Pipe & Re-Pipe
A Perspective from Florida

R. Steven Miller
Project Manager
Downstream Data Corporation
Presented By
Ernest M. Roggelin
Pinellas CHD - Engineering

Perspective on Florida 2009

D/W construction will preserve property values and their corporation has a significant investment in property.

Insurance companies recognize the value of D/W equipment and rate accordingly.

Have already made a significant financial investment.

Have upgraded most of their facilities

Release Detection Standpoint

Like to use D/W because it offers the choice between automated and manual methods. Belief that manual is more reliable.

Narrows down possible reasons for inventory problem to either delivery, sales, or accounting/data errors.

Use SIRS at all locations to help find inventory problems (Caldwell)

Recommends changing calibration standards to average zero (± 1cc).

Marketers need to have sufficient inventory control to know when they need to calibrate, rather than waiting for a state inspector to find problem.

Sun City

Station – original d/w fiberglass tank and s/w fiberglass piping.

Upgrading to d/w pipe ahead of Florida 2009 schedule.

Fiberglass Sumps

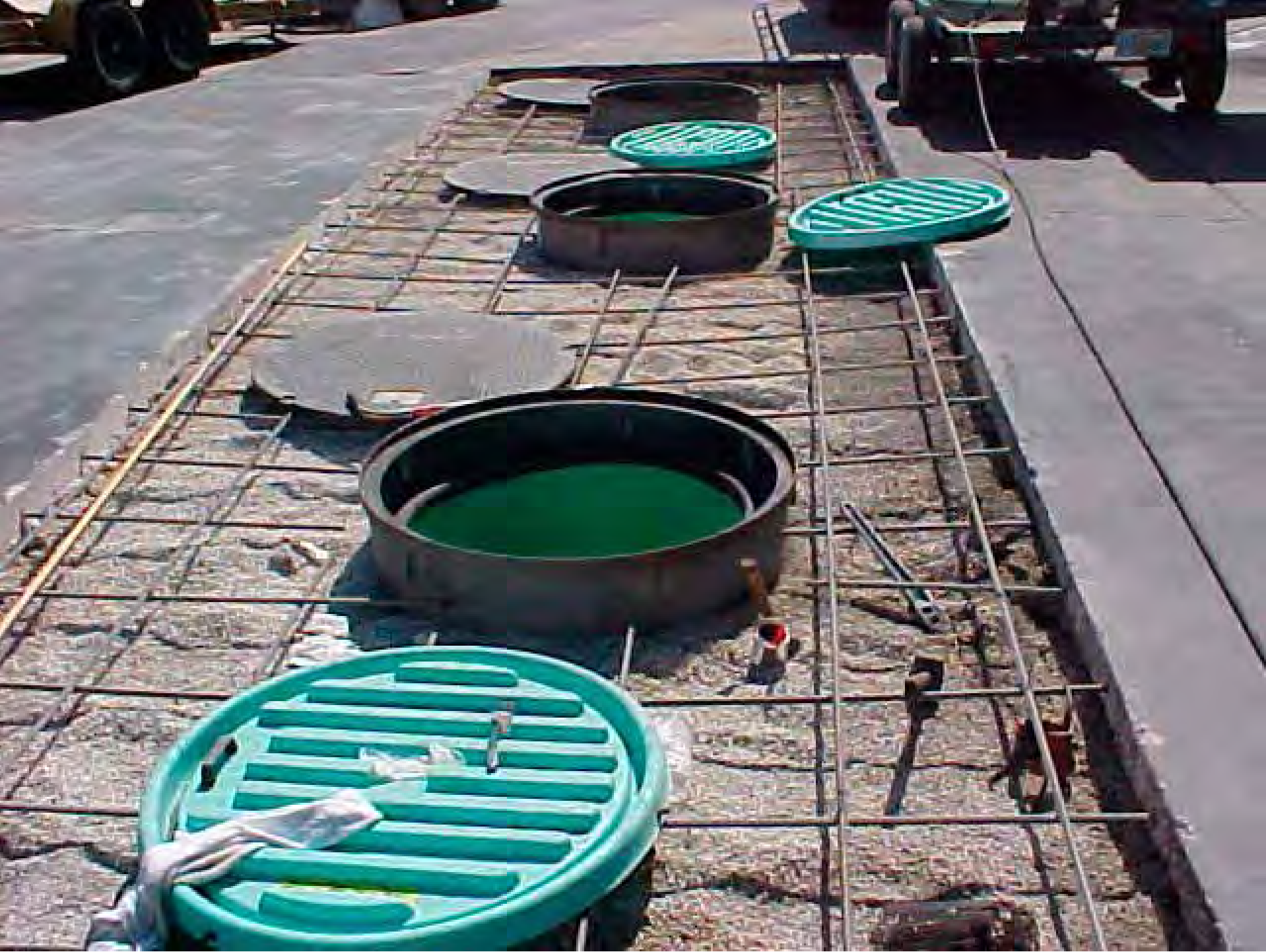
Clean Installation

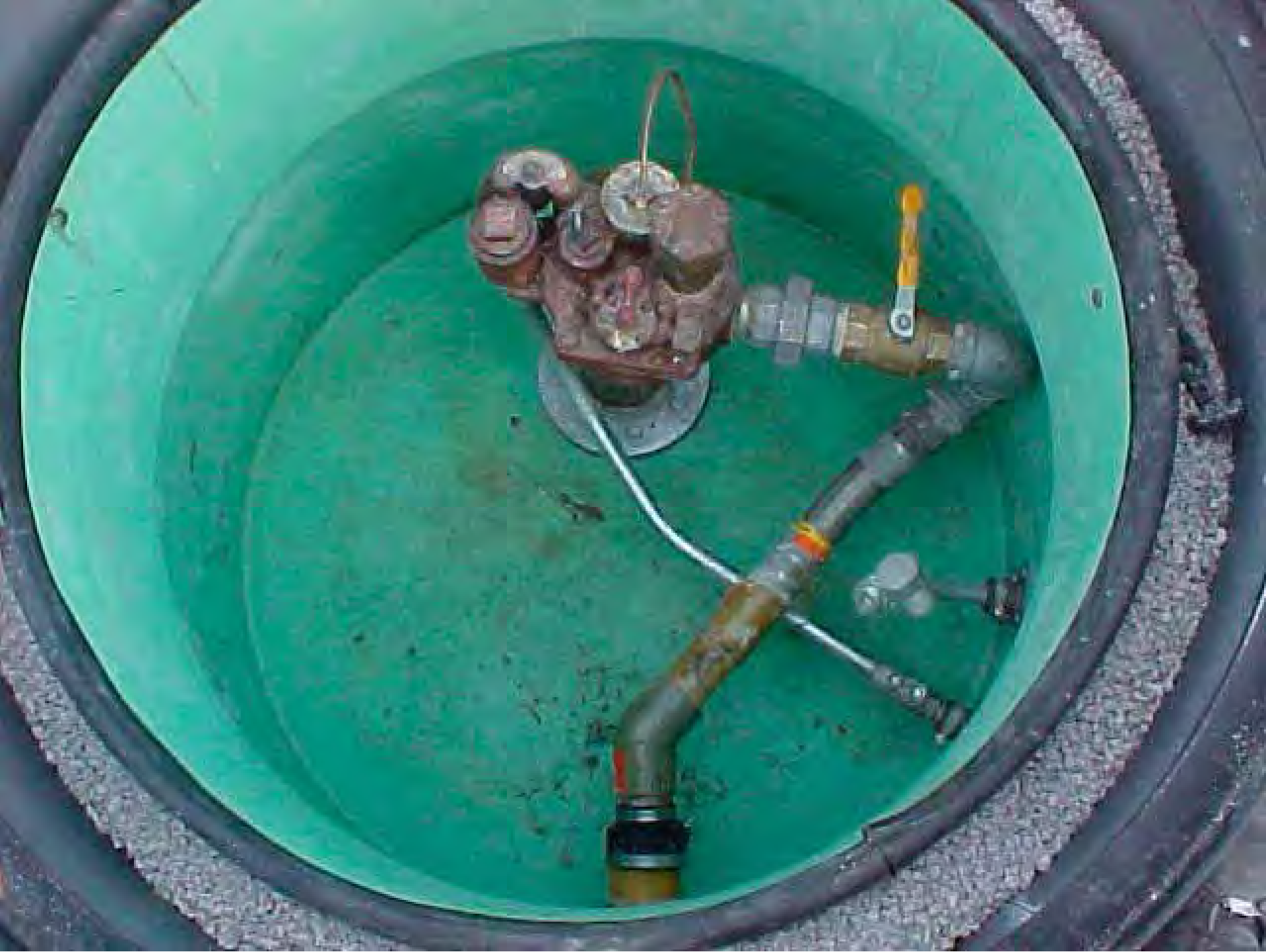
Have structural strength

Can be repaired

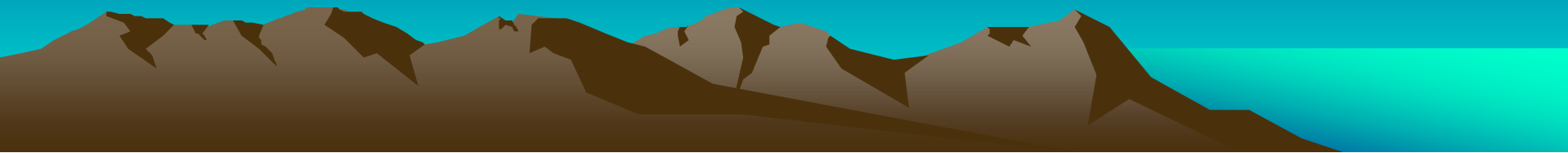
Have penetration mating concerns

Position: All installations extending into water table should be fiberglass (5-6 years now) Recent decision to use fiberglass pipe (integrated pipe & 3/2 inch) at all installations along with FRP-clad tanks (typically Modern Welding Glasteel II).





