

Minutes
National Work Group on Leak Detection Evaluations
September 17-19, 1998
Minneapolis, MN

September 17, 1998

The Workgroup has two new members, Jon Reeder from Florida and John Kneece from South Carolina. This is Mike Kadri's last meeting.

Team Leader updates

Curt Johnson - Administration

- Has completed a draft List for review. He hopes to have the final draft completed and to David by the end of September.

David Wiley - Vapor/Liquid Sensors

- Is working on reformatting of listings to reduce the number of pages in the List.
- There is a steady flow of reports to review.

Mike Kadri - SIR

- No significant changes in SIR
- Identifying water incursion into tanks is important for manifolded systems as it can mask a leak, although there is a low possibility of this. The present protocol does not reflect this problem.
- There have been reports of SIR vendors giving passing results to data that is inconclusive. It should be clear that data that is too poor to detect a 0.2 gph leak 95% of the time with less than 5% chance of false alarm cannot be used to determine whether or not a tank is leaking.
- Blending systems may create errors in the information collected for analysis due to multiple stickings, and orifice inconsistencies.

Jeff Tobin - Pipeline and Non-Volumetric

- Has 4 evaluations under review. Some of these are just name changes. Most of this work is pipeline leak detection systems.

Russ Brauksieck - ATG and Volumetric

- Two companies are receiving drop dead letters for failure to respond to requests for information.
- For three more companies we are waiting on submittal of additional info.
- Another company has recently submitted 4 new ATG evaluations - same equipment, larger tanks.
- There are 8 Large tank systems under review. California is requiring monthly testing of Bulk tanks and that is why all these vendors are so eager to be certified.

Shahla Farahnak - CITLDS

- Evaluation reports from four companies are under review.
- One company cannot provide the original data used in the evaluation so probably will be denied.
- An initial review of the information provided for a second company indicates an approved protocol was not used.
- The original protocol does not include sufficient data to complete a review of this method. Jerry Flora has updated the protocol report sheets and the team has reviewed them. Hopefully this will keep the submittal of data from being a two-step process in the future.

New Protocols

Dave Wiley - SIR

- Efforts to produce a new and better SIR protocol have been ongoing for several years. The ASTM process didn't work. EPA office of R&D has paid for development of a new draft SIR. This has been a continuing issue without resolution. Dave has sold the idea of a new SIR protocol to his superiors and is now working on the contracting process. Contract should be issued to MRI in approx. 3 weeks.
- Mike commented that a new protocol needs to distinguish between certifying vendors vs. service providers. SIR software should be evaluated and certified as stand-alone if a vendor is selling SIR software to tank operators.

Russ Brauksieck - Manifold ATG

- Shahla, Mike and Bob Hart have provided comments on the draft.

Other issues

1. The scaling factor for bulk storage tanks which has been proposed by KWA. Should we allow scaling of test results for bulk tank leak detection methods? Overall the answer is yes but some work remains to be done.
2. A vendor has submitted a protocol for a system that uses differential pressure / partial vacuum to detect leaks. The protocol was written to cover his equipment and similar systems. It covers the preliminary considerations for third party evaluations but is unfinished as a protocol. Dave Wiley will get back to the vendor and explain what will be needed. It was suggested that the vendor get with a third party for the second draft.
3. Hybrid SIR - analysis of inventory data using software onsite. For evaluation of a system like this the evaluator should be provided with a copy of the software and run the data instead of sending the data to the vendor for analysis.

New team assignments

Team	Leader	Followers
ATG/Volumetric	Russ Brauksieck	Beth DeHaas, Ed Olson
Non-Volumetric	Jeff Tobin	John Kneece, Shahla Farahnak
CITLDS	Shahla Farahnak	Beth DeHaas, Jennie Bravinder
Pipeline	Jeff Tobin	Ed Olson, John Kneece
SIR	Jon Reeder	Jennie Bravinder, David Wiley, John Kneece
Sensor/Vacuum	David Wiley	Jon Reeder
Administration	Curt Johnson	David Wiley

Other issues cont.

