



**Canada
Contractor Safety Program
For**

Maintenance and Construction (M&C)

Sales Automation

Commercial and Industrial

**"Do Not Proceed Unless Everything Is Safe!"
"Every Task...The Right Way...Every Time"**

Revision Date: September, 2013



Letter from Darin O'Kelley

On behalf of Chevron North America Products, I am very happy to provide you with this Contractor Safety Program. I want to thank you for providing services or goods to Chevron and for your active engagement in this Contractor Safety Program.

The program outlined before you sets out our minimum health, environment, and safety expectations for supplying Maintenance & Construction, Retail Automation and our C&I operations. I want to stress that it is your responsibility as our approved supplier to understand and meet all the expectations outlined here, as well as all other relevant legal, Governmental and contractual guidelines.

Chevron remains committed to protecting people, property and the environment and this program is a key part of that commitment. Thank you again for supplying our Americas Products Retail Business Units and for your diligence in staying safe.

Darin O'Kelley

Maintenance & Construction Manager

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11. Annex A – Canada Independent Contractor Health, Environmental and Safety Contract Guidelines (version 2.0)
12. Annex B – Canada Company's Drug, Alcohol, and Search Policies
13. Incident Protocol
14. 30M33 Electrical
15. 52E49 Notice of Project (NOP); Construction, Asbestos, Lead
16. Comparison – API 1646 vs. Worksafe BC
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18. Contact List
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Web sites:

<http://www.chevronwithtechron.com/safeworkpractices/>

http://www.chevronwithtechron.com/safeworkpractices/awareness_training.aspx

<http://www.chevronwithtechron.com/safeworkpractices/maintenance-construction/default.aspx>

Section 1 Acknowledgement

By signing below, I acknowledge:

1. I have received the Contractor Safety Program packet (version dated above)
2. I have reviewed the Contractor Safety Program
3. I have completed or will complete the API WorkSafe training and possess a personal API Safety Key wallet card*
4. I have been made aware of API Work Safe training and the Chevron requirement and will pursue my wallet card
5. I understand that I may be asked to present my Safety Key wallet card at anytime I work on Chevron property; if unable to present my card or proof of course completion, I understand that I may be asked to leave the premises
6. I was given the opportunity to ask questions and all my questions have been answered at the present time
7. I further understand that I may contact Chevron or a Chevron representative at any time with questions or concerns
8. I am committed to Zero Incidents on Chevron’s facilities/projects and will supervise work accordingly
9. I understand that as a Contractor, workers and Subcontractor personnel shall be fully trained in compliance with appropriate health, environmental and safety training laws, regulations, rules and standards of ALL governmental or regulatory agencies having jurisdiction at the work site (e.g. , WorkSafe BC, COHS, CSA, WCB of Alberta, NFPA, API.) that may or may not be covered in this document. (See Annex A section 23.01)
10. I understand I may receive updates to this Safety Program occasionally and will add them to this packet as needed
11. I have reviewed and understand the Self Permitting and high risk work requirements posted on the Chevron web site, <http://www.chevronwithtechron.com/safeworkpractices/maintenance-construction/default.aspx>
12. I am accountable and responsible for sharing this information with all company and subcontractor staff who work on Chevron facilities/projects for my employer and their compliance with this Contractor Program.

Signature

Date

Name (print)

Company Name & Title Held

Email Address

PLEASE TURN THIS FORM IN TO THE LEADING FACILITATOR OR OTHER CHEVRON REPRESENTATIVE. RECEIPT OF THIS FORM CONFIRMS YOU ARE IN GOOD STANDING WITH CHEVRON'S CONTRACTOR SAFETY PROGRAM FOR A MINIMUM OF (1) YEAR.

*ALL CONTRACTORS AND SUB-CONTRACTORS GOVERNED BY THIS SAFETY PROGRAM WILL BE REQUIRED TO CARRY A VALID API SAFETY KEY WALLET CARD AND MUST BE COMPLETED BY December 31, 2008.

CONTRACTOR OBLIGATIONS

Chevron is committed to providing a safe, healthy workplace for its employees and those of its contractors and subcontractors. The safety and well-being of those with whom we work is of paramount importance to Chevron. Job safety is considered a critical driver in our aim to achieve Operational Excellence and Incident-Free Operations through safe, reliable, efficient and environmentally sound operations.

In scenarios where governmental regulations, API requirements and or Chevron specific requirements appear to conflict or lack agreement, then the most stringent Health Environmental and Safety requirement which provide the greatest level of protection must be used.

Annex A (HES) Section 1.00	Topic
1.00	Responsibility for Compliance
1.01	Communication of Guidelines and Health, Environmental and Safety Requirements
1.02	Compliance with Chevron requirements
1.03	Compliance of Subcontractors
1.04	Contractor's qualified representatives
1.05	Contractor HES program

Annex A (HES) Section 2.00	Topic
2.00	Environmental, Health and Safety Protection
2.01	HES Plan
2.02	Submittal of HES plan
2.03	Compliance of HES plan
2.04	Participation in Safety and Environmental Protection Orientation
2.05	Review of HES plan
2.06	Acceptance of HES plan
2.07	Daily JSA
2.08	Participation in BBS process

Additional Information

Please become familiar with your contractual obligations. Our expectation is that contractors are trained to perform the task at hand and that they will further follow all applicable rules and regulation for performance of the work. This same expectation applies to all work activities that may not be covered by in this document or by API. If Annex A and B are currently not part of your contract the information is imbedded in your Master Services Agreement.

Section 2 – The Chevron Way and Operational Excellence

The Chevron Way

The Chevron Way explains who we are, what we do, what we believe and what we plan to accomplish. It establishes a common understanding not only for those of us who work here, but for all who interact with us.

Chevron Way Vision

At the heart of The Chevron Way is our vision... to be *the* global energy company most admired for its people, partnership and performance.

Chevron Way Values

Our company's foundation is built on our values, which distinguish us and guide our actions. We conduct our business in a socially responsible and ethical manner. We respect the law, support universal human rights, protect the environment and benefit the communities where we work.

Review Chevron Way Pamphlet to drill down on Values

Integrity

Trust

Diversity

Ingenuity

Partnership

Protecting People and the Environment

High Performance

Chevron Way Strategy

Our Strategic Plan translates our vision into action. It aligns and integrates our organization, inspires confidence, and differentiates us from the competition.

Operational Excellence (OE) Vision & Values

Our vision for operational excellence directly supports our corporate vision “to be the global energy company most admired for its people, partnership and performance.” With respect to operational excellence, our vision is “to be recognized and admired by industry and the communities in which we operate as world-class in safety, health, environment, reliability and efficiency”.

OE Objectives

To better describe “world-class” performance,” the following corporate OE Objectives have been established. We will systematically manage OE in order to:

- Achieve an injury-free work place.
- Eliminate spills and environmental incidents. Identify and mitigate key environmental risks.
- Promote a healthy workplace and mitigate significant risks.
- Operate incident-free with industry-leading asset reliability.
- Maximize the efficient use of resources and assets.

Chevron’s OE Tenets of Operation

The Tenets of Operation are based on two key principles:

1. Do it safely or not at all
2. There is always time to do it right

Always:

1. Operate within design or environmental limits.
2. Operate in a safe and controlled condition.
3. Ensure safety devices are in place and functioning.
4. Follow safe work practices and procedures.
5. Meet or exceed customer's requirements.
6. Maintain integrity of dedicated systems.
7. Comply with all applicable rules and regulations.
8. Address abnormal conditions.
9. Follow written procedures for high risk or unusual situations.
10. Involve the right people in decisions that affect procedures and equipment.

Zero, Zero, One - 001

A call to help remember our goal of:

Zero Incidents, Zero Injuries, Number One in the Hearts and Minds of our Customers

Operational Discipline

Every task...the right way...every time.

Through our continued focus on every task the right way every time we can improve our health, safety and environmental performance in order to have a positive impact on those around us – including the people we work with, our families and our communities. There is no reason for not following safe work practices.

Contractor Health, Environmental and Safety Management (CHESM)

Purpose

The purpose of the CHESM process is as follows:

- Reduce the risk of contractor incidents, accidents, injuries and occupational illnesses
- Reduce the risk of environmental liabilities incurred through contractor (third-party) activities
- Reduce the risk of financial liabilities incurred through contractor (third-party) activities.

Objective

The objective of the CHESM process is to develop and manage a sustainable, fit-for-purpose process that will allow Chevron Downstream & Chemicals (DS&C) organizations to continually improve contractor health, environment and safety/operational excellence (HES/OE) performance through the use of risk-based procedures that address the following areas:

- Leadership accountability for employees and contractors
- Contractor engagement
- Contractor HES/OE processes (i.e. planning, qualification and selection, pre-job review activities, work in progress, and performance evaluation).
 - Planning
 - Qualification and selection
 - Pre-job review activities
 - Work in progress
 - Performance evaluation

Contractor Grading

The CHESM initiative requires that we implement a system to grade our contractors. Americas Products M&C has decided to use the A, B, C, grade scale to accomplish this. The majority of the grading weight will be placed on your companies Work Experience Rating Letter, our safety questionnaire, and having documented safety programs for the services provided to Chevron. Other items that would influence the grade to a lesser degree would be outcomes of the CSPA (Contractor Safety Performance Assessment), PPR (Periodic Performance Review) Assessment, etc. Chevron designated scores and grades are confidential and are not shared outside the company. For the majority of the contractors the management of the HES data will be completed through ISNetwork at www.isnetwork.com

A - Superior	No restrictions
B - Effective	No restrictions; pursue A grade
C - Fair	Limit high risk work, increased Chevron oversight, coach to improve grade
D - Inadequate	Restricted, contract owner to create plan to increase grade, increased Chevron oversight
F - Poor	Do not use

Safety Statistic Inquiry (Experience Rating)

Experience Rating for Workers' Compensation Insurance

The safer you are, the less you pay. That's the whole idea behind WorkSafeBC's experience rating plan.

Employers who work safely can earn discounts on their base rate of up to 50 percent over time. Firms working less safely may face surcharges of up to 100 percent on their base rate over time.

How it works

First, a determination is made of the average safety performance of your rate group in terms of workplace injuries. Then it is determined whether your relative costs are above or below the average. If your costs are lower than average, you'll receive a discount on your premiums. If they're higher than average, you'll pay a surcharge.

Experience rating accommodates different types and sizes of firms. It also recognizes that not all industries pose the same level of risk to their workers. It compares your firm with only your peers — those within the same rate group, facing a similar level of risk. If the ratio of your claim costs to your payroll is lower than the average of your rate group, you'll enjoy a better experience rating.

For more information regarding Experience Rating, contact your Provincial Workers Compensation office.

At anytime, Chevron may ask you to submit your Experience Rating rates for review.

Federal and Provincial Work Regulations

Contractors and sub-contractors will observe all Provincial and Federal minimum age regulations regarding minor age workers.

Contractors and sub-contractors will observe all Provincial and Federal regulations regarding undocumented and illegal workers.

Contractor Safety Program

Mission Statement

To develop, implement and adhere to a "best practices" safety program designed to provide a defined process for continuous improvement to further solidify our guiding safety principals and ensure success in reaching our goals that Zero is Attainable (ZIA). This program incorporates Chevron Americas Products Safe Work Practices Standards, Retail Safe Work Practices, API Safe Work Practices, and Contractual obligations. The Contractor Safety Program is in accordance with Chevron's overarching code of conduct that guides our daily decisions and activities; Chevron's Operational Excellence (OE) Tenets of Operation. The OE Tenets of Operation provide foundation for an operational excellence culture at Chevron.

The purpose of this Safety Program is to provide guidance and expectations for Chevron construction projects and is meant to supplement –not supersede- the terms and conditions of the Chevron contract. Contractors must perform work or provide services that comply with all COHS requirements, local Provincial regulations, API Work Safe requirements and Chevron contractual rules and standards, whichever is more stringent.

Chevron has aligned this Contractor Safety Program with API WorkSafe regulations. This program is intended to explain requirements specific to Chevron jobsites and those which are supplementary to your employer's safety program, API, and other Federal, Provincial and local safety and health requirements while working on Chevron jobsites. The Safety Program should be considered a "living document" and is subject to updates. You will be notified of any future updates to this document as they become available.

API's Safe Work Practice 1646 is intellectual property and copyright protected by API. All participants at Chevron training and orientation sessions will be require that each participant purchase and bring their own copy of API Safe work Practice 1646. Copies can be purchased online at: <https://worksafe.api.org/>

Objectives

To meet the requirements of the Americas Products Safe Work Practice Standards Procedure Chevron is committed to providing a safe, healthy workplace for employees and those of its contractors and subcontractors. The safety and well-being of those with whom we work is of paramount importance to the COMPANY. Job safety is considered a critical driver in our aim to achieve Operational Excellence and Incident-Free Operations through Safe, Reliable, and Efficient and environmentally sound operations.

Chevron is providing you with this information to make you aware of certain important safety and health information and requirements related to work activities on Chevron sites. These guidelines MUST be used in conjunction with your employer's safety program, API, and other, Federal, Provincial and local safety and health requirements.

Contractor Safety Program Document

The Contractor Safety Program Document and its attached forms may be viewed, downloaded or printed from the following link <http://www.chevronwithtechron.com/safeworkpractices/maintenance-construction/default.aspx> Contractors are responsible to check this link periodically to insure the latest forms are being used.

Section 3 – General Information

Terms & Definitions

M&C = Maintenance and Construction Group
OE = Operational Excellence
Contractor Safety Program – That of Americas Products - Canada
Chevron Outsource Provider = Contractor representing Chevron (i.e....CBRE)
GC = General Contractor
PM = Project Manager
Contractor = can refer to GC or other vendor on-site
SSE = Short Service Employee
Sub Contractor = can refer to a Contractor or other vendor on-site under the control of a GC
HES = Health, Environmental and Safety
CCL – Chevron Canada Limited
C&I = Commercial and Industrial
CSA = Canadian Standards Association
API = American Petroleum Institute
Annex A = Document in your contract regarding Health, Environmental and Safety
Annex B = Document in your contract covering Drug, Alcohol and Search policies
ISNetworld = HES management database tool used to assist with contractor grading
JSA = Job Safety Analysis (may also be referred to as JLA – Job Loss Analysis)
NEAR LOSS = Any incident which, if circumstances had changed slightly, could have resulted in: personal injury, damage, vapor release, product mixture or contamination or fire.
Recordable Incident = Any incident requiring medical treatment (other than first aid).
Lost Time Recordable Incident = Any incident requiring medical treatment (other than first aid) and results in lost workdays with days away from work.
Motor Vehicle Crash (MVC) = Any MVC which occurs on Chevron property while conducting Chevron project duties.
LIMITED-ACCESS SITE = Typically an operating site that is partially closed for construction -- typically not fenced off with chain link.
CONTROLLED ACCESS SITE = A work area with a 6' chain link fence barrier around perimeter with controlled gates.
EXCLUSION ZONE = Work area that is barricaded to prevent general access.
TAILGATE MEETING = A daily meeting conducted on-site (or in-shop for program work) to review THAT DAY'S potential safety issues, safety questions and high-risk activities.
High Risk Activity = High risk activities are: <ul style="list-style-type: none"> • Confined space entry, • Hot work, • Excavation work. • Lock-out/tag-out, • Rigging, hoisting and lifting • Working at Heights • Energized Electrical
SIMOPS – Simultaneous Operations
TLV – Threshold Limited Value
TOOLBOX MEETING = A periodic meeting conducted either on-site or in office to review a key safety topic related to current work activity

 = Chevron Legacy Safe Work Practices
 = Global Safe Work Practices

HES Plan = Site Safety Plan. The Site Safety Plan is a document detailing the following, specifics to a job site:

- Work description
- Authorized personnel
- Possible site hazards
- Personal Protective Equipment requirements
- Emergency contacts, phone numbers, and hospital routes
- Material Safety Data Sheet (MSDS)
- See Appendix D for a sample Site Safety Plan.

Roles & Responsibilities

Chevron HES Specialist – Provides overall guidance regarding **H**ealth **E**nvironmental & **S**afety issues and processes

Chevron Program Manager – Chevron, outsource provider or key contractor lead for major national program initiatives

Chevron Project Manager – Chevron, outsource provider or key contractor contact responsible for managing project

Chevron Senior Project Manager – Chevron, outsource provider or key contractor provider; supervises regional Project Management team

GC Project Superintendent– Supervises activities by contractor employees, subcontractors and other 3rd party vendors. Equivalent titles holding the same responsibility, hence accountable for GC Project Superintendent guidelines, are GC Project Manager or jobsite supervisor.

Superintendent Authorization

Chevron is implementing this Safety Program to ensure “authorized” superintendents are supervising work being conducted on Chevron sites. The purpose of this authorization is to ensure GC superintendents:

- Understand Chevron Contractor Safety Program
- Have a base level of understanding on Chevron site management expectations
- Clearly understand safety communications & reporting processes
- Have the opportunity to ask questions regarding the Contractor Safety Program
- Shares and trains this information with all worker and sub-contractors

General Contractor Responsibility

GCs have the responsibility to make sure that all employees under their supervision, including sub-contractors and third-party service providers, are adequately trained and informed of all applicable safety practices. All workers on our sites are required to possess and carry a valid API card. GC also must ensure that only qualified and approved personnel are Self Permitting and all High Risk Permit Writers must be documented and approved by Chevron.