Rally #133

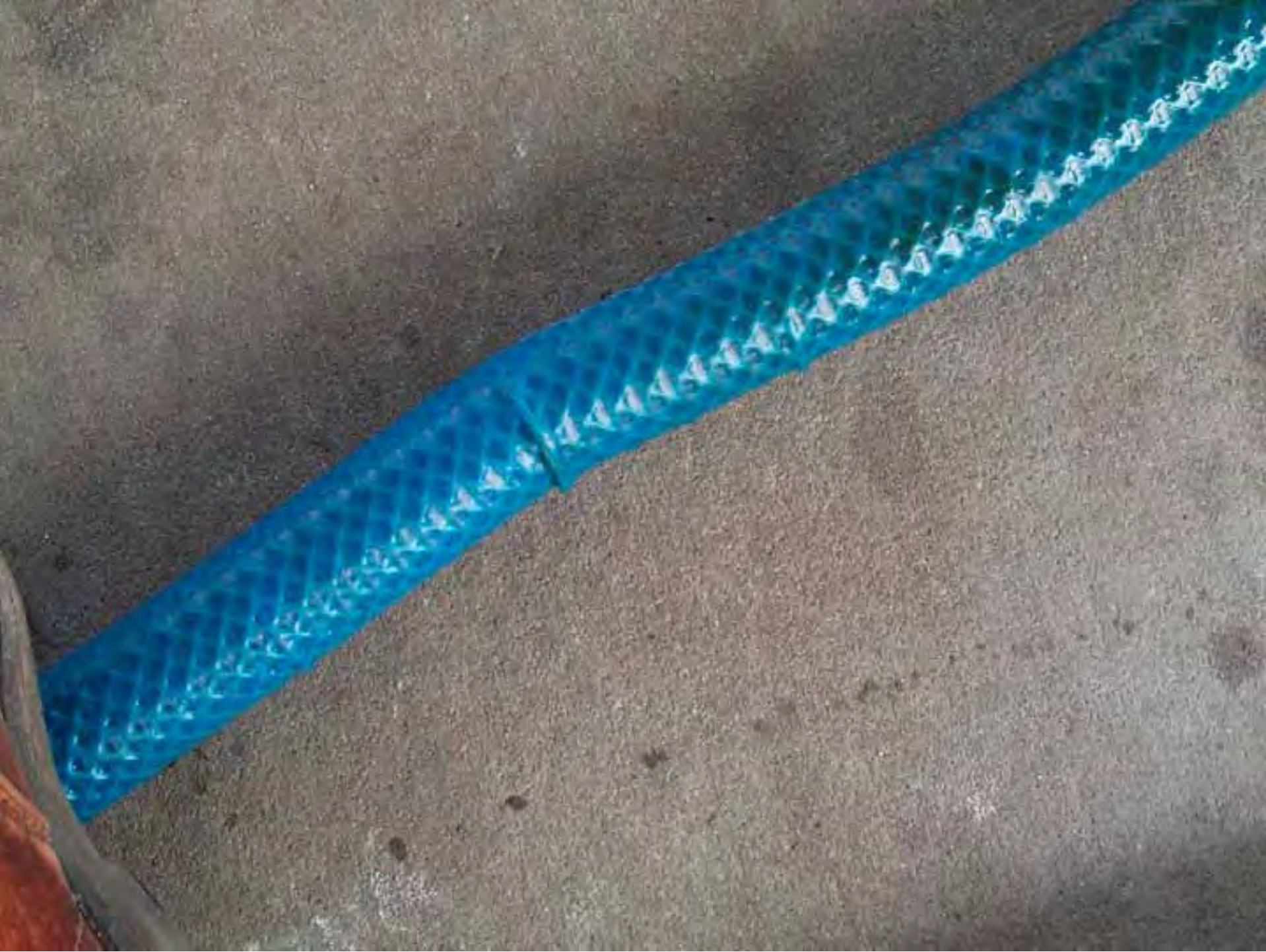


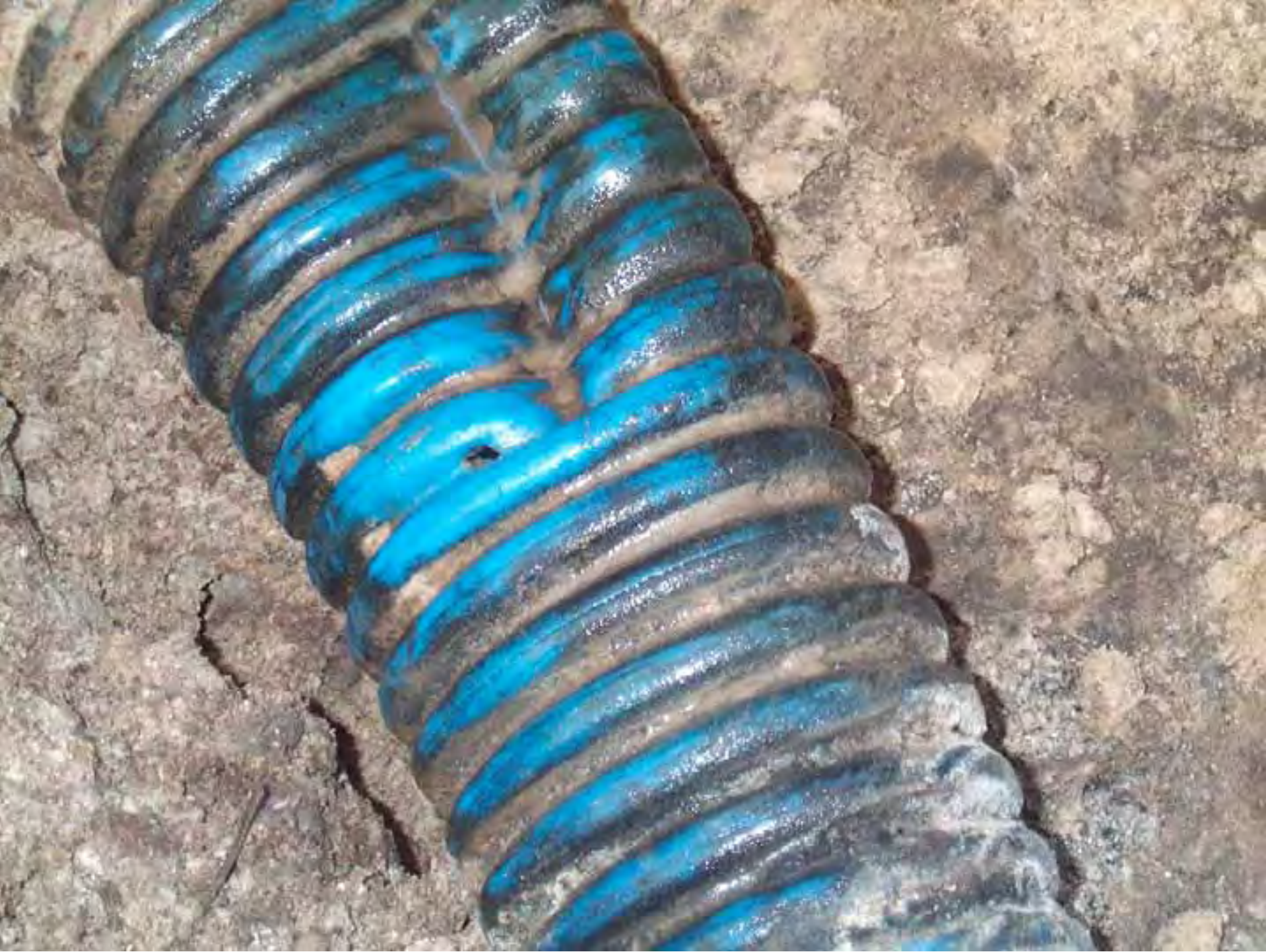
Agency History at Facility

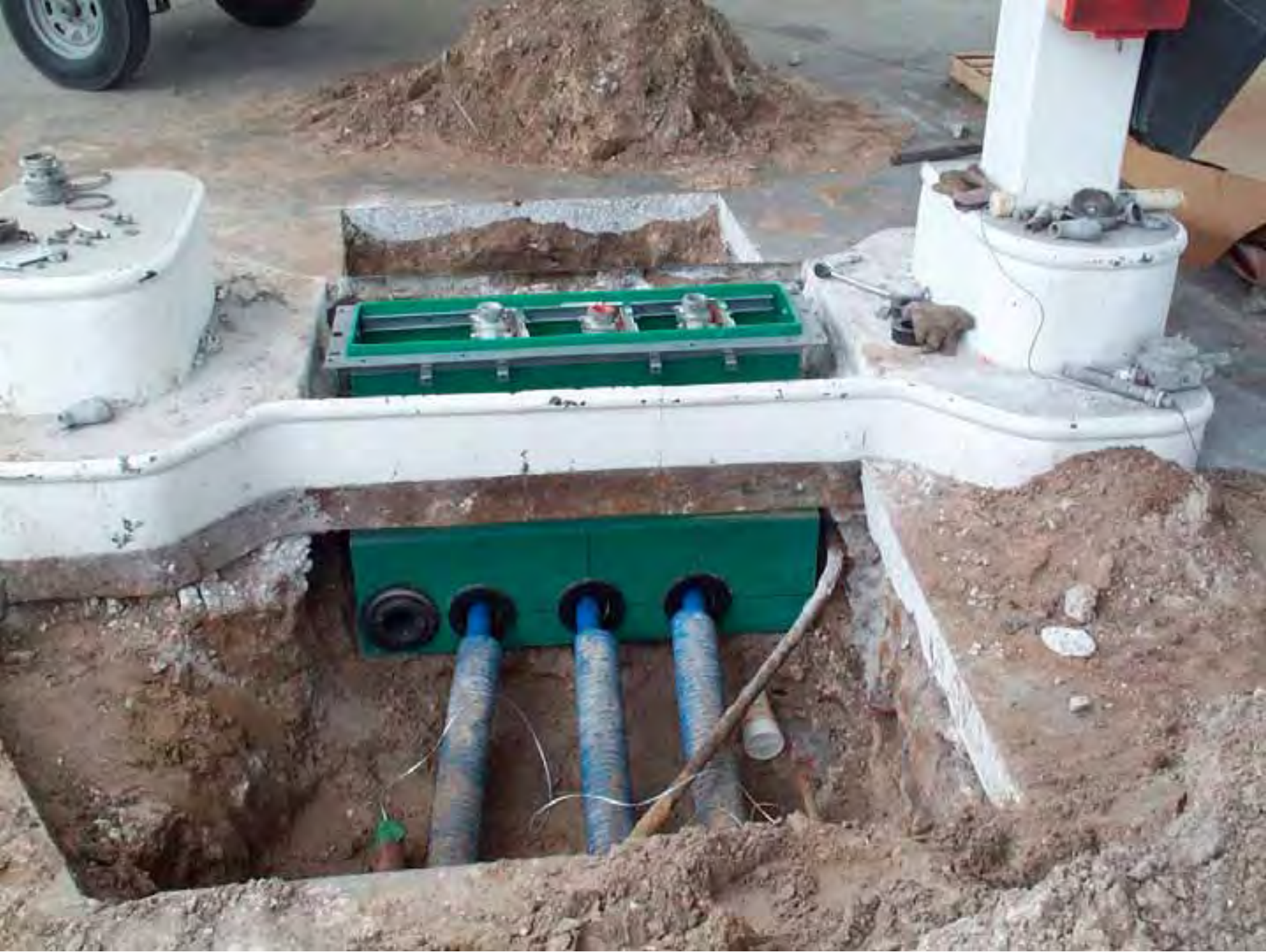
- 11/23/92 – Date of Install – PP1500
- 6/28/95 – Enviroflex II PP1501 installed
- 5/9/02 – Plus line failure between dispensers #1 & #5; product in dispenser liner #5; replaced with Enviroflex Blue single-wall
- 5/13/02 – Plus line failure between dispensers #5 & #9 during line tightness testing; product in both liners; replaced with Enviroflex Blue single-wall
- 7/23/02 – Plus line failure between sump and dispenser #10; replaced with Enviroflex Blue single-wall
- 7/24/02 – Regular line failure between dispenser #5 & #9; secondary fails air test; replaced with Omniflex (Blue/Blue)

Latest

- 6/04 – Premium Line failure between two dispensers
- 7/04 – Hydrostatic testing of dispenser sumps.
- 8/04 – Discharge filing based on analytical testing
- 9/04 – Closure of flexible piping system; reuse of two dispenser sumps.
- 9/04 to 10/04 – Installation of new FRP system.

