

## **National Work Group on Leak Detection Evaluations Meeting Columbia, SC, October 9-11, 2002**

Welcome new member: Sharon Sadlon

Attendees: Work group members and see attendee's list attached

### **Action Items:**

1. October 25, 2002 - Curt to submit description of topics of discussion to UST/Lust National Planning Committee.
2. November 5, 2002 – all information to be submitted to Curt for 10<sup>th</sup> edition of the List.
3. December 6, 2002 – Curt to send 10<sup>th</sup> edition of List in MS-Word format to Jon Reeder. Jon will hold posting the new List until he is able to update the web site.
4. Next meeting – San Francisco, March 10-12, 2002. Note taker: Shaheer Muhanna

### **Review Assignment of Team Members:**

<b>TEAM</b>	<b>LEADER</b>	<b>MEMBERS</b>
Automatic Tank Gauging (ATG) and Volumetric Tank Tightness Test (VTTT) Methods	Beth DeHaas	Mike Kadri Jon Reeder John Cernero
Continuous In-Tank Leak Detection Methods	Shahla Farahnak	Shaheer Muhanna Sharon Sadlon
Non-Volumetric Tank Tightness Test Methods	John Kneece	Shaheer Muhanna
Pipeline Leak Detection Methods	Mike Kadri	John Kneece John Cernero
Statistical Inventory Reconciliation (SIR) Methods	Jon Reeder	Shaheer Muhanna
Sensor and Vacuum Methods	Tim Smith	Shahla Farahnak Sharon Sadlon
List Administration and Surveys	Curt Johnson	Tim Smith Jon Reeder

### **Team Leader Updates:**

#### **List Administration (Curt)**

- Time frame to have changes for 10<sup>th</sup> edition to Curt (Nov. 8)
- Friday, December 6 – Curt to have 10<sup>th</sup> edition in MS-Word format
- To address Alaska's issue with order of documents in List and to better reflect NWGLDE's standing:
  - EPA's cover letter to be removed.
  - Curt's letter to be removed from Alabama DEM's letterhead and stated as a "Foreword."
- Jon Reeder will hold posting of 10<sup>th</sup> edition until he is able to update web site.
- John Kneece to forward changes similar to those recently accomplished for Veeder-Root listings for Incon, etc.
- Jon Reeder raised issue of Book Marks w/ filenames changed leading to "Get Page Download Error." Notice to users to keep BookMarks current may be needed.

**Pipeline (Mike Kadri)**

- John Kneece indicated that updates to Veeder-Root's listings have been completed to web site.
- John Cernero reported on meeting in Dallas with Hansa regarding its large diameter pipeline evaluation currently under review.
  - Has received a lot of paperwork
  - Discussion was sparked involving EPA not having a protocol for bulk pipeline.
- Shahla stated that all bulk pipeline listings should be noted as being evaluated for underground application.
  - Also a motion was introduced to review other bulk pipeline listings to determine if consistent language is provided.
- A question was raised as to whether problems such as in field failures should be noted and passed on by NWGLDE.
- The issue of what the definition of "hydrant refueling" is was raised. It was noted that EPA doesn't have a definition. However some states do have standards. For instance, Alaska's is 110-150 psi.
- Issue identified with Vista Research Inc.'s use of data averaging. Listing has "n" of 3. Mike Kadri indicated that "n" should be a large value in order to be statistically valid.
- Mike identified an issue related to Bulk Modulus. He noted that the third-party evaluation for Veeder-Root (VR) used a combination of both rigid and flexible piping. VR has indicated that it wants to be able to provide electronic line leak detectors that applies to either: 1) all rigid pipeline, 2) all flexible pipeline or 3) combinations of both types of piping. Unfortunately, the difficulty in determining accurate bulk modulus in the field on older sites makes it difficult, if not impossible to allow such a use with any assurance of receiving valid performance.

**S.I.R. (Jon Reeder)**

- Need to complete Shaheer Muhanna's updates to current SIR listings based upon results from query to SIR vendors.
- Resolved issue related to TeleData, Inc. Added manufacturer's statement that reads to the effect that software version 3.20 and version 3.12 are the same.
- SIR International's listing was reviewed in order to clarify what Pass/Fail is based upon:
  - 0.1 or 0.2 test needs to be indicated
  - Also fixed or movable threshold needs to be indicated.

