

National Work Group on Leak Detection Evaluations (NWGLDE) Meeting  
**Cocoa Beach, Florida, September 26-28, 2007**

WEDNESDAY, September 26, 2007

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**Welcome and introduction of two new workgroup members, William Moore and Peter Rollo.** A complete list of meeting attendees for the sessions is included at the end of these minutes.

**TEAM UPDATES**

**ATG TEAM – Jon Reeder**

- OPW was recently listed. The probe comparison was done in a 20,000 gallon tank. For the listing to be extended to 30,000 gallon tanks, OPW will have to do additional probe tests in a 30,000 gallon tank because the listing for the previous probes has limitations of 20,000 gallons.

**VTT TEAM – Jon Reeder**

- No activity to report.

**ABOVEGROUND STORAGE TANK METHODS TEAM – Jon Reeder**

- MassTech CBU-1000 listed July 13, 2007 for 1.717 gallon per hour leak rate. The data set was filtered to extract only nighttime data to eliminate the effects of radiant solar heating.

**NVTTT TEAM – Scott Bacon**

- Praxair Enhanced Tracer Tight Tank and Piping Methods quantifying releases in interstitial space are being reviewed.
- CGRS Iota Method for 0.005 gallon per hour leak rate to be determined by monitoring the interstitial space is being reviewed. CGRS will be presenting their method during the Presentations portion of the meeting.

**CITLDS TEAM – Shaheer Muhanna**

- No reviews at this time.

**PIPELINE TEAM – Greg Bareta**

- Praxair Enhanced Tracer Tight Piping Method being reviewed by this team also. The review material will continue to go to Scott Bacon, Jon Reeder and Greg Bareta.
- Masstech Line Procedure is being reviewed.

**SIR TEAM – Jon Reeder**

- Listed Total SIR 2.0, which is Bob Mitchell's revamped SIR International Method. We have letters from both SIR International and Total SIR.

- Jon has passed on to Lamar an evaluation from Victorian Automobile Camber of Commerce from Australia.

#### **INTERSTITIAL MONITORING METHODS TEAM – Tim Smith**

- Listed Beaudreau Electric DFR-1 Liquid Sensors and Dual Float Reservoir Sensors.
- PermAlert Sensors Evaluations still under review.
- Tim Smith will renew three (3) Stat Pack licenses.
- Process Analyzers LLC evaluation review for PID analyzers 102 for diesel fuel is on hold. No new information has been submitted. A new protocol for diesel vapor phase detection may be necessary to show field samples versus laboratory samples.
- FDR Environmental out of Texas and Missouri approached Tennessee.
- Mini Rae approached Tennessee. They are not on the workgroup list.
- Formerly Euro Tech System – Reich Thomas D9 is very similar to SGB System. Latest revision to European Standard was in 2002.
- Spring Patents review on hold.
- Tyco Thermal Controls (originally listed as Raychem LS-3, only LS-3 sensor is a Gem sensor. This was a limited evaluation that used salt water and chemicals, not gasoline. Tyco TT and FFS listed as an Interstitial Detector and Out of Tank Product Detector.
- Discussion on how to handle one manufacturer's sensor used in different vendors' listings.
- Two Veeder-Root Evaluations listed, the Float Switch 794 Mag Sump Sensor and the Variable Length Sensor.
- Western Fiberglass Pressurized reservoir-ambient monitoring for piping – CO-Flow Hydraulic Interstitial Monitoring System Propylene Glycol Filled Pressurized Interstitial Spaced Continuous Interstitial Line Monitoring Method (liquid filled). WF3 and WF750 waiting on listing. They were tested in WF sump equipment versus cup. These sensors are going to be specified.
- The following motion was made and voted on and approved. "When situations arise with identical nomenclature/model identification, the work group team leaders make efforts to convince the manufacturers to voluntarily relabel or change nomenclature identification.
- Xerxes Listing is currently under and will continue to be listed under "Interstitial Tank Tightness Test Method" and will also be listed under "Continuous Interstitial Monitoring Method".

#### **SECONDARY CONTAINMENT TESTING METHODS TEAM – Scott Bacon**

- Protocol "Continuous Interstitial Line Monitoring Method Evaluation Protocol for Vacuum-Wrapped Pressurized Portions of a Fuel Containment and Dispensing System" has been approved.
- Western Fiberglass evaluation for Sumps and Under Dispenser Containment being reviewed.
- Praxair evaluation being reviewed.