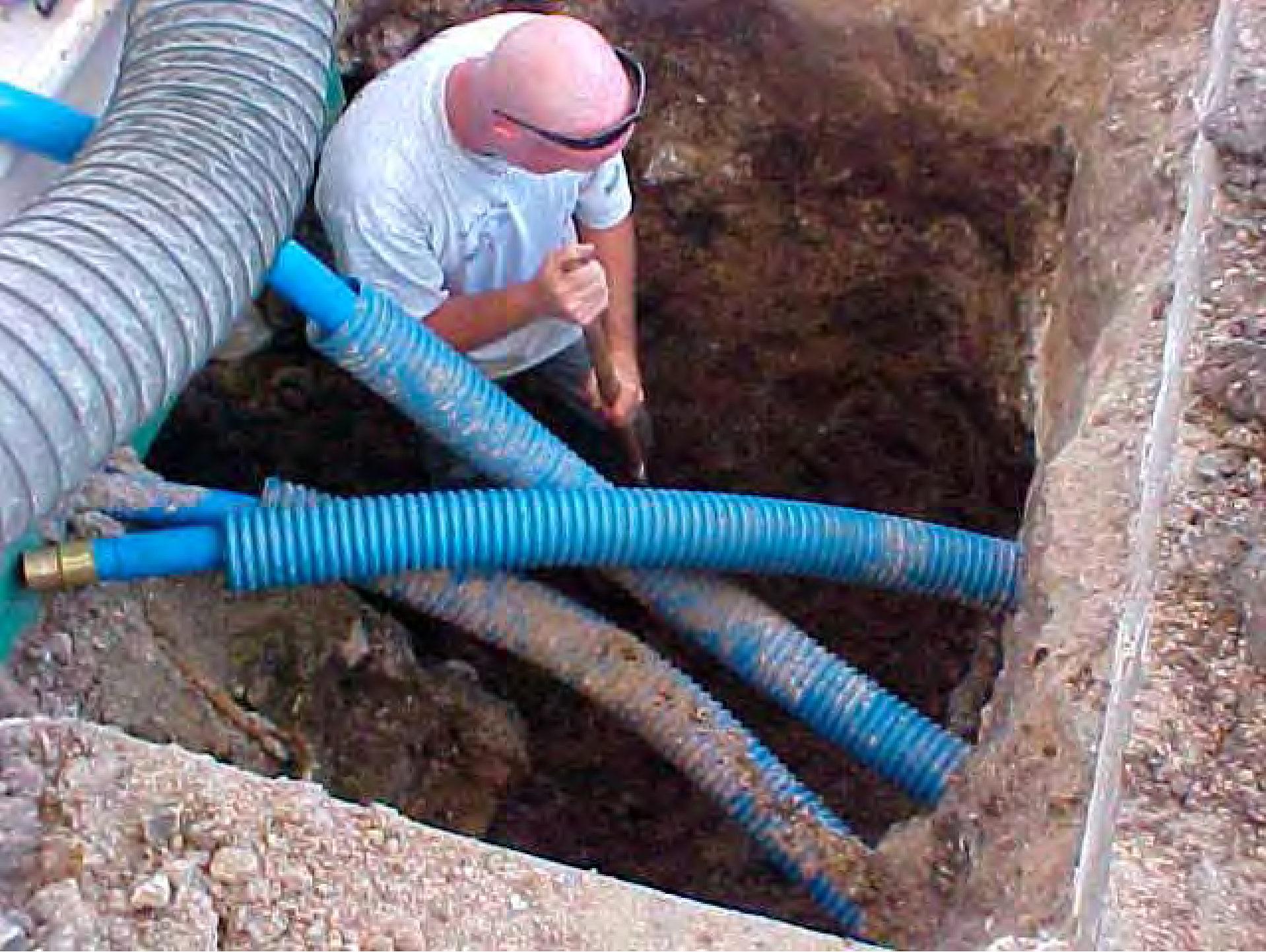


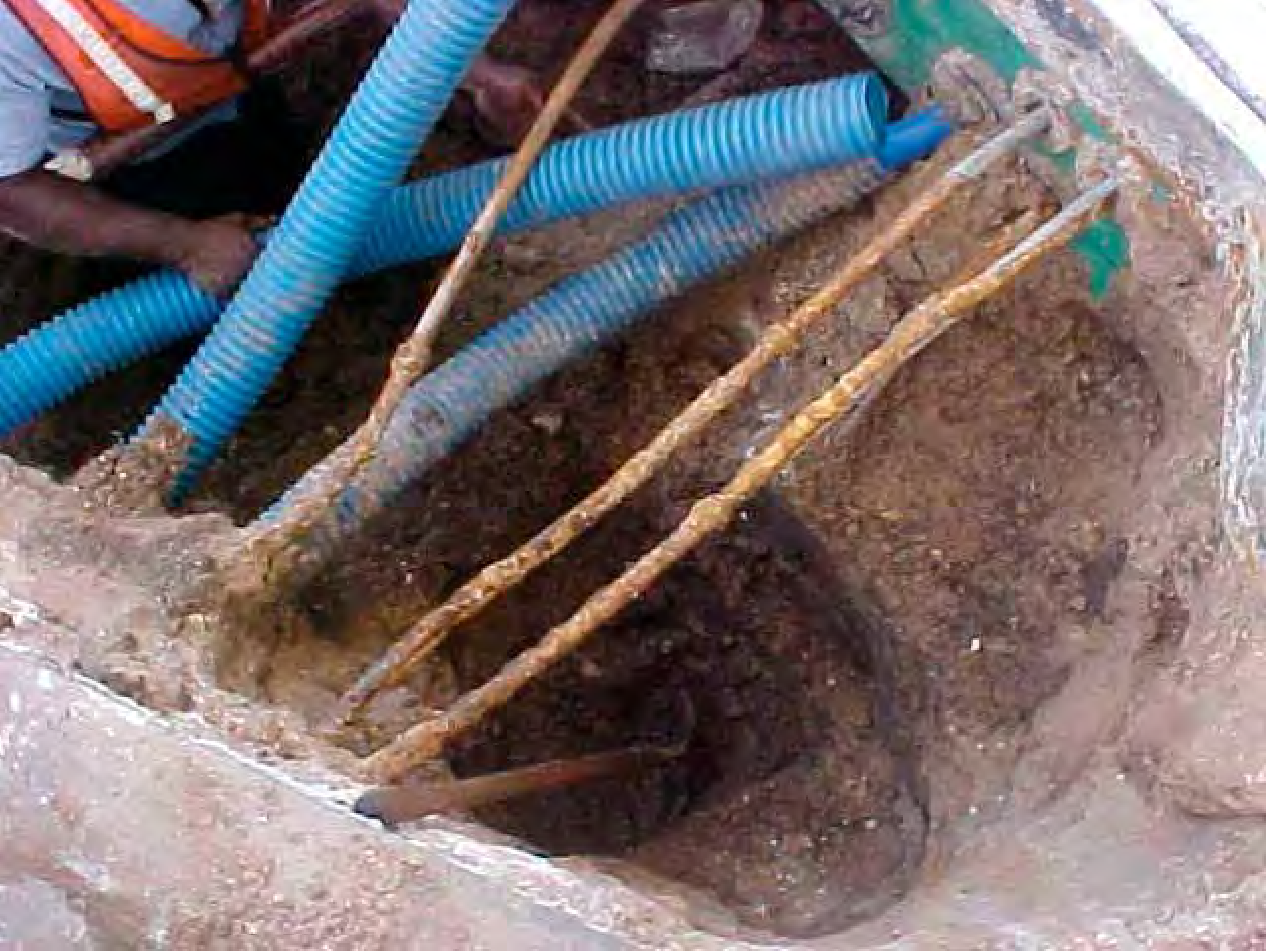


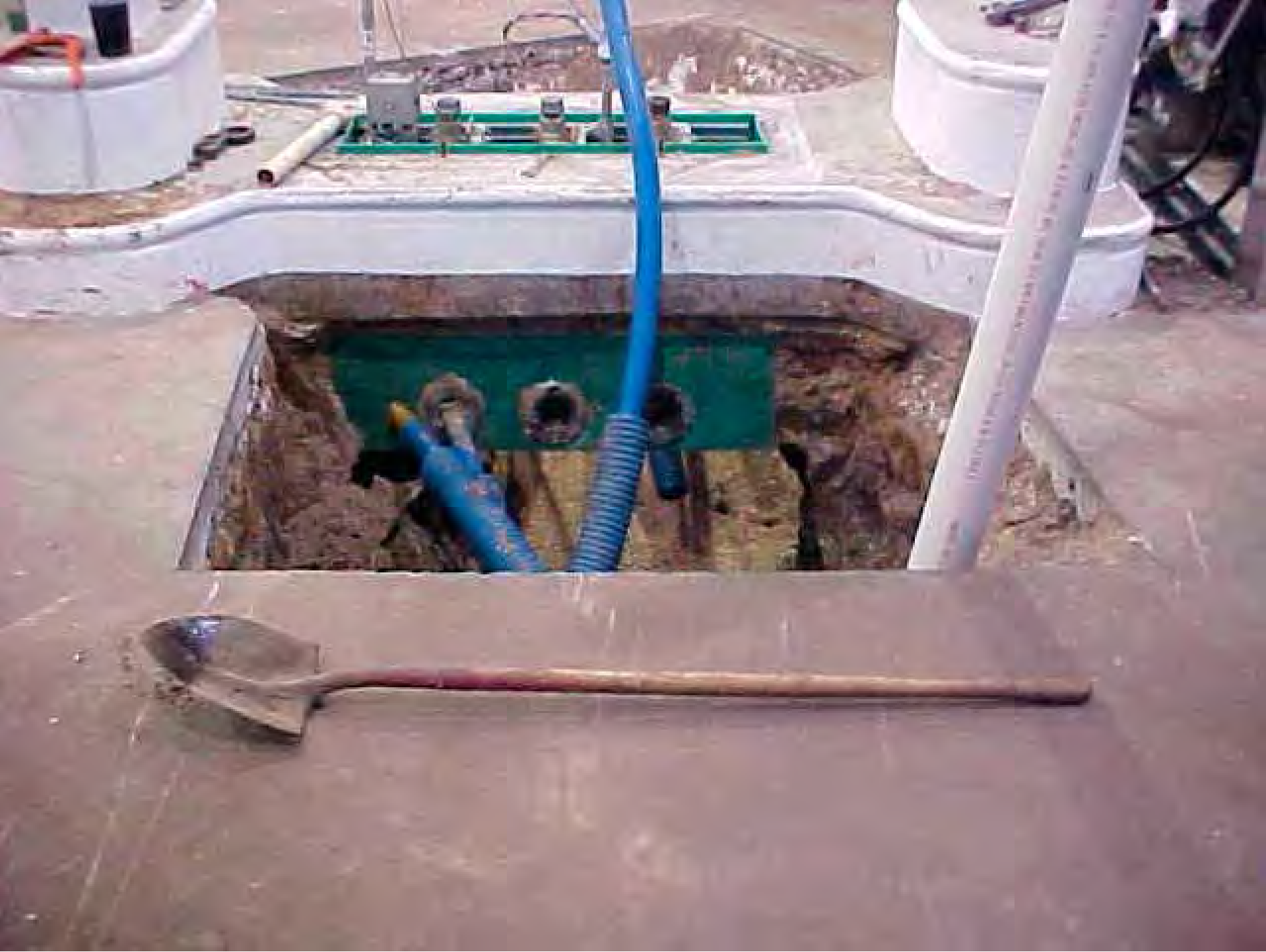


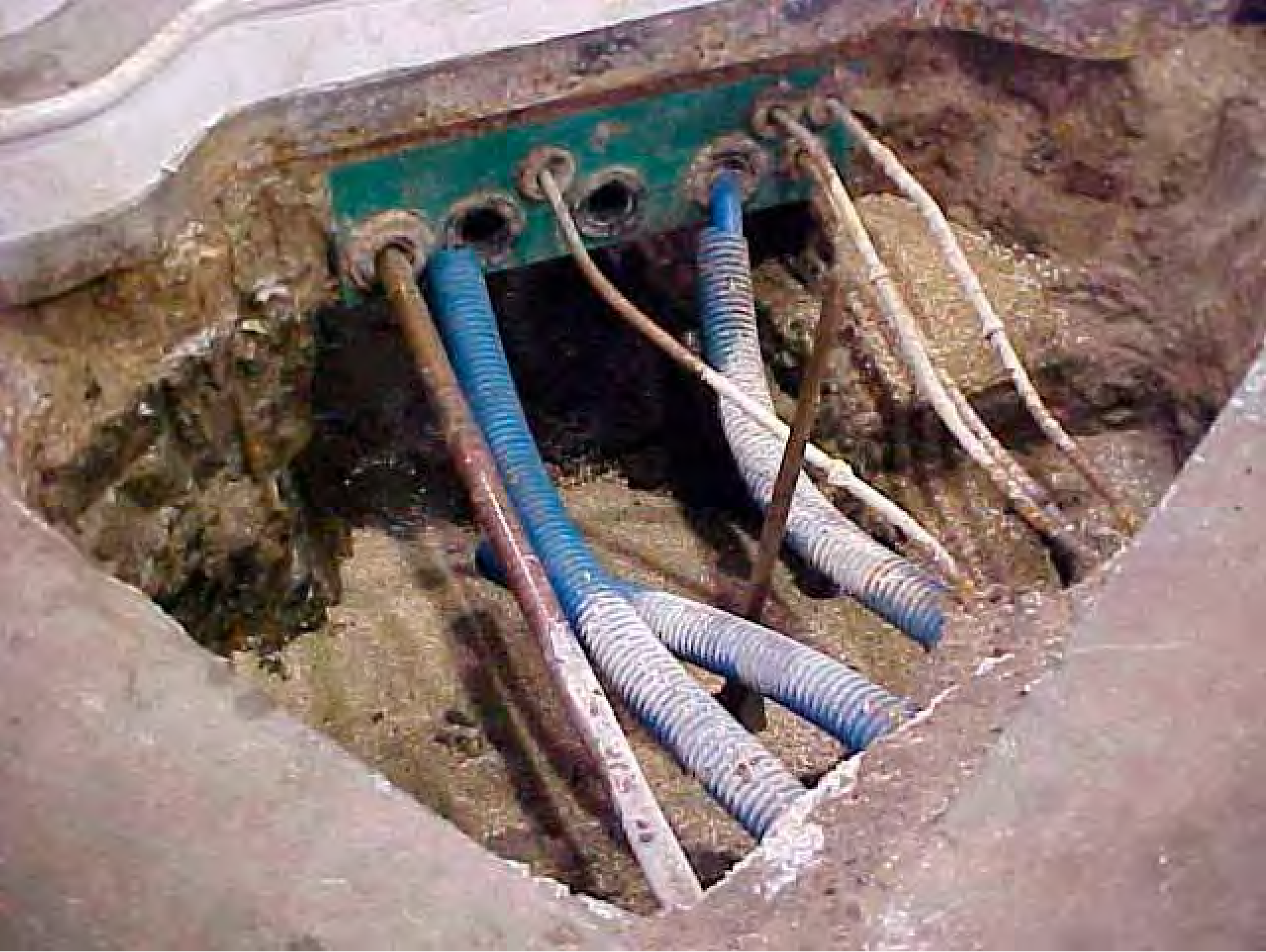
Cause

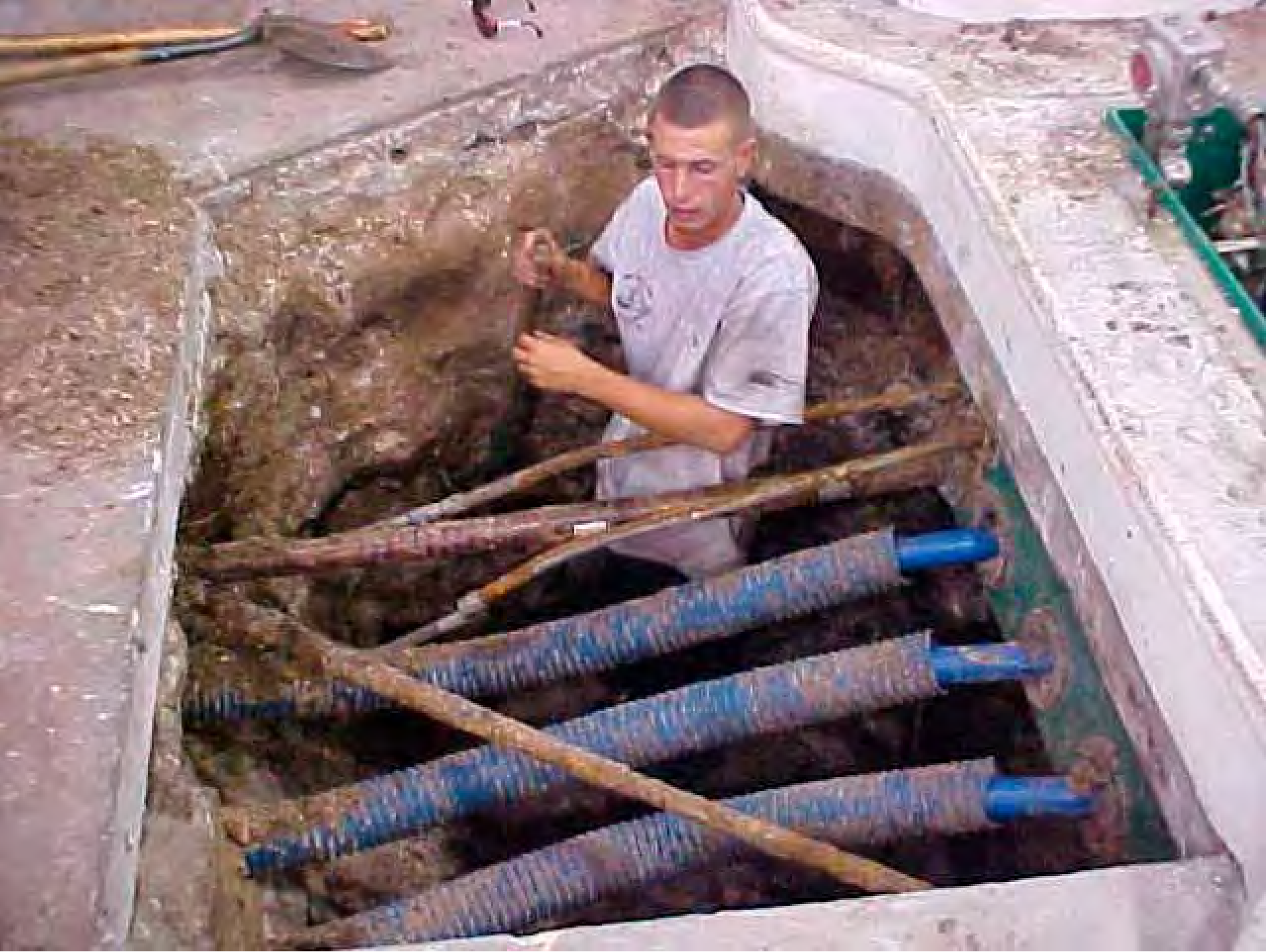
- Piping elongation that eventually pushed the penetration fittings into the dispenser sumps and caused slow leaks under at least one dispenser.
- Fuel filled the sump to the level of the penetration fittings then leaked to the environment.

