

Minutes
National Work Group on Leak Detection Evaluations (NWGLDE) Meeting
Sedona, AZ, March 30 – April 1, 2011

WEDNESDAY, March 30, 2011

A complete list of meeting attendees for the sessions is attached.

WELCOME VISITORS

- The group welcomed visitors, introductions were made, and visitors were asked to sign in.

TEAM LEADER UPDATES

1. ATG & VTTT TEAM – Lamar Bradley

ATG Completed Reviews:

- **Franklin Fueling Colibri ATG Controller** Bill Moore reviewed documents submitted and determined the controller could likely be listed if there was a protocol for console comparison. Franklin had KWA to write console comparison protocol. Reviewed and listed November 19, 2010. Colibri console added to Incon T1 and T5 Series, and Franklin CL-6 and TS-CL6 Series.
- **Test Procedures for Comparison of Different Automatic Tank Gauge Consoles** October 4, 2010. Developed by KWA for Franklin Fueling. Reviewed and listed October 18, 2010 by Bill Moore.
- **Evaluation of Veeder Root Water Float for Ethanol Blended Gasoline** this was Veeder Root's 2 stage water float reviewed and listed October 28, 2010 as water float only.

ATG Under Review:

None at this time.

VTTT Under Review:

- **Mass Technology Corporation** CBU 1000D tank tightness test docs received February 2010. For tanks 50,000 gallons. Mike Juranty is lead reviewer on this. Effects of groundwater not considered in evaluation- Mike requested response from Mass Tech and KWA on March 20, 2010. Mike received call from Ken Wilcox regarding groundwater levels on Mass Tech on June 6, 2010 and returned call following week. Sent email July 13, 2010 informing Ken that Mike is doing this one, and reply received that Ken would call Mike. Revised Report received July 19, 2010. The effects of groundwater were still not considered. Following discussions of possibly listing for use where groundwater was known to be below the tank bottom, Mass Tech submitted a draft listing for review on February 24, 2011. On March 25, 2011 Mike replied with revisions that would be required for NWGLDE to consider the listing.

- Resolved issues with Greg Young and restored USTest 2001/P to VTTT list on January 12, 2011 where it had been removed from previously. (USTest 2001/P is not an ATG as thought. It is a VTTT.)

Other Activity

ATG 0.1 gph listing issues

May 12, 2010- Sent letter response forms to ATG vendors relative to providing documentation that they used 0.05 leak rates in evaluations to be listed for 0.1 gph tests. March 17, 2011 update- Nothing further done on this. Likely all responses received. Few listings will be modified.

Received request from Dave Emmington to get biodiesel listings for 7 ATG models on February 16, 2011. Draft listings prepared and added to website on March 1, 2011.

2. CITLDS TEAM – Shaheer Muhanna

- No activity to report.

3. NVTTC TEAM – Helen Robbins

Under Review:

- Tanknology – Vacuum Interstitial Test (VIT) for Double-Wall Tanks – Response was sent to Brad Hoffman December 10, 2010 indicating the method would need to be evaluated for gasoline in order to list gasoline and as the evaluation stood the interstitial volume could be no greater than 250 gallons. This response was coordinated with the IMOTDM team. Received letter dated March 3, 2011 from Ken Wilcox Associates asking if the NVTTC protocol will be an acceptable test protocol to evaluate an *Interstitial Tank Tightness Test Method*.
- Tanknology – VacuTect – Request to revise listing to indicate a smaller vacuum for certain field constructed double walled fiberglass tanks. Response was to have a third party evaluation completed. Since last meeting, September 2010 no response has been received from Tanknology.

4. LLD TEAM – Greg Bareta

Review Complete:

- Franklin Fueling - Continuous Pressurized Piping Testing Leak Detection Method (Continuous Electronic Line Leak Detection) - TS-LS500, TS-LS500E Series with ST and LT SLLD (for Rigid and/or Flexible Pipelines), KWA May, 10 2010, Received: 05/15/10 (New) Completed: 09/29/10 Revised: 11/23/10 for biodiesel addition.
- Vista Research, Inc. - Large Line Leak Detection, HT-100 Version 2.1 Pressure Test, KWA August 25, 2007, Received: 03/01/10 (New), Completed: 11/19/10.
- Leighton – O’Brien - Line Tightness Testing, PM2, KWA October 11, 2010, Received: 07/2010 (New), Completed: 11/23/10.
- Franklin Fueling - Automatic Line Leak Detector –static and continuous, LS-500/500E with and without SLLD, Request to add biodiesel through NWGLDE, Received: 10/19/2010, Completed: 11/23/10.