### **LIST ADMINISTRATION TEAM – Curt Johnson**

- All listings to be included in Hard Copy List must be to Curt Johnson by November 30, 2007.
- Curt will have the draft Hard Copy List available mid-December.
- The finalized Hard Copy will be out in the beginning of January 2008.
- The NWGLDE website has approximately 300 visits a day, 11,000 unique visits a month and 203,000 visits a year.

### **REVIEW OF TEAM ASSIGNMENTS**

ATG, VTTT – Jon Reeder (Leader), Lamar Bradley

CITLDS – Shaheer Muhanna (Leader), Helen Robbins

NVTT – Helen Robbins (Leader), Scott Bacon

IM & Out of Tank – Tim Smith (Leader) Shaheer Muhanna, Scott Bacon, Lamar Bradley, Peter Rollo, Bill Moore

LINE LEAK DETECTION – Greg Bareta (Leader), Bill Moore

SIR – Lamar Bradley (Leader), Jon Reeder

AST – Jon Reeder (Leader), Greg Bareta, Peter Rollo

SECONDARY CONTAINMENT – Scott Bacon (Leader), Shaheer Muhanna, Tim Smith, Bill Moore

ADMINISTRATION – Curt Johnson (Leader), Jon Reeder, Helen Robbins

### **PROTOCOLS UNDER REVIEW**

- No new protocols under review at this time.
- Recently we have accepted some evaluations that have deviated from existing protocols.

### **NEW BUSINESS**

It was moved to adopt a new version of Policy Memo #2 incorporating changes proposed and presented by Lamar Bradley.

Ken Wilcox has published the final results of the California ATG/LLD Field Testing. Jerry Flora worked on the statistics in that there was small data set information on some of the equipment. California has approximately 90% Veeder-Root equipment. The California Report did not have recommendations. This is left up to the consultants. For consistent protocols to test the leak detection equipment and sensors the manufacturers would then have to generate leaks. This test could be used to bolster the removal of single-walled tanks from the ground.

Gaps in the protocols were brought up for discussion. It was suggested that each team pick out important parts of their respective protocols, identify the gaps, and give this information to Tim. Tim reiterated that will be difficult to revise the current protocols.

The work group can however, concentrate on new protocols for ethanol and secondary containment setting the bar.

The ATG Probe Comparison and the SIR Manifolded Tanks protocols are by the workgroup. These are interpreted as new protocols or protocols modified for new methods/technology. Changes in protocols are being driven by new or more sensitive technologies and changes in state regulations. Chances are U.S. EPA will not open up existing protocols and companies may not be willing to have a new protocol written at their expense only to have other companies then be able to use the protocol.

History of test performed in different medias can be used. Praxair is a good example, usually a qualitative method and now a quantitative method. The reviews must really be done on a case by case basis. Some methods that have been previously listed as qualitative are now being submitted for quantitative listings.

Next the group had a brief discussion on remote monitoring systems. It was discussed that the Operator Training Guidelines will open doors to more effectively handle these situations.

#### **NEXT LUSTLINE ARTICLE**

Ellen Frye has requested that we break up the sensor article into two articles. Tim and Curt will work together at the end of this meeting to come up with an outline.

In addition to these two articles, another article will be written on the difference between qualitative and quantitative or the difference between NVTTT and VTTT and if qualitative then how is a leak rate determined.

With these articles being written the work group will have several articles available for LUSTLINE.

#### **END OF WEDNESDAY MEETING**

THURSDAY, September 27, 2007

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#### **VENDOR PRESENTATIONS**

##### **Ken Wilcox – Ken Wilcox Associates**

Ken Wilcox presented requests for modifications to the Probe Comparisons protocol. Industry wants to change the protocol to reflect the tank capacities of new tests (not full tests, just comparisons). The original tests were extrapolated from 10,000 gallon

capacities to 15,000. Industry wants the probe comparisons to be for 20,000 gallon tanks. It was requested that Ken submit a written proposal to the work group.

Ken Wilcox's second presentation, with Don Halla from Veeder-Root, concerned the effects of and measurement of water ingress for the ATG protocol. The State of Illinois is not going to allow equipment that is not listed by the NWGLDE for the specified fuel. Ken Wilcox ran tests with Veeder-Root at an Albany, NY station with a 6.5 ID glass cylinder with 3 gallons of product with water added in 1% increments for one hour. Their conclusions were that water ingress in E85 is detectable and this is easily tested in a laboratory. Scaling this up to a 10,000 gallon tank, 1% would be 100 gallons of water, which is a lot. What happens with water ingress less than 1%?

