Asia South Business Unit
(ASBU)

Chevron Thailand

Employee & Contractor

Operational Excellence (OE) Handbook

Revision 1.1
June 2015

Employee and Contractor Operational Excellence (OE) Handbook

Chevron Thailand

Revised June 2015

ACKNOWLEDGMENT OF OE PROCESSES AND PROCEDURES

This is to acknowledge that I have received a copy of the Chevron Thailand, Employee and Contractor Operational Excellence (OE) Handbook and that I agree to read it and observe all Chevron OE processes and procedures. I will ask my supervisor to explain any tasks, procedures and rules which I do not understand, or when I consider a HES problem exists. I understand that failure to abide by these Policies and Procedures can result in disciplinary action.

Employee's full name:

_____

Employee's signature

_____

(In block capitals)

_____	_____
Employee Number	Employer
_____	_____
Location	Date

_____

Supervisor's signature

Review this form with your Supervisor who will sign and retain it as part of your personnel file.

Table of Contents

“BE PART OF OUR TEAM”

1.0 Introduction

1.1 How to Use This Handbook

The intent of this handbook is to provide guidance for employees and contractors regarding Chevron Thailand's Operational Excellence (OE) expectations. All employees and contractor personnel should have a copy of this handbook available to them. If necessary, an electronic copy of this handbook is available via Chevron OE/HES website.

The contents of this handbook should be reviewed, discussed, and understood by individual before any work is performed.

If an HES issue ever arises that is not addressed in the handbook, you must ask for guidance from a Chevron Thailand supervisor, HES representative or your employer representative.

All new employees must attend a HES orientation arranged by the company per Thai laws and regulations. The contract company is responsible to provide a HES orientation to their employees prior to being assigned work at Chevron Thailand.
Contractor health, environment, and safety meetings must also be conducted as required

by the Chevron Contractor Health, Environment and Safety Management (CHESM) process to supplement this handbook.

Contractor can schedule an orientation by contacting the Chevron Thailand person overseeing the work.

Personnel Responsibilities

(including disciplinary action for OE/HES violation)

As an Employee or Contractor working for Chevron Thailand, you have a responsibility for your personal safety and the safety of your co-workers.

Employee Responsibilities

The following are Chevron Thailand employees' responsibilities regarding this handbook:

- Be aware of this handbook and comply with its requirements.
- Ensure that contractors under your area of responsibilities are aware of these expectations and have a copy of the handbook available.

- Ensure that all contractors working for Chevron Thailand are complying with the expectations of this handbook and all related procedures related to their work.

Contractor Responsibilities

Each contractor company is responsible for the contractor's employees' safety and for ensuring that the contractor's employees perform their day-to-day work in a safe and proper manner.

The contractor must ensure their personnel, become familiar with, and follow the requirements of this handbook and consult with the contractor's supervisor whenever there are questions about this handbook or the Chevron Thailand requirements.

This handbook is an overview summary of Chevron Thailand's requirements and is not intended to replace, the contractor's own safety program. If there is ever a conflict, the most stringent requirements must be followed.

Supervisor Responsibilities

Supervisors are responsible to:

- Understand, implement and ensure their subordinates comply with all Chevron Thailand policies and procedures along with the Health, Environment and Safety requirements applicable to their area of responsibility.

- Instruct and assist new Chevron Thailand and contractor personnel and visitors to ensure that they are familiar with work expectations, applicable policies, practices, and emergency procedures.

- Inform personnel of the known hazard potentials including fire, explosion, and toxic hazards relating to the person's activities.

- Ensure that Emergency Response Plan (ERP) is current and available and understood by subordinates.

- Ensure that subordinates and visitors understand their roles and responsibilities in the event of an emergency.

- Ensure that all new Chevron Thailand and contractor employees receive a site-specific initial Health, Environmental, and Safety orientations before starting work.

- Confirm that their subordinates have received the appropriate classroom and/or on-the-job training so they have the skills and knowledge to perform their duties correctly and safely.

- Periodically inspect and audit facilities for potential hazards, stopping work and eliminate or mitigate hazards to an acceptable level of risk.

- Ensure that Safety Data Sheets (SDS) for chemicals are available.

- Reinforce safe behaviors and correct unsafe behaviors using the principles of Behavior Based Safety (BBS).

- Investigate and report all accidents and incidents, including injuries, illnesses, spills, fires, motor vehicle accidents and near misses. Then ensure appropriate actions are taken to address the root causes, share lessons learned and prevent recurrence.

- Listen to and respond to personnel concerns regarding workplace conditions, and either act directly to resolve concerns or inform the appropriate level of management to ensure a resolution.

1.2 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 at Chevron, but also for stakeholders that interact with us.

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.

Protecting People and The Environment is one of seven (7) values of Chevron. We place the ***highest priority*** on the health and safety of our workforce, the environment and protection of our assets. We aim to be admired for world-class performance through disciplined application of our **Operation Excellence Management System.**

1.3 Operational Excellence Management System (OEMS)

OEMS is the systematic management of process safety, personal safety and health, environment, reliability and efficiency to achieve world-class performance.

Vision and 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 (OE), our vision is to be recognized and admired by industry and the communities in which we operate as world-class in process safety, personal safety & health, environment, reliability and efficiency.

Objectives

We will systematically manage OE in order to:

- Achieve an incident- and injury-free workplace.
- Promote a healthy workforce and mitigate significant workplace health risks.
- Identify and mitigate environmental and process safety risks.
- Operate with industry-leading asset integrity and reliability.
- Efficiently use natural resources and assets.

The Operational Excellence Management System consists of three parts:

Leadership Accountability - Leadership is the single largest factor for success in OE. Leaders establish the vision and set objectives that challenge the organization to achieve world-class results. They direct the Management System Process, by setting priorities and monitoring progress on plans that focus on the highest-impact items. Leaders visibly demonstrate their commitment through personal engagement with the workforce and by showing concern for the health and safety of every individual. They demonstrate the same commitment to protecting the environment and process safety risk mitigation.

Management System Process - The Management System Process (MSP) is a systematic approach used to ensure progress toward world-class performance. It is linked to the business planning process and begins with defining a vision of success and setting objectives. Gaps between current performance and vision objectives are monitored during the assessment phase. Plans are developed, implemented and monitored to close the gaps to achieve enhanced performance.

OE Expectations - Corporate Expectations for Operational Excellence are detailed under 13 elements including:

1. Security of Personnel and Assets
2. Facilities Design & Construction
3. Safe Operations
4. Management of Change
5. Reliability & Efficiency
6. Third Party Services
7. Environmental Stewardship
8. Product Stewardship
9. Incident Investigation
10. Community and Stakeholder Engagement
11. Emergency Management
12. Compliance Assurance
13. Legislative & Regulatory Advocacy

The OE Expectations are met through processes and standards required to be implemented by local management with the support of corporate and operating company Subject Matter Experts (SME).

An Overview of the OEMS is available at the following URL:

http://www.chevron.com/documents/pdf/OEMS_Overview.pdf

While leaders are responsible for managing the OEMS and enabling OE performance, every individual of Chevron's workforce is accountable for complying with the principles of **"Do it safely or not at all"** and **"There is always time to do it right."**

Our success depends on each individual's **Operational Discipline** commitment to apply the Tenets of Operation for **"every task, the right way, every time".**

Most important is to recognize hazards, follow required practices and procedures and appropriately manage workplace risks and changes.

If necessary, every member of our workforce is authorized to exercise the **Stop Work Authority.**

1.4 Tenets of Operation

To achieve and sustain our objectives, we must develop a culture where everyone believes all incidents and operating disruptions are preventable and that 'Zero Incidents' is attainable. The Tenets of Operations provide a foundation for the Operational Excellence culture at Chevron Thailand.

Tenets are a code of conduct required by employee and contactor personnel to guide daily decisions.

Management plays an important role in reinforcing behaviors consistent with these tenets. The Tenets of Operation are based on two key principals:

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

The tenets state and require personnel to **ALWAYS:**

1. Operate within design and 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.

1.5 Stop Work Authority

At CTEP, we always comply with the Tenets of Operation and strive to achieve an Incident-Free Operation (IFO).

Our Stop Work Authority (SWA) is fundamental to our ability to conduct business safely and reliably. Each employee and contractor personally has a responsibility to stop any unsafe act or condition that does not comply with the Tenets of Operation poses an unacceptable hazard or risk.

Management assures there will never be personal repercussions for exercising this authority.

Your care and concern are very important for the safety of yourself and your colleagues.

Examples of situations to Use SWA include, but are not limited to:

Anytime anyone feels that personnel, the environment, or equipment is at risk.

Observed unsafe conditions at or with a worker or work site.
The occurrence of an incident or significant near-miss.
During emergency response.
Work scope changes that add an un-assessed hazard.
When procedures are not being followed.

In general terms, the SWA process involves a STOP, NOTIFY, CORRECT and RESUME approach for the resolution.

A supervisor with the next level of authority shall be consulted to resolve differences of opinions regarding the validity of a stop work intervention or the decision to resume work.

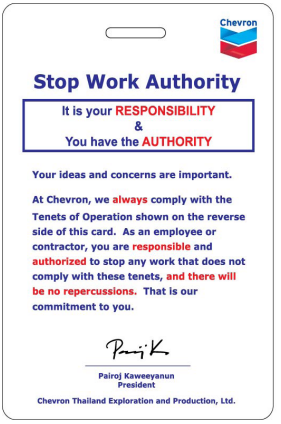
If the proper authority does not exist at the conflict location the resolution must be elevated to the next management level.

Reporting Stop Work interventions should be formally documented and reported as required by the SWA procedure and to facilitate sharing of lessons learned.

Contractor equivalent program to Chevron Thailand's SWA procedure is acceptable if approved by Chevron Thailand.

SWA

YOUR AUTHORITY & RESPONSIBILITY



Chevron

Stop Work Authority

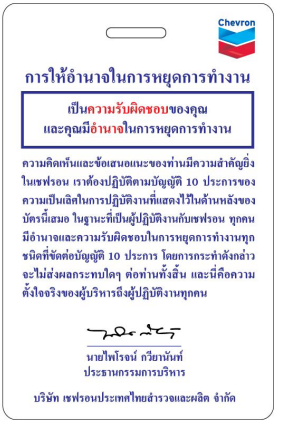
It is your **RESPONSIBILITY**
&
You have the **AUTHORITY**

Your ideas and concerns are important.

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

Pairoj Kaweeyanun
President

Chevron Thailand Exploration and Production, Ltd.



Chevron

การให้อำนาจในการหยุดการทำงาน

เป็นความรับผิดชอบของคุณ
และคุณมีอำนาจในการหยุดการทำงาน

ความคิดเห็นและข้อเสนอแนะของท่านมีความสำคัญยิ่งในเชฟรอน เราต้องปฏิบัติตามบัญญัติ 10 ประการของความเป็นเลิศในการปฏิบัติงานที่แสดงไว้ในด้านหลังของบัตรนี้เสมอ ในฐานะที่เป็นผู้ปฏิบัติงานกับเชฟรอน ทุกคนมีอำนาจและความรับผิดชอบในการหยุดการทำงานทุกชนิดที่ขัดต่อบัญญัติ 10 ประการ โดยการกระทำดังกล่าวจะไม่ส่งผลกระทบใดๆ ต่อท่านทั้งสิ้น และนี่คือความตั้งใจจริงของผู้บริหารถึงผู้ปฏิบัติงานทุกคน

นายไพโรจน์ กวียานันท์
ประธานกรรมการบริหาร

บริษัท เชฟรอนประเทศไทยสำรวจและผลิต จำกัด

"Compliance Is Not Optional"
Remember
Do It Safely Or Not At All
There Is Always Time to Do It Right

1.6 Incident and Near Miss Reporting

Incidents are defined as identifiable situa tions or conditions that did or could have resulted in an injury to a person or result in environmental consequences, property damage or a near miss.

All injuries, illnesses, other incidents or near misses, property damage, spills, releases, fires, harassment, and permit violations of any severity must be reported to the responsible supervisor immediately but no later than at the end of shift.

An incident report must be completed and if any statements needed for the report must be taken at the incident site immedi-ately with all persons involved.

1.7 Hazard Observation

In order to encourage personnel to identify (see) abnormal condition, Chevron Thai land utilizes the program called “Hazard Observation” (HazOb).

A hazardous condition is a situation or circumstance where risks exist that could cause harm to personnel, assets or the environment, however, incident has not yet occurred.

Examples include but are not limited to:

Energy hazards
Defective tools, equipment, or supplies
Inadequate supports or guards
Inadequate warning
Poor housekeeping
Toxic / hazardous atmosphere / chemical condition
Excessive noise

The objective is to proactively eliminate hazards that could lead to injury / illness, property damage and loss, process loss, non-compliance – environmental impact, etc. before an incident can occur.

The Chevron Thailand HazOb card should be used to report and detail the observed hazard. Completed HazOb card should be submitted to the Chevron Thailand responsible person or Facility HES Specialist.

1.8 Behavior Based Safety (BBS)

Behavior-Based Safety (BBS) is a process aimed to prevent injury to persons using the technique of reinforcing “Safe Behaviors” and eliminating “At-Risk Behaviors” by individuals.

The BBS Program applies to all personnel and requires each employee and contract person to participate in a BBS or equivalent behavior based safety orientation.

This process is designed to encourage cross-observation between all workers regardless of their employer or position.

Contractor companies that implement their own BBS process are required to report the effectiveness of their BBS implementation to the contract owner during the performance review sessions as appropriate. A contractor's BBS program is subject to be audited as required by the Chevron Thailand CHESM Process.

The BBS Program must include the following components:

- A data sheet with critical behaviors
- Training on the observation process
- Feedback after observation process
- Data collection and trend analysis
- Action Planning
- Steps to follow up on action plan.
- The following 6-steps are used for conducting BBS observation:
    1. Greet to get the person's attention.
    2. Commend safe acts/practices (be specific & sincere).

3. Show concern about at-risk acts/ situations and potential injury consequences, and ask questions why the person performed the at-risk act. Stop work if needed and consult with knowledgeable people.
4. Ask about other ways to perform the task safely and gain commitment for change and ensure that change occurs.
5. Ask about other safety concerns.
6. Thank the person for their cooperation and commitment to safe work.

1.9 Non-compliance Reporting (Hotline)

Chevron's policy is to comply fully with internal requirements and all applicable laws, therefore it is everyone's responsibility and it is a must to report the situation to management when they believe there is a violation of the law or company policies.

Potential violation or non-compliance with the Chevron business conduct and ethics code, vital company interests or the security of personnel included but are not limited to:

Anti-boycott Laws
Antitrust Laws

Conflicts of Interest
Data Privacy
Environmental Laws
Foreign Corrupt Practices Act
Fraudulent Transactions
Harassment/Discrimination
Health and Safety Laws
Improper Lobbying Activities and Political Contributions
Information Protection
Internal Accounting Controls
International Trade Controls and Sanctions
Potential Criminal Violations
Questionable Accounting or Auditing Matters
Thefts, Bribes or Kickbacks
Travel & Entertainment or Purchasing Card Abuse
Weapons on Company Property

Reports can be made anonymously to:

The Chevron Hotline 24hr toll-free number [Thailand 001-800-11-007-5466] or http://www.ChevronHotline.com

There will be no disciplinary action or retribution against any employee or contractor who reports any potential violation or non-compliance.

2.0 Chevron Thailand Workplace Principals and Policies

2.1 Professional Conduct

Chevron respects every individual who works for the company and expects our employees and contractors to conduct themselves in a professional manner. No form of horse-play, practical jokes, harassment or fighting will be tolerated at Chevron's operations.

Violators will face disciplinary actions including dismissal, including involvement of regulatory agencies and law enforcement as appropriate.

Chevron considers it is the responsibility of all employees, contractor or, subcontractor personnel to report any acts of discrimination, harassment, violence, etc. by contacting their Chevron Thailand or Contractor Supervisor, HR Manager, Manager Security or the Chevron Hotline.

Discrimination
Chevron's policies aim to provide a working environment free from discrimination or harassment based on race, color, religion, national origin, sexual orientation, gender identity, age, physical or mental disability, political preference, family or marital status and citizenship.

Harassment
Harassment is any inappropriate conduct that has the purpose or effect of creating an intimidating, hostile or offensive work environment, including unreasonably interfering with an individual's work performance or affecting their employment opportunity.

Chevron prohibits any form of:

Verbal harassment, such as offensive jokes, name calling, slurs, objectionable photographs, computer images, pictures etc. Sexual harassment, such as unwelcome and uninvited sexual advances, requests for sexual favors, or other verbal or physical conduct of a sexual nature.

Physical harassment, such as pushing, shoving or other aggressive physical conduct or threats to take such action

Workplace Violence (Fighting)
Chevron prohibits and will not tolerate any violence or threats of violence in the work place such as extreme forms of physical harassment, hitting, punching, kicking, fighting, physical attacks or threats of such.

Gambling
Chevron prohibits all forms of gambling at its operations, facilities, and work locations.

2.2 Contraband

Contraband is the possession of items that are illegal and prohibited including but not limited to: firearms, ammunitions, explosives, drugs, alcohol, controlled substance, and other items which may be banned by International or local laws.

