Project Health, Safety, and Environment Plan

Interior Heart and Surgical Center
Project Number:

CONSTRUCTION LEADERS

Printed: **December, 2011**

The term "PCL" in the following document is used to refer to any one of the independent operating companies in the PCL family of companies.

PROJECT HSE PLAN SIGN-OFF

Interior Heart and Surgical Center

After reviewing the policies and practices as outlined in this plan, the company owner, site superintendent, on-site foreman, lead hands, and all subcontractors are to sign off this sheet. The sign-off sheet must be returned to the PCL Project Manager, before commencement of work-related activities on the jobsite.

I have read and understand this Project Health, Safety and Environment Plan and will carry out my work within these guidelines.

Company Name: _____

Company Owner

Name: _____ Date: _____

Signature: _____ Title: _____

Company Superintendent

Name: _____ Date: _____

Signature: _____ Title: _____

On Site Foreman

Name: _____ Date: _____

Signature: _____ Title: _____

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Section 1 – Policies

1.1 Overview

PCL has long acknowledged the importance of maintaining a safe and healthy work environment for all personnel and the stewardship required in maintaining an effective and successful program.

This Project Health, Safety, and Environment (HSE) Plan applies to all on-site personnel and describes the safety and environmental standards, which govern the work performed on this project.

Full compliance with this Project HSE Plan and applicable safety and environmental laws and regulations are the **minimum** acceptable standards on Interior Heart and Surgical Center Project.

Where there is conflict between this Project HSE Plan and any regulatory requirement, the more stringent will apply.

This Project HSE Plan can be amended as site conditions warrant.

The purpose of the Project HSE Plan is to:

- assist project personnel in the planning, organizing, control monitoring and implementation of corrective measures which are necessary to prevent exposures which could cause injury, illness or negative environmental consequence
- enhance and maintain safety and environmental awareness of all project personnel
- minimize hazards to public health

1.2 Project Description

The Interior Heart and Surgical Center (IHSC) is a three-storey building, plus mechanical, which will house the Cardiac and Inpatient Surgical Suite and support spaces, Cardiac Surgery Intensive Care Unit as well as the new Medical Device Reprocessing Department. The IHSC will be designed to expand and to accommodate approximately 30 medical/surgical inpatient beds.

1.3 Policy Statements

- PCL Corporate Health, Safety and Environment Policy Statement
- PCL Environmental Policy Statement
- PCL Fall Prevention and Protection Policy
- PCL Workplace Violence Policy
- PCL Safety Philosophy

PCL Constructors Westcoast Inc.

Corporate
Health, Safety, & Environment

POLICY STATEMENT

PCL Constructors Westcoast Inc. is committed to providing and maintaining a safe work environment.

We achieve this goal by providing a system of policies, procedures, and practices that encourage continuous improvement of all HSE program elements and the site-specific HSE plan.

It is every employee's and subcontractor's responsibility to manage risk exposure.

As an employee or subcontractor, at all times you must guard your safety and the safety of fellow personnel by identifying, controlling, and/or eliminating known hazards that can result in personal injury or illness, equipment and property damage, or any other form of controllable loss.

As an employee or worker, you must be aware of and comply with your responsibilities under legislative, industry and company standards, including those identified in the HSE Manual and HSE Site-Specific Safety Plan. You must promptly report all unsafe acts or conditions to your supervisor(s). Supervisors are responsible for taking immediate action on problems that arise.

Fostering a safety culture requires the dedication, commitment, involvement, and participation of all employees and subcontractors. Working together will allow us to achieve safety excellence.

Date: December, 2010

Anibal Valente, P. Eng
Vice President

PCL Constructors Westcoast Inc.

Corporate
Environmental

POLICY STATEMENT

We are committed to the goal of conducting our business operations in a manner that protects our environment.

We achieve this goal by:

- complying with all legislative, regulatory and contractual requirements relating to the environment,
- monitoring our compliance with those requirements,
- reporting to our board of directors on our compliance with legislative and regulatory requirements,
- minimizing hazards to public health,
- taking steps to protect the environment from adverse effects of construction operations, and
- working with industry, government and workers to maintain and enhance environmental awareness.

On large, complex construction projects of substantial duration and on projects with known environmental contaminants, we take additional steps to achieve this goal by:

- appointing an environmental designate,
- providing education to project personnel, to enable them to understand and share in the responsibility for monitoring and protecting the environment,
- maintaining an effective reporting and communications system, and
- developing a project environmental action plan.

Date: December 2010

Anibal Valente, P. Eng
Vice President

PCL Constructors Westcoast Inc.

Prevention of Workplace Violence

POLICY STATEMENT

PCL believes in the prevention of violence and promotes a violence-free workplace. Any act of violence committed by or against any worker or member of the public is unacceptable conduct and will not be tolerated.

We are committed to:

- providing our employees with an appropriate level of protection from the risks associated with workplace violence;
- investigating reported incidents of violence in an objective and timely manner;
- taking necessary action on acts of workplace violence; and
- providing appropriate support for victims of workplace violence.

Employees have a responsibility to:

- become familiar and comply with this policy;
- report incidents of workplace violence to their supervisors; and
- participate in work site risk assessments and implement control measures to mitigate associated risks as required.

No action shall be taken against an individual for making a complaint unless the complaint is made maliciously or without reasonable and probable grounds.

No employee or any other individual affiliated with PCL shall subject any other person to violence in the workplace.

Date: December 2010

Anibal Valente, P. Eng
Vice President

PCL Constructors Westcoast Inc.

Fall Prevention and Protection

POLICY STATEMENT

PCL is committed to protect company personnel and other on-site workers from fall related injuries when working at elevated heights. To accomplish this, each PCL company through their line management team(s) will be responsible to:

We are committed to:

- Review and familiarize themselves with legislative jurisdictional requirements regarding fall prevention and protection;
- Comply with legislative jurisdictional requirements;
- Evaluate each project and compile a Site Specific Fall Prevention and Protection Plan where elevated work and fall protection is necessary;
- Provide the necessary resources, equipment and training; and
- Monitor the effectiveness of the Fall Prevention and Protection Plan.

Subcontractors/trade contractors will be responsible to compile and implement their own Site Specific Fall Prevention and Protection Plan for the work they perform. These plans should be in accordance with the applicable regulatory requirements and PCL's Site Specific Fall Prevention and Protection Plan.

All personnel are responsible for:

- Complying with the PCL Site Specific Fall Prevention and Protection Plan; and
- Reporting unsafe acts and conditions, and if necessary, taking action to see that corrective measures are implemented.

Date: December 2010

Anibal Valente, P. Eng
Vice President

PCL
SAFETY PHILOSOPHY

Demonstrating Leadership

PCL is committed to providing a safe and healthy work environment for all personnel.

Our Goal Is Zero Incidents

Safety is an integral part of PCL's operations. PCL is committed to the goal of **zero incidents** on all projects. No work is so important that it cannot be done safely.

Responsibility And Awareness

Safety is a "line management" responsibility. Senior management is responsible for planning, implementing and monitoring the safety and loss prevention program. Each staff member then has specific responsibilities for safe construction work.

These responsibilities are defined for the District Manager, the Operations Manager, the Construction Manager, the Project Manager, the Superintendent, the Foreman, and the Tradesman, all of whom are accountable in turn for safety within their own jurisdictions. Finally, all employees, clients and subcontractors are personally responsible for their own safety. As well, they share the responsibility for the safety of other personnel on the project. *To encourage safety awareness and practice, PCL measures all safety performance and rewards superior safety performance.*

Working Together For Success

Safety cannot be "delegated" to staff specialists. The staff specialists support line management by assisting in jobsite training, serving as trained and knowledgeable observers, providing administrative assistance, monitoring, evaluating and scoring the success of the safety program. While this role is important, commitment and active participation by everyone, everyday, on every job, is necessary if we are to achieve the level of safety excellence that PCL expects.

1.4 Drugs and Alcohol

- If a worker is taking a prescription drug, for which there is a potential unsafe side effect, he/she has an obligation to report this potential to the supervisor.
- No worker will misuse prescription drugs.
- No worker shall report to work, or be at work, with an alcohol level equal to or in excess of 0.020 grams per 210 liters of breath (.002 on a breathalyzer)
- Workers are expected to not use illegal drugs. If they test positive for illegal drugs, they will be removed from the site and not allowed to continue working on the project until PCL at its discretion determines they no longer pose a safety risk.
- Workers will likewise be removed from the site and not allowed to continue working on the project if they test for alcohol in excess of the limit described above.

1.4.1 Drug and Alcohol Testing

- Testing will be conducted when PCL determines there are reasonable grounds to suspect that an employee is using illegal drugs, or has rejected to work, or is working with an alcohol level in excess of the limit described above. Such reasonable grounds will include absenteeism or performance problems.
- Testing will also be conducted after an accident, or, at the discretion of the District HSE manager and site superintendent, after a near-accident or other incident.
- Refusal to submit to a test will be treated as a positive test.

1.5 Discrimination, Harassment and Violence

PCL is committed to creating and maintaining a working environment free from all forms of discrimination, harassment, and violence on the grounds specified under anti-discrimination legislation and PCL related policies. **See PCL Workplace Violence Policy in this Section**

All persons under PCL contractual responsibility are responsible for making certain their behavior does not negatively contribute to the maintenance of the work environment. Incidents are to be investigated with corrective measures put in place.

1.6 Workers' Right of Refusal

PCL management, contractor supervisors, and workers all share responsibility for identifying and recommending corrective action respecting situations which are, or could be, unsafe.

A worker who refuses to carry out a work process or operate a tool, appliance, or equipment that they feel is unsafe;

(1) must immediately report the circumstances of the unsafe condition to their supervisor.

(2) The supervisor receiving a report must immediately contact PCL Superintendent and investigate the matter and

(a) ensure that any unsafe condition is remedied without delay, or

(b) If in their opinion the report is not valid, must so inform the person who made the report.

(3) If this does not resolve the matter and the worker continues to refuse to carry out the work process or operate the tool, appliance or equipment, the supervisor or employer must investigate the matter in the presence of the worker who made the report and in the presence of

(a) a worker member of the joint committee,

(b) A worker who is selected by a trade union representing the worker, or

(c) If there is no joint committee or the worker is not represented by a trade union, any other reasonably available worker selected by the worker.

(4) If the investigation does not resolve the matter and the worker continues to refuse to carry out the work process or operate the tool, appliance or equipment, both the supervisor, or the employer, and the worker must immediately notify a Worksafe BC Officer, who must investigate the matter without undue delay and issue whatever orders are deemed necessary.

Section 2 – Leadership and Administration

2.1 Overview

Responsibilities and enforcement information is contained in the Health, Safety, and Environment (HSE) manual. A copy will be provided at the site office. All workers, trade contractors, suppliers and consultants are required to review and understand these requirements.

2.2 Prime Contractor

PCL Constructors Westcoast Inc. has been appointed Prime Contractor by Plenary Health Group and Interior Health Authority. All Subcontractors / Trade Contractors are to adhere to PCL Constructors Westcoast Inc. safety policies and procedures, as well as this site specific health safety and environment manual. PCL Constructors Westcoast Inc. as Prime Contractor will ensure the activities of and between Subcontractors / Trade Contractors performing work at the Interior Heart and Surgical Center related to health, safety and environment are coordinated, and do everything that is reasonably practicable to establish and maintain systems and processes outlined in this manual and ensure compliance with Worksafe BC Legislation with respect to all activities.

2.3 Construction Manager

The construction manager is responsible to assist in the development and implementation of the Project Specific HSE Plan on assigned construction projects.

Responsible, with respect to the projects they manage, to:

- Account to the operations manager and/or district manager/general manager;
- Receive regular reports from project management (site) regarding;
    - the effectiveness of district and/or project HSE programs and operations;
    - the occurrence of any significant HSE incident within the district; and
    - implementation of corrective or remedial actions arising out of significant incidents;
- Receive reports or recommendations from HSE director, USHO/HSE vice president, NAHQ and/or district HSE department regarding:
    - the effectiveness of HSE policies and programs, required reviews, and updates; and
    - the appropriateness and adequacy of resources (financial and time) for HSE programs;
- Report to the operations manager/project director/ district HSE manager:
    - the effectiveness of district and/or project HSE programs;
    - the occurrence of any significant HSE incident within the district; and
    - implementation of corrective or remedial actions arising out of significant incidents;
- Implement HSE standards and procedures as stated in the HSE Manual;
- Conduct PSI audits;
- Verify that the SMC is being utilized and updated on an on-going basis;
- Comply with regulatory requirements and building codes, as to construction means, methods and project specifications;
- Exercise authority to maintain compliance with regulatory and company requirements;
- Establish goals and objectives for employee training; (HSE-03)
- Participate in the required training for their position; (HSE-03)
- Provide resources necessary to carry out training goals and objectives; (HSE-03)
- Verify that the superintendent is chairing and the project manager is co-chairing the project HSE committee meetings; (HSE-04)
- Participate and attend all required HSE committee meetings; (HSE-04)
- Implement the District Strategic HSE Plan and report progress to the district HSE committee; (HSE-04)

- Prepare HSE topics/issues for meeting agendas with clients, suppliers, and subcontractors/sub-trade contractors;
- Verify that the hazard assessment process is followed on each project; (HSE-05)
- Develop and approve the Project Specific HSE Plan prior to mobilization; (HSE-05)
- Complete regular revisions of the Project Specific HSE Plan as project conditions change; (HSE-05)
- Participate in the CHA; (HSE-05)
- Provide coaching and recognition to employees on the implementation and development of SWPs, HSEOPs, JHAs, and the overall hazard assessment process; (HSE-05)
- Verify that projects are following the Project Specific HSE Plan standards through auditing and observation; (HSE-05)
- Verify that applicable procedures are an integral part of the project HSE program;
- Verify that project management is familiar with the Project Specific HSE Plan; (HSE-05)
- Verify that corrective actions identified during inspections are implemented; (HSE-06)
- Complete corrective action plans for items identified during audits; (HSE-06)
- Conduct one formal inspection per month, at a minimum; (HSE-06)
- Set an appropriate example for employees under their direction; (HSE-07)
- Verify that PPE standards outlined in this manual or otherwise established by the district are followed; (HSE-07)
- Provide sufficient resources (including materials, equipment, and training) to effectively deal with potential emergencies at the work place; (HSE-08)
- Assist in the development of the ERPs and verify that it is implemented on projects; (HSE-08)
- Provide sufficient resources, including materials, equipment, and training to effectively deal with security needs and issues; (HSE-09)
- Submit the completed Environmental Scope of Work form and the CHA to the appropriate project management team to facilitate their assistance with the development of the Project Specific HSE Plan;
- Assist with the development of the Project Security Plan, and verify that it is part of the overall Project Specific HSE Plan; (HSE-09)
- Assist with the development of the Environmental Action Plan and verify that it is implemented on each project; (HSE-10)
- Verify that projects are following the Environmental Action Plan standards through auditing and observation; (HSE-10)
- Participate in the environmental inspection components of the Environmental Action Plan and address deficiencies where required; (HSE-10)
- Assist with the implementation of the PCL subcontractors' screening
- Continuously monitor subcontractors with poor HSE performance to the point where their HSE performance has sufficiently improved; (HSE-11)
- Notify subcontractors of work schedule, location, hazards, and special precautions, including the Project Specific HSE Plan content prior to the start of the project; (HSE-11)
- Verify the Project Specific HSE Plan acknowledgement form has been signed and returned to the project management team; (HSE-11)
- Monitor subcontractors to verify their work is conducted in a safe, responsible and compliant manner, is in accordance with the Project Specific HSE Plan and the subcontractor's HSE Plan; (HSE-11)
- Review the subcontractor's designated HSE qualifications; (HSE-11)
- Provide support and resources for the inspection, maintenance, and repair of equipment and tools; (HSE-12)
- Participate, support and reinforce the incident investigation and reporting process; (HSE-13)
- Review incident investigation reports and verify that the company incident investigation process is followed; (HSE-13)
- Communicate and report incidents to the appropriate client representatives as per district management directive; (HSE-13)
- Support corrective actions identified in incident investigations; (HSE-13) and
- Provide adequate support and resources for all aspects of the injury management program.(HSE-14)

The Construction Managers on this project will be Les Krusel and Wayne Bilawchuk.

2.4 Project Manager

The project manager is responsible for assisting in the development and implementation of the Project Specific HSE Plan for assigned projects. The project manager will work closely with the project superintendent and the district HSE manager to implement these HSE programs.

In addition to the responsibilities of all employees as set out in section 3.1 of this HSE-02, project managers are responsible, in respect to their projects, to:

- Account to the operations manager/construction manager/manager, special projects/general manager/district manager as applicable;
- Assist and develop regular reports regarding;
  - the effectiveness of project HSE programs and operations;
  - the occurrence of any significant HSE incident; and
  - implementation of corrective or remedial actions arising out of significant incidents;
- Receive reports or recommendations from HSE director, USHO/HSE vice president, NAHQ and/or district HSE department regarding:
  - the effectiveness of HSE policies and programs, required reviews, and updates;
  - the appropriateness and adequacy of resources (financial and time) for HSE programs;
- Report to the operations manager/construction manager/manager, special projects/general manager/district manager/ district HSE manager as applicable:
  - the effectiveness of project HSE programs;
  - the occurrence of any significant HSE incident; and
  - implementation of corrective or remedial actions arising out of significant incidents;
- Implement HSE standards and procedures as stated in the HSE Manual;
- Conduct PSI audits;
- Verify that the SMC is being utilized and updated on an on-going basis;
- Comply with regulatory requirements and building codes, as to construction means, methods and project specifications;
- Exercise authority to maintain compliance with regulatory and company requirements;
- Where practical participate in site orientations; (HSE-03)
- Participate in the required training for their position; (HSE-03)
- Provide resources necessary to carry out training goals and objectives; (HSE-03)
- Develop the Project HSE Trend Analysis; (HSE-04)
- Develop action plans arising from the Project HSE Trend Analysis;
- Verify that the superintendent is chairing and the project manager is co-chairing the project HSE committee meetings; (HSE-04)
- Participate and attend all required HSE committee meetings; (HSE-04)
- Implement the District Strategic HSE Plan and report progress to the district HSE committee; (HSE-04)
- Prepare HSE topics/issues for meeting agendas with clients, suppliers, and subcontractors/sub-trade contractors; (HSE-04)
- Assist in the development and verify implementation of the Project Specific HSE Plan; (HSE-05)
- Verify that the hazard assessment process is followed; (HSE-05)
- Complete regular revisions of the Project Specific HSE Plan as project conditions change; (HSE-05)
- Participate in the CHA; (HSE-05)
- Provide coaching and recognition to employees on the implementation and development of SWPs, HSEOPs, JHAs, and the overall hazard assessment process; (HSE-05)
- Verify that the project is following the Project Specific HSE Plan standards through auditing and observation; (HSE-05)
- Verify that applicable procedures are an integral part of the project HSE program;
- Verify that project management and project supervision are familiar with the Project Specific HSE Plan; (HSE-05)

- Verify that corrective actions identified during inspections are implemented; (HSE-06)
- Complete corrective action plans for items identified during audits; (HSE-06)
- Conduct one formal inspection per month, at a minimum; (HSE-06)
- Set an appropriate example for employees under their direction; (HSE-07)
- Verify that PPE standards outlined in the Project Specific HSE Plan are followed; (HSE-07)
- Provide sufficient resources including materials, equipment, and training to effectively deal with potential emergencies at the work place; (HSE-08)
- Assist in ERP development and monitor the implementation on project; (HSE-08)
- Provide sufficient resources (including materials, equipment, and training) to effectively deal with security needs and issues; (HSE-09)
- Assist with the Project Security Plan development, and verify that it is part of the overall Project Specific HSE Plan; (HSE-09)
- Assist with the Environmental Action Plan development and monitor the implementation on project; (HSE-10)
- Verify the project is following the Environmental Action Plan standards through auditing and observation; (HSE-10)
- Participate in the environmental inspection components of the Environmental Action Plan and address deficiencies where required; (HSE-10)
- Assist with the implementation of the PCL subcontractor screening and approval process; (HSE-11)
- Hold a pre-job meeting to discuss subcontractor HSE performance expectations and communicate HSE requirements to the subcontractor prior to the start of the subcontract; (HSE-11)
- Support the subcontractor HSE program and provide assistance where required;
- Continuously monitor subcontractors with poor HSE performance to the point where their HSE performance has sufficiently improved; (HSE-11)
- Notify subcontractors of work schedule, location, hazards, and special precautions, including the Project Specific HSE Plan content prior to the start of the project; (HSE-11)
- Verify the Project Specific HSE Plan acknowledgement form has been signed and returned to the project management team prior to subcontractor payment; (HSE-11)
- Monitor subcontractors to verify the work is conducted in a safe, responsible and compliant manner, is in accordance with the Project Specific HSE Plan, and subcontractor's HSE Plan; (HSE-11)
- Review subcontractor's designated HSE personnel qualifications; (HSE-11)
- Provide support and resources for the inspection, maintenance, and repair of equipment and tools; (HSE-12)
- Participate, support and reinforce the incident investigation and reporting process; (HSE-13)
- Review incident investigation reports and verify that the company incident investigation process is followed; (HSE-13)
- Communicate and report incidents to the appropriate client representatives as per district management directive; (HSE-13)
- Support corrective actions identified in incident investigations; and (HSE-13)
- Provide adequate support and resources for all aspects of the injury management
- program (HSE-14).

The Project Manager on this project will be: TBA

2.5 Project Superintendent

The project superintendent is responsible for initiating, developing, and implementing the Project Specific HSE Plan with the assistance of the project management team and/or project/district HSE professionals.

In addition to the responsibilities of all employees as set out in section 3.1 of this HSE-02, the project superintendents are responsible to:

- Account to the project manager and/or construction manager;
- Assist and develop regular reports regarding;

  - the effectiveness of project HSE programs and operations;
  - the occurrence of any significant HSE incident; and
  - implementation of corrective or remedial actions arising out of significant incidents;
- Receive reports or recommendations from HSE director, USHO/HSE vice president, NAHQ and/or district HSE department regarding:
  - the effectiveness of HSE policies and programs, required reviews, and updates; and
  - the appropriateness and adequacy of resources (financial and time) for HSE programs;
- Report to the operations manager/construction manager/manager, special projects/general manager/district manager/district HSE manager (as applicable) regarding:
  - the effectiveness of project HSE programs;
  - the occurrence of any significant HSE incident; and
  - implementation of corrective or remedial actions arising out of significant incidents;
- Implement HSE standards and procedures as stated in the HSE Manual;
- Conduct PSI audits;
- Assist supervisors with the on-site PSI program;
- Assist with the development of SWPs, HSEOPs and JHAs;
- Verify that the SMC is being utilized and updated on an on-going basis;
- Comply with regulatory requirements and building codes, as to construction means, methods and project specifications;
- Exercise authority to maintain compliance with regulatory and company requirements;
- Where practical, participate in site orientations; (HSE-03)
- Establish goals and objectives for employee training; (HSE-03)
- Participate in the required training for their position; (HSE-03)
- Provide resources necessary to carry out training goals and objectives; (HSE-03)
- Assist with action plan development arising from the project HSE trend analysis; (HSE-04)
- Chair the project HSE committee meetings; (HSE-04)
- Participate and attend all required HSE committee meetings; (HSE-04)
- Implement the District Strategic HSE Plan and report progress to the district HSE committee; (HSE-04)
- Prepare HSE topics/issues for meeting agendas with clients, suppliers, and subcontractors/sub-trade contractors; (HSE-04)
- Make all workers aware of communication systems; (HSE-04)
- Assist in the development and verify implementation of the Project Specific HSE Plan; (HSE-05)
- Verify that the hazard assessment process is followed on each project; (HSE-05)
- Complete regular revisions of the Project Specific HSE Plan as project conditions change; (HSE-05)
- Participate in the CHA; (HSE-05)
- Provide coaching and recognition to employees on the implementation and development of SWPs, HSEOPs, JHAs, and the overall hazard assessment process; (HSE-05)
- Review JHAs/SWPs/HSEOPs that are commensurate with the scope of work for PCL and subcontractors;
- Verify that the project is following the Project Specific HSE Plan standards through auditing and observation; (HSE-05)
- Verify that applicable procedures are an integral part of the project HSE program;
- Verify that project management and project supervision are familiar with the Project Specific HSE Plan; (HSE-05)
- Review completed hazard assessments with employees prior to the start of work; (HSE-05)
- Communicate the Project HSE Plan to his/her workers in the area of their responsibility; (HSE-05)
- Conduct daily informal inspections of their work areas; (HSE-06)
- Verify that corrective actions identified during inspections are implemented;(HSE-06)
- Complete corrective action plans for items identified during audits; (HSE-06)
- Conduct one formal inspection per week, at a minimum; (HSE-06)
- Set an appropriate example for employees under their direction; (HSE-07)
- Verify that PPE standards outlined in the Project Specific HSE Plan are followed; (HSE-07)

- Provide sufficient resources including materials, equipment, and training to effectively deal with potential emergencies at the work place; (HSE-08)
- Assist in the development of the ERPs and monitor the implementation on project; (HSE-08)
- Verify that emergency response standards are met for each project before commencement of work; (HSE-08)
- Inform all supervisors of their responsibilities within the ERP; (HSE-08)
- Assume leadership of the emergency response team; (HSE-08)
- Provide sufficient resources, including materials, equipment, and training to effectively deal with security needs and issues; (HSE-09)
- Assist with the project security plan development, and verify that it is part of the overall Project Specific HSE Plan; (HSE-09)
- Assist with the Environmental Action Plan development and monitor implementation on project; (HSE-10)
- Verify the project is following the Environmental Action Plan standards through auditing and observation; (HSE-10)
- Participate in the environmental inspection components of the Environmental Action Plan and address deficiencies where required; (HSE-10)
- Assist with the implementation of the PCL subcontractors screening and approval process; (HSE-11)
- Hold a pre-job meeting to discuss subcontractor HSE performance expectations and communicate HSE requirements to the subcontractor prior to the start of the subcontract; (HSE-11)
- Support the subcontractor HSE program and provide assistance where required; (HSE-11)
- Continuously monitor subcontractors with poor HSE performance to the point where their HSE performance has sufficiently improved; (HSE-11)
- Notify subcontractors of work schedule, location, hazards, and special precautions, including the content of the Project Specific HSE Plan prior to the start of the project; (HSE-11)
- Monitor subcontractors to verify their work is conducted in a safe, responsible and compliant manner and is in accordance with the Project Specific HSE Plan and the subcontractor's HSE Plan; (HSE-11)
- Review the subcontractor's designated HSE personnel qualifications; (HSE-11)
- Do not permit the use of any piece of equipment or tools that have been tagged "OUT OF SERVICE" or "DO NOT USE" or are otherwise defective; (HSE-12)
- Verify the safe operation and maintenance of all equipment on the project; (HSE-12)
- Provide support and resources for the inspection, maintenance, and repair of equipment and tools; (HSE-12)
- Participate, support and reinforce the incident investigation and reporting process; (HSE-13)
- Review incident investigation reports and verify that the company incident investigation process is followed; (HSE-13)
- Communicate and report incidents to the appropriate client representatives as per district management directive; (HSE-13)
- Support corrective actions identified in incident investigations; (HSE-13)
- Determine, in conjunction with project HSE manager/supervisor/coordinator, if the Incident Investigation Form HSE-13-01 or if the Near Miss Form should be used; (HSE-13)
- Provide adequate support and resources for all aspects of the injury management program; (HSE-14)
- Provide employees and supervisors training in the injury management program; (HSE-14)
- Implement modified work programs within the requirements of the policy and local regulations; (HSE-14)
- Review all medical treatment memorandums and other incident related reports for accuracy and action as required;
- Verify operators of mobile or hoisting equipment qualifications; and
- Verify that all equipment (particularly hoisting equipment) is inspected before use.

On projects that do not have a project HSE supervisor, the project superintendent will assume or delegate the HSE supervisor's responsibilities.

The Project Superintendent on this project will be: TBA

2.6 Field Engineer/Project Coordinator

The field engineer/project coordinator assists with the implementation of the Project Specific HSE Plan.

In addition to the responsibilities of all employees as set out in Section 3.1 of this HSE-02, the field engineers/project coordinators are responsible to:

- Account to project management;
- Assist with the development and implementation of the Project Specific HSE Plan;
- Assist with the development of SWPs, HSEOPs and JHAs;
- Assist project in the assembly of detail drawings and inspection procedures;
- Perform two formal work site inspections per month, at a minimum;
- Assist the superintendent in obtaining the necessary approvals prior to commencing construction activities such as heavy lifts or crane/man-lifts, erection, etc;
- Provide necessary technical specifications requiring approval;
- Assist the superintendent in assembling detail drawings requiring a professional engineer's seal;
- Conduct PSI audits; and
- Familiarize themselves and comply with the Project Specific HSE Plan.

2.7 Quality Assurance/Quality Control Personnel

In addition to the responsibilities of all employees as set out in section 3.1 of this HSE-02, the quality assurance/quality control personnel are responsible to:

- Account to project management;
- Perform one formal work site inspection per month, at a minimum;
- Assist with necessary technical specifications;
- Assist the superintendent in assembling detail drawings and HSE hazard assessments;
- Conduct PSI audits; and
- Familiarize themselves and comply with the Project Specific HSE Plan.

2.8 Procurement/Materials Manager

In addition to the responsibilities of all employees as set out in section 3.1 of this HSE-02, the procurement/materials managers are responsible to:

- Account to the district manager/general manager/project management (as applicable);
- Verify that procurement systems meet the district HSE program needs;
- Where directed by district management, review and issue subcontracts and major purchase orders in conformance with the respective HSE components;
- Manage yard operations and procurement accounts (i.e. small tools, stores, and temporary power) and verify such activities are conducted following PCL HSE program;
- Verify suppliers are instructed to supply MSDS with product delivery;
- Forward MSDS to NAHQ HSE coordinator for entry to database;
- Verify that all equipment intended for field use leaves the shop or yard properly equipped and able to meet the HSE standards required by regulations, laws, codes, and the PCL HSE program;
- Conduct monthly formal inspections of yard, a minimum of one per month; (HSE-06) and
- Verify quarterly formal inspections of all permanent facilities, in conjunction with site management, are completed; (HSE-06).

2.9 Project HSE Manager/Supervisor/Coordinator

The project HSE manager/supervisor/coordinator assists with the development, implementation, and monitoring of the Project Specific HSE Plan with the assistance of the project management team and the superintendent. The responsibilities/accountability will be clearly identified in the Project HSE Plan by the district HSE manager.