Scott Zaremba, working with Ken Wilcox, is installing a retail station with 2 biodiesel tanks and other ethanol tanks that will be blended at the pump. Ethanol 85 fuel is dropped to Ethanol 70 in the winter. They will use molecular sieves to take water out. A protocol that addresses all these concerns is needed.

Curt Johnson noted because the probes used have a water float and the current protocol requires evaluation of the water sensor, ethanol cannot be added to current listings. It is up to industry to present to the work group what they want, to propose to us a new protocol.

Ken requested the work group come up with what we want in order to put Ethanol 85 (E85) on listings.

#### **Eric Hick, President, and Joby Adams - CGRS, Inc.**

Eric Hick of CGRS, Inc. gave a presentation on the Iota VaporTite test method, a helium method for secondary UST systems. The presentation was to clear up concerns with the third party evaluation that helium leaks into to secondary containment may be missed if there are stagnant air spaces that may not be adequately dispersed by the active circulation. The third party evaluation was for  $2 \times 10^{-3}$  leak, which is less than 0.005 for piping, components, and tanks. Curt Johnson asked if interstice is calibrated. Eric responded they are looking at change, not calibrated value. If the method is used on a tank that is not new, it must be emptied and purged. The method will not test any portion that is wet, such as a low spot in a line. The test time and/or helium pressure had to be adjusted to get the detection limit of the detector using diffusion as part of the protocol. CGRS requests to be listed as NVT/Tracer in that the method looks in the interstice versus the outside of the tank. Ken Wilcox added that simply in terms of how it works, the Helium detector is easier to operate than a Gas Chromatograph.

#### **End of Presentations**

#### **Discussion of Presentations**

Ken Wilcox will formally present in a letter his request to change the probe comparison protocol to increase the applicable tank volume. The work group has decided if the vendor wants to list the probes for a larger tank size, they will have to do full testing. Curt Johnson will send an official response.

There was some discussion to limit the Iota VaporTite method to post-construction testing only, however, it was decided to leave listing comments as they are. Scott will add paper, diffusion rates, flow rates and also PowerPoint presentation to the review file.

The next discussion centered on the E85 issue and the ingress of water. What is needed is the minimum detectable level. The method should be able to detect 0.2 gal/hr ingress of water. The 1995 Veeder-Root third party evaluation states that a water float would be monitoring water. Even though the water ingress testing could be done in a laboratory, we may need a new protocol because water ingress in E85 is not the same as measuring water on the bottom of the tank, which correlates volume of water change to level change as in the previous protocol. Jon brought up if we allow modification to existing protocol then ask for 0.2 gal/hr leak rate (water ingress) and vendor/evaluator must run test for time to detect this rate. Lamar suggested that the evaluator/vendor can establish a rate of water ingress and add water at that rate until the top float registers a liquid level change alarm. The time to alarm at a given water ingress rate would then be known. The vendor must test E70, E85 or whatever fuel they want listed. Jon Reeder and Lamar Bradley are working on this.

### **New Business Continued**

Mission Statement expansion was the next topic covered. The work group discussed covering aboveground storage tanks. Following this discussion the following revisions to the mission statement were agreed upon:

- Review leak detection system evaluations to determine if each evaluation was performed in accordance with an acceptable leak detection test method protocol. (One of the edits was to put a period at the end of each bullet item or add "and/or" after the first bullet.)
- Ensure that the leak detection systems under review meet EPA and/or other regulatory performance standards, if applicable.

**END OF THURSDAY MEETING**

FRIDAY, September 28, 2007

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### **New Business Continued**

#### Sensor Testing with Control Panel -

The work group does not have a policy for listing a console; just console sensor can be used. The console is not mentioned unless it is included in the review. The work group currently has a sensor evaluation with no control panel. The sensor can be listed with no control panel but to add one later the six tests would have to be run again. The discussion that ensued was whether or not to include information or a statement on sensor listings that the sensors may be used with other panels, or a statement to check with the manufacturers on this. It was decided that if the manufacturer asks for a statement that their sensors can be used with other panels then we could include that in the listing. We could also ask the manufacturer when the review comes in whether or not they want the sensors listed for specific panels or multiple panels. Another option would be to have the third part evaluators ask along with renaming sensors. Tim Smith will consider adding a statement to the sensor main page.