- Leak Detection Technologies – Large Line Leak Detection, PHDLeak, KWA, Received: 01/18/2011, Completed: 02/08/11.
- Hansa Consult of North America - Line Tightness Test, HCNA Pipeline Leak Detection System, Version 2.1, KWA 05/24/2010, Received: 09/09/2010, Completed: 02/17/11 updating for lines less than 5k-gallons large and small pipeline TT protocol.
- Hansa Consult of North America - Large Dia. Pipelines, HCNA Pipeline Leak Detection System, Version 2.0, KWA, 12/15/2005, Received: 07/15/2010, Completed: 02/17/11, Changed capacity limit since limited by Leak Rate desired (non-EPA) not capacity.
- Veeder Root - Automatic Line Leak Detector, Veeder Root/Red Jacket Bio-Diesel Leak Detector Listing Updates, Request by Dave Emmington Veeder Root, Received: 02/17/11, Completed: 03/??/11.
- Ken Wilcox - Flex pipe and increased capacity protocol, KWA, Completed March 8, 2011.
- Franklin Fueling - Automatic Mechanical Line Leak Detector, STP-MLD, KWA 10/21/2010, Received: 11/17/2010, Updating for Flexible lines 11/24/10 requested Results of Performance Summary 03/23/11 requested all listings changed from FE Petro to Franklin Fueling.

Under Review:

- Vaporless Manufacturing, Inc. - Automatic Mechanical Line Leak Detector, LD 3000/3000S, KWA 04/17/2006, Received: 03/31/2010, updating line length for flexible lines.
- Hansa Consult Ingenieurgesellschaft mbH with HC Fuel Systems LLC - LARGE DIAMETER LINE LEAK DETECTION METHOD (6 inches diameter or above), Hansa Consult Pressure-Step Tightness Control System (TCS) Pipeline Leak Detection System, KWA 08/11/2000, received: 11/17/2010 Revise listing for smaller leak rate volume.
- Ken Wilcox - Large pipeline protocol, KWA.
- Protanic - Update listing to remove pre-conditioning pressure, Petro-Tite LLD, With Ryan and Steve 03/22/11 received letter form KWA and Protanic justifying reduced pressure.
- Leak Detection Technology - Tracer tight, MDLeak, KWA, Need NVT protocol listed under line leak detection.

5. SIR TEAM – Lamar Bradley

Completed Activity:

- None at this time.

Under Review:

- None at this time.

Other Activities:

- FuelWatch, who made a presentation to the workgroup in Boston, has not submitted anything as of March 15, 2011.
- Received request to change ownership of Tanknetics SIR V 2.1 from Advanced Telemetry, Ltd. to National Environmental, LLC in March 2010. Documentation received and seller confirmed sale. Ownership change recommended.

6. IMODTM TEAM – Tim Smith

Completed Activity:

- Beaudreau Electric Marketing, LLC Model MPC100 Controller with Models DCS140L, DCS140NL Liquid Sensors and Model DCS140D Discriminating Liquid Sensor. New product listing January 27, 2011 by Peter Rollo.
- Containment Solutions, Inc. FOVF 600B, FOVF 600S Non-Discriminating Sensors for High Level Overfill (Brass, Steel); FCBS 700 Non-Discriminating Sensor for Collars, Bulkheads, Sumps; FDAS 710 Non-Discriminating Sensor for Dry Annular Spaces; FHRB 810 Non-Discriminating Sensor for Reservoirs. Revised product listing by adding biodiesel statement December 21, 2010 by Lamar Bradley.
- Franklin Fueling Systems Model FFS 404-4 Controller with Models S404 and S406 Liquid Level Sensors. Revised product listing by changing designation of sensors to include “S” November 3, 2010 by Tim Smith.
- Franklin Fueling Systems Tank Sentinel TS-5xxx Series with TSP-DMS 12 and 24 Inch Discriminating Magnetostrictive Sensors. Revised product listing by adding biodiesel statement December 30, 2010 by Tim Smith.
- Franklin Fueling Systems Tank Sentinel TS-1000EFI , TS-1001/TS-2001, and TS-5xxx Series with TSP-HIS BriteSensor; Tank Sentinel TS-1000/TS-2000, TS-1001/TS-2001, and TS-5xxx Series with TSP-HLS Standard Sensor, TSP-ULS, and TSP-UHS Standard Sensors. Revised product listings by added TSP-UHS sensor, E85 to non-discriminating floats, and biodiesel statement December 30 2010 and January 27, 2011 by Shaheer Muhanna and Tim Smith.
- Franklin Fueling Systems Tank Sentinel TS-1000EFI, TS-1001/TS-2001, and TS-5xxx Series with TSP-DIS BriteSensor; Tank Sentinel TS-1000/TS-2000, TS-1001/TS-2001, and TS-5xxx Series with TSP-EIS Standard Sensor; Tank Sentinel TS-1000/TS-2000 with TSP-PS Liquid Contact Sensor. Revised product listing by adding E85 to non-discriminating floats and adding biodiesel statement January 27, 2011 by Shaheer Muhanna and Tim Smith.
- Franklin Fueling Systems Secondary Containment Monitoring (SCM) - Incon TS-SCM and EBW AS-SCM. Revised product listing by adding biodiesel statement February 3, 2011 by Tim Smith.
- Preferred Utilities TG-EL-D4A Fuel Sentry Control Unit, HD-A2-C Optical Discriminating Sensor – Interstitial Detector (Liquid Phase) and the following Liquid Phase Out of Tank Product Detectors: TG-EL-D4A Fuel Sentry Control Unit, PLS-1 Non-Discriminating Sensor for Reservoirs; TG-EL-D4A Fuel Sentry Control Unit, PS-LDS Non-Discriminating Pump Set leak Detector Switch; and TG-EL-D4A Fuel Sentry Control Unit, RBS Non-Discriminating Sensors for Sumps and Containments. Revised product listing by adding biodiesel statement February 3, 2011 by Tim Smith.
- Veeder-Root Double-walled Containment Sump Hydrostatic Sensor – Form No. 794380-304 with TLS 450 Series, TLS 350 Series, TLS 300 Series, EMC Series, EMC Basic, Red Jacket ProMax and Red Jacket ProPlus. Revised product listing by adding results of testing in propylene glycol December 3, 2010 by Bill Moore.
- Veeder-Root MicroSensor and Tank Interstitial Sensors – Form Nos. 794380-344 and 794390-420. Revised product listing by adding results of testing in waste oil November 9, 2010 by Shaheer Muhanna.
- Veeder-Root Sensor #s: 794380-208, 794380-323, 794380-344, 794380-345, 794380-420, the former Gilbarco/Marconi PA02591144000 (same as 794380-420), and 794380-430. Revised listing by adding verification of acceptability of use of various VR sensors in other containment

areas such as containment sumps, contained risers and other contained enclosures November 9, 2010 by Lamar Bradley.

Pending Completion:

- Veeder-Root various Sensor series numbers 794380, 794390, 847990, 857060, 857080, and RE400. Revised product listing by adding biodiesel statement pending by Tim Smith.

Under Review:

- Containment Solutions Hydrostatic Precision Tank Test for DWT-Type II Tanks and FCI Liquid Filled Interstitial Monitor Tank Model with Model FHRB 810 Level Sensor by Tim Smith.
- Leak Detection Technologies MDLeak Enhanced Leak Detection Method by entire work group.
- Omntec Mfg. “BX-LWF” sensor by Tim Smith. The company is unable to provide a copy of the complete third-party evaluation. I have what appears to be the original evaluation on file date June 12, 1993 and conducted by KWA. However, it appears that the evaluation was revised on November 20, 1998, as indicated in parentheses on the results sheet provided by Omntec. Although results sheet lists the sensor, the original evaluation does not address the LWS sensor. Have draft email to finalize and send. It appears that the LWF is listed on at least one Omntec listing on NWGLDE List. Additional action may not be required.
- OPW Fuel Management Systems comparison of the performance of the OPW Fuel Management Systems leak detection system series SiteSentinel Console with and without the Intelligent Sensor Interface Assembly Out of Tank Product Detector (Liquid-Phase) by Tim Smith. Review is riddled with problems. Unable to complete analysis of full range of applicable systems due to testing not covering each appropriate system. At best, perhaps one sensor might be eligible to be added to each requested listing. Sent John Zheng email notification on November 17, 2009.
- Steel Tank Institute (STI) Revaluation of the Permatank Interstitial Monitor for detection of liquid leaks using liquid sensors for tanks up to 50,000 gallons. Interstitial Tank Tightness Test Method review by Peter Rollo.
- Steel Tank Institute (STI) evaluation of the Permatank Vacuum Leak Detection System provided for the STI-P3® Act-100® and ACT-100U® double wall steel underground tanks. Review by Bill Moore.
- Tanknology Vacuum interstitial test for double wall tanks. Non-Volumetric Tank tightness Test Method (Vacuum) review by Bill Moore of IMOTDM Team and the NFTTT Team. Method was evaluated using the NVTMT method but it falls under the interstitial monitoring category. Evaluation indicates the purpose of the test is to determine the tightness of a double-wall UST with a dry interstitial space.
- Various Sensor Listings - Review all sensor listings to make sure only non-discriminating float type sensors are listed with ethanol-blended fuels by Tim Smith.

