

November 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	0.29	0/6	3	0/0	0/2	26
	-	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.



[Slips, Trips & Falls - The Fatal Half Inch - Safety Training Video](#)

November is National Slips, Trips, & Falls Prevention Month

- In 2023, falls resulted in over 8 million trips to the emergency room, making them the leading case of ER visits (21.3%).
- According to the Bureau of Labor Statistics, slips, trips, and falls rank 3rd among the top employer-related workplace injuries, are the primary cause of lost days of work, and led to 450,540 work injuries.
- The leading cause of slips, trips, and falls are uneven or wet surfaces, contributing to 55% of these incidents.

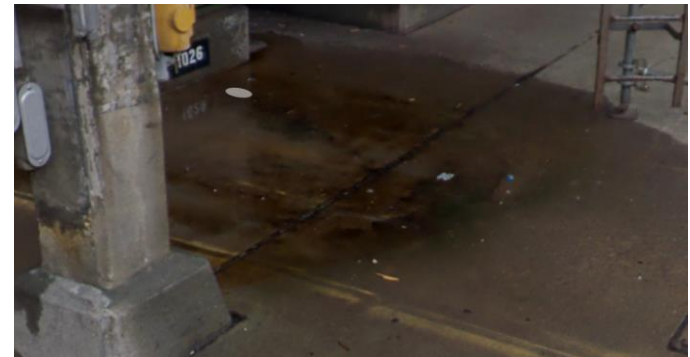


Slips, trips, and falls put workers at serious risk of severe injuries, such as:

- Sprains
- Lacerations
- Strains
- Fractures
- Traumatic Brain Injuries (TBIs)
- Back and spinal cord injuries
- Death

There are many possible sources of slips, trips and falls, including:

- Tools and equipment in stairways and passages
- Unspooled hoses
- Uneven ground
- Wet or icy walkways
- Algae growth under areas with frequent leaks.
- Electrical cords



FALLS ARE 100% PREVENTABLE

The following are some ways to mitigate slips, trips, and falls:

- Determine necessary safety equipment during JJSVs
- Scan the work area for potential hazards
- Ensure ladders are set up on a stable, level surface
- Wear appropriate slip-resistant footwear
- Ensure tools, equipment, and supplies are cleared from walkways when not in use
- Always keep three points of contact when moving up or down ladders
- Stretch before strenuous work activities to stay limber.



Start Safe and Stay Safe: Engagement Questions



- Where in your workspace do you think the highest risk for slips, trips, or falls exist?
- What have you done or seen done that can improve safety in these high risk areas?
- Can you think of an example of a recent near miss with a slip, trip, or fall, and what we learned from it?

Environmental Aerosol Can Disposal

Permit deviations YTD: 26
DEI 1/2 YTD: 33
DEI 3/4 YTD: 2



- Once they are punctured, they can go in a scrap steel bin or aerosol collection drum.
- **NO Bug Sprays**, bug spray should be used up entirely. Only puncture when/if completely empty!
- **NO Adhesives**, they should be used up entirely. Only puncture when/if completely empty!
- Please do not puncture an aerosol can with any other object. Please take empty cans to the puncture device, puncture and dispose of in the provided drum for recycling as steel.
- **DO NOT** put unpunctured cans or empty punctured cans in the regular trash.

Step 1: Pull the Spring Plunger and lift top half up.

Step2: Set Aerosol can **upright** in the lower chamber.

Step3: Lower the top cover all the way until the Spring Plunger locks.

Step4: To puncture, push the Red Handle down.

Hold down for a few seconds then slowly raise.

Let the can de-pressure and drain before removing.

Step5: Remove can and **replace** top half to keep drum sealed.

PLACE THE EMPTY CANS IN THE BINS AT THE PUNCTURE DEVICE FOR PROPER RECYCLING.

Do not put in regular trash cans.

Cans **MUST** go in upright to work correctly.