**ATG & Volumetric TTT ( Beth DeHaas)**

- Endress and Hauser/ Coggins System, an ATG system has been approved for inclusion on the List .
- Pneumercator ATG TMS 2000 and 3000 has been reviewed and approved for inclusion on the List

- Incon 750 has been added to present INCON ATG listings..
- Updates completed to Veeder-Root listings adding the ProMax and ProPlus consoles.
- Beth also mentioned that the Stat-Pack statistical analysis software package has been obtained for the group.
- Sound Seivics (formerly USTest) 2001/P, a volumetric tank tightness test method has been reviewed and approved for inclusion in the List. Changes to the 2000/p and 2000/LL listings have been requested and are in process.

#### **Bulk Tank Review (Beth DeHaas)**

- Vista EDG XLD-2000 Plus and Ronan X-76 CTM are under review. This review should be completed shortly.

#### **Non-Volumetric TTT (John Kneece )**

- Evaluation submitted by Mass Technology Corp. has not been completed due to missing components.

#### **CITLDS (Shahla Farahnak)**

- Letter has been written to Incon (Intelligent Controls, Inc.) regarding discrepancy with one data point in question on its evaluation currently under review.
- Review of Omntec Mfg., Inc.'s evaluation still under way.
- The evaluation of Warren Roger's CITLDS method is under review.

#### **Sensors (TimR Smith)**

- Removed Veeder-Root's 343 (Discriminating interstitial sensor) and 344 (Microsensor) from the "Under Review" section of the List. These listings were inadvertently overlooked when the write-ups were posted.
- Updated Veeder-Root's listing of 794380-208 and 794380-209 (Piping Sump Sensors) by adding ILS-350 console to Header.
- Changed the units of Petrovend's listing of Site Sentinel Controller with Combination Sensors Part #30-3224 and 30-3225 from seconds to read minutes.
- Have not yet received all necessary information to complete the evaluation of SGB's Vacuum Interstitial Detector. Awaiting complete installation and operations manuals (depicting units in English).
- Spoke with EuroTank regarding its Euro-Guard Leak Preventor and informed the company that upon the conclusion of the evaluation of SGB's device NWGLDE would know whether we could list its device.
- Special thanks given to Beth for her work updating the sensor listings for Marconi Commerce/Gilbarco that was recently purchased by Veeder-Root.
- Received 2 new evaluations: 1) Mosier Bros. (The Tank Builders) – Vacuum Interstitial Monitor for Double-Wall Tanks, and 2) Mass Tech Enterprises, Inc. – Chemical Fuse
- Letter was sent to Mine Safety Appliances regarding their equipment listed on the "Under Review" list.

### **New Business:**

1. Jon provided a demonstration of the new StatsDirect software. He pointed out common errors encountered when it's coupled with MS-Excel. These errors include rounding, and confusion over the choice of variance comparitors. In order to demonstrate a few of the capabilities of the software beneficial to NWGLDE, Jon showed the f-test and calculation of probability of false alarm and probability of detection.
2. The subject of record retention was addressed with the discussion on scanning all 3<sup>rd</sup> party evaluations and making them available in "pdf" format on NWGLDE. Software named "Filenet" was mentioned as a possible means of archiving the evaluations. The discussion was couched until later when its feasibility and impact to members can be more thoroughly evaluated.
3. The issue of adding similar language stated in VTTT write-up to NVTTC was discussed. Language would be added to applicable methods that read: "No delivery during wait time."
4. Shahla presented results of California's study on secondary containment testing and its sensor study. Highlights included:
  - 789 sensors were tested.
  - Sensors were tested at 124 UST facilities during routine annual testing and certification. Additional data was obtained from 71 responses to an on-line survey on sensor performance.
  - 12% of the sensors tested during the study had a problem. Problems included the presence of water or product in the secondary containment, raised sensors, ignored alarms, and failure of some pump shutdown features.
5. Beth also provided handouts and led a discussion focused on the issue of the 37-inch rule and its origin.
6. The issue of business cards for the work group was discussed. Beth and Jon R. agreed to take the lead on designing the layout of the card. The card design will be submitted to Tim who will have the cards printed.

