

December 2025

Environmental, Safety & Security Sequential Safety Meeting



ANACORTES REFINERY

ESS Safety Metrics



DSA Eligible	OSHA rec	ORIR	AFPM 1a/1p	H2S >50 ppm	PSE 1/2	DEI 3/4	Permit deviations
	3	0.26	0/6	3	0/0	1/2	29
	-	0.30	3	≤ 3	≤ 3	≤ 1	34

•**ORIR:** OSHA Recordable Injury

•**Anacortes**

- 1 – Debris in eye needing prescription eye drops
- 1- Sprained wrist requiring medical treatment.
- 1 – Fractured ankle.

•**PSE:** Process Safety Event, refer to R-12-007

•**DEI:** Designated Environmental Incident, refer to R-13-027

•**AFPM 1a: Actual Incident** - serious injury that caused a fatality, hospitalization, or other life-altering event.

•**AFPM 1p: Potential Incident** - an incident with the potential for fatality, hospitalization, or other life-altering event, including near misses.

•**Anacortes**

- 1p - Fall Protection Not Utilized
- 1p - HVAC Electrical Spark
- 1p – GFCI Electrical Shock
- 1p – Grating/Handrail Removal Fall Hazard
- 1p – Energy Isolation Verification
- 1p- H2S alarm greater than 100ppm.



**COLD
EXPOSURE**

SAFETY

Temperatures in Anacortes are expected to reach lows of mid 30's this winter, with wind chill driving "feels like" temperatures below freezing. Ensure you take extra measures to stay warm when working outdoors in low temperatures.

Cold weather gear is available in the vending machines

Red HexArmor gloves have insulating layers and are water resistant to keep hands warm and dry. Gloves are "snug" due to extra padding so 1 size larger than normal is recommended.

Hot hands can be used for short term warmth. Use only as directed on the package and do not place directly on skin or open/puncture pouch.



TRUE OR FALSE?

You are at greater risk of dehydration during winter months than summer months*

TRUE

*in areas with colder climates

Dehydration is a serious risk in cold weather

- Moisture from your body humidifies cold dry air as you inhale and leaves as “steam” when you exhale
- When cold, blood vessels constrict > more blood in your core > body thinks it has too much blood volume > kidneys increase urine production > less body fluids
- Your body uses more energy to maintain core temperature > higher metabolism > higher water consumption
- Multiple layers means you are less likely to notice that you are still sweating

You should drink half of your body weight in fluid ounces every day, more when you are working hard or exercising.

Example: 180 lbs = 90 oz water daily

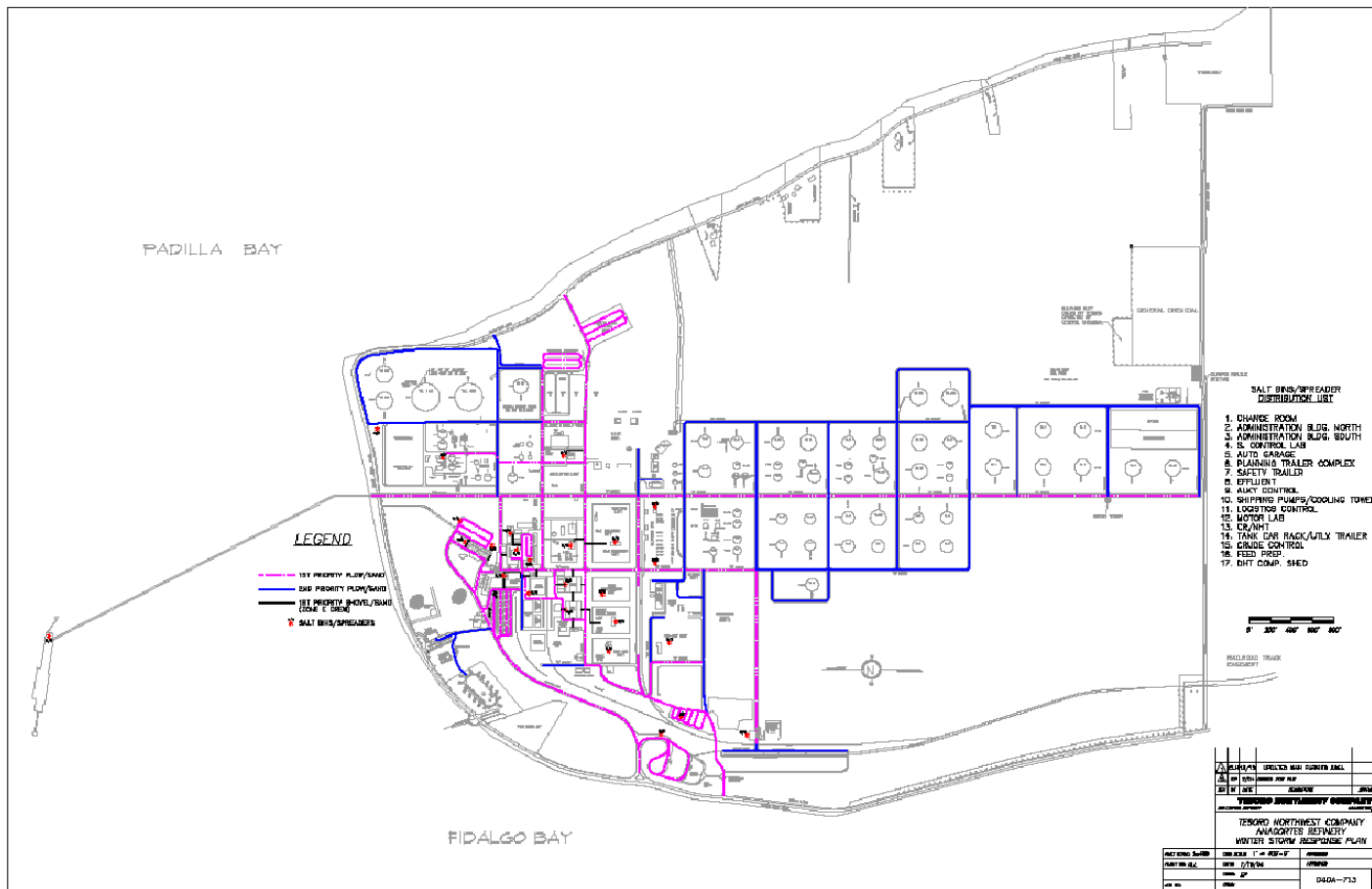
Cold temperatures can reduce the body's thirst sensation by up to 40%