7. AST & BULK STORAGE TEAM– Peter Rollo**Other Activity:**

- Discussions with David Rabb regarding the requirement to have an approved protocol preceding the review of a leak detection method.

8. SECONDARY & SPILL CONTAINMENT TESTING METHODS TEAM – William Moore

Other Activity:

- To date, no protocols or methods have yet been approved by NWGLDE for testing of spill containments or secondary containments. I have been having discussions with Tanknology regarding a need for nationally acceptable standards for testing spill buckets to fill this category which prompted Tanknology to development of a vacuum decay protocol, prior to evaluating such test methods. They are currently still in the process of drafting the protocol, which they will submit once they have peer reviewed.

9. ADMINISTRATION – Curt Johnson

- Marcia is working on the members only section of the website as there is a problem with either ReadyHost or with the old browser host. In the meantime, Lamar is unable to post updated listings of methods under review or not listed, so he will periodically distribute updates to group members.
- A fee was collected from each workgroup member to pay the ReadyHost fee for the workgroup website.
- Visitors were reminded that they are welcome as active participants in the meeting.

PROTOCOLS UNDER REVIEW UPDATE

- Bill noted that a peer reviewed protocol must be accepted by the Workgroup for a particular method prior to the evaluation of a product for that method.
- Bill asked for a vote to accept the NVTTC protocol for tracer and acoustical methods which are directly applicable to ASTs, small and large pipelines. The Workgroup voted affirmative, with the caveat that an addendum to the protocol would be required in order to include vacuum tightness testing.
- Bill noted that a European vacuum protocol exists.
- It was noted that the Praxair draft protocol is confidential. However, the Workgroup determined that only publicly posted protocols may be used by the Work Group. Only trade secrets such as algorithms and tracer material may remain confidential from the Work Group.
- The Tanknology Vacuum Interstitial Test (VIT) for Double-Wall Tanks may not be evaluated under the NVTTC protocol without a vacuum addendum. Neither shall it be evaluated under the Monthly Monitoring protocol because as the name applies it is only appropriate for monthly monitoring method evaluations.
- It is recognized that skin friction coefficients are a more significant factor in tank interstitial tightness testing than in tank interior tightness testing, so it is envisioned that proposed tank interstitial tightness test protocols may be tank type specific.
- Bill is working with Ken Wilcox on a large volume pipeline tightness testing protocol.
- The Workgroup recognizes the difference between a qualitative acoustical test method that utilizes a vacuum, and a quantitative vacuum decay test. This is an important distinction to keep in mind when determining the appropriateness of existing protocols for vacuum decay test methods.

- Bill noted that the KWA vacuum interstitial (monthly) protocol does not have a refresher rate like the European equivalent protocol does, but should.
- In summary it was recognized that the Workgroup needs to fix the protocol placement and that it then can correct the method listing placements – in particular KWA monthly tightness test protocol, Alternative Test Protocol for Leak Detection Methods – Evaluation of Vacuum Interstitial Monitoring Methods. A vacuum decay testing protocol suitable for interstitial tightness testing, and for spill bucket tightness testing, are required.

REVIEW TEAM ASSIGNMENTS

- No changes made to team assignments.

NEW BUSINESS

- Purpora request to eliminate LTT pretest – Greg Bareta & Bill Moore
Either eliminate the pretest or reduce from 90 psi to 75 psi to avoid damaging pipe, and to change listing accordingly without the need for a reevaluation. The Workgroup decided to allow the change without reevaluation.
- Use of biocide to find water using EZ3 Locator Plus – Greg Bareta
Discussed industry efforts to add biocide and biocide/water mixtures to E10 gasoline in an effort to provide the minimum “water” layer required to operate the water float. The Workgroup recognized that issues from phase separation, water adsorption into the E10 blend, and illegality of altering EPA approved reformulated gasoline blends are all reasons to avoid adding biocides to E10 in an attempt to utilize the water sensor per test requirements. It was determined that the correct course of action is to simply empty the tank of E10 prior to conducting the test. It was also recognized that the Workgroup disclaimer excludes E10 in the EZ3 Locator Plus listing so the issue may not be pertinent.
- Discussion of Work Group response to 3/1/11 QAPP by Battelle – Curt Johnson
 - March 4, 2011 Tech Assessment could essentially be considered a draft “ethanol white paper”. The November 15, 2010 Work Group letter to Battelle is now null and void because of the new test design, so a new response letter is needed for the latest draft QAPP.
 - March 14, 2011 Work Group letter suggested modifications and discussion points
 - The general EPA contract with Battelle is also to help discern issues with existing protocols as they apply to evaluations in ethanol fuels.
 - Veeder Root and Franklin Fueling are participating in QAPP test 1 and 2, but not in QAPP test 3 and 4, with their existing probes and their 2nd and 3rd generation density probes.
 - Bill says density probes should be able to alert owner of water ingress prior to phase separation.
 - Tim would like to link water sensing ability to ATG leak alarm.
 - The Work Group understands that leak detection is not the primary issue. The primary concern is knowing if existing or new equipment is able to detect water ingress into the tank.
 - A listing of discussion points entitled “Battelle Study discussion points 3-14-2011” based on Lamar’s conversation with Lorraine was distributed for discussion purposes.
 - At best, QAPP items 1 and 2 are supplemental to existing ATG protocol.