In addition to the responsibilities of all employees as set out in section 3.1 of this HSE-02, the project HSE manager/supervisor/coordinators are responsible to:

- Account to the construction manager/district HSE manager or as identified in the Project Specific HSE Plan;
- Develop regular reports and make recommendations for all workers/district management and project management (as applicable) regarding;
  - the effectiveness of project HSE programs and operations;
  - the occurrence of any significant HSE incident on the project;
  - implementation of corrective or remedial actions arising out of significant incidents; and
  - the appropriateness and adequacy of resources (financial and time) for HSE programs;
- Report to and advise project management on current legislation, information, and issues regarding HSE;
- Assist project management in evaluating HSE performance and exercising authority to maintain compliance with regulatory and company requirements;
- Research legislation and information applicable to operations;
- Assist project management on HSE related issues;
- Conduct PSI audits;
- Participate in HSE associations;
- Monitor, assess and document the performance of subordinate project HSE staff as defined in the Project Specific HSE Plan;
- Liaise with district HSE manager on project HSE related issues;
- Assist with, and verify that, the information contained in the SMC is up-to-date and accurate;
- Issue and circulate HSE literature to enhance and maintain awareness;
- Review investigation reports of incidents including HSE, medical, first aid cases, and damage to property or equipment and verify that corrective action has been completed;
- Notify government agencies of project starts and reportable incidents in accordance with local and federal regulations as directed by the district HSE manager;
- Assist with development of education and training programs for the project;
- Assist with development and review of HSEOPs;
- Assist with development of HSE audit results and industry trends which could impact project operations; (HSE-04)
- Prepare monthly HSE performance statistics and circulate to project management and as otherwise directed by project management;
- Review weekly HSE meeting minutes to verify that meaningful information is being provided to workers;
- Assist in the organizing, planning, and implementation of the worker HSE orientation program (HSE-03) and the on-site PSI program (HSE-05);
- Participate and attend all required HSE committee meetings; (HSE-04)
- Review hazard assessments for accuracy and relevance to the work being performed; (HSE-05)
- Review the Project Specific HSE Plan prior to distribution; (HSE-05)
- Assist with hazard assessments where required; (HSE-05)
- Provide coaching and recognition to employees on the implementation and development of SWPs, HSEOPs, JHAs, and the overall hazard assessment process; (HSE-05)
- Verify that the hazard assessment process is followed on the project; (HSE-05)

- Verify the project is following the Project Specific HSE Plan standards contained through auditing and observation; (HSE-05)
- Assist with CHA prior to mobilization to site; (HSE-05)
- Research, evaluate, and select medical facilities and service providers to accommodate project requirements;
- Assist with revisions of the Project Specific HSE Plan as project conditions change; (HSE-05)
- Coordinate the development, implementation, coordination, distribution, and communication of the Project Specific HSE Plan standards; (HSE-05)
- Verify the Project Specific HSE Plan is current; (HSE-05)
- Verify the Project Specific HSE Plan is communicated to all project personnel in orientation; (HSE-05)
- Coordinate training for line supervision on the Project Specific HSE Plan content; (HSE-05)
- Audit the PSI process where the employees are performing the work; (HSE-05)
- Provide appropriate methods of documenting inspections; (HSE-06)
- Perform one formal work site inspection per week, at a minimum;
- Perform audits and additional inspections as directed by project management;
- Verify the project inspections are conducted according to policy; (HSE-06)
- Verify that corrective actions identified during inspections are implemented; (HSE-06)
- Evaluate HSE inspection reports to identify unsatisfactory performance trends;
- Complete corrective action plans for audits completed in their area of responsibility; (HSE-06)
- Verify that PPE standards are developed for the tasks performed by PCL; (HSE-07)
- Recommend PPE that meets applicable government, industry, or customer standard(s) governing its use; (HSE-07)
- Set an appropriate example for employees under their direction; (HSE-07)
- Assist in the development and implementation of the ERP; (HSE-08)
- Verify that the applicable ERP procedures are part of the Project Specific HSE Plan; (HSE-08)
- Verify through inspections that procedures are up-to-date; (HSE-08)
- Verify project personnel are aware of, and have knowledge of, proper emergency reactions; (HSE-08)
- Investigate, report, and recommend future preventative action plans; (HSE-08)
- Verify that all personnel are familiar with the plan and can adequately respond if required; (HSE-08)
- Exercise the ERP with the emergency evacuation team in test situations at a frequency of no less than once per year. On major construction sites as defined by the district manager/HSE manager, emergency procedures should be completed every six months; (HSE-08)
- Verify that proper first aid procedures are carried out until the arrival of emergency response personnel; (HSE-08)
- Assist in the development and implementation of site security plans; (HSE-09)
- Review the Environmental Action Plan prior to distribution; (HSE-10)
- Evaluate the subcontractor's pre-qualification documentation to determine the ability
- to achieve expected HSE performance; (HSE-11)
- Monitor subcontractor safety performance and verify correction and redirection as needed; (HSE-11)
- Determine the degree of PCL involvement in the subcontractor's HSE efforts; (HSE-11)
- Develop programs to verify that equipment and tools are maintained in safe working condition; (HSE-12); Monitor or assist company-owned or rented equipment safety maintenance programs;
- Provide incident investigation training to project management and project supervision; (HSE-13)
- Investigate or assist with the HSE incident investigations; (HSE-13)
- Review incident investigation reports to verify accuracy, completeness, and evaluate corrective actions taken; (HSE-13)
- Determine in conjunction with superintendent if the Incident Investigation Form HSE-13-01 or if the Near Miss Form should be used; (HSE-13)
- Verify that employees and supervisors are trained in injury management; (HSE-14)
- Assist with development of processes and training to accomplish injury management program goals; (HSE-14)
- Verify that modified work programs are implemented within the requirements of the policy and local regulations; (HSE-14)

- Ongoing liaison with medical practitioners and district HSE regarding rehabilitation or return to work plans; (HSE-14)
- Manage claims on compensation cases and/or assist injury management coordinators;
- Verify that applicable procedures are an integral part of the project HSE program;
- Assist supervisory staff with preparation of agenda and material for project HSE committee meetings and weekly HSE meetings;
- Review HSE related reports and memorandums for accuracy and then forward, as required, to the district HSE manager; and
- Verify that site supervisors have adequately prepared their employees to act appropriately in emergency response situations.

2.10 Foreman/Supervisor/Lead Hand

The foreman/supervisor/lead hand is responsible for promoting HSE awareness and demonstrating to the workers, through day-to-day example and actions.

In addition to the responsibilities of all employees as set out in section 3.1 of this HSE-02, the foremen/supervisors/lead hands are responsible to:

- Account to the applicable immediate supervisor/project superintendent;
- Report to project superintendent promptly on occurrence of any significant HSE incident;
- Assist with development and implementation of the Project Specific HSE Plan as directed by project management;
- Perform informal daily inspections of assigned work areas;
- Conduct task specific HSE orientations for new workers prior to assignment of duties, including hazardous material and JHA's instruction;
- Implement/monitor the Project Specific HSE Plan requirements;
- Assist with the SWPs, HSEOPs and JHAs development;
- Provide PSIs to employees at the beginning of each shift and whenever new tasks are assigned;
- Issue appropriate PPE to employees as required;
- Develop and maintain good housekeeping standards;
- Monitor the job site through personal observation for environmental non-compliance or unsafe conditions/hazards and communicate these (with remedial action as required) to appropriate line supervisors or employees;
- Conduct a preliminary investigation upon the occurrence of an incident;
- Report results of the incident investigations to the project superintendent;
- Hold weekly HSE meetings with employees as per HSE-04;
- Verify that operators complete equipment inspection checklists;
- Check that operators are qualified, fit, and authorized to operate equipment or vehicles safely;
- Conduct PSI audits;
- Enforce HSE rules and issue appropriate discipline;
- Take immediate action to correct unsatisfactory HSE performance; and
- Familiarize themselves, comply with, and communicate to subordinate employees the Project Specific HSE Plan requirements.
- Provide PSIs to workers whenever new tasks are assigned or when job conditions change;
- Before commencing work, contact the project superintendent for instructions regarding HSE hazards;
- Advise their workers of the Project Specific HSE Plan and verify compliance through personal observation;
- Provide education and training, and enforce the use of applicable PPE;
- Provide specific hazard analysis that is commensurate with their scope of work (this may include SWPs, HSEOPs, JHAs, and/or HSEOPs) to the project superintendent;
- Make arrangements with the project superintendent concerning emergency procedures;
- Immediately correct any unsafe conditions and acts observed in their jurisdiction;

- Immediately report to the PCL project superintendent any unsafe acts and conditions observed outside of their jurisdiction;
- Cooperate with all HSE PCL representatives having jurisdiction at the jobsite;
- Contact the PCL project superintendent if they have any doubt regarding the meaning or interpretation of the Project Specific HSE Plan;
- Conduct HSE meetings with their workers, document the meetings, and submit a copy of the minutes to the PCL project superintendent;
- Conduct PSI audits;
- Participate in the PSI program;
- Maintain good housekeeping practices in their work areas;
- Designate a qualified person to coordinate their project HSE program; (HSE-11)
- Understand and fully comply with the Project Specific HSE Plan, client HSE requirements, and legislative jurisdictional requirements; (HSE-11)
- Fully comply with all requirements related to subcontractors in the HSE Manual; (HSE-11)
- Communicate the above items to all contractor supervisors and workers; (HSE-11) and
- Demonstrate commitment to the PCL HSE policies and goal for zero incidents.

2.12 Visitors/Suppliers/Consultants

Visitors, suppliers, and consultants are responsible for safeguarding their own health and safety and the safety of project workers and to:

- Report to the project office before entry to the project site;
- Report to PCL project superintendent promptly on occurrence of any significant HSE incident;
- Participate and comply with HSE directives received from the PCL project superintendent;
- Comply with the PCL Project Specific HSE Plan;
- Wear appropriate PPE;
- Report any unsafe acts and/or unsafe conditions to the PCL project superintendent that could have any negative HSE consequence;
- Report any injury sustained on the jobsite; and
- Demonstrate commitment to the PCL HSE policies and goal for zero incidents.

2.13 Enforcement of HSE Rules

Compliance with company and legislated health, safety, and environment standards is necessary to maintain a safe and healthy work environment. As with any program, corrective disciplinary measures may be required to deal with non-compliance. The following are guidelines for disciplinary action resulting from health, safety, and environment infractions for PCL employees:

- On first offense, worker will be given a documented verbal warning.
- On second offense, worker will be given a written warning.
- On third offense, worker's employment will be terminated.

Subcontractors are expected to enforce their own disciplinary policy or adopt PCL's disciplinary policy.

PCL RESERVES THE RIGHT TO TERMINATE ANY EMPLOYEE ON A SINGLE HSE INFRACTION, WITH OR WITHOUT PRIOR NOTICE; AND IN NO EVENT SHALL ANY EMPLOYEE EXCEED THE GUIDELINES PROVIDED ABOVE.

The direct supervisor of the worker is responsible for the issuance of the disciplinary action.

Section 3 – HSE Orientation and Training

3.1 Components of Orientation

All employees and contractors, shall attend a site specific safety orientation prior to commencing work. A site designate will be appointed to oversee this process and will be assigned by the Project Superintendent.

At the completion of the general HSE orientation workers will be tested for their knowledge of site HSE expectations. A dated site HSE Orientation sticker will be issued upon successful completion of the orientation process.

Orientations to be held: TBA

3.2 Supervisor Orientation for Major Projects

All subcontractor/trade Supervisors/Lead-hands will attend an orientation in addition to the standard site specific orientation. The supervisor orientation will include an overview of site expectations for safety management and daily/weekly/monthly administrative requirements such as PSI, tailgate meetings, mancounts, etc.

3.3 Visitor Control (inspectors, "one off deliveries")

All visitors must report to the project office prior to going on site and be provided with an escort and will be required to sign in and out at the project office. The responsible person from PCL Constructors Westcoast Inc. or the applicable Subcontractor / Trade Contactor who has completed the full orientation will be responsible to escort and supervise the visitor and be present at all times. The escort will be responsible for the safe acts and conditions of the visitor while they are on site as well as completing a PSI with his or her visitor(s). All visitors must wear the required personal protective equipment while on the project site.

The responsibility to assign an escort belongs to the contractor accepting the delivery or requiring an inspection.

Forms: HSE Orientation Checklist, HSE Orientation Questionnaire, Voluntary Medical Questionnaire (See Forms Section)

Section 4 – HSE Communication Systems

The purpose of the HSE communication systems is to provide Management, Supervision and workers with up-to-date information regarding health, safety, and environment requirements and issues at the site level.

Equally important, this communication system provides an opportunity for participation, involvement, feedback, and HSE awareness for all personnel.

4.1 Open and Close Circle Meetings

The purpose of the Open and Close Circle is to ensure all Supervisors are focused on the project targets and to stimulate conversations with regard to improving processes and efficiencies not only for production, quality but also safety. All Supervisors in attendance are expected to participate in these discussions. It is strongly recommended that subcontractor supervisors attend and participate in PCL's "open and close meetings" if possible.

Opening the circle in the morning provides a review of the day's work plans and objectives. What are the targets? Are there any improvements that we can make from yesterday? All are open-ended questions that need to be asked. The people doing the work have the best view of the challenges they face and often can offer the best ways to overcome these challenges.

At the end of the work shift, the same Supervisors meet to discuss the days' progress. By closing the circle at the end of the day we can reflect and evaluate on how the day unfolded, discuss how to duplicate the successes and prepare for the days ahead. Once again, ask questions: What worked? What didn't work and why not? What changes need to be made? It is important to keep these meetings positive, have them daily, and ensure everyone participates.

4.2 Project HSE Committee Meetings (Joint Health and Safety Committee)

The Project HSE Committee develops and promotes the environmental and safe work practices as well as makes recommendations to management that will improve compliance performance as well as the health and safety of the workers on the project.

The Project HSE Committee will be chaired by the Project Superintendent and co-chaired by the Project Manager. Projects will establish a Joint Health and Safety Committee (JHSC). Where required by legislation, the structure, functions, membership, and authority of the JHSC must meet jurisdictional legislative requirements.

Committee meetings provide the forum required for communication amongst project stakeholders that include the owner, architect, consultants, and contractors. Committee meetings keep everyone's concern for health, safety, and environment front and center. From the committee, members are expected to distribute information, decisions, and procedures to their managers, supervisors, workers, and suppliers.

To be practical and efficient, the size of the committee must be limited. However, membership can rotate to allow as many people as possible to benefit from the experience of committee work.

Contractors, whether on-site full time or on a sporadic or inconsistent basis, are required to send a representative to each Joint Health and Safety Meeting.

Joint Health and Safety Committee Meetings will be held the first Wednesday of every month for the duration of the project, with the JHSC Safety Inspection conducted 1-2 days before the meeting.

4.3 Weekly HSE Meeting (Tailgate/Safety Meeting)

The purpose of the Weekly HSE meeting is to provide timely information on health, safety, and environment items that relate to project activities.

Weekly HSE meetings are conducted by supervisors and/or lead-hands and provide an important communication link to each crew. These meetings must be held each week within the first two days of the week. Topics for discussion should pertain to health, safety, and environment matters only. Minutes of these meetings are recorded on the Weekly HSE Meeting form and submitted to the responsible PCL Superintendent for the respective trade.

All members of the crew shall attend. Each member must print and sign their names on the Weekly HSE Meeting form (see Forms Section). *Anyone missing must be informed about important items.*

Forms: Weekly HSE Form (See Forms Section)

Section 5 – Hazard Identification and Control

Hazard Identification and Control are key components in maintaining a safe and healthy workplace. Health hazards, occupational factors or illnesses, arising in and from the workplace, which may cause impaired health and well being, sickness, or significant discomfort and inefficiency must be identified, monitored, and controlled.

The hazard identification and control process will be implemented and maintained throughout the tenure of the project. General site hazards and controls will be identified on the Hazard Identification and Control List and placed within this section of Project Specific HSE Plan. It will be reviewed monthly with changing site conditions and updated as the findings necessitate. Copies of the reviewed and/or updated hazard identification and control list will be provided to all stakeholders for communication with their team from Management to Supervisors to Workers.

Ongoing hazard(s) and control(s) will be addressed by safe work practices, job hazard analyses, safe operating procedures, and the Pre-Job Safety Instruction Program contained within this standard.

5.1 Hazard Evaluation

An evaluation of identified hazards will be done so that adequate controls can be implemented. The evaluation process will include:

- Risk potential for worker(s);
- Magnitude of potential risk;
- Hazards involved;
- Control measures already in place;
- Effectiveness of control measures;
- What was included in evaluation process;
- Documentation of evaluation results; and
- Advising all stakeholders.

5.2 Hazard Categories

Hazards are generally divided into four categories, which include:

- Chemical hazards;
- Physical hazards;
- Biological hazards; and
- Ergonomic hazards.

5.3 Construction Hazard Assessment

The Construction Hazard Assessment (CHA) is essential to identify hazards and risks and appropriate controls prior to mobilization to site. All hazards identified must be prioritized. Information collected during the CHA is used in the development of this Project Specific HSE Plan

5.4 Job Hazard Analysis

The completion of a Job Hazard Analysis (JHA) is required to verify that hazards and risks associated with a specific task are identified and appropriate controls are implemented prior to execution of the task. All hazards identified must be prioritized. The JHA must be communicated to all workers involved with the task prior to the start of the task. PCL project management will be responsible for the development of JHAs for all hazardous PCL work. Subcontractor will be responsible to develop their own JHAs or safe work procedure for any work in their scope that is hazardous and/or complex.

5.5 Pre-Job Safety Instruction (PSI)

Pre-Job Safety Instruction (PSI) is a documented program designed to assist supervisors and workers to safely accomplish their day-to-day activities and responsibilities through the application of hazard identification and control where the work is conducted. PSI is used to enhance communication between workers and supervisors resulting in increased awareness between all crew members. Workers and supervisors will be trained in the proper completion of a PSI.

Foremen/Supervisors are responsible for the following steps:

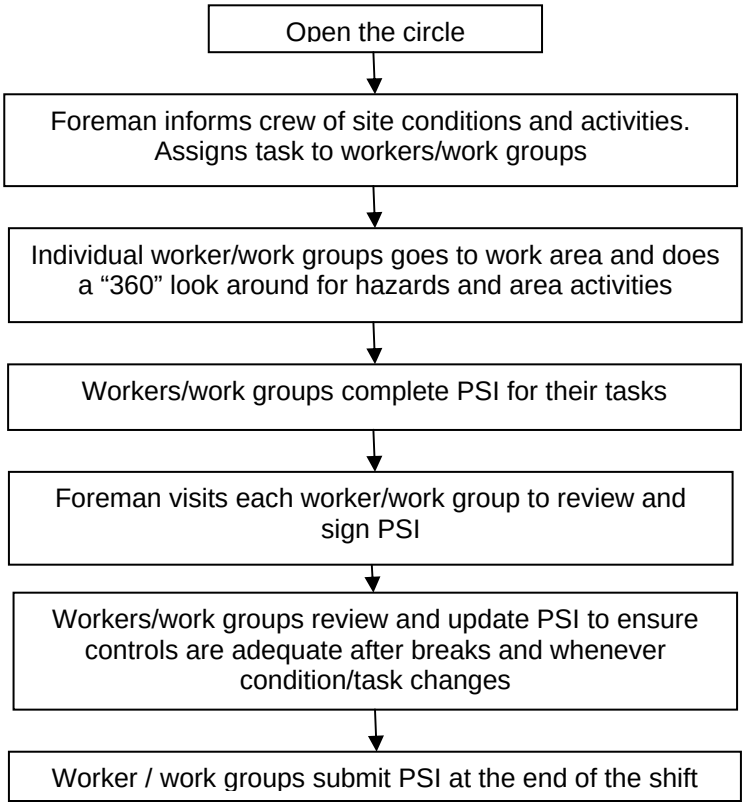
Downloading information to their workers concerning general site conditions and site activities as discussed in the “Open the Circle” at the beginning of the shift.

- Assigning work tasks to their workers and coaching on general hazard information for the tasks.
- Ensuring that a PSI has been completed for each task, that the appropriate hazards/controls have been identified, and that the required controls have been implemented.
- Ensuring that PSIs are updated and/or reviewed after breaks or when conditions or tasks change.

Workers will be responsible for the following:

- Identifying specific hazards in their area of work and completing a PSI for that task
- Updating and/or reviewing the PSI after breaks and whenever the task changes.
- Advising his or her foremen of concerns regarding the work or of hazards that require additional attention.

PSI Flowchart



PSI Audits

PSI audits will be conducted by the PCL Project management staff during the work day to commend, correct, and coach proper completion of a PSI.

Ten percent of all PSIs completed in the field will be audited.

5.6 WHMIS (Workplace Hazardous Materials Information System) & Material Safety Data Sheets

Where subcontractors are required to work with, or adjacent to hazardous materials the law requires persons using these products are educated to work safely with these substances. To commit to the Workplace Hazardous Materials Information System (WHMIS), the responsibility is upon each subcontractor to ensure that the product brought to site meets the specifications outlined in the contract and to label all applicable containers according to WHMIS legislation. Subcontractors are to notify PCL of flammable, explosive, or otherwise dangerous substances. Subcontractors using controlled substances are also required to train employees in WHMIS and meet the requirements for Transportation of Dangerous Goods (TDG).

WHMIS uses classifications to group chemicals with similar properties or hazards. The Controlled Products Regulations specifies the criteria used to place materials within each classification. There are six classes, although several classes have divisions or subdivisions. Each class has a specific symbol to help people identify the hazard quickly. For clarification, these classes are:

Class A – Compressed Gases
Class B – Flammable and Combustible Materials
Class C – Oxidizing Materials
Class D – Poisonous and Infectious Materials
Class E – Corrosive Materials
Class F – Dangerously Reactive Materials

5.7 Material Safety Data Sheets

A requirement of WHMIS is to ensure any controlled substance brought to the jobsite is accompanied with a current (less than 3 years) Material Safety Data Sheet (MSDS). Before a controlled substance is brought onto site. A copy of the MSDS must be provided to the PCL Project Superintendent and a copy kept by the subcontractor and made readily available for review by their respective workforce.

Forms: Construction Hazard Assessment and Hazard Identification and Control Form (see Forms Section)

PSI Info

PRE-JOB SAFETY INSTRUCTION

PSI Steps:

- *Do PSI at site of task*
- *Identify scope of work*
- *Identify hazards*
- *Identify hazard controls*
- *Document on PSI*
- *Review PSI with workers*
- *Workers sign PSI*
- *Workers initial after breaks*

Return PSI to foreman at end of each shift.

OUR GOAL IS "ZERO INCIDENTS"

Questions to be answered:

1. Is the area safe to work in?
2. Will the activities of other crews interfere with safe operations?
3. Has a job hazard analysis been completed and do workers understand their work assignments?
4. Have the proper tools and equipment been provided?
5. Are tools and equipment in safe operating condition?
6. Has proper personal protective equipment been provided?
7. Is the crew knowledgeable on how to properly use all personal protective equipment?
8. Can the crew communicate effectively with each other or are there restrictions due to high noise, restricted vision or language barriers?
9. If chemical products or compounds are being used, is the crew aware of the hazards and safety controls required to safely complete work assignments?
10. Is the crew aware that the Pre-Job Safety Instruction is there to assist them in getting the job done safely?
11. Have workers been encouraged to make suggestions to assist in completing job assignments safely?
12. Has the crew been advised to report any unsafe acts or unsafe conditions to their supervisors?

CONSTRUCTION LEADERS

Pre-Job Safety Instruction Form

Pre-Job Safety Instruction (PSI)

Please complete a PSI at the task location prior to start of each task or when conditions change.

Company / Craft	Date	Time	Job No. / Permit No.

Project	Task Location	Muster / Meeting Point

✓ Review these items with the crew at the site of the task and check the blocks that apply to the work.
"HIGH RISK" activities need a HSE Operating Procedure or a JHA. (Supervisor to Identify)

Environmental Hazards
- ☐ spill potential / containment
- ☐ HAZMAT / TDG storage
- ☐ weather conditions
- ☐ MSDS reviewed for hazardous materials
- ☐ ventilation required
- ☐ heat stress / cold exposure
- ☐ lighting levels too low
- ☐ housekeeping

Ergonomics Hazards / Material Handling
- ☐ working in a tight area
- ☐ parts of body in line of fire
- ☐ working above your head
- ☐ pinch points identified
- ☐ repetitive motion

Work at Height Hazards
- ☐ barricades, flagging, and signs in place
- ☐ hole coverings in place
- ☐ protect from falling items
- ☐ powered platforms
- ☐ others working overhead/below
- ☐ fall arrest systems
- ☐ ladders

Activity Hazards
- ☐ welding / grinding
- ☐ burn / heat sources
- ☐ compressed gasses
- ☐ working on / near energized equipment
- ☐ electrical cords / tools - condition
- ☐ equipment / tools inspected
- ☐ critical lift meeting required
- ☐ energy isolation
- ☐ airborne particles
- ☐ open hole(s) / leading edge(s)
- ☐ mobile equipment / vehicle
- ☐ rigging
- ☐ excavation / underground work hazards
- ☐ confined space

Access / Egress Hazards
- ☐ scaffold (inspected and tagged)
- ☐ slip / trip potential identified
- ☐ required permits in place
- ☐ excavations
- ☐ walkways / roadways
- ☐ Other: _____

Personal Limitations / Hazards
- ☐ clear instructions provided
- ☐ trained to use tool and perform task
- ☐ distractions in work area
- ☐ working alone (communication)
- ☐ lift too heavy / awkward position
- ☐ external noise levels
- ☐ physical limitations
- ☐ first aid requirements

PPE Requirements
- ☐ goggles / Fectoggles / Spoggles
- ☐ face shield
- ☐ gloves (kevlar or leather)
- ☐ coverall (fire retardant)
- ☐ hearing protection
- ☐ respirator
- ☐ harness / lanyard
- ☐ reflective vest
- ☐ footwear (condition / application)

✓ Identify the task steps and hazards, and then identify the plans to eliminate or control the hazards.

TASK STEPS	HAZARD	CONTROL

DO NOT SIGN UNTIL YOU UNDERSTAND AND AGREE WITH THE PSI. REVIEW AND INITIAL AFTER BREAKS AND LUNCH.

Worker Signature:	1st Break	Initial after: Lunch	2nd Break	Worker Signature:	1st Break	Initial after: Lunch	2nd Break

Supervisor: _____ (Print Name) _____ (Signature)

Auditor: Print Name _____ Signature _____ DD/MM/YY _____

	Adequate	Inadequate		Adequate	Inadequate
1. Task description			6. Workers' names legible		
2. Hazard identification			7. Reviewed / signed by foreman		
3. Hazard controls			8. Muster / assembly point identified		
4. All sections implemented			9. Tools and equipment inspected		
5. Initialed after breaks / lunch			10. PSI at task location		

Comments: _____

Auditors will comment on all inadequate items and those that are worthy of positive recognition.

Sample of a completed PSI

PCL

Pre-Job Safety Instruction (PSI)

Please complete a **PSI** at the task location prior to start of each task or when conditions change.

Company / Craft	Date	Time	Job No. / Permit No.
PCL	Aug 3, 2011	6:55am	2200906
Project	**Task Location**		**Muster / Meeting Point**
BC Place	GL503/403		

✓ Review these items with the crew at the site of the task and check the blocks that apply to the work.
"HIGH RISK" activities need a HSE Operating Procedure or a JHA. (Supervisor to Identify)

Environmental Hazards
- ☐ spill potential / containment
- ☐ HAZMAT / TDG storage
- ☐ weather conditions
- ☐ MSDS reviewed for hazardous materials
- ☑ ventilation required
- ☐ heat stress / cold exposure
- ☑ lighting levels too low
- ☑ housekeeping

Ergonomics Hazards / Material Handling
- ☑ working in a tight area
- ☑ parts of body in line of fire
- ☑ working above your head
- ☑ pinch points identified
- ☑ repetitive motion

Work at Height Hazards
- ☑ barricades, flagging, and signs in place
- ☑ hole coverings in place
- ☑ protect from falling items
- ☑ powered platforms
- ☑ others working overhead/below
- ☑ fall arrest systems
- ☐ ladders

Activity Hazards
- ☐ welding / grinding
- ☐ burn / heat sources
- ☐ compressed gasses
- ☑ working on / near energized equipment
- ☑ electrical cords / tools - condition
- ☑ equipment / tools inspected
- ☐ critical lift meeting required
- ☐ energy isolation
- ☑ airborne particles
- ☑ open hole(s) / leading edge(s)
- ☑ mobile equipment / vehicle
- ☑ rigging
- ☐ excavation / underground work hazards
- ☑ confined space

Access / Egress Hazards
- ☑ scaffold (inspected and tagged)
- ☑ slip / trip potential identified
- ☐ required permits in place
- ☐ excavations
- ☐ walkways / roadways
- ☐ Other:

STOP THE DROP

Personal Limitations / Hazards
- ☑ clear instructions provided
- ☑ trained to use tool and perform task
- ☑ distractions in work area
- ☐ working alone (communication)
- ☑ lift too heavy / awkward position
- ☑ external noise levels
- ☐ physical limitations
- ☐ first aid requirements

PPE Requirements
- ☑ goggles / Fectoggles / Spoggles
- ☐ face shield
- ☑ gloves (kevlar or leather)
- ☐ coverall (fire retardant)
- ☑ hearing protection
- ☐ respirator
- ☑ harness / lanyard
- ☑ reflective vest
- ☑ footwear (condition / application)

✓ Identify the task steps and hazards, and then identify the plans to eliminate or control the hazards.

TASK STEPS	HAZARD	CONTROL
-take measurements	-sharp edges	- file sharp edges
in air duct for coring	- working at heights	-wear safety harness
	- other workers	- communicate clearly
	- congested areas	- stay organized
- bend & cut 4" pipe	-vehicle traffic	- make eye contact
to length	- lifting heavy objects	- ask for help
	- loud noise levels	- wear hearing protectio
- mount support where	- low lighting	-use adequate lighting
needed	- open holes	- cover holes w/plywood
	- slips & trips	- housekeeping
- secure pipe to	- pinch points	- watch hand placement
supports	- confined space	- beaware of surrounding

DO NOT SIGN UNTIL YOU UNDERSTAND AND AGREE WITH THE PSI. REVIEW AND INITIAL AFTER BREAKS AND LUNCH.

Worker Signature:	1st Break	Initial after: Lunch	2nd Break	Worker Signature:	1st Break	Initial after: Lunch	2nd Break
Alan Smith	✓						
Dave Wood	✓						

Supervisor: Jason Taylor

Section 6 – Inspections and Audits

The purpose of an inspection is to identify conditions and hazards in the workplace that can lead to an incident and identify positive conditions, behaviors, and observations.

The purpose of an audit is to evaluate the implementation of systems and processes within this HSE Manual against a defined standard.

6.1 Informal Inspections

Informal inspections include the daily visual inspection of workplace conditions. These inspections are conducted by all employees as a part of their regular work tasks.

Note: Subcontractor / Trade Contractor Supervisors are required to conduct and submit a weekly safety inspection to the responsible PCL Superintendent with hazards and corrective actions identified.

6.2 Formal Inspections

Formal inspections are documented visual tours of the work place, used to identify hazards and hazardous conditions. Formal project inspections will be conducted weekly by the Project Superintendent, and the Project HSE Supervisor.

All noted deficiencies are to be signed off on the HSE Inspection Checklist.

Note: Subcontractor / Trade Contractor Management are required to conduct and submit a monthly formal safety inspection to the responsible PCL Superintendent with hazards and corrective actions identified.

6.3 Hazard Classification for Inspections

When a non-conformance item has been identified (during an inspection), a hazard classification is assigned. The hazard classification rating system contains the following:

Class A Hazard – A condition or practice likely to cause permanent disability, loss of life or body part, or extensive loss of structure, equipment or material, or significant negative environmental impact that has the potential to be reported to authorities.

Class B Hazard – A condition or practice likely to cause serious injury or illness resulting in temporary disability or property damage that is disruptive but not extensive.

Class C Hazard – A condition or practice likely to cause minor (non-disabling) injury or illness, or non-disruptive property damage.

6.4 Audits

Audits are much more detailed than inspections and focus on the overall HSE process or management system. This includes such items as communication, administration, documentation, HSE education, training, practices, and procedures. When supported within a framework of frequency statistical analysis

and HSE inspections, this system is very efficient and effective in terms of HSE performance measurement.

Note: audits that will take place include:

- Daily PSI Audits (As per section 5)
- Contractor Mid-Point Audit conducted by PCL management team midway through the Subcontractor /Trade Contractor's tenure on site. Based on the findings of this audit, the responsible PCL Project Manager will conduct a "Performance Review" with the Subcontractor/Trade Contractor management team.
- Close out Audit conducted at the end of the Subcontractor /Trade Contractor's tenure on site.

Audit findings will indicate areas that are good and areas that may need some improvement. Action plans are developed with responsibilities delegated and time lines designated for items of improvement. Follow up is conducted to ensure that the improvement item action plans have been conducted.

Form: HSE Inspection Checklist (see Forms Section)

Section 7 –Personal Protective Equipment

The purpose of personal protective equipment (PPE) is to provide an effective barrier between a worker and potentially dangerous objects, substances, and processes.

7.1 Basic Personal Protective Equipment

At a minimum, basic PPE must include:

- Hard hat;
- Safety Glasses;
- High vis vests;
- Gloves (applicable to task); and
- Safety footwear.

Note: All personal protective equipment must meet the applicable standard as defined by legislation and policy.

7.2 Inspection Defective/Damaged PPE

Workers must inspect PPE prior to use to verify it is fit for use. Defective or damaged PPE must be immediately removed from use. All PPE removed from service will be tagged as out of service.

7.3 Selecting Personal Protective Equipment

PPE will be selected based on the following information:

- Hazard assessments;
- Material safety data sheet (MSDS);
- Customer/client requirements; and
- Legislative jurisdictional requirements

7.4 Mandatory Full Time PPE Requirements

7.4.1 Head Protection

- Personnel shall wear hard hats that are in good condition and meet legislative jurisdictional requirements and standards.
- Bump hats and metal hard hats shall not be worn as head protection.
- Personnel must wear hard hats with their company logo and the workers name clearly displayed on the hard hat.
- Alteration of hard hats is prohibited
- Hard hats shall be worn in the manner prescribed by the manufacturer.
- Only head apparel designed to be worn under a hard hat will be allowed.
- Hardhats are required while welding. They are to be fitted with the appropriate shield.

7.4.2 Eye and Face Protection

- All personnel must wear properly fitting eye and face protection commensurate with PCL policy on active work sites.
- Face and eye protection shall be kept clean and in good repair.

- If a worker cannot wear safety glasses, as documented by a physician's note, alternate arrangements must be made to verify the individual's face and eyes are protected.
- All components of prescription glasses that are being used for eye protection must meet approved applicable regulatory standards.
- The prescription glasses will include side-shields that must meet the applicable regulatory standards. Coverall glasses or goggles shall be required for prescription glasses that do not meet the standard.
- Face shields are required when grinding/cutting steel, concrete, chemical use.
- When using a face shield, safety glasses are also required under the face shield.

7.4.3 Hand Protection

All personnel must have appropriate gloves available for their task on their persons. Gloves are to be worn when conducting work activities with hazards that may cause injury to hands.

7.4.4 Foot Protection

- All personnel on a work site must wear safety footwear.
- The minimum is a CSA approved, Grade one (green triangle), 6" high cut boot appropriate to the task.
- No running shoes of any kind are permitted on work sites.
- Safety footwear must be in good repair. It is the responsibility of the employee to verify that their footwear is in proper working condition.

7.4.5 High Visibility Vests

High visibility apparel shall meet WSBC regulations and will be worn whenever worker and mobile equipment are working in a common area.

7.5 Hearing Protection

Personnel will receive an overview of hearing protection requirements during the project orientation. The training shall include identification of any hearing protection required areas, the hazards associated with noise exposure, and the purpose, use, maintenance, and limitations of the protective equipment provided on site.

Personnel should not be exposed to noise in excess of the occupational exposure limits (OEL) listed below:
85 dBA Lex daily noise exposure level;

140 dBC peak sound level.

This may be accomplished by:

- Instituting engineering controls;
- Work practices/administrative control; and/or
- Providing personal hearing protection.

There are two types of recognized hearing protection available for use in effectively reducing noise exposure – earplugs and earmuffs. In most instances, earplugs are acceptable hearing protection. Cotton plugs are not acceptable and shall not be used. When using earmuffs for hearing protection special care must be given to check they are disinfected before being used by another employee.

Workers are to be informed of the hazards associated with exposure to noise and the purpose and limitations of protective hearing devices by their respective Supervisors.