See also Sub-Contractor Self Permitting requirements. All training and certification of Sub-contractors is the responsibility of the GC, Sub-contractors are not allowed to work alone performing High-risk work unless the GC is on site supervising and permitting work. GC must have a process in place to select, manage and train the sub-contractor and their employees on the Chevron requirements. Documentation of selection and training must be submitted to Chevron as requested. Sub-Contractors are not authorized to self permit without prior approval. See also Sub-Contractor Self Permitting requirements.

API Certification, Site Access and Visitors

It is Chevron's expectation that all workers, contractors and subcontractors obtain and keep their API 1646 certification – WorkSafe Wallet Key Card current and available.

API, for our use, is limited to Safe Work Practices for Contractors Working at Retail Petroleum/Convenience Facilities as evidence in the title of API Practice 1646. The following persons who may come on site are currently excluded from API certification.

- Store Operation Employees
- Chevron Sr. Management
- Delivery Personnel of short or limited duration
- Inspectors
- Fuel delivery personnel
- Public utility workers
- Limited use and temporary on site repair persons
- Contractors / suppliers classified as Low risk only
- Emergency or Law Enforcement related personnel
- Etc.

In regard to the persons above, we cannot control all aspects but we can control our site; the Superintendent in charge shall escort persons not API certified and oversee the activity being performed. Professional judgment shall be used and direction shall be followed from Emergency and Law Enforcement personnel. The GC or HES officer in charge shall adequately control the access of the work sites and insure persons sign in and safety is maintained. Chevron protocols shall be enforced.

All API card applicants shall take their own test. API and Chevron forbid the practice of persons taking tests for others.

Chevron Hotline

Chevron provides a Hotline for reporting violations or improper activities 800-284-3015 or at WWW.ChevronHotline.com 24 hour 7 days a week service

Chevron's Hotline provides a direct and effective, risk-free way to report activities that may violate the law or Company policies, affect the vital interests of the Company, or threaten the security of its employees and contractors. The Company does not tolerate any form of retaliation for reports made in good faith to the Hotline.

Section 4 – Chevron Safety Expectations

Chevron uses the Loss Prevention System™ (LPS) to help prevent and resolve unplanned losses – whether safety or business-related. This includes injuries, business inefficiencies, compromises in product quality, reliability issues, government fines, waste, etc. Contractors are expected to have their own BBS program in place or fully participate in Chevron’s Loss Prevention Observations, Loss Investigation and Near Loss reporting and Investigations as well as Job Loss Analysis development.

Behavioral Based Safety (BBS) - Loss Prevention System™

Annex A Section 2.08	Topic
2.08	Have in place BBS program or Participate fully in BBS.

LPS Pyramid Strategy - Why Incidents Happen

1. Reason: Job Factors
 - a. Estimated 10% of accidents caused by:
 - i. Lack of or inadequate operational procedures
 - ii. Inadequate communication
 - iii. Inadequate tools or equipment

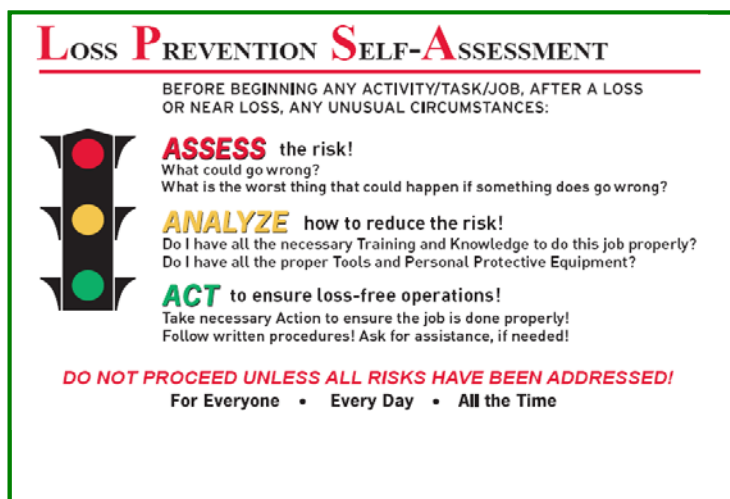
2. Reason: Personal Factors
 - a. Estimated 90% of accidents caused by:
 - i. Lack of skill or knowledge
 - ii. Habits
 - iii. Knowingly and willingly deciding not to follow procedures
 - iv. Reinforcement/toleration of unsafe behaviors or conditions

3. Reason: External Factors
 - a. External factors beyond the control of the individual employee, contractor or supervisor
 - b. Everything possible was done but could not stop the circumstances

<p>The LPS Pyramid</p> <ul style="list-style-type: none"> For every 1 major injury, there are: 10 minor injuries 30 equipment/property damage incidents 600 near losses!!! <p>To achieve Incident Free Operations we must operate at the bottom of the Pyramid, the proactive stage.</p> <ul style="list-style-type: none"> Participate in Loss Prevention Observations Perform the LPSA process Develop JSAs for high risk activities 	<div style="text-align: center;"> <p>Loss Prevention System™ Pyramid</p> </div>
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****Now you know why we require near-losses to be reported!**

Loss Prevention Self Assessment (LPSA) Card



One of the most powerful Loss Prevention System™ (LPS) tools is the LPSA card. It targets work activities and conditions at the very bottom of the LPS pyramid. LPSA provides a truly proactive and effective method by which everyone can and must ensure the maximum safety for themselves, co-workers, contractors, customers and even their family! The LPSA tool is a brief general risk assessment of each work task. The LPSA is a tool that is absolutely essential to the successful implementation of LPS. It enables people to identify and eliminate potential workplace practices and hazardous conditions that could result in a loss. Always start by asking “what could go wrong”? All contractor and subcontractor personnel are required to know the LPSA process and must carry the LPSA card at all times while on Chevron projects and facilities.

Remember that LPSA should be used:

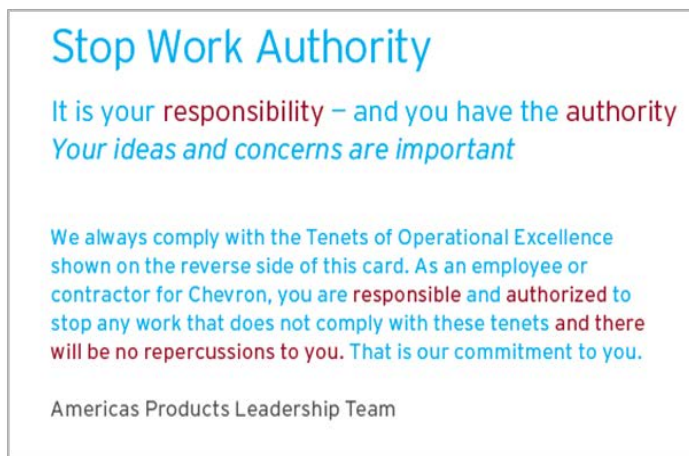
1. Before starting work.
2. Before changing work activities.
3. For non-routine work activities or unusual circumstances.
4. Before performing routine work activities.
5. After a loss or significant near loss.
6. Off the job as well as at work.
7. At the end of every shift

The three steps to performing an LPSA are:

1. Assess the risk!
 - What could go wrong?
 - What is the worst thing that can happen if something does go wrong?
2. Analyze how to reduce the risk!
 - Do I have all the necessary Training and Knowledge to do this job safely?
 - Do I have all the proper Tools and Personal protective equipment?
3. Act to ensure safe operations!
 - Take the necessary Action to ensure the job is done safely!
 - Follow written procedures! Ask for assistance, if needed!

Annex A Section 20.00	Topic
20.01	Stop Work Authority
20.02	Contractors responsibility to instruct others

Stop Work Authority (SWA) Card



The Stop Work Authority (SWA) is the employee’s and contractor’s authorization to **STOP WORK THAT IS UNSAFE!** Safety is everyone’s responsibility and no one should fear retribution for reporting and stopping an unsafe condition or behavior. All contractor and subcontractor personnel are required to be familiar with the Tenets of Operation listed on the reverse side and carry the SWA card with them at all times while on Chevron project and facilities.

Job Safety Analysis (JSA)

API Section 2	Topic
2.1	How to perform JLA /JSA and apply common safety work practices to specific activities
2.2	Management of change and amendments to the JLA/JSA

Annex A Section 2.07	Topic
2.07	Developing and performing JLAs/JSA

Additional Information

JSAs are a tool used to carefully study and record each key step of a job or task, identifying existing or potential hazards (safety, health, environmental, product quality), and determining the best procedures to follow in order to perform the job properly. A JSA is not a procedure.

Benefits of a Job Loss Analysis

- Proactively identifies hazards and prescribes action to take for each hazard
- Assist in establishing proper job procedures
- Great tool for hazard analysis regarding new tasks, new equipment, or procedures that are non-routine

Why develop a JSA?

- To ensure that hazards are identified and controlled for all major tasks and processes
- Represent a proactive means of identifying and eliminating hazards
- Addresses why procedures are not commonly followed, skipped or performed out of sequence
 - Provides 5 minute quick reminder of key “critical activities”
 - Specifically “spells out” losses and near losses that have or could occur and emphasizes the critical action that is required

When to develop a JSA?

- New or modified equipment or procedures
- Interim means as a basis to longer-range goal of fully developed standard job procedures
- Area where there is a high loss frequency or potential for high severity
- **For ALL High Risk Work Activities, as defined under High Risk**

Chevron has developed certain JSAs for certain routine processes that will be shared with you. Contractors are expected to review JSAs during daily tailgate meetings, and prior to start of any High Risk work. If using a JSA for routine High Risk work the JSA should be made site specific to ensure any additional hazards are being addressed. Other JSAs will need to be developed and updated as needed. Contractors are required to keep the applicable JSA(s) on site during construction. If an opportunity for a JSA presents itself, the contractor will be expected to develop, maintain and train the applicable crew on the newly developed JSA. Chevron would appreciate you sharing newly created JSA(s) with us. As API references in section 2.1, a standardized JSA form must be used. You may create your own, or use the attached example of Chevron’s JSA form (see Appendix Attachments). A JSA may need to be updated/amended as a result of a MOC – Management of Change.

One way to assist in identifying hazards is through the use of the Hazard ID Tool. This Hazard Identification Tool can be used to assist with the identification of a condition or action that has the potential for an unplanned release of or unwanted contact with an energy source. This tool describes the different types of Energy that can be associated with High risk activities. However this is not an all inclusive list of Hazards that maybe present at all locations so understanding how to recognize hazards and then knowing how to remove the hazard or prevent the release is critical to ensuring incident free operations. Additional information about this tool can be found on the Chevron Contractor Safe Work Practices web site.



Please note that the Hazard Identification Tool and related job aids and training materials (collectively, the "Tool") are copyrighted. This copyright does not preclude sharing the Tool with Chevron employees; Chevron-operated joint ventures (JVs), non-operated JV partners and our contractor community. Unaffiliated third parties may use the Tool only with permission from Chevron. For the Tool to be effective and to avoid confusion, it is imperative that it be presented consistently. By applying the copyright, we indicate that the graphic, text, shape, aspect ratio, colors, etc., are to be maintained as a unit. No commercial use, modifications, alterations or derivatives of the Tool may be made without express written permission from Chevron. Please contact your Chevron representative or the Hazard Identification Tool Content Contact in the HES department of Chevron Energy Technology Company with permission requests.

- The Tool may be shared with our contractor workforce in the form of hard-copy materials and electronic files so they may conduct their business safely on Chevron projects. However, contractors may not post the Tool on their website or modify the materials in any manner without express written permission from Chevron.
- Contractors may subsequently use the Tool to train their personnel who work on Chevron projects and activities.
- Contact the Hazard Identification Tool Content Contact in the HES department of Chevron Energy Technology Company with permission requests before sharing the Tool with non-contractor, unaffiliated third parties.

High Risk Work

Chevron M&C defines High Risk work as work that has a reasonable potential for serious injury or life threatening consequences when hazards are not adequately identified, assess or managed. Job tasks involving the following Safe Work Practices are considered High Risk work:

- Confined Space Entry
- Lock-out Tag out
- Hot Work (includes Tank Cleaning and use of Vacuum Trucks)
- Trenching & Excavation
- Rigging, Hoisting and Lifting
- Working at Heights
- Energized Electrical Work (not typical for Chevron Retail)

Management of Change (MOC)

API Section 2.2	Topic
2.2	Management of Change

Additional Information

MOC (Management of Change) is a process to communicate changes. The MOC process is used on all additions, changes, or modifications to equipment (other than in-kind) at Company-owned retail facilities. Chevron will utilize the MOC process to communicate changes of various types to you. Changes may include equipment, installation procedures, design standards, processes, etc. Changes of this type will be communicated to you by your Project Manager.

Minor and in-kind changes may be communicated to you through an Engineering Change Notice (ECN). This will be communicated to you through your Project Manager.

Safety Training

Annex A Section 24.00	Topic
24.00	Training
24.01	Training Requirements, documentation and letter of certification

Additional Information

All contractors and subcontractor personnel shall be fully trained in compliance with appropriate health, environmental and safety training laws, regulations, rules and standards of all governmental or regulatory

agencies having jurisdiction at the work site (e.g. Work Safe BC, WBC Alberta). Training shall cover potentially dangerous conditions, safe work practices and procedures, and the use and maintenance of personal protective equipment. This training only applies to personnel performing the task and not the contractor's entire staff. Training of Sub-contractors is the responsibility of the GC, training material can be found on the Safe Work Practice web site.

API Section 2 describes general knowledge for applying common safe work practices to specific activities. Additional training is defined within API for PPE, lockout/tagout, etc. Although having an API card and being familiar with Federal, Provincial and Local regulations is necessary, additional specialized training is likely required. Refer to Chevron's Contractor Health, Environmental and Safety contract Guidelines Annex A section 24.00 for additional Chevron contractual requirements. Attending this Safety Orientation does not qualify as specialized training. Training competencies are summarized in the SWP Training Requirements Tool. http://www.chevronwithtechnon.com/safeworkpractices/documents/AP_SWP_Training_RequirementsTool.doc

Specialized training should be provided for:

- Hot Work
- Lock-Out Tag-Out
- Trenching & Excavation
- Rigging, Hoisting and Lifting
- Confined Space Entry
- Working at Heights
- Energized Electrical
- Work with hazardous materials
- Air Monitoring Use
- Use of Scaffolding or Motorized Lifts
- Vacuum Trucks
- Any other potentially hazardous tasks

In addition to training on specific tasks, governmental regulations and Chevron require that contractors have regular safety meetings (see Safety Meetings section) to discuss any and all safety processes, including self-permitted activities on the project.

Remember, knowledge of a job's hazards and the safe work practices to follow is the best protection. If you have not been trained in the safe way to do a job – **do not take a chance. DO NOT PROCEED UNLESS EVERYTHING IS SAFE.** Notify your management, who will see that you receive the proper instruction or assign the job to another more highly trained person.

Approved Written Work Procedure

A written procedure developed by competent personnel using risk management considerations that have been approved, as appropriate, and maintained in a retrievable filing system in electronic or hard-copy format. The procedure lists task-oriented steps that have a starting and ending point and details how work is to be completed using the SWPs and guidelines or other materials (where appropriate). The procedure also identifies the activities, roles, responsibilities and authorities assigned to all the parties involved.

Rescue Plans

Annex A Section 10.04	Topic
10.04	Rescue Plans for Confined Space

Contractors and Sub-contractors must ensure they have a site specific rescue plan created for any work that would require emergency rescue i.e. Confined Space Entry and when Fall Protection equipment is being used. Rescue plans should be maintained along with the other job forms and also must contain names of the trained rescue personnel and rescue equipment on site.

General Safety Rules

API Section 2.12	Topic
2.12	Proper personal lifting techniques

Based on prior experience and history, these are some of the most common areas of high risk:

- Obtain proper permits.
- Review and know all Safe Work Practices associated with the job.
- Review and know applicable Emergency Response plans.
- Check that all necessary safety equipment, including fire extinguishers and first aid kits, are on site and are readily accessible.
- Follow all safety procedures applicable to the job being performed, including use of appropriate protective equipment.
- Read and heed all warning signs.
- Do not break or alter seals on valves or equipment without proper authorization.
- Always use proper barricading techniques when blocking a driveway or entrance.
- Never horseplay on Company property. When you see an unsafe condition, correct it if possible or report it to your supervisor.
- Report all injuries, spills, and vehicle accidents promptly to your supervisor
- Report to your supervisor all “near losses,” unusual situations, or releases that could potentially affect the environment, the health and safety of employees and the community, and Company property.
- Always work on a stable surface so that both feet are firmly planted.
- Watch for moving vehicles and equipment at all times.
- Never jump from elevated surfaces, including trucks.
- Never carry a load unless your view is unobstructed.
- Do not step over or stand near a rope or wire cable that is under strain.
- Never look directly at a welding arc. Shield your eyes when nearing welding operations
- Provide first aid care only if properly trained.
- Review the MSDS before using any hazardous product or chemical.
- Drink water only from potable water outlets
- Make sure workers are properly hydrated during hot weather conditions
- Evaluate weather conditions before start of work; rain, sleet, lightning, etc...
- Height of stacked materials should not exceed 4'
- The use of back support belts for lifting and bending are optional and are based on individual preferences.
- No personal music listening devices or audio equipment is allowed on site without permission

For additional training and reference on Safety Topics, see links below:

API Home:	http://www.api.org/
API Work Safe Overview:	http://www.api.org/certifications/worksafe/index.cfm
API Work Safe test link:	https://worksafe.api.org/
Work Safe BC	www.worksafebc.ca
WCB of Alberta	www.wcb.ab.ca
COHS	www.ccohs.ca

Disabled access

Contractors and sub-contractors will observe required disability specifications, Federal, Provincial and Local building codes should be followed when constructing, installing, modifying and repairing elements at all Chevron facilities.

