National Work Group on Leak Detection Evaluations (NWGLDE) Meeting
Tampa, Florida, April, 24-26, 2013

WEDNESDAY, April 24, 2013

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

ANNOUNCEMENTS

- Bill Moore announced he will be retiring in December of 2013.

WELCOME VISITORS

- Dave Wilson from Utah, who works with Bill Moore attended the meeting.

TEAM UPDATES

ATG & VTTT TEAM – Lamar Bradley

- On October 25, 2012 Purpora Engineering 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 exist about different probe material and shape. Steve Purpora indicated they were planning to reevaluate at a KWA facility in the future and we would receive new evaluations based on current probe design.

CITLDS TEAM – Shaheer Muhanna

- No activity to report.

NVTTT TEAM – Helen Robbins

- Estabrook letter covering empty tank testing.
- Request from Purpora Engineering on the 8200 Series Audible Tank Tightness method.

LLD TEAM – Greg Bareta

- Dave Rabb listing for regulated pipelines of smaller size. Wilcox needs to do some additional testing to show the draft protocol will work with smaller pipelines. We will defer to Wilcox to sign off on what they need to do. Want to tie this in with listings for the larger pipelines.

- ATMAS International – Large Pipeline submittal (6 inches or greater), currently under review.

SIR TEAM – Lamar Bradley

- No activity to report.

INTERSTITIAL MONITORING METHODS TEAM – Tim Smith

I. <u>Completed Activities</u>

1) OPW Fuel Management Systems

- Date listing added: April 9, 2012.
- 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 (30-3221-1); 30-0232-D-10/D-20/D-10B/D-20B (Q0003-001/002); and the 924B Sump Sensor. Interstitial Detector - Liquid-Phase.
- Reviewer: Tim Smith

II. <u>Under Review</u>

1) Omntec Mfg.

- **Action requested:** Add "BX-LWF" sensor to existing Omntec listings.
- Received supporting documentation from NWGLDE member – sufficient to add the BX-LWF sensor to existing Omntec listing.
- **Reviewer:** Tim Smith

2) PermAlert
Received: March 21, 2013

- **Action requested:** Revise two existing PermAlert listings. Original evaluation tested sensors to the quantitative procedure 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. **Affected listings:**
  - PAL-AT Models AT20C, AT50C, AT40K with AGW Sensor Cable, TFH Hydrocarbon Sensor Cable
  - PAL-AT Models AT20C, AT50C, AT20K, AT40K, AT80K with PHLR-S/L and PHLR-P-S/L Hydrocarbon Probes
- **Reviewer:** Tim Smith

3) Steel Tank Institute (STI)

- **Action requested:** Revise one currently listed Interstitial Tank Tightness Test Method and add a new combined listing for the STI-P3® Act-100® and ACT-100U®
- Evaluation of the Permatank Interstitial Monitor for Detection of Air and Liquid Leaks.
    - Received third-party evaluation, dated: Feb 15, 2012.
- Evaluation of the STI-P3® Act-100® and ACT-100U® Double Wall Steel Underground Tanks Interstitial Monitor for Detection of Air & Liquid Leaks.
    - Received third-party evaluation, dated: Feb 23, 2012.
- Received protocol: Evaluation Procedures for Leak Detection on Double-Wall Underground Tanks (October 14, 2011); revised (March 15, 2013)
    - Review of the third party evaluations had been held-up pending review and acceptance of protocol.
    - Protocol covers periodic and continuous interstitial methods (i.e., automated communication of alarm condition)
- **Outstanding issues:**
    - NWGLDE determined the test method that calculated vacuum decay test times were insufficiently supported to allow listing for products less viscous than diesel, failure due to air ingress and failure due to liquid ingress in larger tanks.
    - STI requested, and NWGLDE agreed, to provide STI with a detailed explanation of parameters that must be addressed in order to list all products and tank sizes.
- **Reviewers:** Mike Juranty, Bill Moore, Peter Rollo, Tim Smith, Curt Johnson

4) Tanknology

- Vacuum interstitial test for double wall tanks.
    - Comments: IMOTDM Team and NVTTT Team working together to review request. Method was evaluated using the NVTTT method. Evaluation indicates the purpose of the test is to determine the tightness of a double-wall UST with a dry interstitial space. The STI sponsored protocol is applicable to this method. Draft listing prepared – awaiting review by NWGLDE.
- **Reviewer:** Bill Moore

5) Tank Tech, Inc.

- Braddock Method by Tank Tech Using Vacuum on the Interstice of an In-situ Upgraded Tank.
    - Evaluated using Non-Volumetric Tank tightness Test Method (Vacuum). NWGLDE review pending
- **Reviewer:** Tim Smith

ABOVEGROUND AND BULK STORAGE TANK METHODS TEAM - Peter Rollo

- Mass Tech 24-hr and 72-hr certifications for Bulk Field Constructed Underground Storage Tanks. Want to revise the existing listings and was originally submitted in August of 2011. It was determined that Wilcox used an old protocol instead of the revised version for their evaluation. It appears that they had already done the requirements required by the protocol and some minor revisions to the listing are needed. I have not heard from them since December of 2011. Reminded Ken Wilcox at our Tampa meeting that I am still waiting for the revised listing to be submitted.
- Ken Wilcox delivered information for review from Sensorcom. They want to have their Product Sensitive Cable workgroup approved. The submittal contained old evaluations not base on any approved protocol. Ken was advised that the evaluation would need to be done using an approved protocol or create a new protocol to support the existing evaluation.