As per legislated requirements hearing testing is required to be conducted within six months of tenure and annually after that. To assist subcontractors / trade contractors in meeting this requirement hearing testing will be scheduled throughout the tenure of the project and dates communicated to the stakeholders.

7.6 Limb and Body Protection

Where there is risk of injury to a worker's limb and/or body, adequate limb and body protection must be worn and equipment designed to protect employees from injury to their limbs and body must be used (i.e. chainsaw chaps).

Where there is risk of injury due to congested work area and/or the movement of heavy equipment in and/or around the work area, all employees must wear high visibility apparel.

When work is being done in extreme hot or cold temperatures, the protective clothing being worn must be reviewed to verify that it is adequate.

Personnel must be informed of any special precautions that need to be taken or special protective clothing that needs to be worn.

At a minimum a 4 inch sleeve is required (no tank tops / muscle shirts are permitted)

7.7 Respiratory Protection

This section provides a description of various types of respirators that may be used at the jobsite for respiratory protection.

Respiratory Protection Options include:

Disposable Dust/Particulate Respirators - Single use disposable particle masks (double strapped types) are designed to protect the lungs from nuisance particles.

Air Purifying, Half Mask Respirators - Air purifying, half mask respirators have a rubber face seal that fits over the nose and under the chin. It is fitted with cartridges which purify the air as the wearer breathes. Different types of cartridges are available for different types of air contaminants.

Air Purifying, Full Face-piece Respirators - Air purifying, full face-piece respirators work on the same principal as the half-mask respirators described above. The face-piece extends around the entire face, covering the eyes, nose, chin, and mouth. This type of mask should be used when working with highly corrosive chemicals to protect the eyes and face from chemical splashes or where a face-shield and respirator combination is required.

Powered Air Purifying Respirators (PAPR) - PAPR features a battery powered, portable fan which draws air through a particulate or chemical filter and blows it to the face-piece. The fan and filter unit may be an integral part or the face-piece or mounted on the wearer's back or belt. Full and half mask face-pieces are available as well as a variety of helmets and hoods. This type of respirator is typically

used when high particulate concentrations are present.

Airline Respirators - Airline respirators provide clean, fresh air to the wearer from a stationary source such as compressor or compressed air cylinders. They may be equipped with a full or half mask face-piece, helmet, or hood. Breathing air must be high quality and meet regulatory specifications.

Respirator Fit Testing

Prior to issuing a reusable, face-fitting respirator to a worker, the worker must successfully pass a qualitative fit test on that respirator. Aspects of the fit test requirements are outlined below:

- A worker cannot be fitted with a face-sealing respirator if there is any facial hair present that would come between the skin and facemask sealing surface. Moderate stubble at the sealing surface is considered excessive facial hair.
- Any worker who exhibits difficulty breathing or a severe psychological reaction during any phase of fit testing the worker must be examined by a physician, and the examining physician must be provided with sufficient information to allow the physician to advise the employer of the ability of the worker to wear a respirator.
- Fit testing repeated at least annually, or more frequently, if any change occurs which may alter respirator fit (i.e. weight loss or gain)

Note: Records of fit tests are to be submitted to the PCL Superintendent

7.8 Fire Retardant Clothing

Fire retardant clothing (FRC) must be used where there is risk of fire (i.e. welding) or explosion, legislative requirements dictate, or client requirements dictate. Where FRC is required, the outer layer of worker's clothes, including rain gear, must be made of fire retardant material.

7.9 Clothing and Jewelry

For personal protection and to limit the spread of construction related contaminates throughout the facility, workers will not be permitted to wear:

- loose fitting clothing or jewelry
- greasy or oily clothing;
- torn or ragged clothing;
- cut-off or "muscle" shirts (4" sleeve shirt is the minimum sleeve length allowed); or
- short pants

Work site personnel wearing shirts, other clothing and stickers displaying any offensive language or opinion will be asked to remove the offensive material or leave the site immediately.

Section 8 – Emergency Response Plan

The purpose of the Emergency Response Plan (ERP) is to provide guidelines for the response required in the event of an injury, fire, or any other emergency at a work site.

8.1 Definitions

Emergency Assembly/Muster Point

Emergency assembly/muster points are a predetermined location where personnel will gather in the case of an emergency evacuation.

8.2 Emergency Meeting Point

Emergency meeting points are a predetermined location where a designate will be sent to meet responding emergency response crews.

8.3 Site Plot Plan

The site plot plan will indicate:

- access gates;
- streets;
- site offices;
- evacuation routes to emergency assembly/muster points;
- emergency meeting points
- first aid room/trailer location;
- fire extinguisher / air horn locations;
- controlled product storage

8.4 Emergency Contact List

As part of the emergency response plan, the site will complete an Emergency Contact List that shall be kept current, including the following information and contacts:

- PCL site supervision;
- Project management;
- Client representatives;
- District HSE department;
- Government agencies;
- Medical transportation services;
- Medical services; and
- NAHQ Offices.

8.5 Emergency Coordination

Project superintendents (or other designates) must be able to respond to, and participate in, any emergencies that may occur. All subcontractors/trade contractors should participate by identifying their qualified first aid personnel. The main responsibility during an emergency coordination is to respond to the call for emergency help.

**** <u>During an emergency, all radio traffic will be dedicated to the emergency</u>. ****

8.6 Types of Emergencies and Procedures

All personnel working on this project are directed to the procedures within this section should they need emergency help.

8.7 Medical Emergencies

See INJURY RESPONSE PROCEDURE at attachments section.

8.8 Emergency Evacuation

See EMERGENCY EVACUATION PLAN at attachments section.

8.9 Earthquake Procedures

See EMERGENCY EARTHQUAKE PROCEDURES at attachments section.

8.10 Action on Discovering a Fire

In the event of a fire, ensure the REACT procedures are followed.

REACT
R – Remove those in immediate danger.
E – Ensure room doors and windows are closed.
A – Activate the air horn (1 long blast).
C – Call 911 and inform the operator.
T – Try to extinguish or control the fire.

Only fight the fire if:

- trained to do so
- you will not be placing yourself in danger
- the correct type of extinguisher is available
- an escape route is available

On hearing the fire alarm

- stop all work-related activities
- If using cranes, lower all loads to a safe location
- switch off electrical equipment
- close windows
- proceed along the safest and closest escape route, closing doors behind you
- move directly to the designated Emergency Assembly/Muster Point.
- ensure any flammable or explosive liquids are removed from the building (if possible)
- follow all instructions given by fire marshals or members of the emergency services. Do not re-enter the building or move from the assembly area unless instructed to do so.

When the fire alarm sounds, there are certain things you must not do.

- DO NOT walk upstairs or enter another room.
- DO NOT enter a building or area where the alarm is sounding.
- DO NOT carry bags or other bulky articles with you.
- DO NOT use the elevators.

- DO NOT loiter near entrances/exits to buildings.
- DO NOT move vehicles.
- DO NOT leave tools, equipment, or materials in locations that obstruct pathways or exit ways.
- DO NOT block the access roads.

8.11 Bomb Threat

When notification of a bomb threat is received by telephone, the PCL Project Manager and the PCL Project Superintendent must be notified immediately, giving as many details as possible. All construction workers, foremen, and supervisors should be familiar with the bomb threat procedures.

If the threat is received in writing, the letter or note should be turned over to local authorities. The note should be handled as little as possible as it may be useful in an investigation (i.e. fingerprints may be required).

8.11.1 Actions To Be Taken

Contact should be made immediately with the local police department at 911 and to the PCL Project Manager or Project Superintendent providing all available details relating to the bomb threat.

The local police department will initiate action in accordance with established procedures.

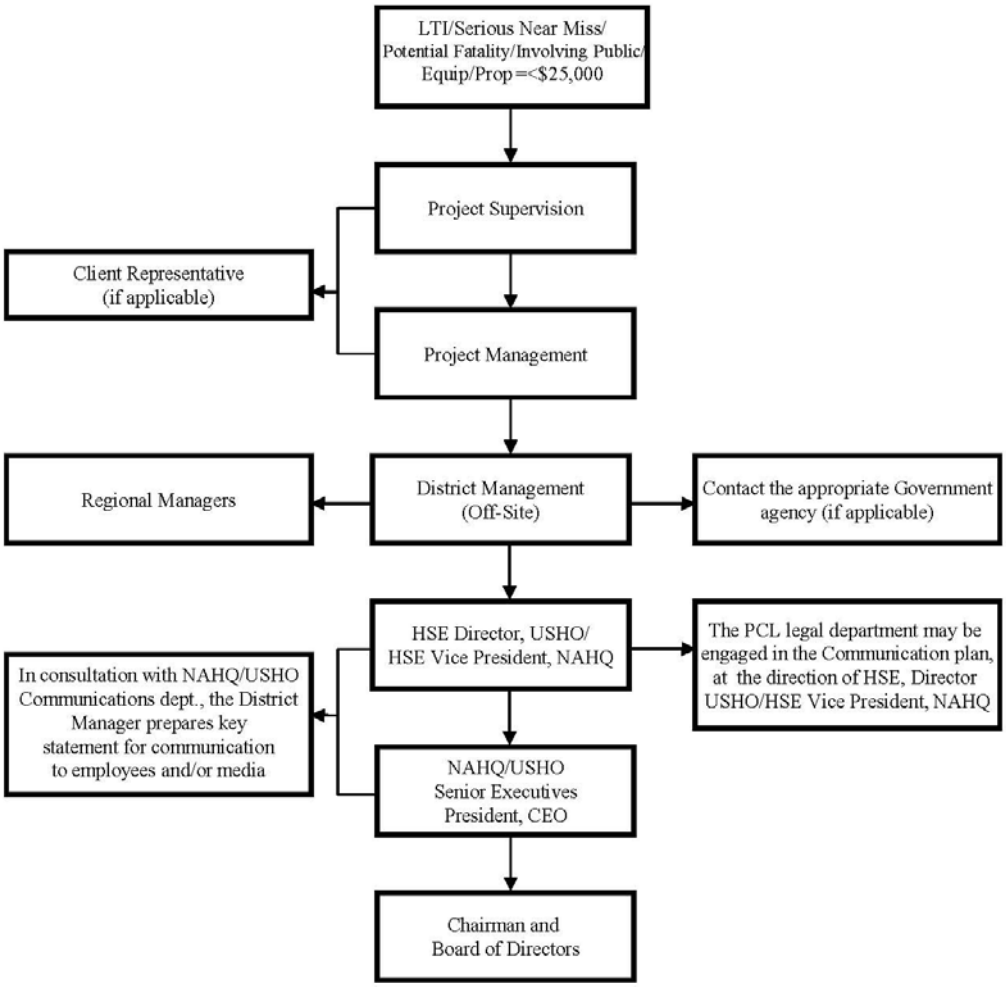
Applicable areas will be searched and/or evacuated (follow Emergency Evacuation Response Plan), as deemed necessary by PCL and in consultation with city or other police officials.

It is important in the event of a bomb threat, that no one touches any suspected item. Should a suspected item be located, immediately notify the PCL Project Superintendent.

Attachments: Emergency Contact Information, Injury Response Procedure, Emergency Evacuation Plan (see Appendix B); Emergency Earthquake Procedure (see Appendix D)

Incident Reporting Diagram

Incident Reporting Diagram



Section 9 – Site Security

The purpose of this section is to prevent loss caused by intentional acts and reduce the opportunity for public incidents in our workplaces.

9.1 Fencing and/or Physical Barriers

The purpose of fencing and/or physical barriers is to keep the general public off the site and to keep materials and equipment inside the site. No fencing is to be removed unless it has been authorized by the PCL Superintendent.

9.2 Gates

All gates will be identified and numbered as well the gates will be identified on the site safety plan. Gates should be closed when not in use and opened only when required for specific deliveries or other authorized entries.

9.3 Lighting

PCL will illuminate walkway areas and "common" areas to an adequate degree of brightness. For safe access & egress. (Task lighting is by trades).

Each site will have specific identified emergency route lighting that is automatically initiated when there is an electrical power loss. These emergency light systems will be inspected and tested on a regular basis, and identified on the site safety plot plan.

9.4 Visitor Control (inspectors, "one off deliveries")

All visitors must report to the project office prior to going on site and be provided with an escort as outlined in Section 3 of this safety program. All visitors will be required to sign in and out at the project office. The responsible person from PCL Constructors Westcoast Inc. or the applicable Subcontractor / Trade Contactor who has completed the full orientation will be responsible to escort and supervise the visitor and be present at all times. The escort will be responsible for the safe acts and conditions of the visitor while they are on site as well as completing a PSI with his or her visitor(s). All visitors must wear the required personal protective equipment while on the project site.

9.5 After Hours Activities

Any personnel and subcontractors/trade contractors that return to the project after hours or on weekends must be authorized to do so by the project superintendent or operations designate. An extended hours work permit must be completed and submitted to the PCL Superintendent for approval. First Aid coverage may become the responsibility of the subcontractor/trade contractor.

9.6 Parking Overview

Parking is not provided for workers on the Project. If parking is required to facilitate the work it is to be arranged through the PCL Project Superintendent. Consideration of the project traffic plan is to be given for all vehicular traffic including deliveries to the site. PCL Contractors are to ensure companies delivering material and/or equipment to the site are familiar with delivery locations, procedure and safety/environmental requirements prior to coming to the site.

9.7 Vehicle Access

Only authorized vehicles are allowed on site. PCL Project management will control vehicle entry. All vehicles entering and exiting site are subject to search.

9.8 Tools and Equipment

The security of the tools and equipment is the responsibility of the applicable owner. Subcontractor/trade contractors are responsible for their equipment on the project.

9.9 Shipping, Receiving, and Material Control

Each subcontractor/trade contractor is responsible for their own shipping and receiving of materials and equipment. PCL Constructors Westcoast Inc. will not sign for any shipments delivered to site for a subcontractor/trade contractor and is therefore not responsible for:

- Partial shipment;
- Damaged shipment
- Inaccurate packing slip, inadequate shipping document; and/or
- Inaccurate listings of shipments returned to equipment or material suppliers.

9.10 Key Control

The PCL Superintendent is responsible for key control. Keys that access general areas will only be issued to supervisors. An inventory and signature system will be set up to control keys, including vehicle and equipment keys

Section 10 – Environmental Action Plan

This Project Health, Safety, and Environment Plan is intended to provide information to all project personnel for the purpose of eliminating or minimizing exposures which could have a negative or harmful effect on people, property, or the environment.

All **on-site personnel** are responsible for:

- complying with the Environmental Action Plan
- performing all work activities with due care and attention for other personnel and environment
- Immediately reporting any potential or actual hazards to their supervisor.

10.1 Environmental Project Checklist

The completed Environmental Project Checklist is a quick reference planning document which identifies key elements in the PCL project specific environmental program. See Forms Section.

The Environmental Project Checklist specifically highlights program considerations such as:

- Selection of an on-site environmental designate
- Listing on-site environmentally sensitive products/contaminants
- Chemical substitution review which would provide less hazardous and more environmentally friendly products
- Ensuring that current health hazard information on products is available (Material Safety Data Sheets)
- Having the necessary environmental permits/licenses arranged for
- Identifying safe storage areas and handling of products
- Having spill response kits on site and identifying location(s) on the site safety plan
- Development of a spill response plan
- Contact numbers of relevant jurisdictional environmental agencies for reporting of incidents
- Developing plans for transport and disposal of contaminated waste
- Having emergency response equipment and personal protective equipment available

10.2 Site Environmental Inspections

Formal environmental inspections will be conducted at each project location by PCL on a monthly basis unless otherwise directed by legislative jurisdictional requirements. These can be included with regular HSE inspections;

All site inspections will examine the worksite to address any environmental hazards or potential conditions.

10.3 Waste Management

Wherever possible, PCL and subcontractors will minimize production of non-hazardous waste through recycling, reuse, and waste minimization initiatives. This includes participation in site recycling programs unless otherwise specified by legislative jurisdictional requirements; and where hazardous waste is generated, PCL will follow the required legislated protocols for the handling and disposal of such material. When working on client sites, all hazardous waste will be managed through the client waste management programs.

10.4 Environmental Incident Reporting

There are two types of environmental incident categories:

- Incidents which are not in compliance with legislation and which must be reported to a regulatory agency, and;
- Incidents which are not serious in nature but which have a serious hazard potential and are reported within the company only.

Environmental incidents will be investigated by the PCL Superintendent and the on-site Environmental designate in liaison with the District HSE Manager.

Where serious incidents require the services of consultants, expert personnel, or special agencies, arrangements are to be made in consultation with the HSE Vice President, NAHQ (for Canadian operations).

10.5 Spill Response Plan

Spills of chemical, fuels, and other substances may occur as isolated events or they may occur in association with other emergencies such as fire, explosion, natural causes, or accident.

There are six distinct steps

- Communicate event
- Spill details
- Control of scene
- Spill containment kit retrieval
- Spill/release clean up
- Disposal of contaminated materials

10.6 Communication System

An effective communications system is set up so that key personnel such as the project environmental designate, superintendent, project manager, district manager, and the district HSE manager can be contacted in a timely manner. This system includes public agencies such as government environmental agencies, and emergency services if required.

10.7 Spill Details

When a spill occurs, the person discovering the spill must provide details of the spill such as:

- Location;
- Product name of spilled substance (if known);
- Estimated volume or how much was spilled;
- Total quantity involved (this refers to potential of additional spillage);
- Source of the spill or leak;
- Any hazards involved;
- Size of area affected by spill, and
- Injuries or personnel requiring medical attention or rescue.

10.8 Control of Scene (Affected area)

When a spill occurs, the designated first responders will evaluate the situation and hazard's before proceeding.

Items to be considered are;

- Proper identification of spilled product or substance;
- Review Material Safety Data Sheets ("MSDS") for allocation of appropriate personal protective equipment and other control measures;
- Weather conditions which could affect contaminated area such as rain, snow, wind and temperature;
- Evacuation of area to protect personnel (if required);
- Cordoning off and securing of the contaminated area;
- Equipment/materials required to control spill area;
- Personal protective equipment required to protect personnel as identified on the MSDS;
- Containment to minimize contaminated area;
- Extinguish or remove sources of ignition;
- Stopping leak or spill at source, i.e. repairing a leaking drum or container, turn off valves, or shut down compressor or pump;
- Placing dams of absorption materials to protect sensitive watershed areas such as floor drains, area drains for surface moisture collection, open recessed drains, spillways or watershed avenues; and
- Taking photographs of contaminated and affected area(s).

10.9 Spill Station/Spill Containment Kit

- Obtain spill response kit from its identified location on the site safety plan;
- Obtain Material Safety Data Sheets for product spilled (if known) so that the correct response/clean up can be accomplished in a timely manner;
- Collect any Personal protective equipment required that is identified on the Material Safety Data Sheet
- Shovels, pails, plastic bags, over pack barrel(s);
- Neutralizers;
- Labels for each containment of hazardous waste, identify date, Contractor and material/contaminant;
- Log for contaminated waste. Including; No. of bags, Contractor and material/contaminant.

10.10 Clean Up Operations

Clean up operations will be dictated by the situation and circumstances but generally consist of:

- Extraction and transfer of spilled material/substance into tanks or barrels;
- Extraction and transfer of contaminated soil, material or water into tanks or drums;
- Placement of damaged drums or containers into over packs;
- Extraction and transfer of used absorbents into drums;
- Placement of labels on drums, tanks and over packs; and
- Proper storage and transfer of materials or substances.

10.11 Transfer and Disposal of Hazardous Waste

Transfer and disposal of hazardous waste will be conducted as per jurisdictional legislated requirements and only by a licensed hauler/disposal agency with properly trained employees.

Note: Any subcontractors/trade contractors that are found responsible for the spill or release will be held accountable for all costs associated with the response, clean-up (including materials and personnel

hours), disposal of the contaminated materials by an approved licensed hauler and any damages to area where spill/release occurred.

Erosion, Sediment, Run-off and Seepage Control Plan – (To be developed, site specific)

Attachments: Waste Management Plan, Spill Contingency Plan (see attachments section)

Forms: Environmental Project Checklist,Environmental Spill Report Form, Environmental Checklist and Environmental Scope of Work (see Forms Section)

Section 11 – Subcontractor / Trade Contractor HSE Program

11.1 Program Promotion and Awareness

PCL Constructors Westcoast Inc. will verify that the respective subcontractor/trade contractor HSE program and/or systems in place meet the applicable standards and are integrated with the PCL Program. Where there is a discrepancy between programs and legislation, the higher standard will be applied. In addition subcontractor/trade contractors will agree to adopt the content of this Health Safety and Environment Manual by signing the "Acknowledgment form" at the back of this section. This acknowledgment form must be signed and submitted prior to starting any activities on the project site.

All subcontractor/trade contractors are required to meet all applicable legislated standards as defined by Worksafe BC in the Occupational Health & Safety Regulations and the BC WSBC Act. In addition all subcontractor/trade contractors will comply with any other client, legislative jurisdictional, and company requirements (i.e. Marine Vessels Act, Transportation of Dangerous Goods Act).

All subcontractor/trade contractors will ensure compliance with the Alcohol and Drug policies as identified in this manual. If a subcontractor does not meet these requirements under their own respective Alcohol and Drug policies, they will follow the PCL Alcohol and Drug policy. Testing of subcontractor employees is the responsibility of the subcontractor.

The subcontractor/trade contractor shall designate a representative to be responsible for the administration of the subcontractor HSE program. This person must be a line manager or supervisor.

11.2 Personal Protective Equipment

Subcontractors/trade contractors are responsible for verifying that their employee's have the appropriate PPE and are trained in its use and maintenance. This HSE manual describes basic and specialized personal protective equipment requirements. These requirements will be outlined in detail during the site HSE orientation.

11.3 Incident Reporting

The subcontractor/trade contractor is required to notify PCL of all incidents including near misses. All incidents must be reported to the site superintendent immediately. All incidents that require medical attention, or have the potential for medical attention require the immediate notification of the project management team.

11.4 Investigations

An investigation must be conducted by the subcontractor/trade contractor supervisors for all incidents involving their workers. The preliminary investigation report must be submitted to the project management team within twenty-four hours of occurrence. These reports must be completed to the satisfaction of the PCL project management team.

11.5 Statistical Reporting

Each subcontractor/trade contractor will confirm, on a daily basis, a report detailing the number of their Employees on site.

11.6 Audits and Inspections

Subcontractors/trade contractors shall inspect their work areas and their subcontractors work areas on an on-going basis to verify compliance with HSE regulations. Subcontractors/trade contractors are expected to conduct formal inspections on their job sites in accordance with Section – 6 of this manual and provide copies of the inspections to the PCL project management team. If non-compliance items are observed, the subcontractor/trade contractor must rectify any unsafe acts and/or conditions without delay. Work which is not in compliance with applicable HSE standards will be stopped until corrective action is implemented.

11.7 Training

All subcontractor/trade contractor personnel must be trained and competent to perform the assigned work. Training requirements must meet or exceed requirements outlined in BC WSBC OHSR and any applicable standard. Training records must be submitted before at risk work is permitted to begin (i.e. work at heights, confined space, mobile equipment…)

11.8 Meeting Attendance

All subcontractor/trade contractor personnel shall attend and/or conduct the following meetings:

- **Weekly HSE Meetings** (Tailgate Safety Talks) Weekly HSE meetings are to be held a minimum of once per week. Meeting minutes are to be submitted to the PCL project management team on the day of the meeting.

- **Project HSE Committee Meetings (Joint Health and Safety Committee Meetings)** Project HSE Committee meetings will include company supervisors, subcontractor/trade contractor supervisors, foremen, and designated workers.

The intent of these meetings is for workers and supervisors to discuss any HSE issues that may arise on the project.

Section 12 – Preventative Maintenance

The purpose of this Preventative Maintenance standard is to verify that the tools and equipment provided to workers are properly maintained.

12.1 Inspection

Tools and vehicles/equipment shall be inspected daily and prior to each use by the user/operator to verify that they are in proper working order. Equipment that has a pre-operation inspection checklist must have them completed and be kept on the piece of equipment for verification.

Damaged or defective tools must be tagged “DO NOT USE / OUT OF SERVICE” and returned to the Supervisor immediately. Under no circumstances may tools or equipment in need of inspection or repair remain in service.

12.3 Maintenance

Competent workers will maintain all tools, vehicles, and mobile equipment in accordance with the manufacturer’s maintenance requirements. Records of maintenance will be kept. Only “Qualified” persons may repair tools and equipment (i.e. Journeyman Electrician repairing temporary electrical panel).

12.4 Site Requirements

All tools and vehicles/equipment, company owned or rented, dispatched to the site shall be sent in good mechanical condition and with the required HSE equipment installed and be accompanied by operation manuals, testing (inspection) forms, and maintenance instructions. This is a requirement of legislation, codes, and company procedure.

Section 13 – Incident Investigations

13.1 Purpose

Investigations are a methodical examination of the facts of an incident that resulted, or could have resulted in injury, illness, loss, property damage, or liability.

They are conducted not to find blame, but to determine root causes and ultimately determine corrective actions or controls designed to prevent a recurrence of the incident.

13.2 Definitions

Incident
An incident is an undesired event that results in harm to people, loss of process, environmental interference, property damage, or liability.

Near Miss
A near miss is an incident where something could have resulted in personal harm, property damage, loss, or liability.

Loss of Process
Loss of process is an undesired incident that results in the disturbance of normal construction operations caused by an incident, damage to property, equipment, or the environment.

Lost Time Injury (LTI)
A lost time injury (LTI) is an injury where a medical professional directs the injured worker to remain away from work longer than the day on which the incident occurred.

Modified Work (Restricted Work)
This refers to work duties that have been modified to accommodate an injured worker who cannot perform their regular work duties as directed by a medical professional.

Medical Treatment (Medical Aid)
An injury or illness-related procedure other than first aid or preventative treatment that is intended to provide remedy or palliative care.

First Aid
Any one time treatment and subsequent observation(s) of minor, superficial injuries (ie. minor scratches, cuts, burns, abrasions and splinters or foreign objects embedded only in surface tissue) that do not require the professional medical care of a medical professional even though such an individual may have delivered the care.

13.3 Objective

The objective of investigating and reporting an incident is to determine the underlying causes that allowed the incident to occur and to implement effective corrective measures regarding:

- An incident;

- Damage to property, equipment, and environment; and
- Loss of process.

An investigation is a systematic process of examination, observation, and inquiry comprised of three parts including:

- Description of Incident
- The description identifies in detail how, when, and where the incident occurred including all related factors (i.e. weights, heights, distances, time of day, weather conditions).
- Root Cause (Why did the incident occur?)
- What acts, failures to act, and conditions contributed to the incident.
- Recommendations
- After the cause of the incident has been determined, recommendations (corrective actions) to prevent recurrence will be prepared.

13.4 Incident Investigation Procedure

The purpose of an investigation is to gather factual information which is pertinent to the incident or near miss which has occurred.

The investigation will be proportionate to the loss potential. As the degree of loss potential increases, so will the degree of investigation. The following information has been prepared to assist the investigation process.

Investigation Team

The PCL Project management team is responsible to conduct or assign someone to conduct on site investigations. Where incidents involve serious injury or major equipment / property / environmental damage, project management can request assistance from the district HSE manager.

Where minor incidents involving non-disabling injuries or minimal equipment damage occur, it is permissible for the project management team to utilize a competent designate providing the project superintendent oversees all investigation proceedings.

Incident Response

First Aid/Emergency Services

People's lives and their well being come first. Have first aid administered following the emergency response plan identified in Section 8.

Establishing Control

Establishing control at the scene where the incident occurred is critical to the success of the investigation. The success of an investigation is generally the result of a prompt and efficient response. Many things can happen in a short period of time that can mitigate or compromise evidence and information. The following is a list of some initial steps to assist and support this process.

Control Potential Secondary Occurrences

Prior to entering an area where an incident has occurred, an assessment of potential hazards must be done. Secondary occurrences can sometimes be more serious because normal controls can be

weakened or modified as a result of the incident. Positive temporary actions need to be taken after timely but careful consideration of the consequences.

Photographs

Photographs effectively preserve the visual aspects of the scene. When properly done, they can save hours of note taking, drawing, and writing. Photographs can also be used for training purposes. Photographs will be taken as follows:

- Use a long range, medium range, and close up sequence;
- Take a general scene photograph;
- Take a photograph of work station(s);
- Take a close up shot of deficiency items, damaged and impacted area(s);
- Photograph the scene from all sides; and
- Number each photograph and document the location of each shot on the sketch where the incident occurred.

Sketching the Scene

A sketch will be made of the area(s) where the incident occurred. In most cases a plan view is sufficient however, elevation views may be necessary to identify certain items. Sketches will include directional orientation (i.e. North, South, East, West) so that recorded information adequately describes the site where the incident occurred. Measurements will be included to identify and determine who and what was where. Witness locations (when incident occurred) will be noted on the sketch as well as photograph locations. Some affected areas may require a grid that in turn will be included in the sketch. Identify Sources of Evidence Conditions can change quite rapidly after an incident has occurred. Emergency rescue work involving equipment, machinery, lights, ventilation, and people can alter the scene and destroy valuable evidence. The investigator needs to know and recognize these things while taking other initial actions. This is when photographs can be very useful. If photographs are taken, note the locations at which photographs were taken on the sketch plan.

Preserve Evidence

Affected areas will be cordoned off, work stopped in that area immediately, and people restricted from entering the area until the investigation has been completed.

Collection of Evidence

Equipment Examination

An investigation will include the tools, equipment, and materials that people were using at the time of the incident. In some cases this may require the services of an expert. Guards, warning labels, condition of tools, application of tools, equipment, and materials as well as wear and tear can reveal evidence of what may have happened.

Records Check

Review all records (training, maintenance, schedule of work practices, and job procedures) to determine possible contribution to the incident (PSI, work plans, drawing, JHA, disciplinary actions).

Medical Condition

Investigate thoroughly; that is, evaluate all factors that may or may not be relevant. Consider, among other things, substance abuse, mental health, physical disabilities, fraudulent behavior, and future job continuity.

Re-enactment

On occasion, a re-enactment of the incident may become necessary to see what happened and how it occurred.

Re-enactment will only be used when:

- The information cannot be gained in any other way;
- It is vital to the development of remedial or corrective actions; and
- It is absolutely necessary to verify critical facts.

Interviewing Witnesses

Immediately after the site has been secured, witnesses must be interviewed (Witness Statement attached at the end of this standard). A witness is anyone who knows something related to what happened. Eyewitnesses and the people involved in the incident will be interviewed first. The first details from these witnesses give the investigator symptoms of the problem(s) and/or causes of the incident. The investigators will obtain more objective information when they demonstrate a calm, supportive, non-judgmental attitude.

The Interviewing Process

Interviews will be conducted as follows:

- Interview as soon as possible;
- Find fact, not fault;
- Interview near the scene (if possible) where incident occurred;
- Mark the locations where witnesses were when incident occurred on the site sketch;
- Interview one on one separately from other witnesses;
- Put the witness at ease;
- Ask open ended questions;
- Ask witness to complete a witness statement;
- Repeat information to witness for verification;
- Offer the witnesses a copy of their statements;
- Thank the witnesses for their time and effort; and
- Keep communication open by advising them if they remember anything else to call you.

Incident Analysis

After all information and evidence has been collected, the analysis of what happened can begin. This process will include but not be limited to:

- Write down all facts;
- List the facts that contradict one another;
- Compare facts with physical evidence to establish the most likely answer;
- List the sequence of events;
- Identify root causes; and
- Corrective actions.

Notification/Report

Write the Report

The report will include all pertinent information including copies of gathered documents and lessons learned. Report shall be completed and submitted to NAHQ no later than 72 hours after the occurrence of the incident. If the incident is still under investigation by a regulatory agency, then a preliminary report may be submitted to NAHQ with gathered documents to that point, followed by a final report when investigation (by the regulatory agency) is complete.

Lessons Learned (Corrective Actions)

TEMPORARY ACTION includes those items that can be implemented immediately to prevent recurrence of the incident.

PERMANENT ACTION includes those items that take substantial time to implement such as training and/or developing or modifying a particular practice, standard, or procedure. In any case, corrective action will be monitored until fully implemented.

13.5 Documenting and Reporting Procedure

General

All serious incidents including near misses must be reported, investigated, and documented immediately. See Section 2 for employee's roles and responsibilities. The success of the company HSE program depends entirely on the cooperation and commitment of all employees to all phases of the program. It is of the utmost importance that all managers and supervisors know and comply with the procedures as outlined herein. Investigation action items are to be signed off by the construction manager.

Regulatory Reporting

All contact and reporting to government officials is to be done by the district HSE manager with consultation of Vice President, NAHQ. In regards to injuries, all compensation carriers have specific legislative reporting requirements for the employer, worker, and attending physician(s).

Internal Reporting

All incidents must be reported to the site supervisor immediately. All incidents that require medical attention, or have the potential for medical attention require the immediate notification of the project HSE supervisor or superintendent. All serious incidents must be reported to the district HSE manager immediately – the notification of NAHQ and any government agencies will be coordinated by the district HSE manager.

First Aid Injuries

All injuries, major and minor, must be recorded in the project first aid treatment log maintained by the first aid attendant.

Medical Aid Injuries

All injuries requiring medical attention must use the following administrative procedures:

- The foreman or project HSE supervisor initiates the company medical treatment memorandum.
- If possible, accompany the injured worker to the medical facility.
- After treatment, the attending physician completes the memorandum.

- The supervisor forwards copies of the memorandum to the district HSE manager and retains a copy for the site records.

