control of work
oe process

Chevron Technical Center, HSE
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Version	Date	Approver
1.0	December 2021	HSE Functional Leadership Team

1 Process overview

1.1 Purpose and objectives

The purpose of the Control of Work (CoW) Process is to manage workplace safety and health hazards and to prevent workforce Serious Injuries and Fatalities (SIF).

Objectives of CoW include:

- Control all work, not just permitted work.
- Define a fit-for-purpose framework to plan, prepare, deliver, and learn from work.
- Utilize a risk-based approach to define controls for the task regardless of asset class or business segment.
- Ensure representation of persons performing work in all four phases of the work cycle.
- Set Chevron requirements for CoW that must be met at a minimum, with flexibility to add safeguards as required for the task.

The CoW process is part of Chevron's Operational Excellence Management System (OEMS). It is not the company's interpretation of any legal or regulatory requirements.

The CoW process does not encompass local legal or regulatory requirements that may be applicable. It is the responsibility of individual Business Units[1] (BU) to comply with these requirements.

1.2 Scope

The CoW process applies to work performed by Chevron employees, their delegates, contractors, and subcontractors (hereafter referred to as the workforce). This includes work performed at locations within the scope of the OE Data Reporting Standard as implemented locally, such as operating facilities, refineries, manufacturing sites, blending plants, drilling and completions operations, vessel operations, equipment, construction, demolition, maintenance, inspection, and other similar activities that have the potential to adversely impact the safety or health of the workforce.

1.3 OE expectations met

The CoW process and associated standards meet the applicable expectations listed under the OEMS Workforce Safety and Health (WS&H) focus area.

[1] The term "Business Unit" (BU) is used herein as a generic term that refers to a technical company, service company, functional area, or a corporate department.

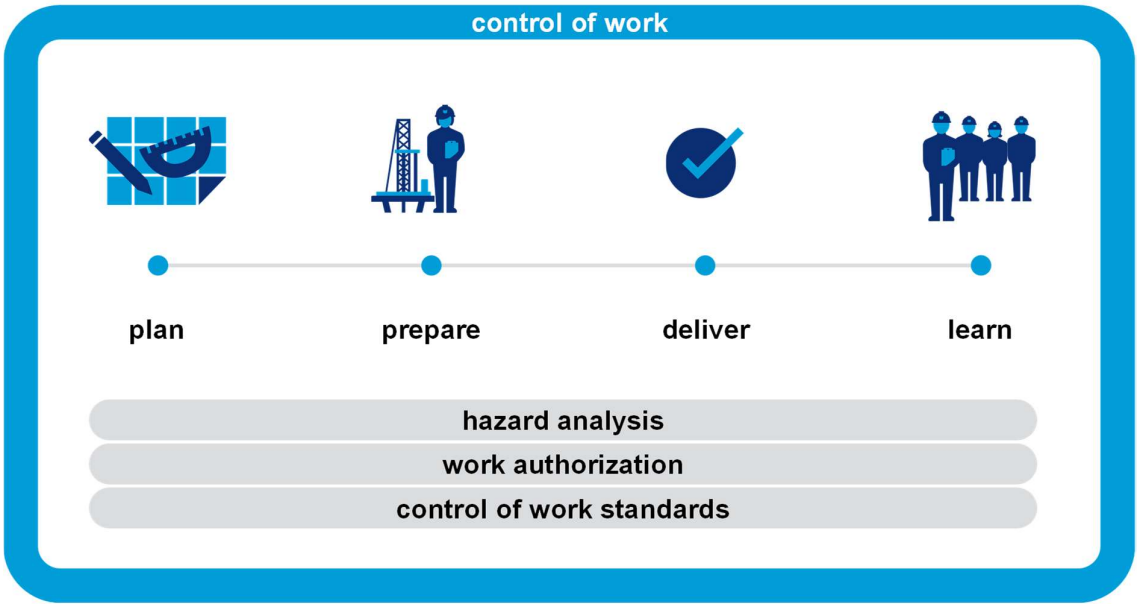
1.4 Requirements

The following sections provide minimum requirements for CoW and guidance to clarify the intent of those requirements.

- Requirements **shall** be met.
- Guidance **may** be used as an aid to develop local documents that meet or exceed CoW requirements. If examples are provided within guidance sections, they are not meant to be an exhaustive list of acceptable means for meeting a requirement. BUs may develop or utilize other suitable methods not discussed in this document. Guidance is not auditable.

Framework

The CoW framework illustrates CoW expectations throughout the four phases of the work: Plan, Prepare, Deliver, and Learn.