PSE₁ MPC POST EVENT LEARNING REPORT

GALVESTON BAY TRANSMITTER MANIFOLD LEAK INC# 461426

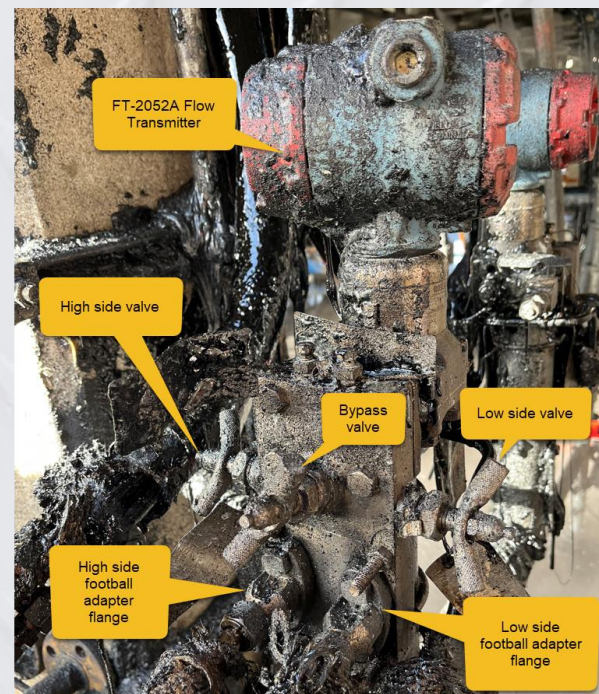
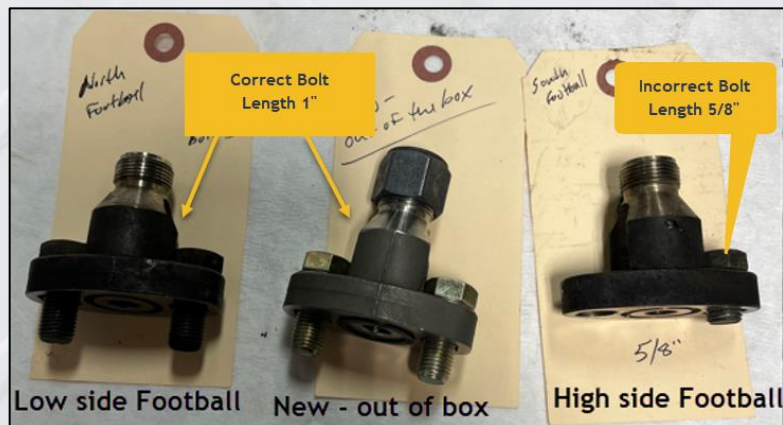
Published 11/5/2025

On January 16, 2025, a leak occurred on Flow Transmitter FT-2052A, which is on the inlet of the Resid Hydrocracking Unit (RHU) 200 train Hot Oil Heater 201-B, operating at 298opsi and 519°F. The leak of hot resid material occurred when an I.E. Technician noticed a small leak on the transmitter high side football adapter flange. When the technician placed a socket on the bolt it became loose, spraying resid. The technician was sprayed on the arm and face and received first aid treatment. Due to the proximity of the leak to the RHU 300 heater, Operations made the decision to shutdown both units.

➤ **This transmitter release was a PSE₁ due to the release of ~50 bbl. of combustible material released above flash point. This was also an AFPM 1P Significant Injury or Fatality (SIF) event. During shutdown, the RHU depressured to the flare which resulted in a Tier 3 DEI.**

▲ **Causal Factors:**

- Post event analysis identified the wrong length bolt was installed on a football adapter flange, leading to the lack of thread engagement.
- There was no QA/QC specific verification question related to the bolt thread engagement of the football adapter flange to the manifold.



“THE REST OF THE STORY”: In 2021, a reliability project was initiated to relocate flow transmitters on the RHU’s Hot Oil Furnaces (RHU 200, 300, and 400) closer to the orifice flanges and replace hard pipe impulse lines with Thermon tubing (heat-traced and insulated). The plan was to complete this during normal operations under MOC 87817, but Operations later deemed it too risky while the RHU was running. Although no turnaround (TAR) scope was originally planned for the tubing replacement, a task under MOC 87817 identified deadlegs that would result from the relocation, and TAR packages were created. During the 1Q2023 TAR, deadleg piping was removed, but the transmitters were not relocated. QA/QC later revealed that piping to the transmitters had been removed, but the relocation was never completed. Since these transmitters are essential for unit startup, the original project was reactivated. Three contractor partners completed the work during the final weeks of the TAR. However, the work package did not include changes from hard pipe to tubing for football adapter flanges and lacked formal approval. Additionally, SP-70-05 does not mention football adapter flanges and requires direct threaded connections for new instrument manifolds.

