SCOTFORD GOAL ZERO WEEKLY AND TURNAROUND TIMES
MONDAY, APRIL 24, 2023

DELIVERING SCOTFORD PERFORMANCE
UPGRADER SOUTH - 2023 SPRING TURNAROUND EVENT

OVERALL EVENT PROGRESS	24.2%

The Rainbow Society of Alberta
A Child. A Wish. A Dream Come True!

Goal Zero Shifts	35	Money Raised for Charity	$17,500

NO HARM (Site):		
FAC	21-April-23	Worker contacted steam hose causing burn

TURNAROUND STATS	LAST 24 HRS	OVERALL
No Treatment Case	0	3
Occupational Illness	0	1
First Aid	0	1
Medical Aid	0	0
Recordable	0	0
Life-Saving Rule Violation	0	2
Near Miss	0	1
Motor Vehicle Incident	0	3
Dropped Object	0	0
Hi Potential Incident	0	0
SIF	0	0
Env (Other/Spill)	0	3
LOPC (<100kg)	0	0
LOPC (>100kg)	0	0
Environmental Non-Comp.	0	0

STEP Update - Top 3 At-Risk Behaviours:

LINE OF FIRE

- Workers were landing a lugger bin on a deck to dispose of waste material. One of the workers backed up and had their back against a valve. The lugger bin was approximately 6 inches from their chest as it was lowered. The area was very congested, and they had to reposition the lugger bin multiple times to get it to fit on the deck.
- Worker stepping over decon piping instead of using adjacent walk overs.

WALKING/WORKING SURFACES/HOUSEKEEPING

- Worker noticed Kuny bag full of tools at bottom of ladder while crew was working on catwalk.
- On inspection of our work area, it was deemed necessary to clean up before we began work in that area.

BARRICADES/FLAGGING/BARRIERS

- Untagged flagging and confusing flagging placement.

WEEKLY SAFETY TOPIC - LINE OF FIRE

Line of Fire risks come in many forms, and all can have serious, negative consequences. Whatever the task, here are some questions to ask to mitigate LOF risks. (please use these questions and the commitment to open your discussion)

For the Team:

- How can you and your team stay safe?
- Are there hardware/process/human barriers in place?
- Have the LOF hazards been discussed during safety or toolbox meetings?

For Yourself:

- How do I stay out of the LOF?
- What can go wrong?
- Where is the energy?

Commitment:

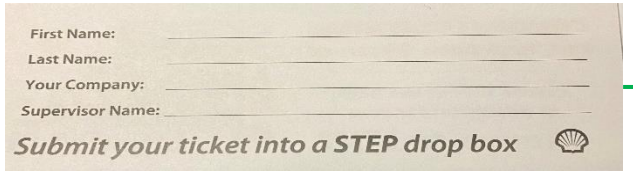
- I position myself to avoid:
  - moving objects
  - vehicles
  - pressure releases
  - dropped objects
- I establish and obey barriers and exclusion zones
- I take action to secure loose objects and report potential dropped objects

SCOTFORD GOAL ZERO WEEKLY AND TURNAROUND TIMES
MONDAY, APRIL 17, 2023

I would like to nominate the **TA logistics PME** crews on Days and Nights for the goal zero cup. There was a near miss on a crosswalk at 9th Ave and F street. Safety decided a manned crosswalk was needed to mitigate the potential of an incident. On short notice the PME Logistics Team were able to assess the location and put in place a plan to immediately man the crosswalk and to set up a safe area for the crossing attendant to have shelter from weather while not blocking the intersection or walkway. **The work was managed efficiently and safely while also managing the crosswalk in a safe, energetic and enjoyable manner to not create any friction.**

I would like to take this opportunity to put in a nomination for the **Graham NS GF Ken Fudge, Foreman Scott Postle, and Crew** for doing an exceptional job from the presenting of the toolbox , field presence and going over every detail to pre-plan, plan, and execute their tasks effectively, efficiently and safely.

The amount of ongoing communication, focus and positivity is very effective with their workers and moral amongst the crew.



Meet Pipi…a very good girl who is an incredible working cocker spaniel whose jobs include helping us safely work around the geese. She belongs to the wildlife expert that is permitted by the government to help us with the geese and other protected species. **Definitely deserving of the Goal Zero Cup**! **13/10 Good Dog!**

WEEKLY SAFETY BALLOT PRIZE WINNERS

- Barry MacDonald — Ed Ex
- Marco LeBouthillier — Acuren
- Valda McKenzie — Graham
- Terry Skjersven — Ed Ex
  - (no picture)

Hydrocarbon Release from Thermocouple installation

Laptop Presentation Version – Turn on 'Presentation Mode' for the Animation Effect

Go & Engage – Hydrocarbon Release from Thermocouple Installation

HSSE INVESTIGATE AND LEARN

Hydrocarbon Release from Thermocouple Installation, CP-AW-202302 | CHEMICALS AND PRODUCTS | FEBRUARY 2023

What Happened

- During Start-Up following a Unit Turnaround the Demethanizer Feed Train (DMFT) was observed to have a leak around a thermocouple element (TE) on the overhead line of the first stage knock out drum. While accessing a scaffold to investigate the leak an operator lifted the thermocouple's cable and the element ejected from the pipe by gas pressure. A jet of process gas escaped from the hole left where the thermocouple element had been. The gas leak had a potential to become a jet fire and burn the operator.