System

These requirements apply to the overarching system to control work and support all four phases of the work.

1.	**Requirement:**	**Implement and maintain a documented system to control work that meets the requirements of the CoW process and supporting standards.**
	Guidance:	• CoW process requirements have been designed to allow flexibility in the manner they are met. • Each BU should develop CoW documentation that is fit-for-purpose at the local level, while meeting the CoW process requirements. • Human and Organizational Performance (HOP) principles and concepts should be incorporated into local procedures and practices. • BUs may develop documentation detailing alignment between their local requirements and the CoW process requirements. This alignment documentation is useful when seeking approval of local documents from BU management, for audit purposes, for BU V&V programs as well as when changes to the CoW process requirements occur and local documentation needs to be updated. A mapping tool is available on the CTC CoW SharePoint Site.
2.	**Requirement:**	**The workforce shall meet training and competency requirements that apply to their roles in accordance with the Training and Competency standard.**
	Guidance:	Workforce training and competency requirements are specified in the Training and Competency standard. Responsibilities of personnel filling a specific CoW role are defined in that individual CoW standard (e.g., "Approver" for Work Authorization, "Entry Supervisor" for Confined Space Entry, "Fire Watch" for Hot Work).
3.	**Requirement:**	**The authority and responsibility to "Stop Work" without personal consequence shall be communicated to all members of the workforce and reinforced by leaders.**
	Guidance:	BUs should develop mechanisms to ensure Stop Work expectations are clearly communicated and understood by the workforce. Examples could include inclusion in training programs and procedures, wallet cards, V&V

		coaching programs, communication during pre-job briefs, safety orientations for contractor workforce.
4.	**Requirement:**	**If contractor CoW standards will be used in place of Chevron standards, they shall be evaluated in accordance with the Contractor OE Management (COEM) Process and align with the requirements of the CoW process.**
5.	**Requirement:**	**Implement and maintain CoW record retention requirements that meet local regulatory requirements, and Enterprise Policy 566 – Information Retention, or for at least 6 months (whichever is greater).** **Under Enterprise Policy 566, records that are outdated or have outlived their business value are retained for 6 months or any longer period required by local law.**
	Guidance:	The documented (when required) results of area gas monitoring taken for the purpose of personnel safety during CoW activities are “Records” pursuant to Policy 566, are classified as ENV1000, and have a retention period of 10 years. Examples include monitoring of O2, %LEL, H2S, CO, or other toxics under Confined Space Entry, Hot Work, Excavation, and Isolation of Hazardous Energy permits.
6.	**Requirement:**	**Define expectations for leaders to support SIF prevention by engaging with the workforce where work is being conducted.**
	Guidance:	• Leaders are individuals with the ability to influence the workforce. This includes managers and supervisors as well as non-supervisory personnel such as head operators, drilling engineers, production engineers. • This requirement may be met using existing BU practices, including leadership engagements, field visits, attending pre-job briefs, mid-shift verifications, learning teams. • Documentation requirements for workforce engagements should be determined at BU discretion. • Leaders’ engagements with the workforce are intended as high-level discussions and not as a detailed assessment of the task against CoW standards.

	• Chevron's Effective Engagements Guide is a resource that leaders can use to prepare for and conduct their engagements.
7. Requirement:	**Implement a verification program to assess CoW activities and assure controls are in place and functioning.**
Guidance:	Refer to the OE Assurance Process.
8. Requirement:	**Exceptions to requirements of the CoW process and standards shall be managed in accordance with the HSE Functional Governance document.**

Plan

Planning phase identifies and evaluates the steps and controls required to prevent workforce injuries and fatalities while achieving the desired outcome in an efficient and cost-effective manner.

9. Requirement:	**Incorporate CoW planning phase requirements into the task planning and scheduling process.**
Guidance:	The intent of this requirement is to ensure CoW aspects are considered early in the planning of work. Understanding and addressing applicable CoW requirements helps ensure the work can proceed as scheduled.
10. Requirement:	**Incorporate operational learning in the design of the task.**
Guidance:	The planning process should have a component to check for operational learnings that may be relevant to the task and could improve the process or task. These learnings could come from a variety of sources including previously conducted work and post job reviews, maintenance management and CoW electronic systems, learning teams, incident alerts, bulletins, and industry communications.
11. Requirement:	**Assess the task for Simultaneous Operations (SIMOPS).**
Guidance:	• Any potential for SIMOPS should be identified, evaluated, eliminated and/or mitigated while planning, scheduling, and authorizing the task.

