

October 2026

Environmental, Safety & Security Sequential Safety Meeting



ANACORTES REFINERY

Start Safe and Stay Safe: Unified Permitting

The image shows a comprehensive Unified Safe Work Permit form from Marathon Petroleum Corporation. The form is divided into several sections, each with specific fields for data entry. Key sections include:

- SECTION I: PERMIT INFORMATION** - Contains fields for Permit Number, Date, Time, and Location.
- SECTION II: EQUIPMENT INFORMATION** - Lists equipment details such as Equipment Number, Name, and Description.
- SECTION III: SAFETY REQUIREMENTS** - Includes checkboxes for various safety measures like PPE, Lockout/Tagout, and Hazardous Material handling.
- SECTION IV: HAZARD IDENTIFICATION AND MITIGATION** - Provides a structured way to identify and mitigate potential hazards.
- SECTION V: APPROVALS** - Contains fields for signatures and dates of the Permit Issuer, Equipment Operator, and Safety Professional.

The form is designed to be a single, unified document for all types of work permits, simplifying the permitting process and ensuring all necessary safety information is captured.

Unified Safe Work Permit

On September 8th Anacortes transitioned to a Company SWP format. This brought several changes to our permitting and energy isoation policies.

Starting November 9th, our site will begin training on using the unified permit on a digital platform. The permit format and associated policies will not change as part of this process.

As we continue to adjust to this new permit, please bring up questions and concerns to your Safety Professional.



Risk Assessment Matrix

The process for determining appropriate mitigations using the Risk Assessment Matrix is unchanged, but now plays a more significant role in permitting.

Level 1 Mitigations now require an Owning Department Supervisor signature prior to permitting work.

The Matrix is no longer available on the permit; utilize RAM posters and pocket cards provided by Safety Department to assist you in determining a RAM score.



Mandan Invasive Work Risk Assessment Matrix

Value	Exposure Concerns Equipment or piping Systems that CONTAINS OR CONTAINED:		Value	Exposure Volume		Value	
1	Unknown Atmosphere / IDLH Atmosphere / H2S Streams/CO>25	Equipment or piping systems that contain or contained materials that is immediately dangerous to life and health concentrations of toxic chemicals. Examples are H2S levels of 100 PPM or above, or inert atmospheres.	1	"Live" Volume	Any equipment or piping circuit that is still in service or not completely isolated	1	La Im
	Material Above Auto Ignition	Equipment or piping systems that contain material that will auto-ignite upon contact with the atmosphere		Large Volume	e.g., towers, vessels, receivers, and large bore piping circuits	2	Me Im
2	Hydrocarbons, SO2, NH3, H2S, CO, Benzene, or Other Hazardous Contaminants over PEL or STEL	Material that contains hazardous contaminants below IDLH (reference RSSI 01-16 / 01-33 for Contaminant Thresholds or contact safety)	2	Medium Volume	e.g., knock-out drums, pumps, compressors, and piping systems	3	St Im
	Flammable Material	Flammable material with potential for LEL	3	Small Volume	e.g., transmitter impulse lines, sight glass assemblies, sample stations and small-bore piping	4	Lo Loc Im
	Corrosive Material – Acid/Caustic/KOH	Material with a high (>12) or low (<2) pH					
3	Hot Service	Material that is above 140°F under normal operation	4	Low Volume	Volumes that have been quantifiably decontaminated or bleeder volume	10	M IM
10	Other Material Verified	Equipment or piping that contains or contained utilities such as air and water that are low temperature and low pressure or any stream that does not meet any of the exposure concerns listed above.	6	No Volume	Verified at a low point by operations to be free of any volume		

Risk Assessment Scoring Methodology

Use the Risk Assessment Matrix (RAM) for every job or task that involves invasive work to determine considerations for protection and mitigation. Use the RAM to generate a numerical score based on three categories of exposure concern, volume and impact. These values are multiplied to generate the RAM Score.