- QAFF currently refers to “water floats” only. It should be broadened so as not to exclude phase separation floats and density sensors.
- A listing of discussion points entitled “Additional Battelle Study discussion points 3-25-2011” as crafted by Tim was distributed for discussion purposes.
- The Work Group feels that testing only to QAPP items 1 & 2 is of interest and that QAPP items 3 & 4 are not mandatory for existing equipment.
- The Work Group believes that detection of water ingress should be an alarm enunciation/reportable issue.
- (Detection of) water ingress has become an issue simply because it cannot be detected in ethanol fuels.
- Existing protocols can not be retired. Can have new ones but can’t prohibit use of existing ones.
- If final QAPP were to become a new protocol, then item 4 would have to be greatly expanded.
- QAPP item 3 is an important option and is similar to EPA ATG protocol, but a leak rate for water ingress has not previously been included and should be.
- Battelle should ensure that starting water content in all tests is below the water content that would be expected to cause phase separation.
- Much discussion on whether an (existing) test method could be listed for up to E15 and/or E85 if passes approved QAPP items 1 and 2, or if passing an approved QAPP item 4 would also be required.
- QAPP should redefine the scope of “Low E”, “Mid E”, and “High E”.

End of Wednesday Meeting

THURSDAY, March 31, 2011

WELCOME VISITORS

- The group welcomed visitors, introductions were made, and visitors were asked to sign in.

VENDOR PRESENTATIONS

- Brad Hoffman and Kevin Keegan, Tanknology – Tanknology Vacuum Spill Container Test
 - Brad provided a demonstration of the Vacuum Spill Container Test.
 - A vacuum of 30 inches of water column is induced and held for 1 minute, after which a vacuum of at least 26 inches of water column is considered passing.
 - Tanknology recognized that a proportionally longer hold time is required for larger volumes, so the hold time for a 15 gallon spill bucket is 3 minutes.
 - The Work Group stated the need for a protocol for interstice and sump vacuum decay test evaluations.
 - Tim Smith expressed that the pending PEI RP 1200 may provide an industry standard for interstice and sump testing.
- David Rabb, Leak Detection Technologies – Chemical Marker Testing
 - David provided a PowerPoint overview of MDLeak technology.

- David professed the capability of leak detection down to 2 cc per year.
- David shared experience that most damage to piping occurs during transportation and installation, and that coax is just as prone to damage as rigid fiberglass.
- Dave Emmington, Veeder Root – PLLD with Ethanol Fuels.
- Dave expressed that the Veeder Root PLLD is sensitive to pressure only, so therefore a fluid's viscosity is not an issue but that coefficient of expansion can be.
- Dave stated that the coefficient of expansion of ethanol is less than that of gasoline, implying that that ethanol fuels pose no problem for PLLD functionality.

