COMMUNICATION BETWEEN OFFICE AND FIELD

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INTRODUCTION

The gas industry today is constantly changing, with increasing demands on office and field personnel. Initially there was FERC (Federal Energy Regulatory Commission) Order 636 that forced the gas measurement departments into the electronic age. Next came corporate slashing that has required the gas measurement groups to perform at the same level of integrity in the measurement of gas with reductions in staff of up to 60%. Then GISB (Gas Industry Standards Board) made its way into the gas measurement department through proposed standardization. Today hourly processing requirements with a daily a closing schedule is knocking on the door and has already arrived at some locations. To meet these demands timely communication between the office and field employees is required. Both of these locations (field and office) have been impacted with increased workloads and constant upgrades in equipment and software. With all of this occurring, it is very easy to overlook one of the key links to accurate measurement and that is communication.

By the time that a gas day has started at a meter site on a chart recorder or an RTU (Remote Transmitting Unit) until the volume has been calculated or verified in the corporate office, anywhere from 1 to 35 days can pass with as many as 8 to 10 people handling each individual volume record. With this many people involved covering that span of time, communication becomes a vital part of the measurement process.

TRAINING

In order to communicate effectively you must first have an understanding about what you are talking about. Training has become even more critical with the consolidations and heavy turnover that numerous production and pipeline companies have experienced over the last few years.

Below is a list of terms that you must be familiar with to communicate effectively between the office and field:

1. Plate Size
2. Tube ID
3. Beta Ratio
4. Flange Taps vs. Pipe Taps
5. Mercury/Dry/EFM Meters
6. Differential Pressure Range
7. Static Pressure Range
8. Temperature Range
9. Actual/Square Root/Percentage Charts
10. Positive Displacement/Turbine/Ultrasonic Meters
11. Positive Displacement/Turbine/Ultrasonic Meter Multipliers
12. Mcf/MMcf/MMbtu/Dth
13. Absolute vs. Gauge Pressure
14. Specific Gravity
15. BTU (British Thermal Unit)
16. Inerts–CO2 and N2
17. Current AGA Standards
18. Current Industry Standards

There have been numerous occasions that a clear understanding of these areas had not been attained, thereby causing many costly mistakes and corrections in the measurement department. One example of this error relates to flange taps and pipe taps coded incorrectly in a measurement system. This error can cause and error resulting in an 8% adjustment to the volume due to lack of training in the gas measurement area.

WHO IS RESPONSIBLE

Who is responsible, is a battle today that is being fought with a mediocre success rate. I find it more difficult each year to keep track of the person who is responsible to answer specific questions regarding key areas in the work force today. The best way to solve this problem is to develop your own list of names for each specific area.

Who handles:

Gas Quality Sampling Issues–Lab, Measurement Technicians

New Station Turn-Ons–Regulatory Affairs, Marketing Operations, Marketing Sales, Gas Control, Engineering

Chart Meter Problems–Area Technicians or Chart Changer

EFM Meter Problems–Area Technician

EFM Meter Communication Problems–Area Technician or Communications Technician

Ordering Charts

Etc..

CHARTS

The best way to communicate on chart based stations is by using the chart itself. Most questions that originate from the office could be answered before they are asked by the measurement technician and/or chart changer by simply detailing key events of what happened on the chart.

1. Back-Flow situations should always be noted around the hub of the chart.
2. Liquid in the meter should also be noted around the hub or under remarks on the back of the chart.
3. Whenever a meter is zeroed or tested and the pens are recording low or high this should be noted under the remark's section on the back of the chart.
4. Low flow or no flow should be noted in the remark's section especially if this is a station that may be hard to distinguish between the two. There is a significant difference between low flow and zero flow.
5. Actual chart changing time (placed and removed) should be recorded on the chart.
6. Any clock problems (slow, fast, stopped) or hub problems (loose, too tight) should be noted under remarks.

EFM

Electronic Flow Measurement (EFM) requires almost immediate response for resolving measurement issues between both the office and field locations. Typically the volume received on an hourly basis from the field RTU is being posted on the internet for customers to review**.** Each company should have their own method in place to resolve the issue and minimize the time effect to all internal and external customers. One key area to identify EFM problems is the review of an alarm report that summarizes errors and potential problems that have occurred during the previous and current gas day for all RTU's, transmitters, and all critical volume calculation components. You must rely on the raw data, audit trails, prior station history, check measurement, and information from the measurement technician in order to troubleshoot potential problems. Trying to communicate between the field and office can be difficult at times even with the many modes of communication that exist between between the office phone, cell phone, pager, email and fax. Timely communication is required in this area to meet the demands of verified measurement data on a daily basis. Regular mail is really a slow process when trying to resolve any problems with EFM. The telephone and E-Mail will be discussed in greater detail in the next section. The trend in the industry today is to rely on a rules based software package to validate all of the raw electronic measured data that is received from the RTU's in the field. Only the meters that due not pass the validation checks are individually reviewed for accuracy.

TELEPHONE

Telephone communication has been a source of constant irritation between the staff in the office and field locations. Continually talking to someone's voice-mail, to finding someone just to "Answer" the phone has caused the telephone to move from being one of the most instrumental forms of communication to being an area of complete frustration. One key factor in using the phone is to keep track of the best time to call the person you are trying to reach, especially someone that you call frequently, and set that time aside to reach them daily or weekly.

Most field employees are more easily reached early in the morning or later in the afternoon at the field office. It is also worth noting, the typical lunch and break times for office employees if they are taken at regularly scheduled times.

Although the voice-mail systems can be rather impersonal, they are an excellent tool to exchange information back and forth. Sometimes it takes several days before you can reach the individual in person. But, you can in effect communicate back and forth by leaving voice-mail messages with detailed information included until you get the problem resolved.

WRITTEN DOCUMENTATION

The written document is probably the oldest and one of the most effective ways to communicate. Letters can always be archived and referred to at a later date. Written documentation is a necessity for audit purposes. The only problem is that you generally find out that you need the documentation after it is already too late. Planning ahead is essential and knowing what key areas need to be documented for archiving purposes will be time well spent. This process is really too slow today for a large percentage of internal correspondence due to distribution and mail time.

ELECTRONIC - MAIL (E-MAIL)

Electronic mail has become one of the key forms of communication of today. These mail systems are sometimes interfaced into your SCADA or EFM systems, which can be extremely helpful in troubleshooting EFM problems. Other systems are usually connected to a network system of their own. Today the majority of companies' internal E-Mail systems are interfaced into the Internet. The Internet has significantly enhanced this area of communication by opening up to not only internal company employees but everyone that you are currently doing business with. E-Mail is basically the same as a letter except you save the distribution and mail time. One key advantage to this system is that you can print and archive the message from the PC. In some cases you can certify your message so that you will know when the person receives it.

ACCURATE RECORDS

There is still one more area that has not been discussed yet and is extremely important. This area is keeping accurate records on all of the key measurement devices. These records should be kept in the office and the field for verification purposes. Such as Orifice Plate Size, Tube I. D's, Etc... Some of the new measurement systems give the ability for the office and field to view the same database for verification purposes.

CONCLUSION

In today's changing gas industry, you must have a working form of communication between the field and office. With the impact of FERC Order 636, GISB, unaccounted for gas loss, and proposed hourly processing gas companies must verify and process data with more accuracy faster than ever before. The changing environment that we are operating in has not seemed to slow down yet. Effective communication is a requirement in order to stay competitive in the industry. You absolutely must have effective Communication links between the office and field to meet the challenge placed upon the Gas Measurement area.

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