#### Policy Memo Changes –

##### Policy Memo #1

Strike III. A. 2. because this no longer available to the public.

##### Policy Memo #3

##### Work Group Team Procedures –

I. I. The vendor will be asked to approve the draft data sheet in writing or by e-mail.

I. K. If necessary the team leader sends changes by e-mail to the group, and gives the group an appropriate time to review.

I. L. After the appropriate time needed to resolve any outstanding issue, the List Administrator...

I. F. last sentence - Any concerns must “be” addressed (taking out EPA).

##### Policy Memo #3

##### Work Group List Procedures –

I.A. Via the “NWGLDE” website (taking out “on the Hard Copy”).

#### Hard Copy List Memo changes -

Page iv, 1.b. take out Jack Quigley statement, direct the vendor to Policy Memo III.

All work group members to review the policy memos before the fall meetings. Scott Bacon suggests standing agenda item after team updates will jog members to review and be prepared.

Going back to Thursday's discussion, the work group will send Veeder-Root a letter stating one of two things, 1. Listing saying you cannot detect water or 2. You can detect water with top float.

Should the work group write a "LUSTLINE" article looking at compatibility not functionality and the water ingress issue? Greg will send his "Inspector E-mail" on this subject to the group. Lamar suggested adding capacity probes will not work in ethanol only magnostriptive probes.

### **Old Business**

File Retention – everyone to send files to Curt Johnson if and when they leave the work group. Lamar Bradley will contact John Kneece and Mike Kadri to get any files they might have. John Kneece mentioned he had everything electronically. Jon Reeder suggested saving all the documentation to CD. Greg needs any open reviews John Kneece has sent to him.

The next meeting is in Atlanta, Georgia following the National Conference. Shaheer is going to be our host. Peter Rollo is going to take the minutes.

The Fall Meeting 2008 will be in Wisconsin Dells. Greg Bareta is looking into the arrangements.

### **Team Meetings and Adjournment**



**Meeting Attendees – Wednesday – Friday, September 26-28, 2007**

<b>Name</b>	<b>Affiliation</b>	<b>Phone</b>	<b>E-mail</b>
Curt Johnson	ADEM	334-271-7986	<a href="mailto:cdj@adem.state.al.us">cdj@adem.state.al.us</a>
Lamar Bradley	TN UST	615-532-0952	<a href="mailto:lamar.Bradley@state.tn.us">lamar.Bradley@state.tn.us</a>
Shaheer Muhanna	GUST	404-362-2579	<a href="mailto:shaheer.Muhanna@dnr.state.ga.us">shaheer.Muhanna@dnr.state.ga.us</a>
Scott Bacon	CA SWRCB	916-341-5873	<a href="mailto:bacons@swrcb.ca.gov">bacons@swrcb.ca.gov</a>
Tim Smith	USEPA-HQ	703-603-7158	<a href="mailto:smith.timr@epa.gov">smith.timr@epa.gov</a>
Jon Reeder	MCEMD	941-742-5980 x1712	<a href="mailto:jon.reeder@mymanatee.org">jon.reeder@mymanatee.org</a>
Helen Robbins	CT DEP	860-424-3291	<a href="mailto:helen.robbs@po.state.ct.us">helen.robbs@po.state.ct.us</a>
Greg Bareta	WI DCOM	608-267-9795	<a href="mailto:greg.bareta@wisconsin.gov">greg.bareta@wisconsin.gov</a>
Peter Rollo	DE DNREC	302-395-2500	<a href="mailto:Peter.Rollo@State.de.us">Peter.Rollo@State.de.us</a>
William Moore	Utah DEQ	801-561-9523	<a href="mailto:BillMoore@utah.gov">BillMoore@utah.gov</a>

**Additional Attendees – Thursday, September 27, 2007**

<b>Name</b>	<b>Affiliation</b>	<b>Phone</b>	<b>E-mail</b>
Joby Adams	CGRS, Inc.	800-603-7158	<a href="mailto:Joby@CGRS.com">Joby@CGRS.com</a>
Edward Kubinsky	Crompco Corp.	610-278-7203	<a href="mailto:ed@crompco.com">ed@crompco.com</a>
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Ken Wilcox	KWA, Inc.	816-443-2494	<a href="mailto:kwilcox@kwaleak.com">kwilcox@kwaleak.com</a>