WIP – Work In Progress

Annex A Section 23.00	Topic
23.00	CHESM
23.01	Questionnaire expectations, and work in progress “WIP” inspections

The WIP process is meant to provide an in-depth review of site safety conditions. The WIP should cover all Self-Permitted Activities and other key safety categories. The outcome of the assessment will be logged into our database and will affect contractor grading in ISNetworld. See sample WIP form and instructions in the Forms section.

PPR – Periodic Performance Review

Annex A Section 23.00	Topic
23.00	CHESM
23.01	Questionnaire expectations, and work in progress “WIP” inspections

The PPR evaluation is meant to provide a review of Key Performance Indicators and other HES performance area of the contractor after a major project is completed or at least annually. Results will be logged into our data base and parts of the evaluation will affect contractor grading. See sample PPR form and instructions in Forms section.

Short Service Employees

Annex A Section 22.00	Topic
22.00	Short Service Employees
22.01	Definitions, notifications, qualifications and exceptions
22.02	Mentor and SSE performance expectations

Additional Information

Contractors are required to maintain a Short Service Employee (SSE) program and program documentation is to be made available to Chevron at all times. All SSE’s must be identified. eg: green hard hat. This program is an orientation for new employees working on Chevron property. No one person crew may be staffed by an SSE. Only one SSE is allowed on a 2-4 person crew, and on crews of 5 persons or more no more than 20% may be SSE’, the mentor will also be involved in certifying that once the time limit is met and have had no safety incidents they can be removed from the program. Each SSE must be assigned a qualified mentor who will monitor the SSE’s job performance and provide feedback on SSE. Statistics have shown this is an area of high risk. SSE is defined by <6 months with the employer, except for routine M&C Maintenance Contractors who SSE definition is < 2 months. Any temporary exceptions to this rule must be made in writing and approved by the Chevron Contract Owner or delegate.

Safety questions and enforcement

If you fail to obey any of the safety rules and work practices referenced hereon, including the use of safety equipment, you and/or your firm may be subject to action, up to and including being barred from future work with Chevron. If you have any questions regarding safety requirements, or about the safety of a particular operation or activity, contact your supervisor or your employer’s safety officer. Your Chevron Project Manager Representatives are always available for consultation on safety issues.

Section 5 – Communications & Reporting

Emergency Management

WorkSafe BC	Topic
3.14	How and where to obtain first-aid and medical treatment, including CPR
3.16	Basic requirements

API Section 2.14	Topic
2.14	How and where to obtain first-aid and medical treatment, including CPR

Annex A Section 14	Topic
14.00	Medical Aid

Additional Information

Contractors and its subcontractors shall provide their own first aid personnel, equipment, and supplies unless otherwise agreed by COMPANY in writing.

When an emergency occurs:

- Call 911 or paramedics to report the emergency.
- Give your name, the location of the emergency and the phone number you are calling from. Be as specific as possible.
- Describe the nature of the emergency as you see it:
 - Fire in an electrical panel...
 - Worker has fallen off ladder, has a possible broken ankle...
 - Worker having chest pains (severe, mild, etc.)...
- Wait for any questions from the emergency operator.
- Be prepared to assist Emergency Response personnel as directed. Paramedics choose the hospital or treatment facility for the injured individual.
- In the event of an emergency requiring evacuation, leave the building and/or site by the nearest safe exit.
- As soon as practical, immediately contact the responsible Chevron Project Manager.
- Chevron Project Manager will assess site conditions immediately after receiving notification.

The contractor foreman or lead person must ensure that his or her employees receive prompt medical attention.



Incident Investigation and Reporting (II&R)

API Section 2.6	Topic
2.6	Incident/case management at the job site, escalation, and outside resources available to manage.

Annex A Section 17.00	Topic
17.00	Incident reporting
17.01	Reporting of accidents and injuries on the job & reporting near misses
17.02	Reporting of incidents
17.03	Accident forms
17.04	Health, Environmental or Safety citations
17.05	Summaries of incidents and root cause analysis
17.06	Participate in incident investigation

Additional Information

- **Applies to all Chevron Downstream & Chemicals organizations**
- **Includes all contractors and sub-contractors working on Chevron premises**

Report every work related illness or injury to the Chevron Project Manager immediately, no matter how small. Our goal is to provide Early Injury Management and Intervention. The report must be to a live person at Chevron or Chevron representative (CB Richard Ellis) and not a recording. Please refer to the project site safety plan for appropriate phone numbers, directions to the nearest hospital, etc.

When reporting a Loss, contractor must supply as much of the following information that is available as soon as possible to the Chevron Project Manager/Representative. If in doubt contact the Chevron Project Manger/Representative as soon as possible. Do not delay reporting due to lack of information; time is of the essence to Chevron.

• Name of injured person	• How incident occurred
• (place, date, time)	• Description of Injury
• Medical treatment administered	• Where taken to
• How transported	• Medication prescribed
• Current status of injured person	• Etc

When in doubt, report any potential issues to the Chevron Project Manager/Representative immediately. Unreported incidents **will not be tolerated**. HES appointed loss investigation team will be dispatched for all qualifying incidents. Please refer to the **Incident Protocol** (see Section 8 Attachments and Forms)

Note to Chevron employees and Chevron Project Management Representatives:

Incident Investigation and Reporting must follow the process as stated in the Incident Classification & Notification Brochure: Incident Classification Matrix. Contact your local HES Specialist for guidance on Incident Classification and Investigation protocols i.e. TapRoot® or Loss Prevention System™.

Job Site Signage

Warning, safety and security signs, notices and barriers should be posted for the protection of workers, customers and other people near or in the exclusion zone. They must be observed and followed at all times. For example, if you are working in a posted “Hard Hat” area, you must wear an approved hard hat.

When the work you are performing may expose others to hazards, you must provide warning signs and barricades (see Site Barricading section). Where signs and barricades do not provide adequate protection, additional measures must be taken to assure safety (flagmen, temporary lighting, store closure, etc.)

The following provides specifications for the required signage for Chevron projects.

Banners (Project Type specific. See your Chevron Project Manager for details and signs in Spanish)

- **USE:** Project Specific
- **WHERE:** On storefront and/or construction area – should be prevalent to customer traffic
- **WHEN:** During construction

LOSS PREVENTION SELF-ASSESSMENT

BEFORE BEGINNING ANY ACTIVITY/TASK/JOB, AFTER A LOSS OR NEAR LOSS, ANY UNUSUAL CIRCUMSTANCES:

ASSESS the risk!
What could go wrong?
What is the worst thing that could happen if something does go wrong?

ANALYZE how to reduce the risk!
Do I have all the necessary Training and Knowledge to do this job properly?
Do I have all the proper Tools and Personal Protective Equipment?

ACT to ensure loss-free operations!
Take necessary Action to ensure the job is done properly!
Follow written procedures! Ask for assistance, if needed!

DO NOT PROCEED UNLESS ALL RISKS HAVE BEEN ADDRESSED!
For Everyone • Every Day • All the Time

Stop Work Authority

It is your responsibility – and you have the authority
Your ideas and concerns are important

We always comply with the Tenets of Operational Excellence shown on the reverse side of this card. As an employee or contractor for Chevron, you are responsible and authorized to stop any work that does not comply with these tenets and there will be no repercussions to you. That is our commitment to you.

Americas Products Leadership Team

10% to scale
6'w x 4'h

The following are additional safety signs and banners that may be required on Chevron development projects

 CAUTION HARD HAT REQUIRED	 CAUTION THE PROPER USE OF PERSONAL PROTECTIVE EQUIPMENT IS MANDATORY	 CAUTION NO SMOKING INSIDE FENCED AREA
NOTICE ALL PERSONS ENTERING SITE MUST REGISTER IN TRAILER	EMERGENCY CONTACTS 911 GENERAL CONTRACTOR: _____ DEVELOPMENT MANAGER: _____ EXXONMOBIL: _____	NOTICE REPORT ALL ACCIDENTS AND INJURIES TO SUPERINTENDENT IMMEDIATELY

Chevron

Ninguna droga legal o ilegal, bebidas toxicas, armas o personas bajo la influencia de drogas, estimulantes o alcohol son permitidas en esta propiedad.

Todas las personas, vehiculos y cualquier articulo que entre o salga de esta propiedad sera sujeto a inspeccion.

Tenets of Operation

1. Always operate within design or environmental limits
2. Always operate in a safe and controlled condition
3. Always ensure safety devices are in place and functioning
4. Always follow safe work practices and procedures
5. Always meet or exceed customers' requirements
6. Always maintain integrity of dedicated systems
7. Always comply with all applicable rules and regulations
8. Always address abnormal conditions
9. Always follow written procedures for high-risk or unusual situations
10. Always involve the right people in decisions that affect procedures and equipment

"DO IT SAFELY OR NOT AT ALL"

"THERE IS ALWAYS TIME TO DO IT RIGHT"

Chevron

8075 Monet Ave.

- Bringing Our Best To Your Neighborhood
- New Extra Mile Market

Visit our closest Chevron Station at:
12659 Foothill Blvd. / North-East I-15

Safety Meetings

As part of developing safe work practices, it is critical to follow a regiment of effective Safety Meetings. These Safety Meetings may include (but are not limited to):

Tailgate/Toolbox Meetings

WorkSafe BC Section	
Safety At Work	Tool Box Meeting Topics
API Section 2.7.3	Topic
2.7.3	Toolbox Discussion
Annex A Section 7	Topic
7.09	Safety Briefing for work crew

Additional Information

To be conducted by GC every workday to review job-specific environmental, health & safety issues pertaining to the work activities for the day. Of particular note should be the day's Self-Permitted Activities (see Self-Permitted Activities section for more guidance). Tailgate meetings can be conducted on-site or in-shop depending on project type, with all applicable workers, including subcontractors and other vendors. **As a reminder, GC is responsible for all vendors performing Franchise and/or Image tasks on Chevron premise.**

All documentation for tailgate/toolbox meetings should be kept in GC's safety files, including:

- Topic(s)
- Attendance Sheet
- Questions/comments/meeting minutes

Some possible resources where you can obtain free Toolbox Meeting Topics:

- <http://www2.worksafebc.com/Portals/Construction/ToolboxMeetingGuides-Index.asp>
- www.ToolboxTopics.com
- www.csdsafety.com/weekly.asp

Job Sign-in

API Section 2.7.1	Topic
2.7.1	Check-in/Work clearance

In order to help ensure this daily safety information is being reviewed, the following processes will be followed for every project:

- Contractor and sub-contractor must advise the station operator/personnel of their presence before work is performed.
- JOBSITE SIGN-IN PROCESS** For both Controlled and Limited Access Projects – The GC is required to have daily activities posted (including self-permitted activities) with a corresponding sign-in/sign-out sheet for ALL workers/visitors to the site to acknowledge their understanding of the site activities and safety guidelines. A designated safety table or bulletin board or designated area in a job shack is recommended. API Appendix B.2 provides an example Daily Site Safety Record (site register of everybody entering the site).

Program “Kick-Off” Meetings & Annual Meetings

Depending on the program/project type, Chevron may conduct Safety Meetings to commence a construction program, development project or annual Safety Meetings to commence a new year of activity for a construction program and or Contractor Forum to share best practices or provide updates to the Contractor Safety program. Your Chevron Project Manager will advise you of these meetings as they are planned.



Site Safety Plan

The Site Safety Plan is intended to ensure all Chevron construction projects have at least a base level of information ON-SITE for use in case of emergency or incident. Information to be included (at minimum):

- Chevron Location
- Emergency contact names and telephone numbers
- Utility marker emergency telephone numbers
- Directions to nearest hospital along with directional map

This information must be posted on a store front or other surface near the exclusion zone or on the designated safety table or bulletin board. Contractors shall post direct phone numbers for emergency contacts in addition to 911 due to regional differences of how cell phone providers handle 911 calls. While 911 may be the first call in an emergency, a direct and local backup number for emergency contacts shall be available.

Hazardous Communications

WorkSafe BC 5.3	Topic
5.5	WHMIS – Workplace Hazardous Materials Information System
5.6, 5.7	Worker Education - Training
5.8.	Supplier Label
5.10	Workplace label for decanted products
5.11	Piping systems and vessels
5.12	Placard identifiers

API Section 6	Topic
6	Hazard Communication
6.1	Requirements related to “employee right-to-know”
6.2	Hazard determination and mitigation
6.3	Chemical list requirements
6.4	Hazard types
6.4.1	Physical Hazards
6.4.2	Health Hazards
6.4.3	Exposure Limits
6.4.4	Acute versus chronic health effects
6.4.5	Route of chemical entry into the body
6.5	Hazard labels
6.6	References

Annex A Section 12.04	Topic
12.02	Hazard Communication

Additional Information

An emergency response is a response to an incident that has—or is likely to have—an adverse impact on one of the following:

- Chevron Canada Limited - CCL
- The public
- The environment

Those responding to an emergency are Chevron employees and/or other designated responders, such as mutual-aid groups or fire departments. In the event of an emergency, it is your responsibility to yield to Chevron responders, mutual aid groups or fire departments.

WorkSafe BC	Topic
5.14	MSDS
5.16	MSDS Availability

API Section 6.2	Topic
6.2	MSDS

Annex A 12.03	Topic
12.03	MSDS

Additional Information

Contractors and subcontractors shall maintain Material Safety Data Sheets (MSDSs) for all chemicals and other hazardous materials used in performance of the work, and shall perform all work consistent with the use specifications and other information in such MSDSs. MSDSs shall accompany chemicals and other hazardous materials at all times. Some examples of MSDS's required on site are:

- Paint
- Cleaners & solvents
- Lubricants
- Glues & adhesives

MSDS sheets may be obtained online or directly from the manufacturer/distributor.

Explosives and Hazardous Materials

Annex A 12.00	Topic
12.01	Explosives and hazardous materials
12.02	Storage, transportation, security and handling

Translation to Other Languages

If you require translation of this document or other safety documents into another language, you may want to go to the following resource:

www.FreeTranslation.com

Summary of Safety Checklists & Processes

Checklist or Process	Completed By	Daily	Weekly	Monthly	Other
Near-Loss Reporting	Contractor / Chevron PM	Report to Chevron PM Immediately			
Loss Reporting	Contractor / Chevron PM	Report to Chevron PM Immediately			
Tailgate Meetings	GC	Yes			
Toolbox Meeting	GC		Minimum		
Job-Site Sign-In Sheet	GC	Yes			
Project Site Safety Plan	GC				Prior to Project Commencement (or as needed)
Confined Space Form	Contractor				As Necessary
Excavations/ Trenching	Contractor				As Necessary

Lockout/Tagout Form	Contractor				As Necessary
Hot Work Form	Contractor				As Necessary
Scaffolding	Contractor				As Necessary
Work at Heights	Contractor				As Necessary
Rigging Hoisting & Lifting	Contractor				As Necessary
Energized Electrical	Contractor				Not Typical
Job Safety Analysis (JSA)	Contractor and or Chevron PM				Prior to Project Commencement (or as needed)

Checklist or Process	Completed By	Daily	Weekly	Monthly	Other
Loss Performance Self Assessment (LPSA)	All Personnel	Yes			
Stop Work Authority (SWA)	All Personnel	As Needed	As Needed	As Needed	
PPR Evaluation	Chevron PM				Minimum once per project - Development
Work In Progress (WIP)	Chevron PM				Minimum once per project - Development

Chevron's Safety Questionnaire and Communications

Annex A Section 23.00	Topic
23.00	Safety Reports
23.01	CHESM Safety Questionnaire and PPR Review
23.02	Report of Total man hours worked

Additional Information

Chevron M&C, Retail Automation, C&I or other groups within Chevron may occasionally request the completion of a questionnaire by your company. We ask that you make this a priority and respond in a timely manner.

Simultaneous Operations (SIMOPS)

SIMOPS is defined as when two or more work activities occur at the same time in close proximity. SIMOPS shall be discussed at tailgate meetings prior to beginning the day's work. A point of verification of this has been added to our General Work Permit form. (Conduct discussion with group; focus on communication) The lead GC is responsible for SIMOPS discussions and insuring that appropriate planning occurs.

Examples:

Multiple contractors performing work at the same time and at the same location

Multiple work trades being performed at the same time at the same location

Multiple events being performed at the same time at the same location; perhaps the same equipment

Section 6 – Safe Work Practices

This safe work practices section addresses the requirements from Chevron Americas Products Safe Work Practices Standards. Chevron Annexes to the Master Contract Agreement (Annex A and Annex B), API Safe Work Practices Document 1646. WorkSafe BC, British Columbia Fire Code. Contractors in Alberta must understand their obligations under WCB of Alberta and other Provincial Requirements. Below are highlights only and is not intended to be a complete list of safety protocols.

Notice of Project (NOP) Form – Required for all Construction and demolition project.