Example: An invasive work job that has an exposure concern value of 1, a volume value of 3 and an impact value of 4 would generate a Risk Assessment Score of 12 (1x3x4) which would require Level 2 Mitigation.

Level 1 Mitigations		Level 2 Mitigations RAM Score 14-46		Level 3 Mitigations
Inhalation Hazard Mitigation	Fire Hazard Mitigation	Inhalation Hazard Mitigation	Corrosive Material Hazard Mitigation	
- Breathing Air - Resistant PPE – Consult Safety - Resistant Pyroclon Suit	- Thermal PPE – Consult Safety - Appropriate Gloves and Boots - Helmet w/ Face Shield	- Air Moving Device AND/OR - Air Purifying Respirator AND/OR	- Chemical Resistant Pyroclon Suite - Chemical Face Shield or Goggles - Chemical Gloves	- Normal Refinery Practices - Normal Refinery Practices

First Break Tag

First break locations must be positively identified by a physical tag along with Owning Department presence. This is for all invasive activities such as; opening a flange/line/equipment/tubing(non-routine), line cutting, demolition, tie-ins, etc.

The tag must be signed by the Owning Department Representative on shift and the Servicing Group member **who will actually make the first break.**

If work is not performed during the shift the tag was signed and dated, a new tag must be re-signed at the time of work.

Exceptions:

- In-service welds or hot taps
- Blind removal upon completion of maintenance
- Operator Performed Tasks
- Opening a bleeder to verify energy isolation
- Approved Minor Servicing Activities (R-11-32, APP H)



MPC - FIRST BREAK IDENTIFICATION TAG

- Signatures confirm the First Break location and obtained in the presence of the owning department.
- Work must be completed on date & shift of the signatures. The tag must be resigned or replaced if personnel change.

OWNING DEPARTMENT REPRESENTATIVE:

[Signature/Name Box]

(SIGNATURE/NAME)

[Date Box]

(DATE)

SERVICING REPRESENTATIVE:

[Signature/Name Box]

(SIGNATURE/NAME)

[Date Box]

(DATE)

Work Authorization Signatures

Signatures are no longer determined by a Work Classification Table. The colored columns on the right designate when a signature is required by an X. A superscript next to the X indicates a conditional requirement listed in the notes below the signatures.



SIGNATURES				CW		
Printed Name	Initial Signature	Printed Name	Work Extension Signature			
				X	X	X
				X ^{3.5}	X ^{3.5}	X
				X	X	X
				X ³	X ³	X
						X ⁴
				X ¹	X ¹	X ¹
						X ²
						X
				Site-specific		

APIC is no longer a signature on the permit. Competent Person applies to excavations only. Confined Space Entry Supervisor must be an MPC employee or Directly Supervised Contractor.

Safety Department is now required to sign for all Confined Space initial entries, except for instances listed in the signature notes.

TIME OF ISSUANCE. IF CONDITIONS CHANGE, STOP WORK AND NOTIFY THE OWNING DEPARTMENT.

Equipment Number _____ Equipment Name _____



N/A Work Order # _____



Turning Blinds

On permits where blinds will be turned, any blind that is going to be turned must be listed by number on the permit.

This should be done in the detailed work description under Section I of the permit.

This action is a result from a learning team investigation on a LOTO incident in which a blind tag was installed on the incorrect side of a valve.

Need to switch to a different class?

Workday: Drop & Re-enroll



The screenshot displays the Workday Learning (Classic) interface. At the top, there is a navigation bar with a menu icon, the Marathon logo, a search bar, and notification icons. Below the navigation bar, the main content area is titled "Learning (Classic)".

On the left side of the main content area, there is a tab labeled "My Learning" and a link to "Supervisor Dashboard". Below this, a section titled "Required for You" contains a table of learning content.