GENERAL DISCUSSION ON SUBJECTS RELATED TO NWGLDE MISSION

- Orifices
- Ken Wilcox expressed the need for standardization of orifices used for leak detection evaluations and third party testing.
- Ken states that acceptance of an off-the-shelf item such as an hypodermic needle would provide much relief and repeatability to evaluators and testers who must now custom create any test orifice.
- Brad Hoffman stated that custom created orifices can possess jagged qualities that may affect the leak rates differently than a rounded orifice.
- Ken suggested that a peristaltic pump may be a suitable substitution for an orifice.
- The Work Group suggested that a protocol for producing/selecting/evaluating orifices may be needed.
- Leak Detection Thresholds
- Randy Barnes from Alert Technology stated that the leak detection industry can go much lower than 0.1 gallons per hour, but that customers only want 0.1 gallons per hour and the shortest test durations, so it all comes down to regulation.
- Tim Smith stated that the detection threshold is a tradeoff, but the real problem is circumvention of the current threshold, so nothing would be improved by lowering the threshold by regulation, and that a recent EPA study showed a 50% detection rate for 0.1 gallon per hour leaks.
- David Rabb says that a California study shows equal leaks from single wall and double wall facilities.
- Stage I/II Vapor Recovery
- A general question was raised as to when Stage II vapor recovery requirements will go away.
- Peter Rollo observed that auto dealers can't tell what the useful life is for an onboard refueling vapor recovery (ORVR) system.
- Brad Hoffman stated that a stage I/II pressure decay test is not a precision test but that such testing finds a lot.
- Peter Rollo stated that Delaware requires a 10 inch water column pressure decay test with fill caps removed and vents capped.
- Battelle

- The Work Group indicated that it is looking at how the Battelle process may apply to Work Group listings and that it will have a written response to Battelle that will be made public at how it will look at the evaluation.
- Brad Hoffman offered that he does not believe Battelle will be usable by the Work Group to make listings.
- The Work Group stated that the Battelle study may result in an “ethanol white paper” similar to the Biodiesel White Paper that the Work Group may comment on, and that the Battelle study was more focused on water ingress sensing than leak detection as a whole.

End of Open Meeting

NEW BUSINESS (Continued)

- Discussion of Work Group responses to 3/1/11 QAPP by Battelle (Continued) – Curt Johnson
 - General agreement was expressed that the Technical Assessment (TA) is extremely rough and badly in need of peer review before the Work Group can base any opinions on it.
 - The TA Table 3 differentiates between Low-E and High-E, but it appears that a reclassification and/or rationale for Low-E may be required.
 - A show of hand vote was taken of the 9 Work Group members present on the question “Should the Work Group in concept allow the addition of (1) E-15 and/or (2) E-85 to existing ATG listings if water detection evaluation shows to the satisfaction of the Work Group that water ingress was detected at an ingress rate or quantity in accordance with the existing protocol or protocol as modified by Battelle and found acceptable to the Work Group? (1) for E-15: 7 Yes, 2 No; (2) for E-85: 9 No.
- Discussion of Vendor/Evaluator Presentations
 - Brad Hoffman, Tanknology – Tanknology Vacuum Spill Container Test: A seemingly good test, will be interesting to see how it is addressed in PEI RP 1200, particularly on how “manufacturer’s recommended test procedure” compares to 3rd party testing methods and how this will be addressed by federal rule.
 - David Rabb, Leak Detection Technologies – Chemical Marker Testing: Presentation was very informative and eye opening.
 - Dave Emmington, Veeder Root – PLLD with Ethanol Fuels: The Work Group notes that Dave’s statement that PLLD functionality is not affected by viscosity is contradicted by the Battelle Technical Assessment on Page 12. The Work Group LLD Team will explore this issue.
- Leak Detection at High Throughput Sites –Lamar Bradley, Helen Robbins, & Greg Bareta
 - The Work Group is not aware of an ATG/SIR/LLD leak detection method that can detect a leak when a system is so busy there is zero quite time.
 - It is believed that no one other than the owner/operator is required by 40 CFR 280 to report a leak detection test failure.
 - It was observed that states such as Delaware and Michigan require inventory monitoring in addition to other leak detection methods at all facilities, even those with secondary containment for just this reason.

TEAM MEETINGS

End of Thursday Meeting

FRIDAY, April 1, 2011

NEW BUSINESS (Continued)

- Leak Detection at High Throughput Sites (Continued) –Lamar Bradley, Helen Robbins, & Greg Baretta
 - The Work Group recognizes that existing CLD protocol involves throughput limitations, yet all agree that minimum quiet times are what is actually required in order for the equipment to conduct a test.
 - A revised protocol addressing minimum quiet time requirements is needed; otherwise test methods will have to be reevaluated using existing protocol if manufactures are seeking higher throughput limitations.
 - EPA is drafting a manual that addresses CLD.

- Add Link to Equipment Pictures from Listings? – Lamar Bradley
 - The value of adding images to some of the listed test methods was recognized, such as for identifying older LLDs observed in the field.
 - The evaluation submittal form will be revised to include a request for a picture (not a requirement) for all future submittals.

- Need state web site links on NWGLDE website? – Curt Johnson
 - Question was prompted by a state request.
 - It was decided that the existing EPA link on the website provides links to state programs and is sufficient as is.

- Need Hard Copy List for Historic Purposes? – Curt Johnson
 - It was determined that hard copies of earlier listings prove useful when going back to determine what changes had been made to listings, for example.