Reporting Equipment and Property Damage

The district HSE manager and the district administration manager must be promptly notified of equipment or property damage. The Incident Report Form must be completed for all incidents and forwarded to the district office for administrative processing.

Forms: Investigation form, Witness Statement form (see Forms Section)

CONSTRUCTION LEADERS

INVESTIGATION CHECKLIST

This checklist can be used as a guideline for investigating an incident.

A. CONTROL THE SITUATION - PEOPLE ARE THE FIRST PRIORITY

- ☐ Send for help - notify management
- ☐ "Safe" the area and administer first aid, if required
- ☐ Preliminary Notification Requirements
- ☐ Corporate Management
- ☐ Client Contact(s)
- ☐ Government Agencies (if applicable)

To Stop Ongoing Hazards To Rescue Personnel You May Have To ....

- ☐ Shut off electrical power
- ☐ Bleed or isolate pressurized systems
- ☐ Block mechanical equipment - prevent movement
- ☐ Check air quality
- ☐ Issue personal protective equipment
- ☐ Provide emergency lighting, power, air, etc.

Secure the Scene and Protect Evidence

- ☐ Rope off area or station a guard
- ☐ Issue tagouts, lockouts, permits

B. COLLECTIVE EVIDENCE

Identify Transient Evidence - Make notes, take pictures or provide sketches of the following:

- ☐ Positions of tools, equipment, layout.
- ☐ Weather conditions at time of accident.
- ☐ Air quality, things that evaporate or melt
- ☐ Tire tracks, footprints, loose material on floor, etc.
- ☐ Operating logs, charts, records
- ☐ Identification numbers of the equipment and maintenance records

- ☐ Housekeeping
- ☐ Equipment Condition or Malfunction History
- ☐ Work Environment or Layout
- ☐ Training, Experience or Supervision
- ☐ Floor or Surface Condition
- ☐ Periodic Rule or Procedure Violations
- ☐ Lighting or Visibility
- ☐ Employee Morale or Attitude
- ☐ Noise or Distractions
- ☐ Health or Safety Record
- ☐ Air Quality, Temperature or Weather
- ☐ Alcohol or Drug Abuse

Note: Put dimensions on all sketches, sign and date all photos
Note General Conditions - Yes or No (Y or N) - did the following factors contribute to the accident?

C. GET THINGS BACK TO NORMAL

SECTION 1

INTERVIEW WITNESSES - ALWAYS ONE-ON-ONE - AVOID GROUP INTERVIEWS

DO…

- Interview as soon as possible
- Interview at the accident scene
- Take notes or use a tape recorder
- Put the witness at ease
- Ask open-ended questions
- Repeat the story back to the witness
- End the interview on a positive note

DON'T…

- Pressure the witness
- Blame the witness for the accident
- Interrupt an answer
- Ask questions that can be answered "yes" or "no"
- Ask "why" questions and "opinion" questions first

ALWAYS…

- Stress that you want only the facts
- Stress that you want to prevent another accident
- Take the extra time to promote understanding

Section 14 - Safe Work Practices

14.1 Fall Protection

The purpose of Fall Protection is to protect construction workers from the risks of injuries due to falls when working at elevated heights. All contractors will supply a site-specific fall protection plan to the PCL Project Superintendent, prior to starting work that meets BC Occupational Health and Safety Regulations Part 11, Documentation is required for workers certified/trained in fall protection.

All workers are responsible to utilize fall protection in areas where it is possible for a worker to fall a vertical distance of greater than 1.83 meters or 6 feet from a temporary work area or 1.2 meters or 4 feet from a permanent work area. The following fall protection hierarchy will be followed.

1. Eliminate the fall hazard/potential.
2. Conventional Systems (Guardrails)
3. Fall Restraint
4. Fall Arrest
5. Procedures (Control Zone and Monitor)

The hierarchy noted above must be followed in the order identified. Each practice must be found not practicable with the work process before moving onto the next.

Where work activities are taking place on a roof, no personnel may approach within 1.98 meters or 6.5 feet of the leading edge without the use of fall protection system in place. A Control Zone that meets the legislated requirements must be installed 1.98 meters or 6.5 feet back from the leading edge.

A Personal Fall Protection System consists of four distinct parts

1. Anchor
2. Anchorage Connector (note: lifeline with knots cannot be used as an anchorage connector on a PCL site)
3. Body Holding Device
4. Rescue Plan

Anchor

Anchors must have an ultimate load capacity in any direction in which a load may be applied of at least 5,000 lbs;
Fall Restraint anchor must be a minimum 800lbs or 4x the workers total weight.
Fall Arrest anchor must be able to withstand a minimum 5000 lbs or twice the maximum arresting force.

Anchorage Connector

Anchorage connectors, connect from the worker to the anchor.
Examples of these are:

- Shock absorbing lanyards
- Self-retracting lifelines
- Lifeline with rope grab
- Anchorage slings

Body Holding Device

A body holding device is another term for a fall protection harness. Depending on the type of work being conducted a specific harness may be required (i.e. Confined Space is an "E" Type Harness). Note: Safety Belts are not permitted to be used on PCL Projects

Rescue Plan

A Rescue Plan is required for all fall protection scenarios. Only qualified, trained persons are permitted to rescue a worker who has fallen and is suspended. In most circumstances it is the local Fire Rescue Service that provides high angle rescue.

Training and Supervision

No personnel will be permitted to use fall protection unless provided with adequate instruction and training. Proof of training documents are required to be submitted to PCL for all subcontractor/trade contractor workers who will be on site working at heights. All workers who are authorized to be using fall protection must be supervised by the responsible supervisor.

Standards

All fall protection equipment is to be used as per manufacturer's instructions and applicable standards.

All fall protection equipment must be CSA or ANSI Approved. (i.e. lifting/rigging slings are not permitted to be used in a fall protection system.

Careful consideration is required to ensure that each piece of equipment is "compatible" with each system component.

100% fall protection is required on all PCL project sites. This is defined as constant fall protection at 6' or above which could include systems such as double shock absorbing lanyards etc.

14.2 Scaffolds

Where work cannot safely be done on or from the ground, or from part of a building, or other permanent structure, there shall be provided, placed and kept in position for use and properly maintained either scaffolds or, where appropriate, ladders or other means of support, all of which shall be sufficient and suitable for the purpose for which it is used. PCL is not responsible for the erection or the approval of any scaffold structure. The erection of all scaffolds must be done by a competent person, as per industry standards and Worksafe BC requirements.

Current OH&S guidelines / manufactures specifications must be adhered to when the use of a scaffold is required (meaning proper deck, all braces, etc.) **Scaffold greater than 3x the height of the minimum base dimension requires out riggers to increase the base dimension on all sides and/or to be rigidly tied back to structure at specified intervals. (This includes guardrail heights of the scaffold).**

Note: Guardrails will be installed on all scaffolds greater than 4' if they do not interfere with the work process and mandatory on scaffolds 6' and higher.

Additional elements that must be followed while working on a scaffold structure include:

Supervision of Work
No scaffold shall be erected or be substantially added to or altered or be dismantled except under the immediate supervision of a qualified person and by trained and experienced personnel.

During scaffold erection and dismantlement fall protection is required. The qualified erector is required to provide a written fall protection plan prior to commencing erection or dismantling of the scaffold.

Upon completion of the scaffold erection, the qualified erection Supervisor will install a tag indicating that the scaffold is ready for use and advise as such.

Maintenance of Scaffolds:
Every scaffold shall be properly maintained and every part shall be kept so fixed, secured, or placed in position as to prevent accidental displacement.

Construction and Material:
Every scaffold, and every part thereof, shall be of good design and construction, of suitable and sound material and of adequate strength for the purpose for which it is used. The type and quantity of material shall be in accordance with current OH&S regulations and manufacturers specifications.

Partly Erected or Dismantled Scaffolds:
Any scaffold that is partly erected or partly dismantled cannot be used unless it is deemed safe for use by the responsible erection Supervisor. In case a scaffold that is partly erected or partly dismantled does not comply with OH&S either:

- a prominent warning notice indicating that the scaffold or part, as the case may be, is not to be used is affixed near any point at which the scaffold or part, as the case may be, is liable to be approached for the purpose of use, or
- access to the scaffold or part, as the case may be, shall be prevented by suitable barriers or other equally effective means.
- scaffolds that are load bearing, must adhere to industry practices as well as have engineered stamped drawings immediately available in accordance with OH&S Regulations.

Engineering
In the event that the scaffold requires engineering as per legislated requirements (BC WCB OHSR Part - 13, Item 13.11 Engineering required) a copy of the stamped engineered drawings will be available on site during the erection, disassembly and when in use. A copy of the stamped engineered drawings must be provided to PCL prior to these activities taking place.

Inspection
Scaffolds are required to be inspected prior to each shift. A Scaffold inspection tag will be provided by PCL to the responsible subcontractor/trade contractor that is required to be affixed to the scaffold and signed off each shift by the identified qualified competent person.

14.3 Opening Penetrations (cutting/coring)

Cutting or disruption of existing services when opening penetrations into floor space creates a falling hazard to those within the immediate area. To prevent injury, the following must be strictly adhered to when opening a penetration:

- Two-worker operation minimum (One worker above and one worker below the penetration).
- Communication between top and bottom worker at all times.
- Plotting and referencing penetrations to be done from existing services.
- Flag off area in floor space where penetrations will be opened. Punch or drill a pilot hole in low ridge of Q-Decking with punch or screwdriver.
- Place a color-coded marker through punch hole to verify proper location.
- Confirm plotting and referencing of the penetration opening.
- Commence to open the penetration and proceed with caution.
- Flag off the area or secure a cover (e.g. plywood marked with a circle with X) over the opening if the penetration is left unsupervised for any length of time.

14.4 Open Penetrations (floor/wall)

All floor and wall openings in a floor, walkway, roof or wall must be securely covered with a cover of adequate size and strength or with guardrails. Covers will be clearly marked with a circle and an 'X'.

Workers should avoid crossing over covered floor openings when possible. Mobile equipment, scaffolds, or other materials will not be placed on covered openings.

14.5 Ladders

Ladders shall be checked by the user for general condition prior to each use. Ladder use will be followed in accordance to the manufacturers specifications and recommendations. Due to product specification changes that may occur, the users when in doubt should always consult the manufacturers specifications. If the ladder is found to be unsafe, it must be tagged out and removed from service immediately and repaired or destroyed.

No worker shall use the top two rungs on a step ladder. All portable extension ladders shall extend a minimum of 36 inches (1 meter) past the area to be accessed. Three point contact must be maintained at all times when climbing a ladder.

Equipment and/or materials shall not be carried up a ladder. A rope shall be utilized to transport equipment and/or materials.

Extension ladders must be tied off (secured) at the top and bottom at all times unless the ladder is being used for short duration work and is being stabilized by another worker. One worker shall hold the ladder while another worker climbs and secures the ladder. Only then can the worker stabilizing the ladder let go of the ladder.

Extension ladders should be installed using the 4:1 angle ratio.

Extension ladders must not be taken apart to use the extension as a second ladder as no swivel feet are on this section of the ladder.

Any "job built ladder" must be built in accordance with Worksafe BC Standard LDR 1 – Job Built Ladders. This standard is available at:
http://www2.worksafebc.com/publications/OHSRegulation/WCBStandards.asp?ReportID=33450

Workers performing "light duty work" from a portable ladder at a height of 6 feet or greater, where the ladder will be at any one spot for sporadic, short-term work must follow the guideline below:

- The worker shall keep his/her centre of gravity (worker's waist) between the side rails of the ladder.
- The worker will have one hand available to hold on to the ladder or other support to maintain three points of contact.
- The ladder is not to be positioned near an edge or floor opening that would significantly increase the potential fall distance.

Note: that if the work on a ladder is likely to exceed 15 minutes at one spot, some form of fall protection shall be used.

14.6 Self Propelled Elevating Work Platforms (Scissor / Boom Lifts)

All self propelled elevating work platforms will only be operated by trained and authorized personnel. Manufacturers specifications and recommendations are to be reviewed prior to use. Pre-operation inspection checklists are required to be completed by each operator prior to use and must be kept with the equipment for verification.

All workers using self propelled elevating work platforms shall be trained in their proper use and have proof of training documentation. Subcontractor/trade contractors are required to submit proof of operator training to PCL. All personnel working in boom-lifts will use fall protection and connect to the identified fall protection anchor points. The basket guardrail is not a fall protection anchor point. Lanyard length can be no longer than 5', or as per manufacturers requirements.

All self propelled elevating work platforms must be situated on firm level, solid ground with the outriggers (if equipped) fully extended. If unsure of ground conditions, do not proceed - report to Supervisor for remedial action (i.e. road plates).
No ladders or other raising devices are permitted on/in the platforms. Operators are not permitted to stand on the mid or top rail of the basket guardrail. The operators feet must never leave the floor of the platform. The only acceptable exception to this is when there are two workers in basket and they are using the lift to access an elevated area. A written procedure is required for this and must identify that the individual leaving the basket must remain tied off to the basket until tied off in the area they are exiting to. The second person in the lift can then disconnect the fall protection from the basket connection

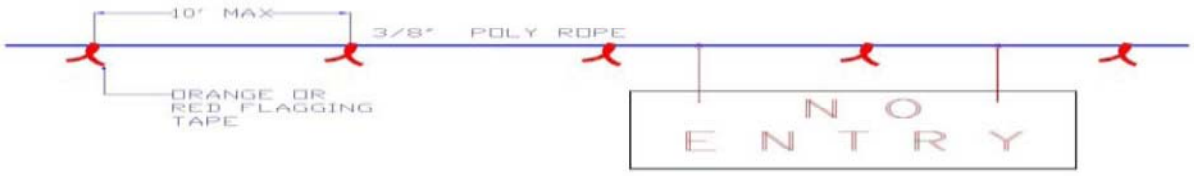
The total load, including personnel, tools/equipment and supplies must not exceed the manufacturers indicated capacity.

If hot work is taking place from within the basket, a 20lb. fire extinguisher must be immediately available in the basket, fire blankets utilized to protect controls and area below delineated as per standard practice.

14.7 Communication and Signage

Every site will be equipped with signage that informs all workers and visitors of the regulations, hazards and site or job specific safety equipment required. Any unsafe area should be identified with a barricade and hazard signage. Each contractor is responsible for the assembling and dismantling of warning barricades and/or applicable signage that pertains to their scope of work (e.g. welding, overhead work, electrical hazards, etc.). Hazard/caution tape is not to be used on this project except for short duration or emergency situations. In lieu of this, 3/8" poly propylene rope is to be used to prevent or restrict access. (see diagram)

Signage is to be suspended from the rope identifying the hazard(s) and rules or safe work requirements or other appropriate means as approved by PCL.



14.8 Fire Protection Overview

A fire extinguisher rated at not less than 20lb. ABC Dry Chemical shall be the minimum standard for general use on the project site.

All fire extinguishers shall be inspected monthly and identified as such on the monthly inspection tag required by the NFPA (National Fire Protection Association).

All inhabited spaces on the project site will have a fire extinguisher immediately accessible. This includes trailers, lunch rooms and storage areas.

Fire extinguisher access shall not be covered or blocked by material or debris. Clear access to fire protection equipment must be maintained.

Fire blankets shall be used beneath or adjacent to any welding/burning operation where it is necessary to catch sparks or slag.

Fuel storage areas will have a fire extinguisher nearby within close proximity, not immediately adjacent to the storage area.

Any equipment with a combustion engine is required to have a fire extinguisher attached, unless there is an integral automatic fire suppression system designed into the equipment.

Any fuel tanks on site must be grounded during transfer or fuel.

14.9 Motorized vehicles (i.e. trucks, forklifts, tractors, etc.)

All operators and passengers in vehicles shall wear their seatbelts while being transported in the vehicles. No personnel are permitted to ride in the back of any vehicle, unless designed to transport passengers in this manner.

All vehicles and equipment required by legislation and applicable standards will have a functioning reverse audible warning device. In the event that the vehicle or piece of equipment does not have this device as per the legislated requirements or applicable standard, the operator is to utilize the horn or a spotter and horn combination.

All operators' of motorized equipment shall hold a current operator's license for the equipment they are operating. Fork-lift trucks of all classes shall be only operated by trained and certified (as per CSA Standard) operators and must be operated within the parameters of the equipment design.

14.10 Manual Lifting and Moving Equipment and Material Overview

Back injury is the leading cause of lost time injuries. Experience and statistics have shown prevention programs significantly reduce the incidence of back injuries. Below are a few basic suggestions to lifting that may prevent the occurrence of a back injury.

- Avoid lifting where possible and practical by pushing, pulling, rolling or sliding the object to be moved.
- Use mechanical aids (hand trucks, carts, winches, forklifts, etc.)
- Request help from other employees when necessary, particularly when you find yourself in a difficult or awkward lifting situation.

When lifting heavy objects from the floor or ground can't be avoided, here are some basic principles to prevent back pain and injury:

- Plan the lift (P.S.I)
- Lift only loads you can safely handle.
- Establish good footing.
- Keep the load close to the body.
- Bend at the knees as you grasp it and keep your eyes looking straight ahead.
- Get a full handgrip and keep your body erect.
- Lift smoothly by straightening the legs (avoid jerky or snatching lifts).
- Avoid the lift and twist action. When turning, shift the position of your feet rather than twisting your body at the waist.
- Reverse the procedure to set the object down.

REMEMBER that the secret to proper lifting is to bend your knees, not your back, and let your leg muscles do most of the work.
For further information log onto: http://www.worksafebc.com

14.11 Workplace Lighting

PCL will illuminate walkway areas and "common" areas to an adequate degree of brightness. Where lighting is required in specific rooms or for specific tasks, each contractor is responsible for task lighting where they work.

14.12 Fuel Storage

A fuel storage area will be designated by PCL. All fuel storage require the appropriate containment. Tidy tanks of diesel are allowed to and from the work area up to 100 gallons, but must be approved by PCL Project Management. Jerry cans (CSA approved) of gasoline are acceptable.

The criterion for storage tanks in the designated area is as follows:

- Tank must be mounted on a steel cradle and grounded;
- Must have approved vent cap, fill nozzle and tank shut-off;
- A 20 lb. dry chemical extinguisher must be within a 25 foot radius of the storage facility (not directly beside the fuel itself).

14.13 Electrical Safety

All electrical equipment shall be of construction grade and CSA/ULC approved. This means that it must be certified in accordance with the electrical code.

Portable electrical hand tools must be double insulated or grounded.

All electrical cords and cables if practicable must be elevated or covered to protect them from damage and to mitigate tripping hazards.

Qualified electricians are the only personnel authorized to repair electrical equipment. Field repairs or tampering with any electrical equipment by unauthorized personnel will not be tolerated.
Temporary lighting must have guards over bulbs.

Electrical cords must be of commercial gauge with heavy-duty insulation, weather and sun resistant with a ground conductor and free from splices.

All electrical equipment is to be visually inspected by the user daily or before each use.

When performing work on live electrical equipment, lockout must be used. All trades performing this work must submit their own lock out procedure to PCL for review and approval.

All electrical cords must be in accordance with “Assured Grounding Program”. Electrical cords are tested for grounding every three months and the identified colour of electrical tape is put on the male end of the cord approximately 4” from the plug.

Red: January, February, March
White: April, May, June
Blue: July, August, September
Green: October, November, December

This program is the responsibility of the owner of the electrical cord. Electrical cords found in use not in accordance with the assured grounding program will be removed from service until confirmed.

All temporary electrical cords must have GFCI protection.

14.14 Hand and Power Tool Overview

All workers using hand/power tools are to inspect these tools prior to each shift to determine if they are in a safe operating condition. Ensure all guards are in place and operational (i.e. grinder guard and second handle in place).

All tools requiring repair or missing guards will be immediately removed from service and reported to the workers supervisor. Such tools will be taken out of service, tagged and repaired before making them available to any other worker.

Only hand tools that are in good condition and that are the right tool for the job should be used.

14.15 Powder Actuated Tools

User must be properly instructed, trained and able to provide proof of training.

User must ensure area behind shot is clear and material will take the shot applied.

A procedure for the disposal of used and unused shot cartridges will be provided and implemented by the contractor.

14.16 Welding

Special precautions must be taken to ensure proper ventilation and air quality of area when burning or welding as well as ensuring proper personal protective equipment is used including the use of fire blankets to prevent fire or damage to other products as required. Fire blankets must always be kept in good condition.

In the event hot work must take place inside the building, adequate notice to the PCL Superintendent is required, so that adequate ventilation can be evaluated or other controls implemented. A hot work permit must be completed and signed off by superintendent. Use of local exhaust ventilation (smoke eater) will likely be required.
(See Hot and Safe Work Permit form in forms section)

Sufficient welding screens/blinds must be used during welding operations to protect persons from welder's flash.

A 20lb. ABC Dry chemical fire extinguisher must be readily available in the immediate vicinity of any welding/burning operations.

Welding/burning shall never be performed on flammable materials (dunnage), barrels or other systems that may have contained a combustible or unknown product and have not been cleaned or purged.

Workers shall ensure that all welding leads and oxygen/acetylene hoses are clear of walkways and stairways by routing them away from walk areas or by suspending them overhead. And that all short or unused pieces of welding rod are discarded or put away.

All oxygen/acetylene bottles shall have the regulators removed and caps in place when not in use and shall be stored and transported in such a manner as to prevent personal injury or property loss.

Flash back arrestors shall be installed on both the torch and the regulator ends of the hoses.

14.17 Storage of Compressed Gasses

The handling, storage, and use of all compressed gases in cylinders on site shall be in accordance with the provisions of the PCL and applicable provincial legislation, as well as NFPA (National Fire Protection Association).

Typically, compressed gasses are not to be transported or stored inside the building. However, some work practices require compressed gas as a tool to complete a project. If compressed gas is required, adequate notification must be given to PCL management before the compressed gas is brought on-site. At no time is propane or another compressed gas to be stored overnight within any structure without prior approval from PCL.

General Guidelines for Compressed Gasses

If, as a result of a visual inspection, a cylinder appears to be damaged or leaking, it should be immediately removed from site to the vendor or manufacturer for repair or replacement. (No one shall use a damaged or a leaking pressure cylinder)

Pressure cylinders should not be subjected to a temperature above 50 Celsius (125° Fahrenheit), nor should a flame ever be permitted to come in contact with any part of a compressed gas cylinder. Smoking and any form of hot work are prohibited within 50 feet of a cylinder storage area.

- Individual cylinders or small groups of cylinders must be chained to a fixed object, whether in use or in storage, unless they are chained in a cylinder cart.
- Propane gas cylinders must be fitted with a flashback arrester at the regulator end of the hose. • Pressure cylinders shall be stored in a well-ventilated area.
- Do not drop compressed gas cylinders or permit them to strike each other violently.
- Qualified vendors or manufacturers may only fill cylinders.
- It is illegal to remove or change the numbers or marks stamped on compressed gas cylinders.
- Do not use a sling when handling compressed gas cylinders.
- Cylinders are not to be used for rollers, supports, or for any purpose other than that to carry gas.
- Pressure cylinders should always be stood in the upright position.
- All oxygen valves, gauges, regulators, pipes and fittings must be scrupulously free of oil, grease, graphite or any other oxidizing substance. Such pipes, gauges, fittings, etc must at no time be allowed to come to an elevated temperature due to proximity to welding operations, burners or other heat sources.
- All compressed gas cylinders must comply with WHMIS (workplace hazardous materials information system) and TDG (transportation or dangerous goods) requirements.

14.18 Housekeeping Overview

Housekeeping is a basic requirement on all construction sites and must be maintained at all times.

Special attention must be given to maintaining clear walkways and roadways. Removal of trash, slipping and tripping hazards, and proper storage of materials is an ongoing requirement.

Trash containers and/or garbage cans must be available in the various work areas.

Removal of protruding nails staples, screws or other objects that present a hazard to personnel or equipment.

Hoses, cables and cords where practicable should be suspended from overhead or effectively covered when on the ground. Excess hose, cord, cable found on the ground shall be removed from the work area.

Any cylindrical waste (i.e. welding rods, conduit, pipe, coil rod) shall be removed from the floor, ground and gratings.
Scaffold decks must be kept clear of debris.

14.19 Material and Equipment Storage

All materials must be properly stacked and secured to prevent sliding, falling or collapse. Aisles, stairs and passageways must be kept clear to provide for the safe movement of personnel and equipment and to provide access/egress in an emergency.

To protect the other parties, tools and equipment are never to be left unattended. Always store tools and equipment (unless flammable, corrosive, or explosive) within a designated storage area or a construction area. The tools should be locked up or locked to a secure object to prevent theft. PCL is not responsible for missing or stolen tools or equipment.

14.20 Infection and SHARPS

Needle and Blade waste (SHARPS) consists of hypodermic, surgical, suture, or IV needles, syringes with needles, lancets, scalpels, blades and similar metallic sharp or pointed items for disposal that are capable of causing punctures, cuts, or tears in the skin or membranes. Universal precautions will be observed at this facility in order to prevent contact with blood or other potentially infectious materials. All blood or other potentially infectious material will be considered infectious regardless of the perceived status of the source individual.

14.21 Cellular Phone and Radio Use

Personal music devices (radios, IPods, MP3 Players, etc.) are not permissible on PCL construction sites.

At no time are operators of equipment or vehicles permitted to use a cell phone while operating the equipment.

The standard rule for employees required to use a cell phone while on site is to stop and move to a safe place, where you can be aware of any potential hazards around you such as moving equipment, and conduct your phone conversation.
No personal cell phone usage is permitted on site unless you are using that phone for company business.

14.22 Dust and Airborne Aerosols

Construction activities and airborne particulate matter (dust, smoke, etc.) often go "hand-in-hand", meaning construction and renovations often result in the creation of airborne dusts and other matter. For healthy people, unprotected exposure to these contaminates often results in nothing more than a brief period of sore eyes and minor irritation of the airway. However, to ill individuals, exposure to even a minor concentration of airborne contaminate may result in serious health consequences.

During construction activities, small dust particulate and other microscopic entities travel through the airways, and if not controlled they could travel to non-construction areas. These microscopic entities could travel to non-construction areas that treat ill or injured persons that require a "clean air" environment. Therefore, "dust-control" procedures were developed to control construction generated dusts and other contaminates within a specific and controlled boundary.

Procedures within construction zones may include, but are not limited to the following:

- enclosing a construction zone with temporary walls, structures, or hoarding
- negative pressure within construction zones;
- procedural changes for activities that generate dust;
- air cleaners; and
- worker education, training, and supervision.

14.23 Dust Control – See Dust Control Program at Forms Section

14.24 Noise and Vibration

Noise created during construction process may produce or have adverse effects upon residents in the area. Noise is a reality of the process of construction, but all efforts must be made to reduce, eliminate, or schedule activities that generate noise that could be considered excessive. PCL Project management team to identify and provide to subcontractor/trade contractors a copy of the local municipal noise bylaws that indicates days and times that construction work is permitted. If construction activities that generate noise are required outside of the identified times, a noise variance must be applied for with the municipality. It is duly noted that municipal approval for a noise variance may take time and this time must be considered in advance of the application.

Activities that generate considerable noise during the process of construction will be identified to PCL on a daily basis. Notification of tasks and times of noise creations will be relayed to the managers of the area's most likely to be affected by the PCL representative. Not all noise related tasks can be detailed, but identifying the ones that are foreseeable will allow PCL directed forces or owner staff the opportunity to direct their procedures accordingly.

14.25 Permits Overview

A permit to work system may be used to coordinate work and particularly to approve work, which affects construction operations. (i.e. Confined Space Entry Permit, Hot work or Lock-out) Contact the PCL Site Superintendent for specific requirements prior to the start of work.

14.26 Smoking Overview

All PCL construction sites are designated non-smoking. Smoking is only permitted in designated smoking areas. These smoking areas will be identified on the site plan.

Attachments: Hot and Safe Work Permit, Dust Control Program (see Forms Section)

Section 15 – Safe Work Procedures

In some instances work being performed on PCL construction sites may require a specific written safe work procedure. This includes procedural requirements identified by Worksafe BC or the applicable standard. These procedures are required to be submitted in advance to PCL for review of compliance with the requirements prior to the activity taking place.

Activities requiring written safe work procedures are, but not limited to:

Fall Protection
Confined Space
De-energization and Lock-out
Crane Operation (Tandem/Critical/Engineered Lifts, Personnel Suspended Work Platforms)
Trenching and Excavation
Dust Exposure (I.e. Silica , Fire Proofing)
Evacuation and Rescue
Asbestos Abatement
Lead Abatement
Mold Abatement
Commercial Diving
Working alone or in isolation
Blasting Operations
Or any other high risk activity, process that requires a written safe work procedure as determined by PCL.

CONSTRUCTION LEADERS

APPENDIX A - SPILL CONTINGENCY PLAN

PURPOSE AND SCOPE:

The purpose of this Spill Contingency Plan is to clearly identify potential spill risks associated with the construction of the Interior Heart & Surgical Centre, and to identify the procedures to be followed to facilitate the rapid deployment of resources to minimize impacts and risks to the environment.

It is understood and expected that subcontractors will have in place relevant inspection and maintenance regimes for any equipment that will be used on-site. This will be the first level of preventive measures to reduce the risk of spills of substances such as hydrocarbon fuels or lubricants. It is a contractual requirement of all subcontractors is thoroughly familiar with this plan.

IDENTIFICATION OF HAZARDOUS MATERIALS:

The following substances will be utilized during project construction:

- Lubricating Oils;
- Diesel;
- Gasoline;
- Propane.
- Oxy/Acetylene;
- Form release agents;
- Other products as indicated in the specification documents.

Additional substances identified subsequent to the distribution of this plan will be addressed as quantities and suppliers are finalized. Material Safety Data Sheets (MSDS) for all substances used will be maintained on site in a predetermined location familiar to all employees. These sheets identify:

- product information;
- hazardous ingredients;
- physical data;
- fire and explosion hazard;
- reactivity data;
- toxicological properties;
- preventative measures;
- first aid measures; and,
- preparation information, as required by the Workers' Compensation Board of British Columbia.

ASSOCIATED RISKS:

Risks associated with the occurrence of spills include:

- environmental pollution/degradation;
- human exposure, via dermal contact or inhalation possibly resulting in illness;
- slipping, possibly resulting in personal injury; and/or,
- fire.

CONSTRUCTION LEADERS

APPENDIX A - SPILL CONTINGENCY PLAN

In order to minimize the occurrence/consequences of spills it is important to ensure that:

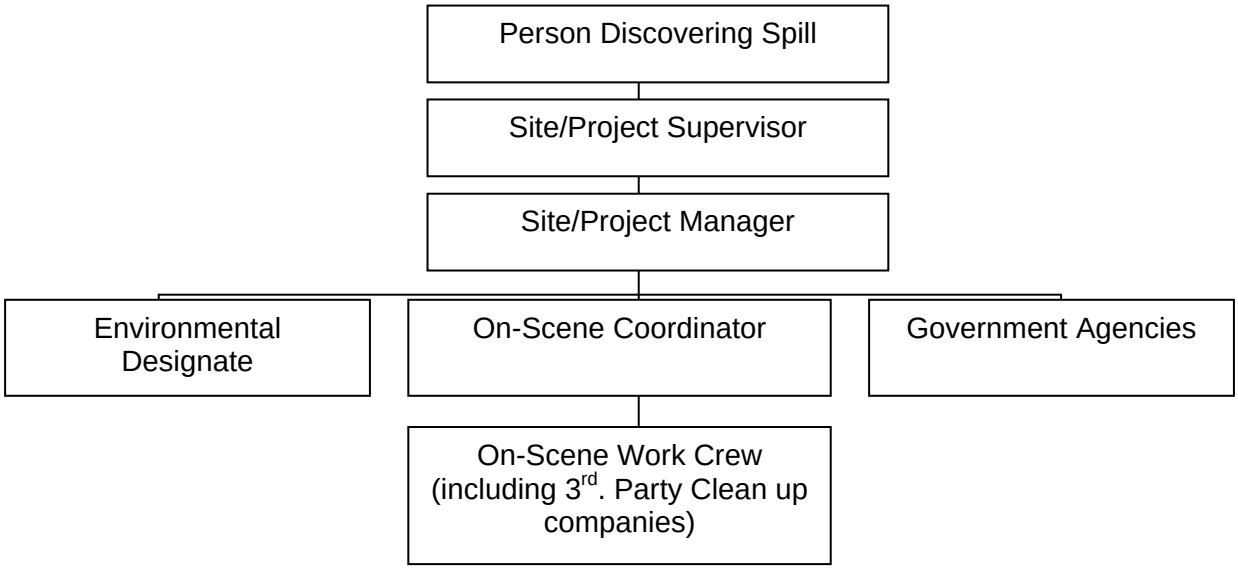
- Equipment is properly maintained, ensuring all leaks are repaired;
- All onsite fuel is properly stored within double-walled tanks or within approved secondary containment facilities;
- Fuel and/or lubricant containers are stored with the lids on in order to prevent overflow during heavy rainfall, or spills if accidentally knocked over;
- Spill kits are available in visible, accessible locations; and,
- Prompt and effective clean-up is initiated in the event of a spill.

Workers will be encouraged to provide information on weaknesses in current management control and prevention systems such that improvements can be made which may eliminate the occurrence of a spill.

EMERGENCY ORGANIZATION AND RESPONSIBILITIES:

Spills of chemical, fuels and other substances may occur as isolated events or they may occur in association with other emergencies such as fire, explosion, natural causes or accident.

The key personnel involved during a spill incident and the reporting responsibilities are illustrated in the following chart.



CONSTRUCTION LEADERS

APPENDIX A - SPILL CONTINGENCY PLAN

The responsibilities of each of these personnel are discussed on the following pages, with names and numbers kept current at all times at the project site.