	Another assessment should be conducted at the jobsite, immediately before work starts. • While planning and scheduling work, tasks should be prioritized to eliminate or mitigate adverse interactions with other planned work that are likely to result in unsafe or unwanted conditions. • If SIMOPS cannot be eliminated, the task should be planned in accordance with the applicable requirements of the SIMOPS standard.
12. Requirement:	**Identify CoW resources required to complete all phases/steps of the task.**
Guidance:	While planning a task will involve identification of personnel and equipment needed to complete the job, it's also important to identify those resources in the context of CoW. Identification and availability of CoW resources should include: • Qualified personnel, e.g., to conduct the hazard analysis, issue work permits, or support specialized technical work such as confined space entry or excavation. • Equipment, e.g., fall protection, lifting equipment with adequate load capacity, breathing systems, high-pressure equipment. • Documentation, e.g., hazard analysis, work permits, rescue plans, equipment isolation checklists, site-specific or activity-specific emergency response plans.
13. Requirement:	**Determine the hazard analysis required for the task in accordance with the Hazard Analysis standard.**
14. Requirement:	**Determine the work authorization required for the task in accordance with the Work Authorization standard.**

Prepare

Preparation phase authorizes work as defined in the planning phase, assesses site conditions for unplanned changes, and verifies controls are in place and functioning immediately prior to the work commencing.

15. Requirement:	**Conduct start-of-shift discussion to coordinate planned tasks for the upcoming work period.**

Guidance:	The intent is to ensure all affected persons are aware of the work to be conducted, and may include status updates of ongoing work, allocation of resources, any potential SIMOPS issues, and incorporation of any relevant learnings.
16. Requirement:	**Authorize work in accordance with the Work Authorization standard.**
17. Requirement:	**Conduct pre-job brief with persons performing work, in appropriate language(s), to review the task and approved boundaries/conditions, and to verify controls are in place and functioning immediately before work starts.**
Guidance:	After the CoW documentation is authorized, a discussion is held with the persons performing work to: • Review the scope of work. • Communicate the approved boundaries and conditions of the work. • Provide the opportunity to clarify, and if necessary, revise the documentation to assure alignment of the work to be conducted in accordance with the documented boundaries and conditions. • Review the Hazard Analysis and allow the workers the opportunity to contribute any additional information that was not previously addressed. • Verify controls required for the work are in place and functioning.

Deliver

Delivery phase is where the work is conducted as planned, monitored for variability, and stopped if unsafe conditions arise.

18. Requirement:	**Maintain access to CoW documentation at the task location.**
Guidance:	• BUs should define the boundaries of what constitutes "access" at the task location. The intent is that person(s) performing work can readily refer to the CoW documentation as necessary. • Electronic accessibility of the CoW documentation at the work location is acceptable.

	• Documents to be accessible should include, at a minimum, those that define the boundaries and conditions of the task (e.g., work permits, hazard analysis, etc.).
19 Requirement:	**Provide appropriate monitoring of the task to verify the work is being conducted within the approved boundaries/conditions.**
Guidance:	• Person(s) with thorough knowledge of the approved boundaries and conditions are accountable to monitor the work and ensure it is conducted within those approved parameters. • The degree of monitoring is at the discretion of the BU but should follow a methodology that ensures monitoring at the jobsite during critical steps of the work. • Transfer of monitoring to other individuals is acceptable if that person is also qualified and authorized to fulfill that role.
20. Requirement:	**Conduct applicable Start Work Checks.**
21. Requirement:	**Stop work if approved boundaries/conditions are no longer met.**
22. Requirement:	**Return jobsite to a safe condition when left unattended or upon completion of the task.**

Learn

Learning phase captures operational learnings to increase Chevron's performance and reliability for future tasks. Work authorizations are closed out.

23. Requirement:	**Report operational learning opportunities identified throughout the phases/steps of the task.**
Guidance:	Operational learnings identified throughout phases/steps of the task are reported to personnel responsible to review and incorporate the learnings into future tasks of a similar nature if appropriate. Examples of operational learning tools and opportunities include: • Post Job Brief (PJB) • Post Job Review (PJR)

	• V&V • ePTW • Safeguard Learning Tool • JSA lessons learned • EAM, CMMS • IMPACT
24. Requirement:	**Close out work authorizations in accordance with the Work Authorization Standard.**

1.5 Linkages to other documents

Internal documents

The CoW process references the following **internal** processes and documents:

