	LOCATE WIRE AND OTHER LOCATE TECHNOLOGY		GOM 30.10.50
Department:	Operations, Engineering	Date Approved:	11-4-2020
Approved by:	Frank Bennett, Chris Clancy, Dan Huegel	Date Effective:	1-11-2021
Revision Number:	8		

Purpose

The purpose of this procedure is to establish guidelines for the installation of locate wire and other locate technology to allow plastic pipe to be located after installation.

Scope

This procedure applies to locate wire installed for all plastic pipe installation methods. This procedure also applies to other locate technology (marker balls and near surface markers) for both plastic and steel applications as listed in Table 30.10.50-1.

Responsibilities

A. Qualified individuals are responsible for installing locate wire and other locate technology in accordance with these procedures.
B. Operations Supervision and Field Personnel are responsible for overseeing the installation of locate wire and other locate technology.
C. This procedure shall be reviewed and approved by the following:
    a. Director Engineering and Technical Services
    b. Director(s) Operations

Equipment

Qualified individuals installing locate wire may require the following equipment:

A. Exothermic (Cad) Weld Equipment

Operator Qualifications and Training

The following Covered Task may be needed in association with installing or replacing a section of locate wire:

Task #113 – Replacing a section of existing locate wire

References

Provide a list of regulatory and industry standards that are applicable to the procedure Use the format in the following examples:

A. Federal Regulations

49 CFR § 192.321 Installation of plastic pipe

Procedures

1.0 General

CADWELD – A process to connect wire to either steel or cast iron pipe using the ignition of a weld metal (a mixture of copper oxide and aluminum) to perform an exothermic reaction to produce molten copper, resulting in a permanent, high conductivity connection.

CCS Wire – Copper Clad Steel Wire, with a steel core for strength and copper cladding for conductivity to enhance the locate signal.

HMW Coating - High Molecular Weight polyethylene used in wire coating provides outstanding dielectric strength with excellent resistance against moisture, abrasion, and corrosive chemicals.

Marker Ball (See Figure 30.10.50-1) - The ball marker is 4" in diameter, has a yellow plastic case for gas applications and is buried over key facilities during construction or maintenance and can be detected up to 5 Ft. in depth. Later, the marker is easily and accurately located using a locator instrument. The locator transmits a signal to the buried marker. The marker returns the signal to the locator, indicating the marker's exact position.

Figure 30.10.50-1 - 3M Marker Ball

Near Surface Marker (See Figure 30.10.50-2) - The near-surface marker identifies underground facilities at distances of up to 3 Ft. from marker to locator. It is three inches long and 0.78 inches in diameter. Markers provide accurate identification of buried facilities, helping to reduce the risk of accidentally excavating other buried facilities. The near-surface markers have a small cylindrical shape that allows for easy installation after the facility has been buried. Its size and shape allow for easy installation in asphalt, concrete or dirt, without extensive digging or drilling.

Stick (Drive-In) Anode – 1-1/2 pound magnesium anode that can be driven into the ground with a hammer.

Figure 30.10.50-2 - 3M Near Surface

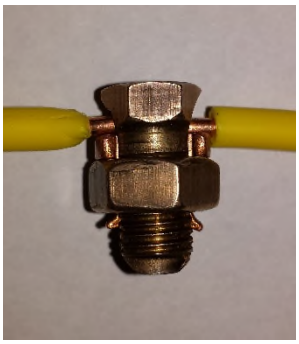
Stub Service – A short service installed for convenience when a customer's building that requires gas service has not been constructed or has been demolished, terminated underground (no riser or meter shall be connected) behind the edge of paving in order to conveniently extend the service to a completed building at a later date.

2.0 Locate Wire Installation

Locate Wire Connector Enclosure

Catalog Number 4909081

Split Bolt Connector



Catalog Number 4909016

New Service Line to Plastic Main Connection

Catalog Number 4909052

Figure 30.10.50-6 Tracer Wire Splice Connections

3.0 Wireless Locate Ball Markers and Near Surface Markers

3.1 First Step Locate ball markers and near surface markers supplement the ability to accurately locate underground facilities. They are used to identify specific locations, valves, dead ends or sections of UGI underground pipelines. Follow the manufacturer's installation instructions when installing these markers. In addition, complete form 30.10.50-1 for the installation of each marker except for those associated with valves and service lines. These forms will be used to record marker locations throughout the system.

3.2 Table 30.10.50-1 shows potential uses for marker balls or near surface markers for new installations or new excavations. The required applications shall have ball markers or near surface markers installed as indicated, and the suggested locations should be considered to have either marker balls or near surface markers. Signal reception should be confirmed at the time of installation for all ball and near surface markers.