### **Old Business:**

1. The issue of EPA's update to its seven leak detection test protocols was discussed. Members voiced their need to see some activity begun on addressing the deficiencies that University of Wisconsin identified in its recent study.
2. Beth DeHaas spoke on the topic of low level ATG testing. She stated the fact that just because a method is listed as being able to perform a 0.1 gal leak rate test does not mean that it can perform a valid volumetric tank tightness test. The determination whether an ATG test can be used to meet a state's requirement for tightness testing remains the decision of the implementing agency.
3. Jon Reeder discussed new language that has been developed regarding the issue of the SIR method's "floating threshold." The SIR Team anticipates adding the same statement to all SIR sheets pertaining to whether the vendor used a fixed or floating threshold.
4. Curt Johnson led a brief discussion to develop a list of suggested topics for the upcoming UST/LUST National Conference to be held in San Francisco, CA,

March/2003. Curt, Shahla, John K. and Jon R. were chosen and agreed to represent NWGLDE at the conference. These members will finalize a format and topics to be presented at the conference.

5. Jon Reeder also restated issue that was more or less concluded last meeting pertaining to “math fonts.” Some Corel WordPerfect documents that were received in the past did not depict appropriate mathematical symbols in equations. However, fonts necessary to make the equations legible have been made available to group members.

## **NOTES FROM THE OPEN MEETING WITH THE VENDORS**

### **Open Meeting Presentations and Discussions**

#### **Randy Barnes – Problems Faced by all Test Equipment Manufacturers**

New products were identified. They were: 1) quick disconnects for line leak detectors, and 2) above ground storage tank leak simulator. Alert’s operating system was reported to have been updated to Windows instead of DOS. Also, reporting capabilities have been improved and are able to be outputted to vendor’s forms.

The presentation also mentioned a certification program to be implemented for testers. The company would like to identify all testers using company equipment, and would like to conduct quarterly training. Mr. Barnes noted that Gilbarco originally provided training on the equipment. The requirement would be 2 days classroom and 1 day field. Recertifications are anticipated to be in a single day.

The company’s Model 2000- ATG was mentioned as not being manufactured in a long time. However Michigan was identified as a state which has in the past used the ATG successfully on waste oil tanks. Alert would look into coordinating with Michigan DEQ and possibly provide support for the equipment. The presentation ended with Mr. Barnes extending an invitation to NWGLDE to attend any of its company’s upcoming training sessions. This invitation was also extended to UST program officials as a whole.

#### **Ken Wilcox – Issues Concerning Protocols**

The presentation focused on two general topics: 1) data averaging to improve performance, and use of nonvolumetric tank protocol for non tank applications.

Data averaging was stated to be beneficial by affecting such outcomes as: 1) reduction of minimum detectable leak and 2) ability to meet tighter regulatory standards. Also, the issue of the unspecified “n” number of data points that are required to provide statistically valid results was discussed. It was stated that if the vendor is going to be allowed to use averaging during third-party testing, then there must be enough data to render a

statistically valid analysis. The topic of application of the F-test was discussed in this segment of the presentation. The test's fairness with regard to averaging and the restrictions that it imposes on two data points when both show 99.9% but differences between them are significant was also discussed. NWGLDE asked if there is an alternative test that can be used. An alternative non-parametric test that doesn't require normalizing was mentioned. The crux of the presentation regarding averaging was that it is a statistically valid method when it meets correct criteria.

With regard to the second general topic that was discussed, the use of the nonvolumetric tank protocol for non tank methods was introduced. Discussion centered on using this protocol for evaluations like methods involving liquid filled interstitial spaces and piping applications. Retooling the protocol to encompass pipelines was mentioned. Finally, the presentation wrapped up with a brief discussion pertaining to the need for reference standards. Non volumetric methods were mentioned in particular. The example of sump testing was provided. The commonly used 0.25 inches per 24 hours standard for sump testing was stated to be inadequate.

#### **Alan Porter – Uniform Testing Procedures for Secondary Containment**

The presentation discussed: 1) some of the reasons for testing the secondary containment; test methods used, and 2) company experience with testing secondary containment. First, several reasons were stated for testing secondary containment areas. They included the regulatory requirement in the state of California (Senate Bill 989), environmental protection, risk management, and the fact that it's a good business practice. Second, the components (e.g., under dispenser containment, sumps, piping, etc.) that make up the entire secondary containment system were discussed in the context of test methods identified as being currently used. Sump, tank and line testing methods such as hydrostatic testing, vacuum testing, vacuum and pressure test, and pressure testing using nitrogen gas were discussed. The presentation ended with several statistics being given regarding Tanknology's experience with secondary containment testing as of October 2002. The presentation called for establishing uniform testing standards.

Discussion continued centered on the possible need for establishing a new testing protocol for evaluation purposes or using a modified non volumetric tank tightness test protocol or another method currently available (e.g., vacuum interstitial method or European standard).

### Columbia, SC National Work Group Attendees

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