- Corporate Policy 530 (Operational Excellence)
- OE Management System (OEMS)
- OE Audit and Assurance
- HSE Functional Governance
- Leadership and OE Culture
- Management System Cycle (MSC)
- OE Data Reporting Standard (OEDRS)
- OE Risk Management
- Contractor OE Management (COEM)
- Facility Integrity and Reliability Management (FIRM)

External documents

The CoW process utilizes the following **external** industry processes and documents:

- U.S. Department of Energy DOE-HDBK-1028-2009: Human Performance Improvement Handbook
- CCPS Conduct of Operations and Operational Discipline: For Improving Process Safety in Industry
- Health & Safety Executive HSG250: Guidance on permit-to-work systems
- IOGP Report No. 6.29/189: Guidelines on permit to work (P.T.W.) systems
- IOGP Report 459: Life-Saving Rules
- AFPM Practice Sharing: Establishing Scope of Activities Managed Outside of a Permit to Work Document

- ISO BS ISO 45001:2018: Occupational health and safety management systems - Requirements with guidance for use
- API Recommended Practice 75: Safety and Environmental Management System for Offshore Operations and Assets
- API Recommended Practice 76: Contractor Safety Management for Oil and Gas Drilling and Production Operations

2 Procedures

The CoW process governs the application of the following standards:

- Bypassing Critical Protections (BCP)
- Commercial Diving (DIV)
- Confined Space Entry (CSE)
- Electrical Safe Work (ESW)
- Excavation (EX)
- Flame-Resistant Clothing (FRC)
- Hazard Analysis (HA)
- Hot Work (HW)
- Isolation of Hazardous Energy (IHE)
- Lifting and Rigging (L&R)
- Material Transfer (MT)
- Portable Gas Detection (PGD)
- Simultaneous Operations (SIMOPS)
- Training and Competency (T&C)
- Vacuum Truck Operations (VT)
- Work at Height (WAH)
- Work Authorization (WA)

3 Roles and responsibilities

Role	Responsibilities
Enterprise WS&H Focus Area Sponsor	• Monitor performance and oversee integration of the risk profile, assurance program, and prioritization of gaps and OE plans for the WS&H focus area • Coordinate with other focus areas and sponsors to support the execution of the OEMS and link OE plans with business plans • Evaluate process effectiveness and adjust to align with OE priorities, risks, and potential consequences • Approve major changes to this process in alignment with the appropriate corporate governance board • Serve as enterprise-wide advocate of this process to ensure that it is understood and successfully implemented
Enterprise CoW Advisor	• Manage the CoW Community of Practice (CoP) and ensure its fulfillment of its role as per the charter • Lead input to Corporate Management System Cycle (MSC) • Facilitate changes in the process design to enhance effectiveness, including obtaining necessary governance approvals • Identify emerging issues related to the process • Compile and share lessons learned and best practices from lookbacks and process reviews • Benchmark against competitors and top performers in other industries
BU WS&H Focus Area Sponsor	• Serve as the advocate of this process with the BU to ensure that it is adopted and implemented, and staff and other resources are available • Ensure that the effectiveness and efficiency of this process is measured and verified within the BU • Allocate resources to operate and improve the process including asset allocation for business plan alignment • Be accountable for continual improvement of this process in the BU and for ensuring improvement opportunities are evaluated for inclusion in the business plan
BU CoW Advisor (or equivalent)	• Coordinate and lead the implementation of the CoW process and supporting standards at the BU • Provide CoW subject matter expertise to BU • Evaluate effectiveness of BU CoW process by coordinating or supporting process measurement and verification • Lead development of input to the BU Management System Cycle (MSC) • Conduct performance reporting and trend analysis • Participate in and provide Corporate CoW CoP with required input

4 Measurement and verification

4.1 Measurement

BUs shall establish, track, and review leading and lagging metrics to determine the effectiveness in meeting the purpose and objectives of the CoW process and standards.

4.2 Verification of process effectiveness

BUs shall establish and implement verification approaches to assure conformance with the CoW process and standards. This may be accomplished, for example, by using the OE Assurance Plan, OE-self assessment tools, process metrics, peer assists, benchmarking data, and stakeholder inquiries.

5 Continual improvement

BUs shall evaluate the execution effectiveness of the CoW process during the annual MSC through review of leading and lagging metrics, verification programs, and assurance activities. CoW improvement opportunities shall be directed by BU leadership based on the results of the MSC review.

As part of the annual Enterprise MSC, the Enterprise Workforce Safety and Health Focus Area Sponsor and Advisor shall review performance of the CoW process.