



Gas Pipeline Safety Division Newsletter

TENNESSEE PUBLIC UTILITY
COMMISSION
502 Deaderick Street, 4th Floor
Nashville, Tennessee 37243
<https://www.tn.gov/tpuc/>

- February 2019 -

Director’s Corner by: Pete Hut, PE

Winston Churchill once said, “Give us the tools, and we will finish the job” (1941). One of our many goals for 2019 is to provide technical assistance to help you “finish the job.” When a GPSD safety inspection of your gas system results in a probable violation citation or recommendation, we will be available to provide technical assistance, if you want it. All you have to do is ask! We want to help you achieve and maintain compliance, so please don’t hesitate to let us know if you need help.

It is my pleasure to announce that Travis Aslinger has been appointed as the new GPSD Deputy Director. In his new role, he will manage the day to day scheduling of inspections/training and provide oversight of the TPUC Utility Inspectors. With his guidance, we look forward to a marked improvement in efficiency for the GSPD.

The main emphasis for inspections this year will be on regulator, relief, and odorization (RRO). It is important to observe all types and sizes of regulators used by each operator. Many low pressure regulators have not been inspected recently. This has become of higher importance following the incidents in Massachusetts. Operator qualification tasks will be reviewed and observed on all inspections.

We will also start paying closer attention to natural gas pipeline construction activities in the state. Operator qualification for construction-related tasks is required. Tasks include but are not limited to pressure testing, tapping, and purging. Current certification for welding and fusion must be available. Please send us notification when you plan a significant construction project.

As always, all of the inspection related forms we will be using can be found on the Tennessee Public Utility Commission web page (<https://www.tn.gov/tpuc/divisions/gas-pipeline-safety-division.html>). So, take a look at them and let us know if you have any questions. We expect to begin the RRO safety inspections sometime around the middle of this month.

Our phone lines and emails are always open if you have questions, concerns, or need assistance with any aspect of natural gas pipeline safety. **Let us be a tool toward your success in finishing the job.**

PHMSA’s New Plastic Pipe Rule

PHMSA’s final “Plastic Pipe Rule” was published in the Federal Register on November 20, 2018 and is effective as of January 22, 2019. The new rule includes many revisions and amendments to code requirements as related to plastic pipe and components. As a convenience to our operators, a summary of the more substantive and commonly applicable requirements of the new rule is hereby provided. Please contact your assigned Gas Pipeline Safety Division inspector if you have questions or require clarification.

- The rule amendments apply to new, repaired, and replaced pipelines as of the rule effective date. They are *not* retroactive.
- All plastic pipe and components (e.g., valves, fittings) must meet applicable listed specifications referenced in §192.7 and Appendix B to Part 192.
- ASTM D2513-12ae1 (“Standard Specification for PE Gas Pressure Pipe, Tubing, and Fittings”) has now replaced ASTM D2513-09a and ASTM D2513-99 in code.
- Written procedures must now be developed and implemented for the storage and handling of plastic pipe and associated components. (§192.67)
- The design factor (DF) in the design pressure equation for new polyethylene (PE) pipe installations has been increased from 0.32 to 0.40. (§192.121)
- Heat fusion (except for electrofusion) joints for PE pipe or components must now comply with ASTM F2620-12 (“Standard Practice for Heat Fusion Joining of Polyethylene Pipe and Fittings”). (§192.281(c) and §192.285(b)(2)(i))
- Only Category I mechanical fittings/joints may now be used. (§192.281(e)(3), (4); §192.283(b); §192.367(b)(3)).
- An operator may not install plastic pipe with a bend radius that is less than the minimum bend radius specified by the manufacturer for the diameter of the pipe being installed. (§192.313(d))
- New requirements for trenchless excavation (i.e., cross-boring) have been added. (§192.329 and §192.376)
- Newly installed, electrically isolated, metal alloy fittings in plastic pipelines must be cathodically protected unless current exemptions for use of such fittings are satisfied. CP monitoring is not required; however, the fittings must be maintained in accordance with the operator’s integrity management plan. (§192.455(g))
- The use of mechanical leak repair clamps is now prohibited as a permanent repair method on plastic gas distribution pipelines. (§192.720)
- Operators must maintain plastic pipe joining equipment in accordance with the manufacturer’s recommended practices or with written procedures that have been proven by test and experience to produce acceptable joints. (§192.756)

