

Schedule:

The estimated time frame for implementation of actions listed above:





EMERGENCY RESPONSE PLAN

*Aurora College
Training Well G-04*

Prepared by

Canadian Petroleum Engineering Inc.

900, 600 – 6th Avenue S.W.

Calgary, Alberta, Canada T2P 0S5

Phone: (403) 263-0752

Fax: (403) 233-0859

E-Mail: cpe@cpe.ab.ca

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 •identify causes of incidents and gaps in the OHS Programing;
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EMERGENCY RESPONSE POLICY

Canadian Petroleum Engineering Inc. (CPE) Emergency Response Policy is to initiate immediate emergency response minimizing public and environmental exposure, and to protect all employees, contract personnel and assets.

In support of this policy, the following guidelines are identified:

1. Personnel and public safety are the primary concerns.
2. Notification of an emergency event concerning Aurora College personnel and relevant third parties is mandatory.
3. Containment of the event is critical to limit injury and damages.
4. Emergency management responsibilities will be assigned prior to the event occurring, wherever possible.
5. All external communications will be channelled through Aurora College.
6. Effective response depends on all aspects of the Emergency Response Plan being current, therefore all employees are responsible for reporting any errors or omissions in this Plan to CPE's Emergency Response Coordinator.
7. All personnel at the worksite or associated field locations are to be aware of the Emergency Response Plan and understand their responsibilities.

For an emergency involving a third party, respond in a best efforts response with the procedures most appropriate to the event as described in this Emergency Response Plan.

For an emergency in which CPE has a legal obligation to respond, respond immediately in accordance with this Emergency Response Plan to the extent required by law.

For an emergency in which CPE has no legal duty to respond, but where public perception or the name of the Company is involved in any way, or a definite threat exists to people or the environment, and prompt

response is not forthcoming from others, respond to the extent required to control and contain the emergency and eliminate danger to the public.

For an emergency in which CPE has no association to the emergency, respond when requested by government authority, the public, or industry, without prejudice.

Report all emergencies in accordance with the procedures set out in this manual.

HOW TO USE THIS MANUAL

For any Production Facility Site emergency:

- If you are the Head Office Responder, refer to the sections in this manual identified by the **Head Office Response** and the **Emergency Contacts** tabs.
- If you are a Designated Field Responder, refer to the Sections in this manual identified by the **Emergency Contacts** and **Onsite Response** tabs, as well as the sections dealing with the specific type of emergency which is identified by the **Uncontrolled Gas Release, Fire/Explosion, Spills, and Injury & Fatality** tabs.

This plan focuses on activities and responsibilities of the Incident Commander at head office and the On-Scene Commander at the work site. These two key individuals must be in regular communication to organize and coordinate the response and recovery. They are responsible to delegate tasks in order to ensure each of the Emergency Response Plan steps assigned to them is completed.

The Emergency Response Plan requires the Head Office Responder and the Designated Field Responder to repeat various steps, as required, until the emergency situation has ended.

Organization And Emergency Contacts

An organization chart and list of emergency contacts has been provided in this manual under the **Emergency Contacts** tab.

Forms

A series of forms have been provided at the end of this manual under the **Forms** tab. These forms can be copied as many times as required. The forms are intended to help responders by ensuring that they:

- Obtain all appropriate information on the emergency.
- Are provided with access to key resources.
- Consider all reasonable options for their response.
- Implement the appropriate steps to manage the emergency.
- Have ready access to key information during the emergency.
- Prepare a comprehensive history of the entire event as it takes place.

In addition, information gathered by completing the appropriate Emergency Response forms, can help to ensure that:

- Appropriate measures can be taken to recover from the emergency.
- Any subsequent investigations have adequate facts available to them.
- A basis for improvement can be established.

Demobilizing And Debriefing

The section of the manual identified by the **Demobilizing & Debriefing** tab deals with the additional steps to be taken after the emergency has been brought under control.

Government Roles And Responsibilities

The section of the manual identified by the **Government Roles & Responsibilities** tab provides information on the mandates of various government agencies that can have an interest in any on-site emergency.

Communication Guidelines

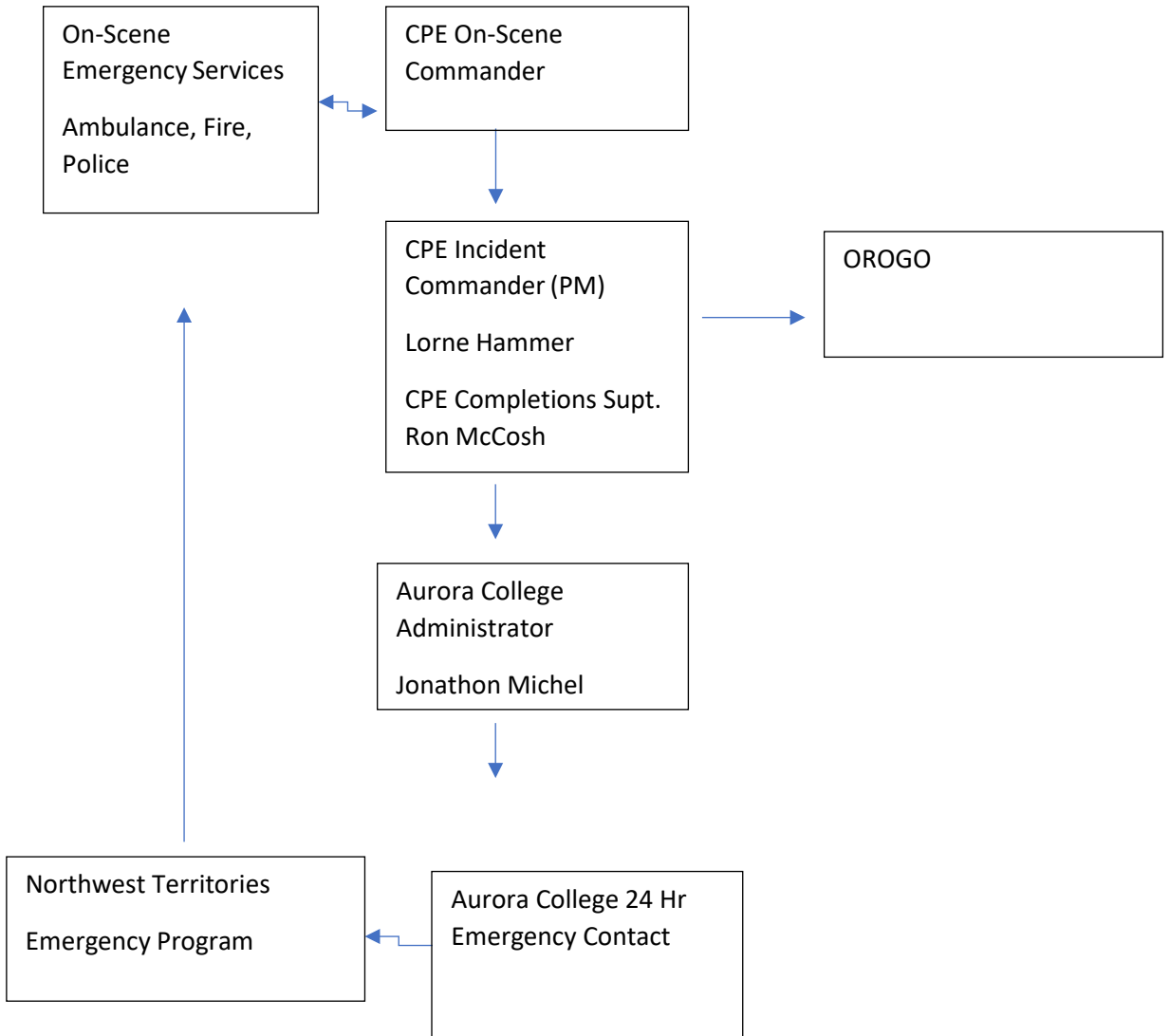
The section of the manual identified by the **Communication Guidelines** tab provides information on appropriate responses when dealing with news media and vendors. In all cases, dealing with news media must be left to Aurora College.

Map

The section of the manual identified by the **Map** tab contains a local map that can provide a useful reference for planning and monitoring emergency responses.

EMERGENCY COMMUNICATIONS

For any emergency, all emergency responders should follow the communications protocol outlined in the chart below. Contact details are provided on the following page.