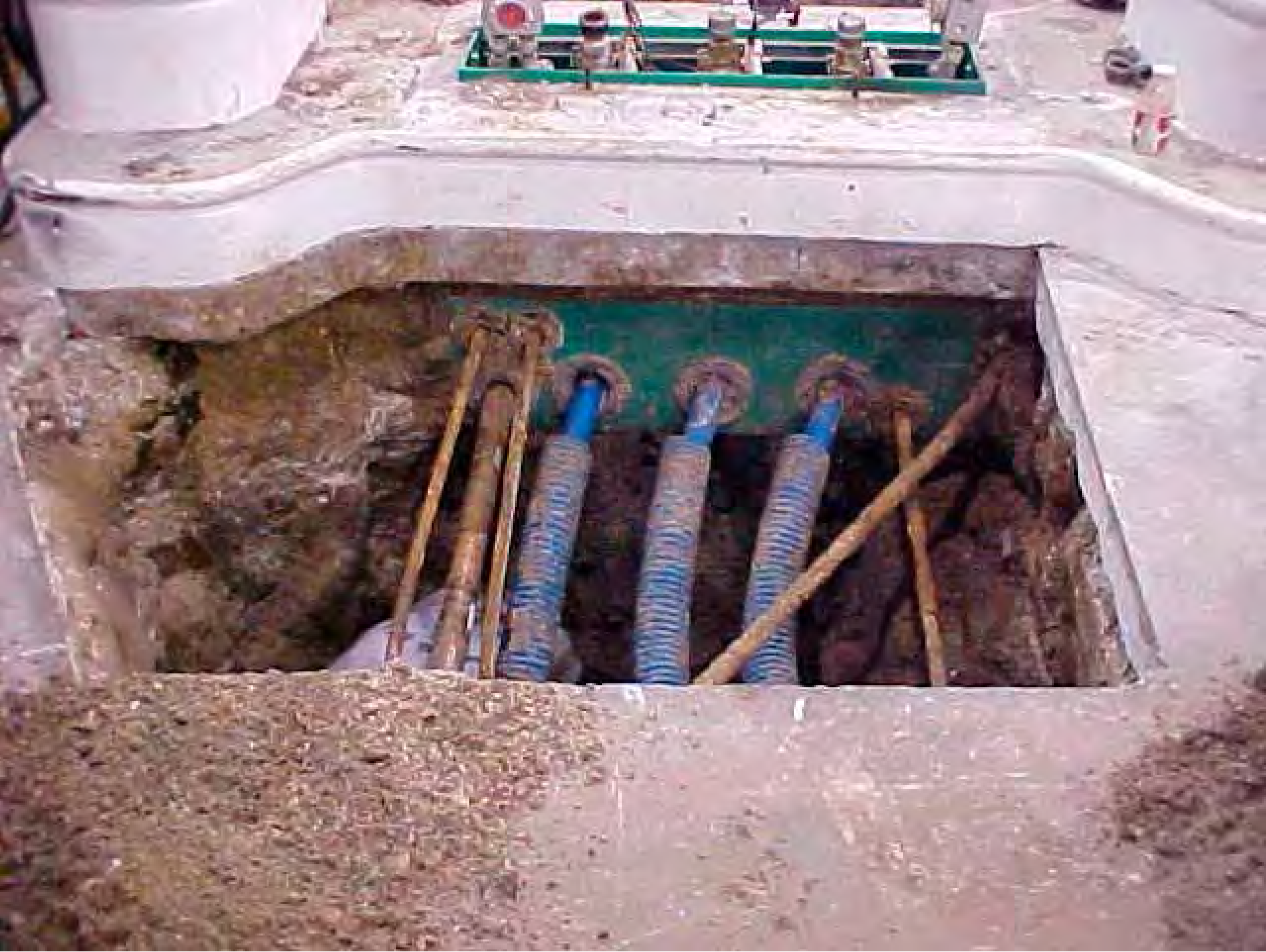






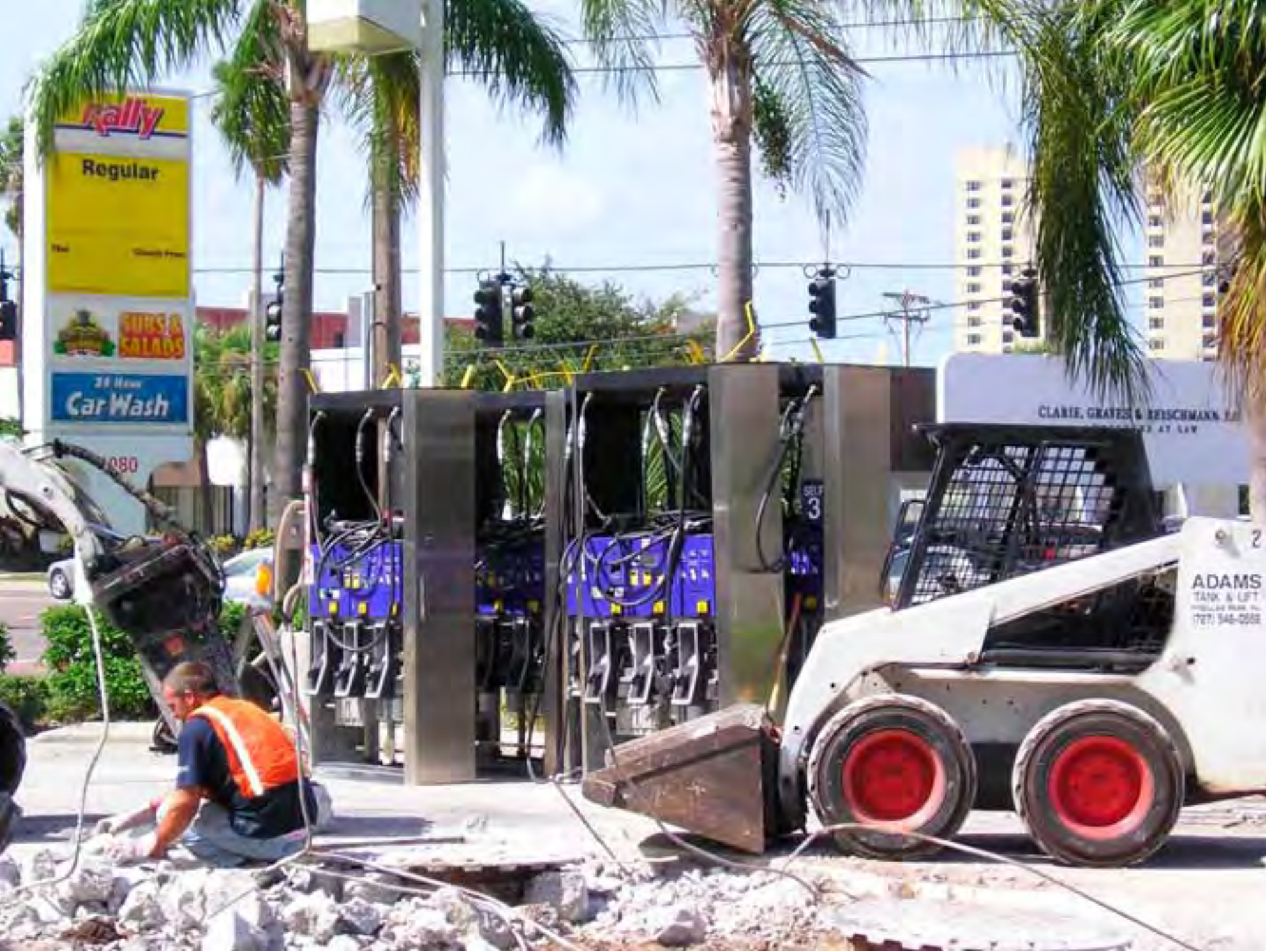


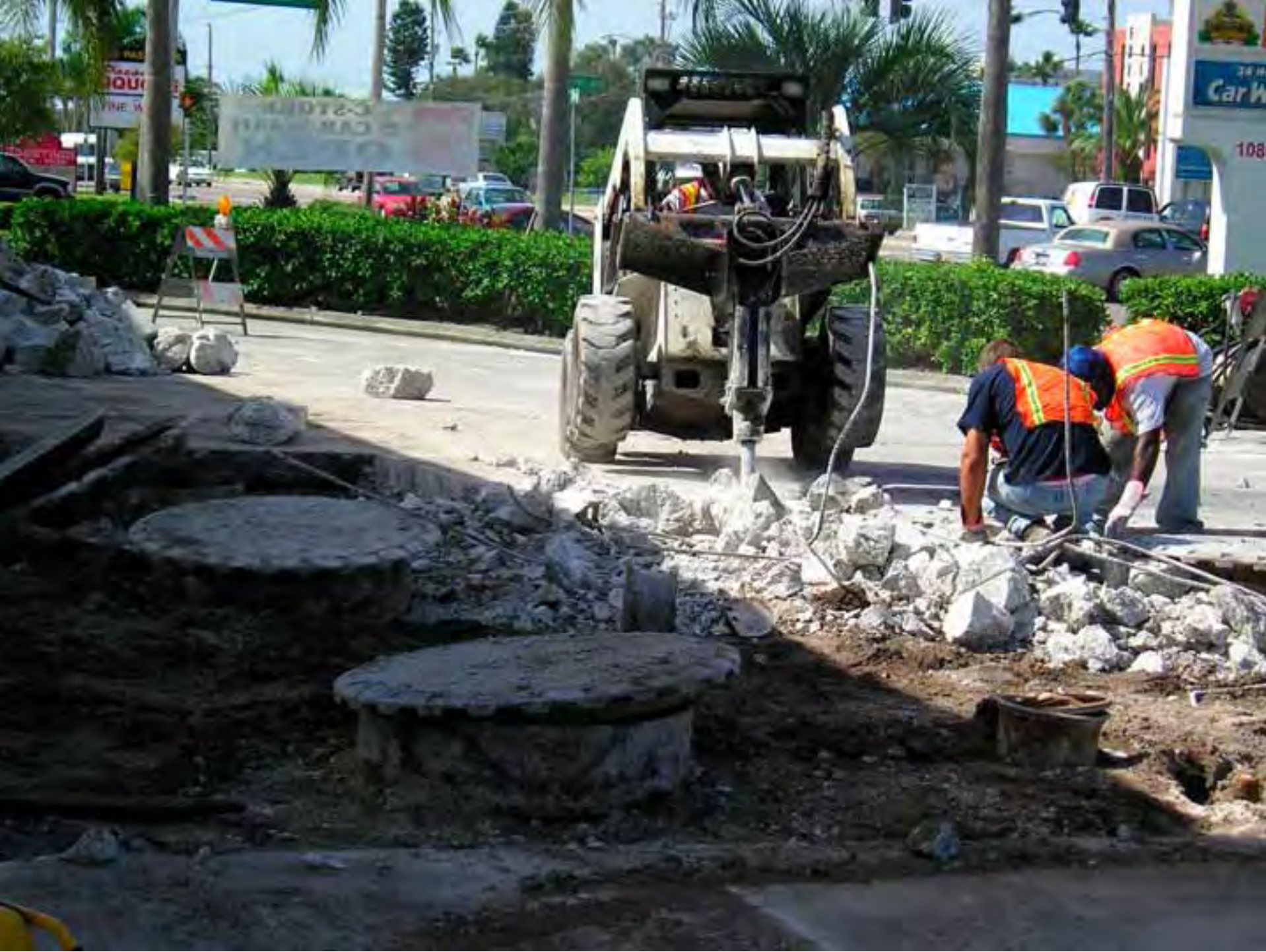


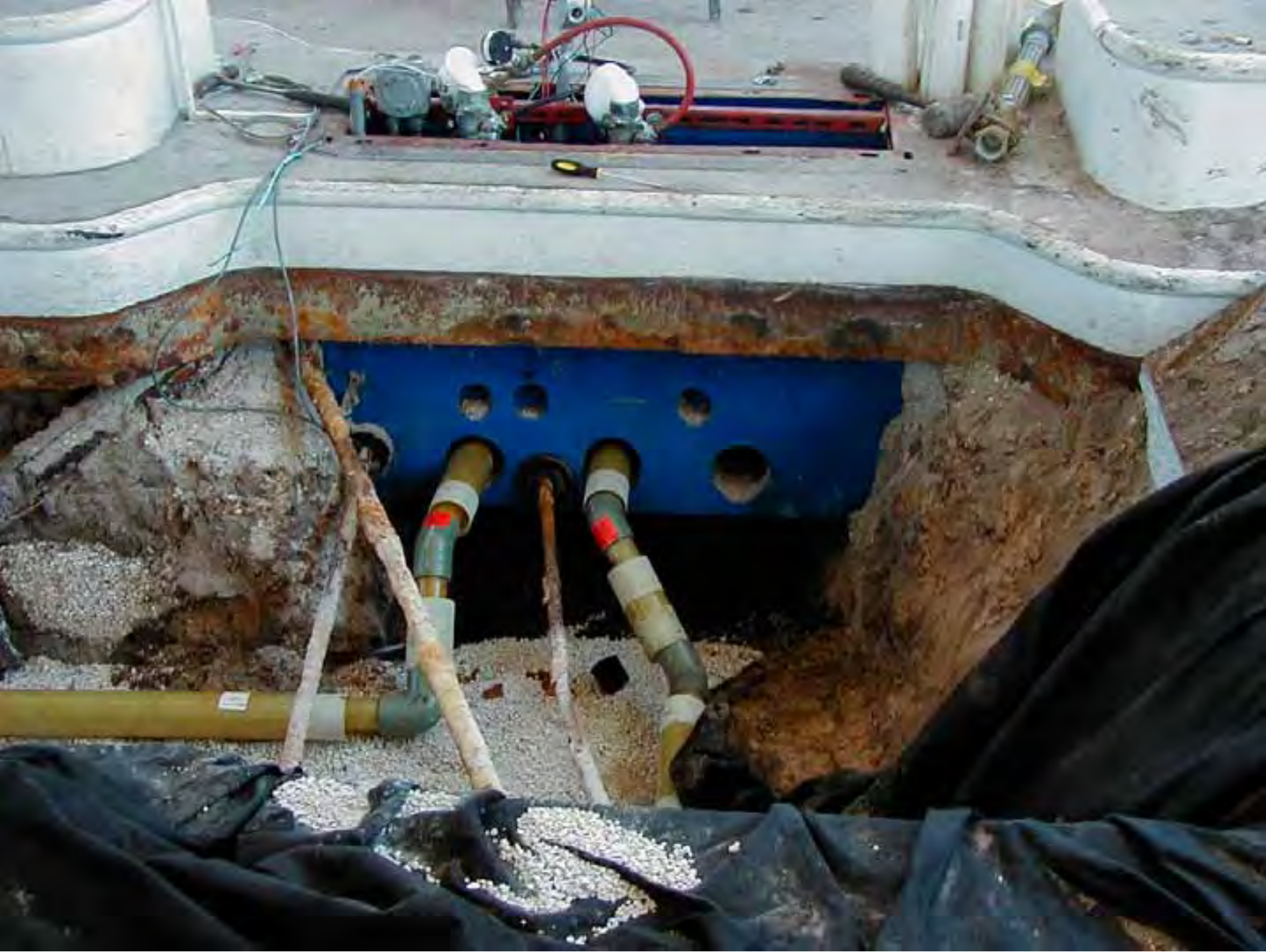


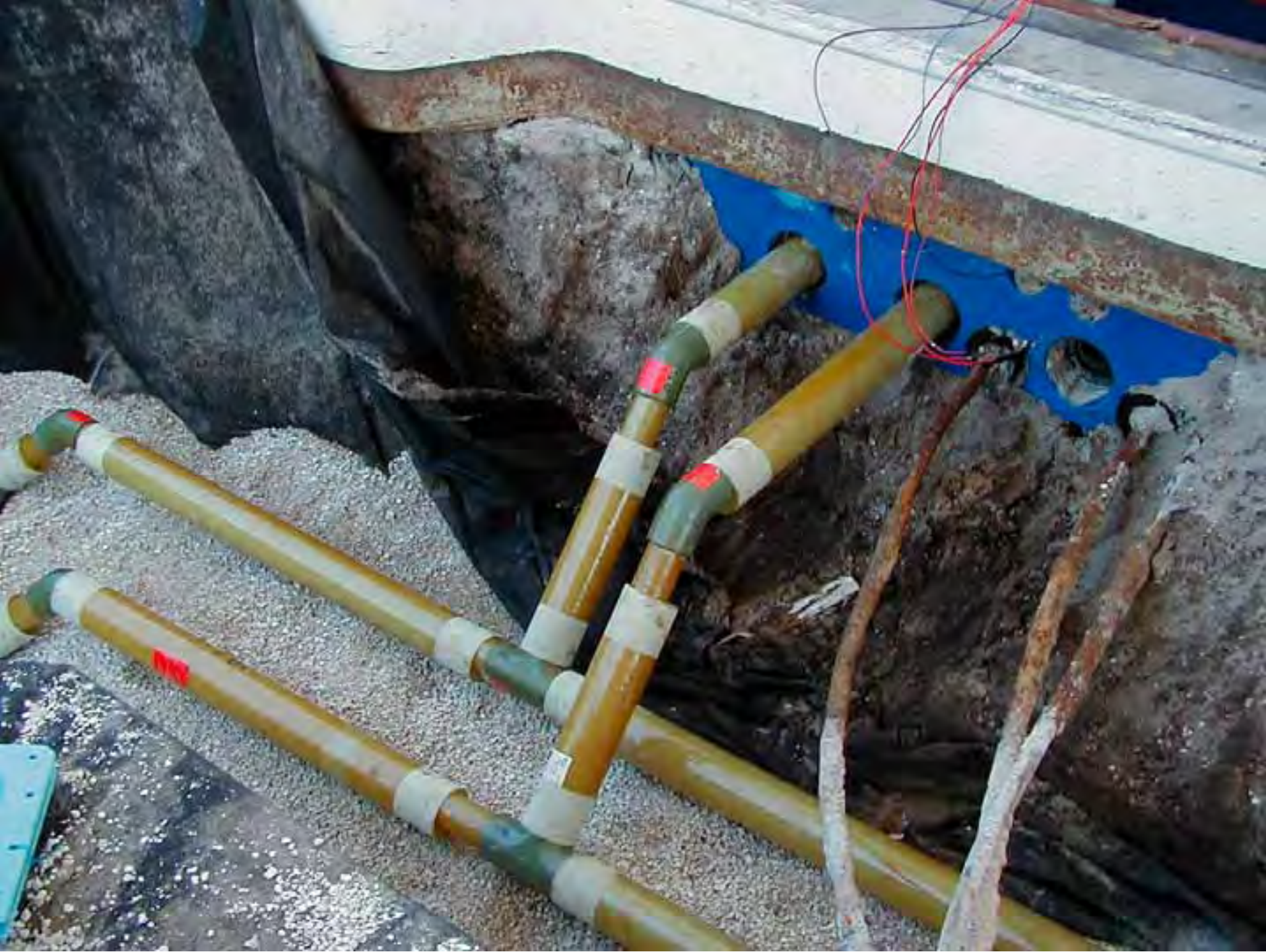
Perspective

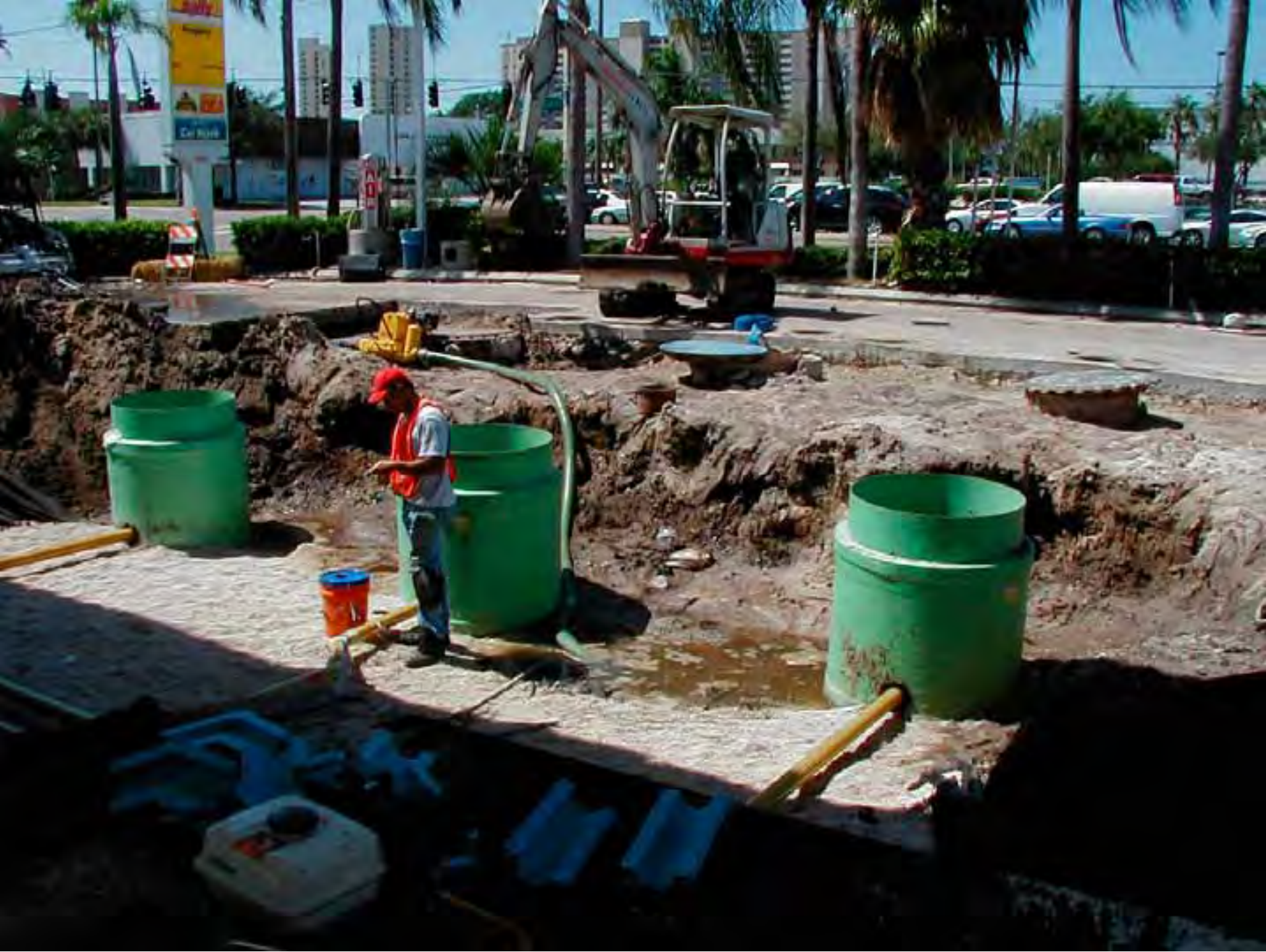
- Second flex piping failure in a little over a year.
- Replaced “flex with flex” to stay in business, until all could be replaced with d/w fiberglass.
- Both failures resulted in discharges.
- First discharge was NFA
- Second discharge is being assessed and an interim cleanup system is operating using bioremediation and SVE.
- Out-of-pocket expenses: $35,000 for cleanups, $80,000 for the piping. Lost business – unknown – site sells over 300,000 gallons per month.
- The problems at this site persuaded company to remove flex piping everywhere, as soon as possible.

