# SCP TRIBUNE©

## When a Vent Doesn't Vent

When the engineer opened a sounding tube on a new towboat to check the tank's fuel level, a stream of diesel gushed out. Clearly the fuel tank was not venting properly. What was going on?

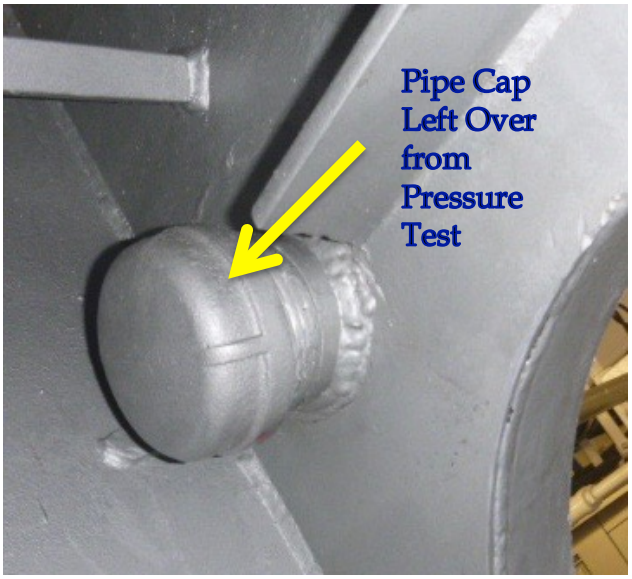
After shifting fuel the crew opened the 10,000-gal tank to inspect its vent.

Surprise! Not the usual flush vent mouth in or near the tank overhead; this vent was an inverted opening with a liquid trap, (image above) much like you'd see in sewage transfer piping.

True, that design would leave a liquid block, causing a little air resistance. But enough for a geyser of diesel?

Looking for answers, the crew followed the vent piping to the overflow tank. On opening the tank's manway they saw the problem right away. (Note the pipe cap, obviously used by the builder to pressure-test the vent system.) Just as obviously, the testers had forgotten to remove the cap when they were done. Crewmembers immediately removed the offending 2" pipecap to solve the backpressure problem.

As the regulators demand, Competent Persons and Chemists routinely ask that fuel lines be blanked or blocked to prevent fuel leakage when repairs are underway. And this forgotten pipe cap reminds us why we always demand a lanyard be led from the cap or plug out to the tank's manway that way someone will remember to remove it when repairs are complete.




## TRAINING

### Shipyard Competent Person

**3-Day Initial**
Apr 6-8 @ SSC
May 4-6 @ SSC

**1-Day Updates**
Apr 7 @ SSC
Apr 17 @ Fremont
Apr 28 @ Bremerton
May 5 @ SSC
May 18 @ Fremont

Fremont @ Fishermen's Terminal
(SSC: Georgetown Campus
Just off I-5: Corson Ave)
Call Peggy or Bonnie: 206-932-0206

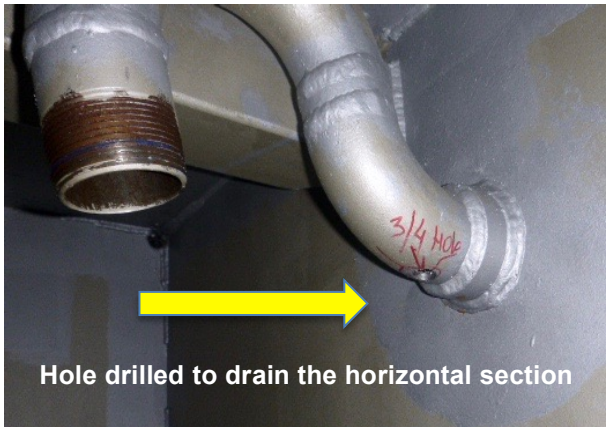
### OSHA 10 Maritime & General Industry

May 19-20th

10-hour training on 29 CFR 1915 or 1910 provides methods on recognition, avoidance, abatement, and prevention of safety and health hazards in workplaces specific to the maritime or general industries.

