

**National Work Group on Leak Detection Evaluations (NWGLDE) Meeting
Louisville, Kentucky, April, 2-4, 2014**

WEDNESDAY, April 2, 2014

A complete list of meeting attendees for the sessions is included at the end of these minutes.

ANNOUNCEMENTS

- Welcome to David Wilson, as new member to workgroup.

WELCOME VISITORS

- Attendees from Nevada and Kentucky attended the meeting.

TEAM UPDATES

ATG & VTTT TEAM – Lamar Bradley

I. Completed Activities

- OPW Nano-console Comparison evaluation with OPW Integra. Listed 10-22-13.
- Franklin Fueling TS-5000evo upgrade added to listing. TS-5000evo is TS-550 in larger housing to accommodate 11 modules rather than 6. Third party letter received and listed 12-20-2013.

II. Under Review

- 10/25/12-Purpora submitted listing information to change Alert listings to Purpora due to Purpora's acquisition of the company. They also want to consolidate some listings, however concerns about different probe material and shape. Last communication from Chris Ramshaw (9-18-13) was that they were going to do evaluations based on current probe design. No new developments.
- 2-28-14-Received ATG evaluations for VeederRoot Console 8601 with TLS4 probes for 20,000 and 30,000 tanks. No 0.05 leak rates-emailed VR 3-12-14. VR deciding what to do with KWA; appears they are going to re-do test to 0.05 rate.

III. Other Activity

- 3-17-14-Received info concerning new OMNTEC models OEL8000III with several Proteus versions-No evaluation received, however, Craig Wilcox says they are done, but reports not written as of 3-19-14.

- 3-19-14-Received email from VeederRoot regarding improvements to TLS450, new TLS-450Plus. Replied will need either console comparison or Third Party Letter.
- Nothing done with ATG 0.1 gph listing issues since last time. Low priority item. Will be submitting revisions for the following:
 1. Patriot Sensors (Magnetek) after trying to contact the company.
 2. USTest 2001 and 2001 Quick Test after consultation with Greg Young.
 3. VeederRoot Prolink System, RJE Probes #RE-400-094 thru 112-5 after contacting VR. This will conclude the project. Can be reopened later if necessary.

CITLDS TEAM – Shaheer Muhanna

- I. Completed Review
 - No activity
- II. Under Review
 - No activity
- III. Other Activity
 - INCON SCALD want to change a “test failed” result to “test alert” when in alarm situation. They were informed that “alert” is too ambiguous and not acceptable.

NVTTT TEAM – Helen Robbins

- I. Completed Review
 - No activity
- II. Under Review
 - No activity
- III. Other Activity
 - No activity

LLD TEAM – Greg Bareta

- I. Completed Review
 - No activity
- II. Under Review
 - No activity
- III. Other Activity
 - No activity

SIR TEAM – Lamar Bradley

- I. Completed Review

- No activity
- II. Under Review
 - No activity
- III. Other Activity
 - 9-9-2013 – Email from Henryk Zajdel representing AIUT Company in Poland concerning a SIR program apparently at the encouragement of Shell. SIR is not yet acceptable in Poland for leak detection. No Third Party evaluation submitted yet. 3-6-14 – Nothing further on this.
 - 1-8-14 – Contact from Bill Strohman (FDR Services) re: TeleData SIR system which he says FDR purchased 2 years ago. Strohman reported that SIR program originally written in Cobol has now been rewritten in C Sharp language, but none of the algorithms were changed and it operates the same as before. He was told to get a letter from a third party verifying what he told me.

INTERSTITIAL MONITORING and OUT-of-TANK DETECTOR METHODS TEAM – Tim Smith

- I. Completed Review
 - Franklin Fueling: S940 Sensor Alarm Console with TSP-HFS Horizontal Float Switch Sensor, TSP-HLS High Level Sensor, TSP-UHS Universal Hydrostatic Sensor, and TSP-ULS Universal Liquid Sensor that was added to Interstitial Detector (Liquid Phase) on December 20, 2013.
 - Pneumercator Company Inc: LC2000, TMS-2000, TMS-3000 with E825-100F, 100XF, 100CF Non-Discriminating Liquid Sensors, ES825-200F, 200XF Discriminating Liquid Sensors. Revised listing November 4, 2013.
 - Pneumercator Company Inc: TMS 1000, TMS 2000W (wireless) with ES825-300F, 300XF, 300CF Non-Discriminating Liquid Sensors, ES825-400F, 400XF Discriminating Liquid Sensors. Added to Interstitial Detector (Liquid-Phase) November 4, 2013.
 - Veeder-Root and Acquisitions: TLS-4; TLS-4B; TLS-300, 300C, 300i, 300PC; TLS-350, 350R; TLS-450 Series; Red Jacket ProMax and ProPlus with Position Sensitive Interstitial Sensor 794380-333. Added to Interstitial Detector (Liquid-Phase) December 13, 2013.
 - Partially Completed
 - PermAlert: Company asked NWGLDE to revise two existing PermAlert listings. Original evaluation tested sensors using the quantitative procedure outlined in the protocol although these sensors are listed as “Qualitative” for “Output type” on the listing. New evaluation of modified PAL-AT consoles evaluates the various sensors using the qualitative procedure that involves full immersion of the sensors and recording the alarm response times. Resolving issue with company regarding distinguishing new sensors that have the same name as older sensors. The test results are different. Affected listings:

1. PAL-AT Models AT20C, AT50C, AT40K with AGW Sensor Cable, TFH Hydrocarbon Sensor Cable;
 2. PAL-AT Models AT20C, AT50C, AT20K, AT40K, AT80K with PHLR-S/L and PHLR-P-S/L Hydrocarbon Probes.
- Veeder-Root and Acquisitions: NWGLDE was asked to list the TLS4; TLS4B; TLS-300, 300C, 300i, 300PC; TLS-350, 350PC, 350R, 350R-PC; TLS-450 Series; Red Jacket ProMax, ProPlus, and ProPlus with Interstitial Sensor 794380-333. Add to Interstitial Detector (Liquid-Phase). Adding several PC consoles to the listing.

II. Under Review

- Franklin Fueling: NWGLDE was asked to list TSP-DMS 12 and 24 inch Discriminating Magnetostrictive Sensors with E85. Team partially completed request by listing the TSP-EIS (Opto-electric); TSP-ULS (Float Switch); and TSP-UHS (Float-Switch) with E85. Information unavailable to list the other types of sensors for E85 at this time.
- OPW: NWGLDE completed partial listing posted on April 9, 2012 for the iSite, iTouch, and EECO Series Fuel Management Systems with OPW Intelligent Sensor (and Company Equivalent): 30-231-S, 30-0230-S (30-3221-1A/1B, Q003-009); 30-0231-L (30-3221-2); 30-0323-D-10/D-30/D-10B/D-20B (Q0003-001/002); and the 924B Sump Sensor. Company also requested NWGLDE list various sensors with ethanol blends – E10, E15, and E85. All float switches have been listed. Information unavailable to list the other types of sensors at this time.
- Pneumercator Company, Inc: Company requested NWGLDE list:
 1. Reservoir sensor models – RSU810 Single-Float, and RSU800 Series Dual Float with Console Models: LC1000 Series, LC2000 Series, E-700-1, LDE-700, LDE-740, TMS3000, TMS2000, TMS2000W, TMS1000 Series.
 2. Non-Discriminating Liquid Float-Switch Sensor models: LS600 Series, LS600-LD Series, and LS610 with Console Models: LC1000 Series, LC2000 Series, E-14, E-29, E700-1, LDE-700, LDE-740, TMS3000, TMS2000, and TMS2000W Series.
- Steel Tank Institute: NWGLDE was asked to revise the listing for Permatank Interstitial Monitor for Detection of Air and Liquid Leaks – Interstitial Tank Tightness Test Method. The group was also asked to add a new combined listing for the STI-P3® Act-100® and ACT-100U® Double Wall Steel Underground Tanks Interstitial Monitor for Detection of Air & Liquid Leaks. The submittals have been back with STI for rework since April, 2013.
- Tanknology: Evaluation indicates the purpose of the test is to determine the tightness of a double-wall UST with a dry interstitial space. NWGLDE previously sought to link with the pending STI protocol. However, since the method was evaluated with the NVT TT protocol, the NVT TT Team will review the company's vacuum interstitial test for double wall tanks.

- Tank Tech, Inc: Review Braddock Method by Tank Tech using vacuum on the interstice of an In-situ Upgraded Tank. Method was evaluated using Non-Volumetric Tank Tightness Test Method (Vacuum).

- III. Other Activity
 - No activity

ABOVEGROUND AND BULK STORAGE TANK METHODS TEAM - Peter Rollo

- I. Completed Review
 - No activity
- II. Under Review
 - No activity
- III. Other Activity
 - No activity

SECONDARY AND SPILL CONTAINMENT TESTING METHODS TEAM – Shaheer Muhanna

- I. Completed Review
 - No activity
- II. Under Review
 - No activity
- III. Other Activity
 - No activity

LIST ADMINISTRATION TEAM – Curt Johnson

- I. Other Activity
 - David Wilson will begin maintaining website.
 1. Curt inquired if possible to “capture” webpage at a date in place of creating annual listing.

REVIEW OF TEAM ASSIGNMENTS

- Marcia Poxson and Helen Robbins removed, David Wilson added, to Administration, Heather Peters remains as back-up.
- Marcia Poxson added to ATG and Interstitial Teams.
- David Wilson added to Secondary and Spill Containment Team.