RESPONSIBILITIES OF THE PERSON DISCOVERING THE SPILL, FIRE OR INJURY:

Any person discovering a spill will:

- Assess the initial severity of the spill and safety concerns. If a risk of gas poisoning exists or if fire or explosion hazards are perceived, then warn all personnel to evacuate the area.
- Identify the source of the spill.
- Arrange for appropriate operating equipment to be shut down, if applicable, contain the spill and remove any sources of ignition.
- Notify his/her Supervisor immediately.
- If warranted, notify on-site Occupational First Aid persons to administer first aid.

Any person attending a person exposed to spilled substances will:

- Notify on- Occupational First Aid persons to administer first aid.
- Notify his/her Supervisor immediately.
- Notify ambulance or police if required.

RESPONSIBILITIES OF THE SITE/PROJECT SUPERVISOR:

The Supervisor must immediately contact the Site/Project Manager with the following information:

- The name of the person discovering the spill;
- The time of the incident;
- The location of the incident;
- The type and quantity of the substance spilled;
- The cause of the incident, if known;
- The current weather conditions;
- Any perceived potential for hazard, and any injury to people, wildlife or the marine environment;
- Whether a fire or explosion hazard is deemed to exist;
- Any actions already taken; and,
- Any persons already notified.
- The Supervisor will remain on-site, with the exception of imminent personal danger.

RESPONSIBILITIES OF THE SITE/PROJECT MANAGER:

In the case of a spill, the Site/Project Manager will immediately inform the following:

- The Environmental Designate
- *(3rd. Party Spill Clean Up Company)* depending on the nature of spill (extent and substance spilled)
- The Provincial Emergency Program (PEP) at **1-800-663-3456**. This 24-hour government contact will notify all concerned municipal, provincial and federal agencies, including the following, as appropriate:
    - The local PEP office;
    - The police;
    - The Provincial Waste Management Branch;

APPENDIX A - SPILL CONTINGENCY PLAN

- The Provincial Ministry of Health;
- Environment Canada, and
- Any other relevant agencies.

- If applicable, the Ministry of Water, Land and Air Protection Emergency Oil Spill Plan at **1-800-663-3456**.

The Site/Project Manager will plan for the disposal of recovered spill material and, upon completion of the cleanup and restoration, prepare a Spill Report.

A complete log of events and activities undertaken during and after the spill, and photographs if possible for legal purposes and critical review of events at a later date.

RESPONSIBILITIES OF THE ENVIRONMENTAL DESIGNATE:

The Environmental Designate will maintain contact with, advise and coordinate work crews undertaking the actual cleanup of a spill. After successful cleanup is completed, the Environmental Designate will:

- Ensure this Spill Contingency Plan is up-to-date with all potentially hazardous materials listed and all names of personnel and phone numbers accurate;
- Be responsible for assessing new spill hazards as they develop and take preventative actions, whether covered in this Plan or not;
- Check and maintain the operating status of required response equipment which may be required at a spill (i.e. a spill kit containing: absorbent material such as Dry Rite, absorbent pads, booms); and,
- Train emergency response personnel with respect to their duties.

RESPONSIBILITIES OF THE ON-SCENE COORDINATOR AND WORK CREW:

Upon receiving a report of a spill, the On-Scene Coordinator and Work Crew will carry out the following:

- If injury, serious health threats or potential equipment hazards exist, call the Site/Project Manager if the person reporting the spill has not already done so.
- Consult the appropriate MSDS to review the properties of the spilled material and recommended response actions. If further information is required, contact one of the resource services listed below.
- Assess the spill requirements for human resources, equipment, materials, tools and protective gear to contain the spill, in consideration of the resources available. Mobilize these resources and take responsibility for implementation of the response actions at the spill site.
- Contact the Environmental Designate to determine what, if any, sampling should be done and to discuss the spill and any environmental implications.
- Due to the proximity of the project site to fish bearing waters it is critical that all attempts be undertaken to prevent the introduction of spilled material into the marine environment. This can be achieved through the use of spill kit equipment including absorbent pads, booms, or in the case of a high volume spill, as may occur in a vehicular accident, a temporary berm made of local substrate material to impede flow and contain the spill.

CONSTRUCTION LEADERS

APPENDIX A - SPILL CONTINGENCY PLAN

ANNUAL SPILL RESPONSE EXERCISE:

A spill response exercise will be conducted at least once per year to test and evaluate the state-of-preparedness of the Spill Response Team and the communications links with PEP and the provincial, federal and municipal agencies that could become involved with responding to actual spill incidents.

Spill response exercises can take the form of desk-top exercises intended to evaluate the decision-making procedures required in the event of an actual spill incident. In particular, this type of exercise exposes the members of the Spill Response Team to their responsibilities in the event of a spill and provides the opportunity to evaluate communications among the team and with the regulatory and resource agency reporting system.

Field spill response exercises serve to test the effectiveness of the Spill Response Team and its equipment. Such exercises involve the actual deployment of spill response equipment and manpower under realistic yet hypothetical conditions. Exercises of this nature permit evaluation of the response techniques and provide valuable practice experience for the participants in the exercise.

RESOURCES AND PHONE NUMBERS:

Response to accidents involving the transportation of dangerous goods is the responsibility of the shipper. Site personnel will lend whatever assistance is required in order to rapidly contain and clean up spill incidents.

Response to spills involving products received from the supplier is the sites responsibility. It is anticipated that the procedures outlined above will be sufficient in most instances to deal with problems that may arise. However, in some cases there may be a need to obtain further assistance. The following list summarizes personnel and/or resources to be contacted in case of a spill, fire or injury incident, as well as additional resources that may be able to provide information or assistance.

STOP

THINK

OBSERVE

PLAN

INJURY RESPONSE TEAM

NAME	RESPONSIBILITIES	CONTACT #
	• First Aid Attendant (Primary)	BY RADIO OR
	• First Aid Attendant (Secondary)	BY RADIO OR
	• Superintendant (Primary)	BY RADIO OR
	• Superintendent (Secondary)	BY RADIO OR
	• Designated Caller to 911	BY RADIO OR
	• Ambulance Escort #1	BY RADIO OR
	• Ambulance Escort (Backup)	BY RADIO OR

INJURY RESPONSE PROCEDURE

NOTE: Response to injuries may result from either of the following ways:

- **THREE** (3) short blasts on air horn
- Call for help on **RADIO**
- Call for help on **CELL PHONE**
- Yelling for help from injured individual
- **NOTICE** from **TOWER CRANE OPERATOR (if applicable)**

1)	Once call for help is received, the **FIRST AID ATTENDANT** and other **SUPERVISORS** respond to the scene **NOTE: FIRST RESPONDER** may be closer and may respond to injured worker before arrival of the above individuals
2)	**FIRST AID ATTENDANT** (Primary) is in charge of injured worker; other personnel assist where directed to.
3)	**FIRST AID ATTENDANT** upon arrival - conduct scene assessment. If all is clear/safe; secure the area, commence treatment of injured worker(s).
4)	**FIRST AID ATTENDANT** to attend to injured worker and provide necessary first aid
5)	If ambulance/stretcher is required, please refer to the **AMBULANCE SUMMONING PROCEDURE** below
6)	If ambulance/stretcher is **not** required, please refer to the attached Medical Treatment Route

AMBULANCE SUMMONING PROCEDURE

If ambulance/stretcher is required for injured worker, the FIRST AID ATTENDANT at the scene shall:

1)	**DESIGNATED CALLER** to telephone for an ambulance by dialing **9-1-1** stating: a) We have a construction-related accident b) We are located at:
2)	**DESIGNATED CALLER** to: 1. Provide a description of the incident 2. Provide a description of number of injured workers and their injuries. 3. Advise of response so far (i.e. First Aid Attendant on scene) 4. Report back to the FIRST AID ATTENDANT that an ambulance has been called with the estimated time of arrival
3)	**AMBULANCE ESCORT** to meet the ambulance at: **PRE-DETERMINED LOCATION**
4)	**AMBULANCE ESCORT:** escort the ambulance/EMS attendants along the safest direct route to scene and injured worker

MEDICAL TREATMENT ROUTE (HOSPITAL)

NEAREST HOSPITAL:	PHONE NUMBER:

STEP BY STEP DIRECTION FROM SITE TO HOSPITAL

Overview **Start** **End**

MEDICAL TREATMENT ROUTE (MEDICAL CLINIC)

NEAREST MEDICAL CLINIC:	PHONE NUMBER:

STEP BY STEP DIRECTION FROM SITE TO MEDICAL CLINIC

EMERGENCY RESPONSE TEAM:		
	NAME	**POSITION**
1		*SITE SUPERINTENDENT*
2		*SUPERINTENDENT SECONDARY*
3		*HS E COORDINATOR*
4		*TRAFFIC CONTROL PERSON #1*
5		*TRAFFIC CONTROL PERSON #2*
6		*DESIGNATE 1*
7		*DESIGNATE 2*
8		*PRIMARY FIRST AID (PCL)*
9		*BACKUP FIRST AID (PCL)*

FIRE/EXPLOSION RESPONSE PROCEDURES	
R	Remove those in immediate danger
E	Ensure room doors and windows are closed
A	Activate the fire alarm and/or air horn
C	Call the **PCL SITE SUPERINTENDENT:** _____ explain the emergency, a designate will contact 911.
T	Try to control the threat

1)	**STOP ALL WORK**
2)	**LOWER all loads (if possible).**
3)	**ALL equipment and energy sources to be SHUT DOWN.**
4)	**CLOSE all site fencing, gates and doors (if possible).**
5)	**Proceed along SAFEST and most DIRECT escape route.**

FIRE/EXPLOSION RESPONSE PROCEDURES cont.	
6)	ALL employees, in orderly fashion, to proceed to nearest designated **MUSTER POINT:** _____ **SECONDARY MUSTER POINT:** _____
7)	Follow ALL instructions given by Emergency Response Personnel (ERP)
8)	DO NOT re-enter buildings or site; do not leave MUSTER POINT unless instructed to do so.
9)	Work to be resumed only under direction of **SITE SUPERINTENDENT:** **SUPERINTENDENT:** _____ **MOBILE:** _____
10)	**DO NOT:** o LOITER NEAR ENTRANCES/EXITS TO BUILDING/SITE o USE ELEVATORS o LEAVE TOOLS, EQUIPMENT, OR MATERIALS IN LOCATIONS THAT OBSTRUCT PATHWAYS OR EXITWAYS o BLOCK ACCESS ROADS
11)	**NOTE:** **All communications with media to be conducted through PCL District Manager for Vancouver** **HEAD OFFICE Please call 604-241-5200**

EMERGENCY RESPONSE RESPONSIBILITIES	
1)	**First Observer:** • **Blow Air Horn – 1 LONG BLAST** • **Notify PCL Supervision who will designate someone to call 911** • **Communicate Location of incident on site, and description of event** • **PROCEED TO NEAREST MUSTER POINT AND REPORT TO YOUR SUPERVISOR!!**
2)	**Designate to Call 911:** • **Call 911** • **Advise description of incident to 911 Operator** • **Advise 911 Operator of site: Pandosy St. & Rose Ave** • **Advise of any injured parties and what response is currently underway (i.e. First Aid Attendant on scene)** • ***DO NOT HANG UP UNLESS TOLD TO DO SO BY THE 911 OPERATOR.***
2)	**All Personnel** o Evacuation begins with o Witnessing an emergency event (e.g. Fire, Explosion, Utility Rupture) o Hearing one long blast on an Air Horn o Hearing one long blast from the crane operator >15sec o Word of mouth from fellow worker or foreman o Frequent sounding of siren from megaphone. o PROCEED TO NEAREST MUSTERING POINT o REPORT TO YOUR SUPERVISOR o SUPERVISORS TO REPORT FINDINGS TO THE PCL SUPERINTENDENT AT THE MUSTER POINT

EMERGENCY RESPONSE RESPONSIBILITIES cont.	
3)	**Superintendent:** • PROCEED TO DESIGNATED MUSTER POINT • give general announcement with instructions to all personnel with radios to evacuate and spread the evacuation instructions to all personnel while evacuating. • Give special instruction to crane operators in regards to evacuation or to stay in place. • Give special instruction to site foreman as required to facilitate the Emergency Evacuation Plan. • Give special instruction to Primary First Aid Attendant in regards to entry to site to aid injured worker, if any. • Radio contact Health Safety and Environment Coordinator with status of designates • Take head count from all foreman/supervisors and designates • When head count is complete approach ERP (take at least two volunteers with you) • Advise of injured or missing workers (if any) • Give ALL CLEAR SIGNAL once hazard is controlled and the site is safe for entry, confirmed by Emergency Response Personnel. • Notify relevant Project Management Staff and district office staff at: **604.241.5200** o **Sean Brock – Cell#: 604.788.0424** o **Lou Metcalf – Cell#: 604.312.0533**
4)	**Superintendant (Alt)** • Conduct sweep of building to ensure all workers have evacuated the site. • Assist primary Superintendent as needed

EMERGENCY RESPONSE RESPONSIBILITIES cont.	
5)	**Health Safety and Environment Coordinator** • PROCEED TO NEAREST MUSTER POINT • Verify if 911has been called. If not; Call 911. • Instruct Designates and Traffic Control as necessary • Contact Superintendent with update • Ask what assistance is required • Instruct volunteers of required assistance • Check on designates and determine whether additional assistance is required • Walk the site and use the siren equipped megaphone to notify personnel who may have missed the evacuation signal
6)	**PRIMARY FIRST AID ATTENDANT** • Assemble a medical evacuation team to tend to injured worker, if any • Check with Site Superintendent to establish whether it is safe to enter the site to aid injured workers, if any. • Ensure that proper first aid procedures are carried out until the arrival of emergency response personnel.
7)	**Traffic Control Person** • PROCEED TO NEAREST MUSTER POINT • Check in with your supervisor • Obtain 2 Traffic Paddle and delineators (if possible) • Wait for Emergency Response Team to arrive on scene • Close roads and sidewalks as required to facilitate emergency response

EMERGENCY RESPONSE RESPONSIBILITIES cont.	
8)	**Crane Operators** o Crane Operators to lower all loads if is safe to do so. o Crane Operators to follow evacuation procedure unless it is not safe to do so (e.g. crane involved in electrical incident, no clear access from base of crane) o If instructed to stay in crane blow crane horn for 1 long blast 15 seconds minimum to alert all workers to evacuate.

MAINTENANCE OF EMERGENCY EQUIPMENT	
FIRE EXTINGUISHERS	• Verify location of fire extinguisher / air horn stations as indicated on site safety plan. • Check all fire extinguishers for serviceability on a monthly basis. Check tag if in good service. • Check yearly check service date on all extinguishers. Replace extinguisher from service if annual service is required. • Extinguishers that require service or have an expired yearly tag will be removed from service immediately and sent to the yard for service
EMERGENCY AIR HORN	• Change out all Air Horns that arrive on site in red boxes • Test all Air Horns at least once a month • Update list of locations of all tested air horns.

CONSTRUCTION LEADERS

Emergency/Crisis Contact Phone List

This list shall be posted by the telephone and used in cases where assistance is required from an outside agency.

Project Name: Interior Heart & Surgical Centre
Project Number: 2700122

EXTERNAL			
	Location/Contact	**Number**	**Address**
Fire	Administration **EMERGENCY**	604 **9-1-1**	
Police	Administration **EMERGENCY**	604 **9-1-1**	
Ambulance	Administration **EMERGENCY**	604-660-6006 **9-1-1**	Vancouver
Medical Clinic			
Hospital			
City of _____	General Information		
BC Poison Control Centre	For poisoning questions or emergencies, call	604-682-5050 or 1-800-567-8911	Vancouver
Ministry of Public Safety and Solicitor General	Environmental Emergencies	1-800-663-3456	Victoria
Spill cleanup and disposal/hazardous waste (CEDA)	Main Office 24 hour emergency number Fax	604-540-4100 1-800-793-2378 604-540-4200	1564 Booth Avenue Coquitlam, BC V3K 1B9
BC Hydro	Emergencies & Power Outages Call Before You Dig	1-888-769-3766 1-800 474 6886 or Cell *6886	Vancouver
Terasen Gas	Gas Emergencies (24 hrs)	1-800-663-9911	Vancouver
Environment Canada	Weather One-on-one	1-900-565-5555	Canada
Owner			
Consultant			

INTERNAL			
Project Superintendent			Jobsite
Project Manager			Richmond
Construction Manager			Richmond
District HSE Manager	Lou Metcalf	604-241-5245	Richmond
Manager, Finance & Administration	Dwayne Hostyn	604-241-5255	Richmond
District Manager	Sean Brock	604-241-5253	Richmond

CONSTRUCTION LEADERS

APPENDIX C – CONSTRUCTION WASTE MANAGEMENT PLAN

Project Waste Management Objectives:

- This project shall generate the least amount of waste possible by:
    - planning and ordering carefully to minimize poor quantity estimating and over packaging;
    - following all proper storage and handling procedures to reduce broken and damaged materials, contamination of reusable/recyclable materials, inadequate protection of materials from moisture, dust and other damage;
    - reusing materials wherever possible; and
    - PCL will work with the project designers to ensure that specific construction details minimize waste by working to standard construction material dimensions.
- Of the inevitable waste that is generated, as much of the waste materials as economically feasible shall be salvaged for reuse, or separated for recycling. **At least 75%** of waste generated will be reused or recycled, with **a goal of diverting more than 90%** of waste.

Waste Management Procedures:

- All contractors will be provided with a copy of this Waste Management Plan upon award of tender, and will be expected to review this Plan, and provide a description of how the plan will be implemented for their own construction activities within 10 days of tender award. All contractors will appoint one person responsible for implementing waste management plan.
- Waste prevention, reuse, and recycling activities and performance will be discussed at the beginning of each subtrade meeting. As each new contractor comes on-site, the designated person from PCL will provide a tour of the recycling areas and describe separation procedures.
- All contractors will be expected to make sure that their entire crew complies with the Waste Management Plan. All recycling containers will be clearly labelled and lists of acceptable or unacceptable materials will be posted throughout the site. Contractors are responsible for transporting their own recyclables to the designated area and carefully sorting them into the appropriate bins on a daily basis.
- All contractors will also provide adequate documentation verifying compliance with the requirements established herein.
- All contractors will be responsible for ensuring that materials are delivered to site in containers or packing that is reusable wherever possible. Contractors will be responsible for removing reusable packing from site and taking it back to the supplier – examples of this are glazing frames, block / brick pallets. Where packaging is not reusable it shall be recycled - cardboard will have its own recycling collection points. Wood crating, where not reusable, is to be placed in clear wood bin.
- The following chart identifies the waste materials that will be generated on this project, the reuse/recycling/disposal method for each material, and any handling procedures. In addition to these minimum requirements, PCL and all contractors will make every effort to reuse/recycle additional materials at local recycling/reuse facilities.

CONSTRUCTION LEADERS

APPENDIX C – CONSTRUCTION WASTE MANAGEMENT PLAN

PCL – Waste Management – Handling:

- A goal of over 90% waste diversion has been set for the project.
- On the following pages are tables indicating how different types of waste will be handled. Individual contractors will be responsible for source separating their own waste.
- For contractors responsible for removal, recycling and disposal of their own recycling and waste materials, a Waste Management Plan (using this format) will be provided to PCL within ten (10) days of tender award. Contractors will also provide the Construction Waste Management Reporting Sheet (attached) on a monthly basis to PCL.
- PCL will provide the following collection areas for recycling:
    - Metals
    - Clean Wood
    - Concrete, brick, concrete block, asphalt
    - Excavated materials (soil, aggregate, etc.)
    - Organic materials
    - Plastics
    - Cardboard
    - Beverage Containers
    - Paper

PCL Waste Management Plan:

Clearing/Excavation Phase (Minimum Requirements)

Materials	Fate	Handling Procedure	Facility
Excavated Soils	1. Reclaim on site for backfill 2. Grade fill for future development 3. Bioremediation 4. Landfill	Site Stockpile, ensuring wind/water erosion is prevented	Hazco XS West Landfill
Asphalt	1. Reuse on site as temporary fill 2. Reuse elsewhere for roadfill 3. Recycled	Stockpiled, then crushed on- or offsite for fill. Stockpiled, then hauled to recycling facility	Columbia Bitulithic
Concrete	Recycled	Stockpiled, the crushed and removed	Columbia Bitulithic

CONSTRUCTION LEADERS

APPENDIX C – CONSTRUCTION WASTE MANAGEMENT PLAN

New Construction Phase (Minimum Requirements)

Materials	Fate	Handling Procedure	Facility
All Metals: Aluminum framing, hot rolled steel, cast iron, rebar, cold rolled galvanized steel sheet, metal pipe, etc.	1. Reuse or salvage by contractor. 2. Recycle by Salvage Contractor.	Deposit all metals in "metals" dumpster.	Richmond Steel
Clean Wood (incl. OSB, PT wood, form-ply, etc.)	Scraps reused for formwork, backing / blocking etc. Remainder recycled.	Separate "clean wood" in clean wood dumpster.	Urban Woodwaste
Impacted Wood (veneered, creosote treated, etc.)	1. Reuse or salvage on site. 2. Reuse by general public. 3. Landfill.	Normal trade waste.	Ecowaste Landfill
Concrete, Mortar, Masonry	Recycle at Asphalt Plant.	Break up any wastes or mistakes and put in "concrete" dumpster.	
Gypsum Drywall	Recycle	Drywaller provided bin	
Glass	Recycling Plant	Glass bin	
Paint	Return to paint depot. Opened cans to be turned over to Owner for maintenance materials.	Special containment for recycling.	
Ceramic	Reduce, reuse, recycle where possible. Balance to landfill.	Trade contractor removal. Normal trade waste.	
Resilient Flooring	Reduce, reuse, recycle where possible. Balance to landfill.	Trade contractor removal. Normal trade waste.	
Carpet	Reduce, reuse, and recycle where possible. Balance to landfill.	Trade contractor removal. Normal trade waste.	
Remaining Materials	Reduce, reuse, and recycle where possible. Balance to landfill.	Normal trade waste.	
Packaging	Cardboard recycle Clear plastics recycle	Cardboard recycle bin Plastics recycle bin	
Rigid Foam Insulation	Reduce, Reuse	Source separated for return to supplier / PCL yard future projects	
Plastic Plant Pots	Return to supplier	Collection by landscape contractor	

CONSTRUCTION LEADERS

APPENDIX C – CONSTRUCTION WASTE MANAGEMENT PLAN

Ongoing Recycling Requirements

Materials	Fate	Handling Procedure	Facility
Beverage Containers	Recycle.	Drink container recycling	
Cardboard	Reduce, reuse, and recycle.	Separate in cardboard collection container.	Super Save Recycling
Mixed Office Paper	Reduce, reuse, and recycle.	Separate in paper collection container.	Super Save Recycling

Additional Recycling Efforts (Goals)

Materials	Fate	Handling Procedure	Facility
Forming Plywood	Reuse as many times as possible, then recycle.	Stack next to supply of new for boards for reuse. Recycle clean unusable forms in "clean wood" dumpster.	
Acoustical Ceiling Tile	Salvage all full tiles. Recycle where possible	Salvage and turn over all full tiles to Owner for future use; normal trade recycling or waste	
Carpet	Recycle. Reuse as protection for finished surfaces.	Send back to supplier/manufacturer for recycling.	

CONSTRUCTION LEADERS

APPENDIX D - EMERGENCY EARTHQUAKE PROCEDURES

PREAMBLE

During an earthquake it is impossible to determine the type and extent of damage the building would receive; the entire office in and out would be affected. The intent of these guidelines is to offer a preconceived plan of action and a tool for educating our staff.

Earthquakes vary in duration, intensity and pattern – they can be very destructive.

DURING AN EARTHQUAKE

If you are inside a building:

- Stay calm, drop, cover and hold on.
- Do not attempt to exit the building while the shaking is occurring.
- Get to a position of safety:
  - away from objects that can fall on you
  - away from edges of slabs or floor openings
  - sit in an inside corner of other structurally sound points. e.g. doorways
  - keep out from under any temporary forms or structures
- **DO NOT HESITATE – MOVE AT ONCE!**
- Do not leave your position of safety until the shaking stops. If you have no position of safety, what can you do to protect yourself? Get down in a forward position and hold you hands over your head clasped together to protect your neck. Keep your hard hat on.
- After the shaking has stopped, move to the emergency assembly area shown on the site plan and report your name and any injuries. If you are hurt and unable to move, remain calm to conserve energy and call out for help. Rescue teams will be organized to search for the injured. On the way to the assembly area, if you find an injured worker report the location A.S.A.P. Do not move an injured worker as you can complicate injuries. Move the injured worker only in a life-threatening situation. Do this while maintaining C-Spine control (minimizing back and neck movement).
- Be aware of aftershocks as you may have to repeat the above.
- **Biggest dangers:**
  - Falling objects
  - Swinging doors and broken windows
  - Fires
  - Electrical hazards
  - Damaged gas mains
  - Filing cabinets/bookshelves.

CONSTRUCTION LEADERS

APPENDIX D - EMERGENCY EARTHQUAKE PROCEDURES

If you are outdoors:

- If possible, move to an open area.
- Keep out of harms way, i.e. away from stored materials, tress, mobile equipment, gas or chemical storage, motor vehicles, crew and office trailers, or any other objects that can fall and crush you.
- After the shaking has stopped, move to the designated emergency assembly mustering area and report in with your name and any injuries. If you are hurt and unable to move, remain calm to conserve energy and call out for help. As mentioned before, do not move an injured worker unless there is imminent danger to him.
- Be prepared for aftershocks.

After the Earthquake has ended:

The Site Superintendent or his designate will ensure the following:

- Triage and first aid of injured workers has started.
- A head count is conducted listing the last known location of missing workers.
- If necessary, hazardous utilities (gas/electricity) will be located and shut down.
- No worker is to leave the site without authorization.

Additional Information:

In order to prevent further injuries, do not leave for home. Power will be out, including traffic lights. Traffic congestion will occur, people will panic and emergency vehicles will be unable to respond to the injured. Have a home plan prepared in advance to give your family its best chance. Guides are available from supermarkets and bookstores. Stay where you are needed until advised by emergency services. If you are not part of the solution, you are part of the problem.

In case of a major disaster, Emergency Shelter locations will be broadcast by Emergency Services Radio. At this time, the local authorities will advise on how to contact family members. If everyone does their part by staying calm, following procedures and following the directions of the Emergency Services, everything will be back to order sooner.

CONSTRUCTION LEADERS

Forms:

1) HSE Orientation Checklist (section 3)
2) HSE Orientation Questionnaire (section 3)
3) Voluntary Medical Questionnaire (section 3)
4) Weekly HSE meeting (section 4)
5) HSE Committee Meeting Minutes (section 4)
6) Construction Hazard Assessment (section 5)
7) Job Hazard Analysis
8) Hazard Identification and Control Form
9) HSE Inspection Checklist (section 6)
10) Safety Tour Report
11) Environmental Inspection Report
12) Environmental Spill Report (section 10)
13) Environmental Project Checklist
14) Environmental Checklist
15) Environmental Scope of Work
16) Checklist for visually determining the presence of mold in an existing building
17) Medical Treatment Memo
18) Statement Form
19) Fitness Form
20) Modified Work Offer
21) Employee Injury Management Form
22) Incident Investigation Report Form (section 13)
23) Witness Statement Form (section 13)
24) Safe Operating Procedures Table of Content (from PCL Business Guide)
25) Working Alone Permit
26) Extended Working Hours Permit
27) Extended Working Hours Sign in Sheet
28) Hot and Safe Work Permit System
29) Dust Control Program
30) Site Plan

HEALTH, SAFETY AND ENVIRONMENT ORIENTATION CHECKLIST

COMPANY: _____ ☐ **PERMANENT** ☐ **TEMPORARY** ☐ **TRANSFER**

WORKER'S NAME: _____

PROJECT SUPERVISOR: _____ **ORIENTATION DATE:** _____

PROJECT: _____ DD/MM/YY

PART ONE (Site Specific)

Items reviewed with all workers:	**YES**	**NO**	**N/A**	**CL**
1. Have you been advised that working safely is a condition of employment, and of the disciplinary procedures associated with failure to adhere to this or other site requirements?	☐	☐	☐	☐
2. Has the team approach been reviewed with you?	☐	☐	☐	☐
3. Has an overview of the following PCL policies as they relate to this project been given: a. HSE b. Workplace Violence and Harassment c. Drug and Alcohol d. Fall Protection e. Environment	☐	☐	☐	☐
4. Have you been advised of the environmental designate?	☐	☐	☐	☐
5. Has the Pre-Job Safety Instruction Program (PSI) and the following steps been explained and reviewed with you? • recognizing potential hazards? • eliminating potential hazards? • controlling potential hazards?	☐	☐	☐	☐
6. Have you been advised about site's basic PPE requirements?	☐	☐	☐	☐
7. Has the project site plot plan been reviewed (including hazards associated with utilities, excavations and restricted areas etc)?	☐	☐	☐	☐
8. Have the site's hours of operation been reviewed?	☐	☐	☐	☐
9. Have you been advised about HSE signage, proper use and compliance?	☐	☐	☐	☐
10. Has the use of a fire extinguisher been demonstrated to you?	☐	☐	☐	☐
11. Do you know the expectation for housekeeping onsite?	☐	☐	☐	☐
12. Have you been advised that intoxicating beverages and drugs are not allowed on the worksite?	☐	☐	☐	☐
13. Have you been advised that firearms or weapons of any kind are not allowed on the worksite?	☐	☐	☐	☐
14. Have the project fall protection plan requirements been explained to you?	☐	☐	☐	☐
15. Have you been advised where to find MSDS, PCL Project Safety Plan, and OHS legislation on the site?	☐	☐	☐	☐
16. Have you been advise on the procedure to refuse unsafe work?	☐	☐	☐	☐

Items reviewed with all workers:	**YES**	**NO**	**N/A**	**CL**
17. Have you been advised on current general job site hazards (check all that apply): ☐Harmful Gases ☐ Overhead Activity ☐ Congested Work Areas ☐ Restricted Work Areas ☐Excavations ☐Trenches ☐ Demolition ☐ Traffic ☐ Falls from height ☐Mobile Equipment ☐ Other Please Specify: _____	☐	☐	☐	☐
18. Has the project's scaffold inspection and tagging procedures been explained to you?	☐	☐	☐	☐
19. Has it been explained that we follow both local legislation and PCL requirements and that the more stringent standard of the two will always apply on site?	☐	☐	☐	☐
20. Have you physically been shown the location of muster areas, first aid stations, and spill kits, etc?	☐	☐	☐	☐
21. Have the site's incident report procedures (including near misses) been explained to you?	☐	☐	☐	☐
22. Has it been explained that all injuries must be immediately reported and recorded?	☐	☐	☐	☐
23. Have the medical facilities and services on and off the job been reviewed?	☐	☐	☐	☐
24. Have you been advised that any damage to public, project and/or client property or equipment must be reported immediately to PCL?	☐	☐	☐	☐
25. Have you been introduced to the site superintendent and did he/she discuss their commitment to HSE on the jobsite?	☐	☐	☐	☐
26. Have you been advised about weekly HSE meetings?	☐	☐	☐	☐
27. Have the emergency procedures for fire, first aid, and spills been reviewed with you?	☐	☐	☐	☐

Note: Non PCL workers please go to questions 40 and 41 before signing the trade/sub contractor orientation acknowledgement portion of this form located on page 3.

PART TWO PCL EMPLOYEE HSE ORIENTATION

Items reviewed with the employee:	**YES**	**NO**	**N/A**	**CL**
28. Has the maintenance requirements of tools, equipment, and vehicles been reviewed?	☐	☐	☐	☐
29. Has a review and demonstration of manual lifting procedures been completed?	☐	☐	☐	☐
30. Has WHMIS/HAZCOM been explained to you?	☐	☐	☐	☐
31. Has a review of scaffold requirements been completed?	☐	☐	☐	☐
32. Has a review of ladder requirements been completed?	☐	☐	☐	☐
33. Has a review of guardrail requirements been completed?	☐	☐	☐	☐
34. Has a review of PCL's requirements for openings been completed?	☐	☐	☐	☐
35. Have your breaks and lunch times been reviewed?	☐	☐	☐	☐
36. Has the worker been advised that hearing protection must be worn if sound levels exceed 85dB?	☐	☐	☐	☐
37. Have any other items been reviewed? If so, please describe below: _____ _____				
38. Has the modified work program been explained to you and if required, do you know what would be expected if you became injured?	☐	☐	☐	☐
39. Has the PCL stretching program requirements been reviewed with you?	☐	☐	☐	☐

TRADE/SUBCONTRACTOR ORIENTATION ACKNOWLEDGEMENT

Items reviewed with the worker:	**YES**	**NO**	**N/A**	**CL**
40. Have the applicable decals been issued to the worker at the completion of this orientation?	☐	☐	☐	☐
41. Has the worker been advised to request a PSI from his foreman upon leaving this orientation and joining his/her crew?	☐	☐	☐	☐

PCL ORIENTATION ACKNOWLEDGEMENT

Additional items covered with the worker:	**YES**	**NO**	**N/A**	**CL**
42. Has the worker completed the orientation questionnaire?	☐	☐	☐	☐
43. Have the applicable decals been issued to the worker at the completion of this orientation?	☐	☐	☐	☐
44. Has the worker been advised to request a PSI from his foreman upon leaving this orientation and joining his/her crew?	☐	☐	☐	☐

THIS FORM WILL BE RETAINED ON FILE AT THE PROJECT WORKSITE LOCATION.

