



SAFETY BULLETIN...

Gasoline Vapor Explosion

What Can Go Wrong When Safety Protocols, Safe Work Practices and Safety Procedures Are Not Adhered Too.

What Happened: On November 05, 2015 two workers were assigned the task to remove and replace STP pumps and steel plugs from three sumps. Two sumps were completed and workers were working on the third last pump. The pump was loosened and hoisted to let residual gasoline drain back into the tank. During this process, the lead plumber returned to the work truck to retrieve a 24" pipe wrench to remove a 4" dia steel plug/cap within the sump.

After the pump was hoisted out of the way the lead worker entered the sump to remove the 4" plug. The assistant plumber was outside passing tools. While trying to loosen the 4" diameter plug, the pipe wrench slipped causing a spark which ignited gasoline vapours in the sump causing a flash flare up.

Root Causes

People:

- The correct procedures for performing the task were not followed.
- Critical POST checklist documents were not filled out as required.
- Hazardous atmosphere detector was not utilized.

Equipment:

- 24" Pipe Wrench (aluminum handle with steel teeth), 15lbs.
- STP Pump, 125lbs.
- 4: diameter steel plug, 3.5lbs.

Environment:

- Sunny, very warm.

Lessoned learned / Corrective Actions:

- Do not deviate from procedures.
- Have the site in an intact condition so that the plumber can follow procedures from beginning to end.
- When removing STP make sure the sump is bone dry and to be done when vac truck is on site to pump out any product that may fall inside the sump.
- Complete the Tankfield entry forms.
- Build and design custom set of tools made out of brass to avoid spark that the plumber can use to remove plugs from ground level without going inside the sump.
- Plumbers and supervisors are to complete these tasks on the first day of the project before excavating / disturbing the ground around the sump.
- Each plumber will have and wear fire resistance clothing and FR rated head wear when performing these task.