SECONDARY AND SPILL CONTAINMENT TESTING METHODS TEAM – Bill Moore

- Franklin Incon TS-STS Sump Test System listed on 4/12/2013.
- On 3/3/2013 Tanknology requested listing our NVTTT Protocol under this category as appropriate for their Vacutect Spill Bucket Tester. Since the Vacutect is based on "Vacuum Decay" rather than noise and water ingress, it is pending approval of the Interstitial Vacuum Decay Protocol proposed by STI, so they can append a paragraph that would be applicable only to Spill and Containments testing.

LIST ADMINISTRATION TEAM – Curt Johnson

- Collected web fees of $11.00 from every member.

WEB SITE ADMINISTRATION – Heather Peters

- Still working on updating web software. Still working on getting all our submittals computerized via Bill Moore.

<u>REVIEW OF TEAM ASSIGNMENTS</u>

- Add Heather Peters to the List Administration Team. ADMINISTRATION – Curt Johnson (Leader), Marcia Poxson, Helen Robbins, Heather Peters.

<u>PROTOCOLS UNDER REVIEW</u>

- Vacuum Test Protocol – Continuous versus Periodic. NWGLDE categorizes these methods based on how an alarm condition is identified and communicated. Evaluation added wording for vacuum protocol i.e. How are vacuum levels established prior to the test? Continuous versus Periodic – add to PAP Manuals and

applicable memos the definition of periodic and continuous interstitial monitoring. The definitions were changed and will appear on our web site once group members can review the changes.

- Consider new category or revise to include periodic interstitial monitoring i.e. Interstitial Tank Tightness Test Method. No changes necessary.
- Xerxes and Containment Solutions Post Installation Hydrostatic Interstitial Tank Test. Existing listings are so sparse there is not enough information to determine how the system works. Proposing that these methods are clarified that the interstitial space is liquid filled and utilize a sensor. Tim Smith will take the lead. He will review old evaluations for completeness based on 3rd Party evaluations.
- Update on Battelle revisions to EPA Protocols. Received peer review comments from stakeholders. Sam Gordji is the only person who disagrees with the statistical basis of the protocol review. However, what he wants is cost prohibitive. ATG evaluations are complete and available on Battelle's share-point web site.

NEW BUSINESS

- Covered under the "Protocols Under Review" Topic.

OLD BUSINESS

- Add Vendor Procedure Number to listings and Review Draft of discussion in Policy Memo #3. This is done to stay current and add which procedure was used when the evaluation was done. Amend Memo #3 to cover changes to listings that we need to be notified. It was determined that this was already required. Do we put it in the listing? Yes. Direct link for listed.

End of Wednesday Meeting

WELCOME VISITORS

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

VENDOR PRESENTATIONS

Anne Gregg, Lorraine Sable and Earl Drack – Battelle Update

To summarize I included the Project Objectives and QUAPP Objectives.

Questions

Lamar Bradley – Three technologies categories to be evaluated. Are ATG's, sensors and maybe multiple sensors included in these evaluations? As per Battelle it is not yet known. Need to do full scale testing on these technologies. Battelle agreed it is a good idea if funds are available.

Lorri Grainawi – What size are the "full scale" tanks to be used? Battelle plans to use a normal retail site containing 10 – 15k tanks with E10 – E85 fuels. They will have ATG's and sensors. The site will have to have some down time to conduct the tests. Can be in Columbus or anywhere else.

Kevin Keegan – Tanknology

He presented an overview of their Vacutect Test Method and Vacutect Test Statistics. Tanknology did not want their presentation made public.

Vacutect Overview – 4.8% of tanks tested using this method in the last 18 months did not pass.

Vacutect Results – Between 9/1/2011 and 3/20/2013 9063 tests were performed, 280 tests failed and 158 tests inconclusive.

Questions

Lamar Bradley – Is the ground water level measured as part of the test if not known? If known Tanknology assumes it is at the highest point. If not known - It is good to know the actual groundwater level but it does not preclude doing the test if it is not known.

Lorri Grainawi – How much of a vacuum do you use? It depends on the tank. With a 96 inch tank you must off-set ground water pressure and overcome head pressure. No more than 5 psi vacuum. Assumes empty tank and hole full of water for maximum pressure.

Lamar Bradley – Tennessee has no use for leak detection methods that can be impacted by clay backfill which could plug holes and give a passing test. Viscosity versus orifice size is the key. When doing tank testing creating holes small enough is the problem due to the ease the hole plugs up with dirt.

Curt Johnson – Has anything been done to adjust the procedure to deal with E85? Anything above E10 the test is done with dry interstice and known groundwater level but you would never give a pass due to too many unknowns.