Fire Protection

Work Safe BC Section 4.16	Topic
4.16	Fire Prevention Training and Evacuation

BC Fire Code Section – Mult.	Topic
2.8.2	Fire Safety Plan
4.1.5	Fire Prevention and Protection
6.0	Fire Protection Equipment

API Section 2.8	Topic
2.8	First line fire response
2.8.1	Classification of fire extinguishers
2.8.2	Inspection, maintenance and service of fire extinguishers
2.8.2.1	Fire extinguisher inspection
2.8.2.2	Fire extinguisher service / certification
2.8.3	First line fire response

Annex A Section 13.00	Topic
13.00	Fire Protection
13.01	Precautions
13.02	Disposal of combustible materials
13.03	Transportation and storage of flammable liquids
13.04	Filling portable fuel containers
13.05	Tampering and altering of fire protection equipment
13.06	Hydrants and or main water valves
13.07	Reporting of leak and or gas around piping or vessels
13.08	Use of cleaning solvents
13.09	Safety and fire protection training
13.10	Fire protection equipment
13.11	Fueling of combustion engines
13.12	In case of fire - safety of personnel
13.13	In case of fire - shut down of equipment
13.14	Equipment permitted inside tank dike

Contractors and sub-contractors must ensure that fire protection equipment is readily available on service vehicles and in proximity to work being performed at Chevron facilities.

The contractor shall supply sufficient fire extinguishing equipment to handle any anticipated emergency related to their work and ensure that the extinguisher is charged prior to each work day or shift.

Contractor employees shall be familiar with the proper use of fire extinguishers and firefighting equipment. Firefighting equipment must be used only for its intended purpose.

Do not block access to firefighting equipment or apparatus with vehicles or material. Access to fire extinguishers must be kept open. Know the location of firefighting equipment in your area.

A 20 lb. minimum capacity ABC dry chemical fire extinguisher shall be placed near any work activity that may be a source of ignition. All welding machines are to be equipped with a 20 lb. minimum capacity ABC dry chemical fire extinguisher.

A fire extinguisher must be mounted and readily accessible in the contractor's site office.

Any fire that has been extinguished, no matter how small, must be reported to both the contractor and CCL representative.

A fire safety plan is required for all construction and demolition sites per BC Fire Code. (ref above)

Facility Operations

WorkSafe BC Section 4.16	Topic
4.16	Training – Emergency Evacuation Procedures

API Section 2.7	Topic
2.7	Facility operations and how to manage your activities safely within them
2.7.1	Check-in/Work Clearance
2.7.2	Evacuation Procedures

Annex A Section 3.00	Topic
3.00	Entrance to Property
3.01	Security Requirements
3.02	Authorized Personnel

Environmental Considerations

API Section 2.3.1	Topic
2.3.1	Environmental Considerations

API Section 2.4	Topic
2.4	Regulatory Requirements and Reporting

API Section 2.5	Topic
2.5	Chain of command for non-regulatory required reporting and notification procedures

Annex A Section 18.00	Topic
18.00	Environmental Protection
18.01	Pollution Prevention
18.02	Impacts to the local environment
18.03	Assessing environmental hazards
18.04	Disposing of rubbish and waste materials
18.05	Disruption of local wildlife
18.06	Removal of trees and vegetation
18.07	Use of above ground steel tanks
18.08	Secondary containment of above ground storage tanks
18.09	Protection of waterways and land
18.10	Protection of fossils and antiques
18.11	Compliance with all Federal and Local law, rules, regulations, policies and guidance documents

Additional Information

Contractors and subcontractors shall prevent spills or releases of oil or chemical substances on land, water or air and all other requirements listed in Annex A Section 18.00. Pollution prevention will be a routine part of all business and work activities. Chevron Project Manager and contractors must follow-up and ensure that all waste manifests and other documentation is forwarded to the HES Waste Tracking desk in Vancouver (C&I HES Specialist) and that all Federal, Provincial, and Local requirements are being met.

Smoking, Alcohol, Gambling, Fighting, Drugs, and Weapons

API Section 2.9	Topic
2.9	Basic prohibitions regarding smoking, gambling, fighting, drugs, alcohol, and weapons

Annex A Section 5.00	Topic
5.00	Smoking
5.01	Smoking designated areas
5.02	Smoking in unauthorized areas
5.03	Smoking in company aircraft

Annex A Section 6.00	Topic
6.00	Matches and lighters

Annex A Section 19.00	Topic
19.01	Company's Drug and Alcohol Policy
19.03	Firearms and ammunition

Annex B Drug, Alcohol, Firearms	Topic
1.1	General Requirements
	Drug Testing Procedures
	Violation of the Policy
	Definitions
1.2	Health and Safety – Alcohol and Other Drug Use
	Policy Philosophy
	Scope
	Fitness for Duty and Applicable Rules
	Illicit /Illegal Drugs
	Alcohol
	Medications and Other Substances
	Searches and Alcohol and Drug Testing
	Prevention, Assessment/Rehabilitation, Aftercare
	Policy Violation and Discipline
1.3	Drug, Alcohol, and Search Policy for Canadian Operations
	Notice to Suppliers
	Search
	Notification of Search and/or Test by the Supplier & Definitions

Annex B 2	Topic
	Drug, Alcohol and Firearms Search

Annex A Section 19.08	Topic
19.08	Removal of persons from the worksite

Critical Equipment

API Section 2.3.	Topic
2.3.	Critical Equipment and Environmental Considerations

API Section 2.3.2	Topic
2.3.3	Critical Equipment

Additional Information

Critical equipment is any equipment that could adversely impact the safety or economy of the service station, cardlock or the surrounding community should the equipment fail. Examples of critical equipment include:

- Pumps
- Monitoring devices
- Sensors
- Leak Detectors
- Emergency Systems and Controls
- Fire Extinguishers
- Shear Valves
- Hose Breakaways

New service station equipment must be fabricated in accordance with recognized and generally accepted good-engineering practices. This includes:

- Chevron Canada Limited standards for retail and C&I facilities
- Codes and standards published by:
 - NFPA
 - ASTM
 - ANSI
 - API
 - CSA
 - Etc.

The frequency of inspections and tests is consistent with:

- Manufacturer's recommendations
- Good engineering practices
- Operating experience
- Compliance requirements

Frequency of inspection will be adjusted, if necessary, based on experience.

The type of inspection can be either:

- A simple visual inspection
- One of the following tests:
 - Electronic
 - Mechanical
 - Precision test (required for a product tank)

Traffic and Vehicle Safety

WorkSafe BC Section 17.1	Topic
17.1	Transportation of Workers
16.8	Warning signal device

API Section 5	Topic
5	Driving Safety
5.1	Vehicle regulations and State requirements
5.2	Use of seat belts
5.3	Companies' driving procedures
5.4	Mobile phone procedures
5.4.1	Mobile phones while driving
5.4.2	Speaker phone or hands - free phones
5.4.3	Multitasking while driving
5.5	Proper places to park while on the site
5.5.1	Parking
5.5.2	Backing Hazards
5.5.3	Entering and exiting vehicles
5.6	Defensive driving practices
5.6.1	Distractions
5.6.2	Fatigue
5.6.3	Defensive driving
5.6.4	Alcohol and drugs while driving
5.6.5	Passengers
5.7	Posted speed limits
5.8	Traffic patterns
5.9	Heavy traffic and pedestrians patterns to and from inside store

5.10	Personal protective equipment
5.11	Accident reporting and procedures
5.12	Department of Transportation requirements

Annex A Section 4	Topic
4.00	Traffic and Vehicles
4.01	Following Posted Speed Limit
4.02	Speed limits and traffic signs
4.03	Seat belts
4.04	Cell phones, two way radios and pagers
4.05	Parking
4.06	Safe loading limits
4.07	Safe operations and qualifications

Additional Information

Cell Phone Use: Chevron prohibits contractors and subcontractors from using a cell phone, whether hand-held or hands-free, while driving or operating heavy equipment on Chevron property.

Journey Planning: Know your route prior to operating a vehicle. Where are the construction site entrances and exits, dirt piles, tank holes and heavy equipment operating? A map displaying the route to the nearest medical facility is required to be on site at all times (see Site Safety Plan sample form).

Parking of Vehicles: Contractor vehicles must be parked in authorized areas only. Parking in reserved areas, loading zones, sidewalks, roadways, yellow curb zones, or disabled person parking spaces is prohibited. Improperly parked vehicles will be cited, and may be towed. Vehicles should be parked in such a manner that the first move is forward when the vehicle is used next. Pull through parking is preferred to minimize the need for backing. If a pull through opportunity does not exist, Chevron prefers work vehicles to back into parking stalls. Statistics show a substantial amount of motor vehicle crashes are directly related to backing out. Backing a vehicle to move across a substantial distance should be avoided.

Backup Alarms: All haulage vehicles, such as backhoes, dump trucks and ready-mix rigs must be equipped with audible alarms that sound continuously while the vehicle is backing up.

Site Housekeeping

WorkSafe BC Section 4	Topic
4.39	Slipping and Tripping Hazards
4.40	Wet Floors
4.14	Access to emergency exits

API Section 2.10	Topic
2.10	Good Housekeeping Practices

Annex A Section 16.00	Topic
16.00	Housekeeping
16.01	Good Housekeeping, tripping hazards marked
16.02	Access to emergency exits

Keep the area where you are working clean and free of rubbish and debris. Accidents typically occur less often in areas with good housekeeping. Work areas must be kept neat and orderly at all times. Additionally, Chevron would like to point out:

- Clean up spills immediately
- Deposit trash into appropriate container. **DO NOT USE STORE DUMPSTER.**
- Place oily rags and container that have contained paint or other flammable or combustible liquids into properly labeled metal receptacles
- Keep walking areas clear of obstructions and tripping hazards
- Keep driveway areas clear for emergency vehicles
- Do not block emergency shutdown switches or fire protection equipment
- Job or project debris and scrap materials must be cleaned up on a regular basis – especially when leaving for breaks, lunches, or at the end of a work shift.
- At the end of each work shift, clean up all project debris and place in appropriate container.

PPE – Personal Protective Equipment

WorkSafe BC Section 8	Topic
8.1	Responsibility to provide
8.3	Selection use and maintenance
8.11	Safety headgear
8.14	Safety eyewear
8.17	Face protection
8.22	Footwear
8.24	High visibility apparel
8.32	Respiratory protection
8.19	Limb and body protection
8.4	Work place evaluation for PPE

API Section 3	Topic
3	Personal Protective Equipment (PPE)
3.1	Use of PPE
3.1.1	PPE Descriptions
3.1.1.1	Eye Protection
3.1.1.1.1	Chemical Goggles
3.1.1.1.2	Face Shields
3.1.1.2	Head Protection
3.1.1.3	Foot Protection
3.1.1.4	Hand Protection
3.1.1.5	Body Protection
3.1.1.6	Hearing Protection
3.1.1.7	Hearing Tests
3.1.1.8	Respiratory Protection
3.1.1.8.1	Medical Clearance
3.1.1.9	Fall Protection
3.1.1.10	Fire Resistant Clothing
3.2	Potential environmental hazards
3.2.1	Noise
3.2.2	Splashing
3.2.3	Fire
3.3	Consequences of ignoring of PPE requirements
3.4	Engineering controls
3.5	Requirements for respirator program
3.5.1	Requirements for all workers
3.5.1.1	Single-Use disposable mask
3.6	References

Annex 15.00	Topic
15.00	Personal Protective Equipment (PPE)
15.00	Personal Protective Equipment
15.01	PPE Requirements, local and facility requirements
15.02	PPE Use training and documentation
15.03	Fall Protection maintained as per manufacturer recommendations
15.04	Provide appropriate fall protection rescue equipment and training

Contractors must consider the hazards on site and select the PPE appropriate for protection against the hazards. The type of equipment required will be determined by each contractor and/or vendor (based on the degree of exposure to the hazard) based on Federal, Provincial and local requirements as well as NFPA, API Work Safe and this Contractors Safety Program. See also Electrical Requirements in this document.

The PPE required to do the job safely must be identified on the General Work Permit.

Work should not be performed if proper Personal Protective Equipment is not available and used. THERE IS ALWAYS TIME TO DO IT RIGHT!

Tools Selection

WorkSafe BC Section 12	Topic
12	Tools machinery and equipment

API Section 4	Topic
4	Tools Selection
4.1	Proper use, function, and care of hand, pneumatic, and power tools
4.2	Safe working limits of hand, pneumatic, and power tools
4.2.1	Overloading
4.2.2	Do not defeat safety features of tools
4.3	Hand, pneumatic (air), and power tool safety features
4.3.1	Blade wheel guards
4.3.2	Pressure switches
4.3.3	Air Hose Connections
4.4	Safety requirements for surrounding areas when hand, pneumatic, and power tools are used
4.5	Training requirements for hand, pneumatic, and power tools
4.6	Visible wear or damage to hand, pneumatic, and power tools that make maintenance or replacement necessary
4.7	Use of GFCI outlets and extension cords
4.8	References

Annex A Section 19.00	Topic
19.04	Maintenance and operation of safety equipment
19.05	Training and qualification to perform work
19.07	Preventative Maintenance Program

Additional Information

Use tools appropriate for the job and for any existing hazardous conditions:

- Do not use defective tools or subject tools to undue stress
- Never use tools for purposes other than intended use
- Only adjust, start or operate tools you are authorized and trained to use
- Thoroughly clean all tools after each use involving corrosive materials
- Use ladders that are appropriate for the intended use and are equipped with safety feet.

Barricading

WorkSafe BC 18	Topic
18.1	Definitions
18.2	Responsibility
18.3	Standards for traffic control
18.4	Supervision
18.5	Placement of traffic control signs and devices
18.6	Use of a traffic control person
18.7	Traffic control person to remain on duty
18.8	Location of traffic control persons
18.9	Equipment for traffic control persons, daytime operations
18.10	Equipment for traffic control persons, night time or poor visibility
18.11	Traffic control equipment maintenance, PPE
18.12	Directions and signals by traffic control persons, precise motions
18.13	Standard signals between traffic control persons
18.14	Standard signals for traffic control
18.15	Dust control
18.16	Long periods of delay for traffic
18.17	Towing and recovery operations

WorkSafe BC 4	Topic
4.54	Work area guards and hand rails
4.58	Specification for guard and guard rails
4.59	Floor and roof openings

API Section 8	Topic
8	Barricading
8.1	Traffic patterns (vehicular, foot traffic, peak periods, delivery trucks)
8.2	Entrances/exits to sites
8.3	Types of barricades
8.3.1	High foot traffic areas
8.4	Traffic control by regulatory authorities
8.5	Work area isolation planning
8.5.1	Establishing the work area
8.5.2	Guidelines for use of barricades
8.6	Personnel requirements
8.7	Personal protective equipment


Annex A Section 21.00	Topic
21.01	Barricades and open holes, warning signage
21.03	Barricading compliance

A barricade warns, deters, and limits access to a hazardous area. All contractors and Sub contractors must provide proper barricading for all work activities, particularly at a limited-access work area (operating location). Use barricades appropriate to the existing hazardous conditions.

For Controlled-Access Projects (typically closed locations):

- 6' Chain link post-mounted fence around perimeter with controlled gates is required during construction
- Conform to ANSI D6.1-1971, Manual on Uniform Traffic Control Devices for Streets and Highway Standards
- Display Chevron-specified warning signs


For Limited-Access Projects (operating locations), barricading must:


-  Be clearly visible by car drivers (no less than 42" high)
- Act as an obstruction for the protected area
- Conform to ANSI D6.1-1971, Manual on Uniform Traffic Control Devices for Streets and Highway Standards
- Display Chevron-specified warning signs

General Information:

- Advise station personnel when a barricade is to be installed
- Do not enter a barricaded area unless authorized by a supervisor or a contract foreman
- Place flashing lights and reflectors on all barricades that are left overnight
- When working on or near gas dispensers, barricade both sides of the pump island

Acceptable Barricading Techniques:

- Service vehicle(s)
- Traffic Cones
- Saw-horse barricade with a portable sign
-  Delineators (≥ 42 " tall) -- small cones are NOT acceptable
- Chain Link post-mounted fencing
- Other fencing products meeting the intent of these Guidelines. eg: orange safety fencing

-  **Chevron Global standard is that all delineators be at least 42" tall, large flags can be used on top of smaller cones.**

Health

WorkSafe BC Part 7	Topic
7	Division 1 noise exposure

WorkSafe BC 5	Topic
5.48	Exposure limits
WorkSafe BC Part 8	Topic
8.42	Medical assessment

WorkSafe BC Part 4.19	Topic
4.19	Physical or mental impairment

Annex B	Topic
Exhibit 1.2	Health and Safety – Fitness for Duty

API Section 3.1.1.7	Topic
3.1.1.7	Required Hearing Test

API Section 3.1.1.8.1	Topic
3.1.1.8.1	Medical Clearance

API Section 3.5.1	Topic
3.5.1	Medical Clearance

Additional Information

Fitness for Duty is a process to ensure that persons can safely perform essential physical, psychological, and cognitive requirements of their job without risk to self, others, or the environment.

- Contractor and sub-contractor must be aware of medical condition and medications that can impede worker's performance/capacity to perform job in a safe, reliable, and efficient manner. (WorkSafe BC 4.19)
- This applies to the Drug and Alcohol policy; please see the Smoking, Alcohol, Gambling, Fighting, Drugs and Weapons section.

Fuel Deliveries

API Section 2.11	Topic
2.11	Hazards of Fuel Deliveries

Pressure Testing

Annex A Section 11.00	Topic
11.00	Pressure Testing
11.01	Pressure Testing requirements

Self Permitted Activities

Self-Permitted Activities are work activities common to Chevron facilities and pose the most potential hazard. Understanding these potential hazards will better prepare you for a safe workspace. API, Federal, Provincial, and local requirements will supersede any conflicting information in this section. Typical Chevron projects will have various Self-Permitted Activities such as: Hot Work, Lock-out/Tag-Out, Trenching and Excavation, Rigging, Hoisting, Lifting and Confined Space Entry, Working at Heights and Electrical Work. See Chevron's Retail General Work Permit and forms in the forms section. (Contractors shall use this General Work Permit and high risk forms when performing permit required activities on site).