EMERGENCY CONTACTS

ENGINEERING AND OPERATIONS CONTACTS

Position	Name	Telephone	Number	E-Mail
Project Manager	Lorne Hammer	Office	403- 263- 0752	lhammer@cpe. ab.ca
		Cellular		
Completions Superintendent	Ron McCosh	Office	403- 263- 0752	rmccosh@cpe. ab.ca
		Cellular		
Completions Supervisor	TBD	Cellular		
Aurora College	Jonathon Michel	Office	867- 777- 7878	Jmichel@auror acollege.nt.ca

EMERGENCY RESPONSE CONTACTS

Position	Name	Location	Telephone	Email
Orogo Executive Director	Ms. Pauline De Jong	Yellowknife	1(867) 767-9097	Pauline_DeJong@gov.nt.ca
Chief Safety Officer	Michael Martin	Yellowknife	1(867) 446-2235	Mike_Martin@gov.nt.ca
Inuvik Regional Hospital		Inuvik	1(867) 678-8000	
Inuvik RCMP		Inuvik	1(867)777-1111	GDIV_INUVIK_DETACHMENT@rcmp-grc.gc.ca
Inuvik Fire Department		Inuvik	1(867)777-2222	
OROGO Incident Report Line			1(867) 445-8551	
NWT Spill Reporting Line			1(867) 920-8130	
GNWT OH&S			1(867) 920-3888	

ONSITE RESPONSE

EMERGENCY FIRST RESPONSE

Usually the first person on emergency scene will raise an alarm.

The On-Scene Commander will act to:

1. Protect all personnel by employing SCBA, respirator and gas detectors if required.
2. Evacuate personnel, if required, to a predetermined safe area or upwind alternate.
3. Locate all personnel; identify and assess all casualties.
4. Give first aid treatment as required. Do not move injured persons unless necessary to prevent further injury.
5. Contact appropriate emergency services: Ambulance, Hospital, Fire, RCMP. Refer to **Emergency Contacts** tab.
6. Establish an On-Scene Command Post.
7. Determine the location and condition of all on-site personnel.
8. Initiate emergency management using assigned teams. Ensure that all teams (minimum of 2 persons per team), entering hazardous area are properly equipped with all appropriate safety and detection equipment. As appropriate, refer to the specific procedures outlined under **Uncontrolled Gas Release, Fire/Explosion, Spills, and Injury & Fatality** tabs of this manual.
9. Evaluate the emergency and determine the appropriate Severity Level:

Level 1 – There is no immediate Public Hazard. No danger outside company property or right of way.

Immediate control of the hazard/source is possible, there is no threat to the public, minimal environmental impact, little or no news media interest and the situation can be handled entirely by company personnel. As a precaution, a voluntary evacuation of sensitive residents maybe initiated.

Level 2 – There is a Potential Hazard to the Public. There is a potential for the emergency to extend beyond company property. OROGO and the RCMP must be contacted through the Northwest Territories Emergency Program. Refer to the **Emergency Contacts** tab. Although imminent control of the emergency is probable, there is some threat to public, moderate environmental impact and news media interest. Establish roadblocks and begin general evacuation procedures.

Level 3 – There is a Definite Public Hazard. There is an Uncontrolled Emergency, public safety is jeopardized, there is significant environmental impact, significant news media interest, immediate municipal and provincial government involvement and assistance is needed from outside parties. Complete evacuation procedures. Ignite an uncontrolled gas release if those criteria are met.

CONTINUING EMERGENCY MANAGEMENT

After the First Response, the On-Scene Emergency Commander will continue with the emergency management:

1. Begin an Incident Log – Refer to **Forms** tab of this manual.
2. Notify Incident Commander at Head Office – Refer to **Emergency Contacts** tab.
3. Continuously monitor whereabouts and status of all on-site personnel.
4. Continue with Emergency Response as required for specific emergency. Refer to procedures outlined under **Uncontrolled Gas Release, Fire/Explosion, Spills, and Injury & Fatality** tabs of this manual.

HEAD OFFICE RESPONSE

PHASE 1 – EMERGENCY RESPONSE

1. When a call advising an emergency has been received, record information on the incident and on any initial steps underway for stabilization and containment. Use the **First Response** form under the **Forms** tab of this manual while the caller is still on the phone.
2. Begin an Incident Log by documenting all of the following steps.
3. Assign the Incident Commander and establish a Company Emergency Operations Centre. The Incident Commander will coordinate activities through one central point and will have the following responsibilities:
 - Communication with field, government agencies, emergency response and support services,
 - Understand the level of complexity of the incident and apply appropriate logic to situation,
 - Update office and field personnel of current situation and estimated resolution timeframes,
 - Coordinate initial reporting and incident logging.
4. The Incident Commander will ensure an On-Scene Command Post (OSCP) has been established and confirm the On-Scene Commander.
5. The Incident Commander will confirm that the appropriate Emergency Level has been assigned:
Level 1 – There is no immediate Public Hazard. No danger outside company property or right of way.

Immediate control of the hazard/source is possible, there is no threat to the public, minimal environmental impact, little or no news media interest and the situation can be handled entirely by company personnel. As a precaution, a voluntary evacuation of sensitive residents maybe initiated.

Level 2 – There is a Potential Hazard to the Public. There is a potential for the emergency to extend beyond company property. The BC Oil & Gas Commission and the RCMP must be contacted through the Provincial Emergency Program. Refer to the **Emergency Contacts** tab. Although imminent control of the emergency is probable, there is some threat to public, moderate environmental impact and news media interest. Establish roadblocks and begin general evacuation procedures.

6. **Level 3** – There is a Definite Public Hazard. There is an Uncontrolled Emergency, public safety is jeopardized, there is significant environmental impact, significant news media interest, immediate municipal and provincial government involvement and assistance is needed from outside parties. Complete evacuation procedures. Ignite an uncontrolled gas release if those criteria are met.
7. The Incident Commander will assemble the appropriate response team for the specific emergency. Ensure that the Aurora College Administrator, with decision authority, will be present at the Emergency Operations Centre (GEOC) if it is activated.
8. The Incident Commander will confirm that the appropriate emergency management procedures have been implemented. Refer to the procedures outlined under the **Onsite Response, Uncontrolled Gas Release, Fire/Explosion, Spills, and Injury & Fatality** tabs of this manual.

9. The Incident Commander will maintain communications with On-Scene Commander and provide all support required, including assistance with all communications, additional personnel, and obtaining emergency equipment and services.
10. The Incident Commander will ensure that all available information has been recorded (refer to the **Forms** tab of this manual) then contact and report to the lead regulatory agencies.
11. The lead agency can initiate a fan out of calls to all other government agencies as required.
12. The Incident Commander will update all relevant regulatory agencies and complete their paperwork based on the nature of incident.
13. The Incident Commander will contact owners and/or occupants. Inform them of the situation and how to contact the company. He will outline all assistance that CPE Inc. will provide to them.
14. CPE Inc. will contact the immediate family of any injured or deceased worker, using RCMP assistance as appropriate.
15. CPE Inc. will notify all personnel and vendors. Refer to the Communications Guidelines tab in this manual.

PHASE 2 – RECOVERY RESPONSE

Information And Assessment

- The Incident Commander will assess damage to the worksite, including the time to repair and duration of outage.
- The Incident Commander will prepare an assessment report for CPE Project Managers. The report will outline the costs to clean up, repair, and replace equipment, and provide an estimated outage period. The report will describe potential legal and environmental liabilities, personnel issues, and regulatory concerns.
- Management will make a decision regarding continuation or shutdown on the basis of the damage report and on the available options.
- The Incident Commander will contact and meet with government agencies in order to agree on the next steps to be taken.
- The Incident Commander will meet with company legal counsel and outline the status of the recovery, as well as the company management decision to continue or suspend operations.
- Aurora College will issue an informational press release after conferring with the company legal counsel. Continuing Operation.

If the decision has been taken to continue operations, the CPE Project Manager will:

- Appoint a construction manager.
- Develop a reconstruction plan and tender to qualified contractors.
- Contact existing companies and contractors. Notify the companies and contractors working at the location of the decision to continue with operations. He will schedule their services and prepare

a list of alternate companies or contractors in the event that primary contractors are unavailable or unwilling to continue.

- Advise regulatory agencies of the continuing operations and coordinate all permits and regulatory requirements for continuation.
- Contact leasehold to outline the plan for continuing operations.
- Order replacement equipment and supplies (if required).
- Monitor and manage the construction project.
- Prepare a schedule for restarting operations and ensure that the associated work complies with all regulations.
- Provide updates on progress to Aurora College who may issue new press releases.

Suspending Operations

If the decision has been taken to suspend operations, the CPE Project Manager will:

- Establish a cleanup team to restore the site to its original condition and coordinate the work with the appropriate regulatory agencies.
- Ensure that the leaseholder is informed of the suspension plan and schedule.
- Coordinate with company legal counsel to ensure settlement of any claims.
- Contact all contractors to advise of the decision to suspend operation and will ensure that all final costs and penalties are suitably resolved.
- Shut down operations on completion of the clean-up and ensure that all commitments and requirements have been met.
- Provide updates on progress to Aurora College who may issue a new press release advising of the completion of the work suspension.

