

Operation and Maintenance Manual

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Introduction

- My discussion today concerns current auditing expectations of written processes and procedures that should exist within the O&M manual - both old and new.
- I currently work for the Railroad Commission of Texas (*TRRC*) Pipeline Safety and have now for 5 years.
- Early-on in my career I have 3 years of refinery operations experience.
- Some 30 years of experience in the pipeline industry through project management, technical engineering and regulatory compliance.

Topics of Discussion

- Operation and Maintenance (O&M) manual requirements in general
- Some discussions on PHMSA requirements
- And to a greater degree; discussion concerning TRRC requirements
- New written procedures and process for some of the latest rule additions

Topic One

- PHMSA requirements that are common for both Gas and Liquid systems
- Areas within these requirements that sometimes need to be updated and are often overlooked
- New and upcoming PHMSA rules and regulations and how they will affect the O&M manuals

Topic One (*Continued*)

- **Common requirements that to both Gas (192) and Liquid (195), should be addressed - just to name a few:**
 - **Underwater inspection and reburial of pipelines in the Gulf of Mexico and its inlets**
 - **Damage prevention program**
 - **Emergency plans**
 - **Public awareness**
 - **Line markers**
 - **Record keeping**
 - **Pipeline Repairs**
 - **Over pressure protection**
 - **Maintenance of valves, overpressure protection, etc.**
 - **Corrosion control**

Topic One (*Continued*)

- **Common areas that sometimes need work:**
 - Little, or no supporting documentation.
 - Emergency plans are not always up to date (*phone numbers, contacts, etc.*).
 - Maximum operating, or maximum allowable operating pressures are not always well documented.
 - Public awareness programs are left to consultants, or vendors.
 - Line markers
 - Pipeline repairs are not always well documented, *with exception of those done within an IMP process.*
 - Normal repair criteria – what, when and how
 - Over pressure protection – Sized or set properly to actually protect for long term overpressure situations.
 - Maintenance records do not always support, or accurately detail all necessary repair work that is done.

Topic One (*Continued*)

- **New rules and requirements:**
 - Relatively new corrosion requirements:
 - Some are not reading and passing-on all that is in NACE RP-0169-2002
 - Damage prevention requirements.
 - References to Common Ground Alliance would be nice to see.
 - Being a member of a One-Call program is not enough
 - Public Awareness.
 - Vendor or Consultant programs – not enough left to field personnel
 - New gas distribution integrity management program (*DIMP*).
 - Jury is still out

Topic Two

- **TRRC rules and regulations will sometimes go a little above and beyond PHMSA's minimum requirements**
- **This would include incident reporting, the new DIMP, the damage prevention, integrity management, etc.**
- **The additional TRRC requirements discussed today are for both Gas and Liquids Systems**

Topic Two (*Continued*)

- As a partner to the Federal Pipeline Hazardous Material Safety Administration (**PHMSA**), the Railroad Commission of Texas (**TRRC**) has adopted, and uses **49 CFR Part 192** and **195** rules and regulations as a baseline to work from.
- where it is deemed necessary the **TRRC** will sometimes enhanced these requirements.
- Do not forget to include in the O&M manual **TRRC** requirements for reporting incidents. These requirements are different for crude oil, for example, *do not forget our Oil and Gas division*.
- Reporting an incident to **PHMSA** is not enough, the O&M manual should have a written process that includes reporting to **TRRC**.

Topic Two (*Continued*)

- Concerning intrastate pipelines, some of the most recent rule enhancements are as follows:
 - Integrity management includes the entire pipeline system, however, if the operator chooses, they can use their O&M manual as a basis to work from for scheduling repairs and repair methods outside of high consequence areas (HCA). Within an HCA, the appropriate PHMSA rules will be followed.
 - Outside of an HCA the operator cannot use external corrosion direct assessment (ECDA) without approval of the TRRC.

Topic Two (*Continued*)

TRRC rules allows the operator to choose between either a risk-based or a prescriptive plan for scheduling integrity assessment intervals, and allows for exclusion of some systems. However, all of this needs to be well documented in the operators O&M manual.

Topic Two (*Continued*)

Title 16, Texas Administrative Code, Part 1, Chapter 18 Underground Pipeline Damage is an extension, *of sort*, of the Damage Prevention rule of PHMSA. The operators O&M manual will be expected to include the following:

- **Reporting Pipeline Damages**
- **Reporting No Damage Alleged Non-Compliance Activities**
- **A reference to the Common Ground Alliance (CGA) Best Practice version 4.0 would probably get a “Brownie Point”.**

Topic Two (*Continued*)

The new TRRC integrity management program for gas distribution operators begins with a little different Leak Survey Program

- **The operators O&M manual is expected to see the leak grading and repair particulars spelled out as well as the mandatory removal and replacement program for couplings.**
- **The O&M manual is expected to spell out the operators risk-based leak survey program and whether or not it is to be used in lieu of a prescriptive program.**
- **Report documents and instruction for filling them out should also be included in the O&M manual.**

Topic Three

- Audit or inspection check lists
- Some discussion of PHMSA's
- The possibility of one being developed for TRRC's expectation

Topic Three (*Continued*)

- On recent occasions TRRC has started using the PHMSA inspection checklist along with ours, and have found it to be a good means of keeping up the an operator's O&M manual. We would expect their check list to change soon to reflect some of the new rules recently implemented.
- Some discussion has occurred concerning the possibility of adding certain O&M manual items to TRRC's checklist to ensure all is included in our newest rule additions.

Real Life

- Most pipeline operators know what is needed to safely operate a pipeline system
- Sometimes with all that is expected (*regulatory-wise*) some things can fall between the cracks
- If a written process or procedure does not exist, and a person is sometimes left to remember on their own, some things get missed.
- If it is not written it will not always get done correctly or in a timely manner

What This Means

- During safety evaluations or inspections we have seen things that were expected to be done, but were not. There are many reasons this happens, but generally it is because the process was take for granted and not written for someone to follow.
- If it is written down, it must be important.
- If it is written down in detail, it takes on even more importance.

Next Steps

- Reviewing O&M manuals on an annual basis is a minimum requirement
- An inspector would like to see where this has happened more often
- Certainly, more emphasis should be put on reviewing sections of the O&M manual that deal with new rules and requirements as they are developed