



Corrosion Solutions, LLC
858 Wellington Way
Collierville, TN 3801
Office 901-491-856

November 23, 2021

City of Drakesboro
Honorable Mike Jones
212 Mose Rager Blvd.
Drakesboro, KY 42337

Dear Mayor Jones,

My return visit from November 15, 2021 through November 18, 2021 focused on identifying and repairing gas system shorts. This investigation started at the newly installed impressed current system on Hwy 179 and continued south to Beechmont and west to Beech Creek. There was a total of eleven gas system shorts identified and repaired with the exception of one. This one is identified below and is to be repaired at a later date.

Findings:

- 14 Kirtley Lane, gas meter shorted due to faulty meter swivel.
- 2019 Beech Creek Browder Road, gas meter shorted due to faulty meter swivel.
- 3515 Merle Travis Hwy, gas meter shorted due to faulty meter swivel.
- 84 White Drive, gas meter shorted due to faulty meter swivel.
- 3599 Merle Travis Hwy, gas meter shorted due to faulty meter swivel.
- 3091 Merle Travis Hwy, gas meter shorted due to faulty meter swivel.
- 3721 Hwy 179, gas meter shorted due to faulty meter swivel.
- 2228 Hwy 179, gas meter shorted due to faulty meter swivel.
- 2785 Merle Travis Hwy, gas meter shorted due to faulty meter swivel. To be repaired later.
- 68 Joe Davis Lane, gas meter shorted due to faulty meter swivel.
- 947 Beech Creek Browder Road, gas meter shorted due to faulty meter swivel.
- Merle Travis cased crossing at Hazel Creek Road, suspected shorted casing. Detailed test to verify will be conducted my next visit.
- Purchase Meter Station, gas piping it shorted to security fence and support structure. These issues where shown to Brian and RussMar representative Abe. Control stainless steel tubing fittings should be replaced with insulated (dielectric) fittings as they leave gas piping. Support structure should be isolated from gas piping with heavy-duty rubber and industrial high strength zip ties or equivalent. (See attached pictures)
- Arnold Drive Regulator Station is isolated from the high pressure main as the pipe-to-soil potential represents. Recommend installing a 17# HI-POTENTIAL magnesium anode to correct this issue.

Of the thirty-two test points surveyed by RussMar September 23, 2021, six locations were non-compliant. Our goal this visit was to bring these locations into compliance, that goal was achieved with the exception of one. That one is an isolated regulator station described above with corrective measures explained.

The six locations are identified with before and after potentials below.

- | | | |
|--------------------------------------|---------------|----------|
| • Beechmont Old National Bank | -791mv/-902mv | |
| • Beechmont Test Station | -776mv/-877mv | |
| • Arnold Drive Regulator Station | -448mv/-493mv | Isolated |
| • Union Ridge Regulator Station | -803mv/-865mv | |
| • Texas Gas Purchase Station | -794mv/-863mv | |
| • Beech Creek Browder & Merle Travis | -769mv/-890mv | |

Future Plans

- Investigate the area between Bolton and Myers Chapel and west to the purchase station.
- Investigate the area to include Drakesboro, south to Hwy 179 impressed current system.
- Investigate the area from Drakesboro west to the Ebenezer community.
- Implement a new cathodic protection survey for the Drakesboro natural gas system and evaluate the data for effectiveness.

Thank you for the opportunity to provide services to the City of Drakesboro natural gas system. If you have any questions contact me at 901-491-8563.

Regards,

William D. Tucker

William D. Tucker
Corrosion Solutions, LLC
Senior Corrosion Technologist
NACE #3971





Replace with insulated fitting.

SIGHT FLOW	
TYPE NO.	1/4"
FLUID RATE	1/4"
FLUID TYPE	1/4"
FLUID VISC.	1/4"
FLUID TEMP.	1/4"
FLUID PRESS.	1/4"
FLUID DENSITY	1/4"
FLUID VISC.	1/4"
FLUID TEMP.	1/4"
FLUID PRESS.	1/4"
FLUID DENSITY	1/4"



Remove clamp, install rubber for isolation then secure with industrial zip tie.



Remove clamp, install rubber for isolation then secure with industrial zip tie.