WORKER'S SIGNATURE: _____

FACILITATOR'S NAME: (please print): _____

FACILITATOR'S SIGNATURE: _____

NAME OF EMERGENCY CONTACT: _____

EMERGENCY CONTACT NUMBER: ( ) _____-----_____

FOREMEN/TRADE REP. NAME (please print): _____

FOREMEN/FORMEN/TRADE REP. SIGNATURE: _____

Legend: CL = Client N/A = Not Applicable For clarification, check the response boxes CL and YES if these safety points have already been completed by the client during their orientation.

HSE ORIENTATION QUESTIONNAIRE

WORKER'S NAME: _____ **YOUR EMPLOYER IS**: _____
PROJECT NAME: _____ **PROJECT LOCATION:** _____

1. A PSI will be used to identify and control hazards associated with your work tasks and location. True : ☐ False : ☐

2. Working safely and in compliance with environmental legislative requirements is a condition of employment on this site. True : ☐ False : ☐

3. Injuries, regardless how minor, must be immediately reported to _____?

4. PCL is responsible for housekeeping on this site. True : ☐ False : ☐

5. Unsafe conditions must be reported your supervisor and/or PCL:
   ☐ Before the end of the day.
   ☐ At your next break.
   ☐ Immediately.

6. Carrying materials or equipment up or down any access ladder is acceptable on this site. True : ☐ False: ☐

7. Openings that are covered with plywood will have the plywood secured to prevent accidental dislodgement and will be marked with:
   ☐ A circle
   ☐ A cross
   ☐ A warning sign
   ☐ All of the above

8. A trench of only 6 feet deep does not require shoring, cutbacks or engineering before entering. True : ☐ False : ☐

9. Eye protection is only required when working on a task that has the potential for an eye injury. True : ☐ False : ☐

10. When you are working from heights and the guardrails are missing, you must use fall protection equipment. True : ☐ False : ☐

11. Tools and equipment that have guards which are inoperative or missing are okay to use 'on a temporary basis'. True : ☐ False : ☐

12. The Workplace Hazardous Material Information System (WHMIS)/Hazardous Communication system designates certain products as controlled products and requires them to be labelled. This label is a warning for you the worker. The label tells you the:
   ☐ Name of the product
   ☐ Hazard symbol
   ☐ Risks when you use it
   ☐ Personal protective equipment to wear
   ☐ First aid treatment if necessary
   ☐ All of the above

13. Material Safety Data Sheets (MSDS) are also required for WHMIS controlled products. These sheets are readily available for your additional information by asking your supervisor to see them. True : ☐ False : ☐

14. Some form of fall protection is required whenever working at a height of 6 feet or more. True : ☐ False : ☐

Worker: (please print) _____ Signature of worker: _____

Voluntary Medical Questionnaire

Site:_____

The following is a Medical Questionnaire, which will be filled out on voluntary basis by all employees being orientated to this site.

Once filled out, the Medical Questionnaire allows the company to assure that:
(1) existing problems are not aggravated;
(2) limitations due to disabilities are considered when assigning duties; and
(3) it alerts safety or medical staff of conditions or medications, in case a worker is injured and unable to pass this information on to hospital staff him/herself.

Filling out this questionnaire is greatly appreciated and in no way puts a workers job in jeopardy. This information is strictly confidential.

Do you suffer any of the following conditions:	**Yes**	**No**	
1. asthma, bronchitis	☐	☐	_____
2. high blood pressure	☐	☐	_____
3. diabetes	☐	☐	_____
4. epilepsy	☐	☐	_____
5. nose bleeds	☐	☐	_____
6. joint pain – i.e. arthritis	☐	☐	_____
7. frequent headaches	☐	☐	_____
8. back problems	☐	☐	_____
9. allergies – chemicals, pollen, etc.	☐	☐	_____
10. allergies – bee stings	☐	☐	_____
11. heart problems	☐	☐	_____
12. hepatitis A, B, C	☐	☐	_____
13. skin disorders – psoriasis, eczema, rashes	☐	☐	_____
14. carpal tunnel syndrome	☐	☐	_____
15. hernias	☐	☐	_____

If you have answered yes to any of the above, are you taking any medication for these conditions? ☐ yes ☐ no
If yes, please indicate what you are taking and the amount prescribed: _____

_____

_____

Do you have any other conditions not listed? ☐ yes ☐ no
If yes, please indicate the condition and if medication is needed: _____

_____

Is there any other medical information that you feel is important? ☐ yes ☐ no
If yes, please indicate: _____

☐ I have chosen not to provide any information.

_____	_____	_____	_____	_____
Name (please print clearly)	*Trade*	*Company*	*Date*	*Signature*

Weekly HSE Meeting

Company/District:
Date: DD/MM/YY
Project Supervision: Print
Trade:
Project Name:
Project Number:
Subcontractor:

Attendance

	Print		Signature
1.	Print	1.	Signature
2.	Print	2.	Signature
3.	Print	3.	Signature
4.	Print	4.	Signature
5.	Print	5.	Signature
6.	Print	6.	Signature
7.	Print	7.	Signature
8.	Print	8.	Signature
9.	Print	9.	Signature
10.	Print	10.	Signature

Safety Items Discussed:

Employee Suggestions:

Corrective Actions:

Safety Talk Used:
Project Supervision: Signature
Reviewed By: Print

Weekly HSE Meeting – Responsibilities of Project Supervision

- Review the last Project HSE Committee meeting minutes;
- Bring forward topics for discussion; e.g. environmental, at risk behaviors, practices, or conditions that have been observed.
- Review the following:
    - Inspection dd/mm/yy;
    - Incident; and
    - MSDS.
- Encourage worker suggestions and discussion;
- Decide on corrective action and follow up to verify that this has been completed;
- Brief the workers on new types of equipment and controlled products;
- Discuss personal protective equipment suitable for the work on site;
- Review first aid and emergency procedures, update of any current changes;
- Discuss current HSE risks on the job site;
- Use the results of HSE inspections or audits as a topic of discussion; and
- Periodically, request assistance from the district HSE manager or project HSE supervisor in regards to content or special presentations.

HSE Committee Meeting Minutes

Meeting Minutes #: _____
Date: DD/MM/YY
Time: _____
Location: _____

Participant's Name:	**District (or jobsite, company, etc):**

Absent:

TOPIC	DISCUSSION	ACTION BY
	Topic Name Heading (e.g., Review of Previous Minutes)	
1.1		
1.2		
1.3		

NEXT MEETING
The next meeting is scheduled for: DD/MM/YY
Time: _____
Location: _____

Construction Hazard Assessment (CHA)

Project	**Date**
Project Number	**Completed by**

		Hazard																	Affected Group			Mandated Group		Control			
	Applicable to project	fall <10'	fall >10'	fall >21'	noise	light	radiation	biological	chemical	mechanical	pnumatic	electrical	struck by/contact	immersion	> 50 lbs	traffic	awkward postion	repetitious	PCL worker	contractor worker	public	gov. requirement	PCL requirement	Engineering	Administrative	PPE	Comments
SITEWORK	X																										
EXCAVATION																											
LOOSE FORMWORK																											
GANG & FLY FORMWORK																											
CONCRETE & PLACING																											
CEM FINISH/CONC SPEC																											
REINFORCING STEEL																											
PRECAST CONCRETE																											
MASONRY																											
METALS																											
WOOD AND PLASTICS																											
THERM/MOIST PROTECT.																											
DOORS & WINDOWS																											
FINISHES																											

Construction Hazard Assessment (CHA)

	Hazard																		Affected Group			Mandated Group		Control			
	Applicable to project	fall <10'	fall >10'	fall >21'	noise	light	radiation	biological	chemical	mechanical	pneumatic	electrical	struck by/contact	immersion	> 50 lbs	traffic	awkward position	repetitious	PCL worker	contractor worker	public	gov. requirement	PCL requirement	Engineering	Administrative	PPE	**Comments**
SPECIALTIES																											
BUILDING EQUIPMENT																											
FURNISHINGS																											
SPECIAL CONSTRUCTION																											
CONVEYING M2STEMS																											
BUILDING MECHANICAL																											
BUILDING ELECTRICAL																											
CONFINED SPACE																											

Job Hazard Analysis

Project Number	Project Name
Work Activity/Work Task	JHA/ -001 rev.

Steps	Hazards *Considerations to: People, Equipment, Material, Environment, Tools,(Chemical, Biological, Physical, Hygiene and Ergonomics)*	Pre-control Risk Rating	Control	Post Control Risk Rating	Controls Verified Yes / No

Review By: **Special Review By: (if required)**

Project Superintendent	**Date:** Day Month Year	**Required:**								
Foreman	**Date:** Day Month Year	**Engineer**		**Yes**	☐	**No**	☐	**N/A**	☐	**Date:**
Project HSE	**Date:** Day Month Year	**District HSE Manager**		**Yes**	☐	**No**	☐	**N/A**	☐	**Date:**

Crew Reviewed with Signatures:

	Date: Day Month Year		**Date:** Day Month Year
	Date: Day Month Year		**Date:** Day Month Year
	Date: Day Month Year		**Date:** Day Month Year

Step 1 — Risk Matrix

Frequency

Category	Term	Definition
4	**Very Frequent**	Activity will be repeated many times in the course of a task
3	**Frequent**	Activity will be repeated several times in the course of a task
2	**Occasional**	Activity will occur at somepoint in overall task
1	**Infrequent**	Activity could be occured but not likey

Step 2 — Severity – Consequences

Consequence Category		People	Property	Environment	Public Image, Reputation & Disruption
4	**Major**	Fatality	Impact >$10,000	Reportable Occurrence	Government intervention
3	**Critical**	Permanent, long-term injury or illness	Impact < $10,000 but > $5000	Client Standards Not Met	Owner Intervention
2	**Serious**	Recordable Injury	Impact < $5000 but > $ 1000	Site Conditions Unacceptable	Community Attention
1	**Minor**	On-site/ No Treatment	Impact < $1000	No Impact	Individual or none

		4	**3**	**2**	**1**
Severity	**4**	16	12	8	4
	3	12	9	6	3
	2	8	6	4	2
	1	4	3	2	1

Step 3

Risk Category		
"A"	High (8-16)	Situation must be corrected immediately. Approval to continue at current level of risk by District Manager, Senior Construction Manager and District HSE Manager.
"B"	Medium (4-6)	Approval to continue at current level of risk by 2 senior supervisory project team members.
"C"	Low (1-3)	Managed appropriately at field level.

HAZARD IDENTIFICATION AND CONTROL LIST

NAME OF PROJECT: _____

Job Location: _____ **Inventory Date:** _____

Name of Project Superintendent: _____
(please print)

Name(s) of the Physical, Biological or Chemical Hazards:

1) _____ 5) _____
2) _____ 6) _____
3) _____ 7) _____
4) _____ 8) _____

Monitoring Frequency – Regulated Exposure Limit/Control Action Level:

1) _____ 5) _____
2) _____ 6) _____
3) _____ 7) _____
4) _____ 8) _____

Equipment, Operation(s) or Machine(s) Creating Hazard:

1) _____ 5) _____
2) _____ 6) _____
3) _____ 7) _____
4) _____ 8) _____

Exact Location of Equipment, Operation(s) or Machine(s):

1) _____ 5) _____
2) _____ 6) _____
3) _____ 7) _____
4) _____ 8) _____

Summary of Hazard Control Measures (personal protective equipment, evacuation, auxiliary lighting, turn fans on, wetting down, purging, replace specific part, spill contaminant, etc.)

1) _____
2) _____
3) _____
4) _____
5) _____
6) _____
7) _____
8) _____

See reverse for Control Measures

CONTROL MEASURES:

Item 1 _____

Item 2 _____

Item 3 _____

Item 4 _____

Item 5 _____

Item 6 _____

Item 7 _____

Item 8 _____

Authorized by: _____ Date: _____

Site Superintendent's Name

HSE Inspection Checklist

Project Name / Location: _____ **Project #:** _____ **Inspection Date:** _____ **Time:** _____

Item #	Item Description – Notes	Hazard Rating	Corrective Action	Assigned To	Target Date	Completion Date	Deduction (optional)

Inspection Type: **Formal** ☐ **Informal** ☐ | **Weekly** ☐ **Monthly** ☐ **Project Team** ☐ **Safety Committee** ☐ **District Safety** ☐ **Reviewed Previous Inspection** ☐ **Final Score** (optional)

Weather Conditions: _____ **Lighting:** _____

Positive Observations: _____

_____

_____

Inspection Team:
(please print)

_____ (lead) _____ _____

_____ _____ _____

_____ _____ _____

Reviewed by Project Manager: _____ *signature* _____ *date*

_____ *signature* _____ *date*

Superintendent: _____ *signature* _____ *date*

_____ *signature* _____ *date*

Class "A" Hazard: *a condition or practice likely to cause permanent disability, loss of life or body part, or extensive loss of structure, equipment or material.*
Class "B" Hazard: *a condition or practice likely to cause serious injury or illness, resulting in temporary disability or property damage that is disruptive but not extensive.*
Class "C" Hazard: *a condition or practice likely to cause minor (non-disabling) injury or illness or non-disruptive property damage.*

White copy: post on site, circulate to project team and to be filed in project management files.
Yellow copy: forward to HSE Department in Richmond Office.

1. General Project Requirements
2. Public Safety/Security/Signage
3. Occupational Health
4. Environmental
5. Personal Protective Equipment
6. Fire Protection
7. Material Handling/Storage
8. Hand & Power Tools
9. Welding & Cutting
10. Electrical
11. Scaffold Erection
12. Scaffold Use
13. Cranes/Hoists/Lifts
14. Vehicles & Equipment
15. Excavations
16. Concrete & Masonry
17. Steel Erection
18. Demolition
19. Ladders
20. Confined Space
21. Lockout Tagout
22. Procedures: PSI, JHA, Infection Control, Controlled Access Zones
23. Rigging
24. Stairways
25. Fall Protection Systems
26. Fall Protection
27. Marine Operations
28. Respiratory Program
29. Aerial Work Platforms

Other

CONSTRUCTION LEADERS

SAFETY TOUR REPORT

PROJECT NAME:	AREA:
CONTRACTOR NAME	

ITEM	HAZARDOUS CONDITIONS/ACTS AND LOCATION	CORRECTIVE ACTION	BY WHOM	DATE COMPLETED	FORM RETURNED TO

Project Superintendent SAFETY REP _____

District Safety Office DATE _____

Signature of Inspector: _____

Signature of Superintendent: _____

PCL ENVIRONMENTAL INSPECTION REPORT

Project:

Date:

Site/Weather Information			Inspected Items			Comments / Corrective Action Items:	Corrective Measures:	
Inspected By:						Project Superintendents are responsible to:	All correspondence measures will be signed and detailed in the section when completed.	
Contractors on Site:						- record all non-compliance items		
Heavy Equip. on Site:						- implement all corrective measures		
Activities on Site:						- advise District Loss Prevention Manager		
Weather:						of status/completion within 48 hours		
mm rain in last week:								
		ITEMS:	**Yes**	**No**	**NA**	**DETAILS:**	**SIGNATURE:**	**D/M/Y**
SEDIMENT AND EROSION CONTROL MANAGEMENT	a)	Silt Fences						
	b)	Temporary Surface Water Storage Area						
	c)	Outlet at Surface Water Storage Area						
	d)	Integrity of Swales and Channels						
	e)	Are SlopesStabilized ?						
	f)	Is Cover of Rough Grades Req? / Maintained?						
	g)	Catchbasins Filtering Controls						
	h)	Remove/Salvage of Topsoil						
	i)	Dewatering						
	j)	Dust Control						
	k)	Mud Tracking						
	l)	Breakout & Removals (Asphalt/Conc/Saw Cut)						
	m)	Protection of Trees						
	n)	Protection of Private Property						
	o)	Are Stockpiles Stabilized ?						
	p)	Is Vegetation Providing Adequate Stabilization ?						
	q)	Other						
HAZARDOUS MATERIAL MANAGEMENT	r)	Chemical/Hazardous Material Storage						
	s)	Fuel Storage						
	t)	Disposal/Recycling of Chemicals/Haz. Matl's						
	u)	Other						
WASTE MATERIAL MANAGEMENT	v)	Disposal of Waste						
	w)	Reduction of Waste						
	x)	Reuse of Waste						
	y)	Recycling of Waste						
	z)	Recovery of Waste						
		Other						
OTHER - SPECIFY								

ADDITIONAL COMMENTS :

Environmental Spill Report

Date of Report: DD/MM/YY
Date of Incident: DD/MM/YY
Project Name:
Location:
Name of District:
Name of Project Superintendent: Print
Name of Company Responsible for Spill?
Address:
Phone #:
Contact Name: Print
Position:
Name of product/substance spilled/released: (refer to Material Safety Data Sheet)

Location of spill:
Total quantity involved:
Quantity spilled/released:
Time incident started:
Time incident stopped:
Weather conditions anticipated during clean up operations:

Briefly describe what caused the spill or release:

Briefly describe what was affected by the spill/release (identify surface areas, where practical to do so):

Briefly describe measures/actions taken to control spill/release (include equipment, materials, etc.):

Identify corrective measures/actions taken to complete all operations (ie. Clean up, packaging, storing, disposal, etc.):

Date and time of completion: DD/MM/YY Time
Recommendation(s) to prevent reoccurrence:

Was anyone injured? Yes ☐ No ☐

If yes, has an Incident Investigation Report been completed? (contained in HSE-13)
If yes, please attach a copy of this report

Who has been contacted?
District Manager ☐
District HSE Manager ☐
HSE Director ☐
Environmental Protection Agency ☐
Other Government Agencies contacted (identify who/when)

Name of On-site Environmental Designate: Print Signature
Name of District HSE Manager: Print Signature

SEQUENCE OF EVENTS RECORD

Date	Time	DESCRIPTION OF ACTION TAKEN AND PERSONS INVOLVED	Initials

Environmental Project Checklist

Name of Project: _____
Job Location: _____ **Date:** DD/MM/YY
Project Superintendent: Print
District/Location: _____

No.	Topic or Item	YES	NO	N/A
1.	Has an on-site environmental designate been selected?	☐	☐	☐
2.	Has a list of the on-site environmentally sensitive products/contaminants been developed?	☐	☐	☐
3.	Has a chemical substitution review been completed which would provide less hazardous and more environmentally friendly products?	☐	☐	☐
4.	Is current health hazard information on products available?	☐	☐	☐
5.	Have the necessary environmental permits/licenses been arranged for?	☐	☐	☐
6.	Has a procedure for safe storage and handling of products been completed?	☐	☐	☐
7.	Have arrangements for an on-site spill containment kit been established?	☐	☐	☐
8.	Has a spill containment and response plan been developed?	☐	☐	☐
9.	Has a communication system been established with the on-site environmental designate and the district HSE manager pursuant to notification of relevant government regulators such as the Environmental Protection Agency?	☐	☐	☐
10.	In the event of a spill, have retrieval, transportation and disposal of products been addressed?	☐	☐	☐
11.	Is emergency response equipment and personal protective equipment available on-site?	☐	☐	☐
12.	Have contact procedures for preferred environmental consultants or labs for emission analysis or product sampling and testing been established?	☐	☐	☐
13.	Is there a system in place on how to accommodate audits/inspections by government regulators such as the Environmental Protection Agency?	☐	☐	☐

Name of Environmental Designate: Print
Signature

Note: Use reverse side as required.

Use this portion for additional information which may be required as part of the Environmental Checklist.

No.	Topic or Item

Environmental Checklist

District Name Print Project Name Print

Chief Estimator Print Initials

Date of Review DD/MM/YY

INSTRUCTIONS

- This "Environmental Checklist" has been compiled to assist the chief estimator and project management team(s) define an Environmental Scope of Work.
- When completed, this "Environmental Checklist" must be attached to the "Environmental Scope of Work Form" for distribution.
- Project manager is responsible to review this information with project management team and modify (if necessary) to facilitate field operations.

1. Available Information Regarding the Site

	YES	NO	N/A
a. Reports/Assessments and other pre-existing information.			
Has an Environmental report/Phase I/II report been included with the contract?	☐	☐	☐
Is the date of the report acceptable? (data current enough to still be utilized?)	☐	☐	☐
Are there clearly defined conclusions and recommendations?	☐	☐	☐
A list of clear conclusions and recommendations:			
Was the Phase I/II assessment completed in accordance with any standards or protocols (i.e. CSA or ASTM)?	☐	☐	☐

Reference Note(s):

		YES	NO	N/A
b.	**Contract**			
	Does the bid document identify or indicate the presence of any on-site environmental contaminants, pollutants or hazardous waste?	☐	☐	☐
	Reference Note(s):_____			
	Have any environmental enforcement or clean-up actions been initiated by E.P.A. at or near the proposed site?	☐	☐	☐
	Reference Note(s):_____			
	Is the site on the Government's: • National Contaminated Sites List (Canadian?) National Priorities List (US)	☐	☐	☐
	Reference Note(s):_____			

			YES	NO	N/A
c.	**Document**	***Possible Information Sources:***			
	• Aerial photographs?	Local libraries, private companies, the federal government, certain provincial/state or federal government directories	☐	☐	☐
	Reference Note(s):_____				
	• Property use records?	Insurance companies, municipal, provincial/state or federal government directories	☐	☐	☐
	Reference Note(s):_____				
	• Records of previous ownership, such as title transfer documents?	Provincial/state land registries, title search companies	☐	☐	☐
	Reference Note(s):_____				

		YES	NO	N/A
• Previous environmental assessment reports	Engineering and other firms that have conducted environmental studies at the site	☐	☐	☐

Reference Note(s):_____

• Company records, including site plans, building plans (including as-builts) and permits, production and maintenance records, emergency response or contingency plans, and spill reports?	Internal company files and accounts	☐	☐	☐

Reference Note(s):_____

• Geological and geotechnical reports?	Engineering and other firms that have conducted environmental studies at the site	☐	☐	☐

Reference Note(s):_____

• Environmental permits, orders and charges relating to hazardous material storage, hazardous waste treatment, landfills, and contamination of adjacent sites, and other regulatory documents?	Federal or provincial/state government agencies dealing with waste management, water quality, public health, and environmental planning and protection	☐	☐	☐

Reference Note(s):_____

d. Inspection of the site

Has PCL taken any groundwater, soil, microbial or other samples been taken and analyzed which are not part of any consultants report?	☐	☐	☐
Current uses of the property that may involve hazardous materials?	☐	☐	☐

Reference Note(s):_____

	YES	NO	N/A
Details about hazardous materials and unidentified substances observed on the site?	☐	☐	☐
Reference Note(s):_____			
Evidence of present or former underground or aboveground storage tanks. These indicate a high probability of environmental contamination?	☐	☐	☐
Reference Note(s):_____			
The condition of any storage areas and bins. These can suggest the presence of hazardous materials such as solvents and other chemicals?	☐	☐	☐
Reference Note(s):_____			
The presence of "special attention" items, such as items containing asbestos, CFC's and lead. Transformers and old light ballasts suggest the presence of PCB's, which may have leaked or spilled onto surface soils?	☐	☐	☐
Reference Note(s):_____			
Unusual odors at the site?	☐	☐	☐
Reference Note(s):_____			
Housekeeping practices, indicated by the general maintenance and appearance of a site, and by the condition and tidiness of any buildings, storage or waste-disposal areas?	☐	☐	☐
Reference Note(s):_____			
Is there evidence of any bird or mouse feces (body waste) in any of the buildings proposed work areas?	☐	☐	☐
Reference Note(s):_____			

		YES	NO	N/A
e.	**Interior Observations:**			
	Type of fuel used in heating and cooling systems?	☐	☐	☐
	Reference Note(s):_____			
	Stains on floors, walls, or ceilings?	☐	☐	☐
	Reference Note(s):_____			
	The location and condition of floor drains and sumps?	☐	☐	☐
	Reference Note(s):_____			
	Interior finishes of buildings, which may include hazardous materials such as asbestos & lead paint?	☐	☐	☐
	Reference Note(s):_____			
	Is there evidence of water damage (i.e. Surface stains, sewer backup markings, broken water line or fire suppression)?	☐	☐	☐
	Reference Note(s):_____			
	Is there any black or greenish-black mold growth present on interior surfaces?	☐	☐	☐
	Reference Note(s):_____			
f.	**Exterior Observations:**			
	The exterior condition of buildings on the property?	☐	☐	☐
	Reference Note(s):_____			
	Natural and artificial surface features (i.e. topography and geology). These features sometimes allow judgments to be made about subsurface conditions, such as direction of groundwater flow and migration of contaminants to or from the site?	☐	☐	☐
	Reference Note(s):_____			

	YES	NO	N/A
The presence of wells on the site. Those that are not used as sources of water may have been used for contamination assessment or impact studies, disposal of liquid wastes; those that are still in use are potential sources of contaminated water?	☐	☐	☐

Reference Note(s):_____

Waste-disposal practices, such as disposal of process liquids, sewage and solid waste?	☐	☐	☐

Reference Note(s):_____

Pits and lagoons used for waste disposal or waste treatment, surface water drainage systems, and wastewater discharge systems?	☐	☐	☐

Reference Note(s):_____

Surface staining, which can suggest the discharge of waste materials or other causes of soil contamination?	☐	☐	☐

Reference Note(s):_____

Type and condition of vegetation?	☐	☐	☐

Reference Note(s):_____

Unusual surface formations and areas of fill. These may contain hazardous or otherwise contaminated materials?	☐	☐	☐

Reference Note(s):_____

Features of adjacent property that may have a direct influence on the presence and type of contamination at site?	☐	☐	☐

Reference Note(s):_____

	YES	NO	N/A
Did the Phase II report include:			
• An executive summary?	☐	☐	☐
• The date of assessment?	☐	☐	☐
• A list of clear conclusions and recommendations?	☐	☐	☐
• Data current enough to still be utilized?	☐	☐	☐

Reference Note(s):_____

Was the Phase II assessment completed in accordance with any standards or protocols (i.e. CSA or ASTM)?	☐	☐	☐

Reference Note(s):_____

Were these standards and protocols clearly defined within the Phase II report?	☐	☐	☐

Reference Note(s):_____

Are existing underground tanks or structures identified on any drawings?	☐	☐	☐

Reference Note(s):_____

2. Identification of Potential Environmental Risks

Protected Areas	☐	☐	☐

Reference Note(s):_____

3. Identification of Potential Environmental Risks

	YES	NO	N/A
a. Hazardous Materials			
Will PCL be responsible for dealing with any contaminants? If yes, check the following areas of responsibility:			
• Handling?	☐	☐	☐
• Removal?	☐	☐	☐
• Storage?	☐	☐	☐
• Transportation?	☐	☐	☐
• Disposal?	☐	☐	☐
• Monitoring and Sampling?	☐	☐	☐
• Laboratory Analysis?	☐	☐	☐
• Quality Control/Assurance Procedures?	☐	☐	☐

Reference Note(s):_____

Water related risks
Has a dewatering assessment or plan been completed? ☐ ☐ ☐

Reference Note(s):_____

b. Environmental Permits

Who is responsible for acquiring the hazardous waste generator permit:			
• the client?	☐	☐	☐
• PCL?	☐	☐	☐
Is there sufficient time for proper acquisition of permits?	☐	☐	☐
Which environmental permits is PCL responsible for?	☐	☐	☐

Reference Note(s):_____

Noise/dust/emissions ☐ ☐ ☐

Reference Note(s):_____

	YES	NO	N/A
Species at risk/migratory birds Are there any protected, threatened or endangered species in the area?	☐	☐	☐

Reference Note(s):_____

Other risks Landslides Are there any historical or archaeological concerns on or near the site?	☐	☐	☐

Reference Note(s):_____

4. PCL's Contractual or Other Legal Liability for Identified Environmental Risks

Are there any clauses addressing unanticipated environmental occurrences?			
If yes, check the following items:	☐	☐	☐
• Is work to be stopped?	☐	☐	☐
• Has the responsibility for dealing with this problem been clearly defined?	☐	☐	☐
• Is there adequate and equitable adjustment available for suspension of work?	☐	☐	☐
• Will change orders be issued for remedial work?	☐	☐	☐
• Will approval time be adequately allowed to facilitate schedule requirements?	☐	☐	☐
Are there provisions for Environmental Liability Release and Indemnity for PCL?			

Reference Note(s):_____

Does the bid document contain any deviation clauses or information which places undue environmental liability on PCL? (i.e. to determine the presence and type of environmental contaminants)	☐	☐	☐

Reference Note(s):_____

	YES	NO	N/A
Does the contract document expressly any environmental scope of work requirements?	☐	☐	☐

Reference Note(s):_____

• Does the contract clearly identify the regulatory requirements?	☐	☐	☐
• If yes, do they coincide with PCL's interpretation of regulatory requirements?	☐	☐	☐
• If no, have we clarified requirements with the client?	☐	☐	☐

Reference Note(s):_____

5. PLOT PLAN AND CONSTRUCTION DRAWINGS:

Are existing underground tanks or structures identified on any drawings?	☐	☐	☐

Reference Note(s):_____

6. ON-SITE CONSIDERATIONS

Will on-site spill kits be required?	☐	☐	☐

Reference Note(s):_____

Will containment booms be required?	☐	☐	☐

Reference Note(s):_____

Will absorbent booms be required?	☐	☐	☐

Reference Note(s):_____

Will transfer pumps be required?	☐	☐	☐

Reference Note(s):_____

	YES	NO	N/A
Will containment membranes be required?	☐	☐	☐
Reference Note(s):_____			
Will storage bins be required?	☐	☐	☐
Reference Note(s):_____			
Will spill containment trays be required?	☐	☐	☐
Reference Note(s):_____			
Will spill overpack drums be required?	☐	☐	☐
Reference Note(s):_____			
Will special personal protective and activity isolation equipment be required?	☐	☐	☐
Reference Note(s):_____			

7. MISCELLANEOUS CONSIDERATIONS/NOTES (Please specify)

ENVIRONMENTAL RISK EVALUATION AND CONTROL CONSIDERATIONS

Topic or Item

GENERAL CONTRACT CONSIDERATIONS

An extremely important contract consideration is determining the environmental risks associated with the proposed scope of work which in most cases, have accompanying liabilities and costs. The following items have been complied to assist with this evaluation:

Environmental Risk Assessment and Control

HAZARD (definition)
Any object, chemical, material, activity, operation, situation, etc. with the inherent ability to cause harm or adverse impact.

Harms/Adverse Impacts Include:

- Environmental damage
- Occupational or community health and safety
- Adverse financial or operational cost impact
- Increased regulatory agency scrutiny
- Public, client or labor relations image
- Management perception
- Operational or manpower resource impacts
- Regulatory compliance program resource impact
- Civil and criminal liability (and cost of defense)

VULNERABILITY, SUSCEPTIBILITY, OR SEVERITY (Definition)
The vulnerability or susceptibility of the potential "hazard receptor" to harm or adverse impacts, or the severity of these impacts resulting from the particular hazard(s).

Receptors include:

- Public
- Workers (direct hire)
- Subcontractors
- Third Party/Consultants
- Property
- Environment
- Business Operations
- Operating Resources
- Public Image
- Utilities such as storm drains

Environmental Scope of Work

INSTRUCTIONS

- The identification of an environmental scope of work for each project is mandatory to meet regulatory compliance and to develop a Project Specific HSE Plan so all on-site personnel can be effectively protected.
- The chief estimator (or designate) is responsible to identify the project specific environmental scope of work on this form.
- To assist this process, an "Environmental Checklist" (for contract bidding and field operations) has been prepared and included in this section. This must be completed (only to the extent required) and attached to the "Environmental Scope of Work" form.
- In some cases, there may not be any environmental requirements identified at the bidding stage. In such cases, it must be identified on this form that there is NO ENVIRONMENTAL SCOPE OF WORK.
- Upon completion of this form and if we are successful in achieving the contract, this completed form (together with the "Environmental Checklist") must be submitted to the construction manager who will in turn submit it to the appropriate project management team who is responsible for having the Project Specific HSE Plan developed (see Responsibility and Distribution Chain attached).