Chevron does not tolerate contraband violation and will take appropriate disciplinary actions including criminal charges for offenders

Firearms/Weapons
No firearms, ammunitions or explosives are allowed on Chevron property at any time without the prior approval of the Company management, after consultation with and approval from the Global Security Chief Security Officer.

Firearms include any type of weapon that propels bullets by an explosive or other energy source.

Ammunitions include any type of explosive device that is used as the energy source for a weapon.

Illegal Drug, Alcohol and Controlled Substance Policy
Chevron Thailand enforces a strict drug, alcohol and Substance Abuse Policy (SAP) that includes a required mandatory test for a Breath Alcohol Concentration of each passenger traveling offshore by helicopter or boat and as part of pre-employment medical examinations.

A Chevron Thailand designated Medical Person will conduct the test privately.

If a helicopter passenger has a reading at or above 0.05%, they will not be allowed to travel offshore and may be subject to disciplinary action as required by the Chevron Thailand SAP and Medical protocols.

Prescription drugs

If a person brings prescription drugs into a Chevron facility, the medication must be in the bottle or container in which it was originally dispensed and must be prescribed to the individual.

All persons shall report the use of medication to their supervisor if taken before and during the work shift or if carried offshore.

Use of a prescription or over-the-counter medication is permitted only if such use does not have side effects that could impair or adversely affect the person's work performance. Individuals should consult with their physician before taking any medications that may interfere with their ability to work safely.

Chevron prohibits the use, possession, distribution, purchase, or sale of any controlled substance while on company premises; while conducting company

business; or while operating company equipment.

2.3 Smoking

All Chevron buildings and facilities are designated as “non-smoking” areas, except for areas specifically designated for smoking.

Offshore smoking is only permitted in designated areas; smoking is prohibited on wellhead platforms and any area containing hydrocarbon, gas or fuel.

Smoking is prohibited on any aircraft (rotary or fixed-wing).

Smoking is only permitted on crew change vessels with designated area as identified by the Captain.

Smoking is also prohibited on vessels within 500 feet of an offshore installation, drilling rig or FSO/FPSO.

In addition, lighters and matches are not allowed to be carried to any offshore installation, FSO / FPSO, drilling rig, special project vessel, or construction vessel operated by or for Chevron.

A fixed means of ignition shall be provided in the designated area.

Smoking is allowed in the wheelhouse of a vessel as long as the area is well ventilated, and the secondhand smoke is not circulated throughout the passenger seating area; however, if a more stringent smoking policy is imposed by the vessel owner/operator, that policy must take precedence.

Personnel are not permitted to carry or use Electronic Cigarette (e-cigarette) or Personal Vaporizer (PV) or Electronic Nicotine Delivery System (ENDS) at Chevron's facilities.

2.4 General Safety Rules

Electronic Devices
All non-intrinsically safe electronics devices such as cameras, mobile/cellular phones, calculators, notebook computers shall only be used in non-hydrocarbon areas or with an approved work permit.

Emergency Station Bills
Station Bills are posted at each facility. The Station Bill summarizes the procedures that must be followed when the general or prepare to abandon alarm sounds. You must

read and understand the alarm sounds and what to do when the alarms sound.

Fishing Limitation
No fishing is allowed on/or near well head and processing platforms. This limitation includes fishing on rig and vessels under Chevron Thailand operation. Exception only allow for environmental monitoring program.

Guards and Handrails
Guard and contact prevention devices must not be removed while equipment is operating and must be in place before start - up. Handrails or other protective barriers shall not be removed without permission.

Hand Trailing Technique
Hand railing use is required: one hand shall always be free to use stair hand railings.

When going down or going up, ensure your free hand slides down or up and remains in contact with the hand railing at all times. This “hand trailing technique” shall be used to catch yourself in the event of a slip or fall. (Ask a HES Specialist to demonstrate.)

Hose Clamps
Except for engine coolant hoses, hose clamps (tangential screw type/band hose

clamps) must not be used in any air, gas, water, fuel or hydrocarbon service.

Manual Lifting
Avoid manual lifting. It is always preferable to use mechanical lifting devices when possible. When manually lifting, bend your knees and bring your body up with the load. Keep the load close to your body and keep your back straight. Let your legs do the lifting. Get help for heavy loads.

Objects or equipment heavier than 25 kg and 55 kg should not be manually lifted by woman and man respectively (refer to Labor Protection Act and the Regulation of the Ministry of Labor, Re: Determining weight limits for manual lifting).

Banned Equipment
Based on lessons learned, Chevron Thailand bans and prohibits various types of work related items and equipment that includes but is not limited to:

- Lifting and rigging equipment
- Certain chemicals or hazardous goods
- Non-approved PPE
- Certain types of tools
- Cheater bars unless used as follow:

Cheater pipes can only be used when absolutely necessary; the pipe must be less than twice the length of the wrench handle and must closely fit the entire length of the wrench handle but never on Crescent® type adjustable wrenches. Never jump or jerk on cheater pipes to break connections.

Cargo Deliveries

All cargo delivered to a Chevron Thailand facility must be pre-slung with slings that meet or exceed Chevron Thailand's Cargo Handling and Lifting Equipment Requirements and Practices including but not limited to:

- All cargo and materials must be marked to identify the weight, destination, supplier / owner, purchase reference and contents.
- Ensure that all equipment is inspected for dropped object hazards.
- The cargo documentation correctly matches / identifies the material or item.
- There is no leakage or spill possibility.
- Engines must have (1) Exhaust spark arrestors, (2) Air intake shutdown devices, (3) Low-tension ignition

systems, (4) Hot surfaces protection and guards to prevent accidental contact.
- SDS labeling and documentation.

Knives and Cutting Devices
No weapons or personal knives are permitted at Chevron Thailand offshore facilities.

Site made knives or cutting devices are prohibited.

Only Chevron Thailand provided, controlled and approved knives and hand cutting devices are permitted to be used at Chevron Thailand Facilities.

Kitchen and galley knives shall be blunt ended (Chinese Style).

Personnel are not permitted to carry or use personal pocketknives or multi use tools (Leatherman, multi-pliers etc.) at offshore locations.

Knives can only be taken offshore if they are required for specific work. A Chevron Thailand responsible supervisor or higher positions must provide an e-mail or letter stating what the knife is to be used for.

The e-mail or letter must be shown at the security checkpoint. Knives cannot be taken offshore without an authorizing e-mail or letter.

All knives must be appropriately packaged and checked with baggage.

Contractor companies are responsible for informing their employees regarding Chevron Thailand's restriction for knives and cutting devices and must provide and manage alternative cutting devices for their personnel when necessary for their work.

Each contractor company shall develop a method/procedure to control the purchase and distribution of open/lock-blade knives necessary for their work.

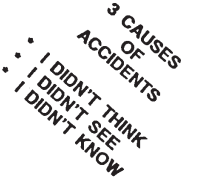
If a knife is the only appropriate tool for the job, the contractor company is required to follow the Chevron Thailand policy regarding PPHA, JSA and PPE requirements.

Personnel must wear the appropriate PPE (KEVLAR or leather gloves) when using knives and cutting devices.


WORK SAFELY
YOU MAY
NOT GET
A SECOND CHANCE


REPORT ALL
INJURIES
AT ONCE


GOOD
HOUSEKEEPING
THIS IS YOUR
HOME
AWAY FROM
HOME
PLEASE
KEEP IT CLEAN


3 CAUSES
OF
ACCIDENTS
I DIDN'T THINK
I DIDN'T SEE
I DIDN'T KNOW

Safety signs
Safety signs are important to:

Warn and as a reminder of conditions and hazards that can cause injuries, illness or accidents. They also serve to remind persons of their responsibility to follow the required safety measures.

Signs are designed for quick reminders by using standardized shapes, colors and words, learn to recognize them.

Signs are for your benefit, read and comply with the intended safety message.

1. Mandatory Signs

A Sign prescribing specific behavior, for example to use the correct type of PPE for the work to be carried out, including specialized PPE.

Sign Style:

Background = Blue,
Diagram or text = white

2. Prohibition Signs

The safety color red must appear around the edge and in a diagonal cross line and must make up at least 35% of the surface area of the sign.

Sign Style:

Background = White
Diagram or Text = Black

3. Warning Signs

Sign Style

Background = Yellow
Diagram or Text = Black

4. Safe signs

Safe signs mark fire exits and escape routes as well as the assembly/muster point and the safety equipment.

Sign Style

Background = Green
Diagram or Text = White

5. Fire Protection Signs

Sign Style
Background = Red
Diagram or Text = White

Use of Hand or Power Tools
The type of and risks related to the tools required for the work shall be considered as part of the PPHA and JSA Assessment.

A Hot Work Permit is required for work in hydrocarbon areas when the hand or power tool can cause a spark.

Hand tools shall only be used for their intended purpose (do not use wrenches as hammers or screwdrivers as chisels or pry bars. Do not use pipe wrenches on hex nuts).

Electric for power tools shall be connected to a source with a ground fault circuit interrupter (GFCI).

Grinders shall have a wheel guard in place with a wheel rated for the maximum speed and type of work.

Always maintain tools in good condition, and replace or have defective tools repaired by qualified personnel.

Power tools should be de-energized when not in use.

Use of Compressed Air
Compressed air for cleaning shall only be used at a pressure ≤ 30 psig with appropriate PPE to protect from flying material.

Personnel are prohibited from using compressed air for cleaning themselves, their clothing, body parts, PPE and anything that the compressed air could damage or could result in a hazard.

Whip check or approved securing equipment shall be used on all air hose connections.

Housekeeping
Good housekeeping is fundamental for safety. All Employees/Contractors are responsible and must keep work areas, tools, equipment clean and free of housekeeping caused hazards.

2.5 Security

Personnel and Asset Protection

Security at Chevron Thailand relates to the protection of personnel, company assets and information from theft and criminal activities.

All personnel are responsible for reporting any activity of a suspicious nature. Information is posted at each facility about a confidential telephone hot line for reporting security and other non-compliance concerns.

Fraud and Theft

Chevron Thailand relies on its internal controls and the personal integrity of all its personnel to protect the company's assets against damage, theft and other unauthorized use.

Engaging in any scheme to defraud anyone — of money, property or honest services — violates Chevron policy and the law and carries severe penalties, including termination and/or criminal prosecution.

These consequences apply to any dishonest or fraudulent activities, including misusing or stealing company assets or cheating on timesheets, travel and entertainment expense reports, or other violations as determined by investigations.

Employees are discouraged from bringing large amounts of cash or other valuables of a financial or personal nature to work sites. If they choose to do so, however, it is their personal responsibility to keep these items adequately secured. Chevron is not responsible for any loss of personal valuables.

Firearms

No firearms are allowed on Chevron property nor shall they be used in the performance of company business at any time without the prior approval of Chevron's Chief Security Officer. Chevron Thailand retains the right to search persons and their belongings for firearms and contraband.

Controlled Substances

The use, possession, distribution, purchase or sale of any controlled substances by any person at a Chevron Facility or operation is prohibited. It is prohibited and no one shall use a controlled substance which causes or contributes to unacceptable job performance or unusual job behavior when present at a Chevron Thailand operation, or facility. Chevron Thailand retains the right to conduct or require searches and tests to enforce this policy.

Information and Data Protection

Chevron Thailand requires Employees and Contractor Personnel to maintain the confidentiality of information related to Chevron Thailand Operations.

It is important for all employee and contractor personnel to realize that Company verbal, written, computer information and data is considered a valuable asset and must be protected and respected the same as physical and financial assets.

This requires that employees and contractors only divulge and discuss Company information with those directly involved or having a need to know as required to perform their work. Information about the use of Chevron Computer Systems are also subject to security procedures and requirements.

The following is a summary of some of the important procedures and requirements for using Chevron Thailand computer equipment and systems.

- Access to Chevron computer systems must be made using only your Smart Badge and password. Passwords must not be shared.
- Users are responsible for all activity performed with their personal Smart Badge.
- All activities on the Chevron System are subject to monitoring by the IT Department.
- Chevron respects and honors all copyrights and requires all users to respect and honor the proprietary rights of all copyrighted material and the copyright owner.
- Terminals, computers and workstations must be secured from unauthorized use when unattended.

- Users shall log out at the end of their work day or shift.
- All users must report any virus or security incident or problem immediately to the IT Service Desk.
- Any questions about the use, suspected abuse or comprised security of Chevron information shall be reported immediately to your supervisor.

Discrimination, Harassment, and Workplace Violence

Chevron Thailand is fully committed to the principles of equal employment opportunity. Chevron values diversity and encourages an inclusive work environment that enables all employees to fully participate and contribute effectively to meet the Chevron Thailand business objectives.

This means the Company Policy is designed to provide a working environment free from discrimination or harassment based on race, color, religion, national origin, ancestry, sexual orientation, gender identity, age, physical or mental disability, political preference, family status, marital status, citizenship, or other status protected by law or regulation.

All employees must conduct themselves in a manner to comply with the provisions of the company's policy.

Chevron Thailand strictly prohibits harassment of any employee or applicant in any form. The term harassment refers to any unwelcome conduct, either explicit or implicit, that by its nature has the effect of interfering with an individual's rights or causes hurtful feelings or emotions.

Harassment includes offensive, hostile or intimidating words or actions, as well as inappropriate actions such as sexual advances. Acts of violence or threats such as hitting, punching, fighting and physical attacks are an extreme form of physical harassment and will not be tolerated.

Retaliation Prohibited

Sexual harassment is illegal and will not be tolerated at Chevron. Employees found to have violated Chevron's anti-harassment policies will be subject to disciplinary action, up to and including dismissal.

No employee will be subjected to retaliation because they filed a sexual harassment complaint or participated in a sexual harassment investigation, action conducted by the company. Any retaliation under these circumstances is a clear violation of Chevron's Complaint Policy and Procedure.

Chevron Thailand has adopted the Corporation's procedures for handling complaints. If you feel you have been subjected to sexual (or other) harassment and/or if you are aware of any harassing behavior, such concerns should immediately be reported to your direct supervisor (or if you are uncomfortable with doing so, the next level of management), Human Resources business partner, or by calling the Chevron toll-free, 24-hour hotline at +1-800-284-3015. All complaints will be promptly and effectively investigated with effective corrective action taken if the allegations are proven.

3.0 Work Location and Transportation Requirements

3.1 Traveling Offshore Requirements

The requirements for traveling to a Chevron Thailand Offshore Facility or Operation vary based on the following categories: Medical (Physical) Examinations, Training and Document Requirements.

Categories of Offshore Travelers

Category 1: Infrequent Visitors Not Engaged In Physical Work / Activities

This category includes:

Offshore Special Visits - Persons in this category include VIP's, government officials, and Technical Experts;

Onshore-based employees or contractors or summer-hire students who travel offshore for training, survey, observation or performing specific tasks that do not require physical work. Personnel of this category shall not exceed: four (4) offshore trips per year, accumulated time offshore per year does not exceed 30 days.

Category 2: Infrequent Workers Engaged in Physical Work / Activities

This category includes:

Short-term project contractors, summer-hire students traveling offshore for specific tasks or projects with physical work, accumulative trips must be less than four (4) trips per year and the accumulated days per year cannot exceed 30 days.

Category 3: Regular or Frequent Workers Other Than Categories 1 and 2

This category includes:

Regular or frequent workers other than categories 1 and 2 who travel offshore for physical work. Persons that make more than four (4) trips per year, or exceed 30 days offshore per year.

Government officers such as DMF or PTT representatives who normally work at CTEP offshore facilities with offshore days equal to this category.

Physical (Medical) Examination

The following Physical Examinations (PE) are required for personnel who travel offshore

Category 1:
Persons of this category must sign a medical acknowledgement and release confirming that they consider themselves medically fit to travel offshore based on the results of a physicians medical examination within the previous 12 months.

Category 2:
Thailand based personnel must provide proof from a "Certified Doctor" that they meet the minimum requirements listed in Appendix D (TSP-2 Traveling Offshore, Safety Passports and Short Service Employee Program) within the previous 12 months or provide a letter of indemnity from their employer prior to being allowed offshore.

Persons from outside of Thailand must provide a verifiable "fit for work", doctor's certificate or verification from their employer that they have had a satisfactory PE within the previous 12 months and are "fit for work".

Category 3:
Thailand based personnel must meet the requirements as listed in Appendix D (TSP-2) for regular crew and catering crew prior to being allowed offshore.

Persons from outside of Thailand must provide a verifiable "fit for work", doctor's certificate or verification from their employer that they have had a satisfactory PE within the previous 12 months and are "fit for work".

Tropical Basic Offshore Safety Training (TBOSIET)

New personnel that will spend more than 30 days per year offshore are required to have proof of completing the Tropical Basic Offshore Safety Induction and Emergency Training (T-BOSIET) or a company approved equivalent course.

Training record should be readily available to show the transportation dispatcher when checking in for travel by boat or helicopter.

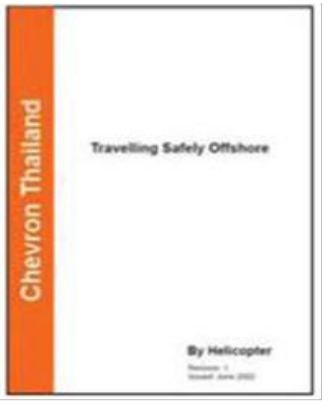
Safety Passport

All contractors working offshore are required to have a Chevron Thailand or other approved Safety Passport. Refer to TSP-2. If you are going offshore, the booklet "Information for Helicopter Passenger" provides information about the check-in procedures, flight safety, and about what to do on arrival offshore.