Moisture leaving the body



- In the event of freezing conditions, be careful when traversing roads and sidewalks on and off the property.
- Zone E supervisor will monitor ambient weather and weather reports to determine if/when our ice mitigation plan should be implemented.
- A sign in the clock alley will notify employees that the mitigation plan is in effect and cleared roadways are to be used (see next slide). R-52-001 provides further guidance on the refinery's ice mitigation plan.
- Take extreme care if removing ice accumulated overhead. (don't let this happen to you) 
- Bicycle use may be discontinued due to icy conditions. A bulletin will be released discontinuing use of bicycles until the cold weather passes.





- 1st priority plow
- 2nd priority plow
- 1st priority shovel

Start Safe and Stay Safe: Engagement questions



Do you know who to contact in the event icy roads prevent safe travel to work? (hint: there is no longer a local hotline!)

Call your supervisor or work out an appropriate POC ahead of time.

Where in your workspace would you encounter the greatest risks during freezing temperatures?

What extra measures would you need to take while working in winter months?

No Oil to the Sewer Standard (RSP 1727)



Scope: It covers intentional draining of hydrocarbon to sewers to prevent personal or process safety risks.

- The following hydrocarbons shall not be drained to the sewer:
 - Materials from fuel gas systems such as gases, vapors, or liquids
 - High vapor pressure materials (ie. Natural gasoline, light straight run, isomerate, etc) (RVP > 15 psia)
 - Liquified petroleum gas (LPG)
 - Hydrocarbon high temperature streams (> 180 deg F)
 - Asphalt, resid, and other streams that will solidify at ambient temperatures
- The following hydrocarbons have volume restrictions when drained to a Sewer System (additional amounts require supervisor approval):
 - Gasoline blending component streams (naphtha, reformate, platformate, alkylate, etc.) in volumes less than 5 gallons per activity.
 - Other hydrocarbons in volumes up to 1 barrel.
 - Hydrocarbon residuals that remain in equipment after initial depressuring and de-inventorying can be drained to the sewer as part of final equipment preparation.

(Review the RSP to obtain more information about the standard and mitigation and alternative methods for draining)

Local Procedure: [R-13-017.docx](#)

RSP: [RSP-1727-000.pdf](#)

PPE only works when you wear it correctly

- On May 4, 2023, approximately 790 pounds (358Kg) of a hydrocarbon mixture containing hydrogen sulfide (H_2S) was accidentally released at a refinery in California. Exposure to the toxic H_2S gas seriously injured one employee.
- Four operators were sent to the field to replace a broken pressure gauge. Because the lower valve (blue oval) was visibly broken, the operators closed the valve closest to the pressure gauge (blue rectangle). They were not aware that an internal obstruction prevented fully closing the valve.
- One operator began removing the pressure gauge; there was no indication of residual pressure while unscrewing the gauge. After the gauge was removed, the process pressure likely dislodged debris in the piping and released flammable hydrocarbon mixture containing toxic hydrogen sulfide.
- None of the operators wore respirators to protect them from the H_2S vapor. Three operators regained consciousness and evacuated. The fourth operator was unconscious and was rescued by emergency responders and received medical treatment at a hospital.
- The investigation determined that the release was caused by failure to effectively isolate the piping before removing the pressure gauge. The plugged gauge gave a false sense of safety. The severity of the incident was increased by the failure of the operators to wear appropriate personal protective equipment (PPE)



Figure 1. Valves isolating the pressure gauge



Figure 2. Plugged pressure gauge from the incident

PPE only works when you wear it correctly

Did You Know?

- PPE is an administrative safeguard that requires people to know the proper PPE for the job, and to ensure it is worn properly. It includes protection from bodily and respiratory exposures.
- Operating and maintenance procedures should specify the PPE required to safely perform the task.
- Safety Data Sheets (SDS) have a section on recommended PPE.
- There are several reasons why PPE might not be effective:
 - It is not used or not used properly.
 - User is not properly trained on using the PPE.
 - The specified PPE is not correct for the task.
 - The task changed.
 - The PPE is in poor condition.
- PPE cannot prevent the release of hazardous materials but is a critical line of defense when a loss of containment occurs.

What Can You Do?

- Before starting a task consult the procedure to know what PPE that is required. The SDS for the materials can also provide guidance on proper PPE.
- Inspect your PPE before use to ensure it is in good condition.
- Wear the required PPE until the task is completed and the hazards are contained.
- Inspect your PPE regularly to ensure that it remains in good condition and key parts such as respirator cartridges are not expired.

Bring It Up!!!



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