Self Permitted activities shall only be performed by Chevron contractors in good standing with acceptable safety records and Sub Contractors certified and trained by General Contractor on Chevron Self Permitting requirements and approved by Chevron. Project Managers or other Chevron Representative may review the Self Permitting Form prior to the start of any Self Permitted work to verify that all the requirements for the activity have been fully addressed. General Contractors are required to ensure they have enough permit issuers and qualified gas testers to adequately cover permitting at all remote sites

API certification or use of Chevron Work Permit and high risk work forms does not make one certified or competent to sign off on Self Permitting Activities, furthermore, all Federal, Provincial and local requirements must be met.

API Section 2.15	Topic
2.15	Permit-to-work requirements, where applicable

API Section 2.16	Topic
2.16	References

Annex A Section 7.00	Topic
7.00	Work Permits

Annex A Section 7.04	Topic
7.04	Self Permitting by Contractors
7.05	Self Permitting Contractors provide adequate gas detection equipment
7.06	Adequate number of trained Permit Issuers and Gas Testers
Annex A Section 24.00	Topic
24.01	Training, documented, proof of completion

Chevron Self Permitting

Contractors performing work for Chevron Americas Products M&C, Retail and C&I operations shall use Chevron's Work Permit and Form. A General Work Permit and associated High risk form(s) will be required for all work identified as High risk or non routine. The additional high risk forms are required for work that encompasses Hot Work, Lock Out Tag Out, Trenching and Excavation, Rigging and Hoisting, Confined Space Entry, Working at Heights, Energized Electrical Work.


General permit and high risk forms must be posted in an area that is generally visible while the work is being conducted. A signature line has been included on the General Permit for the Store Manager or 2 IC (Second in Command) representative to sign indicating that the Store Manager and the Contractor have discussed work activities covered by the permit and that both will coordinate Safe Operations for store staff and customers. API offers Self Permit forms as part of the API safety program however; **Chevron will require use of its permit and forms for High risk work.** Verification that Simultaneous Operations (**SIMOPS**) has been addressed and has been added to the General Permit form.

GC Self Permitting responsibilities for Sub Contractors

Sub contractors are not approved to self permit unless they have been certified by the General contractor and then approved by Chevron prior to the self permitting. Certification includes review of the Chevron Self Permitting process and the Chevron specific requirements covered in this Contractor Safety Program, validation of training and competency by GC. General Contractor should have a plan for selecting and managing Sub Contractors to ensure Chevron HES expectations are being followed. GC should also ensure Sub Contractor(s) have valid API certification and have reviewed the Self Permitting High risk awareness documents located on the Chevron M&C web site at: <http://www.chevronwithtechron.com/safeworkpractices/maintenance-construction/default.aspx> Once Sub contractor has been certified by the General Contractor approval must be obtained through the Chevron Contract Owner. General Contractor must maintain a list of certified and approved Sub contractors that can self permit and provide to Chevron upon request proof that training has been completed and is being maintained.

Recordkeeping

The General Work permit and related high risk forms shall be retained by the Contractor for a minimum of 1 year. Permits shall be made available for inspection by Chevron or a Chevron representative at any time.

 Contractor shall maintain a current list of approved, qualified, and experienced self permit issuers and permit approvers and relevant records in each respective self-permitted activity; the list shall be made available at all times and upon request. At various times, Chevron will request an up to date list of permit issuers, permit approvers and training records. For Contractors using ISNetwork, this list of current self permit writers must be kept updated at all times.

General Work Permit Numbering Sequence

Each General Work Permit must have a unique number. The numbering sequence shall be in the following format: Chevron Facility ID-Date (day/mo./yr.)-Time (24 hour format). Example: 1577-030307-1630.

Additional Requirements

Competent Person – A competent person is defined as a person trained in the specific work activities and regulatory requirements and capable of identifying existing and predictable hazards in the surroundings, or working conditions that are unsanitary, hazardous, or dangerous to employees. The competent person is authorized to take prompt corrective measures to eliminate existing and predictable hazards and to stop work when required. The competent person is not authorized to enter the excavation area while performing entry watch responsibilities.

Approved - Sanctioned, endorsed, accredited, certified, or accepted as satisfactory by a duly constituted and nationally recognized authority or agency.

Authorized person - A person approved or assigned by the employer to perform a specific type of duty or duties or to be at a specific location or locations at the jobsite. (designated)

Qualified Person: - One who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training, and experience, has successfully demonstrated his ability to solve or resolve problems relating to the subject matter, the work, or the project.

Gas Detection

Annex A Section 7.01	Topic
7.01	Gas Detection requirements
7.02	Gas detection and Hot Work
7.04	Adequate number of trained Permit Issuers and Gas Testers
7.05	Gas Detection equipment calibration and bump test records
7.06	Authorized Gas Testers for remote locations

While on its own, Gas Detection is not a Self-Permitted activity, it can apply to Trenching and Excavation and is required on Hot Work and Confined Space Entry activities.

This section applies to all Company and/or contractor personnel performing portable Gas Testing at any Global Marketing facility/property and/or any joint venture operation, where Chevron is the managing company. All gas testing required by the permit to work process must be performed by a Qualified Gas Tester or under their direct supervision. When performing gas testing before entry into a Confined Space the gas testing device must be able to test at top, middle and bottom of the Confined Space.

This section describes the selection of portable gas detection instruments and the minimum tests that must be conducted in the following situations:

- Before performing hot work (including Vacuum Truck activities)
- Before entering a confined space

This section does not apply to fixed gas detection devices or systems.

Bump Test (Response Check) – A functional check on test instruments prior to use. Test instrument sensors are briefly exposed to manufactures test gas concentrations to confirm that instrument is within calibration range and alarms work at appropriate set points. Bump tests may also be conducted after conducting gas tests, in addition to the prior use test, to confirm the functionality of the instrument. If the instrument does not respond correctly it must be Field Calibrated.

Classified Hazardous Area – Any area classified as a hazardous zone area (Zone 0, 1, 2 or Class I, Division 1 or 2) in accordance with API RP 505/API RP 500 or other equivalent local standards.

Combustible Gas Indicators – Meters using a filament heated or coated with a catalyst that reacts with flammable vapor. The reaction causes a change in the filament temperature, which registers on the meter's readout. Typical instruments using the combustible gas indicator method include instruments normally known as "LFL/LEL explosion meters/vapor testers".

Continuous Gas Testing – A process whereby the required gas tests are continuously monitored. Continuous gas testing is normally required where there is a high likelihood of changing gas concentrations and/or there is a high risk to workers if the gas concentration changes unexpectedly. Continuous gas testing is required whenever workers are wearing supplied air respiratory protection or SCBAs inside a confined space and at any other time required by the work permit or JSA or both. Testing may be stopped if the worker is performing activities that can affect the instrument, such as water washing, steam cleaning or sandblasting. Periodic testing, however, must still be conducted

Note: Where continuous monitoring is performed, results shall be recorded on the relevant permit documentation at a minimum of once every 4 hours.

Field Calibration – A periodic physical test of gas testing equipment to ensure that the testing element sensors and alarms are working within prescribed limits. Field calibration tests differ from Bump Tests in that the instrument is reset to the 'optimum' reading as opposed to ensuring the instrument is within the calibration range. Field calibration must be done at least monthly and documented. Instrument "self-tests" do not constitute field calibration.

Follow Up Testing – Performed after initial testing at intervals sufficient to ensure that the atmosphere remains safe for the work being performed. Follow-up tests must be performed whenever work has been stopped for more than 30 minutes, whenever operating conditions change, or at least every four hours.

Gas Testing – Use of portable detection equipment, including detector tubes and combustible gas indicators, to determine levels of oxygen and flammable or toxic vapors and gases

General Work Permit – The form used by the Permit Issuer to grant personnel permission to perform work at a facility that does not involve hot work and/or entry into a confined space.

Hazardous Atmospheres – Atmospheres that expose employees to the risk of death, incapacitation, impaired ability to self-rescue, injury, or acute or chronic illness. Caused by any of the following:

- Flammable gas, vapor, or mist in excess of 10 percent of its lower flammable limit

- Atmospheric oxygen concentration below 19.5 percent or above 23 percent
- Atmospheric concentration of any substance that could result in employee exposure in excess of its dose or Time Weighted Average (e.g. benzene, hydrogen sulfide, etc.)
- Any other atmospheric condition immediately dangerous to life or health

Initial Gas Testing – First gas test taken to determine:

- Requirements for entry
- If the space is safe for hot work

Job Safety Analysis – A Job Safety Analysis (JSA) is a process where a job task is broken down into the sequence of steps required to perform the task, the potential hazards/risk for each of these steps are determined and the controls necessary to eliminate or mitigate the risk are developed.

LFL/LEL Explosion Meter – An instrument used to measure the lower flammable limit (LFL) or explosive limit (LEL) of a flammable substance. *See also Combustible Gas Indicator*

Lower Flammable Limit – The lowest mixture of hydrocarbon vapor and air that will support combustion. Typically indicated on gas testing equipment as “100%”. Sometimes referred to as “LEL” or “lower explosive limit”.

Manufacturers Calibration – A periodic physical test of gas testing equipment conducted by the equipment manufacturer or nominated representative to ensure that testing element sensors are working within prescribed limits and to check other critical instrument operations. Manufacturer calibration should be done according to manufacturer’s specifications as described in the owner’s manual or at least annually, whichever is more frequent. Manufacturer calibration should also be done when instrument does not pass Field Calibration.

Oxygen Monitor – A device containing an electrochemical sensor that detects oxygen and is used for measuring the percentage of atmospheric oxygen. As the amount of atmospheric oxygen increases or decreases, the electrical current fluctuates and produces a signal, which is sent to the instrument’s meter.

Time Weighted Average – An exposure limit to a chemical as established by ACGIH and/or a local and Provincial regulatory authority. (WorkSafe BC 5.48) May be either a:

- Time weighted average limit – 8 hour (e.g. TWA or STEL)
- Maximum concentration exposure limit (e.g. Ceiling)

Permit Issuer – A competent and trained individual who has been authorized by the Contractor to complete, review and issue the various types of work Permits and work forms for the assigned area.

Qualified Gas Tester – A person, either contractor or sub-contractor employee, who has been trained in the use of portable gas testing equipment and has successfully demonstrated its use in the field. Must be trained in gas detection principles and be able to recognize hazards inherent in hot work and confined space entry. Only qualified gas testers are permitted to conduct gas tests.

Responsible Party – A competent individual trained in the Isolation process and who has responsibility for assigned areas, the facility, or a project, as well as any permitted work performed within that area.

Safe Atmosphere – An atmosphere that meets all the following requirements:

- Is safe for a person to work in without wearing respiratory protection (i.e. no toxic or hazardous vapors and sufficient oxygen)
- Where no flammable vapors are detected within 15 meters (50 feet) of a site where hot work will be performed

Situations Requiring Gas Testing

The following work activities require gas testing:

- tests prior to general work in an area where hazardous atmospheres may exist
- tests prior to hot work in a classified hazardous area

- tests prior to confined space entry
- follow-up tests
- continuous testing
- and any other situation where the need for a gas test has been determined

Self-Permitted Activity - Working at Heights

WorkSafe BC Section 13	Topic
13 Division 1	General
13 Division 2	Ladders
13 Division 3	Work Platforms
13 Division 4	Scaffolds
13 Division 5	Movable work platforms – Motorized lifts

WorkSafe BC Section 11	Topic
11.1	Definitions
11.2	Use of fall protection
11.3	Fall protection plan
11.4	Selection of harness or belt
11.5	Equipment standards
11.6	Anchors
11.7	Temporary horizontal life lines
11.8	Certification by engineer
11.9	Inspection and maintenance
11.10	Removal from service

API Section 7	Topic
7	Working at Heights
7.1	Working-at-height equipment selection
7.2	Use of any mobile apparatus used for working at heights
7.2.1	Wheeled Scaffolds
7.2.2	Aerial Lift (Cherry Picker, Bucket Truck)
7.2.3	Scissor Lift
7.3	Inspections for equipment used when working at heights
7.3.1	Ladders
7.3.1.1	Ladders with defects
7.3.1.2	Removing ladders from service
7.3.1.3	Ladder repairs
7.3.2	Scaffolds
7.3.3	Aerial Lift (Cherry Picker, Bucket Truck) w/t OSHA references
7.3.4	Scissor Lifts
7.3.5	Fall protection equipment
7.4	Prevention/protection systems for working at heights
7.4.1	Fall prevention system
7.4.1.1	Properly constructed guardrail
7.4.1.2	Parapet wall meeting the same requirements as a guardrail system
7.4.1.3	Properly constructed safety net system
7.4.2	Fall protections systems
7.5	Electrical hazards impacting working at heights
7.5.1	Overhead electrical hazards
7.6	Ladder positioning and use
7.6.1	Ladder positioning
7.6.1.1	Unstable soil conditions

7.6.1.2	Ladders on slippery surfaces
7.6.1.3	Falling objects hazards
7.6.1.4	Ladders in traffic flow
7.6.1.5	Protection of the public
7.6.1.6	Non-self supporting ladders
7.6.2	Ladder use
7.6.2.1	Loads
7.6.2.2	Purpose
7.6.2.3	Oil & grease
7.6.2.4	Top step
7.6.2.5	High work access
7.6.2.6	Climbing
7.6.2.7	Moving / shifting
7.6.2.8	Horizontal reach
7.6.2.9	Visual restrictions
7.6.2.10	Prohibited ladders
7.7	Use of Personal Protective Equipment and Tie-off Points
7.7.1	Use of fall arrest equipment
7.7.1.1	Personal fall arrest system
7.7.1.2	Operational requirements
7.8	Barricading/protecting/isolating work environment
7.9	References
Annex A Section 2.07	Topic
2.07	JSA for Medium or High risk work
Annex A Section 7.08	Topic
7.08	Work at Heights requirements and definition > 6 feet
7.09	Self Permitting Contractors and required safety briefing
Annex A Section 15.04	Topic
15.04	Appropriate Fall protection and rescue equipment

Working at Heights

All work at height must be permitted and managed in accordance with the [Global Marketing – Managing SWPs Assessing Hazards and Managing High-Risk Work Procedure and Downstream Work at Heights Procedure](http://www.chevronwithtechron.com/safeworkpractices/documents/GD_SWP_WorkHeightStandard-GMBlueTexted.pdf). http://www.chevronwithtechron.com/safeworkpractices/documents/GD_SWP_WorkHeightStandard-GMBlueTexted.pdf. Prior to conducting any work at height, competent personnel must conduct a hazard assessment to identify the potential hazards associated with the work at height and determine the controls necessary to ensure the work at height can be performed safely. The hazard assessment must be done regardless of whether fall protection already exists. The assessment must also include, but is not limited to, the:

- Physical capabilities (and competency) of the workers.
- Likelihood of falling 2 meters (6 feet) or more. If a fall is likely, then a means to prevent a fall must be put in place or, where fall prevention is not possible, provide adequate fall protection.
- Risk of injury to a person if that person falls.
- Risk of falling objects to workers below.
- Work activity (the proposed work at height).
- Equipment to be used (for example, ladders, MEWPs) and the hazards associated with using it.
- Duration of the work.
- Location of the work activity (to determine the presence of hazards).
- Work environment (weather conditions, lighting, space, etc.).
- Condition and stability of the existing work surfaces.
- Potential fall path.
- Proximity to conductors. The presence of overhead conductors presents risks of electrocution from inadvertently touching the conductors or simply from working too close to them.

- Load-bearing capacity of roofs. All facilities shall use the assistance of a competent person to determine the load-bearing capacity of the roofs of structures where access is required. Where access is required to a part of the roof, only that part of the roof needs to be assessed, as long as the designated access way is clearly marked and non-designated areas are protected from personnel access.
- Risks of the control measures must also be considered.
- Emergency procedure(s) required in the event of an incident.
- Anchorage Point Verification

Elimination of hazards is the most desirable method of hazard control and passive controls are preferred over active controls. The preferred order is as follows:

- Elimination – for example, performing work at ground level instead of at height.
- Substitution – for example, using a MEWP instead of a ladder.
- Engineering controls – for example, installing stairs instead of vertical ladders or safety railings.
- Administrative policies and procedures – for example, requiring a Safety Standby while the person working at height is wearing a harness.
- Personal protective equipment (PPE) – for example, providing fall-arrest systems. PPE should only be used as a last resort when all other control measures have failed to control the risk adequately or in an emergency response.
- Conduct a hazard assessment using appropriate subject matter experts.
- Physically inspect/walk the job site prior to signing the permit.
- Write a JSA/JLA or an approved, written work procedure.
- Conduct a pre-job briefing with personnel – or when changes in personnel occur – before performing work.
- Ensure that a field review of work in progress occurs at least once during a work shift (or once during a 24 hour time period).
- All individuals have the authority and responsibility to stop the work if an unsafe condition occurs or if there is uncertainty about the scope of work or work plan.

Additional Information



Assume that all overhead utility lines are energized, unless the owner of the line has verified that the line is not energized and the line has been visibly grounded. Maintain a minimum distance of 3 meters (10 feet) between all parts of the crane and load and all overhead utility lines

Definitions

Scaffolds = A temporary structure or framework used to provide a secure working platform, store or support materials and a way to provide protection to persons below. Scaffolding may be made of timber, steel tubes, aluminum tubes or prefabricated frames.