# When a Vent, Continued


These reminders help prevent damage from pressurizing a vessel's tank. Remember: A tank with 4 10x10' bulkheads has about 70,000 square inches. If each square inch has a pressure above 3-4 lbs/in$^2$, that tremendous force from all those square inches may start to deform the bulkheads themselves. We don't want our safety efforts to cause more damage than we're trying to prevent!




To get rid of bothersome backpressures, the crew drilled holes to drain liquid (see image to right) blocks from the horizontal vent runs.

# WHEN OSHA ISN'T ENOUGH

To deal safely with some common fire hazards (for instance, insulating foam, electrical wire insulation, plastics…) the aware and experienced Competent Person will go well beyond OSHA's baseline "Safe for Hot Work" regulations.

The reason is that OSHA's Subpart B ("Hot Work") focuses only on fire dangers from LIQUID fuels and cargoes. Why? Because those liquids are packed with hydrocarbon energy. (Remember; it takes only 1.5% gasoline vapor to turn a tank's fresh air into a bomb. In fact to deal with fuel or cargo fire hazards hot work repairs start only after a chemist certifies the project "Safe for Hot Work." But that refers to LIQUID fuels and cargoes.)


However, solid greasy coatings, plastics and insulating foam are hydrocarbons too. So, while OSHA's Subpart B may not even mention them, the sensible Competent Person will take extra measures to control the fire danger of such energy-rich solids. Extra Measures?

- Train and supervise fire watches more carefully.
- Pay double attention to a clean workplace so no rag or cardboard fire will help any hydrocarbons to misbehave.
- Keep the firewatch on the job for a longer cool-down period.
- Run a water line so an extinguisher isn't the last line of defense.
- Make sure the scope of a job is definite so hot work doesn't go into areas that have not been certified "safe."
- Study on OSHA's Subparts D & P, where combustible material is better addressed.

In other words, the SCP should keep in mind that OSHA publishes "minimum" regulations, telling the very LEAST we HAVE to do. We can do better.

# MACOSH Charter

Word from Puget Sound Shipbuilder's Association's Al Rainsberger: OSHA is citing many ship repairers for shortcomings in their Fire Safety Plans.

It's not a perfect regulatory world. For instance, you might consider that more shipyards would comply if OSHA did a better job of explaining those Fire Safety Plans.

Well, now your opinion has a conduit straight to OSHA. Sound Testing chemist Amy Liu has been appointed to the 6-member MACOSH Shipyard Work Group.

Obvious question: So What? What's MACOSH anyhow? Obvious answer: MACOSH is a federally structured group that links the Maritime Industry to OSHA.

So, if you have a constructive concern for OSHA (who doesn't?) contact Amy Liu (206 932 0206.) She can more directly bring your individual, PSSA or PSSRA (Puget Sound Ship Repair Association) suggestions/complaints/input to OSHA's regulatory ears.

MACOSH meets 2-3 times yearly.

# What's a UST?

Until the mid-1980s underground storage tanks, such as you'd find under the pavement at gasoline stations, were made of mild, uncoated steel plate, rolled to a cylinder with ends welded in place. Many such "UST's" became ecological problems as corrosive soils or stray electrical currents caused holes, letting tank contents leak into soil and groundwater.

But digging up huge UST's with their gassy, toxic contents can be dangerous. And it turns out that, with their experience of shipyard fuels and tanks, Marine Chemists and Shipyard Competent Persons are already familiar with those dangers, and know how to deal with many of them.

During the UST removal process pictured, a Marine Chemist can work with contractors and local fire departments, to inert tanks so there are no explosions or fires during excavation. So the training and experience that prevents fires and explosions in shipyards has its place in the world of underground tanks.

Congrats to **John Brown** of **Foss Maritime:** Winner of March's quiz.

**March's Question:**
**Q:** "Building a Towboat" (Complete the rhyme:)
"The outer deckplate must align with the side shell by design!
Now: weld the sideshell to the **CHINE**.

**April's Question:**
If your store of grease is shallow, Fill the pintle void with _____.
**Send your answer** to newsletter@soundtestinginc.com before April 25, 2016.
All correct answers will be entered into a random drawing and one person will win a **$50** gift card!
One entry per person, please.