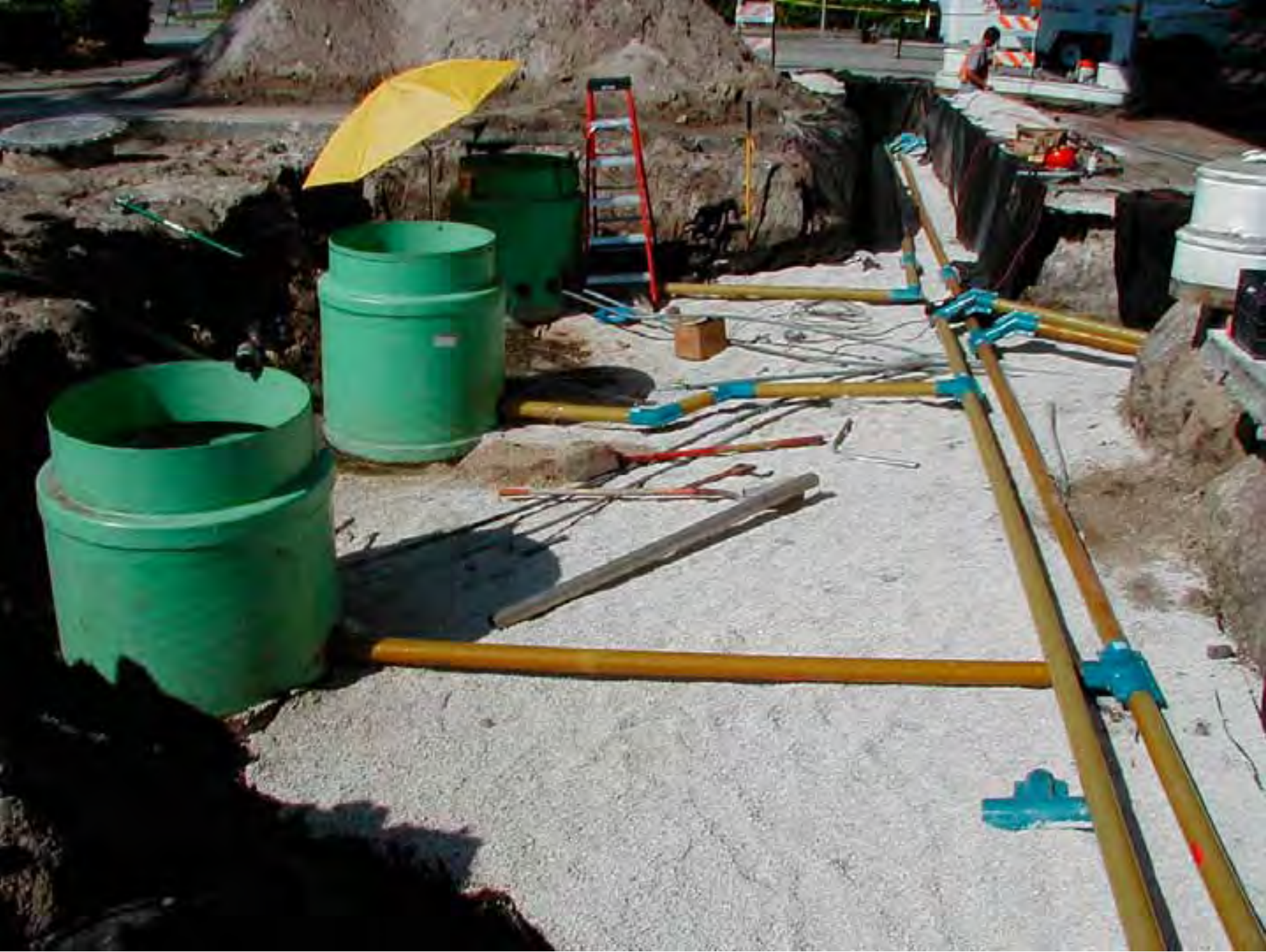

Rally
Regular
SUBS & SALADS
24 Hour
Car Wash
SELF
3
ADAMS











Bonita Springs

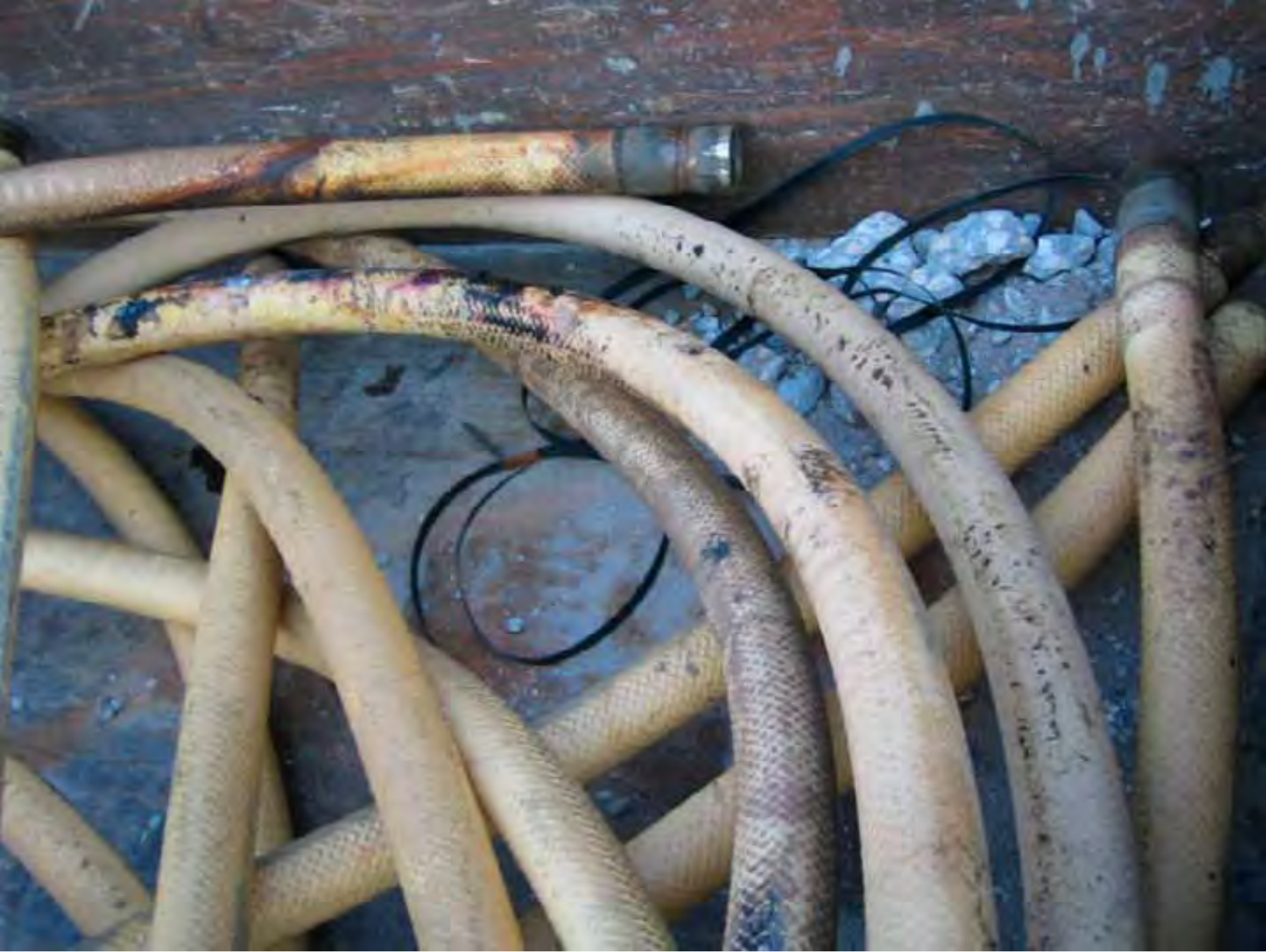
1997 Construction

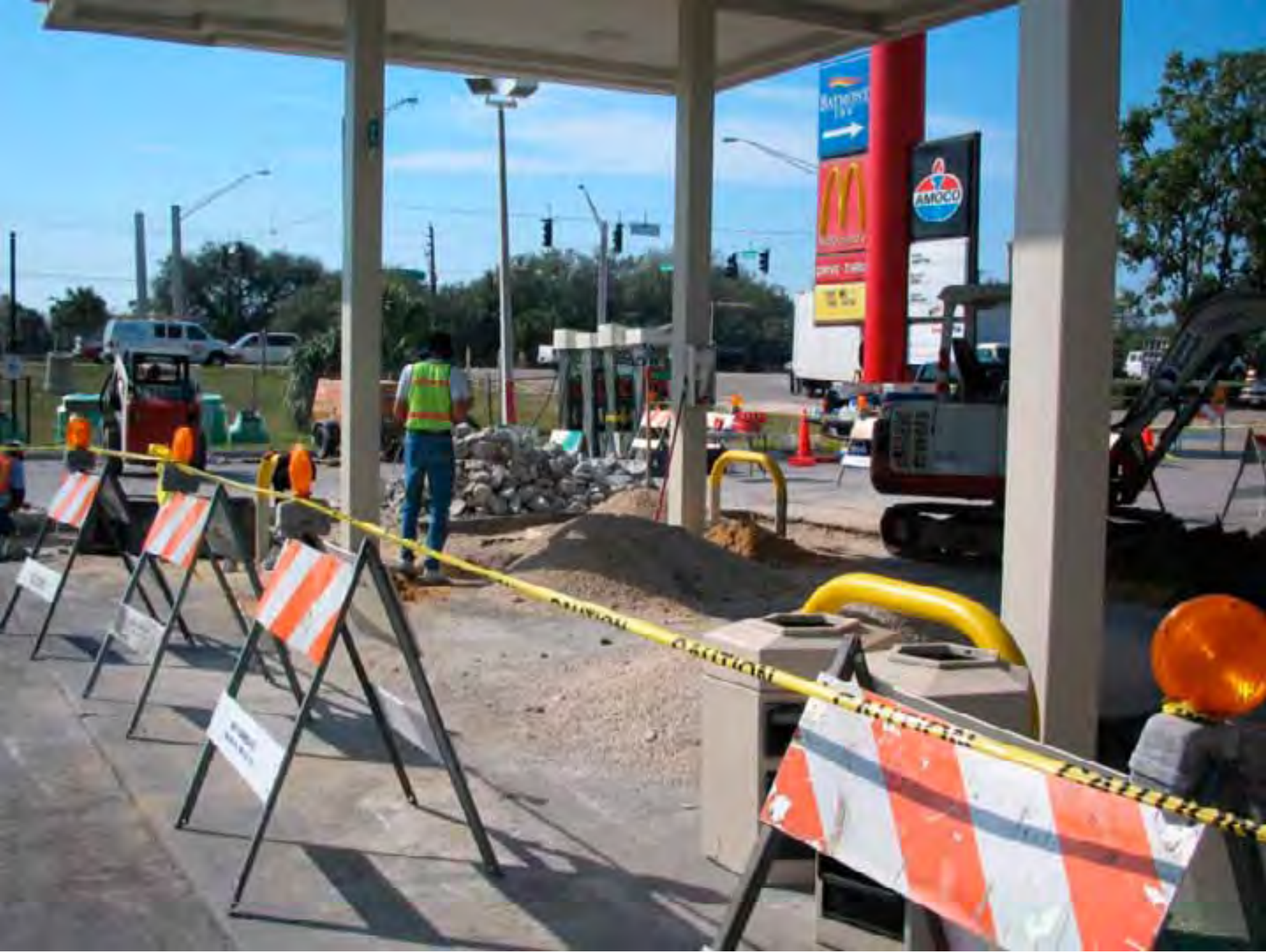
- The flexible piping manufacturer's warranty would have expired in another two years. The length of the warranty was not considered when the site was built. The main factor in the decision making was cost, applicability, use of DEP approved materials, and contractors – but not the warranty.
- Spent $65,000 to replace the flexible piping

