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# Liquid Measurement Field Surveys

## Class # 2220

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### Introduction

A measurement field survey is an examination or research done to verify procedures, practices, equipment use, equipment installation, users training and user understanding of the importance of these things. It can be used to fix a problem or potential problem as well as a health check of the asset. Unlike audits, which are merely done to verify that the company's policies or contractual agreements are being followed, measurement field surveys are done as learning and teaching tools as well. Measurement field surveys can be performed by any qualified person or group, with the objective to understand and/or correct the things that are not satisfactory. We should also remember to give praise for what is being done correctly.

### Preparation

Before starting, have an objective in mind. Whether it is something done individually or as a group, you must have a plan. Before starting, it is a good idea to get everyone who will be involved together to talk about what each person's role is and develop the plan. This time should be used to understand the asset in which you are reviewing. Ask yourself what you want to accomplish by doing the survey and make a written course of action. If you do not have or do not stay to the plan, especially as a group, it is likely you will not accomplish the objective. You might find out about a lot of things that go on at the location but never find out what you came for. It is also a good idea when working as a group to split up the tasks you have outlined. One way is to work on different parts of the process. Another is to split into two groups to ask the same set of questions or look at the same equipment and see if you get the same answers.

### Field survey

When doing the survey it is important to establish that you are there to help everything to work as it should and not to point fingers or blame at what is not being done. If the survey is approached or viewed as an audit, many times you will only get the book answer or what someone wants to let you know. When talking to someone about the asset you are visiting, listen to everything they say no matter how important or unimportant it seems at the time. Try to take as many notes as you can and write down every detail. Sometimes the small details lead you to the problem if nothing major is identified. Talk to as many people involved with the asset to get everyone's view of what is being done. Asking the supervisor if his people understand what they are to do and actually witnessing them do it might give you a different answer.

### **Office Portion**

1. Review paperwork and documentation to verify that checks of equipment are done, certifications are up to date,
2. Review paperwork to verify that data entry is correct.
3. Look at historic loss / gain performance to establish trends. (gross standard and net standard where applicable)
4. Do interviews of personnel to establish their understanding of equipment and processes.
5. Review current procedures.

### **Field Portion**

1. Witness personnel while doing verifications of equipment.
2. Witness personnel while performing measurement tasks.
3. Verify that equipment is used in accordance with company policy, manufacturer's recommendations, appropriate measurement standards or contractual agreements.
4. Verify that equipment used is programmed properly (proper prover volume, proper flow computer calculations, proper scaling of transmitters, etc....)

### **Post Review**

After the measurement field survey, everyone involved should meet to go over findings and issues. Talk through what was discovered both for the good and what was lacking. Establish action items to be addressed with time lines and designated personnel to perform those actions. Follow up by monitoring the progress of the actions.