UNCONTROLLED GAS RELEASE

Note: There are local residents in the area who would have to be evacuated in the event of a gas release.

Management of an Uncontrolled Gas Release Emergency will begin with the steps outlined for all emergencies under the **Onsite Response** tab of this manual. The following additional items are specific to Uncontrolled Gas Release emergencies:

- Only those containment procedures that can be safely performed will be initiated. If there is doubt the situation can be safely stabilized, shutdown of the operation will be considered.
- The On-Scene Commander will assign a Gas Monitoring Crew with gas monitors in order to determine the location and concentration of the gas plume.
- The On-Scene Commander will establish an Emergency Zone from which all ignition sources and non-essential personnel will be excluded.
- In the event of ignition follow the emergency procedures outlined under the **Fire/Explosion** tab of this manual.
- If necessary, roadblocks will be set up where required and other area operators will be advised of the gas release. Refer to the **Maps** tab of this manual in order to identify appropriate locations for roadblocks. Advise the RCMP (refer to the **Emergency Contacts** tab of this manual) of the roadblocks to be set up.
- The On-Scene Commander will assemble the key information on the emergency using the **First Response** form found under the **Forms** tab of this manual.
- The On-Scene Commander will advise the Incident Commander of the emergency according to the communications outlined under the **Emergency Contacts** tab of this document and provide him with the information assembled in the **First Response** form.
- The On-Scene Commander will continuously monitor the progress with the containment procedures and will re-evaluate the Emergency Level and size of the Emergency Zone for the Uncontrolled Gas Release as required.
- The On-Scene Commander will maintain regular communications with the Incident Commander throughout the incident in order to keep him updated on containment efforts, and to advise him of any additional support required to control the emergency.
- The On-Scene Commander will monitor and report on the environmental impact of the gas release using the **Plume Tracking Form** and **Incident Log** found under the **Forms** tab of this manual.
- Once containment of the gas release has been achieved, the On-Scene Commander and the Incident Commander will follow the procedures outlined under the Demobilizing and Debriefing tab of this manual in order to close out the incident.

Fire/Explosion

Management of a Fire and/or Explosion Emergency will begin with the steps outlined for all emergencies under the **Onsite Response** tab of this manual. The following additional items are specific to Fire and/or Explosion emergencies:

- Only those fire-fighting procedures that can be safely performed will be initiated. The On-Scene Commander will ensure that no person will attempt to fight a fire unless they have been trained, and are using the appropriate personal protective equipment and extinguishers.
- All personnel will stay clear of tank ends and will fight the fire from a maximum distance possible.
- Fire fighters will ensure that they do not allow ice to form on vents that might cause an increase in gas pressure.
- All personnel will evacuate the area if tank discoloration, venting, or any other signs, suggest a build up of tank pressure.
- The On-Scene Commander will monitor the risk of any toxic or hazardous materials that may be released as a result of the fire and/or explosion.
- If the On-Scene Commander determines that there is doubt that the fire can be controlled, it will be isolated and allowed to burn out.
- The On-Scene Commander will contact any emergency services that may be required (refer to the **Emergency Contacts** tab in this document).
- The On-Scene Commander will determine if the entire operation should be shut down in order to reduce the risk of an escalating fire and/or explosion.
- Isolating fuel, and/or removing the oxygen and/or cooling the fuel in the ignition area will be utilized in order to control fires.
- In addition to the above, the On-Scene Commander may take any or all of the following measures to bring the situation under control:
 - Shut off electrical power to nearby equipment
 - Shut off fuel supplies to heaters near or downwind of the fire
 - Dissipate static charges
 - Eliminating any re-ignition sources from the surrounding area
- If necessary, roadblocks will be set up where required and other area operators will be advised of the gas release. Refer to the **Maps** tab of this manual in order to identify appropriate locations for roadblocks. Advise the RCMP (refer to the **Emergency Contacts** tab of this manual) of any roadblocks to be set up.
- The On-Scene Commander will assemble the key information on the emergency using the **First Response** form found under the **Forms** tab of this manual.
- The On-Scene Commander will advise the Incident Commander of the emergency according to the communications outlined under the Emergency Contacts tab of this document and provide him with the information assembled in the First Response form.
- The On-Scene Commander will continuously monitor the progress with the fire fighting and will re-evaluate the Emergency Level and the size of the Emergency Zone for the incident as required.

For incidents that have the potential to affect the surrounding area, the On-Scene Commander will advise all relevant regional and provincial authorities referenced under the Emergency Contacts tab of this manual. At the request of the regulators, Transport Canada may decide to issue a Notice to Airmen, which advises of restrictions on the airspace near the Emergency Zone.

- The On-Scene Commander will maintain regular communications with the Incident Commander throughout the incident in order to keep him updated on containment efforts, and to advise him of any additional support required to control the emergency.
- The On-Scene Commander will monitor and report on the environmental impact of the fire and/or explosion using Incident Log found under the Forms tab of this manual.

Once the fire and/or explosion risk has been brought under control, the On-Scene Commander and the Incident Commander will follow the procedures outlined under the Demobilizing and Debriefing tab of this manual in order to close out the incident.

SPILLS

Management of a Toxic or Hazardous Chemical spill will begin with the steps outlined for all emergencies under the **Onsite Response** tab of this manual. The following additional items are specific to Toxic or Hazardous Chemical Spill emergencies:

- Only those containment procedures that can be safely performed will be initiated. If there is doubt the situation can be safely stabilized, shutdown of the operation may be required.
- Protection of life, environmentally sensitive areas, watercourses and recreational areas, shall be the first priorities.
- The On-Scene Commander will assign a team to determine the location, type and amount of any spilled materials.
- The On-Scene Commander will establish an Emergency Zone, isolating the area of spilled material, from which all non-essential personnel will be excluded.
- Any essential personnel entering the Emergency Zone will be first provided with detailed information on the exact nature of the Toxic or Hazardous Spill, including a listing of all materials spilled, the volume and locations of spilled material, and their respective WHMIS and MSDS properties.
- The On-Scene Commander will take all available measures to ensure that the spill is remains contained within the Emergency Zone.
- If necessary, roadblocks will be set up where required and other area operators will be advised of the gas release. Refer to the **Maps** tab of this manual in order to identify appropriate locations for roadblocks. Advise the RCMP (refer to the **Emergency Contacts** tab of this manual) of the roadblocks to be set up.
- Concurrently with, or immediately following, the spill containment procedures, the On-Scene Commander will initiate spill clean-up procedures that are consistent with the WHMIS and MSDS guidelines for clean-up.
- The On-Scene Commander will assemble the key information on the spill emergency using the **First Response** form found under the **Forms** tab of this manual.
- The On-Scene Commander will advise the Incident Commander of the emergency according to the communications outlined under the **Emergency Contacts** tab of this document and provide him with the information assembled in the **First Response** form.
- The On-Scene Commander will continuously monitor the progress with the spill isolation and clean up and will re-evaluate the Emergency Level and the size of the Emergency Zone for the incident as required. For incidents that have the potential to affect the surrounding area, the On-Scene Commander will advise all relevant regional and provincial authorities referenced under the **Emergency Contacts** tab of this manual. At the request of the regulators, Transport Canada may decide to issue a Notice to Airmen, which advises of restrictions on the airspace near the Emergency Zone.
- The On-Scene Commander will maintain regular communications with the Incident Commander throughout the incident in order to keep him updated on containment and clean up efforts, and to advise him of any additional support required to control the emergency.

- The On-Scene Commander will monitor and report on the environmental impact of the spill using the **Incident Log** found under the **Forms** tab of this manual.
- Once the clean up of the spill is completed, the On-Scene Commander and the Incident Commander will follow the procedures outlined under the Demobilizing and Debriefing tab of this manual in order to close out the incident.