District Name: _____

Project Name: _____

Location of Project: _____

Environmental Scope of Work

Date: DD/MM/YY _____

Chief Estimator (or designate): Print _____

Signature _____

Environmental Scope of Work (continued)

CONSTRUCTION LEADERS

CHECKLIST FOR VISUALLY DETERMINING THE PRESENCE OF MOLD IN AN EXISTING BUILDING

	Topic or Item	YES	NO	N/A
1. Occupied Space				
	Number of floors:			
	General uses:			
	Problematic? Use of attic, if applicable:	☐	☐	☐
	Dirty, malodours, signs of animals/birds/insects, growth sign, water marks? Use of basement or crawlspace, if applicable:	☐	☐	☐
	Dirty, malodours, signs of animals/birds/insects, growth sign, water marks? Presence of water features (e.g. fountains, sprays, indoor waterfalls, etc.)	☐	☐	☐
	Sign of abnormal water movement?	☐	☐	☐
	Malodours Location(s):	☐	☐	☐
	Visible microbial growth? Location(s):	☐	☐	☐
	History of water damage? Location(s):	☐	☐	☐
	Evidence of water damage (stained or discoloured ceiling tiles, walls, floors, carpeting, etc.)? Location(s):	☐	☐	☐
	Condensation or mildew on walls and windows? Location(s):	☐	☐	☐
	Foul* window air conditioners? Location(s):	☐	☐	☐
	Foul evaporative air coolers?	☐	☐	☐
	Foul sump pump?	☐	☐	☐
	Foul fan coil and induction units?	☐	☐	☐
	Potted plants with visible microbial growth?	☐	☐	☐
	Portable air cleaners for odour control? Location(s):	☐	☐	☐
	Foul console humidifiers? Location(s):	☐	☐	☐
	Console dehumidifiers? Location(s):	☐	☐	☐
	Typical RH > 60%?	☐	☐	☐

2. Heating, Ventilation and Air Conditioning System				
	A. General Characteristics			
	Type of ventilation system:			
	Location of air handling units:			
	Cooling method:			
	Heating method:			
	Locations served by individual air handlers:			
	B. Outdoor Air Intake (OAI)			
	Location(s):			
	Compromised bird screen?	☐	☐	☐
	Feathers or bird droppings near or in air intake?	☐	☐	☐
	Other organic matter near or in air intake (e.g. leaves, plant down, insects)?	☐	☐	☐
	Air intake unprotected from rain, snow, fog?	☐	☐	☐
	Standing water or evidence of standing water near or in air intake?	☐	☐	☐
	Cooling tower within 7.5 m (25 ft)?	☐	☐	☐
	Exhaust air outlet within 7.5 m (25 ft)?	☐	☐	☐
	C. FILTERS			
	Filter with organic debris and sign of microbial growth?	☐	☐	☐
	D. MIXING CHAMBER OF AIR HANDLING UNIT			
	Mixing area dirty with debris and sign of microbial growth?	☐	☐	☐
	Malodours?	☐	☐	☐
	Evidence of water damage or intrusion?	☐	☐	☐
	E. HEATING AND COOLING COIL AREA			
	Coils with organic material and sign of microbial growth?	☐	☐	☐
	Foul condensate pan and drain (i.e. standing water, biofilm, or residue)?	☐	☐	☐
	Corrosion on pan?	☐	☐	☐
	Malodours?	☐	☐	☐
	Evidence of water transport from coil area to other areas?	☐	☐	☐

	F. SPRAY HUMIDIFIERS, EVAPORATIVE COOLERS OR AIR WASHERS			
	Type of unit:			
	Chemicals or additives used:			
	Maintenance schedule:			
	Type of medium, if any:			
	Microbiological growth found in previous water samples? If yes, details:	☐	☐	☐
	Recirculated water used with foul indication?	☐	☐	☐
	Bioflim, dirt or microbial growth in sump area?	☐	☐	☐
	Malodours?	☐	☐	☐
	Water leakage from humidifier into duct system?	☐	☐	☐
	Water pooled near unit?	☐	☐	☐
	Unit enters air space directly (or ducted to other areas) with sign of unusual water movement?	☐	☐	☐
	G. Supply Side of Air Handling Unit			
	Where do ducts enter building (e.g. at ceilings, below floor):			
	Type of supply ducts (lined or unlined):			
	SUPPLY AREA WITH DEBRIS AND SIGN OF MICROBIAL GROWTH?	☐	☐	☐
	Malodours?	☐	☐	☐
	Evidence of water damage or intrusion?	☐	☐	☐
	H. Return Side of Air Handling Unit			
	Type of return (ducted or plenum):			
	Porous lining on ducts or plenums with foul indication?	☐	☐	☐
	Return area with debris and sign of microbial growth?	☐	☐	☐
	Malodours?	☐	☐	☐
	Evidence of water transport from coil area to other areas?	☐	☐	☐

3. Plumbing Fixtures/Piping/Accessories				
	Evidence of water leakage from:			
	Bathtubs?	☐	☐	☐
	Urinals?	☐	☐	☐
	Showers?	☐	☐	☐
	Toilets?	☐	☐	☐
	Basins?	☐	☐	☐
	Sinks?	☐	☐	☐
	Laundry tubs?	☐	☐	☐
	Washing facilities?	☐	☐	☐
	Gang handwash stations?	☐	☐	☐
	Fire suppression systems?	☐	☐	☐
	Piping (supply/drainage)?	☐	☐	☐
	Roof vents?	☐	☐	☐
	Grease interceptor traps?	☐	☐	☐
	Ice-making machines?	☐	☐	☐
	Floor drain backups?	☐	☐	☐
	Vacuum breakers?	☐	☐	☐
	Relief valves?	☐	☐	☐
	Blowdown valves?	☐	☐	☐
	Building envelope penetration?	☐	☐	☐
	Valve stems?	☐	☐	☐
4. Refuse Areas				
	Check for microbial growth in:			
	Garbage cans?	☐	☐	☐
	Garbage bins?	☐	☐	☐
	Garbage storage rooms?	☐	☐	☐
	Garbage chutes?	☐	☐	☐
	Recycle bins?	☐	☐	☐

**Foul: Refers to unusual appearance and/or odour.*

NOTE: A "YES" response indicates a potential problem and requires effective remedial action.

Medical Treatment Memorandum

WCB: ☐ Lost time incident (LTI) ☐ Modified Work (MW) ☐ Medical aid (MA)
Client: ☐ Lost time incident (LTI) ☐ Modified Work (MW) ☐ Medical aid (MA) ☐ First aid (FA) ☐ Non-occupational

1. EMPLOYEE INFORMATION:

Name: _____ Print _____ Date of birth: _____ DD/MM/YY _____

Sex: ☐ M ☐ F
Address: _____ Social insurance #: _____
_____ Trade/occupation: _____

Telephone #: _____ Apprentice ☐ Yes ☐ No
Year of apprenticeship: _____

If the worker was not injured, when would it be expected that the job would end?

_____

2. SITE INFORMATION:

Project name: _____ Foreman: _____
Superintendent: _____ Project Manager: _____

3. INCIDENT AND INJURY INFORMATION:

a. Date and time of incident: _____ 20 ____ at _____ a.m./p.m.

b. Date and time incident reported to employer: _____ 20 ____ at _____ a.m./p.m.

c. Regular work hours are from: _____ a.m./p.m. _____ to _____ a.m./p.m.

d. Provide a **detailed** description of how the injury was caused (include weights, sizes of materials and body positions)

_____
_____
_____

e. What machine, tool, or equipment was the worker using? _____

f. Was the worker referred for further medical treatment? ☐ Yes ☐ No
Where? To Whom? _____

☐ Hospital ☐ Medical Centre ☐ General Practitioner
☐ Physical Therapy Treatments ☐ Chiropractic Treatments ☐ Further Testing (x-rays, CT scan, MRI)

g. What part of the body was injured? _____ ☐ Right ☐ Left

h. What type of injury is this? (ie. Sprain, strain, bruise, laceration, etc.) _____
Was an alcohol and drug test administered? ☐ Yes ☐ No
Why was it administered or not administered? _____

_____

Was the next level of management consulted? ☐ Yes ☐ No Who? _____

This report was completed by: _____ Project #: _____

Statement

Date and time statement was written: _____

Name and title of person giving statement: _____

This statement is regarding (who / what): _____

Details (be specific and descriptive): _____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

(please use additional pages if more space is required)

I declare that the statement above, which I have given to _____ has been read back (to) me.

I understand the content of this statement and I declare that it truly and correctly records the information given by me.

Signature _____ DD/MM/YY _____

Address: Street _____ City _____

State/Province _____ Zip Code/Postal Code _____

Phone: Home _____ Work _____

When completing or reviewing a statement, the following must be included:

- the date and time the statement was written
- who wrote the statement, including their title
- who / what the statement is about
- the sequence of events, in chronological order
- very specific and descriptive detail, including:
    - *times within the details*
    - *names and titles of people*
    - *specifics of what was said, rather than general comments*
    - *a sequence of events that are accurate and include all information. The more descriptive the statement the better*

Do not include any personal or subjective comments on a statement.

Fitness Form

Date: DD/MM/YY Site Contact Phone: _____
Site Contact Fax: _____

Section A – TO BE COMPLETED AT SITE

Name of Worker: Print
Date of Birth DD/MM/YY Date of Injury/Illness: DD/MM/YY

"I authorize the release of any relevant medical information/records related to my current medical condition to PCL for the purpose of enabling them to develop a written rehabilitation plan to assist me in returning to work."

Signature of Worker: _____ Date: DD/MM/YY

Section B – TO BE COMPLETED BY PHYSICIAN

Walking/standing ☐ Only short distances ☐ No kneeling/squatting
Lifting/carrying No more than ☐ 10lbs ☐ 20lbs ☐ 30lbs ☐ 40lbs ☐ 50lbs
Pushing/pulling No more than ☐ 10lbs ☐ 20lbs ☐ 30lbs ☐ 40lbs ☐ 50lbs
Manual dexterity ☐ Left ☐ Right ☐ Limited use of hand(s) Not able to: ☐ Write ☐ Sort
Repetitive motion ☐ Left ☐ Right ☐ Short periods ☐ Self-paced
Climbing stairs/ladders ☐ No ladder climbing ☐ No stair climbing ☐ Short flights at own pace
Medication causing sedation/drowsiness: _____

Misc.:
☐ No working with arms above shoulder level
☐ Vision is a potential safety hazard
☐ No working near high speed/moving machinery
☐ No operating mobile equipment
☐ Ground level work only
☐ No bending or twisting
Not able to work in: ☐ Dust ☐ Cold temperatures

Worker Status:

Diagnosis: _____
Treatment Provided:
☐ Fit for regular job Estimated date or return to regular work: DD/MM/YY
☐ Fit for modified work Indicate level: ☐ Sedentary ☐ Light ☐ Medium ☐ Heavy
Can this employee safely work overtime? (beyond 40 hours per week) ☐ Yes ☐ No
Can this employee safely work his/her scheduled shift of _____ ? ☐ Yes ☐ No
Date of reassessment: DD/MM/YY
Comments: _____
_____

Physician's signature: _____ Date: DD/MM/YY

Modified Work Offer

Duration: DD/MM/YY to DD/MM/YY

Name: Print

PCL will make a reasonable effort to provide you with suitable, meaningful, and productive modified work to assist in your recovery and promote a safe return to your pre-accident employment.

In keeping with your work restrictions of:

Walking / standing: ☐ Only short distances ☐ No kneeling / squatting	**work capacity level:**
Lifting / carrying: No more than ☐ 10 lbs ☐ 20 lbs ☐ 30 lbs ☐ 40 lbs ☐ 50 lbs	☐ **sedentary:** - lifting 10 lbs max. - occasional lifting/carrying - primarily sitting
Pushing / pulling: No more than ☐ 10 lbs ☐ 20 lbs ☐ 30 lbs ☐ 40 lbs ☐ 50 lbs	☐ **light:** - lifting 20 lbs max. - frequent lifting/carrying up to 10 lbs - may require walking/standing
Manual dexterity: ☐ Left ☐ Right ☐ Limited use of hand(s) Not able to: ☐ Write ☐ Sort	☐ **medium:** - lifting 50 lbs max. - frequent lifting/carrying up to 20 lbs
Repetitive motion: ☐ Left ☐ Right ☐ Short periods ☐ Self-paced	
Climbing stairs / ladders: ☐ No ladder climbing ☐ No stair climbing ☐ Short flights at own pace	
Other:	

PCL is offering you the following modified work placement. Your specific job duties include:

_____

_____

_____

We will continually review your progress and adjust the length of this placement as required, based on relevant medical information. Your rate of pay will remain the same.

Your next medical follow-up will be on DD/MM/YY with _____

During your modified work placement you will be supervised by: _____.

It is the responsibility of you and your supervisor to complete the "Employee Injury Management Form" and submit it to _____ in the HSE Department at the end of each week.

It is your responsibility to report any concerns or difficulties *immediately* to your supervisor and _____ in the HSE Department.

☐ Offer Accepted ☐ Offer Not Accepted*
**refusal could affect your right to collect benefits*

Employee:	Print	Signature	DD/MM/YY
Supervisor:	Print	Signature	DD/MM/YY
HSE Department:	Print	Signature	DD/MM/YY

Employee Injury Management Form

PHYSICAL RESTRICTIONS

walking / standing	☐ only short distances ☐ no kneeling / squatting
lifting / carrying	no more than ☐ 10 lbs ☐ 20 lbs ☐ 30 lbs ☐ 40 lbs ☐ 50 lbs
pushing / pulling	no more than ☐ 10 lbs ☐ 20 lbs ☐ 30 lbs ☐ 40 lbs ☐ 50 lbs
manual dexterity	☐ left ☐ right ☐ limited use of hand(s) not able to: ☐ write ☐ sort
repetitive motion	☐ left ☐ right ☐ short periods ☐ self-paced
climbing stairs / ladders	☐ no ladder climbing ☐ no stair climbing ☐ short flights at own pace
other:	

EMPLOYEE DETAILS

Name: _____

Shift: ☐ Day ☐ Night

Hours: _____ a.m. / p.m. _____ a.m. / p.m.

Supervisor:

work capacity level:

☐ **sedentary:** lifting 10 pounds maximum
occasional lifting/carrying
primarily sitting

☐ **light:** lifting 20 pounds maximum
frequent lifting/carrying up to 10 pounds
may require walking/standing

☐ **medium:** lifting 50 pounds maximum
frequent lifting/carrying up to 20 pounds

week starting	date	job(s) performed	within restrictions		medical appointment treatments (time)	comments
Monday			yes	no		
Tuesday			yes	no		
Wednesday			yes	no		
Thursday			yes	no		
Friday			yes	no		
Saturday			yes	no		
Sunday			yes	no		

This form is to be completed by the employee and his/her direct supervisor. **Original to be forwarded to project safety**, which will be sent to the district HSE manager at the end of each week. In the event that an employee or supervisor deviates from the restrictions, the injury management coordinator/district HSE manager must be notified immediately. Any changes to the restrictions by the medical professional must be reflected on this form.

Employee Signature: _____

Supervisor Signature: _____

Investigation No. _____

Incident Investigation Report Form ABC

Seven Step Process

1. Secure the Scene
2. Risk Classification
3. Collect the Facts
4. Description/Develop the Sequence of Events
5. Determine the Cause(s)
6. Corrective Actions
7. Signoff and Final Report

STEP 1- SECURE THE SCENE

STEP 2- RISK CLASSIFICATIONS

A B C ***Complete prior to investigation***

Frequency of Task

Category	Term	Definition	
4	**Frequent**	Possibility of repeated events	(many times over the course of a week)
3	**Common**	Possibility of isolated events	(several times over the course of a month)
2	**Occasional**	Possibility of event occurring sometime	(likely in a year)
1	**Remote**	Event not likely to occur	(occasionally over a course of year)

Severity – Consequences

Consequence Category		The possibility of the event consequences resulting in:			
		People	**Property**	**Environment**	**Public Image, Reputation & Disruption**
4	**Major**	Fatality	Impact >$100,000	Reportable/Damage to Environment	Government Intervention
3	**Critical**	Permanent, Long-Term Injury or Illness	Impact < $100,000 but > $50,000	Reportable Incident/Minimal Environmental Impact	Community Attention
2	**Serious**	Recordable Injury	Impact < $50,000 but > $ 10,000	Site Conditions Unacceptable	Senior Management Involvement/Project Shutdown
1	**Minor**	On-site FA Treatment	Impact < $10,000	No Impact	Individual or None

		Frequency of Task			
		4	**3**	**2**	**1**
Severity	**4**	16	12	8	4
	3	12	9	6	3
	2	8	6	4	2
	1	4	3	2	1

Risk Category		Definition	Level of Investigative Involvement/Instruction
"A"	High (8-16)	Class "A" Incident: a condition or practice likely to cause permanent disability, loss of life or body part, or extensive loss of structure, equipment or material.	**District HSE Manager;** DISTRICT MANAGEMENT (OFF-SITE) *May include corporate/regional HSE manager*
"B"	Medium (4-6)	Class "B" Incident: a condition or practice likely to cause serious injury or illness, resulting in temporary disability or property damage that is disruptive but not extensive.	**SUPERINTENDENT/CM/PM;** PROJECT MANAGEMENT (ON-SITE) *May include district management off site*
"C"	Low (1-3)	Class "C" Incident: a condition or practice likely to cause minor (non-disabling) injury or illness or non-disruptive property damage.	**AS DELEGATED BY SUPERINTENDENT;** PROJECT SUPERVISION *May include project management and/or district management*

STEP 3- COLLECT THE FACTS:

Incident Investigation Report				Investigation No.:
Incident Reported to:			By:	
Date & Time of Incident: (AM/PM)				
Date & Time of Incident Reported: (AM/PM)				
Company:		Project Name:		Project No:
Incident Location:			Client:	
Did this incident involve a Subcontractor(s)? ☐ YES ☐ NO			Name of Subcontractor(s): Print	
Employee Name: Print			Supervisor: Print	
Birthdate: DD/MM/YY			Trade & Trade Status:	
Time Employed by PCL:		Hire Date: DD/MM/YY	Duration on Project:	
Number of Years in Craft:		Hours of Employment on the day of Incident: from to		
Weather: ☐ Clear ☐ Overcast ☐ Rain ☐ Sleet ☐ Snow ☐ Foggy ☐ Temperature ____°F/°C ☐ Wind _____speed/direction				
Light Conditions: ☐ Daylight ☐ Darkness ☐ Artificial Light ☐ Dusk/Dawn				
PCL Incident Classification:	☐ Near Miss ☐ First Aid ☐ Medical Aid	☐ Modified Work ☐ Lost Time ☐ Vehicle Damage	☐ Equipment/Property Damage ☐ Environmental ☐ Fire	☐ Other:_____ ☐ Client Classification_____ If property/equipment/vehicles involved include loss report form.
Post-incident Alcohol & Drug Testing Administered: ☐ Yes ☐ No		If Yes, who was the next level of management consulted? (Canada only) If No, why?		
PSI Completed: ☐ Yes ☐ No		Witnesses: ☐ Yes ☐ No	If Yes, attach witness statements and include day time telephone number(s): ( )	

Type of Contact:	☐ Caught in / on/ between or under ☐ Contact with ☐ Environmental Release ☐ Equipment damage	☐ Equipment failure ☐ Ergonomic ☐ Fall to lower level ☐ Fall on same level	☐ Falling objects ☐ Overstress, overpressure, overexertion, overexposure ☐ Product contamination	☐ Struck against ☐ Struck by ☐ Other: _____
Body Part:	☐ **Left** ☐ **Right** ☐ Abdomen ☐ Ankle ☐ Arm ☐ Back ☐ Chest ☐ Ears	☐ Elbow ☐ Eye ☐ Face ☐ Foot/Toe ☐ Groin ☐ Hand/Finger	☐ Head ☐ Heart ☐ Hip ☐ Knee ☐ Leg ☐ Lungs/Bronchial	☐ Mouth ☐ Neck ☐ Nose ☐ Shoulder ☐ Wrist ☐ Other: _____
Type of Injury:	☐ Abrasion ☐ Allergic Reaction ☐ Amputation ☐ Avulsion ☐ Blister ☐ Blood Clot ☐ Burn ☐ Bursitis ☐ Carpal Tunnel Syndrome ☐ Chemical Exposure ☐ Concussion	☐ Contusion/Bruise ☐ Crush ☐ Dental Damage ☐ Dislocation ☐ Electric Shock ☐ Epicondylitis ☐ Foreign Body ☐ Fracture ☐ Frost Bite ☐ Hearing ☐ Heart Attack	☐ Heat Stroke ☐ Hernia ☐ Infection ☐ Inhalation ☐ Insect Bite ☐ Laceration ☐ Multiple ☐ Nerve Impingement ☐ Occupational Illness ☐ Puncture ☐ Rash	☐ Repetitive Motion ☐ Respiratory ☐ Seizure ☐ Sprain/Strain ☐ Stress, Mental ☐ Stroke ☐ Tendonitis ☐ Welders Flash ☐ Other: _____

Division of Work	☐ Sitework ☐ Concrete ☐ Masonry ☐ Metals	☐ Wood ☐ Waterproofing ☐ Fireproofing ☐ Doors & Windows	☐ Finishes ☐ Specialties ☐ Conveying Systems ☐ Mechanical	☐ Electrical ☐ Insulation ☐ Painting ☐ Other: _____
WORK ACTIVITY	**Boilermaking**	☐ Aligning sections ☐ Attaching rigging ☐ Installing boilers ☐ Maintaining boilers ☐ WHMIS/ HAZCOM	☐ Material handling ☐ Updating components ☐ Repairing boilers ☐ Signaling crane operators ☐ Lockout	☐ Using hand tools ☐ Using power tools ☐ Walking to/from the job area ☐ Other: _____
	Carpentry	☐ Building stairs ☐ Constructing wooden frames ☐ Cutting wood ☐ Erecting scaffolding ☐ Framing walls ☐ Handling material ☐ Building formwork	☐ Installing doors ☐ Installing finish carpentry ☐ Installing millwork ☐ Installing windows ☐ Joining materials ☐ Setting loose formwork ☐ WHMIS/ HAZCOM	☐ Setting repetitive formwork ☐ Stripping loose formwork ☐ Stripping repetitive formwork ☐ Using hand tools ☐ Using power tools ☐ Walking to/from the job area ☐ Other: _____
	Concrete Finishing	☐ Building formwork ☐ Cleaning concrete ☐ Coloring concrete surfaces ☐ Compacting base material ☐ Cutting concrete ☐ Fabricating concrete beams	☐ Finishing concrete ☐ Grinding concrete ☐ Installing base material ☐ Material handling ☐ Mixing concrete ☐ WHMIS/ HAZCOM	☐ Placing concrete ☐ Removing pavement ☐ Rubbing and patching concrete ☐ Walking to/from job area ☐ Other: _____
	Construction Labor	☐ Building formwork ☐ Disassembling scaffolds ☐ Erecting scaffolds ☐ Flagging and signaling ☐ General demolition ☐ Handling material	☐ Housekeeping ☐ Identifying building materials ☐ Landscaping ☐ Mixing concrete ☐ Operating machinery ☐ Housekeeping	☐ Operating man/material hoists ☐ Using hand tools ☐ Using power tools ☐ Walking to/from job area ☐ Other: _____
	Drywalling	☐ Applying textured surfaces ☐ Cutting drywall ☐ Fastening moldings ☐ Filling joints ☐ Fitting drywall ☐ Handling material	☐ Joining material ☐ Lifting ceiling panels ☐ Measuring drywall ☐ Mounting tiles or blocks ☐ WHMIS/ HAZCOM ☐ Pressing the tile	☐ Sanding drywall ☐ Taping joints ☐ Using hand tools ☐ Walking to/from job area ☐ Other: _____
	Electrical/ Instrumentation	☐ Calibration ☐ Commissioning ☐ Connecting electrical systems ☐ Connecting wire ☐ Fastening electrical components ☐ Inspecting all equipment ☐ Installing electrical systems	☐ Installing electronic controls ☐ Installing wiring systems ☐ Locating problems ☐ Maintaining electrical systems ☐ Maintaining electrical controls ☐ Material handling ☐ Placing conduit ☐ WHMIS/ HAZCOM	☐ Pulling wires/cables ☐ Repairing electrical equipment ☐ Rewiring electrical systems ☐ Terminating ☐ Testing electrical systems ☐ Upgrading electrical systems ☐ Walking to/from job area ☐ Other: _____
	Equipment Maintenance	☐ Assembling equipment ☐ Calibrating equipment ☐ Checking performance ☐ Cleaning machinery ☐ Disassembling equipment ☐ Installing new machinery	☐ Lubricating machinery ☐ Material Handling ☐ Performing repairs ☐ Preventative maintenance ☐ Testing machinery	☐ Using hand tools ☐ Using power tools ☐ Walking to/from job area ☐ WHMIS/ HAZCOM ☐ Other: _____

WORK ACTIVITY	**Equipment Operation**	☐ Digging trenches ☐ Driving site vehicles ☐ Flagging and signaling ☐ Handling material ☐ Inspecting equipment ☐ Leveling activities ☐ Operating crane (tower/mobile/overhead)	☐ Operating excavation equipment ☐ Operating loading equipment ☐ Operating manlifts ☐ Operating paving equipment ☐ Operating pile driving equipment ☐ Operating surface equipment	☐ Operating tamping equipment ☐ Repairing equipment ☐ Site grading activities ☐ Using power tools ☐ Walking to/from job area ☐ WHMIS/ HAZCOM ☐ Other: _____
	Flooring	☐ Cutting material ☐ Handling material ☐ Heat taping ☐ Inspecting the surface ☐ Joining materials ☐ Removing materials	☐ Sanding surfaces ☐ Scraping surfaces ☐ Stretching the carpet ☐ Trimming edges ☐ Using hand tools	☐ Using power tools ☐ Walking to/from job area ☐ Working with chemicals ☐ WHMIS/ HAZCOM ☐ Other: _____
	Glazing	☐ Building extrusions ☐ Cleaning glass ☐ Cutting glass ☐ Cutting marble ☐ Cutting plastic ☐ Flagging and signaling	☐ Handling material ☐ Installing curtain wall ☐ Installing glass panels ☐ Installing materials ☐ Selecting glass	☐ Using hand tools ☐ Using power tools ☐ Walking to/from job area ☐ WHMIS/ HAZCOM ☐ Other: _____
	Inspecting	☐ Inspecting bridges ☐ Inspecting buildings ☐ Inspecting earth work ☐ Inspecting electrical systems ☐ Inspecting lifting/conveying devices	☐ Inspecting mechanical systems ☐ Inspecting plumbing ☐ Inspecting renovations ☐ Inspecting roadway ☐ Inspecting sewer systems ☐ Inspecting shoring	☐ Inspecting structural steel ☐ Material handling ☐ Using hand tools ☐ Walking to/from job area ☐ WHMIS/ HAZCOM ☐ Other: _____
	Insulating	☐ Blowing loose fill insulation into attic ☐ Cutting insulation ☐ Fastening insulation ☐ Installing heat tracing ☐ Installing materials ☐ Securing insulation	☐ Material handling ☐ Measuring insulation ☐ Protecting insulation ☐ Removing old insulation ☐ Spraying foam insulation onto wire mesh	☐ Using hand tools ☐ Using power tools ☐ Walking to/from job area ☐ WHMIS/ HAZCOM ☐ Other: _____
	Ironwork	☐ Assembling cranes & derricks ☐ Bending bars ☐ Bolting steel ☐ Checking alignment ☐ Connecting beams & columns ☐ Cutting rebar ☐ Erecting steel frames ☐ Fabricating structural metal	☐ Flagging and signaling ☐ Installing ornamental iron/steel ☐ Installing rebar spacers ☐ Material handling ☐ Placing iron or steel ☐ Positioning mesh ☐ Post tensioning ☐ Rigging & hoisting	☐ Securing mesh ☐ Setting rebar ☐ Tying rebar ☐ Walking to/from the job site ☐ Welding Steel ☐ Welding bars ☐ WHMIS/ HAZCOM ☐ Other: _____
	Masonry	☐ Building and repairing chimneys ☐ Building and repairing fireplaces ☐ Building and repairing floor ☐ Building and repairing partition ☐ Building and repairing structures	☐ Building stone floors ☐ Building stone walls ☐ Cutting block ☐ Filling joints between stones ☐ Installing firebrick linings ☐ Installing wall panels ☐ Material handling	☐ Repairing cracks ☐ Setting block ☐ Smoothing mortar ☐ Using hand tools ☐ Walking to/from job area ☐ WHMIS/ HAZCOM ☐ Other: _____

WORK ACTIVITY	**Millwright**	☐ Replacing, repairing machinery ☐ Alignment ☐ Repair and lubricate machines ☐ Assemble and install equipment ☐ Attach moving parts ☐ WHMIS/ HAZCOM	☐ Layout mounting holes ☐ Drilling ☐ Dismantle machines ☐ Hoisting and rigging ☐ Anchor installation ☐ Shipping & receiving ☐ Walking to/from job area ☐ Hot work	☐ Working from heights ☐ Manual lifting ☐ Climbing ☐ Ladders ☐ Maintenance of machine ☐ Lockouts ☐ Other: _____
	Painting	☐ Abrasive blasting surfaces ☐ Applying coatings ☐ Brushing off dust ☐ Climbing scaffolds ☐ Erecting scaffolds ☐ Filling holes/cracks ☐ Material handling	☐ Mixing paints ☐ Painting with a brush ☐ Painting with a roller ☐ Painting with a sprayer ☐ Sanding rough spots ☐ Sanding surfaces ☐ Stripping surfaces	☐ Walking to/from the job area ☐ Washing walls/trim ☐ Water blasting surfaces ☐ Working with chemicals ☐ WHMIS/ HAZCOM ☐ Other: _____
	Plumbing and Pipefitting	☐ Air testing ☐ Aligning ☐ Bending pipe ☐ Clearing drains ☐ Cutting pipe ☐ Fitting pipe ☐ Gluing pipe ☐ Hand tolls ☐ Ladders	☐ Hot work ☐ Hanging steel supports ☐ Installing fixtures ☐ Joining pipes ☐ Material handling ☐ Preparing and grading Trenches ☐ Preparing surfaces	☐ Screwing pipe ☐ Soap testing ☐ Soldering pipe ☐ Walking to/from the job area ☐ Water testing ☐ WHMIS/ HAZCOM ☐ Other: _____
	Rigging	☐ WHMIS/ HAZCOM ☐ Attach loads, pulleys & blocks ☐ Setup & repair rigging ☐ Inspect ☐ Direct	☐ Walking to/from the job ☐ Climbing to/from ☐ Fall protection ☐ Flagging/marshalling ☐ Assisting operators ☐ Manual lifting	☐ Tagline ☐ Erection/dismantling ☐ Equipment maintenance ☐ Hand tools ☐ Other: _____
	Roofing	☐ Damp proofing ☐ Hammering/chiseling rough spots ☐ Installing insulation ☐ Installing roofing felt ☐ Installing shingles	☐ Installing roofs ☐ Material handling ☐ Repairing shingles ☐ Repairing roofs ☐ Sealing roof seams ☐ Spreading coating	☐ Walking to/from the job area ☐ Water proofing ☐ WHMIS/ HAZCOM ☐ Other: _____
	Sheet Metal Working	☐ Assembling pieces of sheet metal ☐ Bending pieces of sheet metal ☐ Building commissioning ☐ Cutting pieces of sheet metal ☐ Drilling parts ☐ Fastening seams and joints together ☐ Hammering parts	☐ Handling material ☐ Installing duct work ☐ Making sheet metal parts ☐ Nailing/welding parts together ☐ Operating equipment ☐ Shaping pieces of sheet Metal ☐ Testing and balancing	☐ Using hand tools ☐ Using power tools ☐ Walking to/from the job area ☐ Working with fiberglass ☐ Working with plastic materials ☐ WHMIS/ HAZCOM ☐ Other: _____

WORK ACTIVITY	**Specialty**	☐ Abatement ☐ Bolting/welding beams/rails ☐ Construct scaffolding ☐ Erecting ☐ Erecting containment areas ☐ Installing elevator cabs ☐ Installing elevator controls ☐ Installing lift equipment ☐ Material handling	☐ Mold remediation ☐ Operating heavy machinery ☐ Packaging radioactive materials ☐ Removing asbestos ☐ Removing lead ☐ Testing lift equipment ☐ Using monitoring devices	☐ Using hand tools ☐ Using power tools ☐ Using sandblasters ☐ Walking to/from the job area ☐ WHMIS/ HAZCOM ☐ Other: _____
	Surveying	☐ Collecting data in the field ☐ Holding vertical rods ☐ Material handling	☐ Operating surveying instruments ☐ Taking physical measurements	☐ Walking to/from the job area ☐ WHMIS/ HAZCOM ☐ Other: _____
	Welding	☐ Cutting metal ☐ Forming an inert gas ☐ Grinding metal ☐ Machine welding ☐ Manual welding ☐ Material handling	☐ Position welding ☐ Repair welding ☐ Striking an arc ☐ Surface preparation ☐ Tack welding	☐ Walking to/from the job area ☐ Welding metal ☐ WHMIS/ HAZCOM ☐ Other: _____

TOOLS/EQUIPMENT

☐ Air Compressor	☐ Hammer, Sledge	☐ Pry Bar	☐ Snatch Block
☐ Axe	☐ Heater	☐ Pump	☐ Square
☐ B Box	☐ Hoe	☐ Pry Bar	☐ Stapler
☐ Banding Tool	☐ Hoist, Block and Tackle	☐ Pump	☐ Tamper
☐ Battery Charger	☐ Hoist, Chain	☐ Punch	☐ Tap and Die
☐ Bicycle	☐ Hoist, Comealong	☐ Rake	☐ Tape Measure
☐ Broom	☐ Hose	☐ Regulator, Cmp. Gas	☐ Threader
☐ C Panel	☐ Impact Gun	☐ Rigging Spreader Bar	☐ Tin Snip
☐ Cable Puller	☐ Jack	☐ Rigging	☐ Torch, Cutting
☐ Cable Stripper	☐ Jack Hammer	☐ Riveter, Pop	☐ Torch, Soldering
☐ Chisel	☐ Jointer	☐ Rope	☐ Torch, Tiger
☐ Concrete, Vibrator	☐ Ladder, Extension	☐ Router	☐ Trowel, Hand
☐ Conduit/ Pipe Bender	☐ Ladder, Step	☐ Sander	☐ Trowel, Power
☐ Crow Bar	☐ Leaf Blower	☐ Saw, Band	☐ Tugger
☐ Cutter, Bolt	☐ Level	☐ Saw, Chain	☐ Utility Knife
☐ Cutter, Pipe	☐ Lifeline	☐ Saw, Chop	☐ Vise
☐ Drill	☐ Main Panel/ Transformer	☐ Saw, Circular	☐ Welder
☐ Drill Bit	☐ Nibbler	☐ Saw, Cutoff	☐ Welding Cable
☐ Drill Press	☐ Paint Brush	☐ Saw, Hack	☐ Welding Hose
☐ Mag Drill	☐ Paint Roller	☐ Saw, Hole	☐ Welding Screen
☐ Extension Cord	☐ Paint Sprayer	☐ Saw, Jig	☐ Wet Saw
☐ File	☐ Pallet Jack	☐ Saw, Miter	☐ Wheelbarrow
☐ Fish Tape	☐ Pick Axe	☐ Saw, Radial Arm	☐ Wire Brush
☐ Floor Grinder	☐ Pipe, Prep/ Bevel Mach.	☐ Saw, Reciprocating	☐ Wrench, Adjustable
☐ Generator	☐ Pipe, Stand	☐ Saw, Table	☐ Wrench, Box
☐ Grinder, Bench	☐ Planer	☐ Sawz All	☐ Wrench, Chain
☐ Grinder, Right Angle	☐ Pliers	☐ Scaffold	☐ Wrench, Combo.
☐ Gun, Caulk	☐ Plug, Test Ball	☐ Screed, Hand	☐ Wrench, Crescent
☐ Gun, Grease	☐ Pneumatic Fastener	☐ Screed, Power	☐ Wrench, Open End
☐ Gun, Heat	☐ Pocket Knife	☐ Screw Driver	☐ Wrench, Pipe
☐ Gun, Soldering/ Iron	☐ Porta Power Ram	☐ Shop Vac	☐ Wrench, Socket
☐ Hammer	☐ Power Washer	☐ Shovel	☐ Wrench, Spud
			☐ Wrench, Torque
			☐ Other

STEP 4- DESCRIPTION:

Briefly describe the incident. *NOTE: If additional space is required to completely describe this incident, please add additional page.*

DEVELOP THE SEQUENCE OF EVENTS: (complete this section for AB hazards only)

Use the information collected and determine the events prior to, during and after the incident. *NOTE: If additional space is required to completely describe this incident, please add additional page.*

STEP 5- DETERMINE THE CAUSE(S):

CONTRIBUTING CAUSE(s): substandard acts and/or conditions that are the immediate or primary factors that contribute to an incident and lead to the determination of root causes.