Due Within	Learning Content	Due Date	Priority
Due within 90 Days	MPC DECIDE: Self-Guided Experience	10/31/2026	Priority 4 - Developm
Due This Year	MPC MTSA Physical and Cyber Security	12/28/2026	Priority 1 - Regulator
Due Later	ANA Emergency Response & Action Plan (DC_ANA_EMRSP_100)	04/14/2027	Priority 1 - Regulator
Due Later	MPC WBT Access to Medical Records Refresher (Praxis) (DC_MPC_000SHWPH010)	06/10/2027	Priority 1 - Regulator
Due Later	MPC WBT Portable Fire Extinguishers Refresher (Praxis) (DC_MPC_00EMRFIR130)	06/10/2027	Priority 1 - Regulator
Due Later	MPC Five Minute FERC for Liquid Pipelines (DC_MPC_FERC050)	06/12/2027	Priority 1 - Regulator
Due Later	MPC WBT Asbestos Awareness Refresher (Praxis) (DC_MPC_000SHWPH050)	06/12/2027	Priority 1 - Regulator
Due Later	MPC WBT Hydrogen Sulfide (H2S) Awareness Refresher (Praxis) (DC_MPC_000SHJSR160)	06/12/2027	Priority 1 - Regulator
Due Later	MPC WBT Office RCRA	06/12/2027	Priority 1 - Regulator

On the right side of the main content area, there is a sidebar with navigation options:

- LinkedIn Learning
 - LinkedIn Learning
 - CR My In-Progress LinkedIn Learning
 - CR My LinkedIn Learning History
- Tasks
 - Browse Learning
 - View "Saved for Later" Content
- Reports
 - CR My In-Progress Online Learning
 - CR My Instructor-Led Learning Schedule
 - CR My Learning History
 - CRI - BIRT - My Learning Certificates
- Supervisor Reports
 - CR My Team's Learning Assignments



When : January 28, 2021

Where: Production line that produces marinated, diced, fully cooked chicken that was then frozen using a liquid nitrogen “immersion spiral” freezer.

Background : The freezer was leased by an industrial gas products company which had installed the freezer approximately five weeks prior to the incident. During that time the plant experienced a series of operational problems with the equipment. There were multiple occasions to troubleshoot the issues, but the problems persisted.

What Happened?

On January 28, 2021, chicken production on the line was halted so that maintenance personnel could work on the freezer. The freezer remained on. At some point, the freezer’s bubbler tube was bent above the overflow level of the freezer, which caused the freezer’s nitrogen level control system to believe that the freezer was empty. As a result, the system continued to add liquid nitrogen to the freezer, so much that the freezer overflowed.

Once the liquid nitrogen was released, it quickly vaporized and filled the freezer room with a white fog-like cloud that persisted for more than an hour.

When an employee observed the two maintenance workers lying motionless on the floor of the freezer, an evacuation was initiated. During the evacuation, at least 14 other employees, including members of management, responded to the incident by either investigating the freezer room or attempting to rescue their coworkers. The two maintenance workers were fatally injured by asphyxiation due to the vaporized liquid nitrogen, and four other employees were fatally injured as they attempted to respond to the incident. Three other employees were seriously injured.

Fatal 2021 Liquid Nitrogen Release at the Foundation Food Group Plant in Gainesville, Georgia



[“Fatal Fog: Liquid Nitrogen Release at Foundation Food Group,”](#)

- Video is approximately 20 minutes
- Click above to watch 10 minutes of video

Five key safety issues that contributed to the incident:

- 1) Single point of failure,
- 2) No Atmospheric monitoring and alarm systems,
- 3) Lack of emergency preparedness,
- 4) Process safety management systems, Hazard ID/Control
- 5) Product stewardship.

Human Factors: What Error Traps Exist?