Why it Happened

- The TE was replaced with a dual sensing element as part of a project during the turnaround.
- A segment of the overhead line that included TE was replaced in-kind as part of turnaround scope to remove a pipe repair clamp installed during the previous run.
- The thermowell (TW) that held the TE remained in the old piping following demolition. The main mechanical contractor believed the TW belonged to the instrumentation contractor and the instrumentation contractor believed it belonged to the main mechanical to install.
- The crew installing the TE installed a bushing in the place of the TW to adapt the ½" thermocouple mounting fitting into the ¾" thread-o-let (TOL) opening on the overhead line.
- The inspector who performed the loop check on the TE believed it was installed into a thermowell.
- A Pre-Startup Safety Review (PSSR) performed by project management questioned the installation and the punch list action item created was closed using the documented inspection from the loop check.
- Commissioning of the piping following the turnaround was performed with a system leak-down test of approximately 30 PSIG and the system passed the test by leaking about 1 PSIG over 2 hours.
- The system was pressurized to about 550 PSIG during start up.
- An area operator's personal gas monitor detected a leak near the overhead line, and the leak was found to be from the TE using an ultrasonic leak detecting camera.
- The operator who pinpointed the leak believed it was safe to approach the leaking instrument and disturbed the cable attached to the TE while accessing the scaffold platform used in its installation.
- The restraining forces holding the TE in place changed when it was disturbed and were overcome by the internal pressure in the pipe.
- The sensing element was ejected opening a ¼" hole, allowing a jet of hydrocarbon to escape.

Distran – Ultra Sonic Camera

Laptop Presentation Version – Turn on 'Presentation Mode' for the Animation Effect

Go & Engage – Hydrocarbon Release from Thermocouple Installation

HSSE INVESTIGATE AND LEARN

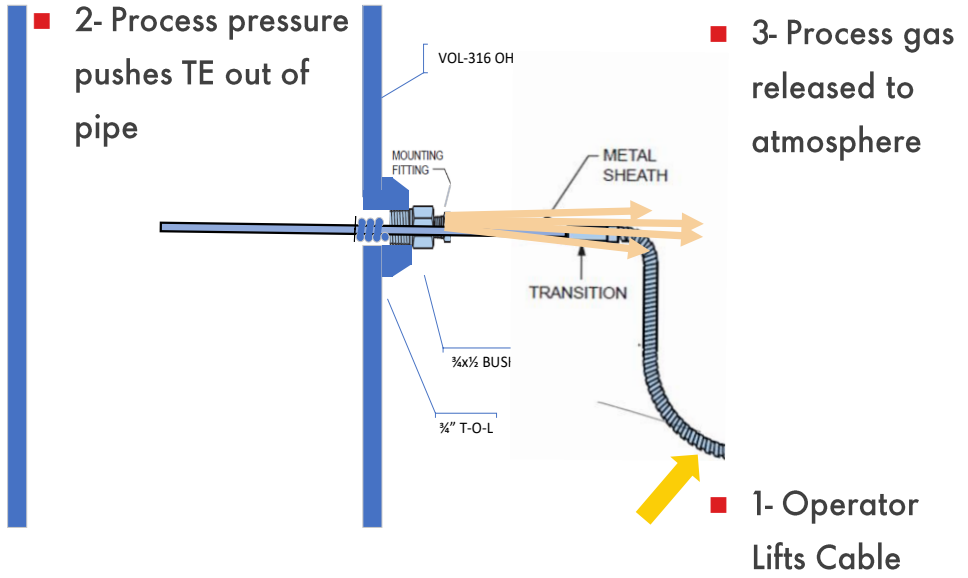
Enter presentation mode and click to animate.

ENGAGEMENT QUESTIONS

- Are there grey areas of ownership you see in your work?
- Have you experienced a situation where two different teams worked on the same equipment at the same time? What happened?
- How do you follow up on PSSR discoveries?
- Are you comfortable asking for technical help when things don't seem to fit?

INSIGHTS

- A grey area exists regarding management of thermowells that allowed them to be lost or omitted.
- Two different planning package involving the same field instrument were active in the turnaround with conflicting tasks.
- PSSR actions may seem to be trivial when reported with vague terms or by someone outside of the affected discipline.
- Replacement-in-kind of threaded thermowell installations goes against best practice to eliminate threaded connections from process piping.
- Inspection of thermowells is performed at the loop check, after the element is installed, covering the component and limiting visual inspection.



KEY TAKEAWAYS

- Coordinate concurrent work on equipment to assure grey areas are resolved.
- Prioritize removal of threaded process connections when pipe fabrication is planned.
- Inspect each component of an instrument assembly and track separately.
- Assure PSSR actions are verified in the field prior to closure.