The Booklet also contains the Chevron Thailand Policies regarding helicopter and boat passenger procedures, baggage allowances, rules, etc. If you have not been given a copy of this booklet, it is available at the Chevron Thailand aviation center.

Read it, and if you have any questions ask the flight dispatcher at the aviation center.

Always read the posters at the aviation center for current Safety, Health and Environmental information.


Chevron Thailand
Travelling Safely Offshore
By Helicopter


Chevron Thailand
Safety Passport

For additional information, refer to the Thailand Specific Procedure (TSP-2) for details about raveling Offshore, Safety Passports and Short Service Employee Program.

Offshore Orientation

When you arrive at your designated offshore work location for the first time you must participate in a location specific orientation covering the following:

Safety Orientation VDO
T-card system
Smoking
Personal Protective Equipment (PPE)
Living Quarters
SSE Program
Station Bill and Emergency Procedures
Safety and Emergency Equipment
Alarm Systems
Communication
Tour of Facility
High level overview of MSW standards and associated requirements
General Safety Rules
First Aid and Medical Facilities
Hygiene
Incident and Near miss reporting
Specific site requirements

Training list above are subjected to change where appropriate

If you have any questions, be sure to discuss them with the person giving the orientation or your supervisor.

You will be required to view the safety video presentation each time you arrive back at your offshore location.

Short Service Employee

The Short Service Employee (SSE) Program stipulates the method that will be used to systematically identify, supervise, train and mentor SSEs with the aim to prevent personal injury and other incidents.

Each individual SSE must be visibly identifiable. This is typically achieved by requiring each SSE to wear a green hard hat or a site specific means to allow quick identification of SSE personnel by other team members.

For the full text of these policies, refer to the Chevron Thailand Short Service Employee Program.

3.2 Helicopter Transportation

Helicopter Safety Procedures

When near a helicopter, it is necessary to adhere to the specified safety guidelines. Personnel should always approach the aircraft when the rotors spinning as directed by the Helicopter Landing Officer (HLO), Ground Support Persons, or Pilot

Always approach from the side mid ship; **never** walk beyond the baggage compartment door, toward the tail rotor, across the front or under the tail boom of the helicopter.

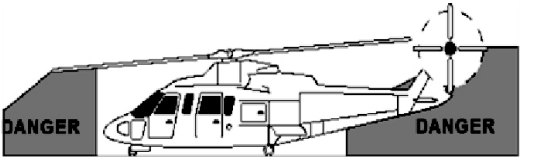
General helicopter safety procedures include:

- Advise the aviation dispatcher before transporting any hazardous materials, such as explosives, flammables, compressed gases, and radioactive substances. All hazardous materials shipments must conform to Department of Transportation (DOT) regulations regarding identification, hazard

classification, proper shipping name, packaging, marking, labeling, and manifesting.

- Use the scales provided to weigh both your person and your luggage accurately for every flight.
- Remove and stow any unsecured headgear including hard hats before approaching a helicopter.
- Notify the flight dispatcher and pilot if you are a first- time passenger. You will also receive extra assistance and guidance during boarding and unloading the aircraft.
- All passengers must view Chevron Thai land's Flight Safety and Aircraft Orientation film before boarding the aircraft.
- Inform the pilot if you are unfamiliar with your destination, so that you may be notified when you arrive at your destination. This action reduces confusion, because helipads are marked by their geographical location, which may not be their commonly called name.
- Smoking, chewing tobacco, and use of snuff are prohibited onboard aircraft.
- Passengers must comply with the following guidelines for dress and traveling:

- Long pants are required – no shorts.
- Shirts must have collars – no tank tops. No petroleum or chemical-saturated clothing or shoes are permitted.
- Proper shoes are required – no thongs, sandals, slippers, Crocs, or flip-flops.
- Wear hearing protection – either earplugs or earmuffs. Earplugs and muffs are provided, or you can provide your own. Do not discard used earplugs inside the aircraft, on the flight decks, or on airport ramps. This can cause a safety hazard, from helicopter rotor wash or be ingested into the engines.
- Securely fasten and wear an inflatable personal flotation device (PFD) aboard the aircraft as instructed by the pilot.



Aviation Emergency Medical Procedures

Transportation for first aid incidents will be a priority on the next available flight. Medical emergencies will have immediate evacuation priority with onshore arrangements coordinated by Chevron Thailand.

3.3 Boat Transportation (Water Safety)

These guidelines apply to employee and contractor personnel and equipment transported by a vessel under charter to Chevron Thailand.

Safe operation of a vessel chartered to Chevron Thailand is the exclusive duty of the captain and owner of the vessel.

Only properly licensed captains employed by the vessel owner shall operate and navigate vessels under charter to Chevron Thailand.

The captain of the vessel has the authority to refuse passage to any person or cargo considered unsafe or not complying with rules or not wearing a Personal Flotation Device (PFD) when instructed to do so.

The captain, deck crew and lift team shall follow the JSA for all lifting operations.

Boat-to-boat transfers are only permitted when approved by both captains or during emergencies.

Boarding Ropes (Swing Ropes)

A deckhand wearing the Personal Flotation Device (PFD) must be on deck to assist passengers anytime personnel transfers are made and only when the Captain considers the sea conditions safe for rope transfers.

Anyone involved in the transfer should use Stop Work Authority any time they feel conditions are unsafe for transfer.

Chevron Thailand and Contractor Companies are responsible for training their employees about proper swing rope use including but not limited to:

- When transferring small items, pass the items to the deckhand before transferring to the boat or have the deckhand pass the items to you when disembarking.
- Wearing a hard hat with chin straps.

- Watching the boat's movements and tim ing the structure to boat transfer swing so that your feet land on the boat as it completes its rise, likewise when transferring from a boat to a structure, timing your swing so that you leave the boat just as it dips down from the highest point of the wave.
- Grab the knotted rope high enough to clear the structure's grating, in most cases, this is just above the middle knot or at eye level
- Swing the rope back for the next person after landing.
- Be alert and help the next person make their safe landing.

Crane Personnel Transfers

Only qualified crane operators shall perform personnel lifts.

Only experienced and approved Crane Operator as per Chevron Thailand "Crane Operator License Classification" is considered qualified.

As recommended by API SPEC 2C and API RP 2D.

Cranes and their hoists shall be classified and marked as “personnel handling” with a sticker depicting a personnel basket with maintenance records and the manufacturers recommendations in a file.

Cranes classified as personnel handling shall be equipped to prevent unintentional lowering of the boom and have an emergency load lowering kit available.

All hooks on headache balls, block, and stingers used to transfer personnel shall be a type that can be closed and locked per API SPEC 2C.

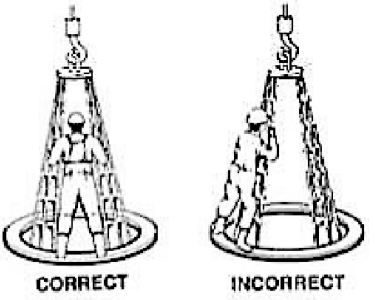
Personnel Basket Transfers

Crane lifted personnel baskets are used for transferring personnel to and from boats and platforms.

Persons not familiar with how to do this must ask for help and observe others transferring before doing it for the first time.

Only luggage and small, hand-carried items shall be placed inside the personnel basket.

Personnel shall stand on the outside rim of the personnel basket and securely grasp the upright basket ropes. Keep knees slightly bent and be prepared for unexpected moves, particularly in rough seas.



All personnel transported by a personnel basket shall follow the instructions of the Crane/Boat Crew and wear a PFD and hard hat with chin strap.

Personnel baskets shall be inspected prior to use to ensure compliance with the manufacturer's load and use limits per the identification tag, Chevron Thailand PLE Requirement and API RP 2D.

A 15-20 feet knot free tag line must be used on all personnel baskets.

Blind lift of personnel transfer is prohibited.

3.4 Land Transportation

Seat Belt

All drivers and passengers are required to be properly seated with the vehicle's seat belt fastened prior to operating the vehicle and for the duration of all journeys.

Cell Phone and Driving Restriction

Chevron Thailand prohibits the use of cell phones or other portable communication devices by the driver of a motor vehicle while the vehicle is in motion (include texting). Calls cannot be made or received while stationary in traffic or stopped at traffic lights. If it is deemed necessary to make or receive a call, the river must locate to a safe area, bring the vehicle to a complete stop without creating a hazard to other road users and make or receive the call.

Drivers are also not allowed to perform other forms of multi-tasking (e.g., eating, reading or taking notes).

3.5 Cargo Handling

The captain of vessel, aircraft or driver of a vehicle is responsible to accept or reject

cargo and to ensure that the cargo is properly positioned and secured prior to the journey. Fastening devices shall be provided by the vessel or vehicle owner company. Only chain safety binders of the cam-lock or the ratchet-type are permitted.

Hazardous materials must be properly identified, classified, named, packaged, marked, labeled and manifested.

All cargo must clearly identify the shipper, destination, weight, contents and be packaged to resist the effects of the environmental conditions to which they may be exposed.

3.6 Hazardous Materials Transportation

Any person who is responsible for classifying, packaging, marking, labeling, plac arding, handling, or preparing shipping papers for regulated hazardous materials must have the required training to ensure the shipment and documents confirm to the IATA/DOT/IMDG Codes.

Whenever hazardous materials are transported by air, water or highway; the Chevron Thailand Aviation Safety and Operations Procedures Manual, Chevron Thailand Marine Safety and Operations

Procedures Manual, TSP-20 Hazardous Materials, TSP-33 Chemical Handling and Storage, The Hazardous Substances Act. apply to all Chevron Thailand operations.

Document hazardous waste on a Hazardous Waste Manifest, not a Straight Bill of Lading.

The supplier must advise the captain, pilot, driver or dispatcher of any hazardous materials before loading.

4.0 OE/HES (Safety) Meetings

OE/HES Meetings are an important means of sharing knowledge about HES topics, Lessons Learned along with re-enforcing planning techniques for working safely. Chevron Thailand requires persons to attend the following meetings:

4.1 Pre-job and JSA Meetings

Prior to starting all work or when conditions have changed from the initial "Pre-Job" or Work Team JSA meeting all members of the team shall discuss the job planning, job assignments, any unique or unusual hazards, and how to avoid or control the identified or possible hazards.

Pre-Job JSA's must be conducted at the worksite and always include reviewing and agreeing the PPHA or JSA Worksheet and Permit to Work Requirements.

Two way communications is required at all Pre-Job and JSA meetings to ensure participation and understanding by all members of the work team/crew.

4.2 Facility OE/HES Meetings

Regular Facility OE/HES Meetings shall be conducted to emphasis and remind persons of the importance of safety and OE/HES topics.

Attendance is required by all onsite personnel at Facility OE/HES meetings nor mally held on a bi-weekly basis.

The OIM / Facility Manager establish the agenda for the meeting after considering the workforce, current activities, issues and topics. Attendance signup sheets and minutes of the meeting are recorded. As a minimum the meeting agenda generally include a review of minutes from the previous meeting, a designated topic, sharing of lessons learned, BBS Cards, personnel questions and as required by TSP-26 Group OE/HES Meetings.

5.0 Incident Investigation

Chevron Thailand requires incidents, accidents and near misses to be investigated and documented as required by the Chevron Incident Investigation Process.

An incident is “an unplanned event or expo sure that has an impact or effect to an employee, contractor, equipment, the community, the environment, the company’s reputation or financial performance.”

Near Miss is an unplanned event having a potential but unrealized consequence for injury to personnel, damage to property, the environment, the company’s reputation, or financial performance

Chevron requires everyone to report all injuries, illness (both work and non-work related), incidents and near miss promptly to their supervisor.

Contractors are required to conduct, and in some cases lead, a root cause analysis (RCA) team.

5.1 Root Cause Analysis (RCA) / Incident Investigation

RCA investigations shall include, but are not limited to:

- A description of the event
- A determination of the actual and potential loss or losses
- A list of the root causes of the incident
- An evaluation of the risk of recurrence
- A list of system controls and/or process changes to reduce the risk of recurrence
- A plan to fully communicate any lessons learned and the details for all completed RCAs shall be shared with the onsite contractor's Chevron Representative as soon as possible.
- Chevron Thailand participation in all contractor incidents while working under Chevron Thailand operation control.

In situations where an incident involves multiple contract companies or contractor and Chevron personnel, Chevron Thailand may commission a team composed of personnel from all affected companies.

5.2 Case Management

Chevron Thailand requires all injuries and illnesses to be reported and assessed immediately in order to ensure proper medical care and follow up for the person(s) involved. Failure to timely report and manage injury or illness cases can result in more severe consequences, including treatment complications.

The Case Management Procedure covers seven (7) key components:

1. Notification and Reporting of Injury or Illness
2. Treatment Facility
3. Interaction and communication between responsible parties
4. Medical Escort
5. Communication of the Case Management Procedure to affected parties
6. Treatment Instruction Documentation
7. Medical Laws/Ethics

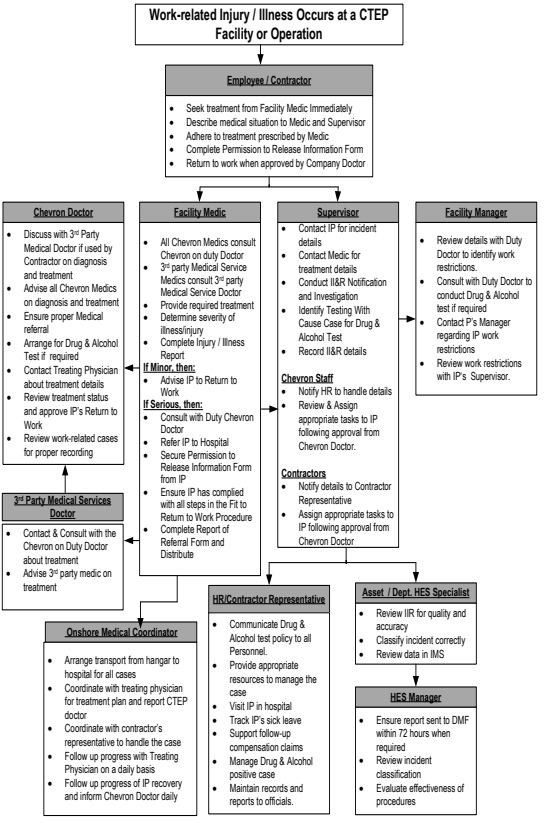
"TSP–21 Case Management for Work-Related Injury / Illness Cases" is established to provide guidance to personnel involved in managing and following up on work-related injury or illness cases. The primary objectives of TSP-21 are to:

- Ensure that appropriate medical treatment is promptly provided to the injured / ill person.
- Ensure appropriate follow up on cases until the injured / ill person is fit for returning to work.
- Ensure effective coordination and communication between supervisors, Chevron Thailand and Contractor Manage ment Personnel, Chevron Thailand's OE/ HES Department, Chevron Thailand Medical staff and the treating medical providers.
- Ensure injuries or illnesses are accurately and consistently documented tocomply with Chevron's Reporting Standard.

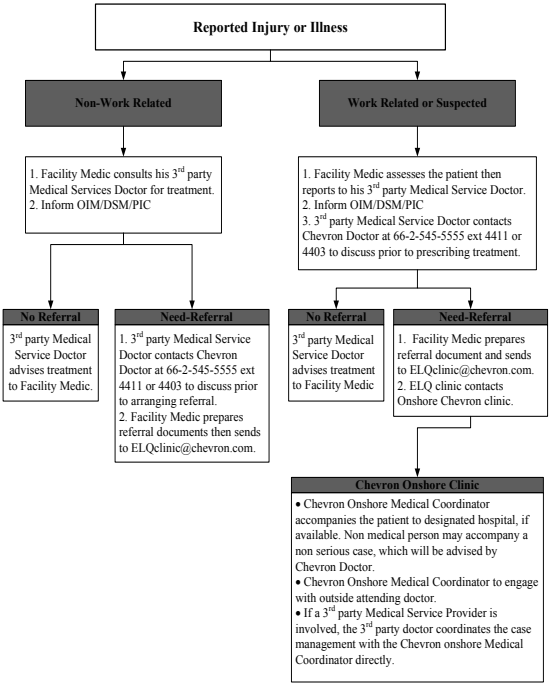
If there is any doubt whether an injury or illness is work related or not, the case should be treated as a work-related case.

Chevron Thailand also requires contractors to be responsible for providing the necessary follow up for all injuries/illnesses involving their personnel also the reporting in compliance with the contract terms between Chevron Thailand and the contractor as soon as possible.

Work Related Injury/Illness Case Management Flowchart:



Medical Case Management Flowchart for Work-Related Injury/Illness Involving 3rd Party Medical Service Provider.