It should also be noted that previously proposed requirements in May 2015 for tracking and traceability recordkeeping as related to plastic pipe and components were not finalized. Final action on these proposals has been delayed by PHMSA until an unspecified later date.

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ELECTROFUSION ADVISORY UPDATE

At this time, there are no changes or updates to the *Electrofusion Advisory* sent in 2017. Gas Pipeline Safety accepts electrofusion as a safe and compliant method when performed in regards to PHMSA rules and manufacturer guidelines.

No definitive causes or correlations were determined or identified by Gas Pipeline Safety relating to the operation or performance of any electrofusion machine for incidents involved in the issuance of the advisory bulletin.

As with any mechanical or electrical device, the operator should monitor the device during performance for proper operation. All electrofusion machines should be properly calibrated, in accordance to manufacturer's procedures, and be inspected for proper working order prior to performing any electrofusion.

Operators are reminded to include abnormal operating conditions in procedures as instructed in the safety advisory. If any problems or concerns do arise with any electrofusion machine, operators are encouraged to contact Gas Pipeline Safety if assistance is needed.

LEAK DOCUMENTATION and YOUR DIMP

A substantial number of the DIMP inspections performed in 2018 revealed that some operators were not properly reporting their leaks on the PHMSA Annual Report form. In DIMP, the risks to an operator's system are identified based on the information from leak documentation and repairs. Leak documentation should include leak location (i.e. address, physical location), date found, and cause (if known). Cause of the leak is very important and should be carefully analyzed. This will allow DIMP to accurately predict actions needed to address possible outcomes.

PHMSA defines a leak as, "...an unintentional escape of gas from the pipeline." Do NOT report a leak determined to be non-hazardous and eliminated by lubrication, adjustment, or tightening. Also, leak grading (1, 2, and 3) is shown in the Tennessee Regulations for Gas Companies under 1220-04-05-.44 Gas Leak Classification, (<https://publications.tnsosfiles.com/rules/1220/1220-04/1220-04-05.20180427.pdf>). Some operators have determined the best way to maintain leak documentation is to put the leak information into specific categories based on the PHMSA Annual Report Form (DOT Form 7100.1-1) Part C. Leak calls determined not to be a leak were put in a separate "no leak folder." Each operator should determine their best method to record and maintain leak documentation.

Technical assistance and training for DIMP will be provided by TPUC in conjunction with the TGA beginning in May through June of this year. Please contact TGA to sign up for the one day training class offered in your area of the state. A stipend may be available to assist in defraying the cost for you to attend the class. It is recommended that your DIMP be updated and analyzed yearly for best results!! This training can assist you with this important task.

TENNESSEE PUBLIC UTILITY COMMISSION GAS PIPELINE SAFETY DIVISION 502 Deaderick Street, 4th Floor, Nashville TN 37243