Aerial Lifts / Boom trucks = A complete machine including the platform, lifting mechanism, chassis or vehicle, as applicable, for the purpose or hoisting persons within a safety cage to an elevated work site.

Anchorage Point Testing = Anchorages to which personal fall arrest equipment is attached shall be capable of supporting at least 5,000 pounds (22.2 kN) per employee attached, or shall be designed, installed, and used as part of a complete personal fall arrest system which maintains a safety factor of at least two, under the supervision of a qualified person.

Scissors Lift = A motorized lift is considered by OSHA to be a mobile scaffold. It must be used in accordance with the OSHA standards for mobile scaffolds used in construction work. OSAH (1926.451 – general requirements for scaffolds)

Ladder = An appliance consisting of two stiles joined by steps or rungs and designed for the purpose of climbing and descending.

Fall Prevention = A system designed to prevent a person from falling, typically through the use for engineering controls such as railings. Where feasible, Fall Prevention must be used in place of fall protection to minimize the risk of personnel from falling during work at heights. In all other cases, Fall Protection must be used.

Fall Protection = An approved full body harness, shock absorbing lanyard or short restraining lanyards, self-locking snap hooks (or carabineer type rings) and secure anchorage points. Note, when fall protection is used a documented rescue plan must be in existence prior to work commencing and rescue personnel must be identified.

Fall-Arrest Harness (Safety Harness) = An assembly of interconnected shoulder and leg straps, with or without a body belt, and used where there is likelihood of free or restrained fall.

Fall Arrest System = A system designed to support and hold a person in the event of a fall. Body belts are not to be used for Fall Arrest purposes. OSHA requirements for personal fall arrest systems may be found at 29 CFR 1926.502(a). An emergency rescue plan must be in place to ensure the rapid recovery of anyone who falls while in using a safety harness. A minimum of two people should be present when using fall arrest systems to ensure a timely rescue. **Note: Fall-arrest system should always be used as a last resort. These systems require a high level of training to both set-up and use. They should only be used if personnel have been fully trained and emergency rescue procedures are in place.**

Fall Restraint = A restraint system prevents a worker from being exposed to any fall. If the employee is protected by a restraint system, either a body belt or a harness may be used. When a restraint system is used for fall protection from an aerial lift or a boom-type elevating work platform, the employer must ensure that the lanyard and anchor are arranged so that the employee is not potentially exposed to falling **any** distance.

Body belt = Strap that can be secured around the waist and attached to a lanyard, lifeline, or deceleration device. Body belts are not to be used for Fall Arrest purposes. The only times a body belt may be used where there may be a fall is when an employee is using a "positioning device", In 1926.500 of the construction standards for fall protection, a "positioning device system" is defined as a body belt or body harness system rigged to allow an employee to be supported on an elevated vertical surface, such as a wall (or a pole), and work with both hands free while leaning. Therefore, in construction work, a positioning device may be used only to protect a worker on a **vertical** work surface. These devices may permit a fall up to 2 feet (0.6m). They may be used in concrete form work, installation or reinforcing steel and certain telecommunications work. Since construction workers in bucket trucks, scissor lifts and boom-type elevating work platforms are on a **horizontal** surface, a positioning device may not be used for those workers.

Work at Height = Any work performed where the feet are at a height of 2 meters (6 feet) or more above the nearest floor or when working at the edge of an excavation or pit where the base of the excavation or pit is 2 meters (6 feet) or more deep.

Scaffolds

Annex A Section 21.02	Topic
21.02	Scaffolding regularly inspected and tagging system in use
21.03	Erection and dismantling of scaffolding


Scaffolds and scaffold components shall be inspected for visual defects by a competent person before each work shift, and after any occurrence which could affect a scaffold's structural integrity. This inspection must be documented. Scaffolding shall be tagged with a red flag at the beginning of construction indicating that it cannot be used. It shall be replaced with a green tag only when the scaffold is deemed safe to use by a competent person.

Use of

Use scaffolding whenever work will be performed at elevated locations where:

- There is no permanent ladder or platform access
- You cannot do the work safely from a portable ladder or lift system
- Duration of the job makes scaffolding safer and more efficient

Working from

 Workers exposed to a fall of **(6 feet)** or greater must be protected by guardrails/midrails. When any side of the scaffold is unprotected by guardrails then fall protection, must be used.

- Use standard guardrails on scaffolding 10 feet or higher (3 meters)
- Always wear fall protection when erecting any scaffolding over 10 feet (3 meters)
- Persons on lifts with guardrails < 42" (+- 3") or 39" will be required to wear fall protection.
- A ladder shall be available for emergency exit.
- All wheeled scaffolds shall be used with the wheels locked
- No person is permitted to remain on any scaffold tower platform while the tower is being moved.

Equipment

Scaffolding must support at least (4) times the maximum intended load. Remember that scaffolding posts bear the total weight of the scaffolding and the load placed on them. Each scaffold must, at a minimum, meet all criteria in the Chevron Safe Work Practices and all specifications listed under Federal, Provincial and local regulation.

Key instructions for scaffolding assembly and use are:

- Contractor foreman must inspect all scaffolding before it is erected
- Must be erected or dismantled only under the direction of a competent person who is experienced or trained in scaffolding erection or dismantling.
- Only scaffolding erection-crew personnel are allowed on staging when scaffolding is being erected or dismantled.
- Always wear fall protection when erecting any scaffolding over 3 meters
- Use standard guardrails on scaffolding 3 meters (10 feet) or higher
- 4" toe board required for scaffolding above 3 meters (10 feet)
- Cross-brace scaffolding to ensure it is plumb and square
- Cross-brace all scaffolding to prevent swaying, tipping, or overturning
- Use base plates and mud sills under scaffolding posts, poles, legs, frames, and uprights
- The front end of the platform must be no more than 30cm or 12 from the face of the work *WBC 13.14*
- Scaffolding to be secured to the structure minimum 6.1 meters (20 feet vertically) or 7 meters (21 feet horizontal)
- Platform boards are not to extend over the end support less than 15cm (6") or more than 30cm (12") 6" or more than 12".

Scissors lifts

Both scissors lifts and other rolling or mobile scaffolds (classified in the same category) shall be inspected for visual defects by a competent person before each work shift, and after any occurrence which could affect a lifts structural integrity. This inspection must be documented.

Motorized lifts must not be moved while in an extended position. Motorized lifts shall not be used when winds exceed 57kph (35 mph). A ladder shall be available for emergency exit. The lift shall be placed on a surface that provides stability in the raised position. If stabilizers are available on the equipment, they shall be deployed. Persons on lifts with guardrails < 92cm (42") (+- 2") will be required to wear fall protection. Address all risks and hazards. (BC 4.54)

Use of

These lifts are designed to be easily moved from one location to another. They are particularly useful for short duration tasks with frequent movement. A scissor-lift or lift cart is considered by WCB as a Movable Work Platform. An elevating work platform is one that self-elevates, and includes design features for lateral mobility (travel). If the platform travels under power when operated by controls on the work platform it is termed "self propelled." There are two types of self propelled units, those that are boom supported, and other designs, such as self-propelled scissor lifts.

Alternatively, if an elevating work platform is moved by hand or is attached to the deck of a powered vehicle, it is called a "portable elevating work platform." There are a range of types of portable elevating work platforms in use, from elevating equipment mounted on service trucks, to compressed gas power lifts that are moved by hand. Both must be used in accordance with the OHS 13 standards for mobile scaffolds used in construction work.

Working from

- Scissors Lifts must have acceptable guardrails 42" (+- 3") or 39" or you need to ensure the use of fall protection.
- (1) If a moveable work platform on wheels is not designed for or intended to be moved along the floor or other supporting surface while a person is occupying the platform, the platform must be secured to prevent that movement before a person accesses or occupies the platform.
- (2) If a moveable work platform is designed for and intended to be moved along the floor or other supporting surface while a person is occupying the platform, the platform must be moved only in the manner and under the conditions specified by the platform's manufacturer. See OHS 13.24 for work platforms on wheels. Which notes the following:
 - Despite subsection (2), if the height of the work platform of a rolling scaffold that is occupied by a person is
 - (a) not more than one and one half times the least base dimension of the scaffold, the scaffold may be moved by the effort of the person occupying the platform or by the effort of a person on the floor or other supporting surface,
 - (b) more than one and one half times the least base dimension of the scaffold, the scaffold must be moved only by the effort of a person on the floor or other supporting surface, and
 - (c) more than two times the least base dimension of the scaffold, the scaffold must not be moved while the person is occupying the platform.
- A competent person must be designated to operate the scissors lift

Aerial lifts / Boom trucks

Mobile elevating work platform are work platforms where the heights of the platform can be adjusted using articulation, telescoping booms or towers. The platforms can be vehicle mounted, self-propelled, towed or manually moved.

Use of

These lifts are designed to provide a temporary working platform which can be easily moved from one location to another. They are particularly useful for short duration tasks, where the use of a ladder would be unsafe or the erection of a scaffolding platform, would be time consuming or impracticable in relation to the job to be done.

Working from

- Mobile lifts shall not be used when winds exceed 35 mph
- Mobile lifts must not be moved while in an extended position
- Aerial Lift (Cherry Picker, Bucket Truck) Fall protection (Body restraint harness) shall be worn at all times while in an aerial lift basket, OHS WorkSafe BC 13:33.

Equipment

- Certain Fall Prevention methods (e.g. mobile elevated platforms, man baskets) also require the use of fall arrest system (e.g. fall arrest harness and safety lanyard) as fall protection methods.
- A competent person must be designated to operate the work platform, cherry picker, crane lift platform or man-lift.
- The use of an aerial lift shall meet the requirements of WorkSafe BC OHS 13.
- The lift shall be used on a surface that allows stability of the equipment in the raised position.
- The lift shall not be used when winds exceed 35 (50 km per hour)
- Barricading shall be constructed around the work area
- If stabilizers are available on the equipment, they shall be deployed.

Ladders

This provides a minimum safety requirement for contractors using ladders during construction work. Chevron Global Safe Work Practices, Federal, Provincial and local requirements will supersede any conflicting information in this section.

A competent person must inspect all ladders for visible defects on a periodic basis and after any occurrence that could affect their safe use. This person must be familiar with the hazards associated with ladder use and be authorized to take appropriate action necessary to eliminate any hazard.

Use of

- Preferred method of working at heights is in a lift with the appropriate fall protection equipment.
- Ladder must extend at least 3 feet above the upper landing surface that you need to reach (BC 13.5)
- Ladder angle must be approximately one-quarter of the working length of the ladder (distance along the ladder between the foot and the top support). (1) foot out for every (4) feet up.

Working From

- A Board Acceptable safety harness may be required for some tasks. (BC reg 420/2004)
- Do not stand on the top two steps of any ladder. Do not carry tools or materials in your hands while climbing up or down a ladder. Use a tool belt, or have a co-worker hand the items to you once you are on the ladder.
- Always perform an LPSA prior to starting work at heights to determine if it is safe to proceed with task.
- Workers shall maintain 3 points of contact while climbing up or descending from a ladder
- Working from ladders should only be considered if there are no other practical means of performing the work and where the work is within easy reach and can be carried out with one hand

Equipment

- Must be equipped with anti-skid feet
- All ladders used at any site must comply with Federal, Provincial and or local government regulations including CSA
- Do not use a ladder if you are visually restricted by blasting hoods, welding helmets, or burning goggles, except for initial and final welding or burning operations to start or finish a job.
- Ladders must have nonconductive side rails if they are used where the worker or the ladder could contact exposed energized electrical equipment or lines.
- Ladders that are found to be defective or damaged shall be removed from service and tagged as "Do Not Use". Mark the ladder in a manner that readily identifies it as defective until ladder has been restored to its original design specifications.

Self-Permitted Activity - Trenching and Excavation

WorkSafe BC Section 20		
	20.78	Work Standards
	20.79	Underground Utilities
	20.80	Removing nearby hazards
	20.81	Sloping and shoring requirements
	20.82	Timber shoring and grades
	20.83	Safe shoring procedures
	20.85	Trench support structures
	20.86	Spoil piles
	20.87	Entry and exit
	20.88	Guarding
	20.89	Excavation crossings
	20.90	Excavated material

	20.91	Use of skips and buckets
	20.92	Scaling and trimming
	20.93	Height limitations
	20.94	Positioning equipment
	20.95	Water accumulation

API Section 9		Topic
	9	Trenching and Excavation
	9.1	Overhead obstructions for equipment and heavy equipment safety
	9.1.1	Overhead obstructions
	9.1.2	Equipment fit for purpose
	9.2	Facility's underground structures
	9.3	Sloping and shoring methods/stability of excavations
	9.3.1	Benching
	9.3.2	Shield (Shield System)
	9.3.3	Shoring (Shoring System)
	9.3.4	Sloping (Sloping System)
	9.4	Management of site and placement of equipment, machinery, and materials
	9.4.1	Management of site
	9.4.1.1	General site management
	9.4.1.2	Surface crossing of trenches
	9.4.1.3	Warning system for mobile equipment
	9.4.2	Placement of equipment, machinery, and materials
	9.5	Impact of changes in weather, soil, and groundwater conditions
	9.5.1	Standing water and water accumulation
	9.6	Isolation of the area
	9.7	Safe entry/exit from excavation - emergency response and evacuation
	9.7.1	Entering and exiting excavations
	9.7.2	Ladders
	9.7.3	Ramps
	9.7.4	Rescue plan
	9.8	Excavation competent person requirements
	9.8.1	Inspections
	9.9	Excavation dewatering
	9.10	Site conditions of adjacent structures and foundations
	9.11	Barricading
	9.12	Management of contaminated soils
	9.13	Vapor hazards
	9.14	Use of PPE
	9.15	Regulatory permit requirements
	9.16	References

Annex A Section 21.00		Topic
	21.01	Barricading and open holes, excavations

Additional Information

Contractors and sub-contractors must use Chevron's Work Permit and Forms. The local Underground Service Alert agency (example: BC One-Call or Alberta One-Call) must be notified (3 business days for BC, 2 business days for Alberta,) prior to start of excavation. BC One-Call – 1-800-474-6886, Alberta One-Call – 1-800-242-3447.

Excavation sites must be properly managed to reduce the risks for injuries to workers. A competent person must be on-site at all times while trenching work is underway, and before employees may enter. The competent person is authorized to take prompt corrective measures to eliminate existing and predictable hazards and to stop work when required. The competent person is not authorized to enter the excavation area while performing entry watch responsibilities.

Entry to the excavation work area must be controlled. The excavation site must be properly isolated to assure that unauthorized people are not exposed to hazards of the excavation (please see API Barricading Safe Work Practice for more information about properly isolating work areas).

Excavations Shallower Than 1.5 Meters (5 Feet)

These have been known to collapse. If a worker is in a trench and bending over at the time of the collapse, they may suffer serious injury. Special precautions or work methods should be considered for such excavations as necessary. Workers are allowed to enter excavations less than 1.5 meters (5 feet) deep provided safety requirements as detailed below are observed.

An entry watch is not required for an excavation less than 900mm (35 inches) (nominally waist height) so long as the worker is not crouching down. Between 900mm (35 inches) and 1.5 meters (5 feet), or if the worker is required to crouch down to perform work, no person shall enter a shallow excavation unless there is an entry watch overseeing the safety of the works on the side of the excavation, and the excavation has been monitored for hazardous vapors.

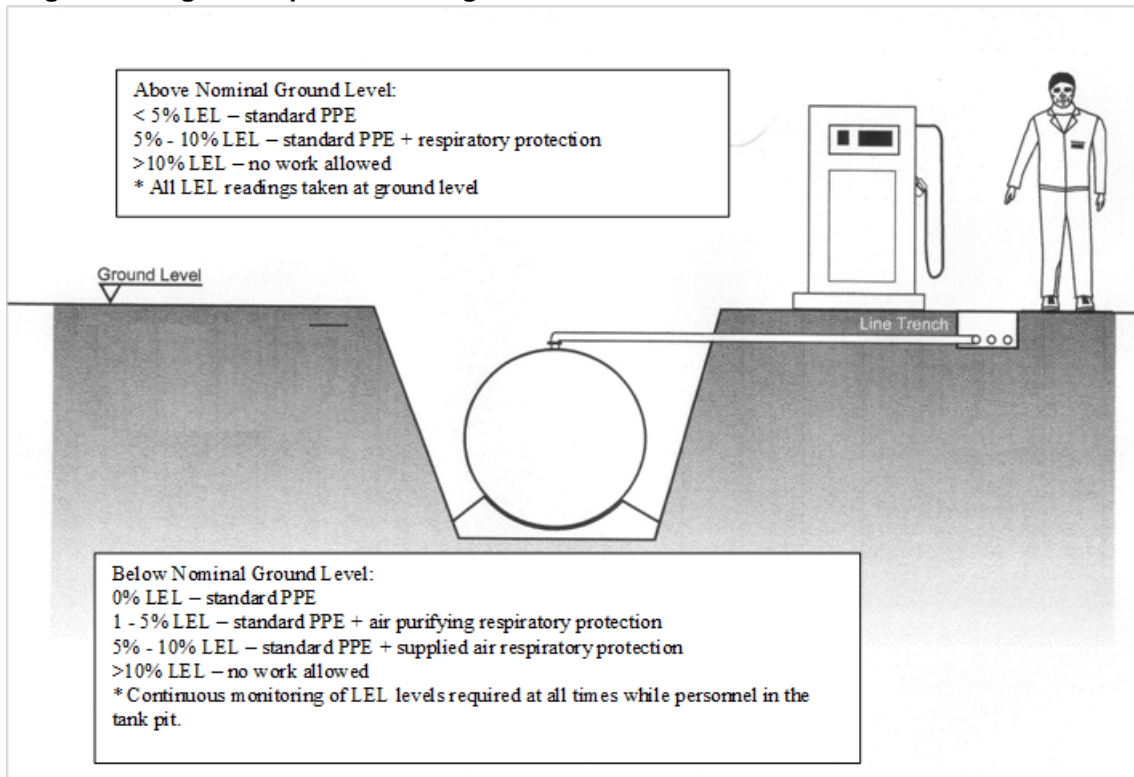
Excavations With a Depth Greater Than 1.5 Meters (5 Feet)

These are considered confined spaces and are particularly hazardous and must be shored unless:

- The face is cut back to a safe slope and the material in the face will remain stable under all anticipated conditions of work and weather.
- Shoring is unpractical or unreasonable, and safety precautions certified by a competent soil engineer (hydro-geologist) to be adequate, have been taken.