Spill Reporting in the NWT

Refer to the government of NWT website www.eccc.gov.nt.ca/en/services/report-spill

To determine if the spill must be reported refer to document:

“What are reportable quantities for spills in the NWT

NWT Government Website: [Report a spill | Environment and Climate Change \(gov.nt.ca\)](http://www.gov.nt.ca/en/services/report-spill)

Spills in the NWT must be reported within 24 of the spill to the 24hr spill report line 1-867-920-8130

Refer to the Government of NWT site and complete a spill form. Submit this form to spills@gov.nt.ca

Once a spill has been reported the government will notify all regulatory agencies

INJURY/FATALITY

Management of a Personal Injury or Fatality Emergency will begin with the steps outlined for all emergencies under the **Onsite Response** tab of this manual. The following additional items are specific to Personal Injuries and/or Fatalities:

- The On-Scene Commander will arrange for the appropriate emergency services: Ambulance, Hospital, Air Ambulance, and RCMP (refer to the Emergency Communications tab in this manual).
- Only a medical doctor can confirm a fatality and all casualties shall be considered alive until such confirmation.
- The On-Scene Commander will ensure that the accident site is not disturbed until it can be thoroughly investigated by the Medical Examiner and/or the RCMP.
- The On-Scene Commander will arrange for personnel to assist the RCMP or Medical Examiner in watching over the body of a deceased casualty.
- The On-Scene Commander will advise the Incident Commander of the nature of the Personal Injury and/or Fatality according to the communications outlined under the Emergency Contacts tab of this document and provide him with the information assembled in the First Response form.
- The On-Scene Commander will provide an immediate verbal report to OROGO and the NT/NU Workers Safety and Compensation Commission (WSCC) in the event of a serious injury or confirmed death.

OROGO Incident Response -1-867-445-8551

NT/NU Workers Safety and Compensation Commission 1-800-661-0792

Injury Reporting-Employer must submit an incident report to WSCC within 3 days of the incident.

- The On-Scene Commander will record the names of all witnesses and assemble the information for the Accident/Incident Report.
- The Incident Commander will contact the RCMP to coordinate notification of next-of-kin (refer to the Emergency Communications and Communications Guidelines tabs in this manual).
- The On-Scene Commander will make a record, and take into safekeeping, all of the possessions of all accident victims, and then turn these over to the RCMP or Medical Examiner.

NOTIFICATION OF NEXT OF KIN

If a serious accident occurs it is most important that the next of kin of a seriously injured or deceased person be notified as soon as possible. If there is a fatality, only the RCMP can notify next of kin.

DEMOBILIZING AND DEBRIEFING

DEMOBILIZATION

CPE will coordinate all recovery efforts when the emergency has been brought under control. The type of activities could include:

- Dismantling of roadblocks.
- Recall of emergency monitoring personnel.
- Inspection emergency equipment in order to determine servicing and replacement requirements.
- Contacting all affected parties to inform them of the “emergency over” status.
- Complete all remedial work required in the event of any environmental damage incurred.
- Completion and assembly of all forms and documents prepared during, or after, the emergency.
- Provision of appropriate statements to the media via the Media Representative.
- Making arrangements for fair and timely compensation to all persons that have incurred a loss as a result of the emergency.

POST INCIDENT ASSESSMENT

CPE will perform a post incident assessment in order to identify the root causes of the emergency, as well as the effectiveness of the subsequent emergency responses. The conclusions of the assessment will be used to provide a basis for continuous improvement and will be reviewed with Aurora College. The components of Post Incident Assessment will be as follows:

Post Incident Debriefing

A Post Incident Debriefing will be held for all Level 2 and Level 3 emergencies within 30 days after the incident has been brought under control. All parties that were involved or affected (government, public, company) will be invited to participate. The Post Incident Debriefing will concentrate on:

- The cause of the emergency incident
- Availability of adequate resources for response
- Effectiveness and timeliness of the emergency response
- Training level of the responding personnel
- Suitability of emergency response equipment

Post Incident Report

A Post Incident Report will be based on the Post Incident Briefing, as well as on all documentation prepared during and after the emergency incident. The Post Incident Report will be prepared and submitted to the Regulator of the NT OROGO by the Incident Commander no later than 21 days after the incident occurring. The Post Incident Report will include all of the following information:

- A full description of the incident.
- A full explanation of the cause of the incident.
- A detailed description of the emergency response measures.
- A detailed status report of completed and ongoing environmental recovery efforts.
- Recommendations for preventive measures to prevent future incidents.
- Changes made to the emergency response plan in order to improve future emergency responses, including availability of trained personnel and appropriate equipment.

STATUTORY REPORTING REQUIREMENTS

Written reports that are required under federal or provincial legislation are to contain only specific facts that describe the incident. The report should not express an opinion as to how the incident occurred or who was responsible. The report is compellable in a court of law in the event of litigation. In serious cases, the company's legal counsel should review the report prior to submission.

OROGO will be sent an investigative report within 21 days of the incident addressing the cause of the incident and the steps that weretaken to:

- Control the emergency.
- Maintain public safety.
- Protect the environment.
- Prevent a similar incident

For Level 2 or Level 3 emergencies OROGO may request a "Post Incident Debriefing" with any local residents or affected public.

Workers Safety and Compensation Commission (WSCC) requires a written report for all accidents having potential to cause serious injury as a result of:

- An uncontrolled explosion.

- Failure of a safety device on a hoist, hoist mechanism, or hoist rope.
- Collapse or upset of a crane.
- Collapse or failure of any structural load-bearing component of a building or structure under construction.
- Collapse or failure of a temporary support structure.
- An inrush of water, fire or explosion in an underground work area.
- Collapse or cave in of a trench, excavation wall, underground work place or stockpile.
- Accidental release of a hazardous substance.

PRIVILEGED REPORTS

A privileged report is not compellable in a court of law. It is prepared for the purpose of assisting the Legal Representative in any existing or contemplated litigation. CPE Management, in consultation with the Legal Representative will determine the need for a privileged report. Except reports made pursuant to a statute, no other written reports will be prepared unless directed by the Legal Representative.

GOVERNMENT ROLES AND RESPONSIBILITIES

This section has been included within this Emergency Response Plan document as a reference for on-scene and head office responders in order to assist them with ensuring that the appropriate government agencies are notified of any emergency.

OROGO

- Provide a representative to the incident site (On-Site Command Post).
- Determine the extent of the immediate hazard and issue a Closure Order to keep the public and press out of the hazard area if the situation warrants.
- Monitor operations and mitigate activities within the hazard area.
- Implement the Government of Northwest Territories Emergency Program telephone fan-out to alert all affected departments (including OROGO), municipalities and other orders of government and industry.
- Coordinate reception plans for evacuation of the public with the affected municipalities,
- All other actions to protect NT public and property from the effects of sour gas.

WSSC

- Monitor the health and safety aspects of applicable occupations within the hazard area to ensure ongoing health and safety of all workers.

GNWT OH&S

- IDENTIFY CAUSES OF INCIDENTS AND GAPS IN THE OHS PROGRAMING;
- TO PREVENT SIMILAR INCIDENTS IN THE FUTURE;
- to fulfill any legal requirements;
- to determine the cost of an incident; and
- to determine compliance with the [NWT Safety Act](#) and [Occupational Health and Safety Regulations](#).

FISHERIES AND OCEANS CANADA

- Manage and assess activities relating to the protection of streams, water bodies and wildlife.

- ensure healthy and sustainable aquatic ecosystems through habitat protection and sound science.

TRANSPORT CANADA

- Provide authorization and assistance for roadblocks on major provincial/federal roads.

LOCAL BOARD OF HEALTH UNIT

- Monitor the health effects of the incident ensuring appropriate data is collected.

R.C.M.P.

- Assist with roadblocks, traffic control, evacuation, and residence security.

LOCAL MUNICIPAL GOVERNMENT/REGIONAL DISTRICT/FIRST NATION

- Implement the district/municipal emergency plan and use any or all of the resources available to the municipality to protect the health, safety and welfare of the public.
- Provide authorization and assistance for roadblocks on district roads that necessary precautions are taken to protect the workers safety.

COMMUNICATIONS GUIDELINES

In all cases, dealing with news media should be left to the Aurora College Public Affairs office.

The regulator of the NWT OROGO must be contacted 24hrs prior to any press release or press conference concerning any incident or near miss activity relating to the Aurora College worksite.

The following information will assist Aurora College to comply with regulatory criteria for media communications. Being accurate and responsive to the media will ensure the company is seen as cooperative and will avoid misinterpretation.

All questions should be carefully considered when dealing with the media and reviewed prior to “going public” regarding any situation.

The Aurora College Public Affairs office will consider the following when providing media with information:

- Should a formal news conference be considered?
- If so, where and when should it be held?
- How will the various news media outlets be told?
- What are the deadlines that reporters are working against?
- How will follow-up information be provided?
- Is there a list of reporters or crews on the scene?
- How much access will be given to media to an incident site?
- What are the varying requirements of the different media (television, radio, newspapers, etc.)?
- How can the media be used to help with the emergency?
- How will uncooperative reporters be handled?