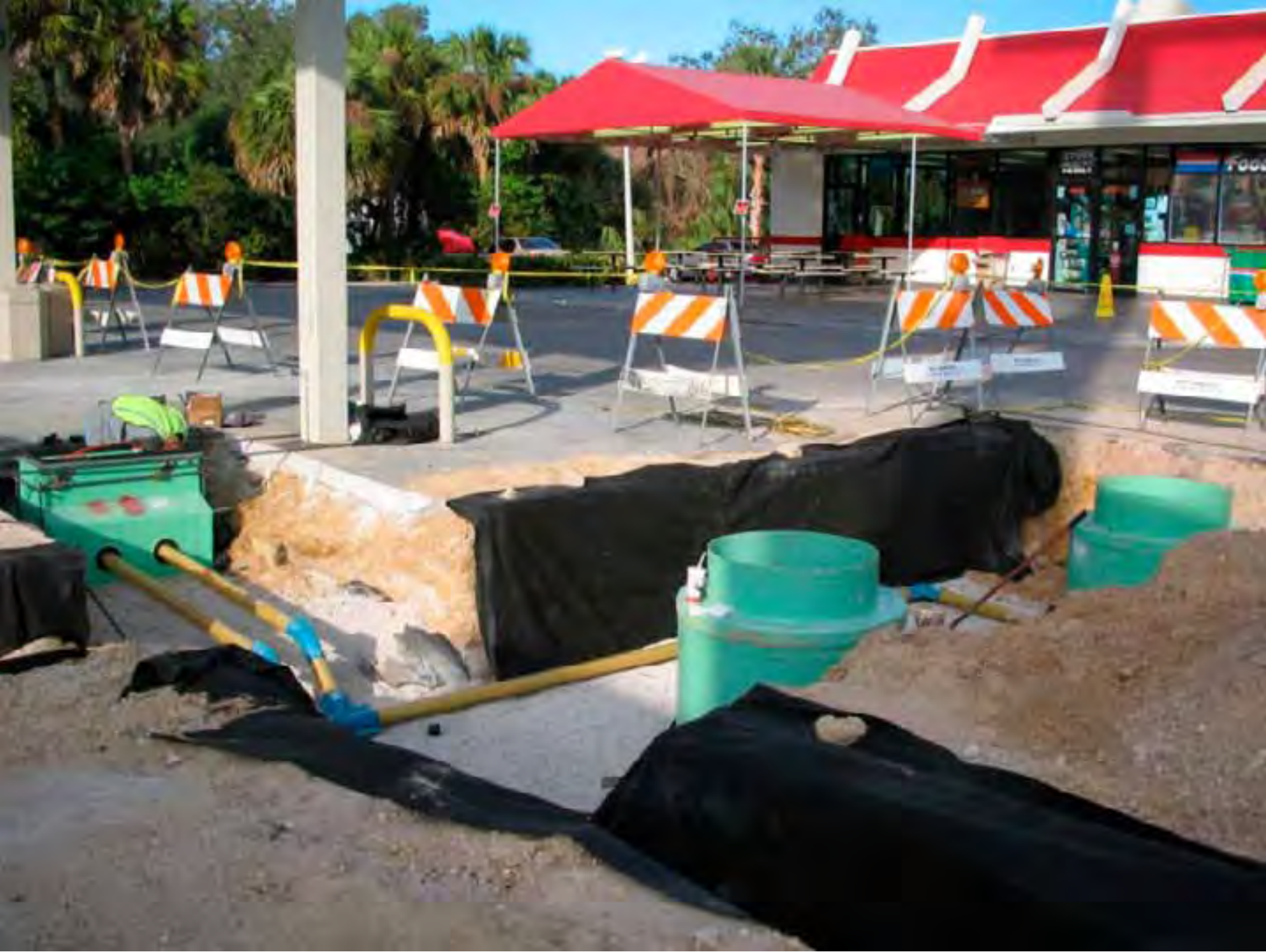
Regulators should remind o/o's to consider warranties. For example, if a manufacturer is approved to sell pipe with a 10-year warranty, then a process for re-certifying or replacing the pipe in year 10 or 11 should be designed and required.

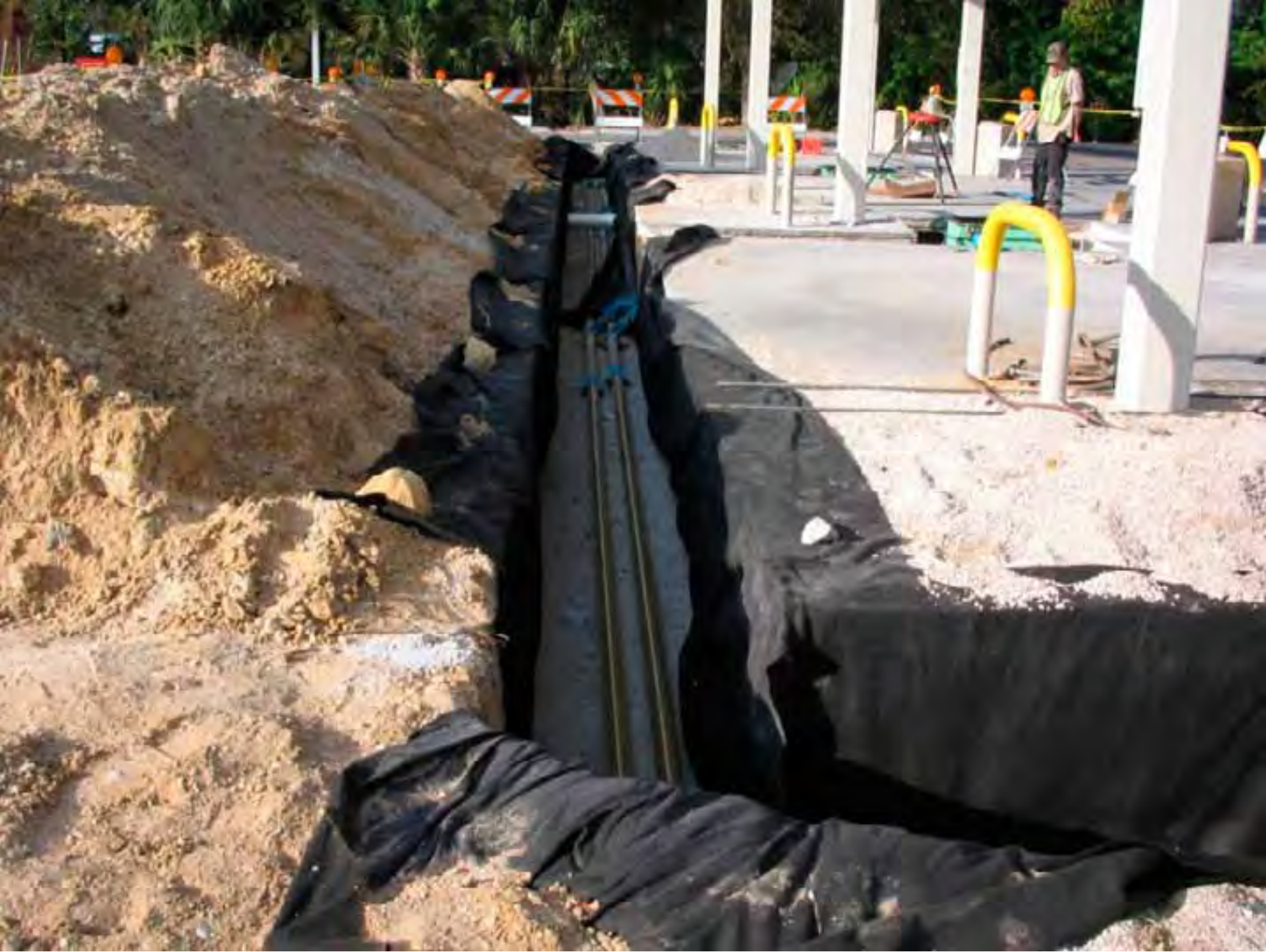
The process of contracting a petroleum installation is complicated; installers have more control over what equipment is used (by virtue of their product line). Rare for issue of warranty to be discussed during sale.

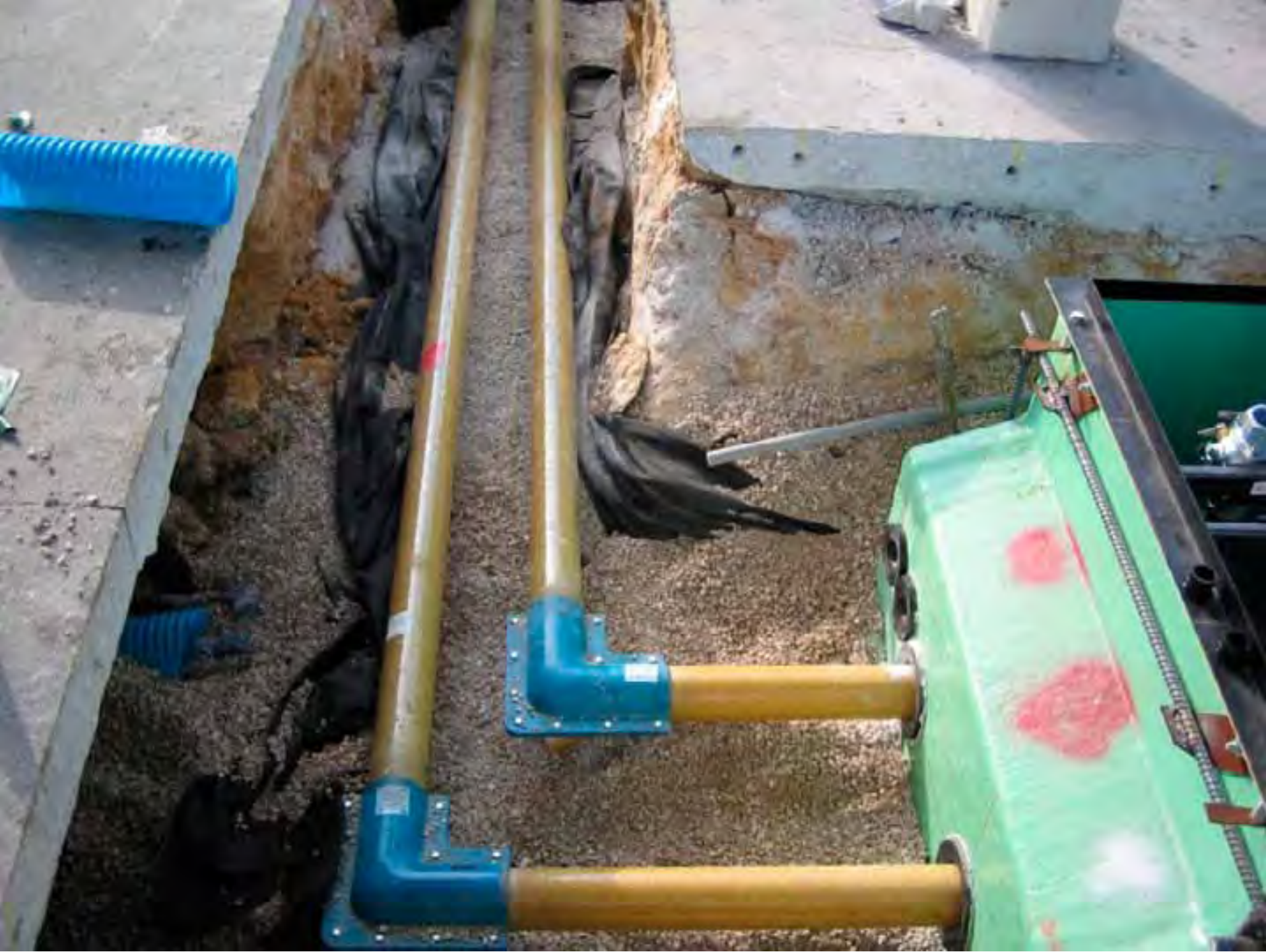
Installation Contractors need more regulation or oversight