Pete Hut PE, Director

cell 615.969.2042 office 615.770.6862
Pete.Hut@tn.gov

Travis Aslinger, Deputy Director

cell 615.202.9848 office 615.770.6864
Travis.Aslinger@tn.gov

— Inspectors —

Regina Brown

cell 615.587.9150 office 615.253.4086
Regina.A.Brown2@tn.gov

Shinisha Freeman

cell 615.308.1489 office 615.770.6860
Shinisha.Freeman@tn.gov

Diana Hawkins

cell 615.483.7071 office 615.770.0080
Diana.R.Hawkins@tn.gov

Phill Hendricks

cell 615.969.1768 office 615.770.6861
Phill.Hendricks@tn.gov

Tim Thompson

cell 615.306.9165 office 615.770.6865
Tim.Thompson@tn.gov

Ted Wilkinson PE

cell 615.476.4716 office 615.770.6859
Ted.Wilkinson@tn.gov

— Executive Administrative Assistant —

Vicky Nelson

office 615.770.6863 fax 615.741.2844
Vicky.Nelson@tn.gov



TPUC Gas Pipeline Safety Division: (L to R) Travis Aslinger, Ted Wilkinson, Tim Thompson, Diana Hawkins, Phill Hendricks, Shinisha Freeman, Pete Hut, Regina Brown, Vicky Nelson

HAZARDS of STATIC

While almost everyone would recognize ‘fire’ as a risk associated with natural gas, some of the potential ignition sources are not so obvious. Static electricity in particular is something that most people don’t think much about, and even when we do encounter it in an everyday context—getting a shock from a doorknob, or peeling freshly dried laundry apart—it seems at worst a harmless nuisance. **Mix static electricity with natural gas, though, and you’ve got the ingredients for a serious fire or explosion.**

Static electricity is usually generated when non-conductive materials rub against each other; whether it’s clothes tumbling in a dryer, or dust and scale particles blowing through a segment of polyethylene gas pipe, the mechanism is the same. During this contact, some electrons are rubbed off of one material (which acquires a positive charge) and onto another (which becomes negative). As more charge is developed, the stronger the potential for a discharge. The displaced electrons want to get back to a more neutral, balanced or grounded state.

It is especially critical to employ appropriate anti-static measures when performing operations that involve gas escaping from the pipe into the atmosphere, like leak repairs or line purging. Some activities such as using a squeeze-off tool will actually increase the static potential by creating additional friction in the gas flow. This is one reason to use squeeze-off tools in separate bell holes, away from a source of blowing gas. All tools should be grounded. The surface of the pipe itself should be thoroughly wetted with some kind of anti-static solution (such as soapy water) to dissipate static build-up. A natural fabric like burlap may be wetted and wrapped around the pipe to keep the solution in contact with the surface; the ends of the fabric should be either in direct contact with the soil or electrically connected via a grounding rod.

When purging significant volumes of gas, steel pipe should be used to discharge the vented gas; the turbulent gas flow at the mouth of the stack will quickly build up a charge on plastic pipe. For safety, it is also advisable to put discharge points well

above ground (e.g., above head height) to avoid creating combustible gas-air mixtures near the ground or inside an excavated pit.

Operators’ written procedures and employee OQ materials should reflect the risks associated with static discharges and address how to cope with them. 49 CFR §192.751 specifically requires operators to minimize the risk of accidental ignition when working with possible gas-air mixtures. Industry groups, government agencies, and product vendors provide a number of resources and guidance materials available to help you reduce static hazards. Don’t overlook help from your neighboring utilities, as well. Here are some useful starting points:

<https://www.aga.org/research/reports/purging-principles--practice/>

https://www.osha.gov/dts/hib/hib_data/hib19880930.html

http://www.kcc.state.ks.us/images/PDFs/pipeline/2013-seminar/controlling_static_electricity.pdf

<https://www.pe100plus.com/PE-Pipes/Technical-guidance/model/operation/electricity/suggestions-i285.html>



Please share this newsletter with anyone who might have an interest.

UUDP Reporting Requirements Reminder!

The Underground Utility Damage Prevention Act (65-31-102 and 65-31-111) requires operators whose utility facilities have been damaged to report the incident using the Damage Information Reporting Tool (DIRT).

The Act does not define “damage” as damage resulting from only a third party. Operators who have incurred a “first” party damage are also required to report the damage in DIRT.