Do

- Confirm, in advance, Aurora College corporate information policy
- Designate a media representative who will be available and accessible at all times
- Have the major newsroom telephone and fax numbers on file for immediate reference
- Provide information in a straightforward accurate and up-to-date fashion
- Be consistent with all the different media representatives
- Act as quickly as possible if general public safety is involved
- For telephone interviews, ask if the conversation is being recorded

Do Not

- Be afraid to take charge of the situation
- Be intimidated by cameras and microphones
- Mislead the media
- Stage a situation for the benefit of the cameras
- Speculate on situations of which you are not certain
- Allow the media to jeopardize their safety or the safety of any other personnel
- Assume that reporters know your business, even if it is routine to you and your staff
- Assume that anything is “off the record”

Typical Media Information Requirements

- Name and emergency telephone number a contact person (24 hours)
- Nature and extent of the problem
- Any threat to public safety.
- Any risk to the environment
- Any requirement, and procedures, for an evacuation.
- Number of persons injured or involved in the incident
- Location of casualties
- Emergency response being implemented
- Access to the general area (if at all possible)
- Description of and directions to the incident site
- Timing of the next briefing.

Media Notification Regarding Injury Or Death

If it becomes necessary to provide media with information regarding casualties, ensure that proper notification of next of kin has been conducted prior to any information release (refer to the information provided under the **Injury/Fatality** tab of this manual). On-Scene staff and Operations management must ensure strict control over the non release of any incident information. Knowledge of the situation should be restricted to those at the site of the emergency and as required to ensure the safety of all personnel. Caution is advised in the use of mobiles and party line telephones for transmitting emergency information.

Example Note To Media

An (describe emergency event) occurred at the Aurora College (field name) site located at approximately (give direction and distance to the nearest major centre) at (date and time). A (subsequent event (if applicable) occurred. No one (or number of persons) was injured. Injured personnel are being treated at (provide name).

The production facility was (or was not) shut down and Canadian Petroleum Engineering Inc. is directing recovery operations on behalf of Spectra Energy.

A Control Centre has been established at (location) and monitoring of the situation and surrounding (describe) area is continuing.

The cause of the event has (or has not) been determined and the extent of damages is known (or not known) at this time.

The next update will be issued at (date and time).

For more information contact: (Name and number).

Signed: (Authorized signature of company officer)

Example Note To Staff

An (describe emergency event) occurred at Aurora College's (field name) site located at approximately (give direction and distance to the nearest major centre) at (date and time). A (subsequent event (if applicable) occurred. No one (or number of persons) was injured. Injured personnel are being treated at (provide name). Additional information will be provided to all staff as it becomes available.

The site was (or was not) shut down and Canadian Petroleum Engineering Inc. is directing recovery operations on behalf of Aurora College.

A Control Centre has been established at (location) and is manned by (names). Monitoring of the situation and surrounding (describe) area is continuing. The Control Centre is for emergency use only and inquiries for more information on this incident should be directed through (name).

The cause of the event has (or has not) been determined and the extent of damages is known (or not known) at this time. The incident is being investigated by (names).

We hope to be able to provide you with further information by (date and time).

Signed: (Authorized signature of company officer)

Example Note To Suppliers

This note is to inform you that our (name) facility has suffered a (describe emergency). The facility has (or has not) been shut down.

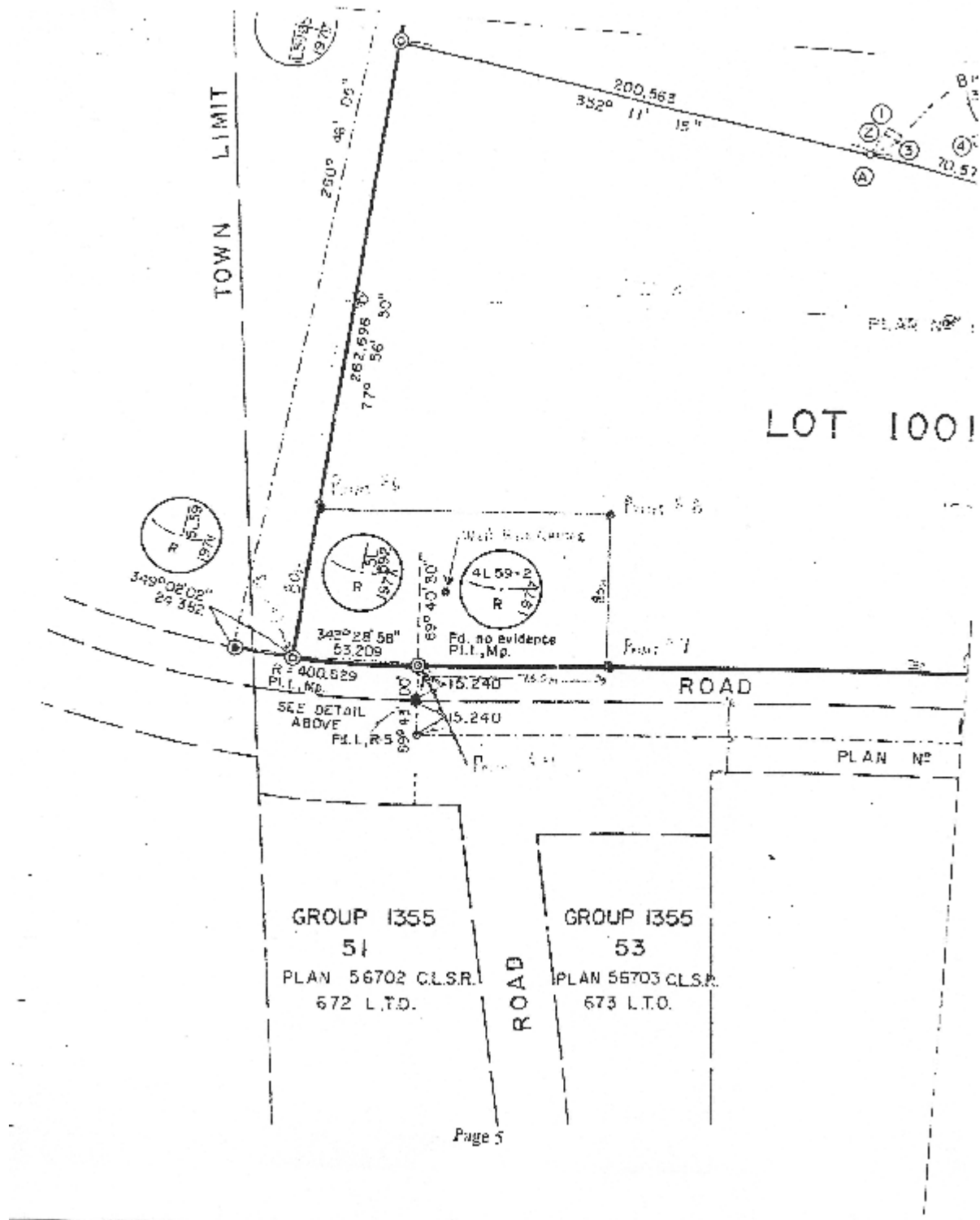
Current activities related to this project have (or have not) been suspended until approximately (date and time). Additional information will be provided to you by (name and number) as soon as it becomes available.

Thank you for your understanding and we regret any inconvenience caused by this incident. Should you wish to discuss this situation in more detail, please contact (name and number).

Signed: (Authorized signature of company official)

MAP







APEGA

Professional Practice Management Plan

Name of Permit Holder: Canadian Petroleum Engineering Inc.

Permit Number: P6474

Contact Information: 403-263-6380

Responsible Member: Ron McCosh P Eng

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1 PPMP Part 1: General Information

1.1 PPMP Declaration

In this section, the senior officer and at least one Responsible Member acknowledge their roles in developing, reviewing, and implementing the PMPP. The senior officer and at least one Responsible Member must sign a declaration annually.

As an APEGA permit holder, we understand that we must implement and follow this PPMP, which is specific and appropriate to our professional practice, to comply with Section 48(1)(d) of the *General Regulation*.

I, Lorne Hammer, as the senior officer responsible for our Permit to Practice, acknowledge that I have reviewed version Feb 28, 2023 of the PPMP and accept responsibility for its contents.

Original Signed by _____

<Lorne Hammer>

_____ <Date Signed>

I, Ron McCosh as a Responsible Member for our Permit to Practice, acknowledge that I have reviewed version Feb 28, 2023 of the PPMP and confirm it is appropriate to Canadian Petroleum Engineering Inc. area of practice.

Original Signed by _____

Ron McCosh P Eng

_____ <Date Signed>

1.2 Revision History

- Professional Practice Management Plan (PPMP) is to be reviewed on an annual basis.