For more information on the case management procedure, refer to the Chevron Thailand Medical Doctor or Erawan Clinic

6.0 Contractor HES Requirements

6.1 Contractor Review and Selection

Chevron Thailand contractors are selected based on but not limited to the assessment and grade of the Contractor Health, Environment and Safety Management (CHESM) Process considering:

- Nature and risk of the work
- Contractor's experience
- Management Leadership
- Historical HES performance
- HES/Safety Management System
- Workforce training and competency
- Incident investigation and reporting procedures
- Emergency Procedures

6.2 Contractor Requirements

Contractor on the job, supervisors and personnel must:

- Conduct regular HES and pre-job meetings including risk assessment planning.
- Utilize only equipment as stipulated in the contract.

- Operate equipment only as intended by the manufacturer with trained and qualified personnel.
- Implement and follow the approved Work Permit System and Chevron Thailand Managing Safe Work (MSW) Process as appropriate.
- Provide and ensure personnel understand and comply with contract and Chevron Thailand PPE training and use requirements.
- Conduct and participate in worksite visits and audits with Chevron Thailand Representatives to establish follow-up requirements for continual improvement.
- Maintain records of man hours and accident incidents for direct and subcontractor personnel as necessary:

  - Fatalities
  - DAFWC
  - RWC
  - MTC
  - FAC
  - Fires
  - Spills
  - TRIR

- A bridging document is required when contractor to control all work using their Safety Management System.

6.3 CHESM Grade

If the contractor work is within the scope of the CHESM process, the contractor's work risk profile and CHESM grade will determine the level of engagement required for qualification and work-in-progress activities.

Contractors will be assigned a CHESM grade of A-D, Low, Not Graded, Hold based on work consequence potential (defined by the standard list of work activities) and estimated work hours to determine the contractor work risk profile and the following:

Initial Grade

Total Recordable Incident Rate.
Validated Qualification Questionnaire via HES System Review and/or CHESM Office/ Field Audit.

Updating the CHESM grade based on experience

Total Recordable Incident Rate.
Validated Qualification Questionnaire via HES System Review and/or CHESM Office/ Field Audit.

Work in Progress Activities (Performance Review, CHESM Field Inspection).

6.4 Contractor Equipment Requirements (i.e. Toolbox, Rental Equipment)

All equipment delivered to a Chevron Thailand location and during use must be pre-slung with inspected and approved lifting devices that meet or exceed Chevron Thailand Lifting and Rigging Requirements as appropriate.

Ensure equipment is suitable for the Area Classification.

Ensure powered equipment is equipped with exhaust spark arrester, over speed intake shutdown, low tension ignition and hot surface insulation protection.

Comply with the Chevron Thailand specific requirements including TSP-9 Toolboxes/ Chests/Equipment with Hinged Lid and Door, TSP-39 Rental Equipment Installation Operation and Demobilization, and other applicable TSPs.

Pressure equipment must be rated and hydro tested for the intended service as required by the manufacturer or applicable industry standards.

Electrical equipment must be rated and certified/tested for the intended service as required by the manufacturer or applicable industry standard.

Lifting and rigging equipment mustcomply with the Chevron Thailand requirements.

6.5 Managing Subcontractor

Primary contractors will be held accountable to ensure that their subcon tractors and their personnel comply with the same primary contract standards. This includes ensuring that subcontractors are qualified to perform the work and compliance with Chevron Thailand's expectations including Upstream and Gas (U&G) MSW Standard Requirements and other applicable OE Process Requirements while working for Chevron Thailand.

7.0 Emergency Management

7.1 Emergency Preparedness

For any emergency situation, each employee shall ensure their personal safety first, raise the alarm and only take action about the situation if there is no risk.

Each Chevron Thailand Facility has posted "Emergency Station Bills" which details how personnel are alerted to an emergency and the actions to be taken during an emergency.

The Emergency Station Bill also assigns personnel to emergency positions (key individuals) by job classification. (The duties for each key role are covered by a hecklist located in the Emergency Response Plan).

Additionally, each Chevron Thailand Offshore Facility has a posted Emergency Equipment Layout Diagram or Fire Control Plan to inform all personnel about the location and availability of emergency equipment and supplies.

All personnel are required to participate during emergency drills and exercises as required for their role.

Medical assistance is available at all locations. In addition, First Aid kits are permanently located at each facility. If supplies are used they must be reported so that they are replaced timely.

To become fully familiar with the details of the Chevron Thailand Emergency Response Procedures and personnel responsibilities, you must review the Emergency Response Plan (ERP) for your facility and familiarize yourself with the Emergency Organization and the Checklists for the various emergency roles.

Finally, if your job function is not specifically identified as a Key Individual, you remain responsible to review the Emergency Station Bill and know your responsibility and action when the alarm sounds or an emergency occurs.

7.2 Fire Extinguishment

Preventing fires and emergencies is the key duty of all persons by following safe working practices and being alert to and eliminating hazards that can create a fire or cause a fire to escalate.

Usually, water is the most practical and readily available fire control and extinguishing agent.

Gas pressure fires must be cooled with water until the source of the pressure can be shut off. In general do not extinguish gas pressure fires.

Portable fire extinguishers are considered initial fire-fighting equipment. They are designed for fires of limited size since their duration of extinguishing discharge is short.

The following types of extinguishers are available.

Water is a versatile extinguishing agent and that is suitable for combustible materials such as wood, paper, textile and similar fires. But it should never be used on burning liquid fires or live electronic/electrical fires.

Powder This type of extinguisher has a non-conductive powder which makes it suitable for use on hydrocarbon fires and in mixed risk areas. Do not uses powder extinguishers in small enclosed areas.

B

Foam is useful for the control of hydrocarbon liquid fires, but should not be used on electrical fires because of the danger of electrical shock. Specialized foam extinguishers are provided and shall be used for galley fryer fires.

C

Co_2 Gas These extinguishers will direct a powerful concentration of CO_2 non-conducting vapors for electronic / electrical fires or flammable liquid fires that extinguish by displacing the oxygen (smothering). Because it is clean and harmless to delicate mechanisms and materials, it is ideally suited for use in computer areas, switch rooms, laboratories, paint spray booths, ships and aircraft.

Each person assigned to a facility should know how to inspect and use the fire-fighting equipment available to them. The equipment is there to protect both the personnel and the Company facility.

Visual inspections shall be performed at least monthly on all firefighting equipment and recorded on the device. Extinguishers shall have seals to indicate that the extinguisher has not been activated. If an extinguisher is found with a broken or missing seal,

the extinguisher shall have a complete maintenance inspection to ensure it has not been activated.

Always immediately notify the operator responsible for the area when an extinguisher has been used or is missing.

7.3 Reporting an Emergency

If you discover an abnormal, hazardous, or emergency condition

IMMEDIATELY DO THE FOLLOWING!

Sound the alarm and announce the situation and location over the PA System 3 times (or if appropriate, report the situation and location to the control room/radio room or dial the Facility Emergency Number.)

When reporting a fire or emergency:
Report:

Who you are
Where you are
What's happening
What help is needed

Back off, observe, and assess the situation from a safe position.

Take action only if qualified and safe (do not put yourself at risk)

Report any changes to the Control Room/ Radio Room or to the facility emergency number until help arrives

Proceed to your assigned emergency or muster station when relieved by the Onsite Response Team.

Go to your Emergency or Lifeboat Muster Point/Station for the head count, buddy-up, and await further instructions whenever the alarm sounds or instructed over the PA system.

7.4 Actions during Emergencies

Process and Equipment Emergencies:

Manual emergency shutdown stations, buttons and valves are provided to shutdown and/or depressurize equipment and systems.

Persons are authorized to activate these if an emergency condition is observed.

Never enter areas that are experiencing an upset or emergency condition unless trained and authorized.

Medical Emergency:

General Rules for the Treatment of Injured Persons:

Always control any serious bleeding.

Never Assume Death.

Have someone notify the emergency number or Radio Operator immediately.

Administer first aid if trained to do so. Do not move the injured person until instructed by a qualified medic.

Keep the injured person warm.

Stay with the injured person until medical help arrives.

Escort the injured person to receive treatment, if they are conscious and able to walk.

Do not disturb anything in the vicinity unless there is a threat to safety. Prevent unauthorized entry to the scene.

Always take precautions and use PPE for blood-borne pathogens such as hepatitis A, B, and HIV infectious exposure.

Blood-borne pathogen kits are available in first aid kits and their use is included as part of First Aid Training.

Electrical Injury:

Do Not Touch The Person.

Locate and isolate the electrical powersource.

If this is not possible, use a dry wooden object (scaffold plank, wooden handle) to push the person away from the electrical source, or to push the electrical source away from the person.

Administer first aid if trained to do so when electrically safe.

Man Overboard:

Immediately throw a life ring or other floating object to the person(s) in order to assist them and/or mark their position as they drift.

Shout “MAN OVERBOARD” and continue shouting until others are alerted.

Keep the person in view, monitor their rate and direction of drift.

Instruct someone in the vicinity to use the PA system or notify the emergency number and give the following information:

- Location in water (direction, distance).
- Name of person overboard (if known).
- Caller's name and current location.
- If there is no one in the vicinity and only as a last resort, leave the scene to broadcast the man overboard alarm.
- Continue observation until relieved.

Leak or Spill:

Warn other personnel in the area.

Leave the area as quickly as possible holding your breath.

Switch off portable tools etc.: do nothing which could cause a spark or source of ignition.

Ensure the alarm is sounded.

Respond as for a general alarm.

Hydrocarbon liquids and gases when leaking or spilled may accumulate and remain in

enclosed spaces. When the presence of gas is suspected, entry to the area is restricted to trained personnel under supervision, wearing SCBA breathing apparatus.

The risk of fire increases considerably when gas is present and therefore tools or materials capable of producing a spark must not be used.

Evacuation/Abandonment:

The decision to abandon an offshore facility will be given only by the OIM (fixed platforms) Barge Master/Captain (floating facilities) or their designated alternates.

Wherever possible, Evacuees (E-Complement) will be evacuated first and emergency personnel (R-Complement) will remain on board as required by the Emergency Response or Typhoon Evacuation Plan.

The safest method for evacuation will be chosen depending upon weather conditions, equipment status, etc. The possible methods are:

Helicopter evacuation
Crew/supply boat
Evacuation by lifeboat/life raft

Other options will be considered and an nounced based on the conditions at the facility.

7.5 Emergency Response and Drills

Emergency drills are conducted at Chevron facilities in compliance with all applicable laws, regulations, and facility policies. To ensure familiarity with the emergency pro cedures, Chevron Thailand conducts drills as if an actual emergency exists. Contractors are required to participate in all drills. All drilling rigs shall schedule, conduct, and record drills for their personnel in compliance to all applicable laws, regulations, and Chevron Thailand contract requirements.

7.6 Oil Spill Response Plan and Notification

Chevron Thailand's emergency management team will coordinate responses to oil or hazardous material (HAZMAT) spills that originate from Chevron offshore and shoreside facilities or assets. This includes com plying with government agency planning requirements and notifying all applicable government agencies of oil and HAZMAT spills that originate from

property or assets under Chevron Thailand's operational control.
Person who observe or discover a spill from a Chevron Thailand facility or operation shall take the following actions:

1. Safety first – Ensure the safety of all personnel. Anyone who observes the spill should act carefully, cautiously, and reasonably.
2. Notify the supervisor and the Chevron person in charge.
3. Control the source – only qualified personnel, when feasible, should take actions that may include, but are not limited to:

    - Shutting in the well(s) and/or vessel(s).
    - Closing the surface and/or subsurface (automatic or manual) safety device(s).
    - Actuating emergency shutdown (ESD) device(s).
    - Actuating blowout prevention (BOP) assembly and well control system(s).
    - Contractors are responsible for developing oil and HAZMAT response plans that meet agency regulations for spills that originate from their property, facilities, or assets, including vessels.

Contractors are therefore responsible for managing and responding to all oil and hazardous material spills that originate from their property, facilities, vessels, or assets.

7.7 Medical Emergency (Medivac)

In the event of a medical emergency, the Chevron Thailand facility manager or the contractor's person in charge shall coordinate and ensure that transportation to a medical facility for the injured person is arranged. Injured personnel sent for medical assistance/evaluation should be accompanied to the medical facility by a medically or first aid trained person depending on the severity.

The escorting person should have a note from Chevron Thailand or the contractor representative to authorize treatment for the injured person. The person(s) employer shall have a representative meet the injured person upon arrival to ensure medical care is appropriately provided.

8.0 Environmental Stewardship

Protecting and caring for the environment is a responsibility of everyone at Chevron Thailand facilities and operations, this means being aware of how your work and activities can potentially harm the environment.

We only get one environment so you must be serious about protecting it. Chevron's Environmental Stewardship is one of the OE Expectations that strives to continual improvement of environmental performance and reduce impacts from Chevron's operations.

You must be aware that even everyday tasks can have a harmful effect; however, you can reduce or eliminate these harmful effects by minimizing the materials you use (don't waste), reuse (recycle) materials whenever possible, eliminate and substitute harmful substances with environmental friendly substances, ensure waste materials are segregated in the designated containers and disposed of correctly.

Remember every task has an Operational, Health, Environmental and Safety aspect - don't forget the Environment.

Always ensure that the hazard and precaution sections of your work permit clearly identifies the environmental concerns and protective measures.

Don't allow polluting materials to enter the ground, waterways or sea. Always remind your co-workers of the importance of being environmentally aware.

Any person observing a spill must immediately notify the operator for the area or the Control Room and HES personnel.

Actions to stop the source and contain spilled materials must begin immediately. However, the material and situation must be assessed first based on the information provided in its Safety Data Sheet (SDS) to ensure personnel have the proper PPE and response equipment and supplies. No one should be put at personal risk.

At Chevron Thailand we are committed to require our personnel and operations to be green and clean in everything we do.

8.1 Prohibited Substances

Eliminating environmentally polluting substances is the best practice; therefore,

these substances must not be purchased or used. They include but are not limited to:

- Ozone-Depleting Substances (ODS)[1]
- All forms of asbestos-containing products (Any material containing more than 1% asbestos).
- Polychlorinated biphenyls (PCBs) (PCB-contaminated materials are defined as materials exceeding 50 mg/kg of PCB oil).
- Lead-based paint
- Leaded thread compound (pipe dope)

8.2 Waste Management

The following is a general summary of the principles and methods of waste management that have been adopted and shall be followed as appropriate by all Chevron Thailand facilities, operations, contractors and personnel.

[1] ODS defined by the Montreal Protocol, unless exempted by the government, e.g. CFCs, HBFCs, carbon tetrachloride, 1, 1, 1-trichloroethane, methyl bromide, and bromomethane. Existing air conditioning and refrigeration equipment containing ODS can be maintained (recharged) only with recycled or reclaimed ODS, or with acceptable alternative refrigerants. Hydro chlorofluorocarbons and Hydrofluorocarbons that are not included in the list of Prohibited Materials under Ozone-Depleting Substances can be used.

All Contractors and Third Parties contracted to handle, transport or dispose of Chevron Thailand waste shall comply with the Chevron Third Party Waste Stewardship (TWS) Standard and waste disposal services shall only be provided by approved contractors following the TWS standard.

Experience has shown that treatment and disposal of waste may satisfy environmental regulations; however, it is not necessarily the best way to manage waste. A more effective approach is to minimize the waste at the source by employing the strategy of "R's" which are; reuse, recycle, and recover or eliminates the quantity of final waste that requires disposal.

Containers appropriately labeled for the waste types, quantities and needs must be provided and used for each facility to effectively manage and segregate waste.

Wastes shall be segregated according to the waste signage provided at the location which shall be in line with Chevron Thailand waste register established in TSP-7 Managing and Handling Waste Materials. It is especially important to segregate hazardous waste from non-hazardous wastes to avoid cross contamination of hazardous materials with non-hazardous wastes. Refer to TSP-3 (The

Removal and Handling of Mercury Contaminated Sludge), TSP-7 (Managing and Handling Waste Materials), TSP-18 (Mercury Contaminated Material Handling and Decontamination) and TSP-20 (Hazardous Materials) for waste management and contaminated waste handling.

Prohibited Practices: The following waste management practices are prohibited

- Open burning of liquids or solids in pits, piles, drums or other open containers. This also applies to the use of burn baskets on offshore facilities.
- Disposing liquid wastes in landfills
- Releasing drums to the public
- Construction or operation of "Unac ceptable" pits as per the Pit Technology Standard[2]

[2] Refer to Waste Management EPS for Pit Technology Standard at http://asiasouth.chevron.com/OE/OEProcesses/Environment/Envir_ES.asp for Chevron Employee

8.3 General Safety Rules for Working Safely With Chemicals and Hazardous Materials

1. Good chemical handling practices include:

- Segregate chemicals that can cause harmful reaction if placed close together, e.g., flammable and explosive chemicals, corrosive and flammable materials.
- Remove foods, drinks and cigarettes from the work area to prevent contamination.
- Read the Safety Data Sheet (SDS) and study the label before starting work.
- Know where the emergency shower and eye-wash stations are located.
- Make sure the correct type of fire and/or safety equipment is nearby and ready for use.
- Check to ensure adequate ventilation.
- Know who to contact and what to do in an emergency situation.
- Inform your supervisor or work col league when and where you work with chemical.
- Assemble the PPE needed for the job and keep it nearby.