Gas Pipeline Safety Division 2019 Inspection List

<u>Municipal</u>		<u>Municipal Cont.</u>		<u>Utility District Cont.</u>		<u>Liquefied Natural Gas</u>	
1 Adamsville (49)	Freeman	49 Munford (12697)	Hendricks	21 Poplar Grove (30669)	Thompson	1 Memphis (12342)	Brown
2 Athens (774)	Hawkins	50 Newbern (13430)	Hendricks	22 Powell Valley (32165)	Hendricks	2 Piedmont (15518)	Freeman
3 Bells (30618)	Brown	51 Obion (14040)	Hawkins	23 Powell-Clinch (15826)	Freeman	<u>MM Apartments/Condominiums</u>	
4 Bolivar (1616)	Wilkinson	52 Parsons (15140)	Brown	24 Sevier County (18192)	Wilkinson	1 Alexian Village (35982)	Thompson
5 Brownsville (1840)	Thompson	53 Pikeville (15560)	Wilkinson	25 Tipton County, First (19471)	Brown	2 Georgetown Condominiums	Wilkinson
6 Centerville (2176)	Wilkinson	54 Portland (15784)	Hendricks	26 Unicoi County (20030)	Hawkins	3 Green Hills Terrace (35986)	Hawkins
7 Clarksville (2460)	Hawkins	55 Pulaski (15966)	Hendricks	27 Volunteer Energy Co-op (32307)	Wilkinson	4 Johnson University (35989)	Brown
8 Clifton (972)	Hawkins	56 Red Boiling Springs (30643)	Brown	28 West Tennessee Public (22434)	Hendricks	5 Kirby Pines (35988)	Wilkinson
9 Collinwood (2556)	Brown	57 Ridgeway (17400)	Hawkins	<u>Private</u>		6 Meridian Apts., The (35983)	Hendricks
10 Cookeville (2764)	Wilkinson	58 Ripley (17470)	Brown	1 Atmos Bristol (20211)	Wilkinson	7 Pentad Crestview (35987)	Thompson
11 Covington (2853)	Thompson	59 Rockwood (17600)	Wilkinson	2 Atmos Franklin (20211)	Wilkinson	8 Pentad Hillview (35987)	Hendricks
12 Dickson (6716)	Wilkinson	60 Saint Joseph (30030)	Freeman	3 Atmos Johnson City (20211)	Brown	9 Pentad Parkway East (35987)	Freeman
13 Dunlap (3610)	Freeman	61 Savannah (18124)	Brown	4 Atmos Maryville (20211)	Wilkinson	<u>Intrastate Transmission</u>	
14 Dyersburg (3660)	Brown	62 Selmer (18176)	Hendricks	5 Atmos Morristown (20211)	Thompson	1 AGC Flat Glass (32188)	Freeman
15 Englewood (4480)	Brown	63 Smyrna (18368)	Freeman	6 Atmos Murfreesboro (20211)	Hawkins	2 Atlas Energy (38884)	Wilkinson
16 Etowah (4567)	Wilkinson	64 Somerville (18392)	Hawkins	7 Atmos Shelbyville (20211)	Hawkins	3 Atmos Energy (20211)	Thompson
17 Fayetteville (5110)	Thompson	65 South Fulton (18432)	Brown	8 Atmos Union City (20211)	Brown	4 B&W Pipeline (32659)	Hendricks
18 Friendship (5640)	Thompson	66 Springfield (18591)	Wilkinson	9 Chattanooga Gas (2288)	Wilkinson	5 Coalfield (31725)	Hawkins
19 Gallatin (6040)	Brown	67 Sweetwater (18768)	Hendricks	10 Counce (30863)	Wilkinson	7 Domtar (39133)	Brown
20 Gallaway (6035)	Freeman	68 Troy (19710)	Freeman	11 Forecco (30975)	Thompson	8 General Gas (39126)	Thompson
21 Halls (7025)	Hawkins	69 Waynesboro (22315)	Hawkins	12 Navitas Byrdstown (32647)	Thompson	9 Humphreys Co. U D (7655)	Freeman