Substandard Acts	**Substandard Conditions**
☐ Operating Equipment Without Authority	☐ Inadequate Guards or Barriers
☐ Failure to Warn	☐ Defective Tools, Equipment or Materials
☐ Failure to Secure	☐ Congestion or Restricted Action
☐ Travelling too Fast Or Rushing to Complete a Task	☐ Inadequate Warning System
☐ Making Safety Devices Inoperative	☐ Fire and Explosion Hazards
☐ Using Defective Equipment	☐ Poor Housekeeping / Disorder
☐ Compliance with Personal Protective Equipment Requirements	☐ Noise Exposure
☐ Improper Loading	☐ Radiation Exposure
☐ Improper Placement	☐ Temperature Extremes
☐ Improper Lifting and Hoisting	☐ Inadequate or Excessive Lighting
☐ Improper Position For the Task	☐ Inadequate Ventilation
☐ Servicing Equipment In Operation	☐ Presence of Harmful Materials
☐ Horseplay	☐ Inadequate Instructions / Procedures
☐ Under Influence of Alcohol and/or Other Drugs	☐ Inadequate Preparation/Planning
☐ Using Equipment Improperly	☐ Inadequate Communications Hardware / Software Process
☐ Failure to Follow Procedures / Policy / Practice	☐ Road Conditions
☐ Failure to Identify Hazard / Risk	☐ Weather Conditions
☐ Failure to Check / Monitor	
☐ Failure to React / Correct	
☐ Failure to Communicate / Coordinate	

ROOT CAUSE(s): the most *basic* cause that can *reasonably* be identified that management has control to *fix* and, when fixed, will prevent recurrence.

☐ **Orientation and Training**		☐ **Communication Systems**	
☐ Not Required	☐ Inadequate	☐ Not Established	☐ Inadequate
☐ Not Established	☐ Not Current	☐ Not Available	☐ Not Current
☐ Not Available	☐ Not Compliant	☐ Not Understood	☐ Not Compliant
☐ Not Understood			
☐ **Hazard Identification and Control**		☐ **Inspection and Audits**	
☐ Not Established	☐ Inadequate	☐ Not Established	☐ No Action Plans
☐ Not Available	☐ Not Current	☐ Inadequate	☐ Not Communicated
☐ Not Communicated	☐ Not Enforced	☐ Inadequate Frequency	☐ Current Form/Checklist Not Used
☐ Not Understood	☐ Not Compliant	☐ Not Closure	☐ Preventive Maintenance Not Met?
		☐ Not Trended	
☐ **Security/Emergency Response**		☐ **Environmental Management**	
☐ Not Established	☐ Inadequate	☐ Not Established	☐ Inadequate
☐ Not Available	☐ Not Current	☐ Not Available	☐ Not Current
☐ Not Communicated	☐ Not Enforced	☐ Not Communicated	☐ Not Enforced
☐ Not Understood	☐ Not Compliant	☐ Not Understood	☐ Not Compliant
☐ **Standard Operating Procedures Practices and Legislation**		☐ **Sub/trade-contractor Management**	
☐ Not Established	☐ Inadequate	☐ Not Required	☐ Inadequate
☐ Not Available	☐ Not Current	☐ Not Established	☐ Not Compliant
☐ Not Communicated	☐ Not Enforced	☐ Not Available	☐ Pre-qualification/Selection
☐ Not Understood	☐ Not Compliant	☐ Not Understood	
☐ **Engineering**		☐ **Procurement**	
☐ Not Required	☐ Inadequate	☐ Not Established	☐ Not Timely
☐ Not Available	☐ No Current Standards Available	☐ Not Available	☐ Improper Selection
☐ Not Understood	☐ Not Compliant	☐ Inadequate	☐ Inadequate or no Specifications
		☐ Not Compliant	
☐ **Site Specific Safety Plan**		☐ **HR/PD**	
☐ Not Established	☐ Inadequate	☐ Inappropriate Hire	☐ Not Competent
☐ Not Available	☐ Not Current	☐ Inappropriate Placement	☐ Not Available
☐ Not Understood	☐ Not Compliant		
☐ **Leadership and Administration**			
☐ Inadequate Accountability	☐ Inadequate Planning		
☐ Lack of Discipline	☐ Schedule Pressure		
☐ Lack of Enforcement	☐ Poor Execution		
☐ Inadequate	☐ Not Communicated		
☐ Lack of Resources			

STEP 6- CORRECTIVE ACTIONS:

SPECIFIC MEASUREABLE ACCOUNTABLE REALISTIC TIMELY EFFECTIVE REVIEWED

What action or recommendations are made to prevent recurrence? Place an X by items completed.	DATE:	ACTION BY:	
	DD/MM/YY		☐ Complete
	DD/MM/YY		☐ Complete
	DD/MM/YY		☐ Complete
Safety Alert recommended: ☐ Yes ☐ No	DD/MM/YY		☐ Complete

Documents to consider are:

☐ Photos	☐ Certifications	☐ Inspections	☐ Training Records	☐ Weekly HSE Meeting Minutes
☐ Drawings/Blueprint	☐ Sketches	☐ Timecards	☐ HSEOPs	☐ Insurance Certificate
☐ JHAs/PSIs	☐ CHAs	☐ Permits	☐ Schedules	☐ Vendor Agreements/Purchase Orders
☐ Daily Log	☐ Contracts	☐ Witness Statement		

STEP 7- SIGNOFF: FAX / EMAIL IMMEDIATELY AND FORWARD ORIGINAL TO HSE DEPARTMENT

Lead Investigator:	Print	Signature	Date	DD/MM/YY
Superintendent	Print	Signature	Date	DD/MM/YY
Manager	Print	Signature	Date	DD/MM/YY
Investigation Team:	Print	Signature	Date	DD/MM/YY
	Print	Signature	Date	DD/MM/YY
	Print	Signature	Date	DD/MM/YY
Employee	Print	Signature	Date	DD/MM/YY
Foreman	Print	Signature	Date	DD/MM/YY

ADDITIONAL MANAGEMENT COMMENTS: (if required)

District/General Manager	Print	Signature	Date	DD/MM/YY

CONSTRUCTION LEADERS

INVESTIGATION CHECKLIST

This checklist can be used as a guideline for investigating an incident.

A. CONTROL THE SITUATION - PEOPLE ARE THE FIRST PRIORITY

- ☐ Send for help - notify management
- ☐ "Safe" the area and administer first aid, if required
- ☐ Preliminary Notification Requirements
- ☐ Corporate Management
- ☐ Client Contact(s)
- ☐ Government Agencies (if applicable)

To Stop Ongoing Hazards To Rescue Personnel You May Have To ....

- ☐ Shut off electrical power
- ☐ Bleed or isolate pressurized systems
- ☐ Block mechanical equipment - prevent movement
- ☐ Check air quality
- ☐ Issue personal protective equipment
- ☐ Provide emergency lighting, power, air, etc.

Secure the Scene and Protect Evidence

- ☐ Rope off area or station a guard
- ☐ Issue tagouts, lockouts, permits

B. COLLECTIVE EVIDENCE

Identify Transient Evidence - Make notes, take pictures or provide sketches of the following:

- ☐ Positions of tools, equipment, layout.
- ☐ Weather conditions at time of accident.
- ☐ Air quality, things that evaporate or melt
- ☐ Tire tracks, footprints, loose material on floor, etc.
- ☐ Operating logs, charts, records
- ☐ Identification numbers of the equipment and maintenance records

- ☐ Housekeeping
- ☐ Equipment Condition or Malfunction History
- ☐ Work Environment or Layout
- ☐ Training, Experience or Supervision
- ☐ Floor or Surface Condition
- ☐ Periodic Rule or Procedure Violations
- ☐ Lighting or Visibility
- ☐ Employee Morale or Attitude
- ☐ Noise or Distractions
- ☐ Health or Safety Record
- ☐ Air Quality, Temperature or Weather
- ☐ Alcohol or Drug Abuse

Note: Put dimensions on all sketches, sign and date all photos

Note General Conditions - Yes or No (Y or N) - did the following factors contribute to the accident?

C. GET THINGS BACK TO NORMAL

SECTION 1

INTERVIEW WITNESSES - ALWAYS ONE-ON-ONE - AVOID GROUP INTERVIEWS

DO…

- Interview as soon as possible
- Interview at the accident scene
- Take notes or use a tape recorder
- Put the witness at ease
- Ask open-ended questions
- Repeat the story back to the witness
- End the interview on a positive note

DON'T…

- Pressure the witness
- Blame the witness for the accident
- Interrupt an answer
- Ask questions that can be answered "yes" or "no"
- Ask "why" questions and "opinion" questions first

ALWAYS…

- Stress that you want only the facts
- Stress that you want to prevent another accident
- Take the extra time to promote understanding

Witness Statement

Date and time statement was written: _____

Name and title of person giving statement: _____

This statement is regarding (who / what): _____

Details (be specific and descriptive): _____

(please use additional pages if more space is required)

I declare that the statement above, which I have given to _____ has been read by (to) me.

I understand the contents of this statement and I declare that it truly and correctly records the information given by me.

Signature _____ DD/MM/YY _____

Address: Street _____ City _____

State/Province _____ Zip Code/Postal Code _____

Phone: Home _____ Work _____

When completing a statement (or reviewing one), the following must be included:

- The date and time that the statement was written,
- Name and title of person who wrote the statement
- Who / what the statement is about,
- The sequence of events, in chronological order,
- Very specific and descriptive detail, including:
    - *Times within the details*
    - *Names and titles of people*
    - *Specifics of what was said, rather than general comments*
    - *A sequence of events that are accurate and include all information. The more descriptive the statement the better.*
- Do not include any personal or subjective comments on a statement.

Table of Contents

WORKING ALONE PERMIT

CONSTRUCTION LEADERS

Project Name:

Project No.:

EMPLOYEE DETAILS			
NAME:		DATE:	
POSITION:		TIME IN:	
COMPANY:		TIME OUT:	

WORK DETAILS			
LOCATION OF WORK:			
EXPECTED DUTIES:	1)	3)	
	2)	4)	
RISK LEVEL:	☐ **LOW**	☐ **MODERATE**	☐ **HIGH**

CONTACT PROCEDURES			
SITE CONTACT:			
CHECK-IN PERIOD:	☐ **15 MINUTES**	☐ **ONE (1) HOUR**	☐ **THREE (3) HOURS**
	☐ **30 MINUTES**	☐ **TWO (2) HOURS**	☐ **FOUR (4) HOURS**
METHOD OF CONTACT:	☐ **RADIO** **WORKING?** ☐ **YES** ☐ **NO**	☐ **CELL PHONE** **WORKING?** ☐ **YES** ☐ **NO**	NUMBER:
CHECK-UP QUESTIONS:	1) ESTIMATED LOCATION ON SITE:		
	2) STATUS OF WORKER:		

RESPONDING PROCEDURES			
RESPONSE PERIOD:	☐ **IMMEDIATE**	☐ **10 MINUTES**	☐ **20 MINUTES**
	☐ **5 MINUTES**	☐ **15 MINUTES**	☐ **25 MINUTES**
NOTE:	IF THE WORKER CANNOT BE REACHED BY EITHER MODES OF CONTACT, OR DOES NOT RESPOND WITHIN THE SPECIFIED RESPONSE PERIOD, THEN THE DESIGNATED SITE CONTACT WILL ARRANGE FOR FACE-TO-FACE CONTACT TO BE MADE WITH THE EMPLOYEE BY THE FOLLOWING:		
CONTACT MODE:	☐ **FOOT/WALKING**	☐ **SECURITY**	☐ **OTHER:**
	☐ **VEHICLE**	☐ **FIELD INDIVIDUAL**	_____
UNSAFE SITUATION:	IF AN UNSAFE SITUATION IS ENCOUNTERED BY THE WORKER WHILE WORKING ALONE OR IN ISOLATION, THE WORKER SHALL IMMEDIATELY CONACT THE DESIGNATED SITE CONTACT, AND WHERE NECESSARY, POLICE/EMERGENCY MEDICAL SERVICES/FIRE @ **9-1-1**		

WORKING ALONE PERMIT

CONSTRUCTION LEADERS

Project Name:

Project No.:

Working alone includes all employees who may go for a period of time where they do not have direct contact with a co-worker or member of the public; when they are on their own and are not directly supervisor; and, when they cannot be seen or heard by another person.

The greatest risk in working alone is that no one is available to help a worker who may be injured, raped, or unconscious. In addition, studies have shown that workers working alone are more likely to take risks by cutting corners or not following established procedures.

Many of our projects include instances where personnel are susceptible to working alone. The following check-in procedure has been developed and will be used on sites for workers who are assigned to work alone, or in isolation under various conditions, which present a risk of disabling injury, and this checklist establishes how they will be able to secure assistance should an injury or other misfortune occur.

NOTE:
It is against the law to work alone where the work involves:

- High voltage
- Toxic chemicals
- Confined spaces
- Trenches
- Lock-out/tag-out operations

PROCEDURE

A check-in procedure should be relevant to the type and scope of the project, and should include the following:

- Prepare a daily work plan so it is known where the lone worker will be and for what duration.
- Identify one main person to be the contact at the site, plus a backup person.
- Define under what means the lone worker will check-in and how often. (Verbal check-in via telephone, cell phone, or two-way radio and/or visual check-in by the worker, or co-worker, on a regular basis.)
- Establish whether the plan is suitable for both regular business hours and after main site hours, or if it needs to be modified to suit each work period.
- Set up a written log of check-ins noting the set intervals.
- Have the contact person call or visit the lone worker periodically to make sure they are okay.
- Develop a plan to be followed if the lone worker does not check-in when they are scheduled to.
- Establish how emergency services will be able to access the workplace if it is inside a locked building.
- Prior to working alone, the worker's immediate supervisor shall conduct a detailed tailgate talk, together with a PSI noting the tasks to be done, the hazards associated to the task and location, and the specific plan developed to monitor the well-being of the worker.

During the PSI with the worker, ensure that the following items are discussed:

- Is the worker adequately trained in the task to be performed?
- Does the worker have the appropriate personal protective equipment?
- What types of machinery and/or tools are required?
- Does the worker have any pre-existing medical conditions?
- Are check-in intervals clearly understood?
- Is the communication equipment in good working condition?
- Has the work area been pre-inspected?

Should you have any questions regarding the above, please do not hesitate to contact a member of the Safety & Health, safety and environment Department, who can assist in setting up procedures for checking on the well-being of individuals working alone, or in isolation, specific to your job site.

EXTENDED HOURS WORK PERMIT

PCL Superintendent: _____ Project Name: _____

Today's Date: _____ Project Number: _____

Date of Work: _____ Subcontractor: _____

Projected Hours to Work: ____ am to ____ pm Applicant Signature: _____

Foreman Responsible for supervision: _____

Trade:_____

First Aider on Duty: _____ First Aid Certification Level: _____

During the hours that a PCL supervisor is not present on site, the undersigned agrees to accept the responsibility of:

- Enforcing PCL's Project Safety Policy, and the Occupational Health and Safety Act;
- Maintaining first-aid coverage; and
- Ensuring the security of the site for all employees, and the protection of the public.

Note: A PCL Superintendent must approve all after hours work where there will be no direct PCL supervision only after identifying, assessing and controlling for any risk associated with the work. Additionally, if there are 2 or more trades working on the site, then direct PCL supervision is required.

Name of workers:

_____

_____

_____

_____

_____

_____

Area of Work:

_____

_____

_____

Office Emergency Contact Name: _____

Phone Number: _____

cc: Security _____ (check if **yes**)

Approved by: _____ Date of approval: _____
PCL Superintendent

Updated: November 2, 2009

CONSTRUCTION LEADERS

SAFE WORK PROCEDURE
EXTENDED WORKING HOURS SIGN-IN SHEET

Date:_____

CONTRACTOR (name)_____

EMERGENCY CONTACT NAME: _____

EMERGENCY CONTACT NUMBER: _____

SCOPE OF WORK:

_____

_____

_____

_____

_____

LOCATIONS OF WORK:

WORKERS ON SITE SIGN-IN: (Print name and Signature)

_____

_____

_____

_____

_____

_____

CONSTRUCTION LEADERS

PROJECT HEALTH, SAFETY AND ENVIRONMENT PLAN

HOT AND SAFE WORK PERMIT SYSTEM

Project Name:
Project No.:

HOT WORK PERMIT SYSTEM
• The Hot Work Permit System is a document designed to communicate an understanding between: 1. employers or supervisors who require specialized or hazardous work to be completed; 2. workers assigned to do specialized or hazardous work; and, 3. others who may be affected by the work (before, during or after).
• A Hot Work Permit includes: • A description of the work to be done; • The time period in which the work must be done; • Details of any hazards that are, or may be, encountered; • Details of safety precautions that must be taken; • Details of what safety equipment is necessary; • Personnel requirements; • Status of all equipment involved before work starts and after work completion; • Signatures of persons responsible for the work area and for the work; and, • Signatures of persons responsible for the safe conduct of all work on site.
• Hot work permits will be issued for any work that may involve the use of: • welding; • cutting; and, • soldering.
• Hot work permits may be necessary for tasks involving: • grinding; • flammable atmospheres (flammable vapours or materials); • electric tools; and, • combustible engines.
• There may also be a Hot Work Permit requirement wherever conditions may prove to contain hazardous elements that require special attention. (E.g. confined space, trenching, working from elevated areas, use of hazardous chemicals, demolition and other such procedures as may be required).

CONSTRUCTION LEADERS

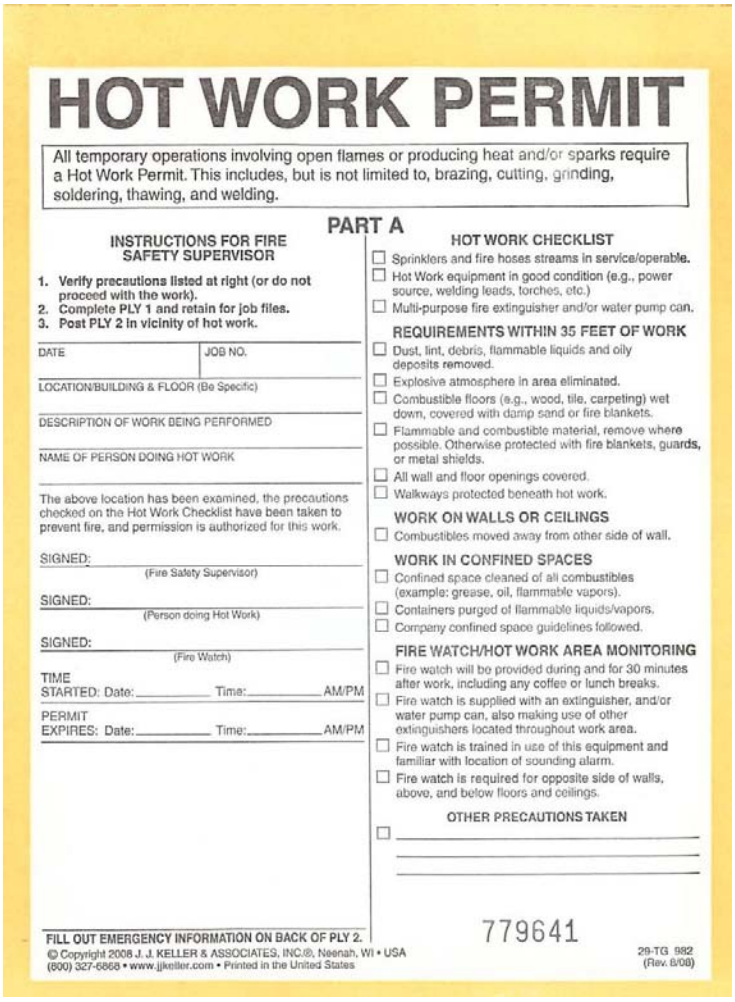
PROJECT HEALTH, SAFETY AND ENVIRONMENT PLAN

HOT AND SAFE WORK PERMIT SYSTEM

Project Name:
Project No.:

HOT WORK PERMIT PROCEDURE	
1.	The permit will be arranged seventy two (72) hours prior to the work being done. Where shorter notice is necessary, contact the PCL Superintendent or designate to do so. He will detail the conditions to be followed in doing the work.
2.	This permit is to be filled out for <u>all</u> Hot Work being done by PCL and their subtrade. They are to be approved by the PCL Superintendent, or his designate.
3.	Before starting any Hot Work, the Subtrade Supervisor is to ensure no other subtrades will be using any flammable, combustible or other chemicals that may be affected by the heat generated during the hot work.
4.	Hot Work involving welding leads, power source, torches, etc, or other tasks that release vapours or fumes harmful to health, safety or may cause a smoke detector to activate will use a Smoke Eater with clean filter to filter gases.
5.	All permits will have a set start and stop time. These times must be strictly adhered to.
6.	If work must carry on beyond the designated stop time a new permit is to be arranged for. If the job can be completed within one hour of the designated stop time an extension may be granted by PCL Superintendent or designate for that period of time only. (The PCL Project Superintendent and Project HSE Supervisor/Coordinator are to be notified)
7.	Once the permit has expired, it is to be delivered to the PCL Project Superintendent or Project HSE Supervisor/Coordinator for reviewing and filing.
•	A special provision has been made to allow for continuing hot work inside PCL worksites. This permit is to account for work being done on a continuing basis (i.e. daily work). • The permit is to be filled out and signed by the area supervisor and the worker/fire watch. • Submit the permit to the PCL Superintendent or his designate. Part A is to be posted on the safety board or hot work permit control board (if applicable). • Post the permit on the equipment or post it in vicinity of hot work. • At the **<u>end of each shift</u>,** Part B of the permit will be signed off by the area supervisor/fire watch then **<u>delivered</u>** to the PCL Superintendent or designate, he/she will then match the Part A & B of the permit and file away.
•	NOTE: • All conditions on the Hot Work Permits must be followed. Non-compliance with work permit conditions will not be tolerated and considered grounds for dismissal and/or termination of the contract as per PCL Subtrade agreements. • The PCL Project Superintendent or Project HSE Supervisor/Coordinator are to be included in all stages of the safety process involved in the work

This is the new 2-part Hot Work Permit being used on site.
(replace the old permit)



HOT WORK PERMIT

All temporary operations involving open flames or producing heat and/or sparks require a Hot Work Permit. This includes, but is not limited to, brazing, cutting, grinding, soldering, thawing, and welding.

PART A

INSTRUCTIONS FOR FIRE SAFETY SUPERVISOR

1. **Verify precautions listed at right (or do not proceed with the work).**
2. **Complete PLY 1 and retain for job files.**
3. **Post PLY 2 in vicinity of hot work.**

DATE | JOB NO.

LOCATION/BUILDING & FLOOR (Be Specific)

DESCRIPTION OF WORK BEING PERFORMED

NAME OF PERSON DOING HOT WORK

The above location has been examined, the precautions checked on the Hot Work Checklist have been taken to prevent fire, and permission is authorized for this work.

SIGNED: (Fire Safety Supervisor)

SIGNED: (Person doing Hot Work)

SIGNED: (Fire Watch)

TIME STARTED: Date:_____ Time:_____ AM/PM

PERMIT EXPIRES: Date:_____ Time:_____ AM/PM

FILL OUT EMERGENCY INFORMATION ON BACK OF PLY 2.

HOT WORK CHECKLIST

- ☐ Sprinklers and fire hoses streams in service/operable.
- ☐ Hot Work equipment in good condition (e.g., power source, welding leads, torches, etc.)
- ☐ Multi-purpose fire extinguisher and/or water pump can.

REQUIREMENTS WITHIN 35 FEET OF WORK

- ☐ Dust, lint, debris, flammable liquids and oily deposits removed.
- ☐ Explosive atmosphere in area eliminated.
- ☐ Combustible floors (e.g., wood, tile, carpeting) wet down, covered with damp sand or fire blankets.
- ☐ Flammable and combustible material, remove where possible. Otherwise protected with fire blankets, guards, or metal shields.
- ☐ All wall and floor openings covered.
- ☐ Walkways protected beneath hot work.

WORK ON WALLS OR CEILINGS

- ☐ Combustibles moved away from other side of wall.

WORK IN CONFINED SPACES

- ☐ Confined space cleaned of all combustibles (example: grease, oil, flammable vapors).
- ☐ Containers purged of flammable liquids/vapors.
- ☐ Company confined space guidelines followed.

FIRE WATCH/HOT WORK AREA MONITORING

- ☐ Fire watch will be provided during and for 30 minutes after work, including any coffee or lunch breaks.
- ☐ Fire watch is supplied with an extinguisher, and/or water pump can, also making use of other extinguishers located throughout work area.
- ☐ Fire watch is trained in use of this equipment and familiar with location of sounding alarm.
- ☐ Fire watch is required for opposite side of walls, above, and below floors and ceilings.

OTHER PRECAUTIONS TAKEN

- ☐ _____

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29-TG 982 (Rev. 8/08)

[Front]

WARNING!

HOT WORK IN PROGRESS
WATCH FOR FIRE!

IN CASE OF AN EMERGENCY:

CALL: _____

AT: _____

_____

_____

WARNING!

[Back]

PROJECT HEALTH SAFETY AND ENVIRONMENT PLAN

DUST CONTROL PROGRAM

Project Name:
Project No.:

OBJECTIVE

To provide workers and Supervisors/Foremen with safe work procedures and controls while conducting work activities such as grinding, chipping, sweeping, and equipment moving where airborne contaminants may become a potential hazard.

RESPONSIBILITIES

1	**DISTRICT HSE MANAGER** • Assist the HSE Coordinator/Supervisor and Project Superintendent in the assessment of work activities and the development, implementation and administration of the *Dust Control Program*. • Arrange for the testing of workplace environments to determine if exposures exist and may pose hazards to workers. • Provide accurate and qualitative information to project personnel regarding abatement procedures that may be required and the training of workers. • Assist project staff to see that quality control measures are completed as necessary. • Monitor the *Dust Control Program* for compliance requirements.
2	**HSE COORDINATOR/SUPERVISOR** • Assist the District HSE Manager and Project Superintendent to assess work operations on site to determine where potential hazards from dust exposures may arise. • Assist the District HSE Manager and Project Superintendent to administer and implement the *Dust Control Program* to minimize or prevent exposures. • Facilitate education and training regarding the requirements of the *Dust Control Program*. • Monitor, and where necessary, enforce employee/subcontractor compliance with the *Dust Control Program* • Notify the Project Superintendent of any changes in construction operations which may create and/or alter worker exposures to potential hazards from dust exposure.
3	**PROJECT SUPERINTENDENT** • Assist the District HSE Manager and HSE Coordinator/Supervisor to assess work operations on site to determine where potential hazards to dust exposures may arise. • Assist the District HSE Manager and HSE Coordinator/Supervisor to administer and implement the *Dust Control Program* to minimize or prevent exposures. • Assist the HSE Coordinator/Supervisor to determine if testing protocols need to be implemented, as required by the work activities. • Verify the facilitation of proper education and training regarding the requirements of the *Dust Control Program*. • Monitor, and where necessary, enforce employee/subcontractor compliance with the *Dust Control Program.* • Verify that there is adequate equipment, sufficient facilities for storage and maintenance and maintain quality control of respiratory protective equipment. • Notify the District HSE Manager and HSE Coordinator/Supervisor of any changes in construction operations which may create and/or alter worker exposures to potential hazards from dust.

RESPONSIBILITIES cont'd	
4	**SUPERVISORS/FOREMEN** • Be familiar with the *Dust Control Program* requirements and safe work procedures (including controls) related to dust exposure. • Verify that all workers have been trained in, and understand, the hazards of dust exposure and the safe work procedures and controls prior to work being done. • Verify that all workers are trained in the proper selection, use and care of the required tools and control measures, such as personal protective equipment (PPE) and Verify that all workers have been properly fit tested for the respiratory protective equipment being used (within the past 12 months). • Monitor and supervise workers to verify that they are complying with the *Dust Control Program* requirements and are following the safe work procedures as outline here within. • Initiate and follow up with compliance measures. • Conduct PSI's and Tailgate Meetings regarding the hazards of dust exposure and the available controls, where applicable.
5	**WORKERS** • Follow all the applicable safe work procedures and the *Dust Control Program* requirements to minimize or prevent exposures. • Attend and participate in educating and training sessions to familiarize themselves with the *Dust Control Program* elements. • Verify they have received appropriate training regarding the hazards of dust exposure (i.e. dust; silica) and the proper control measures available to minimize or prevent exposures. • Properly select, use and care for respiratory protective equipment, where required, and Verify that fit testing has been conducted. • Approach their Supervisor/Foreman with any questions, concerns or uncertainties they may have or may encounter. • Report to their Supervisor/Foreman any defects, non-compliance items or any other related issues that may arise.

CONSTRUCTION LEADERS

PROJECT HEALTH SAFETY AND ENVIRONMENT PLAN

DUST CONTROL PROGRAM

Project Name:
Project No.:

THE FOLLOWING GUIDELINES APPLY:
• All workers who may be exposed to potential hazards from dust exposure must use appropriate engineering and/or administrative and/or personal protective equipment controls, as required by the Worker's Compensation Board of British Columbia Occupational Health and Safety Regulations. • Workers considered at risk include those actively involved in dust generating procedures or workers who may be working in adjacent areas where dust may interfere with their safe operations. • If respiratory protective equipment is used, workers must be fit tested by a Qualified Person in the particular face-piece that they will be wearing, to determine the effectiveness of the facial seal. • All subtrades who may be involved in dust generating procedures or who may be exposed to these potential hazards from dust exposure must submit their own *Dust Exposure Control Plan*. • Where controlled products are used, all subtrades must submit to the HSE Supervisor relevant Material Safety Data Sheets (MSDS) prior to conducting work activities.

SAFE WORK PROCEDURES	
CONCRETE GRINDING	• A minimum of a full-face respirator fitted with P100 filters must be used for all concrete grinding activities (safety eyewear is not necessary as the full-face respirator will protect the eyes from any debris generated into the air). • Dust levels also need to be minimized by a combination of engineering and administrative control measures such as wetting the roadway, worker rotation and/or work schedule adjustments so that other workers in the vicinity are not exposed to the generated airborne contaminants generated. • Workers who may work in the vicinity of concrete grinding may need to wear respiratory protective equipment and must be informed of the potential hazards of the generated airborne contaminants. • If exhaust ventilation is used, Verify that the air is not vented into other adjacent work spaces where it may pose a hazard to other workers. • Concrete grinding should be done with a vacuum grinder wherever possible. • Cleaning of the dust and debris (as per the procedures listed below) must be done on a daily basis or more frequently if the situation warrants.
DRY MIXING MATERIALS	• A minimum of an N-95 half-mask respirator must be used when mixing dry compounds, as well as appropriate CSA-approved safety eyewear, as per the Material Safety Data Sheets for each component. • If dust is generated from the mixing activities, and is distributed on the floors, please refer to the procedures listed below for clean-up.

CONCRETE CHIPPING	• The level of respiratory protection required for this task will be determined as per assessment. • CSA-approved safety eyewear. • For small areas, spray bottles filled with water shall be used to control dust generation by keeping the concrete continually wet. • For larger areas, a more thorough wetting method may be required to control dust generated.
CLEANING FLOORS	• The level of respiratory protection required for this task will be determined as per assessment. • CSA-approved safety eyewear. • Wherever possible, a negative pressure vacuum shall be used to clean dry floors to minimize, as much as possible, dust generation. • If a vacuum is not practicable, use of a sweeping compound (i.e. Dustbane) must be used when dry sweeping floors. • Piles of dust/sweepings must be picked up and disposed of immediately.
MOVING EQUIPMENT	• The level of respiratory protection required for this task will be determined as per assessment. • CSA-approved safety eyewear. • Dust levels also need to be minimized by a combination of engineering and administrative control measures such as wetting the roadway, worker rotation and/or work schedule adjustments so that other workers in the vicinity are not exposed to the generated airborne contaminants generated.