TASK DEMANDS • Time Pressure (In a hurry) • High workload (memory requirements) • Simultaneous, multiple tasks • Repetitive actions, monotonous • Irrecoverable acts • Interpretation requirements • Unclear goals, roles & responsibilities • Lack of or unclear standards	INDIVIDUAL CAPABILITIES • Unfamiliarity with the task/First time • Lack of knowledge (mental model) • New technique not used before • Imprecise communications habits • Lack of proficiency/Inexperience • Indistinct problem-solving skills • Can do or Unsafe attitude for critical task • Illness/fatigue
WORK ENVIRONMENT • Distractions/Interruptions • Changes/Departures from the routine • Confusing displays or controls • Workarounds/OOS instruments • Hidden system response • Unexpected equipment conditions • Lack of alternative indication • Personality conflicts	HUMAN NATURE • Stress (limits attention) • Habit patterns • Assumptions (inaccurate mental picture) • Complacency/Overconfidence • Mindset ("tuned" to see) • Inaccurate risk perception • Mental shortcuts (biases) • Limited short term memory



Error Traps Identified in the Foundation Food Group Incident

01 TASK DEMANDS

1 Unclear goals, roles & responsibilities

The Messer – FFG responsibility matrix did not specifically address atmospheric monitoring; FFG stated they were unaware of the need for monitoring

2 Lack of or Unclear Standards

Maintenance had to diagnose recurring freezing and level-control problems without written procedures or adequate hazard guidance.

03 WORK ENVIRONMENT

1 Hidden system response

The bent bubbler tube falsely indicated low level while defeating both level control and the high-level interlock. Operators had no indication that the safety protection had been defeated.

2 Lack of alternative indication

No oxygen monitors or alarms independently warned personnel that the freezer room atmosphere was unsafe.

02 INDIVIDUAL CAPABILITIES

1 Lack of knowledge (mental model)

Workers and managers had limited or no understanding of liquid-nitrogen and oxygen-deficiency hazards.

2 Lack of proficiency / experience

No formal training plan, competency verification, or written operating and maintenance procedures exist

04 HUMAN NATURE

1 Mindset / habit pattern

Workers routinely saw white fog, so the visible cloud on the incident day was initially treated as normal.

2 Assumptions / inaccurate risk perception

Untrained personnel (14) entered or approached the area to investigate or rescue coworkers without recognizing the asphyxiation risk.

WELLNESS CHECK-IN

Your Health. Your Next Step.

Small actions today can protect your health, your family, and your future.

TAKE CHARGE OF YOUR HEALTH



1

CHECK IN

Schedule preventive care and recommended screenings. Pay attention to changes in your physical and mental health.



2

SPEAK UP

Ask questions and share concerns early. Don't wait until something becomes disruptive or urgent. Be proactive.



3

USE YOUR RESOURCES

Explore support for medical care, mental health, family building, parenting, caregiving, and midlife health.

WELLNESS MOMENT

What health appointment, question, or next step have you been putting off?



MARATHON PETROLEUM RESOURCES

- MPC Benefits website
- Maven
- Anthem or Kaiser EAP
- Suicide & Crisis Lifeline: Call or text 988
- WebMD Health Coaching
- Local Health + Wellness Services

**Start with MPC Benefits website to explore your available programs & eligibility.*

CONTRACTORS

- Use your employer's medical plan or EAP. Public and community resources remain available to everyone!





ANACORTES REFINERY

FUEL YOUR HEALTH FAIR

KNOW YOUR NUMBERS. | USE YOUR BENEFITS. | PROTECT YOUR CREW.



THURSDAY,
NOVEMBER 5, 2026



11:00 A.M. –
1:00 P.M.



ANACORTES REFINERY
CAFETERIA



**CONNECT.
EXPLORE.
ASK QUESTIONS.**

Meet benefits providers,
community partners and
your **Anacortes Health
Services** team.



HEALTH
SERVICES



BENEFITS



BEHAVIORAL
HEALTH



WELLNESS
RESOURCES



RAFFLES
& PRIZES

WHAT YOU'LL FIND



**FLU SHOT
CLINIC**

Available during
the Health Fair.



QUESTIONS? CONTACT HALEY SHAW VIA TEAMS



hshaw@marathonpetroleum.com

Bring It Up!!!



If there are Safety questions or concerns you wish to discuss, please bring them up!