- Discuss Ramifications of EPA approving the use of E15 – Curt Johnson
 - 2007+ model year vehicles are approved for E15, working on earlier model years.
 - Different E-grade tank vents can not be manifolded together may be a big issue at existing facilities.
 - Facilities may not have a choice, E15 might be the only grade produced, similar to E10 being the only grade produced now by most refiners.

- Need Reference to Compatibility Disclaimer for Sensors? – Curt Johnson
 - It was determined that this is already covered by the existing disclaimer.

- Add Another Member to the Work Group? – Lamar Bradley

- The point was made that the Work Group used to have 11 members, that there is a lot of work to go around, and that some member(s) may be retiring soon and it would be good for continuance sake for a new member to get some on the job training first.
- It was determined that the number of members is at the Work Group's discretion.
- The Work Group will advertise for a new member.
- Discuss NEIWPCC Rules on NWGLDE Travel – Lamar Bradley
 - Per the cooperative agreement, NEIWPCC will assist with travel upon receipt of approvable travel based on NEIWPCC travel policy and procedures.
 - EPA can provide more funding through NEIWPCC.
 - Work Group must be self policing to avoid any concerns.
- Discuss how Vapor Recovery Equipment affects Leak Detection Equipment – Peter Rollo
 - Peter discussed this 2+ years ago with Shaheer over an OPW issue.
 - Could put vacuum gauge on ullage and convert stick reading instead of cracking dry-break to equalize the ullage level with the level in the drop tube.
 - Greg relates that Greg Young of Vaporless says their system won't reset if there is a vacuum or pressure in the tank, but he believes the pressure/vacuum vent ratings are within the workable range for existing equipment. Mr. Young is expected to get back to Greg on that issue.
 - Curt asked if the Work Group needs to modify any listings as a result of this issue. Greg was to speak with Howard Dockery.

OLD BUSINESS

- Follow-up on use of Electronic Line Leak Detectors with Mechanical Blending Valves – Greg Baretta and Bill Moore
 - VeederRoot literature says no.
 - Franklin Fueling does not prohibit – can get bleed through/back from solenoids separating say 87 from premium – so that bleed through could mask a leak in the other line and vice versa – but Franklin says you won't always have that situation so they don't think it's a big deal.
 - Greg also feels it's the same for MLLDs and for ELLDs/MLLDs with electronic blenders.
 - Bill feels you'll probably still find enough times to get monthly passes.
 - So the bottom line is that it's a non-issue.
- Follow-up Discussion on 0.1 gph ATG Certifications Using Volumetric Protocol – Lamar Bradley
 - Lamar had sent out 32 letters, no response from 9, those that did respond had no issue with changing the listing from 0.1 gph to 0.2 gph as it should have been originally per protocol.
 - No action has been taken since the Boston meeting.
- Follow-up Discussion on Hearing Tests for LD Equipment Requiring Use of Listening Devices – Greg Baretta
 - Rockland County specifies a capability to hear 20 decibels – which is perfect hearing.
 - Industry says ability to hear 40 decibels aided or un-aided @ every normal frequency range.
 - Greg feels the best approach is refining the test to be able to hear actual expected frequency range at a certain level, that range should be identified, and then the volume could be amplified.

- An option would be to visually analyze on an oscilloscope screen.
- Greg will continue to update the Work Group.
- Update on Development of a Template “Under Review”, “Not Listed”, “Review Completed” Lists – Lamar Bradley
 - Lamar announced that the template is done and distributed copies of the Under Review and the Not Listed templates to the Work Group members.
 - It was suggested to add a “Components” field to each list to allow further explanation.
 - Bill will forward members only link and information via e-mail.
- Status of revision to V-R AELLD listed for methanol & ethanol – Greg Bareta & Bill Moore
 - 3 are already listed that need to be taken off or modified.
 - Still need to contract vendors and then will report back to Work Group members.
- Discuss Lamar’s Future LUSTLINE Articles (next is about website) – Curt Johnson
 - Lamar regretted the mention of his article because it would be too lengthy and controversial for the Workgroup.
 - Marcia's article on the website was pronounced ok.
 - Bill volunteered to draft the article on Helen's idea to advertise the need for a protocol for spill buckets and secondary containment.
 - Greg's idea to write an article with assistance from Marcia and Mike on why the Work Group broadened its scope to include ASTs was asked to be put on hold for now by Tim while waiting for the EPA Large Pipeline/Hydrant System Standards because there is yet to be any nationally standardized leak rate criteria, which would be part of such an article.
 - Bill will make the first draft of an article explaining the need for a spill bucket/interstitial space tightness test protocol.
- Discuss SOP Manual – Tim Smith
 - No action.
- File Retention Committee Discussion – Lamar Bradley, Curt Johnson, Bill Moore
 - will continue to scan archives with OCR.
 - will look at electronic storage requirements, may need to purchase a Terabyte storage utility.
- Progress of Photo Album on our Web Site? – Marcia Poxson
 - Marcia obtained some more key information that wasn’t handed over by John Reeder.
- Review Policy Memos; Add Greg’s Ethanol Policy and Policy about Outside Comments? –Curt Johnson, Greg Bareta & Lamar Bradley
 - Ethanol Policy: Ken Wilcox had asked in December 2010 for Work Group policy so Greg developed a draft statement regarding the need for either a White Paper or individual equipment testing.
 - It was voiced that the Battelle draft TA is essentially a white paper on ethanol.
 - Policy about Outside Comments: Need was recognized following a state’s comment to the Work Group on an evaluation, where it was recognized that current Work Group policies do not require a recognition or response to outside comments.