Ken Wilcox – Ken Wilcox Associates

Ken provided comments and things to consider and directed towards Battelle and EPAs pipeline protocol. Ken mentioned that his facility can accommodate testing for lines up to 560 gallons and can use the KC airport for testing lines from 2,000 gallons to 100,000 gallons, but nothing for lines from about 600 to 2,000 gallons. Problem is protocol requires consideration of temperature differentials of 25F but would like to go down to 10F. He wants to circulate 1 to 2 volumes instead of circulating fuel for several hours. Wants the number of tests reduced. Can use local airport in Kansas City for testing but only gets 5 hours to test. Develop a scaling method based on line size to simplify testing. For mid-size lines costs tend to be prohibitive.

General Discussion

Greg Young – VMI

He brought up a potential problem when the new federal regulations go into effect with regard to day tanks serving generators. The underground portion needs leak detection. Instead of simply alarming, the system must shut down. People should make visual inspection in an alarm situation. Also need to bypass shutdown so hospitals can get emergency power and clean up the mess later. MELLDs cannot be installed with emergency generators.

Steve Purpora – Purpora Engineering

Brought up the pipeline protocol for Battelle to consider. The protocol needs to better address what to do with air pockets in the lines. Air in the lines can give false passing results and reduces sensitivity of equipment.

End of Presentations

Discussion of Presentations

- **Anne Gregg – Batelle**

  NVTTT Methods should be included in the technology testing. Look into full scale testing at an actual facility. Non-destructive testing will be done. NWGLDE will call regional Ohio office and have them ask state for testing locations. Rather than have to dispose of a tank full of gas CROMPCO has a method of "washing" gas so it can be re-used.

- **Kevin Keegan - Tanknology**

  Curt Johnson brought up that he did not mention the use of an inclinometer to determine tilt and when not used test times must be extended.

- **Ken Wilcox – Ken Wilcox Associates**

  Pipeline Protocol – Ask Ken to send Bill Moore a brief paragraph proposing to do some testing at the 10F differential and run 1 to 2 volumes rather than circulate to condition the ground to save time. Still have to submit a formal protocol but will go ahead with testing pending submittal of the protocol.

New Business

- NWGLDE has determined that some existing listings may erroneously list certain combinations of Certification and Applicability. For example, non-volumetric methods relying on vacuum loss due to air or water ingress may inappropriately list as applicable those products that are less viscous than the product that's orifice size was evaluated. NWGLDE will begin a systematic review of affected listings and revise the listings as appropriate pending contact with method owners consistent with written Work Group policy. Volumetric and mass based listings are not affected. It is also possible that certain non-volumetric methods such as tracer and acoustical methods will not be affected.

END OF THURSDAY MEETING

Old Business

- Next Lustline Article discussing our 20th Anniversary. Curt Johnson will write the article and come up with a topic. Something on our history.

- Add ATG Protocol under secondary and spill containment test method protocols category (Bill Moore)? Done.

- Software changes to ATG Systems (Greg Bareta)? Done. Need to get version updates from Veeder- Root.

- Vaporless listing revisions still needed on LD3000, LD3000S and 99 LD3000 (Greg Bareta)? Revisions completed.

- Status of revision to Veeder-Root Red Jacket AELLDs listed for methanol and ethanol (Greg Bareta & Bill Moore). Revisions done.

- 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.

- File Retention Committee Discussion (Lamar Bradley, Curt Johnson and Bill Moore). Will purchase two TB drives – a primary and a backup. Tim will purchase the hard drives to store submissions. Bill is still scanning documents and has two cases left. Send documents to be scanned to Bill Moore and he will send to Heather Peters.

- Links to equipment pictures from listing (Marcia Poxson). Marcia did not attend the meeting. Do we or do we not want to still do it? How do we link to our files? It was suggested that we discuss the best way to do this during the open portion of the next meeting. Need hyperlink to a website where European protocols can be purchased.

- Policy Memo Review (Curt Johnson). Memo #1 no changes. Memo #2 no changes but be ready in December, 2013 to fill Bill Moore's position after he retires. Curt Johnson will get that process started at the appropriate time. Memo #3 under Work Group Review Policies, Part 1, section I remove "minor" from first line. Add "J" Descriptions of Changes. Under Workgroup General Team Procedures, 2, section "O" Delete second sentence and add "Final protocol will appear on NWGLDE web site. Under Part 3, delete section A2. Memo #4 no changes.

- Next Meeting in Denver (Heather Peters coordinating). Workgroup has a presentation scheduled for the conference. Have to discuss what is to be said. So far

Curt will give the historical perspective and other members will discuss how things changed. Methods used then and now, how equipment has evolved, lesson learned etc. Individuals chosen to be presenters will work on abstracts and ideas and send to Curt Johnson.

- Future meeting locations for Spring Meeting, 2014: We will submit three locations to NEIWPCC (Louisville, KY, New Orleans, LA and Albuquerque, NM) and let them choose which location.

- Greg Bareta will take minutes at the next meeting.

Adjourn

Meeting Attendees – Wednesday – Friday, April 23-26, 2013

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National Work Group on Leak Detection Evaluations
Tampa, FL
April 24, 25, 26, 2013

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