VENDOR PRESENTATIONS

General Discussion:

- Visitors have been requesting response/conclusion at meetings. It should be made clear that a decision will not be made during meeting, in accordance with protocol-Policy Memo #4. This portion is for general discussion not specific issues. Specific evaluation should be discussed privately with team.
- Protocol for vacuum test of interstice:
 1. Create product, have it Third Party reviewed per approved protocol and workgroup review policy #3.
 2. New protocol requires peer review prior to workgroup approval.
 3. Third Party writing/designing system? Third Party evaluate at vendors location? Must follow policy. Must be evaluated impartially. Evaluator must have control of evaluation process.
 4. Software changes require Third Party letter with validation of functionality.

WELCOME VISITORS:

- The group welcomed visitors/presenters and they were asked to sign in.

VENDOR PRESENTATIONS:

- CORROSION PROTECTION SOLUTIONS – Ron Knight (Grapple Hook)
Controlling Corrosion in STP Sumps.
Mr. Knight showed examples of sump corrosion and methods of protection to keep a sump clear of rust and fungus. Corrosion tends to accumulate on horizontal surfaces. Vertical surface allow vapor/acid to fall off. Inside of pumps appear unaffected by vapor/acid issue. Procedure consists of cleaning sump of rust, etc.; Coat with proprietary mixture; Remove vapor. Repair work inside sump after coating requires reapplication of coating.
- TANKNOLOGY – Kevin Keegan with Brad Hoffman on conference call
Remote Video Inspection Applications for UST Leak Detection Systems.
Video is used to verify material of construction of UST; to determine where a leak exists; to determine why SIR is not reconciling; to determine why leak detection is in alarm situation; etc. Actual video inspections have shown substantial blistering, cracking, leaking into ribs in tanks containing percentages of ethanol; mostly on USTs greater than 10 years old.
- CONVAULT – John Ekhtiar and OLDCASTLE – Deborah Murphy
Onsight Integrity Testing of Convault AST's
STI SP001 for portable/small tanks does not include Convault type tanks. Pressure testing of these types of tanks should only be used as last resort, as it may damage the tank. Pressure testing is/has been performed incorrectly; overpressure, bad gauges, etc. Hydrostatic testing will not damage tank, though it is “messy”. The preferred method of inspection is visual. Using a “stick gauge” to visually inspect interstitial space. Procedure follows STI SP001 without requirement for pressure testing. STI

representative indicated that to presenters that they should contact STI for inclusion of this method in SP001.

- BATTELLE - Anne Gregg
Update on Evaluation of Leak Detection Equipment with Ethanol Blends and Protocols.
 1. Previously referred to as the “Technology Assessment” now is the “Suitability **Assessment**”. September, 2011 identified uncertainties and data gaps; performed ETV testing and reporting of ATGs. October, 2012 stakeholder meeting to discuss uncertainties and data gaps. April, 2013 Quality Assurance Project Plan (QAPP).
 2. November, 2013 tested fuel properties and 3 technologies. February, 2014 revised assessment. Assessment document structure is different than in past: introduction discussing fuel property discussion, leak detection technology operating principles, suitability assessment table, than appendices which is listing of actual data. Review and completion process: round 1 – EPA peer reviewers and tested technology vendor; round 2 – stakeholder committee members; round 3 – EPA ETV managers and quality assurance. Process is expected to be posted on ETV website: www.epa.gov/etv/vt-ams.html#ustldt . **Protocols:** 7 protocols become 5 – ATG, SIR, Pipeline, Volumetric, and Sensors (liquid and vapor). KWA will assist to draft protocols.
 3. Battelle presented an accelerated schedule for production of the 5 new draft protocols and a document that will consolidate them. Target dates for having each draft document available for peer review are as follows:
 - ATG – April 18, 2014
 - SIR – May 16, 2014
 - Pipelines – June 13, 2014
 - Tank Tightness Testing – July 11, 2014
 - Sensors – August 11, 2014
 - Consolidated Document – August 22, 2014Following the issuance of each document, the selected peer group will be given 2 weeks to provide comments on the drafts to Battelle who will revise the documents and produce a draft document within 1 week of receiving the comments. The contract with Battelle is supposed to end this year.
- KEN WILCOX ASSOCIATES – Ken and Craig Wilcox
Craig indicated that the company is exploring the use of a flow meter to introduce measured leak rates in evaluations. The flow meter is proving to be much more reliable and repeatable than manufactured test-orifices, especially for smaller (gasoline) orifices. They will be exploring its use for air leaks next. Ken indicated that the company now has a 10,000 gallon AST for use in testing (manual sticking), ATG, radar, float level measurement devices. Attempt to consider weather, temperature, etc.

Company also has limited access to airport hydrant system for testing pipelines, etc.