No person may enter a deep excavation unless there is an entry watch overseeing the safety of the works on the side of the excavation(s); a Confined Space Entry Form has been issued; and the excavation has been monitored for hazardous vapors.

Diagram of Organic Vapor Monitoring



- **It is a Chevron requirement that no soil piles, tools and equipment be stored within 1 meter (3 feet) from the edge of a trench.** Specific care must be taken to assure that the excavation area is not accessible to vehicular or pedestrian traffic if the excavation is to be left unattended.
- **WorkSafe BC requires excavated material to be placed at minimum 1.2 meters (4 feet) from excavations other than trenches**

WorkSafe BC requires shoring or sloping for excavations over 4 ft in depth

Do not enter an excavation unless the excavation has been inspected by a competent person at the start of the shift or after conditions change that may affect the stability of the excavation and an Excavation Inspection Permit-To-Work has been completed.

Self-Permitted Activity – Hot Work

WorkSafe BC Part 12	Topic
12.112	Standards
12.114	Ventilation
12.115	Coating on metals
12.116	Flammable and explosive substances
12.117	Silver solder
12.118	Correct equipment
12.119	Equipment inspection
12.120	Flashback prevention
12.121	Receptacles for stubs
12.122	Radiation protection
12.123	Protective clothing and equipment
12.124	Respiratory protection
12.125	Marking hot work
12.126	Fire extinguishers

BC Fire Code	Topic
5.2	Hot Work
5.2.1	General
5.2.2	Hot Work equipment
5.2.3	Prevention of fires
5.3.2	Woodworking operations
5.6.1.5	Portable extinguishers for construction and demo sites

API Section 13	Topic
13.1	Hot Work
13.1	Activities that constitute hot work
13.2	The fire triangle
13.3	Requirements for and duties of the fire watch
13.3.1	Requirement for a fire watch
13.3.2	Duties of a fire watch
13.4	Hot work permit writing
13.4.1	Duties of Hot work permit writer
13.4.2	Perform visual inspection and atmospheric test
13.5	Spark containment systems and fire extinguishers
13.5.1	Fire extinguishers
13.5.2	Spark containment systems (fire blankets and fire curtains)
13.6	References

Annex A Section 8.00	Topic
8.00	Hot Work Operations
8.01	Hot Work Form and General Work Permit
8.02	Trained Fire Watch personnel

Annex A Section 19.02	Topic
19.02	Compressed Gas Cylinders

Additional Information

Contractors and sub-contractors must use Chevron's General Work Permit and Forms. Hot Work is any work that will generate sufficient thermal energy to ignite combustible and/or flammable materials. The following activities are examples of Hot Work, however, there may be more that are applicable at specific locations: welding, burning, drilling, flame cutting, grinding, use of portable heaters, electrical tools/equipment that are not explosion proof (Intrinsically safe), sandblasting operations (static charges), operation of internal combustion engines, tank cleaning and pump outs or any other work capable of producing an ignition source or generate vapor at a retail petroleum/convenience site.

Follow these steps to perform visual inspection:

- Check the area for the presence of exposed flammable material and for conditions such as equipment damage that could potentially cause a release of flammable material.
- If any flammable materials or unsafe conditions are found, cleanup, isolation, or repair of the hazard must take place before the Hot Work may begin.
- Proceed with atmospheric and self-permitted actions

The Hot Work permit writer must conduct a pre-task job safety analysis (JSA) to determine all hazards of the Hot Work location before issuing a permit. The work area must not contain any combustible or exposed flammable materials.

Also review the Vacuum truck section in this document and at

<http://www.chevronwithtechron.com/safeworkpractices/documents/ESH-200.docx>

Chevron requires an atmosphere with an LEL of 0% within 50 feet of proposed hot work; additionally, no flammable or combustible liquid or residues should exist within 50 feet of the proposed hot work.

Self-Permitted Activity – Confined Space

WorkSafe BC Part 9	Topic
9.1	Definitions
9.2 – 9.5	General requirements
9.6 – 9.8	Responsibilities
9.9 – 9.11	Hazard assessment and work procedures
9.12 – 9.16	Identification and entry permits
9.17 – 9.23	Lock out and isolation
9.24 – 9.26	Verification and testing
9.27 – 9.29	Cleaning, purging, venting, inerting
9.30 – 9.33	Ventilation
9.34 – 9.36	Standby persons
9.37 – 9.41	Rescue
9.42 – 9.45	Life lines, harnesses and lifting equipment
9.46 – 9.51	Personal protective equipment and other precautions

API Section 11	Topic
11	Confined Space Entry
11.1	Definition of a confined space and permit required confined space
11.2	Types of confined spaces, including typical service station examples.

11.3	Permit requirements for confined spaces
11.3.1	Permit required confined space (permit space)
11.3.2	Non permit confined space
11.3.3	Hazardous Atmosphere
11.4	Barricading/protecting/isolating work area
11.5	Atmospheric testing including safe atmospheric levels
11.6	Ventilation methods
11.7	Assignment duties
11.8	Entry procedures for confined spaces
11.9	Rescue procedures for single or multi-employer entries
11.10	Personal protective equipment
11.11	Training requirements for all personnel involved in confined space work
11.12	References

Annex A Section 7.02	Topic
7.02	Confined Space Entry Form and Gas Testing

Annex A Section 10.00	Topic
10.00	Confined Space
10.01	Confined Space Entry Form requirements
10.02	Storage Tanks and other fully enclosed vessels
10.03	Confined Space Training
10.04	Emergency rescue plan, equipment and personnel
10.05	Trained Entry Watch

Additional Information

Contractors and sub-contractors must use Chevron's General Work Permit and Form. Confined Space means an enclosed or partially enclosed space, which is large enough for a person to enter and perform work, has limited or restricted means for entry/exit, and is not designed for continuous occupancy.

For typical work at retail petroleum/convenience sites, the most common confined spaces are sumps, manholes and pits atop underground storage tanks. Additional confined spaces that may exist include: storage tanks, storm water management systems, sewer manholes, trenches, excavations, oil-water separators, waste lift-stations, any other water or waste handling systems large enough for human entry and crawl spaces associated with buildings.

A permit is required for confined space entries if the space meets the definition of a confined space and has the potential for a high hazard or moderate hazard atmosphere. Only a person who has received detailed Confined Space training in addition to this overview should be allowed to determine the following classifications of confined spaces.

Work in a confined space that does not have a potential high or moderate hazard atmosphere may only require the use of the General Work Permit.

 **Chevron requirement: 0% LEL is approved for entry; LEL < =10% approved with proper respirator/equipment; NO entry at > 10% LEL.**

Atmospheric testing is required prior to entering a confined space.

- Initial gas testing must be performed outside the confined space prior to the worker's entry and as close as possible to the time work starts. An extension wand must be used to sample as far into the space as practical.
- When performing gas testing of larger vessels (such as tanks) where a ventilation system is used to maintain a continuous air flow, the Qualified Gas Tester must shut down the ventilation for at least 15 minutes (more time may be required depending on the size of the vessel and ventilation rate) before

performing the gas test to get a representative sample. Once a representative sample has been obtained, the ventilation system can be returned to service.

Note: The ventilation system must never be stopped while personnel are inside the confined space.

Additional initial testing is needed inside larger confined spaces where it is not possible to test all areas of the space from the outside. If initial readings are not acceptable, then further ventilation is required.

Inert Atmospheres

Entry into a confined space with an inert atmosphere requires special consideration and is prohibited for everyone except persons specially trained in inert atmospheric entry.

An oxygen-deficient atmosphere may exist outside a confined space opening. Working on or near tanks, or vessels, that are under an inert gas blanket or purge can be extremely hazardous. Gas escaping from leaks or from the tank or vessel being opened has caused fatalities because the hazard was not identified and mitigated.

Note: An oxygen-deficient atmosphere rapidly overcomes the victim. There is no warning before being overcome and can be deadly in only a few breaths. Rescuers must strictly follow safe rescue procedures.

Rescue Plan

Critical: Never attempt to enter a confined space even in an emergency until help has arrived! Don't try to lift a person out of a hole without help. Rescue personnel must be trained and competent, have the correct equipment and have the ability to perform their responsibilities.

The powerful human instinct to help someone in distress, especially a friend or co-worker, all too frequently results in multiple confined space incident victims. Workers suddenly involved in emergency activities must not allow emotions to override safe work procedures and training.

A written rescue plan must be in place for each entry. The plan must contain provisions for conducting a timely rescue of individuals within a confined space, should an emergency arise. The plan shall be kept onsite where the confined space work is being conducted. All affected personnel shall be trained on the Emergency Response Plan.

Self-Permitted Activity – Lockout/Tagout (Energy Isolation)

WorkSafe BC Part 10	Topic
10.1	Definitions
10.2	General requirements
10.3	When lock out required
10.4	Lock out procedures
10.5	Access to energy isolating devices
10.6	Checking lock out equipment
10.7	Worker responsibilities
10.8	Removal of locks
10.9	Group lock out procedure
10.10	Alternative procedures
10.11	Locks not required
10.12	Work on energized equipment

API Section 12	Topic
12	Lockout – Tagout
12.1	Affected employee
12.2	Authorized employee
12.3	Energy isolating device

12.4	Energy sources
12.5	Lockout and tagout devices
12.5.1	Lockout device
12.5.2	Tagout device
12.6	Lockout/tagout procedures
12.6.1	Applying locks and tags
12.6.2	Testing de-energized equipment or "trying" the equipment
12.6.3	Removing locks and tags
12.7	Training and communication
12.8	References


Annex A Section 9.00	Topic
9.00	Equipment Isolation (Lock-Out Tag-Out)
9.01	Written Lock-out/Tag-out program

Additional Information

Contractors and sub-contractors must use Chevron's General Work Permit and Form. Before starting maintenance or construction activities, hazardous energy must be de-energized through the use of lock-out devices. Only when devices are not capable of being locked out, may workers use a tagout process. Lockout/Tag-Out is a self-permitted action. Tags must be legibly signed and dated by the installer of the tag. The tags shall be securely fastened to all isolated points using a self-locking nylon cable tie with a breaking strength of at least 22 kilogram force (50 pound. force). **Tag-outs shall not be used during construction as the sole means of energy isolation.**

An equipment isolation checklist must be maintained on every project. Contractors using lock-out/tag-out equipment are to complete this checklist before and after the use of lock-out/tag-out equipment. See equipment isolation checklist sample in the forms section.

 **Chevron requirement: all lock out tag outs shall be recorded on an energy isolation checklist in addition to Lock-out/Tag-out and General Work Permit.**

 **Chevron Global standard: The tags shall be securely fastened to all isolated points using a self-locking nylon cable tie with a breaking strength of at least 22 kilogram force (50 pound. force).**

See both Chevron's Electrical Safety Standards and Electrical Safety Awareness presentation prior to any Electrical or Energy Isolation work.

http://www.chevronwithtechron.com/safeworkpractices/documents/Global_Marketing_Electrical_SWP.pdf

Self-Permitted Activity – Rigging and Hoisting

WorkSafe BC Part 14	Topic
14.1	Definitions
14.2 – 14.33	General requirements
14.34 – 14.52	Equipment operation
14.61 – 14.62	Manually powered hoists
14.64 – 14.73	Mobile cranes, boom trucks and aerial ladder cranes

WorkSafe BC Part 15	Topic
15.1	Definitions
15.2 – 15.29	General requirements
15.30 – 15.41	Slings
15.42 – 15.45	Wire rope slings
15.46 – 15.51	Alloy steel chain slings
15.52 15.54	Synthetic web slings

15.55 – 15.56	Metal mesh slings
15.57 – 15.60	Below-the-hook lifting devices

WorkSafe BC Part 15	Topic
19.24	Minimum clearance
19.25	Assurance in writing
19.26	Assurance not practicable
19.27	Specialty trained
19.28	Emergency work

API Section 10	Topic
10.	Rigging, Hoisting and Lifting
10.1	Personnel responsibilities
10.1.1	Crane operator
10.1.2	Operation crew
10.1.3	Riggers
10.2	Lifting plan
10.2.1	Special rules for small truck mounted cranes
10.3	Soil stability
10.4	Overhead potential risks
10.5	Equipment selection
10.5.1	Inspections
10.6	Work area isolation
10.7	Machinery movement
10.8	Tool box discussion directly prior to lifting activity
10.9	Rescuing toppled equipment
10.10	References

Annex A Section 4.02	Topic
4.02	Vehicles, cranes, rigging maintained & operators qualified, licensed/certified
4.03	Vehicles equipped with seat belts, seat belt use
Annex A Section 19.04	Topic
19.04	Safety equipment maintained by manufactures instructions
19.07	Preventative Maintenance for all safety critical equipment

Additional Information



Assume that all overhead utility lines are energized, unless the owner of the line has verified that the line is not energized and the line has been visibly grounded. Maintain a minimum distance of 10 feet between all parts of the crane and load and all overhead utility lines

Contractors and sub-contractors must use Chevron's General Work Permit and Form. It is the responsibility of the contractor performing the hoisting or lifting operation to do so in a safe manner and in compliance with applicable WorkSafe BC regulations. If unsure about the safety of a lifting or hoisting operation, it is the contractor's responsibility to **STOP** the operation until the issue has been clarified, and the operation can be performed safely. Rigging, Hoisting and Lifting are self-permitted actions.

Crane operators shall have a valid operator's certificate issued by a person acceptable to the Board. Verification of an operator certificate shall be produced upon request.

Contractors shall be aware and adhere to OSH (WorkSafe BC) part 19 which provides instruction for work performed near energized lines. This may incorporate completion of the form "Assurance of Compliance" with OHS regulation Part 19 available through WorkSafe BC form 30M33. See WorkSafe BC Forms: <http://www.worksafebc.com/forms/>

Additional Safe Work Practices

Storage Tanks – Underground and Aboveground

BC Fire Code	Topic
4.3.8	Installation of underground storage tanks
4.3.8.1	Location
4.3.8.2	Ground cover
4.3.8.3	Damage repair
4.3.8.4	Damage prevention
4.3.8.5	Installation
4.3.8.6	Filling
4.3.8.7	Spillage
4.3.8.8	Anchorage
4.3.9	Corrosion protection of steel underground storage tank
4.3.10	Vents for UST
4.3.11	Openings other than vents

API Section 14	Topic
14	Underground Storage Tanks
14.1	Storage Tank certifications
14.2	Safety around storage tanks in excavations
14.2.1	Entering excavations
14.2.2	Working on top of a UST
14.3	Tank inerting and purging
14.3.1	Inerting
14.3.2	Purging
14.4	When tanks are empty and/or safe for removal
14.5	UST “hold-down” procedures and tank buoyancy
14.6	Corrosion prevention systems
14.6.1	Non-conductive coatings
14.6.2	Cathodic protection
14.6.3	Dielectric fittings
14.6.4	Other corrosion considerations
14.6.4.1	Electrical shorts
14.6.4.2	Dissimilar metal corrosion
14.7	Lifting and setting storage tanks
14.8	Atmospheric hazards of gasoline vapors
14.8.1	Explosive / flammable
14.8.2	Oxygen depleted atmosphere
14.8.3	Limits
14.8.4	Toxic substances
14.8.5	Buildup of vapor
14.9	Returning fuel to storage tanks
14.10	Working on tanks after they have been removed from an excavation
14.10.1	Atmospheric Hazard
14.10.2	Roll Hazard
14.11	Equipment used for removing vapors from a tank
14.12	Entering underground storage tanks
14.13	UST monitoring systems
14.13.1	Moving sensors prohibited
14.14	Personal Protective Equipment

Above Ground Tanks

Annex A Section 18.07	Topic
18.07	Aboveground Steel Tanks
18.08	Aboveground fuel, oil, and chemical tanks (secondary containment)

Additional Information

Manufacturers install procedures and checklist

Registration of tanks

Permits

Interstitial testing

**Electrical Safety (Including Static Electricity)**

WorkSafe BC Part 19	Topic
19.1	Definitions
19.3 – 19.9	General electrical requirements
19.10 – 19.15	Working on low voltage electrical equipment

WorkSafe BC Part 5	Topic
5.1	Definitions
5.27 – 5.35	Flammable and combustible substances

Annex A Section 24.00	Topic
24.01	Specialized training, compliant, proof of training

Additional Information

Contact with live electrical circuits can cause serious injury or death. Only experienced electricians who have been thoroughly trained in electrical safety procedures may install, repair, modify, or remove electrical service, wiring and equipment. API refers to electrical safety guidelines as it pertains to individual work activities. Electrical safety guidelines will be found throughout API's safe work practices.