2. Specific precaution whenever working with hazardous chemicals:

- Do not leave chemical containers open when not in use.
- Do not suck chemical by mouth.
- Do not think that all chemicals have odors. Some chemical vapor can be very hazardous and odorless.
- Do not mix a chemical by yourself, even with water without consultation with SME.
- Do not breathe gases pro duced from chemical reactions.
- Do not pour water in acid.
- Do not eat, drink or smoke around chemicals.
- Do not store chemicals together, without reviewing SDSs for potential reactions.
- Do not wear contact lenses in an area with toxic vapors; soft lenses can absorb vapors.

8.4 Oil and Chemical Spill Protection

Everyone that handles oil and chemicals shall refer to and follow TSP-33 (Chemical Handling and Storage Procedure) and the applicable SDS to prevent injuries, spills and hazardous situations.

Priority should be control of chemical inventories, should include purchasing chemicals in optimum quantities to minimize expiration and waste disposal.

Chemical storage locations must be selected to prevent spills to decks, water bodies and soil and inspected weekly. Oil and chemical containers shall not be placed on grating or areas where a spill can go directly to the environment. Stacking shall be limited to 2 high and single high for plastic (blue) drums.

Incompatible chemicals shall be segregated during storage and use.

Secondary containment shall be provided and sized to retain the largest possible spill and/or have provision to allow an overflow to a sump with a capacity sufficient to hold or treat the spilled chemical and any rain or other water that could possibly be introduced per TSP-33.

Always identify the potential hazards and spill prevention when working with oil or chemicals and provide appropriate mitigation plans such as:

1. Providing adequate spill response kits at the job.
2. Use correct equipment to transfer liquid.
3. Use a drip tray or secondary containment beneath transferring points.
4. Using transfer equipment in good conditions with no leak, labeled per the SDS for chemicals, etc.
5. Ensuring the source and receiver connections are tight and leak free.
6. Barricade the area if a spill occurs.

8.5 Paint and Blast Waste Media Discharges

Waste generated from blasting, chipping and painting shall be managed in compliance with TSP-7 Managing and Handling Waste Materials.

This includes providing containment methods to collect and minimize airborne spread of dust and overspray during and after work activities.

8.6 Environmental, Social & Health Impact Assessment (ESHIA) & Environmental Impact Assessment (EIA)

Compliance with the ESHIA and EIA requirements is a must for both Chevron Thailand and Contractor activities along with the monitoring when applicable.

Both the Chevron ESHIA OE Process and the EIA regulatory requirements are aimed to consistently identify and address potential environmental, social and health impacts along with their mitigation during the design, construction and operational phases of all projects.

Always liaise with the HES representative or Chevron Thailand ESHIA Process Advisor for any questions regarding ESHIA and/or EIA requirements, or refer to the following link:

http://thailandupstream.chevron.com/OEHES/OEProcesses/OE_Elements/Element0703_ESHIA.asp

9.0 Safe Work Practices

Safe Work Practices are for the benefit of each individual.

Each person is responsible request assistance from a Chevron Thailand Supervisor, Representative, or HES Specialist to obtain copies or to read the complete documents for the topics referenced below. This is especially important if you are a person or contractor that does not have access to the Chevron Thailand Intranet.

The complete document for each of the following Safe Work Topics can be obtained at the following links:

Managing Safe work documents (MSW) Link:

http://thailandupstream.chevron.com/OEHES/OEProcesses/OE_Elements/Element0302_MSW.asp

Thailand Specific Procedures (TSP) Link:

http://thailandupstream.chevron.com/OEHES/OEProcesses/ThailandSpecificProcedures.asp

Drilling and Completion (D&C) SOP Link:

http://thailandupstream.chevron.com/drilling/StandardSOPs/GP_Drilling.asp

Thailand Technical Codes and Standards (TC&S) Link:

http://thailandupstream.chevron.com/FE/FEStandard/FE_Standards.asp

Chevron Engineering Standards (CES) Link:

https://custom002-hou.sp.chevron.net/sites/Standards/Active%20CES/Forms/AllItems.aspx

9.1 Managing Safe Work (MSW)

The Chevron Thailand MSW requirements are applicable to all employees, contractor and sub-contractor personnel unless specifically stated otherwise in a contractual agreement.

Chevron Thailand follows the Chevron Upstream and Gas (U&G) Managing Safe Work (MSW) Process along with Behavior Based Safety (BBS) awareness training, to eliminate “at risk behaviors” as fundamental to ensuring work is performed safely.

Additional requirements for contractors are stated in the Chevron Contractor Health, Environment and Safety Management (CHESM) Process Document.

There are three MSW procedures and twelve standard documents that support MSW which must be reviewed and understood as part of the MSW Training

Purpose and Objectives:
The purpose of the Managing Safe Work (MSW) process is to identify, assess and eliminate, mitigate, or control the hazards associated with work. The MSW process provides for the identification and evaluation of job task hazards, specification of control measures, management of those measures, control of the work and behavior to support safe work. The MSW process is part of Chevron's Operational Excellence Management System (OEMS)

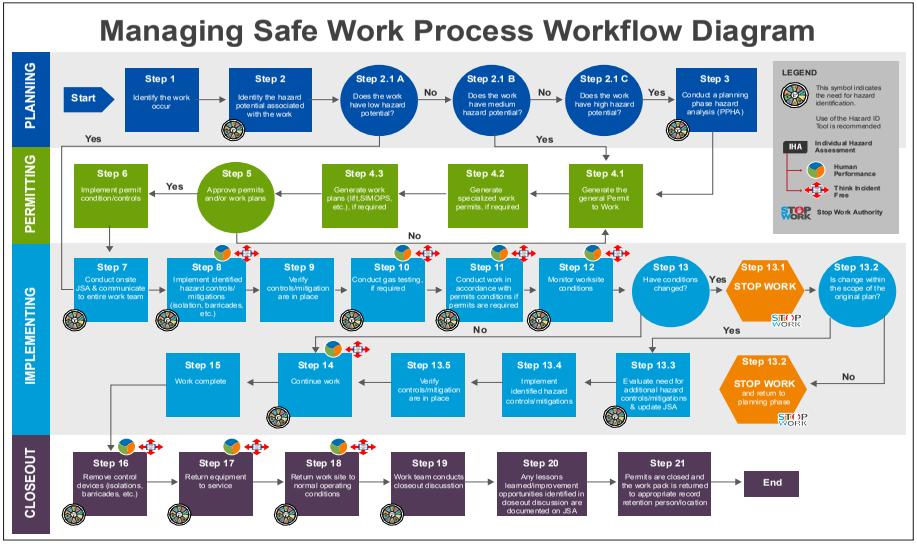
MSW Procedures:
- MSW Leadership Engagement Procedure
- Hazard Analysis Procedure
- Permit to Work Procedure

MSW Standards:
- MSW Training & Competency Verification Standard

- Bypassing Critical Protections Standard
- Commercial Diving Standard
- Confined Space Entry Standard
- Electrical Safe Work Standard
- Excavation Standard
- Hot Work Standard
- Isolation of Hazardous Energy Standard
- Lifting & Rigging Standard
- Portable Gas Detection Standard
- Simultaneous Operations Standard
- Work at Height Standard

All work requires the completion of a written CTEP PPHA/JSA Worksheet as part of the planning and Hazard Analysis.

The following is the MSW required process Work Flow Diagram.


Managing Safe Work Process Workflow Diagram
PLANNING
PERMITTING
IMPLEMENTING
CLOSEOUT
Start
Step 1
Identify the work occur
Step 2
Identify the hazard potential associated with the work
Step 2.1 A
Does the work have low hazard potential?
No
Step 2.1 B
Does the work have medium hazard potential?
No
Step 2.1 C
Does the work have high hazard potential?
Yes
Step 3
Conduct a planning phase hazard analysis (PPHA)
Yes
Yes
Step 6
Implement permit condition/controls
Yes
Step 5
Approve permits and/or work plans
Step 4.3
Generate work plans (lift,SIMOPS, etc.), if required
Step 4.2
Generate specialized work permits, if required
Step 4.1
Generate the general Permit to Work
No
Step 7
Conduct onsite JSA & communicate to entire work team
Step 8
Implement identified hazard controls/ mitigations (isolation, barricades, etc.)
Step 9
Verify controls/mitigation are in place
Step 10
Conduct gas testing, if required
Step 11
Conduct work in accordance with permits conditions if permits are required
Step 12
Monitor work/site conditions
Step 13
Have conditions changed?
Yes
Step 13.1
STOP WORK
Step 13.2
Is change within the scope of the original plan?
No
Yes
Step 13.3
Evaluate need for additional hazard controls/mitigations & update JSA
Step 13.4
Implement identified hazard controls/mitigations
Step 13.5
Verify controls/mitigation are in place
Step 14
Continue work
Step 15
Work complete
Step 13.2
STOP WORK and return to planning phase
No
Step 16
Remove control devices (isolations, barricades, etc.)
Step 17
Return equipment to service
Step 18
Return work site to normal operating conditions
Step 19
Work team conducts closeout discussion
Step 20
Any lessons learned/improvement opportunities identified in closeout discussion are documented on JSA
Step 21
Permits are closed and the work pack is returned to appropriate record retention person/location
End
LEGEND
This symbol indicates the need for hazard identification.
Use of the Hazard ID Tool is recommended
IHA
Individual Hazard Assessment
Human Performance
Think Incident Free
STOP WORK
Stop Work Authority

A. MSW Leadership Engagement Procedure

A critical success factor in achieving operational excellence is leadership. What matters to leaders, translates through behaviors and actions to the workforce. U&G leaders reinforce OE culture, instill operational discipline and verify and validate conformance with U&G MSW process, standards, and procedures.

This procedure defines the U&G requirements for field MSW Leadership Engagements.

This procedure applies to Chevron leaders.

It is the responsibility of SBU OE Leadership Team (OELT)/senior leadership team to ensure that MSW leadership engagements are conducted in the field in accordance with this procedure.

B. Hazard Analysis Procedure

A Hazard Analysis along with methods to control the risks must always be performed and include participation by all work team persons before beginning any work. The Chevron Thailand Hazard Analysis Procedure Document Appendix B requirements consist of six steps;

Step 1: Follow the U&G Hazard Analysis Requirements (Table 7) to identify the hazard potential associated with the work activity to be performed.

Step 2: If the activities are high risk based on Table 7, then the U&G Planning Phase Hazard Analysis (PPHA), onsite Job Safety Analysis (JSA) and Individual Hazard Assessments (IHAs) are required prior to performing the job tasks

Step 3: For medium risk activities as determined by Table 7, completion of the U&G onsite Job Safety Analysis (JSA) and Individual Hazard Assessments (IHAs) are required prior to performing the job tasks

Step 4: Low risk activities as determined by Table 7 requires an undocumented (verbal) JSA to be conducted onsite prior to performing the job tasks

Step 5: Undocumented individual hazard assessments (IHAs) are a responsibility of each work team member to maintain personal awareness of hazards and their associated safeguards prior to and while performing all job tasks.

Step 6: A close out is required at the completion of the tasks to record the Lessons Learned on discussion section of the JSA Form

Specific Chevron Thailand PPHA and JSA forms are available and must be utilized as part of the work planning activities.

The Chevron Hazard Identification Tool (HID) below is always recommended to anticipate and identify hazards based on the various types of energy that create work place hazards before and during work activities.

Gravity - *falling object, collapsing roof, and a body tripping or falling*

Motion - *vehicle, vessel, or equipment movement; flowing water; wind; and body positioning when lifting, straining, or bending*

Mechanical - *rotating equipment, compressed springs, drive belts, conveyors, and motors*

Electrical - *power lines, transformers, static charges, lightning, energized equipment, wiring, and batteries*

Pressure - *pressure piping, compressed cylinders, control lines, vessels, tanks, hoses, and pneumatic and hydraulic equipment*

Temperature - *open flame; ignition sources; hot or cold surfaces, liquids, or gases; steam; friction; and general environmental and weather conditions*

Chemical - *flammable vapors, reactive hazards, carcinogens or other toxic compounds, corrosives, pyrophorics, combustibles, oxygen-deficient atmospheres, welding fumes, and dusts*

Biological - *animals, bacteria, viruses, insects, blood-borne pathogens, improperly handled food, and contaminated water*

Radiation - *lighting issues, welding arcs, solar rays, microwaves, lasers, X-rays, and NORM scale*

Sound - *equipment noise, impact noise, vibration, high-pressure release, and the impact of noise to communication*

Hazard Identification Tool

Hazard

A condition or action that has the potential for an **unplanned release** of, or **unwanted contact** with, an energy source that may result in harm or injury to people, property, or the environment.

Hierarchy of Controls

1. Remove the energy source
2. Prevent the release of energy
3. Protect from the release
4. Use Stop Work Authority

C. Permit to Work Procedure

A permit to work (PTW) system is a mechanism to identify, communicate, mitigate and control hazards associated with work that has the potential to adversely impact health, the environment and safety.

This procedure defines the U&G requirements for permit to work. Refer to the Permit to Work Procedure Workflow Diagram for a visual depiction of this procedure.

The U&G written Permit to Work Procedure includes the following elements:

- General permit to work
- Specialized permits
- Work plans

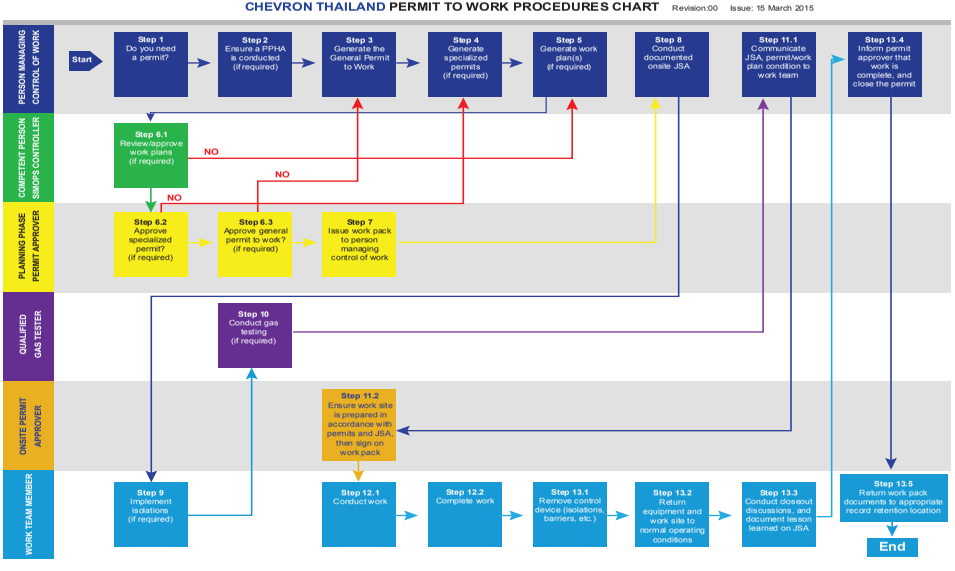
Self-permitting is never allowed.

This procedure applies to work performed by Chevron employees and their delegates and contractors within Chevron Upstream and Gas.

It is the Person Managing Control of Work's responsibility to ensure that permits (general and specialized)

and/or work plans are generated in conformance with this detailed procedure. The Person Managing Control of Work is responsible for ensuring that permit/ work plan conditions are communicated, work is conducted in accordance with permit/work plan conditions and permits/ work plans are closed

The Permit to Work Flow Chart is illustrated below.


CHEVRON THAILAND PERMIT TO WORK PROCEDURES CHART
Revision:00
Issue: 15 March 2015
PERSON MANAGING CONTROL OF WORK
COMPETENT PERSON SIMOPS CONTROLLER
PLANNING PHASE PERMIT APPROVER
QUALIFIED GAS TESTER
ONSITE PERMIT APPROVER
WORK TEAM MEMBER
Start
Step 1 Do you need a permit?
Step 2 Ensure a PPHA is conducted (if required)
Step 3 Generate the General Permit to Work
Step 4 Generate specialized permits (if required)
Step 5 Generate work plan(s) (if required)
Step 8 Conduct documented onsite JSA
Step 11.1 Communicate JSA, permit/work plan condition to work team
Step 13.4 Inform permit approver that work is complete, and close the permit
Step 6.1 Review/approve work plans (if required)
NO
NO
NO
Step 6.2 Approve specialized permit? (if required)
Step 6.3 Approve general permit to work? (if required)
Step 7 Issue work pack to person managing control of work
Step 10 Conduct gas testing (if required)
Step 11.2 Ensure work site is prepared in accordance with permits and JSA, then sign on work pack
Step 9 Implement isolations (if required)
Step 12.1 Conduct work
Step 12.2 Complete work
Step 13.1 Remove control device (isolations, barriers, etc.)
Step 13.2 Return equipment and work site to normal operating conditions
Step 13.3 Conduct closeout discussions, and document lesson learned on JSA
Step 13.5 Return work pack documents to appropriate record retention location
End

Work cannot begin until the permit is approved, issued on-site by the Area Controller and accepted by the Person Managing Control of Work.

If ever in doubt, always ask your Supervisor about the Work Permit Requirements and Procedures for your assigned work.

D. MSW Training & Competency Verification Standard

All persons must participate and have a competency understanding of the Chevron Thailand MSW requirements consistent with their job description.

Structured training is available and conducted for all persons responsible for supervising and/or performing physical work.