On January 16, 2025, an emergency work order was generated to calibrate the FT-2052A flow transmitter and pump glycerin into the impulse lines as needed. The I.E. Technician noticed a small glycerin leak on the high side football adapter flange and placed a socket on the bolt to verify the size when the bolt became dislodged, and the football adapter flange began leaking. Hot resid material at ~298opsi and 519°F sprayed the I.E. Technician on the arm and face. Operations shutdown the RHU 200 train and proactively began shutdown of the RHU 300 train due to the proximity of the leak to the running furnaces. The investigation identified the wrong length bolt installed on the football adapter flange, leading to the lack of thread engagement and LOPC.

- ☐ Operations
- ☐ Technical
- ☒ Maintenance
- ☒ Engineering



DISCUSSION TOPICS:

- Discuss quality control practices at your site: are there verifications in place for instrumentation to ensure adapter flanges have the correct bolts?
 - A proactive check can take place to ensure proper thread engagement as the bolt thread can be seen from the back of the instrument manifold.
- Discuss your site’s various methods of Routine, Project, Maintenance, and Turnaround job packages. Are there consistent expectations for details and approval for each type of job package?
- What discussions do you have about potential upgrades to the most current Standard Practice when creating a project that doesn’t require a spec change?

Completed Recommendation:

- Update the QVD (quality verifying document) EI.70-001 Instrument QA/QC Inspection Checklist to specifically inspect the bolt/thread engagement of football adapter flanges with the instrument manifold. Complete per Rec# 369631.

THANK YOU!

Anacortes 2025 Process Safety Culture Survey



The Anacortes Process Safety Council extends a sincere thanks to all for your participation in our 2025 Process Safety Culture Survey!

All raffle prizes have been claimed and congratulations to our winners!

\$1000- Cordell Stocking-Operations Zone C

\$500-Michael Flaherty-Operations-Zone C

\$300-Tyler Bryant-Operations Zone A

\$100-Jenni Reyes-Operations Zone B; Kris Smith-Operations Zone C; Michael O'Hagan-Operations -Zone A; Thomas O'Donoghue-IE&A; Kyle Kerr-Operations Zone C

- Anacortes Process Safety Council
*Cameron Hunt, Jeremiah Harju,
Kyle Cassidy, Marc Ranieri,
Bret Fritch, Rachael Pletenik, John
Carlson, Aaron Eastwood, David
Arellano, Joshua Bertch, Archie
Jorgensen, Ian Sewell
Trevor Smith, Clay Hathaway,
Trent Kies, Diane Rusher*

Thank You!

Anacortes 2025 Process Safety Culture



- Our last Survey was in 2022.
- The purpose of the survey is to use the results to help us better understand our process safety culture and identify actions for improving our process safety programs/culture
- This survey process was managed by ISN, an independent consulting firm.
- The survey was administered electronically, from Tuesday, September 9th through Friday, October 3rd.

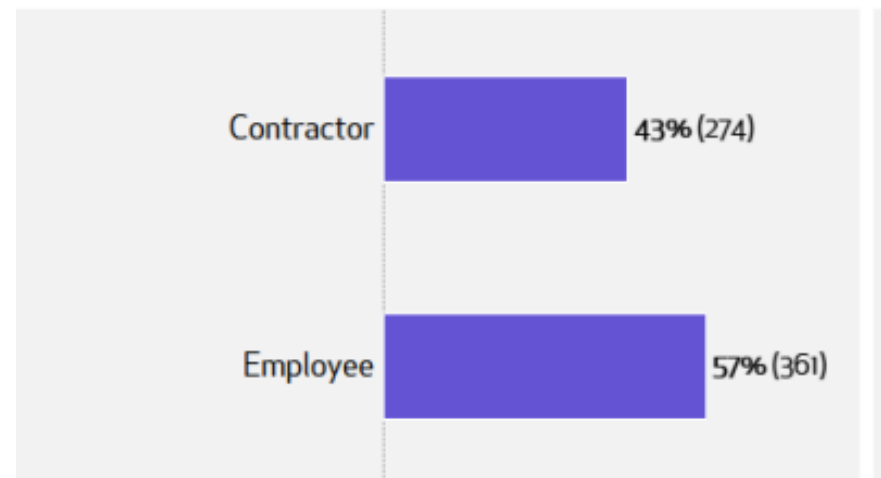
2025 Survey Data

- We had 635 respondents that included 274 Business Partners and 361 Employees-Great Participation!
- There are 1400 free-text comments collected from the survey

Path Forward

- Focus Group meetings are scheduled for the week of November 18th.
- Review results of Survey and Focus Groups with Site Leadership and Process Safety Council – December 2025
- Communicate results and action plans-1Q2026

RESPONDENT TYPE



Bring It Up!!!



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