GENERAL DISCUSSION ON SUBJECTS RELATED TO NWGLDE MISSION

- Question was asked regarding next national tanks conference. OUST was given permission to plan the conference. However, it is not definite that the conference will be held within 18 months of the last conference, but should be held by September 2015.

End of Wednesday Meeting

Discussion of Presentations

- **Ron Knight, Grapple Hook**
Subject matter, while interesting to all of us as UST regulators, does not really apply to the work group mission.
- **Kevin Keegan, Brad Hoffman - Tanknology**
Again, while interesting to all of us as UST regulators, subject matter does not really apply to mission of workgroup.
- **Deborah Murphy, John Ekhtiar – Oldcastle**
Presentation and questions asked were within the scope of the workgroup. However, this is an inspection method, not a leak detection method. Company needs to contact and work with STI to be included in SP001.
- **Anne Gregg – Batelle**
Technology assessment is completed and being sent for review/approval. Protocols are being written and will be sent out for peer review and comments. Members are concerned with short turn-around allowed for review of documents; and question as to how the new protocols affect the current protocols. Will the current protocols be replaced or will there be 5 new protocols?
- **Ken Wilcox, Craig Wilcox – Ken Wilcox Associates**
Using rotameter for testing. Wilcox now has new AST and ability to test aboveground storage tank systems and appurtenances.

OLD BUSINESS

- Protocol code – NWGLDE will be placing code for protocol used to evaluate product on evaluation page.
- LUSTLINE article – Future article:
 - o How vacuum in vapor recovery affecting leak detection equipment. (Heather)
 - o Test Methods Available for Hydrants, Sumps, Bulk Tank Tightness Testing.
 - o Why are there no leak detection methods for ethanol blends?

NEW BUSINESS

- Policy Memo #2 – Add a means to remove a member and clarify means of filling a vacancy.
- Policy Memo #1 – Word-smith for clarity, added policy on conduct at meeting.

- Policy Memo #3 – Place memo on web regarding procedure for listing changes to equipment.
 - o I(A) – Add “The list is formatted the same as the original California List.”
 - o I(I) - request phone number, email address and web address for insertion on evaluation page.
 - o I(J) – Copy paragraph to “HOME’ page of NWGLDE web.
 - o Change reference “lead team member to “lead reviewer”.
- Policy Memo #4 – Add notation regarding private issues during open meeting as outlined during Wednesday’s meeting.
- Elect new Chair Elect – NWGLDE members voted Heather Peters as new Chair Elect. She accepted the position.

END OF THURSDAY MEETING

Old Business (cont'd)

- Update on “Under Review”, “Not Listed” and “Review Completed” lists (Lamar Bradley). Submit updates to Lamar.
- Discuss PAP Manual (Tim Smith & Curt Johnson). Still trying to populate some areas of the manual. Nothing new to add. Changes to policy and procedures manual (PAP) an ongoing process. How to write a White Paper; Outline minimum requirements/inclusions for White Paper, Title, Author(s), author qualifications, purpose for paper, background, references, justification to include fuel, explanation of the process of making the fuel, applicability to release detection/functionality, definitive conclusions, peer reviewer and/or contributors. Tim will determine best location for White Paper within PAP. Create Appendix II. Remove “DRAFT” from PAP document posted to web. Sections remaining to be completed: Tim to send reminder to team leaders.
- File Retention Committee Discussion (Lamar Bradley, Curt Johnson and David Wilson). Archive files have been backed-up onto NWGLDE external drive. David to research for software the workgroup can use to search archive files. Easier for David if members scan and OCR prior to forwarding documents to him.
- From Wednesday’s meeting under SIR, Bill Strohman (FDR Services) re: TeleData SIR; Curt Johnson suggested that Bill be informed that he needs to get a complete SIR evaluation done. It was decided that Lamar would contact Bill Strohman and ask for more information regarding what/how software is changed, and suggest he get a letter from a third-party evaluator to support his claim that system continues to work the same as it was evaluated.
- Next Meeting:
 1. Fall 2014: Schedule for second week in September, if possible. We will submit three locations to NEIWPC, requesting the meeting be in
 - a. Rapid City, SD; or
 - b. Buffalo, NY; or
 - c. Portland, OR.
 2. Lamar Bradley to schedule and work with travel group for the fall meeting.
- Future meeting:
 1. We will submit three locations to NEIWPC for a spring, 2015 meeting:
 - a. Austin, TX; or
 - b. Albuquerque, NM; or
 - c. Charleston, NC.

- David Wilson will take minutes at the next meeting.

Adjourn

MORNING
ATTENDANCE LIST
National Work Group on Leak Detection Evaluations
Louisville, KY
April 2³ and 4 2014

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AFTER NOON
ATTENDANCE LIST
National Work Group on Leak Detection Evaluations
Louisville, KY
April 2, 3, and 4, 2014

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