It is the responsibility of each supervisor to arrange training for their subordinates consistent with each person's work duties. Each person also has a responsibility to advise their supervisor when they have not received the MSW Competency Training for their job duties or do not feel qualified to perform the requested work.

The MSW Document Appendix D Training Standard details the training and Competency Verification Standard requirements.

E. Bypassing Critical Protections Standard

Bypassing Critical protection relates to ensuring that the function of critical protection, safety, instruments and control devices will always perform their intended operation directly or by an approved alternate means.

Chevron Thailand follows a strict multi-step Bypassing Critical Protection Procedure to ensure that the operational integrity of devices that form a part of the Layers of Protection (LOP), design remains effective at all times.

An understanding of this standard is especially important for operation, maintenance and construction personnel who have a need to inhibit by-pass or remove critical functions from service.

If a BCP activity will have a duration in excess of 72 hours, a Management of Change (MOC) must be implemented.

The MSW Document Appendix E details the BCP Standard and Forms available to explain the requirements that must be followed when bypassing critical protection devices.

F. Commercial Diving Standard

Diving operations are complex with specialized risks; therefore, Chevron Thailand requires all commercial diving to be planned, supervised and performed in compliance with all MSW requirements in addition to the actual and specific requirements of the U&G Commercial Diving Standard MSW Document Appendix F and the contractual requirements between

Chevron Thailand and the diving contractor.

Diving contractors, their personnel, equipment and systems must have internationally recognized current qualifications and certificates.

G. Confined Space Entry Standard

The Chevron Thailand Confined Space Entry Standard MSW Document Appendix G is applicable to all operations personnel (employee and contractor) as applicable to any work that requires a person to enter an enclosed space that has restricted access and is not designed for continuous personnel occupancy.

All confined space entry work must be performed in compliance with all applicable MSW Procedures and Standards in addition to the requirement of the actual MSW Document Confined Space Entry Standard Appendix G.

A specialized Work Permit Form is available and required for CSE work.

H. Electrical Safe Work Standard

The Chevron Thailand Electrical Safe Work Standard MSW Document Appendix H stipulates strict restrictions on who and under what conditions work involving electrical equipment and systems can be performed.

Electrical work must be performed in compliance with all applicable MSW Procedures and Standard Documents in addition to the requirements of the actual Electrical Safe Work Standard Documents requirements.

All electrical systems, power lines, electrical equipment or electrical parts (at 50 volts dc or ac (rms.) and above) must be placed into an electrically safe work condition before personnel perform work when either of the following circumstances exists:

- A worker is within the limited approach boundary for shock protection.
- A worker interacts with electrical equipment (e.g., throwing a switch, turning on/off) where conductors or circuit parts are not exposed but there is an increased risk of injury from an exposure to an arc flash hazard.

Exceptions to requirements above are

1. A properly installed and maintained isolation element or a means of disconnec tion is operated, opened, closed, removed or inserted to achieve an electrically safe work condition for connected equipment (de-energize)

2. To return connected equipment to service (energize) that has been placed in an electrically safe work condition provided a risk assessment is performed and does not identify unacceptable risks for the task

This standard does not apply to work on low voltage/low current electrical systems defined as less than 50 volts dc or ac (rms) and are not required to be placed in an electrically safe condition.

Major restrictions are based on voltage levels, approach distances and personnel qualifications.

A specialized work permit form is available and required for all energized electrical work.

Local electrical and safety codes or regulatory standards for electrical safety in the workplace are expected to meet or exceed "The Standard for Electrical Safety in the Workplace" (NFPA 70E)

I. Excavation Standard

Excavation operations relate to digging or removing earth to a depth ≥ 1.5 meters (≥5 feet) or deeper below the surface of the ground level as a hole or trench using hand tools or breaking the surface with power tools and/or heavy equipment (e.g. trencher, backhoe, jackhammer, etc.) regardless of depth. Excavations have the potential of causing danger to underground pipes, wires and utility services in addition to personnel entrapment by cave-in if persons enter or fall in.

Excavation can also cause undesirable environmental impact from rain, water runoff or vegetation damage; therefore Chevron Thailand requires compliance with the MSW Document Excavation Appendix I along with the MSW Hazard Analysis, Permit To Work and Gas Testing requirements, especially the Confined Space Entry and any other MSW Standards as applicable.

Only approved equipment and qualified personnel can perform excavation work as required by the approved Chevron Thailand Specialized Excavation Work Permit Form.

J. Hot Work Standard

The Chevron Thailand Hot Work Standard MSW Document Appendix J stipulates the requirements and restrictions for work involving welding, open flames or any activity/device that could cause a spark.

Hot work should always be avoided by considering alternative methods; however, when necessary, hot work must be performed in compliance with all applicable MSW procedures and Standards in addition to the requirements of the actual Hot Work Standard Document.

A specialized Work permit Form is available and required for hot work.

Gas detection measurements and a qualified fire watch must be on-site for any welding or open flame hot work.

K. Isolation of Hazardous Energy (IHE) Standard

Identifying and removing sources of energy that causes, or can create hazardous or dangerous safety

situations is fundamental to working safely.

A specialized IHE Form and Checklist is available and required for work involving electrical, machinery and process vessels/ piping when necessary to ensure there is a zero state of energy before beginning any work

The MSW Document Appendix B details IHE Standard and Requirements that must be followed when planning/implementing and removing isolations.

A lock-out device must provide a positive means such as a key lock to secure the energy isolating device in a safe position to prevent the unexpected operation of a machine or piece of equipment. Only authorized employees are permitted to affix lockout devices. Lockout devices must be applied to hold the energy isolation devices in a “safe” or “off” position.

Personnel/ Individual lock - Individual performs LO/TO at the lock box

Group lock - Individual does not perform LO/TO, only Work team leader performs LO/TO on behalf of his team. One lock represents the whole team.

Group locks are discouraged except tank cleaning and vessel entry.

- The Supervisor (Work Team Leader) is allowed to apply Group Lock due to the nature of working group and supervision

- The pad lock and tag color for group lock will fall under the Chevron group who supervise that job.

The use of color coded locks is required and is available to identify each craft's lock-out.

A detailed Lock-Out, Tag-Out Procedure Document is available to explain the Chevron Thailand requirements for using the Lock-Out/Tag-Out devices.

L. Lifting and Rigging Standard

Lifting operations can present a significant risk; therefore Chevron Thailand has established strict requirements for both fixed and portable lifting equipment and devices used for lifting and rigging. The U&G MSW Document Appendix L stipulates the requirements for both Fixed Lifting Equipment (FLE) and Portable Lifting Equipment (PLE).

In addition The Chevron Thailand document are related to lifting and rigging operation including;

- Portable Lifting Equipment (PLE) Operating Practices
- Portable Lifting Equipment (PLE) Operating Practices Appendix 1- Management and Inspection of portable lifting equipment
- Portable Lifting Equipment (PLE) Operating Practices Appendix 2-Guide for Examination and Testing of Containers
- Fixed Lifting Equipment Operating Practices
- Fixed Lifting Equipment Operating Practices Appendix 1- Management and Inspection of Fixed Lifting Equipment

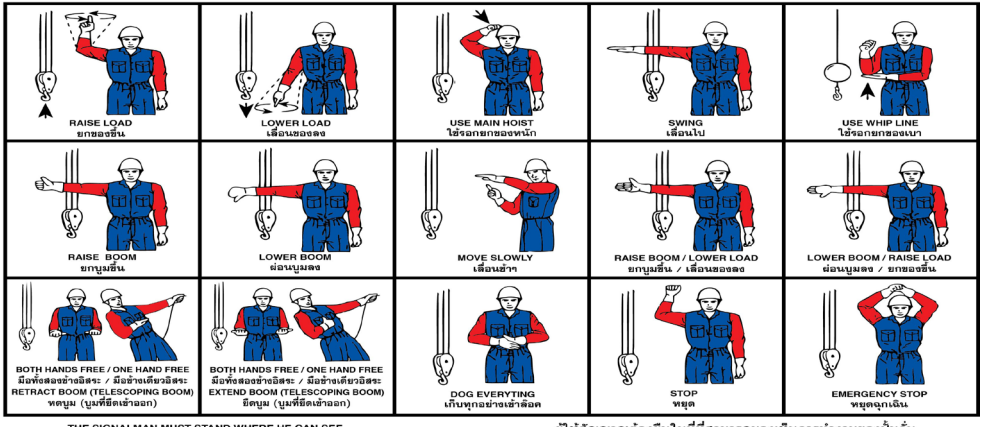
The CTEP document must be followed when performing lifting and rigging activities in CTEP operation

Permit to work, PPHA and A Written Lift Plan are required for critical and/or non-routine lifts, including but not limited to:

- Blind lifts.
- Complex lifts.
- Complicated lifts.
- Heavy lifts.
- Lifts involving man riding work baskets.
- Other types of lifts designated by a Qualified Lifting Operator due to their uniqueness.

A Signalman using the standardized hand signals must be present to direct and assist the Crane Operator during all crane operations.

STANDARD CRANE HAND SIGNALS



THE SIGNALMAN MUST STAND WHERE HE CAN SEE
THE LOAD AND CAN BE SEEN BY THE OPERATOR.

- ALLWAYS FACE THE OPERATOR.
- ALL SIGNALS MUST BY DISTINCT AND CLEAR.

- ผู้ให้สัญญาณต้องยืนในที่ที่สามารถมองเห็นการทำงานของปั้นจั่น และผู้ขับปั้นจั่นมองเห็นผู้ให้สัญญาณชัดเจน
- หันหน้าไปทางคนขับปั้นจั่นเสมอ
- สัญญาณที่ให้ต้องชัดเจนและเข้าใจได้ง่าย

All Crane Operators must be certified with a weight category Chevron Thailand license consistent with the load weight to be lifted.

Lifting equipment must be within the current inspection or color code period.

Note: The use of non-certified locally fabricated or modified lifting and rigging equipment is prohibited.

Cranes must be inspected as required by the crane's specific pre-use checklist prior to each use.

M. Portable Gas Detection (PGD) Standard

The Chevron Thailand Portable Gas Detection Standard MSW Document Appendix M stipulates CTEP's requirement for the use and measurements necessary for ensuring there is adequate oxygen and to identify any explosive, toxic or other exposures or dangers at work sites.

Only trained and qualified persons can perform and record gas detection measurements.

The required PGD measurements along with their frequency must be entered on the Permit to Work Forms at the planning stage.

Before and during the work period, the measurement results must be recorded on the permit form at the work site.

Portable gas detection measurements are always required for hot work, confined space entry, and the use of non-intrinsically safe and explosion proof electronic equipment in an area classified hazardous based on the Hazardous Area Drawings.

Details of the Portable Gas Detection Standard Document must be reviewed and understood as part of the PGD Training.

When in doubt always request assistance for gas/toxic testing from the on-site Chevron Thailand HES Specialist.

N. Simultaneous Operations (SIMOPs) Standard

The Simultaneous Operations Standard MSW Document Appendix N stipulates the requirement for coordinating the work and controlling risks when two or more activities by different work teams will be conducted in the same area during the same period of time.

SIMOPs Requirements are additional to the required work permits based on the CTEP SIMOPs Decision Matrix, Operation Plan and Daily Log.

The SIMOPs Log and Planning Form are available and must be completed and approved as part of the Permit to Work approval requirements.

In all cases, the communications between both Person Managing Control of Work (PMCoW) is fundamental to safe SIMOPs before, during and after.

A pre-work coordination meeting with continual communications between counterparts is a must.

O. Work at Height Standard

The Chevron Thailand Working at Height Standard MSW Document Appendix O requires Personal fall protection systems must be worn when working on/with scaffolding that is greater than or equal to 3.05 meters (10 feet) in height, including but not limited to:

a. Erecting, modifying or dismantling scaf folding.
b. Working on scaffolding that is not completely enclosed by guardrails.
c. Working outside scaffolding guardrails.
d. Working on/with scaffolding that is not approved/green tagged.

Fall prevention and/or fall protection methods are required when work will be performed at an unguarded elevation

of ≥ 2 meters above grade or deck level refer to the Regulation of Ministry of Labor, B.E. 2551 (2008), Re: Occupational, Health and Safety Standards for Construction Activities.

The Thailand Specific Procedure (TSP-41 Temporary Scaffolding, Ladders and Devices for Working at Height) in addition to the U&G Working at Height Standard provides guidance and the requirements for the various methods that allow persons to work at height safely.

The Personal Fall Arrest System (PFAS)

A. Anchor Point/Anchorage
B. Body Support
C. Connecting Devices

Only persons who have completed WAH Training are permitted to work at height.

Additionally, a WAH rescue plan is required when stipulated by the WAH and Permit to Work Documents.

9.2 Repetitive Stress Injury Prevention (RSIP)

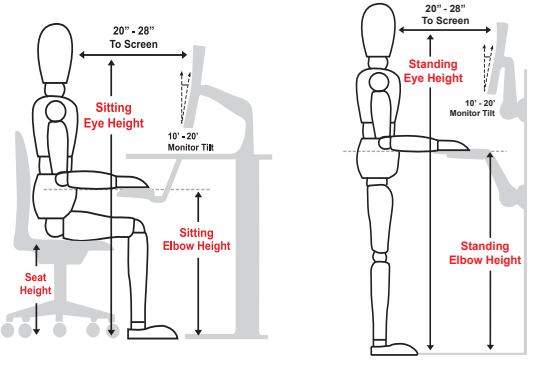
Ergonomics relates to the science of improving worker efficiency by mitigating the hazards associated with musculoskeletal disorders, generally referred to as repetitive stress injuries, (RSIs).

RSI is of concern due to the increased and frequent use of computers, and the associated repetitive motions during their use. The Chevron Repetitive Stress Injury Prevention (RSIP) process aims to reduce office-based repetitive stress injuries (RSIs) and discomfort by requiring participation and compliance by all personnel that use Chevron provided computer, in an office-based environment, for five or more hours per week.

RSIP Requirements

RSIP includes workstation evaluation, training, accessories, and medical assistance. Each department/work group has a trained workstation evaluator that can assist in identifying and eliminating RSI risk

This process focuses on reducing and eventually eliminating office-based, work-related repetitive stress injuries by RSIP awareness training and annual assessments.



The illustration below shows recommended body positions when working with a personal computer.

9.3 Hazardous Material Awareness and Communications

In addition to the Chevron Hazard Identification Tool (HID) for identifying hazards, Chevron Thailand has a HazCom Program to ensure personnel are aware of specific hazards at Chevron Thailand operations.

This Program is aimed at informing and providing awareness of hazard exposures and hazardous materials.

Personnel must be aware that the following hazardous materials and exposures could be present at Chevron Thailand Operations. Personnel must always consider the hazardous exposures as part of all work planning. Refer also to TSP-20 Hazardous Materials and 33 Chemical Handing and Storage

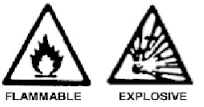
Hazard:

The possibility that exposure to a situation or material will cause injury of harm

The capacity of a substance or material to cause harmful health effects when the body is exposed to the material at certain concentrations.

The exposure can be by touch, absorption through the skin, inhalation through the nose or mouth, or by swallowing.

Hydrocarbons



There are a number of hazards associated with Hydrocarbons and hydrocarbon production:

Pressure:

The high pressure which is associated with the production of natural gas, oil and condensate liquids can rupture pipe and equipment that is improperly sized or of the incorrect pressure rating.

Flammability:

In addition to the hazards associated with pressure, there is always the hazard of explosion and fire.

Never allow hydrocarbons to escape freely or uncontrolled.

Toxics:

The natural gas, oil and condensate liquids of Chevron Thailand contain small quantities of two toxic substances, Benzene and Mercury. Day to day, these are contained in the systems and do not present a hazard; however, it is important that you be aware of them.

Although Chevron Thailand does not have a specific problem with Hydrogen Sulfide (H2S) in the Gulf of Thailand, it is a hazard which can occur during both drilling and production activities.

Therefore, everyone should be familiar with the effects of this toxic gas. Hydrogen Sulfide (H2S) can paralyze the respiratory system and kill in minutes. Even at low concentrations, it is dangerous to health.

Benzene

POISON

Benzene is a naturally occurring compound in crude oil and natural gas.

It is a highly flammable liquid with a strong rather pleasant aromatic odor.

It evaporates rapidly under normal conditions and produces harmful vapors that are nearly three times heavier than air.

Benzene is considered a cancer causing substance. Therefore, contact should be avoided through the use of proper protective equipment and respirators or breathing apparatus protection.

Chevron Thailand Benzene occupational exposure limit

Exposure Measures	**Exposure Standard**
Time Weighted Average (TWA) Exposure Limit	1 ppm
Short-Term Exposure Limit (STEL,15 minutes)	5 ppm
Immediately Dangerous to Life or Health (IDLH)	500 ppm

Mercury

POISON

Mercury is a heavy, shiny liquid metal which is extremely poisonous. It has a

cumulative effect, and can be absorbed by inhalation of vapors as well as absorption through the skin.

At room temperature mercury generates sufficient vapors to be harmful.

Mercury shall not be handled unless the personnel concerned are trained to do so, established procedures are implemented, and all specified PPE is being worn.