The use of a single SIR program for both 0.1 and 0.2 gph leak detection was discussed. If a method is capable of doing 0.1 should it also be listed as a 0.2 method? It was decided we would only list a method for both 0.1 and 0.2 gph if we had a report for both. Methods that only submit a 0.1gph evaluation will only be listed for use at 0.1gph.

One TTT vendor is testing at levels of 24" instead of the 78% full they were evaluated at. The evaluation stated that the method could be used with as little as 24" of product. In the future, the evaluations results/conclusions must agree with the work actually done before the Workgroup will list the system or method.

Shahla described some problems and issues that she had encountered in California in the last few months including:

- Discriminating sensors for petroleum detectors. There should be an evaluation for both depth of petroleum and depth of petroleum on water.
- At some sites which use fibertrench for secondary containment of product piping there have been problems with operators pulling sensors up to avoid repeated water alarms. (Beth mentioned she had also encountered this in Maine)
- At least one ATG vendor is offering a system where the tank operator contracts with the vendor to provide system monitoring. The operator can have information from sensors sent directly to the vendors' headquarters, and there doesn't need to be a printer console on site. In a situation like this it is important to determine who is responsible for what. What creates an alarm? What is response time? How do you know if the link to the vendor fails? It is a good concept but still has some flaws.

Shahla suggested that the Workgroup ask an ATG vendor to give a short seminar on liquid sump, dispenser pan etc. sensors at our next meeting.

David Wiley has been working with the Federal Workgroup on Crime and Fraud in UST's. If anyone is aware of interstate and fraudulent actions these folks may be interested. There has been a big case in Texas already.

Jeff Tobin is having problems with leak detection on heating oil tanks, especially large ones at schools. Daily inventory is not an option, vapor sensing not a good option. Older

tanks have installed ATG's but have encountered problems with the return line creating waves in the tank. Possible solutions are installing drop tube or extend the return line.

David Wiley mentioned that Tom Young at University of California-Davis has been given a grant by EPA to study the effectiveness of various leak detection options. Data will be gathered at closures. Tom is developing a form for data collection.

Beth DeHaas is presently monitoring maintenance issues in Maine and has developed a database to track reports of equipment that needs repair/replacement.

Curt mentioned some work that is being done on leak detection for airport hydrant systems. Jeff Tobin and Russ Brauksieck will be involved in this project.

September 18, 1998

Vendor Presentations

Three presentations were made

Cliff Miller and Jeffrey Barela spoke on USTMAN Technologies SIR explaining in some detail how inventory data is entered and analyzed.

Ken Wilcox (KWA) And Bill Middleton (Dept. of Defense) gave a presentation on determination of a Scaling Factor for Bulk Field Constructed Tanks. The Defense Dept. has a large number of bulk tanks. Testing and evaluation of different leak detection methods is expensive because the tanks are so large. If results could be scaled the additional expense of testing a method on a variety of tank sizes would be avoided. Ken Wilcox explained that he felt the results from mass-based leak detection systems could be scaled to different size vertical tanks. He feels that the product surface is the only significant variable. Scaling is done on the leak rate only - not test time or wait time.

Joe Maresca of VISTA Research described the mass balance leak detection system for Bulk tanks that VISTA has developed and the evaluation work that has been done on the system. Joe is advocating the use of repeated tests to improve leak detection systems performance. Multiple tests are better than simply extending the test time as it is less disruptive to tank operation. To evaluate the use of multiple test results there were two choices; to repeat the evaluation or; to compute the SD deviation of the mean using the initial evaluation results and simulate additional test results. Repeating the evaluation work is expensive and time-consuming. VISTA chose to simulate results for the additional tests and compare the results of the original test and the simulated results.

Dave Wiley spoke briefly about sensor listings and suggested several changes to save space. The Workgroup approved all of his suggestions but the changes will be made on next springs' list not this one.

THE END