REVISION HISTORY

DATE	VERSION	REVISION DESCRIPTION
Feb 28, 2023	1.0	Development of PPMP

1.3 Permit Holder Information

Canadian Petroleum Engineering Inc.
900-600 6th Ave SW
Calgary, Alberta T2P 0S5

Permit # P6474

Contact Information:

Lorne Hammer: 403-263-0752 Ext 101

Ron McCosh: 403-263-0752 Ext 102

Area of Practice

Well Operations – Drilling, Completions, Production

1.4 Objective of the PPMP

Canadian Petroleum Engineering Inc. provides consulting services to the upstream oil and gas industry

As an APEGA permit holder, we understand we must implement and follow this PPMP, which is specific and appropriate to our professional practice, to comply with Section 48(1)(d) of the *General Regulation*. We also understand we are bound by the Code of Ethics, described in Schedule 1 of the *General Regulation*. Definitions, Acronyms, Abbreviations

Canadian Petroleum Engineering will operate our consulting practice in a responsible and ethical business practice to provide professional services to our clients.

1.5 Definitions, Acronyms, Abbreviations

APEGA - Association of Professional Engineers and Geoscientists of Alberta

HSE- Health Safety and Environment

EPP - Environmental Protection Plan

AER – Alberta Energy Regulator

PPMP – Professional Practice Management Plan

PWP-Professional Work Product

PM – Project Manager

1.6 Supporting Documents

The Canadian Petroleum Engineering’s PPMP has utilized the following documents from APEGA in preparing the plan. Additional information is available in these documents to support the PPMP

APEGA Professional Project Management Plan

https://www.apega.ca/docs/default-source/pdfs/standards-guidelines/ppmp-practice-standard-nov2022.pdf?sfvrsn=8af6c9a5_2

Ethical Practice

https://www.apega.ca/docs/default-source/pdfs/standards-guidelines/ethical-practice.pdf?sfvrsn=78261e0b_14

APEGA Authenticating Professional Work Products

https://www.apega.ca/docs/default-source/pdfs/standards-guidelines/authenticating-professional-work-products.pdf?sfvrsn=5a1b9b57_20

Relying on the Work of Others and Outsourcing

https://www.apega.ca/docs/default-source/pdfs/standards-guidelines/relying-on-the-work-of-others-and-outsourcing.pdf?sfvrsn=45759b55_20

APEGA Continuing Professional Development Program

https://www.apega.ca/docs/default-source/pdfs/standards-guidelines/cpd-continuing-professional-development-program.pdf?sfvrsn=f9057e60_16

APEGA Practice Bulletin Drilling and Completions

https://www.apega.ca/docs/default-source/pdfs/standards-guidelines/practice-bulletin-drilling-and-completions-july-2021.pdf?sfvrsn=3494b2b6_4

Additional documents are available from the APEGA website.

[Practice Standards, Bulletins & Guidelines | APEGA](#)

1.7 PPMP Review Process

As an APEGA permit holder the Professional Practice Management Plan (PPMP) must be reviewed on an annual basis.

The PPMP review must take place prior to the end of February each year.

All modifications to the PPMP must be coordinated through the responsible member. (Ron McCosh)

2 *PPMP Part 2: Ethical Practice*

2.1 Ethical Practice

Canadian Petroleum Engineering provides quality engineering services and ethical business practices to our clients.

Canadian Petroleum Engineering will adhere to the Code of Ethics preamble and rules of conduct from the Engineering and Geosciences Act as noted on the following page.

Schedule

CODE OF ETHICS

**(established pursuant to section 20(1)(k)
of the Engineering and Geoscience Professions Act)**

Preamble

Professional engineers and geoscientists shall recognize that professional ethics is founded upon integrity, competence, dignity and devotion to service. This concept shall guide their conduct at all times.

Rules of Conduct

- 1** Professional engineers and geoscientists shall, in their areas of practice, hold paramount the health, safety and welfare of the public and have regard for the environment.
- 2** Professional engineers and geoscientists shall undertake only work that they are competent to perform by virtue of their training and experience.
- 3** Professional engineers and geoscientists shall conduct themselves with integrity, honesty, fairness and objectivity in their professional activities.
- 4** Professional engineers and geoscientists shall comply with applicable statutes, regulations and bylaws in their professional practices.
- 5** Professional engineers and geoscientists shall uphold and enhance the honour, dignity and reputation of their professions and thus the ability of the professions to serve the public interest.

AR 150/99 Sched.:37/2003;8/2005;55/2012

Whistleblowing

Licensed professionals have an ethical obligation to report a licensed professional, employer, or client whose actions are putting the public at risk.

Especially if there is risk:

- to an identifiable individual or group
- to the environment
- of serious bodily harm or death
- of imminent danger

The licensed professional who makes a report to the proper authority in good faith must be able to do so without reprisal from other licensed professionals, members in training, their employer or their client. CPE supports this policy in providing quality professional services to our clients.

APEGA Reference document:

https://www.apega.ca/docs/default-source/pdfs/standards-guidelines/ethical-practice.pdf?sfvrsn=78261e0b_14

3 PPMP Part 3: Professional Business Practice

3.1 Quality Management

Canadian Petroleum Engineering has prepared this PPMP as part of our Quality Process Management System.

All projects are unique. The CPE quality management plan is designed to assist the project management team in achieving successful project management outcomes.

Canadian Petroleum Engineering provides engineering services to clients on projects that utilize our team experience. Client meetings will define the required project deliverables/outcomes, timelines and budget. Contracts will be signed to define the work agreement.

The project team will define the project and prepare an initial scope of work document. This document will be reviewed internally as the project plan is developed. The scope of work document will then be reviewed with the client. The scope of work document must be approved by the client for work on the project to proceed.

Quality Management-Project Management System

CPE will assemble a team to provide technical work on the project. The project will be sub-divided into smaller sub- group tasks. Tasks for each technical group will be assigned to project teams or team members and a scope of work defined for each subsection of the project.

Project work will be managed by a project manager. Technical work products will be prepared, supervised and peer reviewed by licensed professionals in good standing with APEGA. Licensed professionals will authenticate documents once they are complete and deemed to be technically correct. Authenticated work products will be validated by the responsible member to conform to our Permit to Practice requirements before sending the information to our client.

All government regulations, industry standards and recommended practices that pertain to the project will be identified, discussed by the team and applied to the project.

Permit to Practice Requirements

CPE is an APEGA licensed permit holder to supply engineering services. As a permit holder CPE will require work products to be authenticated by a licensed professional. Authenticated work products will then be validated by the responsible member before the documents are delivered to the client. The process for authentication and validation is provided below.

Authenticating Professional Work Products

Professional work products will be developed as each section of the project is completed. All work products must be thoroughly reviewed to ensure they are technically correct prior to authentication. The documents will be authenticated by the licensed professional that has prepared the work directly or strictly supervised the work of others in preparation of the work product. Authenticated work products will be validated by the responsible member to fulfill the CPE requirements for being an APEGA permit holder.

Work products must include a title page for each document. The footer of the pages must include the date and the version of the document being authenticated. Originals documents will be identified as version 1.0. Revised versions will be identified by the date and the version 1.1, 1.2 etc.

Authentication of documents consists of stamping the original document and signing the stamped document. Authentication process includes licensed professional's APEGA stamp, full signature, APEGA ID number and a date of authentication.

Validating Authenticated Work Products

Professional work products are validated by the responsible member after they have been authenticated by the licensed professional that prepared or supervised the preparation of the work. The validation consists of the CPE APEGA Permit to Practice stamp, the responsible member's full hand written signature, APEGA ID number and the date of the validation. The date must be clearly stated.

Contracting Outside Technical Expertise

Should technical assistance be required for work outside of the expertise of CPE we will first look to our alliance partners. (Petrel Robertson Consulting and Acero Engineering) If outside expertise is required

the CPE project team must exercise due diligence in selecting a qualified individual or company to provide technical information that will not compromise the integrity of the project.

If professional work products are developed outside CPE then the work will need to be authenticated by the outside professionals. It will need to be validated by the CPE responsible member to become part of the completed work document submitted to the client. The process for authenticating and validating work products by others is outlined in this section

Project Management Tools

Managing Project Scope

The project manager must continually manage the agreed upon scope of work for each project. Teams must not modify or deviate from the approved scope of work. If changes are to be made to the scope of work they must be made through the Project Manager and the client.