22 Harriman (7090)	Freeman	<u>Utility District</u>		13 Navitas Jellico (32647)	Hendricks	10 Jefferson-Cocke Co. (9200)	Hawkins
23 Henderson (7215)	Hendricks	1 Bedford County (31694)	Brown	14 Piedmont (15518)	Hawkins	11 Magnum Hunter (32624)	Brown
24 Henning (7225)	Freeman	2 Citizens Gas (2412)	Thompson	<u>MM Housing Authority</u>		12 Memphis (12342)	Thompson
25 Hohenwald (7310)	Hendricks	3 Claiborne (31498)	Thompson	1 Columbia (35797)	Thompson	13 Piedmont (15518)	Thompson
26 Humboldt (7650)	Hendricks	4 Clay Gas (31315)	Hendricks	2 Huntingdon (35801)	Freeman	14 Renewco (32681)	Hawkins
27 Jackson (9040)	Hawkins	5 Crockett Public (2880)	Freeman	3 Jackson (35802)	Hendricks	15 Scepter (31987)	Hendricks
28 Jamestown (9100)	Brown	6 Elk River Public (4370)	Hawkins	4 Jefferson City (35803)	Brown	16 Smelter (39343)	Hendricks
29 Knoxville (10310)	Thompson	7 Gibson County (6370)	Brown	5 Lebanon (35804)	Wilkinson	<u>GAS PIPELINE SAFETY DIVISION</u>	
30 Lafayette (11064)	Thompson	8 Hardeman-Fayette (7060)	Wilkinson	6 Lexington (39665)	Hendricks	Pete Hut PE, Director - 615.969.2042	
31 Lawrenceburg (11296)	Brown	9 Hawkins County (7170)	Thompson	7 Livingston (35805)	Wilkinson	Travis Aslinger, Deputy Director - 615.202.9848	
32 Lebanon (11336)	Freeman	10 Horton Highway (7365)	Hendricks	8 Martin (35806)	Hendricks	<u>Inspectors</u>	
33 Lenoir City (11376)	Hawkins	11 Humphreys County (7655)	Freeman	9 McKenzie (35973)	Freeman	Regina Brown	615.587.9150
34 Lewisburg (11416)	Wilkinson	12 Jefferson-Cocke County (9200)	Hawkins	10 Memphis (35974)	Hendricks	Shinisha Freeman	615.308.1489
35 Lexington (11448)	Wilkinson	13 Lake County (11120)	Brown	11 Metro Dev. & Housing (35975)	Brown	Diana Hawkins	615.583.7071
36 Linden (11520)	Freeman	14 Middle TN Crossville (12438)	Wilkinson	12 Newbern (39664)	Freeman	Phill Hendricks	615.969.1768
37 Livingston (11600)	Hendricks	15 Middle TN Dayton (12438)	Thompson	13 Parsons-Decaturville (35977)	Thompson	Tim Thompson	615.306.9165
38 Lobelville (11624)	Freeman	16 Middle TN McMinnville (12438)	Brown	14 Portland (35978)	Hendricks	Ted Wilkinson PE	615.476.4716
39 Loretto (11752)	Hawkins	17 Middle TN Smithville (12438)	Freeman	15 Ripley (35990)	Freeman	Executive Administrative Assistant	
40 Loudon (11776)	Brown	18 Middle TN Sparta (12438)	Hawkins	16 South Pittsburg (35979)	Hawkins	Wicky Nelson, 615.770.6863	
41 Madisonville (12042)	Freeman	19 Oak Ridge (14010)	Thompson	17 Tullahoma (35980)	Freeman	GPSD Fax 615.741.1228	
42 Marion (12168)	Thompson	20 Paris-Henry County (15126)	Wilkinson	18 Union City (35981)	Freeman	TPUC 800.342.8359 or 615.741.2904	
43 Martin (12204)	Hendricks					https://www.tn.gov/tpuc.html	
44 Mason (12222)	Freeman						
45 Maury City (12234)	Hawkins						
46 Memphis (12342)	Thompson						
47 Middleton (39121)	Wilkinson						
48 Mount Pleasant (25126)	Thompson						