- Lamar will draft a policy regarding outside comments.

Discuss Any Other Issues Not Previously Covered

- Tim asked if the Work Group will provide a peer review for the Battelle TA.
- The Work Group agreed that it would, within 3 weeks following an official request from Battelle.
- Members will forward comments on the TA to Curt for compilation and review.

- Battelle QAPP
- Members will provide further comments to Curt.

- Glossary of Terms, Intermittent Detector Definition of “Periodic”
- Tim will draft a definition and forward to Curt for distribution and review.

Discuss Next Meeting in San Diego, CA – Helen Robbins

- To be held in the Old Town District
- September 28-30, Rain date October 5-7
- Trip options include San Diego Zoo, Wild Animal Park, and Coronado Island

Appoint Member to Take Minutes at Next Meeting

Greg volunteered to take minutes.

Adjournment

Attendance List

Attendance Lists for Wednesday, March 30 and Thursday, March 31 are attached below. There was no sign up sheet sent around on Friday, April 1. It was the same as March 30 except that Roland Chester and Tom McClure were not there.

ATTENDANCE LIST
 National Work Group on Leak Detection Evaluations
 Sedona, AZ
 March 30, 31, April 1, 2011

Name	Representing	Phone Number	Email address
Sam Gordji	UNIVERSITY OF MS	662-234-1179	Samgordji@kuboa.com
David Rabb	Leak Detection Technologies	570-9065474	David@mpileak.com
Craig Wilcox	Ken Wilcox Associates	816-668-2925	cwilcox@oasislan.com
Ken Wilcox	KWA, Inc	816-443-2494	kwilcox@kwaileak.com
Helen Robbins	NWGLDE/CT DEP	860-424-3291	helen.robbins@ct.gov
Randy Barnes	Aleant Technologies	317-631-5580	randyb@AleantTechno.com
RYAN HARRIGAN	PurPora Engineering	(262) 268-1150	Ryan.h@PurPoraEngineering.com
ROLAND CHESTER	ITCA	(602) 258-4822	roland.chester@itcaonline.com
Nathaniel Yazzie	NNEPA/UST (928)	871-7993	nlyazzie@navajo.org
TOM McCURR	CS&KT	(406) 883-2880	tomme@cskt.org
TANYA YAZZIE	NNEPA/UST	(928) 871-7993	tyazzie@navajo.org
Howard Dockery	SIMMONS	972-497-9002 x5720	Howard.Dockery@Simmons.com
Lamar Bradley	NWGLDE/TN	(615) 532-0952	Lamar.Bradley@tn.gov
PETER ROLLO	DNREC/NWGLDE	(302) 395-2500	PETER.ROLLO@STATE.DE.US
Karl Dierman	HCNA LLC	603-422-8833 520.87	KOVRMAN@HCNA-LLC.COM
DOUGLAS MANN	VISTA LEAK DETECTION	509 737 1380	dmann@vistaleakdetection.com
Mike Juranty	NWGLDE/NHDES	603 271 6058	michael.juranty@des.nh.us
Curt Johnson	Alabama DEM	334-271-7986	cdj@adem.state.al.us
DAVE EMMINGTON	VEEDER-ROOT	916 638-2066	DEMMINGTON@VEEDER.COM
Marcia Poxson	Michigan DEQ	517-373-3290	Poxsonm@michigan.gov
William Moore	Utah DEQ/NWGLDE	801-536-4106	billmoore@utah.gov
GREG YOUNG	VAPORLESS MFG. (DC)	928-710-1830	gyoung@VAPORLESS.COM

