

SAFETY MATTERS

FEBRUARY/MARCH 2018

TFO BP PROJECT

Sharing in BP's 'absolute' commitment to safety

BP Husky's two-fold Toledo Feedstock Optimization (TFO) project has a wide range of safety issues - working at heights, confined spaces and heavy lifts.

Most tasks were performed in an operating plant through record-cold winter temperatures, ice and snow.

"We share BP's absolute commitment to keeping everyone on our jobsites safe."

Rick Wallace
GEM project manager

The crews installed two new desalters as part of the Toledo Feedstock Optimization Availability (TFOA) to reduce shut-downs and improve refinery availability.

The Toledo Feedstock Optimization Sulfur Reduction (TFOSR) reduced sulfur in the refinery fuel gas to meet permitting requirements.

GEM's team of ironworkers, millwrights, boilermakers, pipefitters, electricians, insulators and laborers:

- Erected steel.
- Set towers, drums and exchangers.

- Installed aboveground piping, electrical and instrumentation cable, conduit and fiber optics.
- Insulated vessels and piping.
- Set and aligned pumps and motors.
- Performed housekeeping/support.

RRI carpenters performed scaffolding.

Safety challenges

- Congested work areas with simultaneous operations (SIMOPS)
- Slippery conditions
- Heavy lifts in tight spaces
- Working at heights of 150 feet above ground

Safety measures

- Project-specific training for foremen
- Clear and achievable expectations
- Open and constant communication between BP, GEM and all contractors
- Traction aids provided to all associates for working and walking on ice and snow
- Proper cold weather PPE
- Manlifts for craftspeople working at heights

"Cooperation between the crafts was key, with workers in the same areas, often in

PROJECT STATS

Absorber/Stripper Tower - 158.2 ft. tall and 331,000 lbs.

Polishing Amine Tower - 89.6 ft. tall and 67,000 lbs.

Lean Oil Stripper - 86 ft. tall and 75,000 lbs.

Water wash tower/bulk amine - 123 ft. tall and 122,000 lbs.

2 Desalter Units - 650,000 lbs. each

22 Drums/Exchangers

25,000 ft. of pipe

95,000 ft. of power cable

1,770 welds (various diameter)

tight spaces," says **Rick Wallace, GEM** project manager.

The GEM team worked 192,168 man-hours with one recordable in October, when a GEM associate's foot was caught between the ground and a carry deck outrigger.

"We strive for a perfect safety record on every job," Wallace says. "While we have had one recordable, we continue to work safely every day. We share BP's absolute commitment to keeping everyone on our jobsites safe."

USING A LADDER? CLIMB WITH CAUTION

- Make sure non-slip feet and treads are in good condition.
- Make sure straight ladders are secured and extend at least three feet above the level you need to access - or install a grabbing device.
- Stay below the third rung from the top unless you're climbing onto a fixed surface like a roof.
- To place a ladder, look above for light fixtures or sprinkler heads and stay at least 10 feet from power lines.
- Keep ladder and work areas dry, clean and free of clutter.
- Stepladders must lock into place, and both "dogs" must work on extension ladders.
- Put barricades, cones or signs around a ladder in high-traffic or congested areas.
- Reaching sideways? Keep your belt buckle within the ladder rails or move the ladder closer to your task.
- Fold out stepladders before using them.
- If a ladder should be more stable, have someone hold it.

RUDOLPH LIBBE INC
GEM INC
GEM ENERGY
LEHMAN DAMAN
RUDOLPH LIBBE PROPERTIES

 **GEM INC**
RUDOLPH LIBBE GROUP

FIND IT-FIX IT

Record-setting submissions and 2017 'Best Find' winners

GEM associates reported a record-breaking 2,397 finds in 2017. Last year, we also had a record number of "best finds," including a four-way tie for third place.

Congratulations to the winners and thanks to everyone who submitted Find It-Fix Its in 2017.

Grand Prize
\$1,000 Best Buy Gift Card
Bob Ferguson, GEM millwright

Bob Ferguson saw a fire on a roof that had been started by other workers. He used a fire extinguisher to put out the fire.

2nd Place
\$750 Best Buy Gift Card
Adam Taylor, GEM electrician

Another contractor dug 4-foot-deep hole outside a doorway but didn't secure it.
Adam Taylor barricaded the door.

3rd Place
\$500 Best Buy Gift Card



L-R: **Tony Ross**, Cleveland millwright superintendent with **Bob Ferguson**, first place Find It-Fix it winner.

Third place was a four-way tie, with \$125 each going to:

Andy Brossia, boilermaker
Gregory Wrick, millwright
Phil Wright, pipefitter
Tim Phillips, tool room

- Andy Brossia** notified the owner when he saw damper doors were not secured, exposing workers to a 40-foot drop.

- Gregory Wrick** notified the owner when a pump continued working after lockout.
- Phil Wright** stopped work and notified the owner when he noticed a strong ammonia smell in a non-regulated area.
- Tim Phillips** stopped work and notified the warehouse supervisor when he saw two subcontractors not using fall protection in a manlift.



Adam Taylor with **Bill Cornett** (left) and **Tim Clark** (right)

2017 SAFETY AUDIT SUMMARY

GEM compliance tops 98 percent on 66,000-plus observations

Observations	In Compliance	Correction Required
Hard hat	12,917	39
Eye protection	13,396	93
Pretask planner	3,045	30
6-foot fall protection	2,130	47
Ladder use	2,628	22
Scaffolds/aerial lifts	1,826	36
Excavation/shoring	300	5
Housekeeping/ work environment	1,773	148
Lock-out/tag-out	1,330	9
Electrical cords (GFC)	3,147	116
Barricades/site protection	1,656	62
Respiratory protection	482	9

Observations	In Compliance	Correction Required
Fire protection	2,293	98
Flammable liquids gas cylinders	788	23
Tools/equipment	3,844	45
Welding/cutting/burning	959	12
Confined space	98	0
Mobile equipment	1,491	13
Lifting/rigging	579	28
Glove use	10,637	54
Permits	546	8
Other	165	54
Total observations	66,030	951
% Observations in compliance	98.58 percent	