Managing Risk

- Document assumptions and unknowns
- Identify technical risks
- Identify business risks
- Determine Magnitude of Risks
- Use risk matrix table to evaluate risk
- Develop a Risk Management Strategy
 - Leave risk uncontrolled (Low probability/ Minimal Consequences)
 - Avoid the Risk
 - Accept and control the Risk
- Brainstorm solutions to Risks
- Communicate Risks to project team
- Monitor and manage change- refer to identified risks throughout project

Likelihood	Consequences				
	Insignificant <i>Risk is easily mitigated by normal day to day process</i>	Minor <i>Delays up to 10% of Schedule Additional cost up to 10% of Budget</i>	Moderate <i>Delays up to 30% of Schedule Additional cost up to 30% of Budget</i>	Major <i>Delays up to 50% of Schedule Additional cost up to 50% of Budget</i>	Catastrophic <i>Project abandoned</i>
Certain <i>>90% chance</i>	High	High	Extreme	Extreme	Extreme
Likely <i>50% - 90% chance</i>	Moderate	High	High	Extreme	Extreme
Moderate <i>10% - 50% chance</i>	Low	Moderate	High	Extreme	Extreme
Unlikely <i>3% - 10% chance</i>	Low	Low	Moderate	High	Extreme
Rare <i><3% chance</i>	Low	Low	Moderate	High	High

Management of Errors and Omissions

- Errors will be minimized by utilizing a peer review process.
- The project team will peer review information as the project proceeds.
- If the project teams are small the project team will peer review each subgroup of the project to ensure that they can function independently and together to achieve the project goals. Team leaders are responsible for peer reviewing information as the project is completed.
- As tasks are completed the project team will peer review all work before it is included in the report documents.
- Calculations will be reviewed by team leaders.
- Errors found in completed work must be corrected, documented and communicated to all subgroups working on the project.
- All areas of the project impacted by the corrected error must be revised.
- If the error is detected after documents have been sent to the client, corrected documents will need to be thoroughly reviewed again with the reason for the revision clearly stated at the front of the document. Revised documents must then be Authenticated and Validated and sent to the client.

Managing Change

- If the client decides at any time to change the agreed upon objectives or goals of a project a formal change order must be used to document the change request. The Project Manager will clarify the change request with the client and communicate the changes to the project team.
- The change in scope will be communicated to all project teams. Each team to review how the proposed change will impact timelines, budget and resources required. Revised plans will be prepared by each team and submitted to the Project Manager.
- The overall project plan (including timelines, budget and resources required) will be revised and sent to the client for approval.
- The Project Manager is responsible for managing the project scope and keeping the team focused on the approved goals and objectives of the project.
- Previously shared revised information relevant to other project subgroups must be documented and communicated to the project team.
- Develop a change management plan
- If team members are required to change during the project it is preferable if the old member and the new member can work together for a period of time to get the new member up to speed on the project and complete the personnel change.

Change Management Plan

- Client requests a change to the scope of the project.
- Project manager to review the change request with team leaders. Each team to discuss how the proposed change will impact each subgroup.
 - Will the original goals and objectives will still be met as a result of the change?
 - Are there any technical or regulatory implications as a result of this change?
 - What are the impacts of each subgroup in terms of timelines, deliverables and budget?
 - Project Manager to communicate all issues to client.
- Project manager to request a change order from the client detailing the change.
- Project team to revise and implement the change into work plans, timelines, budgets, risk analysis and continue with the project.
- Revise scope of work, budget, and project timelines and forward to the client for approval.
- Proceed with the project and implement the change as requested.

Managing Problems – Resolution Process

- Identify issue or problem and impacts on the project
- Define root cause of problem
- Brainstorm solutions
- Select best solution
- Does solution solve the issue or problem
- Document and communicate solution to project team

3.2 Project Execution

The CPE quality management plan is designed to assist the project management team in achieving successful project management outcomes.

Canadian Petroleum Engineering provides engineering services to clients on projects that utilize our team experience. Client meetings will define the required project deliverables/outcomes, timelines and budget. Contracts will be signed to define the work agreement.

The project team will define the project and prepare an initial scope of work document. This document will be reviewed internally as the plan for the project is developed. The scope of work document will then be reviewed with the client. The scope of work document must be approved by the client for work on the project to proceed.

Determine the Key Project Driver

- Cost-Does the project have a limited budget?
- Time-Is there a hard deadline that the project must meet?
- Quality-Technical results/ deliverables required to meet the project goals

All areas are important in every project. Technical content of the project will not be compromised. Project will define the boundaries of technical content to be prepared. Assumptions will be identified and project limitations noted in the scope of work. Discussions with the client will determine the key project driver.

Project planning is critical to the success of all projects. The project team must develop detailed plans to determine how the project will be managed to achieve quality results for the client.

Scope of Work Document

- A Project Manager (PM) is assigned to manage the project
- Goals and objectives are defined based on discussions with client

- The overall project is split into task blocks to divide the work and to focus work activity.
- Team leaders or CPE team members are assigned to each specific task block.
- Critical Key Tasks are identified for each task block.
- Technical milestones are identified for each task work group.
- Project assumptions are documented including what is outside of the scope of this project
- Identify project risk areas
- CPE will peer review scope of work with project team
- Review scope of work document with client

Project Team

- Team leaders or members to define expertise required to work on each subject component.
- Assign team members to project task work groups.
- Determine responsibilities of team members
- Will expertise outside CPE be required to complete this project
- Develop task work budget, timelines/deadlines/reporting requirements

The Project Plan

- Project Manager and team leaders to break project into smaller subject work tasks
- PM and each team leader defines goals/outcomes/timelines for each sub-group in alignment with overall project goals and objectives
- Quality will be maintained by peer review by CPE team for technical information and reports
- Identify areas of project risk in each work task group.
- Define an overall project timeline/schedule utilizing input from each subgroup.
- Determine resources required for each work task subcomponent.
- Prepare a project budget
- Identify and review government regulations, industry standards and recommended practices.
- Define assumptions and what is not included in the scope of this project
- Define how team will measure project success
- Weekly team reporting requirements
- Client communication and reporting

Field Operations Project Plan

- Review regulatory requirements
- Preparation of an Operations plan
- Operations cost estimate and budget
- Operations schedule
- Select qualified wellsite supervisor
- Review regulatory requirements and submit information as required.
- Health, Safety, Environment, Emergency Response Plans

- Equipment requirements
- Procurement of equipment and consumables
- Pre-job meeting-Operations on paper review
- Daily Reporting Requirements
- Final Well Report- Operations Summary and Well Costs

Project Plan Execution

Execution of the project plan is the responsibility of the Project Manager and the project team. Detailed planning documents will assist in the project execution phase.

Effective Project Execution requires the Project Manager to:

- Delegate tasks to get work completed effectively
- Empower teams to make decisions
- Be open to new ideas, advances in technology, changes in industry recommended practices
- Measure project progress timelines and budget regularly
- Document changes to the project plan
- Control scope of work - monitor for scope creep
- Ensure quality of output. Team peer review information /data as required
- Communicate to teams and client regularly

Prepare a project plan that includes timelines, decision gates, project schedule, budgets, risks and operations schedules.

Peer reviews will provide quality control reviewing technical information as the project progresses.

Project Plan Requirements

- Scope of Work
- Project Timelines
- Project Master Schedule
- Project critical path
- Resources required
- Budget Preparation
- Team requirements
- Reporting schedule
- Meeting requirements
- Definition of Project Risk
- Interim Report
- Deliverables
- Final Report

Project Execution

- Manage project to project plan
- Timeline project status, budget updates
- Peer Reviews- Quality Management
- Final Report Preparation
- Team communication
- Client communications

Project Final Report

- Preparation of Final Report
- Authentication of work products
- Validation of all Authenticated documents by Responsible Member
- Final project costs
- Final Client meeting
- Project review

4 PPMP Part 4: Authentication and Validation

4.1 Authentication and Validation of Professional Work Products

Professional work products must be authenticated by the licensed professional that prepared or supervised the preparation of the work. Permit holders must validate authenticated work products with their permit to practice stamp. The responsible member must complete the validation information associated with the stamping requirements.

Professional Work Product-Definition

A professional work product is defined by answering the following questions:

- Does the output contain technical information?
 - Will others rely on the technical information related to the work products intended purpose?
 - Is the technical information complete?
- Authentication is not required until work product is complete

CPE provides technical expertise to our clients. Completed professional work products will be required to be authenticated by the licensed professional that prepared the work product or supervised its preparation. Each work product must be thoroughly reviewed to ensure the technical information contained in the work product is correct.

Permit to Practice Requirement

Canadian Petroleum Engineering is authorized by APEGA to practice engineering in the province of Alberta. Our Permit to Practice requires that completed engineering technical documents (professional work products) must be authenticated by a licensed professional and validated by the responsible member using our permit to practice stamp.

To validate authenticated documents the responsible member must:

- Stamp authenticated document
- Sign the document with their full signature
- Add their APEGA ID number to stamp
- Clearly print the validation date

Authenticating Professional Work Products

Documents can only be authenticated by a practicing licensed professional registered with APEGA.

Completed technical professional work products are required to be authenticated by the licensed professional that prepared the document or directly supervised the technical work. All work products must be thoroughly technically reviewed prior to authentication to ensure the information is correct.