Energized Electrical Work – Is not typical at Retail & C&I locations

The inherently safer, preferred practice at all Chevron facilities is to place electrical systems and electrical equipment of 50 volts or more into an electrical safe work condition before performing work "on" or "near" that equipment or system. All work being performed at Retail locations must be placed into an electrically safe work condition before the work can be performed. Directly after equipment is electrically safe the equipment or circuit must be tested prior to starting any work activity, per NFPA 70E requirements. When work must be performed on or near electrical systems or equipment of 50 volts or more with exposed live parts that have not been placed in an electrically safe work condition, the work to be performed is considered energized electrical work and must be conducted in accordance with Chevron SWP standards. Any work inside the restricted approach boundary is considered high risk and shall be conducted under an approved Energized Electrical Work Permit, exceptions include:

- Use an approved voltage detector to measure voltage on equipment not placed in an electrically safe working condition;
- Attach grounds on equipment previously placed in an electrically safe working condition;
- Check electrical phase synchronization (phasing) using low-voltage instrumentation (at the secondary of instrument voltage transformers prior to closing a switch or circuit breaker;
- Use approved live-line tools to perform switching operations
- When maintenance troubleshooting and diagnostic testing ie:

- Take voltage readings;
- Perform voltage phasing (voltage transformers);
- Perform preventive maintenance observations and meter checks;
- Perform predictive maintenance observations and infrared thermography;
- Reset device overloads.

An Energized Electrical Form requires the qualified electrical person to conduct a risk assessment to identify the potential hazards associated with the work and determine the controls necessary to ensure the electrical work can be performed safely. The risk assessment shall identify any potential for electrical arc and contact with electricity, and must include a detailed Electrical Job Safety Analysis and a Shock and Flash Hazard Analysis conducted with the participation of a Qualified Electrical Person.

Electrical Work— Any task that involves **working on or near** (that is, within 3.2 meters [10 feet], in most cases) any electrical system or equipment that is operating at a voltage of 50 volts or more and that has exposed energized electrical conductors or circuit parts. This includes work on **nonelectrical** equipment that is within 3.2 meters (10 feet) of equipment or lines operating at 50 volts or more and that have exposed energized electrical conductors or circuit parts.

. There are two categories of “**working on:**”

1. *Diagnostic (testing)* is taking readings or measurements of electrical equipment with approved test equipment that does not require making any physical change to the equipment;
2. *Repair* is any physical alteration of electrical equipment (such as making or tightening connections, removing or replacing components, etc.).

Key Roles and Responsibilities

Qualified Electrical Persons:

- Identifies and communicates any needed changes in work scope or changes in conditions to their supervisor immediately
- Reviews and participates in hazard assessment and in identifying controls to be implemented
- Verifies equipment is properly de-energized, isolated, and locked and tagged before applying personal locks
- Tests equipment before touching to ensure it has been properly de-energized
- Can be qualified for specific tasks

Electrical Standby Person:

- Monitors use of overhead equipment to prevent equipment or personnel from entering the limited approach distance or coming into contact with live exposed electrical parts
 - Helps establish the limited approach zone and maintains the barricades
 - If filling a dual role as a rescue person ensures that CPR and AED equipment (if available) is immediately available outside the space for rescue and knows how to use it

See both Chevron’s Electrical Safety Standards and Electrical Safety Awareness presentation prior to any Electrical or Energy Isolation work.

http://www.chevronwithtechon.com/safeworkpractices/documents/AP_Electrical_Safety_SWP.ppt
http://www.chevronwithtechon.com/safeworkpractices/documents/Global_Marketing_Electrical_SWP.pdf

Portable Electrical Equipment

- “Portable electrical equipment” is any transportable (plug-and-cord connected or battery-operated) equipment. Examples of portable electrical equipment include power tools, extension cords, multiple-outlet strips, portable lights, vacuum cleaners, soldering irons, electric pumps, portable electric compressors, etc

- You are required to use hot work safety guidelines whenever you use portable electrical equipment near a potential source of flammable vapors (see API Guidelines Section 13)
- When working at heights refer to API Section 7.5.
- **For requirements on power tools, GFCI and extension cords refer to API Section 4**

Take the following steps to protect yourself and others when working with electrical equipment:

- Make sure that all circuits used to power plug-and-cord equipment have an approved over current protection device, such as a circuit breaker.
- Use GFCI protection when working in wet areas or confined spaces.
- Use protection for eyes and face.
- Do not handle energized cords when the cords or your hands are wet.
- Ensure that all switches, guards, and safety features are fully operational
- Always make sure the grounding conductors are in place.
- Make sure all temporary receptacles at construction sites are GFCI protected. If they are not, an approved foreman or supervisor must implement a Grounding Conductor Test Program.
- When required, all electrical work must be performed by a Trade Qualified Electrician
- Routinely inspect extension cords for frays, exposed wire, stress points, and general wear and tear.
- All electrical equipment including cell phones must not be used close to fueling facilities or UST systems unless the equipment is intrinsically safe
- Be aware of machinery and materials that can create a static charge
- Weather conditions, when cold and dry, may increase the generation of static electricity

Static Electricity Lessons Learned

Incident Description

A contractor working at a retail service station was circulating a chemical cleaning agent in an empty underground gasoline storage tank (UST) to break down sludge and to degas the tank prior to removal. The worker entered the UST excavation to check on the circulation pump. The pump hose consisted of two different sections, with one section inserted inside the other and tied together with a rubber wrap. Furthermore, one section of hose contained a bonding wire and the other section did not. A static electric spark was created when the worker attempted to move the hose, which was not properly grounded along its entire length. The spark ignited the flammable atmosphere in the un-purged tank, causing burns to the worker when flames erupted through the tank opening.

What Went Wrong

- A cleaning agent alone was used in an attempt to degas the tank without also purging or inerting it as specified in Company written requirements. This was a local practice of the contractor performed on prior UST removal jobs without known incident.
- The section of hose that was electrically bonded was joined with rubber wrap to a hose that did not have electrical continuity.
- The discharge hose was positioned in the tank head space which allowed the liquid to fall into the tank thereby creating a risk for static generation.
- The bonding and grounding system was deficient because: the attachment springs for the clamps were weak; the clamps were connected to rusty metal; and lateral wires from the main cable were loosely wrapped rather than connected with crimped fittings to the cable.

Lessons Learned

- Cleaning solutions alone, without inerting or purging the tank, are not adequate for managing flammable vapors in preparation for UST removal.
- The work plans and JLA should specify the methods used for bonding/grounding as well as controlling static generation during tank cleaning and degassing.
- Any exceptions made to Company's requirements for preparing USTs for removal require Company approval in accordance with the MOC process.

The Vacuum Truck Safe Operations standard lists precautions required for carrying out vacuum truck activities within Chevron facilities and lists requirements for the use of wet vacuum systems for transfer of a wide variety of liquids including flammable, combustible and corrosive materials. This standard does not apply to sanitary sewer and septic work service trucks. Requirements for Vacuum Truck Safe Operations include:

- Identification and physical hazards associated with material to be transferred
- Selection of vacuum truck type (wet vacuum or dry vacuum systems)
- Truck equipment and equipment standards
- Grounding and bonding of equipment
- Venting of vapors resulting from the vacuum operation
- Roles and responsibilities of involved personnel
- Driver/Operator training/competency

Review additional information about Tank Cleaning and the use of Vacuum trucks before any of these activities.

<http://www.chevronwithtechron.com/safeworkpractices/documents/ESH-200.docx>

<http://www.chevronwithtechron.com/safeworkpractices/documents/ESH-200-AP-VTSO-CHESM-Engagement.pptx>

JSA's are also available for Vacuum truck services

<http://www.chevronwithtechron.com/safeworkpractices/documents/JSA-Vacuum-Truck.docx>

Additional information should be reviewed regarding Chevron's bonding, grounding and Static prevention requirements.

http://www.chevronwithtechron.com/safeworkpractices/documents/Static_Electricity_Hazards_and_Prevention_from_CBT.pdf



Lead Abatement

WorkSafe BC Part 6	Topic
6.59 – 6.68	Lead

Additional Information

This section addresses the presence of lead and guidelines for workers during removal of lead-based paint, where it is most frequently found. It applies to all construction work where employees may be occupationally exposed to lead. You should follow WorkSafe BC standards when the exposure to Lead is a possibility. Perform a LPSA prior to proceeding and do not proceed until the hazard has been addressed.

Humans absorb lead into the body by inhalation and ingestion. Even small amounts ingested by eating, drinking, or smoking on the job can be harmful.

Lead exposure can affect the brain—leading to seizures, coma, and death. Lead poisoning can occur at high exposure concentrations (acute) or at low exposure concentrations over a long period (chronic).

Lead is a cumulative poison. It accumulates in the blood, bones, and organs, including the kidneys, brain, and liver. It may persist in bones for decades.

An increasing level of lead in the blood usually indicates that there has been a recent exposure and that accumulation is greater than the body has been able to eliminate

For the purposes of this section, lead means all of the following:

- Metallic lead
- All inorganic lead compounds
- Organic lead soaps

All other organic lead compounds are excluded

Before beginning a job, management should establish and implement a written compliance program. This program should assure that no employee is exposed to lead concentrations greater than the acceptable TLV (over an 8-hour period) limit.

In work situations where employees are exposed to lead levels greater than the acceptable TLV, management must provide:

- Respirators, where engineering or work practice controls are insufficient to reduce lead exposures to or below the acceptable limits
- Protective work clothing to protect against skin or eye irritation

Clean change areas and non-contaminated eating areas, if feasible

The contractor must post a “**NOTICE OF PROJECT**” (NOP) at the Lead Abatement worksite at least 24 hours in advance before starting a job per WorkSafe BC, Form 52E49



Asbestos Abatement

WorkSafe BC Part 6	Topic
6.1	Definitions
6.2	Applications
6.3 – 6.12	General Requirements
6.13 – 6.16	Designated work areas and containments
6.17 – 6.19	Ventilation
6.20 – 6.24	Other means of controlling exposure to asbestos
6.25 – 6.28	Waste handling and disposal
6.29 – 6.31	Personal protective clothing and equipment
6.32	Documentation

Asbestos is a cancer causing material mostly found in airborne particles once the material has been disturbed. Asbestos-containing material (ACM) is material containing 1 percent or more asbestos. Written notification to the appropriate agencies is normally required whenever plans exist to remove ACMs during demolition and major renovation.

Environment Canada, Canadian Environmental Protection Act

WorkSafe BC 6.6 Assessment and classification

(1) The employer must ensure that a risk assessment is conducted by a qualified person on asbestos-containing material identified in the inventory, with due regard for the condition of the material, its friability, accessibility and likelihood of damage, and the potential for fiber release and exposure of workers.

(2) The employer must ensure that a risk assessment has been conducted before any demolition, alteration, or repair of machinery, equipment, or structures where asbestos may be disturbed.

(3) Before work involving asbestos takes place the employer must ensure that a qualified person assesses the work activity and classifies it as a low, moderate, or high risk activity.

(4) The qualified person referenced in subsections (1) and (3) must be an occupational health and safety professional with experience in the practice of occupational hygiene as it relates to asbestos management.

Chevron requires that you use a Certified Asbestos Tester and Certified Asbestos Removal Contractor. Our expectation is that all local, provincial and federal regulations be followed including all appropriate and required documentation.

The asbestos contractor must post a “**NOTICE OF PROJECT**” (NOP) at the asbestos worksite at least 24 hours in advance before starting a job per WorkSafe BC, Form 52E49

Before beginning asbestos removal job, all workers in the area—both Company and contractor—must be advised that asbestos removal will be taking place. They should avoid the area.

Assume all insulation to be ACM unless marked as “**NOT ACM**”. Label new non-asbestos insulation and non-asbestos insulation that has been covered as “**ASBESTOS FREE**” or “**NON-ASBESTOS**”.

Qualified Asbestos Contractor must properly label all asbestos waste and send to an approved waste disposal site. [NOTE: The asbestos contractor coordinates the transportation and disposal of all properly labeled asbestos waste.]

WorkSafe BC provides more detailed requirements and guidelines in a published manual titled “Safe Work Practices for Handling Asbestos” available from the BC WorkSafe Website.

On all jobs involving ACM, or potential ACM, asbestos contractors must name a qualified person. The qualified person must frequently inspect the job site, materials, and equipment to ensure that worker safety and health are maintained.

The qualified person must:

- Be capable of identifying existing asbestos hazards in the workplace
- Be capable of selecting the appropriate control strategy for asbestos exposure
- Have the authority to take prompt corrective measures to eliminate asbestos hazards
- Only asbestos abatement personnel may enter the regulated area.

There are 3 types of asbestos-related work WBC 6.6:

High Risk	<ul style="list-style-type: none"> • work activity involving the handling of asbestos-containing material or working in proximity to friable asbestos-containing material, where there is a high level of control necessary to prevent exposure to excessive concentrations of airborne asbestos fiber;
Moderate Risk	work activity involving the handling of asbestos-containing material or working in proximity to friable asbestos-containing material, not otherwise classified as low or high risk work activities.
Low Risk	<ul style="list-style-type: none"> • work activity in proximity to friable asbestos-containing material, where the material is not disturbed and there is no significant release of asbestos fiber;



Bloodborne Pathogens

WorkSafe BC Part 6	Topic
6.33	Definitions – Biohazardous materials
6.34	Exposure control plan
6.35	Risk identification
6.36	Controls
6.37	Labels and identification
6.38	Education and training
6.39	Vaccination
6.40	Health protection
6.41	Records

Employees, Contractors and sub-contractors may be potentially exposed to bloodborne pathogens. Potential hazards may include used hypodermic needles, blood, or other potentially hazardous materials. Such hazards may be encountered while performing routine janitorial duties or when rendering first aid.

A post-exposure Hepatitis B vaccination and a medical examination received within 24 hours will provide adequate protection against infection.

A person who has contact with blood or other potentially infectious body fluids must:

- Immediately report the exposure to his or her supervisor.
- Wash hands and exposed skin with soap and water and/or flush mucous membranes with water as soon as possible following contact.
- Remove clothing and personal protective equipment that has been contaminated by blood or body fluid.
- Report all incidents where blood or other potentially infectious materials are present.
- Report these incidents to the supervisor before the end of the shift during which the incident occurred.
- Supervisors must immediately report incidents where employees may have been exposed to blood or other potentially infectious materials to the Project Manager

The employee's supervisor must complete the written report immediately. The report must include:

- Names of those who were exposed, regardless of whether they were using personal protective equipment.
- A description of the incident, including the time and date. The description must include a determination of whether or not an exposure incident occurred.

Post Construction

A team typically consisting of representatives from the general contractor, engineering, sales, maintenance, a safety representative, and the dealer or station manager conducts the post construction review.

Punch List

The post construction review team generates a punch list of items requiring corrective action. Review team members sign and date the punch list. Normally, the contractor has within 10 working days to complete the punch list items. Final sign-off of the punch list formalizes the Business Consultant's acceptance of the facility or equipment (may include Showstopper and/or a Construction Completion Package).

The Project Manager or Business Consultant is responsible for confirming that dealers and station managers using new or modified equipment have completed appropriate training

During construction, the contractor, Project Manager, or others may conduct interim inspections, as appropriate. These inspections detect noncompliance items that can be corrected while construction is in progress.

The following considerations apply to the informal review process:

- An informal post construction review does not always require written documentation of acceptance.
- Some maintenance dispatch work or small-to-medium-size construction projects will require informal reviews.

Lessons Learned and Look backs

At the conclusion of a project, Chevron will conduct a Lesson Learned session to review safety, construction activities, cycle times, budget and any other issue that may have arisen during any phase of the project. This session will be facilitated by Chevron and mission critical personal are required to attend.

Section 7 – Stewardship of Contractor Safety Program

*The processes outlined in this Contractor Safety Program document cover the Americas Products NA Maintenance & Construction and Sales Automation groups. **Contents of this document will be reviewed annually for changes.** Any additions to this document will be reviewed with the M&C OE Leadership Team for concurrence before inclusion and or printing.*

Updates can be found at <http://www.chevronwithtechron.com/safeworkpractices/maintenance-construction/default.aspx>

Ownership of the document and its contents will be maintained by the NA M&C Contractor Safety Advisor. Updates will be completed as required by the OE Review Process and ensure an annual review is done using the DS&C Process review procedure. Feedback and comments regarding the contents of this document are always welcome; please send your comments and questions to the M&C Contractor Safety Advisor.

Thanks for demonstrating your commitment to Safety!

*Jackie Ledbetter
M&C Contractor Safety Advisor*

Section 8 – Attachments & Forms

Documents to be used with the Contractors Safety Program

1. The Chevron Way
2. API Recommended Practice 1646-*individual copies must be purchased by each training participant*
3. Stop Work Authority Card (Tenets of Operation on the reverse side)
4. LPSA Card
5. WIP Document
6. PPR Assessment
7. Site Safety Plan Sample Form
8. JSA report
9. General Work Permit
10. High Risk Forms
11. Annex A – Canada Independent Contractor Health, Environmental and Safety Contract Guidelines (version 2.0)
12. Annex B – Canada Company's Drug, Alcohol, and Search Policies
13. Incident Protocol
14. 30M33 Electrical
15. 52E49 Notice of Project (NOP); Construction, Asbestos, Lead
16. Comparison – API 1646 vs. Worksafe BC
17. Comparison – API WorkSafe Online CBT vs. WorkSafe BC
18. Chevron Contact List
19. Sample Rescue Plan
20. Retail Work Flow
21. Hazard ID Tool Training