Refer to TSP-3 The Removal and Handling of Mercury Contaminated Sludge and 18 Mercury Contaminated Material Handling and Decontamination for the detailed requirement for handling materials containing mercury.

Chevron Thailand mercury occupational exposure limit

Exposure Measures	**Exposure Standard**
Action Level (AL)	15 $\mu g/m^3$
Time Weighted Average (TWA) Exposure Limit	25 $\mu g/m^3$
Immediately Dangerous to Life or Health (IDLH)	10,000 µg/m3 or 10 mg/m^3

Hydrogen Sulfide (H2S)

POISON

Hydrogen Sulfide (H2S) is colorless, heavier than air, and at low concentrations (10 parts per million or less) smells like rotten eggs. It is extremely dangerous because the sense of smell is lost soon after breathing concentrations as low as 100 ppm. High concentrations cause immediate unconsciousness and death can follow quickly.

The following are some additional characteristics of hydrogen sulfide:

1. Immediately fatal when inhaled in high concentrations.
2. Denser than air and settles in low areas.
3. Disperses easily by wind or air disturbance.
4. When burnt (fire/flaring etc.) it produces a blue flame and Sulfur Dioxide (another toxic gas).
5. Will corrode and embrittle certain types of metal.
6. H2S is 5-6 times more deadly than Carbon Monoxide. H2S relative concentration (parts per million in air = ppm) toxicity:

Physical Effects of H2S Exposure

4-5 ppm	Rapidly detectable by its odor of rotten eggs.
10 ppm	Eyes begin to water followed by mild irritation.
27 ppm	Odor of rotten eggs very pronounced but not intolerable.
100 ppm	Loss of sense of smell and worsening of above symptoms.
200-300 ppm	Irritation of respiratory tract and eyes worsen after an exposure of one hour.
500-700 ppm	Almost immediate loss of consciousness, asphyxiation, followed by death.
1000-2000 ppm	Immediate loss of consciousness, rapid failure of respiratory and cardiac functions resulting in death

Actions to take if you smell H_2S:

- Hold your breath.

- Evacuate quickly to a safe position upwind. Move cross wind if you don't know the location of the source.
- Put on Self Contained Breathing Apparatus or escape Breathing Apparatus set.
- Sound the alarm.
- Do not attempt to help anyone until you have put on breathing apparatus.
- Work in pairs, have a back-up.
- Help anyone who may be in distress, take spare breathing apparatus.

Chevron Thailand Hydrogen sulfide occupational exposure limit

Exposure Measures	**Exposure Standard**
Time Weighted Average (TWA) Exposure Limit	5 ppm
Short-Term Exposure Limit (STEL,15 minutes)	15 ppm
Immediately Dangerous to Life or Health (IDLH)	100 ppm

Acids

Acids are strong substances with a Ph. below 6. They vary in strength and concentration and are generally used as a "strong" liquid solution.

Strong acids are hazardous, toxic, corrosive and reactive and must be handled with extreme care and with appropriate protective equipment.

Acids will cause chemical burns when contacting the skin and are poisonous if ingested.

The vapors from acids are very hazardous and can cause internal as well as external chemical burns.

Hydrochloric and Sulfuric Acids are the two most commonly used.

Caustics

Caustics are strong substances with a Ph above 8. It varies in strength and concentration and is generally used as a "strong" liquid solution.

Like acids, caustics are hazardous, toxic, corrosive and reactive and must be handled with extreme care and with appropriate protective equipment. Caustics cause chemical burns and are poisonous if ingested.

Sodium Hydroxide (Caustic Soda) is the most commonly used.

Asbestos

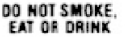
Asbestos is most often found in insulating, gasket or construction materials. It is naturally fibrous material that can cause respiratory related cancer.

Chevron Thailand has conducted surveys to identify and remove or treat locations and equipment containing asbestos.

However, there is always the possibility of asbestos being present in older Chevron Thailand or contractor equipment.

Lead

Inorganic lead is a substance found most commonly in older paints, pipe joining and thread components.



Inorganic lead can be absorbed into the body by ingestion or inhalation.

Removing, blasting or burning of painted surfaces poses the greatest potential for lead exposure.
Identification monitoring, training for exposure to lead is required and may require medical surveillance.

Overexposure to lead can result in short-term (acute) or longer-term (chronic) health effects.

Chemicals

All chemicals should be considered hazardous andtreated with respect, and only handled with the appropriate personal protective equipment. Some additional basic rules are as follows:

- Smoking, eating and drinking is prohibited while handling chemicals.
- Ensure all chemicals are segregated by type and properly labeled.
- Use only containers and materials known to be suitable to the chemical.
- Do not mix chemicals unless following written instructions.

- Properly neutralize and dispose of unused chemicals and their containers. Clean up and immediately give special attention to your personal hygiene after handling chemicals
- If a chemical contacts your body, immediately go to the nearest emergency shower or source of clean water and flush the exposed area with large quantities of water.
- Immediately remove all contaminated clothing.
- Obtain first aid and follow-up medical attention.

Emergency Actions for Hazardous Exposures

- Notify control room/ radio room.
- Remain calm.
- Consider any leak or spill of unknown substances to be dangerous.
- Put on personal protective equipment.

- Do not act hastily.
- Do not breath, taste, or touch it.
- Identify the material first.
- Consult the SDS for proper handling - precautions - actions.

Gasoline

Gasoline is a highly flammable liquid. Gasoline generates flammable vapors at ambient temperatures. It has a flash point of -45°F (-7°C). Due to its low flash point, gasoline presents a greater potential fire hazard than most other fuels.

Radioactive Materials and Operations

Operations involving radiation hazards shall be performed under the direction of a qualified person designated as responsible for radiation safety.

A Permit to Work must been obtained prior to beginning work involving radioactive sources.

If possible, all radiographic work shall be carried out during breaks, or at night.

Areas where radioactive sources are to be used must be roped off. Warning signs shall be conspicuously posted to ensure personnel are warned of the restricted area.

Personal Radiation Monitors as required by TSP 16 The Possession and Safe Handling of Radioactive Material, Person handling with radioactive material shall be worn by all personnel handling and working near radioactive materials (e.g.: film badges, audible alarming monitors, etc.).

Chevron Thailand's TSP-16 the Possession and Safe Handling of Radioactive Material, storage and transport policy regarding radioactive sources must be followed at all times

NORM

Low levels of Naturally Occurring Radiation Materials (NORM) are found almost everywhere in the earth's soil, rocks, water and vegetation.

In oil and gas operations, the NORM of concerned is referred to Technically Enhanced Naturally Recurring Radiation since it results from manmade activities that can cause it to be more concentrated in pipes and equipment.

With this in mind, a radiation survey should be conducted when removing, opening and exposing the internal surfaces of well tubing, piping and equipment.

For Chevron Thailand, when and if NORM is discovered, the major concern would be particles and dust from contaminated tubing and process equipment deposits.

Only trained, non-SSE personnel are permitted to handle piping, equipment, junk iron or solids containing NORM.

9.4 Occupational Health and Industrial Hygiene

Fit for Duty

All personnel assigned to work at Chevron Thailand locations must be fit for duty and physically capable of performing all aspects of their jobs.

This includes a doctor certified pre-employment medical examination.

To meet this responsibility, the contractor must train their employees to:

Implement and enforce their safety program, and ensure that all employees are properly trained for their assigned tasks.

Follow safe work practices and procedures.

Provide their employees with Chevron Thailand approved personal protective equipment appropriate to the work and in good condition.

Require persons to notify their supervisor when they are taking medication, both prescription and nonprescription, that could impair their ability to work safely.

Ensure that the contractor's employees know and comply with Chevron's drug and alcohol requirements.

Conduct appropriate industrial hygiene monitoring and, if requested, provide copies of the results to Chevron Thailand.

General Occupational Hygiene Principle

Contractors are responsible for identifying health hazards that may be present within their scope of work ensuring that appropriate programs and monitoring are in place to protect their employees.

This includes recognition, evaluation, and control of environmental factors or stresses arising in or from the workplace, which may cause sickness, impaired health and well-being, or significant discomfort to workers or the citizens of the community.

Chevron's occupational hygiene objectives are to:

Protect the health of all personnel working under Chevron Thailand operational control.
Provide a framework for recognizing and managing health hazards including physical and chemical hazards.
Comply with regulatory requirements.

9.5 Physical Health Hazards

1. **Work Place Ergonomics**
   Ergonomics relates to working in the correct location and position with the

correct stance and posture to avoiding injuries. The BBS Observation program includes this as one of the critical behavior checklist items to ensure workers are coached to perform their work without risk.

2. Heat Stress

Due to environmental conditions in the Gulf of Thailand, heat can be a major health hazard that should be recognized as part of the PPHA and onsite JSA. The persons planning the work are responsible for ensuring that appropriate controls are identified and utilized to ensure the safety of the personnel performing the work.

3. Fatigue

Worker fatigue can be a risk factor for personnel working longer than normal shifts or during extra strenuous work.

Personnel should be instructed to notify their supervisor when they feel fatigued to ensure rest periods are observed and personnel are changed.

4. Manual Lifting

Many injuries are caused by poor lifting practices. Back injuries can be eliminated by following these simple rules:

- Lift with your legs - not your back.
- Avoid lifting in an awkward or off-balance position.
- Secure a good hold on the object before lifting.
- Use team work when lifting with others. Lift or lower the object together.
- Minimize occasions for which manual lifting is required and minimize weight of lift, whenever possible.

The following must be observed when handling heavy objects:

1. Size up the load before you lift or attempt to carry it. You should seek assistance if you are unsure of the weight or size of the object.

2. Hold heavy loads close to the body.

3. When lifting or lowering the load with others all should agree on who is in charge and the signals to be given. Do not release the load until all persons are ready.

4. The "Kinetic Method" of lifting must be used as follows:

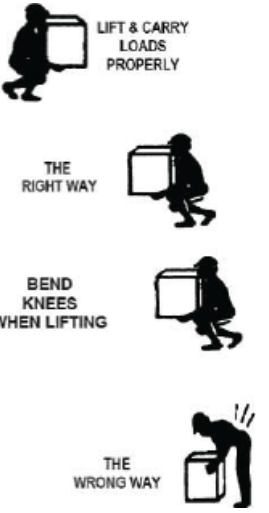
   a. Ensure a secure footing, place feet hip width apart with one foot ahead of the other.
   b. Bend at knees to lift or lower a load.
   c. Always keep back straight and as upright as possible.
   d. Get a firm hold.
   e. Lift or lower gradually by straightening or bending legs, keeping the back straight.
   f. Keep arms close to body.
   g. Keep chin drawn in.
   h. Objects or equipment heavier than 20 kg should not be manually lifted.

5. Back Injuries

Although back injuries are a common hazard, they can be prevented simply by working smart.

The following are rules you should follow:

1. Always walk and sit with upright posture.
2. Wear proper fitting boots and shoes with soles and heals in good repair.
3. Use proper lifting techniques.
4. Get help when lifting heavy items.



6. Noise

Many Chevron Thailand locations have high noise levels that require hearing protection.

All areas with high noise levels are provided with warning signs indicating

that hearing protection is required and must be complied with.

9.6 Motor Vehicle Safety

Motor vehicles represent one of the highest risks both on and off the job.

Chevron Thailand place high emphasis on motor vehicle safety with requirements that included but are not limited to:

- Selection and use of transportation providers with licensed and well trained drivers and vehicles that are well maintained.
- Pre-use inspections.
- Mandatory seat belt use.
- Prohibited cell phone use while driving.
- Training for and use of defensive driving techniques.
- Observing all speed and road condition limits.
- Headlights on for safety at all times.
- No driving when sleep deprived.
- No driving after alcohol consumption.
- No smoking inside the car or during fueling.
- Immediate reporting of accidents with written follow-up.

9.7 Cargo and Material Handling

All cargo requires a manifest detailing the number, type, weight and contents of the packages/containers.

Any cargo materials with a UN, IATA or IMO Hazardous Material Classification must be packaged, handled and shipped as dangerous goods using the Chevron Thailand Multi-Modal Manifest Documents and IMDG Procedures.

Contractor equipment must be marked to identify the owner company, address and contact details along with the items gross weight.

The driver, pilot or captain must be notified and accept any shipment with dangerous goods.

Material Handling

1. Material handling is one of the most hazardous activities associated with Chevron Thailand's operations.
2. Personnel must be alert, keeping eyes on the crane operator, crane block, load and rigging.
3. Always avoid positions where you can become trapped. Keeping your body,

hands, and feet out from under loads. Use tag lines on all suspended loads.

4. When a crane operator cannot see the entire operation, a signal man must be used to give visual direction.
5. Extreme care must be used when loosening ties on pipe bundles.
6. Where a special sling or container is provided for a particular job, they must always be used for that task. Do not improvise rigging.

9.8 Process Safety Management (PSM)

Process Safety Management (PSM) is the management systems and processes which are intended to reduce the risk of major or catastrophic accidents that typically involve uncontrolled releases of hazardous materials. Effective process safety management is fundamental to safe operations.

Process safety works best when each of us takes personal ownership, paying attention to how we operate equipment and verifying that all the safeguards are in place and functioning. The aspects of organizational culture and operational discipline necessary to sustain effective process safety performance.

Within Chevron, Process Safety is a defining area of focus on aspects of OE that are essential in preventing catastrophic incidents in our operations. Process safety is interwoven into our OEMs, touching the majority of the 13 OE elements and impacts multiple CUG function, initiatives and process. The process safety standards are including;

- Asset Integrity Management (AIM)
- Operating Procedures (OP)
- Process Safety Information (PSI)
- Technical Codes and Standards (TC&S)

Process Safety Management ensures that the plant and equipment are designed to operate safely based on the best engineering and construction practices using proven technical and industry standards to meet fit for purpose criteria.

Process safety also recognizes the intimate relationship between the personnel that must operate and maintain the plant and to sustain the integrity of systems, equipment, devices, item by item.

Start-up, operating and maintenance requirements are detailed in written PSM procedures.

For on-going and historical reference, systems shall only be operated and maintained in compliance with the written procedures. Set points and limits must not be changed unless assessed as required by the Chevron Thailand Management of Change (MOC) Procedures.

Any change that is not like for like requires an MOC assessment and approval.

10.0 Personal Protective Equipment (PPE)

General

All personnel working for Chevron Thailand must wear the basic PPE in addition to any specific and appropriate PPE as determined by the Hazard Analysis for the work being performed or the work location.

Chevron Thailand's basic PPE requirements include but are not limited to the following:

- Field Work Clothes (Flame Retardant)
- Footwear
- Safety Hard Hats
- Eye Protection
- Hearing Protection
- Hand Protection
- Work Vests
- Life Jackets
- Respirators Protection
- Fall Protection
- Specific PPE requirements are stipulated in TSP-24

It is the responsibility of each contract company to provide appropriate and Chevron Thailand approved PPE for their personnel as necessary for the specific task being performed, the potential hazards to which the person will be exposed, and the

conditions of the job site. Personnel must adhere to the minimum PPE requirements recommended on the Safety Data Sheets (SDS) for material being handled or the exposure.

Head Protection

Safety Hard Hats

Hard hats must worn by all persons at all times when at work locations except in office-type areas.

Personnel must wear a hard hat with chin strap when working in field operations.

Hard hat and the suspension system shall be replaced as needed or as recommended by the manufacturer.

No one is to alter (drill, rivet, or paint to change the design) hard hats in any way.

Hard hats must be made of nonmetallic material and must comply with ANSI standard Z89.1 (or any successor standard).

Hard hats must be worn squarely on the head and not cocked to one side or turned in a reverse position.

Welding hard hats must be used during welding operations when overhead hazards are present.

The only exception to this is when the welding hard hat poses a hazard to the welder due to body positioning while performing their work. This exception along with an explanation must be documented on the Hot Work Permit and noted on the JSA with all potential hazards mitigated.

Eye Protection

All personnel shall wear approved side shielded safety glasses at all work locations except in office type areas or exposures.

Additional face protection shall be worn when grinding, welding, chipping, pouring chemicals or wherever flying particles may cause eye injury. Eye protection devices shall comply with the requirements of ANSI Z87.1. Refer to Chevron Thailand Specific Procedure, TSP-24 for Personal Protective Equipment.

Safety eyewear, clear (for night operations) or tinted, is mandatory for all personnel in field operations (including visitors) and

must be worn outside of living quarters and office buildings: All safety eyewear (prescription and nonprescription) must have side shields or wraparound protection that meets ANSI standard Z87.1

(The notation Z87 should be on the frames or temples of the safety eyewear.) This includes prescription eyewear when used as the only source of eye protection.

Personnel should always shield their eyes from welding arcs and reflected rays from other surfaces, such as water.

Personnel, when helping or working near welders must wear goggles.

Safety eyewear other than safety glasses may be required for certain tasks, as required by Chevron Thailand Specific Procedure, TSP-24 for Personal Protective Equipment.

Contact Lenses

Personnel wearing contact lenses must comply with the following in addition to the requirements of TSP-24.

- Inform their supervisor when they are wearing contact lenses.

- Never wear contact lenses in areas where there is potential exposure to a welding arc or chemical vapors.
- Wear soft or gas-permeable lenses.
- Have a spare pair of contact lenses or prescription glasses readily available to you.