Authentication after a complete technical review includes licensed professional's APEGA stamp, full signature, APEGA ID number and clearly stating the authentication date. Examples of approved authentication stamping is in the APEGA document Authenticating Professional Work Documents in Appendix 2.

The authentication stamp and validation stamp should clearly appear on the front page or title page of the document.

Samples of authentication and stamping can be found in the APEGA document: Authenticating Professional Work Products (Appendix 2).

Validating Authenticated Work Products

Professional work products are validated by the responsible member after they have been authenticated by a licensed professional. Validation of work products by the responsible member ensures that the completed work is:

- Authenticated and is within the scope of practice of the CPE Permit to Practice.
- Quality control and quality assurance measures were followed and documented in reviewing the technical content of the authenticated work before it was authenticated.
- The work product was developed according to the APEGA Code of Ethics and Rules of Conduct

Validation of a document is completed by the responsible member and consists of the CPE Permit to Practice APEGA stamp, the responsible member's full hand written signature, APEGA membership number and clearly stating the date of the validation. Examples of permissible validation stamping is in the APEGA document Authenticating Professional Work Documents in Appendix 3.

Revising Authenticated Work Products

If an authenticated document must be revised the revisions must be clearly stated on the revised document. The same procedure must be followed for the authenticating the revision document as the original. The reason for the revision should be clearly stated at the front of the revised document. The new revised document must be authenticated by the licensed professional that has managed the revision to the original document. The original document must be kept in the project file.

4.2 Stamps—Control and Security

Canadian Petroleum Engineering's Permit to Practice stamp is the responsibility of the Responsible Member. Only the responsible member can use the permit stamp to validate authenticated professional work products. Canadian Petroleum Engineering uses physical stamping to validate technical documents.

Each licensed professional is responsible for the safe keeping of their APEGA stamp. Only the licensed professional is allowed to stamp and authenticate documents in their own hand writing. Stamping document is the final step in authenticating documents. A full review of the technical information is required to ensure the document is complete and correct. The stamp will be used to authenticate technical work completed by the licensed professional or prepared directly under their supervision.

Professional work products (PWP) prepared for clients by CPE must be validated by the responsible member once the work product is complete and has been authenticated. The completed professional work product must be stamped using the CPE Permit to Practice stamp. The responsible member must sign their full name, clearly state the date, and the responsible members APEGA ID.#. Examples of validated are found in the Authenticating Professional Work Products document Appendix 3.

5 *PPMP Part 5: Relying on the Work of Others and Outsourcing*

5.1 Relying on the Work of Others

Outsourcing- If the project requires outside technical assistance to complete the project the project team will need to select only qualified companies or individuals to provide technical assistance. It is the responsibility of CPE to closely supervise and control all outsourced work.

Outsourcing can be to a licensed professional working not working directly for CPE. The licensed professional can authenticate the work product produced under the direction of a CPE licensed professional.

Outsourcing can also be done to industry experts that are not licensed by APEGA. This requires an outsourcing plan to be prepared to control the work being done. Due diligence is required in selecting the individual or company to prepare the work. The outsourcing plan must include defining the scope of work, guiding the development of the work, being active in the decision making process and defining the resources to be used to prepare the work. Close supervision by a licensed professional is required during the development of the work product from start to finish. Quality control by peer review will be required to ensure the work product is technically correct. The licensed professional is then able to authenticate the work product for the outsourced work. The authenticated work product can then be validated by the responsible member.

All outsourcing must conform to the relevant statutes, regulations, bylaws, standards, codes and APEGA practice standards.

5.2 Outsourcing to Entities Licensed by APEGA

Outsourcing work to third party licensed professionals may be part of the requirement for some projects.

The outsourcing process must include a clear definition of the scope of work required. Only experienced professionals in good standing with APEGA should be considered. Outsourced work must comply with all government regulations and APEGA standards. Quality control and assurance processes must be agreed upon by both parties to ensure the quality of the work product produced is maintained throughout the entire work product process. The produced work product should be authenticated by the outsourcing licensed professional. These authenticated documents can be validated by CPE as part of the completed project submitted to the client.

5.3 Outsourcing to Entities Not Licensed by APEGA

CPE may be required to outsource work to an entity that is not licensed by APEGA.

APEGA licensed professionals can authenticate a work product completed by others if the work was prepared directly under their supervision and control and a thorough review of the work product was completed.

When outsourcing professional services to a non-licensed entity an outsourcing plan unique to the outsourcing requirements must be created.

An outsourcing plan must be developed to strictly direct and control the scope of work to be completed by the non APEGA entity. The licensed professional supervising the work must be clear in defining the boundaries of the specific work required, what resources will be used to produce the work, be actively involved in the decision making process and supervising the all phases of the development of the work product. At completion of the work product a thorough review will be required before the before it can be authenticated. Only qualified, very experienced entities with strong industry reputations would be considered for outsourcing. The entire process requires strict supervision and management of the entire process. All outsourced work must adhere to the government regulations and APEGA standards.

6 PPMP Part 6: Organization and Roles

6.1 Use of Title

The title P Eng will only be used within CPE by professional engineers in good standing with APEGA.

6.2 Organizational Structure

Canadian Petroleum Engineering is a consulting partnership with three partners.

6.3 Roles

Canadian Petroleum Engineering Inc. consists of three partners

Lorne Hammer

Ron McCosh

David Moffatt

7 PPMP Part 7: Management of Professional Resources

7.1 Recruitment

CPE is not currently recruiting engineering or geoscientists.

CPE does not directly hire engineers or geoscientists. If engineers or geoscientist are selected to become partners in CPE only licensed professionals in good standing with APEGA will be considered.

7.2 Continuing Professional Development

All licensed professionals must be in good standing with APEGA. A requirement of APEGA is continuing professional development. Each professional must submit their professional development hours (PDH) to APEGA to remain in good standing.

7.3 Supervision

The CPE team does have personnel that are not licensed professionals. The work contributed by these individuals is supervised by an APEGA licensed professional. The CPE team will peer review technical work produced by the team. Completed work products will be authenticated by a licensed professional and validated by the responsible member.

8 PPMP Part 8: Management of Technical Resources

8.1 Practice Reference Resources and Aids

8.2 Information Technology

CPE partners and associates are responsible for their own information technology.

8.3 Equipment and Tools

Canadian Petroleum Engineering does not directly provide tools or equipment to clients as part of our professional services.

9 PPMP Part 9: Professional Services Output Management

Senior Officer – Reviews validated work projects prior to sending documents being sent to client. Involved in team meetings in project development throughout the life of each project. Supports CPE project team of company partners and senior associates to comply with APEGA standards.

Responsible member – required to remain in good standing with APEGA by following the standards set out by APEGA to be a licensed professional. Accepts the responsibility of being the responsible member for Canadian Petroleum Engineering and follows the APEGA standards and governing legislation to ensure that the completed technical work products produced by CPE are correct and technically sound documents.

Licensed professionals – Required to remain in good standing with APEGA by following the standards set out by APEGA to be a licensed professional. Authenticates work products that only they prepared or were directly involved with the in the supervision of their development.

Staff-CPE does not have any staff at this time

9.1 Originals and Copies

Clients will be given original authenticated and validated documents of the professional work products completed for the project.

Canadian Petroleum Engineering will use manual stamping of original documents to confirm authentication and validation of professional work products.

Copies of the original authenticated and validated documents must be clearly marked as copies

9.2 Revision Control and Transmittals

Revisions of authenticated documents.

Original documents will be identified as version 1.0 and the project completion date

Additional versions will be documented as version 1.1, 1.2 etc. to distinguish from the original documents. The revision date will also be identified on the document. The front of the revised document must clearly provide details of the reasons for the revision. Revised documents must be authenticated and validated prior to sending to the client.

The project manager will provide the client with original validated (stamped) copies of the completed project documents.

9.3 Retention

Licensed professionals will be allowed to keep documents they have authenticated on all projects. Canadian Petroleum Engineering will keep project information on file in the CPE offices. Authenticated and Validated documents will be retained in the well files.

If a licensed professional has a legal claim brought against them as result of authenticated information prepared for a CPE project, CPE will assist the licensed professional in fighting the legal claim siting our project team diligence and team peer review processes that were used to prepare the project work products.

9.4 Storage and Disposal

CPE maintains original copies of completed project work documents for clients.

Project file documents are stored in filing cabinets at the CPE head office. Background work prepared during the development of the work product should be stored with the project files.

Electronic copies of final documents are stored on individual computers. Completed copies of presentations may be stored on memory sticks and should be included in the file documents.

Clients should be contacted prior to destroying copies of completed project work. Client to advise if project documents can be destroyed. A best effort must be made to contact former clients. It may be difficult as companies may not exist as they once did due to mergers and acquisitions etc.