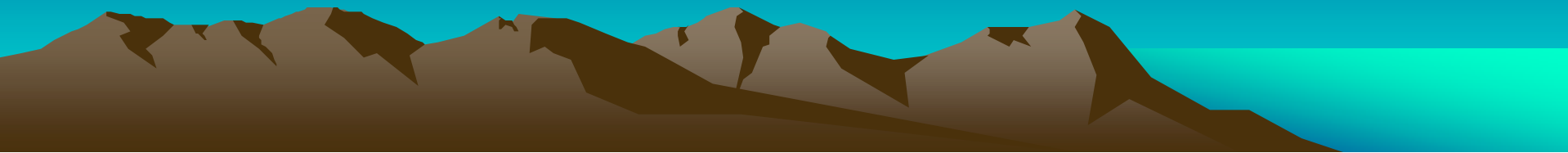

AMOCO
CAUTION

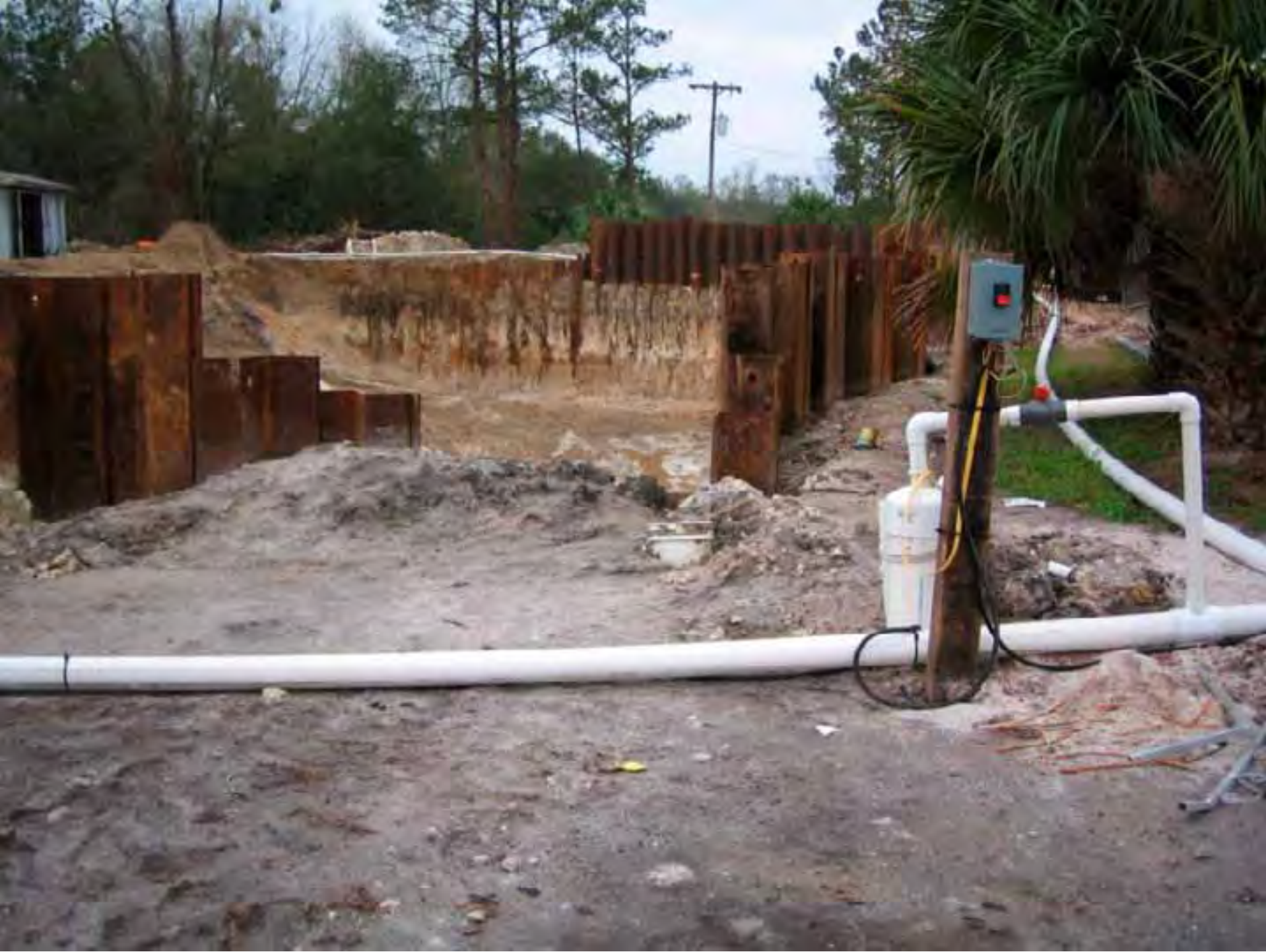


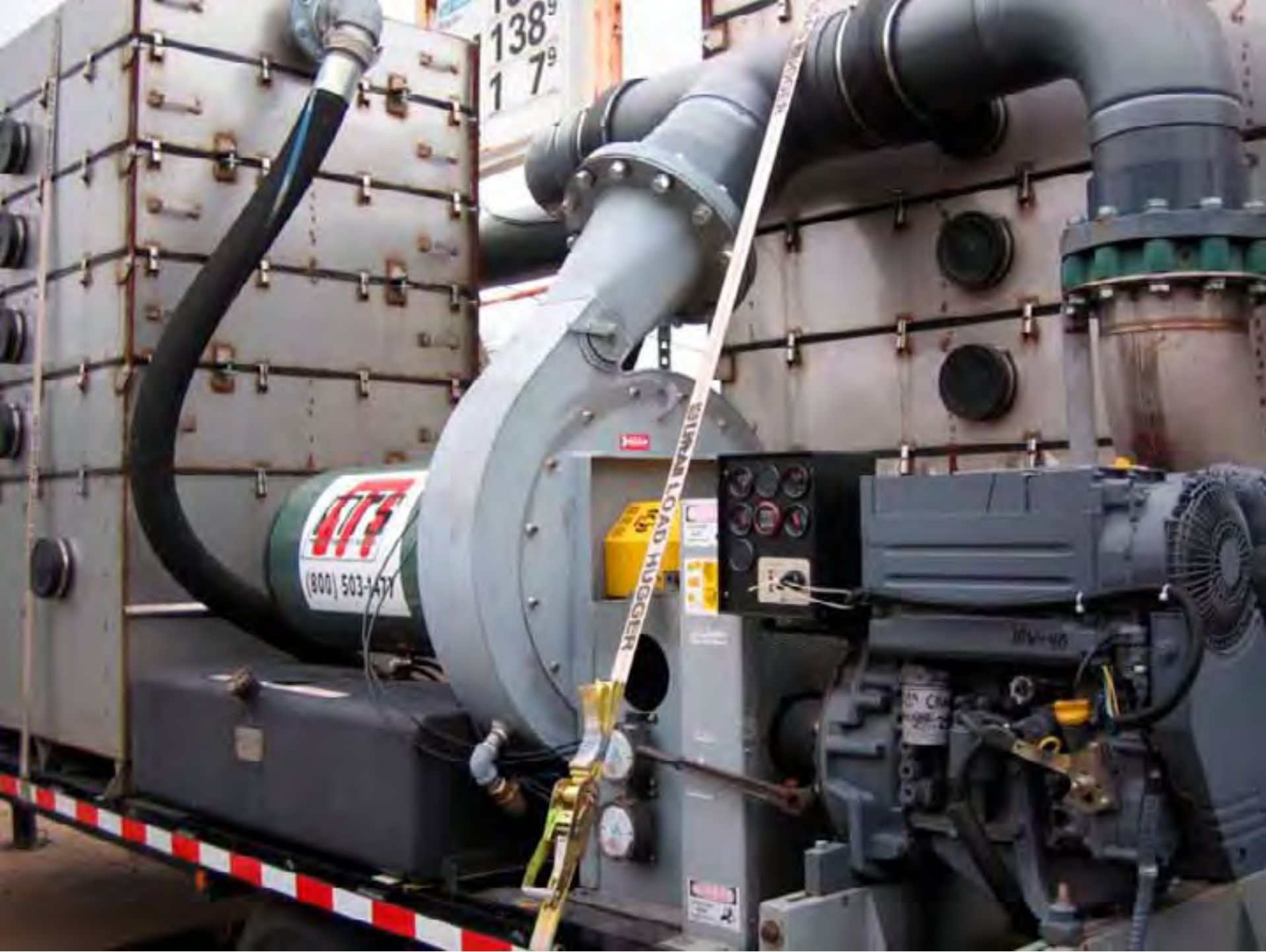




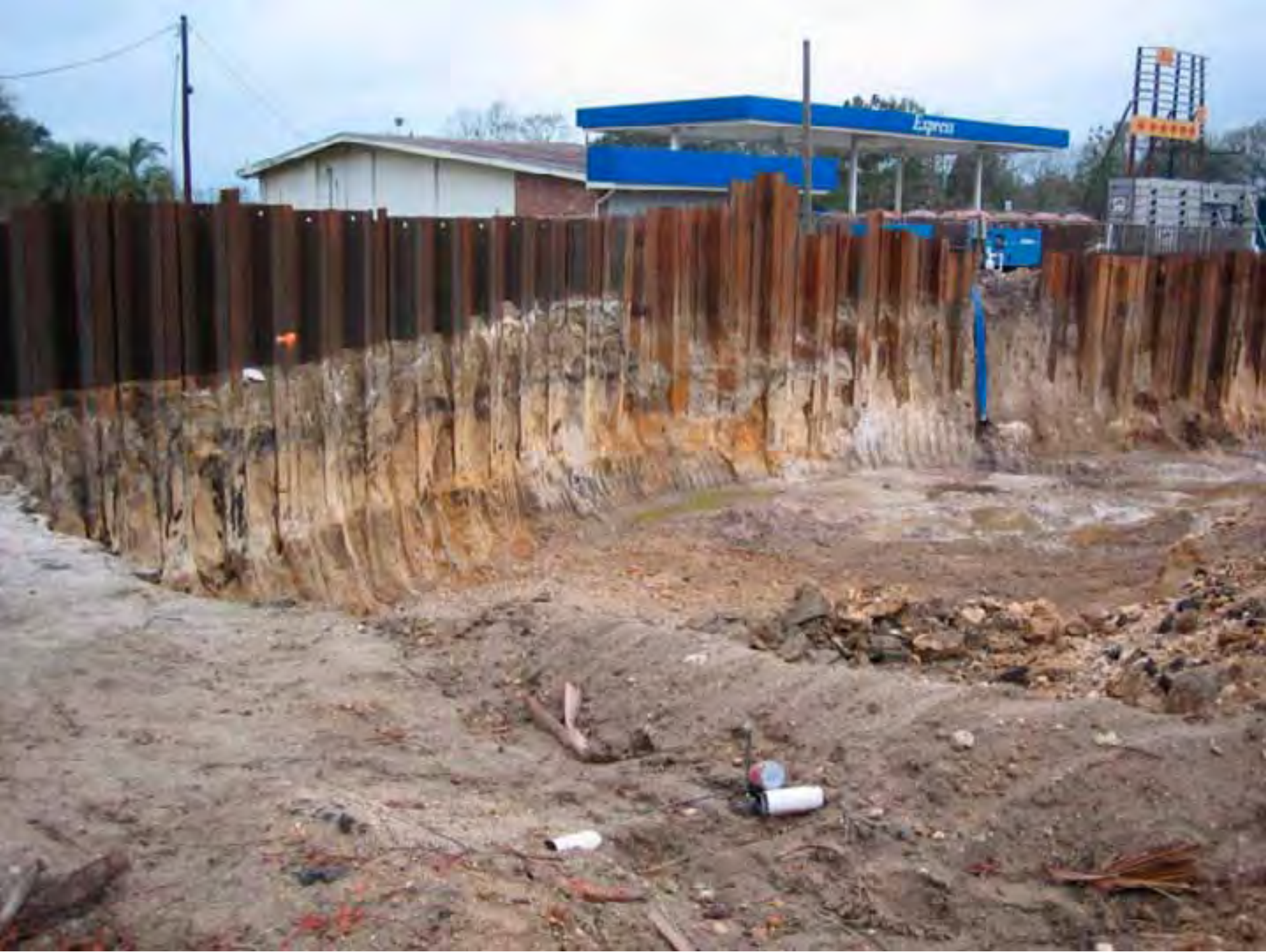
The Alternative






138
7
(800) 503-
HEAVY LOAD HUGGER


FUEL


Express

End Comment

- Applaud Florida DEP's implementation of scientific "Leak Autopsy" approach to investigating, documenting, tabulating, and analyzing leaks.
- Spill Containment has been shown to be a bigger problem than recognized by o/o's.
- The data supports the issues and industry shouldn't complain about changes in the regulations.
- Introduction of Incident Notification Form separated equipment problems from discharges.

Contact Information

R. Steven Miller, Project Manager
Downstream Data Corporation
2865 Executive Drive, Suite A
Clearwater, FL 33762
Office: 727-571-1444
Email: stevem@petrolsmart.com

Tank Forum: www.petrolsmart.com

Ernest M. Roggelin
Environmental Manager
Pinellas CHD-Engineering
Pollutant Storage Tank Program
4175 East Bay Dr, Suite 300
Clearwater, FL 33764

Mobile: 727-235-4005

Email: ernest_roggelin@doh.state.fl.us