Foot Protection

Wearing of safety footwear is mandatory at field and construction operations. Open-toed shoes, such as sandals, slippers, and flip-flops are unacceptable footwear when on the work site or on helicopters and crew boats.

Visitors and employees not actually involved in daily field operations, such as helicopter pilots and office personnel, are not required to wear safety footwear unless visiting an active process area or construction site.

Permitted safety footwear type include: – Lace-up or slip-on boots with steel or composite Steel-toed rubber boots with non-slip soles – Synthetic leather boots (for drilling completions)

Hand Protection

Appropriate protective gloves must be worn any time hands are exposed to hazards, such as cuts, punctures, or abrasions (cloth, cut-resistant, leather, or leather-palmed gloves).

When handling chemicals or hazardous materials with a chemical absorption concern and when performing electrical work, the gloves must be certified for the chemical or electrical voltage involved with the work).

Welding-Specific: Flameproof gauntlet gloves must be used during all arc welding, gas welding, or gas cutting operations, except when engaged in light work, such as fit up tests.

Rigging-Specific: Gloves must be worn when performing rigging duties.

Galley/Cooking: All galley personnel who use knives during food preparation are required to wear cut-resistant gloves.

The catering contractor shall provide procedures for cleaning and disinfecting these gloves. – Only countertop electric knife sharpeners are permitted for use in

galleys and kitchens under Chevron's operational control.

Divers are required to wear KEVLAR® gloves.

Personnel using fixed or locking blade knives must wear KEVLAR or leather gloves. – If a knife is the appropriate tool for the job, the employee's company is expected to provide the fixed or locking blade knife and maintain it for that specific task. A JSA must be completed before its use.

Hearing Protection

Chevron Thailand and Contractors must provide hearing protection to their personnel and ensure they are worn whenever persons work in areas requiring hearing protection, such as:

On helicopters

Posted or other high-noise areas

Protective Clothing

Flame retardant clothing with long sleeves shall be worn by all employees and contractors working on, in, or around production areas/ equipment or drilling operations.

Other persons/visitors (for other than crew change purposes) are required to wear long sleeves. Exceptions to this policy for visitors will be at the discretion of the onsite person in charge.

Clothing shall be worn correctly with – no holes, tears, frayed, or loose material – and fit appropriately, with sleeves rolled down and shirttails tucked into trousers.

Suitable additional protective clothing (specified by the SDS/ JSA) must be worn when handling chemicals or hazardous substances. Rain gear is acceptable as an outer layer during inclement weather conditions.

Flame Retardant Clothing

Contractors shall provide Flame Retardant Clothing (FRC), and PPE for their personnel and ensure they are worn based on the incident energy exposure associated with the specific task.

At a minimum, FRC is required for all electricians and automation specialists

working at CTEP facilities. FRC selected for electrical work must provide for electrical arc protection.

FRC may be required for non-electrical persons who perform certain duties with a high risk of flash fires. For high-voltage applications, additional requirements are listed in the Chevron Electrical Safe Work Practice Manual. Consult a Chevron representative for more details.

Respiratory Protection

Appropriate respirators must be worn when working with dusty materials, chemicals, paint spraying, grit blasting, welding, etc. A fit test is required before use, any hindrance such as beards that will not permit for a tight seal and will inhibit the protection is not allowed. Refer to TSP-24.

Self contained Breathing Apparatus (SCBA) shall be worn if it is necessary to enter a gas or smoke filled area, or any area deficient in oxygen. SCBA shall be the full face positive pressure type.

SCBA shall only be used by personnel trained and medically fit to do so and supported by a Rescue Team.

Contractor companies with personnel that perform work requiring respiratory protection are required to have a documented respiratory protection program in place. The contractor company must ensure that their personnel are properly trained, medically cleared, and fit-tested, and with a monitoring program to ensure proper implementation.

Personal Flotation Devices

Life Jackets

All persons must wear the approved life jackets or floatation device while flying over

water, boarding and riding in boats or life rafts and during personnel baskets transfers.

Each living quarters cabin is provided with a life jacket for each person, additional life jackets are stowed adjacent to the lifeboats.

Work Vest

All personnel shall wear work vests while riding crew boats, supply boats and personnel baskets and prior to entering areas below offshore cellar deck levels.

It is the responsibility of the contractor company to provide their employees with Chevron Thailand approved Personal Flotation Devices.

All personal flotation devices (PFDs) must be securely fastened, fit snugly, and be in good condition.

Only Chevron Aviation Department inflatable PFDs shall be worn on helicopters.

Fall Protection Equipment

Personnel must use fall protection equipment when performing any of the following:

When working at elevations of six feet or more, or over the unprotected edge of a work platform, deck, walkway, or floor .

When working in an area where it is possible to fall more than four feet through deck and floor openings.

When working on a fixed or portable ladder and the worker is above six feet.

When working on the boat landing or Plus 10 level when not surrounded by handrails.

When working on scaffolding that is not green-tagged.

Note: *Individual contractors may require personnel to tie off even if scaffolding is green-tagged.*

PPE During After-Hours

All personnel working for Chevron will wear appropriate PPE during after-hours if outside the galley and living quarters

11.0 Specialized Operations

Each of the following operations or activity types have specific documents stipulating the related requirements.

In all cases, specialized operation activities must comply with the above MSW Procedures, Standards and Requirements in addition to the actual and specific specialized operations requirements.

11.1 Aviation Safety Reliability and Efficiency

Aviation Operations must be contracted for and conducted in compliance with the U&G Aviation Safety and Efficiency Process Document and its references.

For Personal Helicopter Procedures and Safety Requirements refer to the Chevron Thailand Traveling Offshore Booklet available at the Chevron Thailand Air Center. Everyone must read and comply with the requirements before traveling offshore.

Refer to the Thailand specific Procedure (TSP-2 Traveling Offshore, Safety Passports and Short Service Employee Program) for the complete details of the requirements for traveling offshore.

Aviation Manual

Chevron Thailand has a specific aviation manual titled "Aviation Safety and Operations Procedures Manual" that stipulates the Thailand Aviation Operation requirements.

11.2 Marine Safety Reliability and Efficiency

All Marine Operations must be contracted for and conducted in compliance with the U&G marine Safety Reliability and Efficiency Process Document and its references.

Marine Manual

Chevron Thailand has a specific Marine Manual titled "CTEP Marine Safety & Procedures Manual" that stipulates the Thailand Marine Operation requirements.

11.3 Drilling and Completion

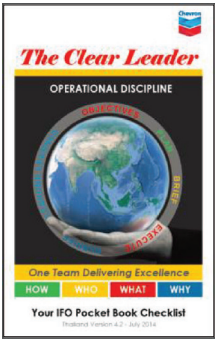
All Drilling and Completions Operations must be conducted in compliance with the contract requirements for the specific work. The above Chevron Thailand Safe Work Practices and Managing Safe Work

Documents requirements must be complied with unless alternative contractor procedures and requirements have been specifically accepted as equivalent.

The Chevron Thailand Drilling and Completion Department maintains specific documents detailing the requirements for their operations which include additional references and specific requirements including but not limited to Emergency Response, Well Control, Blow Out Prevention and Equipment, Regulatory Compliance.

A Job Planning and JSA Pocket Book is available at the following URL:

http://thailandupstream.chevron.com/Drilling/DCSafety/Information_Forms.asp



Other specific standards and SOP's are available at the following URL:

http://thailandupstream.chevron.com/drilling/StandardSOPs/GP_Drilling.asp

If any of the above links are unavailable, contact the local HES Specialist for assistance. Do not assume the requirement or topic is no longer applicable.

Emergency Drill

Contractor company personnel will regularly conduct all emergency drills, including fire, man-overboard, abandonment, and well control, to comply with the contractor company's requirements, Chevron's requirements, and regulatory requirements.

Documentation for subject drills will be maintained on location.

Well Control

Control Chevron's vision of sustained incident-free operations is predicated on maintaining well control. It is Chevron's expectation that the contractor will ensure that all personnel will be appropriately trained as per Chevron's Subpart O Training Plan for Well Control.

Well control drills while drilling, tripping, etc., will be carried out at a minimum of three per week for each tour, until crews illustrate proficiency, then conducted at two per week for each tour. Drill documentation will be maintained on location.

Blowout Preventing Equipment Tests

Blowout prevention equipment (BOPE) is emergency equipment and must be maintained in proper working condition at all times per Chevron's Drilling Well Control Guide and/or Chevron's Work over Well Control & Blowout Prevention Guide.

The object of BOP testing is to eliminate all leaks and to determine that the equipment will perform under threatened blowout

conditions. BOP equipment must be tested when initially installed and every fourteen days thereafter for drilling operations, or per current BOEMRE requirements.

A seven-day test is required for work over and cased-hole operations, or per current BOEMRE requirements. BOP test charts and documentation will be maintained on location.

11.4 Non-Destructive Testing (NDT)

Non-Destructive Testing Procedures that utilize radiography and hydro testing can be dangerous due to radiation and high pressure exposure if Chevron Thailand's Procedures and Safety Precautions are not followed.

Only persons licensed and qualified are permitted to perform non-destructive testing operations.

Refer to the Thailand Specific procedure (TSP-16 The Possession and Safe Handling of Radioactive Material) for the requirements for Radiography and Handling Radioactive Materials.

Refer to the Chevron Thailand Hydro testing Standard for complete details of the required

procedures and precautions for planning and conducting hydro testing.

Hydro testing shall utilize corrosion inhibited water and piping high spots shall be vented to eliminate any trapped air or gas.

Note: The use of a radioactive source may require implementing bypassing critical protection (BCP) to prevent false activations or alarms for some fire detection devices.

11.5 Abrasive Blasting and Painting

Abrasive Blasting and Painting Operations can cause an explosive and health hazard to workers due to the dust and chemicals involved if Chevron Thailand's strict Safety, Operating and Personal protective Equipment Procedures are not followed.

Working At Height Precaution requirements must also be followed as required by the PPHA/JSA, Work Permits and Rescue Plan if the work will be conducted above deck level.

Refer to the Chevron Thailand Abrasive Blasting and Painting Standard for complete details of the required procedures and precautions for blasting, needle gunning and painting.

11.6 Hot Tapping

Hot Tapping is a special operation implemented to add a welded branch connection to a pipe that is in operation under pressure or contains hydrocarbons which can cause a fire, explosion or a personnel injury hazard if Chevron Thailand's strict Hot Tapping Procedure and Precautions are not followed.

Only specially trained persons using special and approved hot tapping equipment are permitted to perform hot taps in compliance with an approved work permit, PPHA/JSA and MOC Document.

Refer to the Chevron Thailand Hot Tapping Standard for complete details of the required procedures and precautions for hot tapping.

11.7 Pipeline Launcher and Receiver Operations

Pipeline pig launching and receiving operations can be dangerous due to incorrect valve positions, instrument malfunctions or readings, trapped pressure and toxic exposures to mercury and benzene if

Chevron Thailand's strict Operating Procedures, Safety Precautions and Personal Protective Equipment are not followed.

Refer to the Chevron Thailand Pig Launching and Receiving Standard Operations Procedure for complete details of the required procedures and precautions for pigging operations.

11.8 Compressed and Liquefied Gas handling

Compressed Gas Cylinders and their gases can be dangerous due to high pressure and their chemical make-up if Chevron Thailand's strict Safety Precautions are not followed.

Never apply grease or oil to cylinder and hose fittings. Only use fittings and hose that are designed and compatible with the gas in the cylinder.

Cylinders are heavy and should always be handled carefully with a cap in place, keeping them vertical and secured to ensure they will not tip over.

Oxygen and acetylene cylinders shall only be used together in a rack or cart with a steel divider plate.

Refer to the Thailand Specific Procedure (TSP-6 Cylinders Containing Compressed or Liquefied Gases and Their Use) for details of the requirements for the Safe Procurement, Handling and use of Cylinders with compressed or liquefied gases.

Fuel Handling

Gasoline

In general, gasoline is prohibited offshore and never to be used as a cleaning liquid or agent.

Gasoline shall only be stored in a fire safe container for use as a fuel. Skin, eye contact, static electricity and fire procedures must be implemented as required by the Safety Data Sheet (SDS) document.

Aviation Fuel

Aviation fuel shall only be stored, handled and dispensed by trained aviation support persons as required by the Chevron Thailand Aviation Operations Manual.

Diesel Fuel
Engines and equipment that require diesel fuel shall utilize fuel that is stored to

maintain the required quality along with only being operated and maintained as recommended by the specific manufacturers while following the precautions of the SDS document.

Natural Gas Fuel

Engines and fuel controls that utilize natural gas shall only be operated and maintained as recommended by the specific equipment's manufacturer along with the stated safety, environmental and health precautions

Compressed Gas Cylinders

Moving Cylinders

Transport compressed gas cylinders in DOT-approved, corrosion-resistant racks.

Make sure the valve protector cap is secure before moving cylinders. Keep the protector caps in place when cylinders are not in use.

Do not use slings, ropes, or chains to lift a cylinder.

Do not lift cylinders by protector caps.

Use a hand truck to move cylinders to prevent sliding or dragging. Securely fasten the cylinders to the hand truck.

Storage

- Store cylinders in shaded areas.
- eep caps in place when cylinders are not in use.
- Keep compressed gas cylinders at least 20 feet from highly combustible or flammable materials, such as oil or chemicals. Alternatively, separate the cylinders with a metal wall 5 feet high and 1/4 inch thick.
- Do not place compressed gas cylinders where they might become a part of an electrical circuit.
- Do not expose cylinders to an open flame, a temperature above 125° F, or an area where heavy equipment is being moved.
- Do not use compressed gas cylinders as rollers or supports, or for any purpose other than to contain the content as received.
- Secure cylinders upright with a nonflammable device to prevent them from being knocked over or damaged. Do **not** use rope to secure cylinders. **Use** Cylinders must be secured and protected from

impact, including falling objects, while in use.

- Keep the cylinder valve closed, except when the cylinder is in active use. Open the valve slowly with the valve pointing away from the contractor and other personnel.
- Do not use compressed gas for cleaning, because it may injure the eyes or body or create a fire hazard.
- Do not use cylinders that have been defaced, are missing identifying markings (labels, decals, tags), or have expired hydrostatic test dates.
- Use regulators, gauges, and hoses only for the particular gas or group of gases for which they are provided. Do not use them on cylinders containing gases with different properties.
- Use properly fitted and recommended wrenches with cylinder-valve accessories. Do not use these wrenches for any other task.
- Install flashback arrestors at the discharge of the regulators and at the torch. This is a requirement.

Appendix- List of Acronyms

ANSI	American National Standards Institute
API RP	American Petroleum Institute Recommended Practice
BBS	Behavior Based Safety
BOEMRE	Bureau of Ocean Energy Management, Regulation and Enforcement
BOP	Blowout Prevention
Bosun	Boatswain
BU	Business Unit
CCU	Cargo-Carrying Unit
CPP	Central Processing Platform
Chevron Thailand	Chevron Thailand Exploration and Production Limited. (CTEP) Chevron Offshore (Thailand) Limited.(COTL) Chevron Asia South Limited. (CASL)
dBA or dB(A)	Decibels A
DOT	U.S. Department of Transportation
ESD	Emergency Shutdown
FRC	Flame Retardant Clothing
FPSO	Floating Production Storage and Offloading

FSO	Floating Storage Offloading
H2S	Hydrogen Sulfide
HAZCOM	Hazard Communication
HAZMAT	Hazardous Material
HazOb	Hazard Observation
HLO	Helicopter Landing Officer
HUET	Helicopter Underwater Escape (Egress) Training
IDLH	Immediately Dangerous to Life and Health
IFO	Incident Free Operation
IHE	Isolation of Hazardous Energy
IT	Information Technology
JHA	Job Hazard Analysis
LEL	Lower Explosion Limit
LO/TO	Lock-Out/ Tag-Out
LQ	Living Quarter
MSRE	Marine, Safety, Reliability, and Efficiency
MSW	Managing Safe Work
MVC	Motor Vehicle Crash
NDT	Nondestructive Testing
NORM	Naturally Occurring Radioactive Material
NFPA	National Fire Protection Association

O2	Oxygen
Oxygen	Operational Excellence
OE/ HES	Operational Excellence/ Health Environment and Safety
OEMS	Operational Excellence Management System
OIM	Offshore Installation Manager
OSHA	Occupational Safety and Health Administration
PA	Public Address
PEL	Permissible Exposure Limit
PFD	Personal Flotation Device
PGD	Portable Gas Detection
PIC	Person-In-Charge
PLE	Portable Lifting Equipment
PPE	Personal Protective Equipment ppm parts per million
PPHA	Planning Phase Hazard Analysis
PTW	Permit to Work
RCA	Root Cause Analysis
SCBA	Self-contained Breathing Apparatus
SDS	Safety Data Sheet
SimOps	Simultaneous Operations
SOP	Standard Operating Procedure
SSE	Short Service Employees

STEL	Short Term Exposure Limit
SWA	Stop-Work Authority
SWL	Safe Working Load
SWP	Safe Work Practice
T-BOSIET	Tropical Basic Offshore Safety Induction and Emergency Training
TIF	Think Incident Free
TRIR	Total Recordable Incident Rate
TWA	Time Weighted Average
UL	Underwriter's Laboratory

For more information, please contact
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