National Work Group on Leak Detection Evaluations
Fall Meeting 2012
October 23-26, 2012

NWGLDE- Tuesday October 23, 2012
Sign in sheets attached.

This opening portion of the NWGLDE meeting was held in conjunction with a Battelle hosted meeting to discuss their evaluation of leak detection equipment and ethanol/water issues associated with regulated UST systems. [These meeting minutes cover only the portions of the official NWGLDE meeting, not minutes from the Battelle hosted portions.]

Curt opened the NWGLDE meeting. Anne Gregg welcomed everyone to Battelle and opened the Battelle portions of this meeting as well. Anne outlined the plan for Battelle's workshop on Wednesday, October 24, 2012.

First NWGLDE presentation- Alert Technologies/Purpora Engineering

Randy Barnes and Chris Ramshaw discussed the changes to Alert Technologies In-Tank Mass Measurement Probe System. The original "probe" measures changes in weight while in a column of fluid, specifically based on the size and the diameter of the tank in which it is installed. The new probe is reported to be more durable than the older model glass probes. The new probes rely on a software algorithm to compensate for the surface area at a specific height. The presenters also officially announced that Purpora Engineering had acquired Alert Technologies. They also requested removal of the model numbers from the listing, as these to do not really represent different pieces of equipment, but simply different evaluation protocols. In addition, Purpora Engineering would like to have this equipment listed under their name. The NWGLDE requested written documentation from both companies to have the listing transferred from Alert Technologies to Purpora Engineering. The NWGLDE also asked for a brief written statement on the history of the model numbers and the justification for removal of those model numbers. Finally, the work group requested a third party comparison evaluation of the probes and software to confirm that the changes have not affected functionality.

Second NWGLDE presentation- Ken Wilcox Associates, Inc.

Ken Wilcox requested an opportunity to discuss the double-wall interstitial vacuum testing protocol and evaluation. He stated that no matter where a leak occurred, above or below product or water lines, inner or outer tank, vacuum would be lost. Even if you re-create the vacuum, it will continue to fail. He asserted that this was a simple process and did not understand the questions being posed by the NWGLDE on recent protocol submissions. The work group explained that there must be some mechanism to declare a failure- a specific loss that could be objectively declared a failure. Ken questioned how to establish an acceptable protocol. The work group discussed that the manufacturer could determine what they believe

that rate to be; the third party evaluator could test to that pre-established rate and confirm that it will find a 0.1g/h or 0.2g/h (for monthly) leak equivalent with 95% probability of detection and less than a 5% probability of false alarm. Ken pointed out that some current approved methods will allow for up to a 75 gallon loss over 1 month, but with the small size of the interstices (well below 75 gallons), no matter how you create this protocol and test, *any* leak rate will be far more stringent than the other methods. Interstitial communication was also discussed. European vacuum is a continuous method that allows for vacuum refresher. This method was discussed for comparison. The work group returned to the main request- an actual value that would serve as a "trigger" to declare a failure and warrant investigation. For a continuous method, with an alarm, there needs to be a point at which the alarm will sound. That would be the same point at which a leak investigation would be warranted. The group also discussed the merits of requiring a liquid sensor in the interstice. Ken also indicated that all vacuums will fluctuate a bit and as such, any protocol would need to allow for some minor vacuum changes. This again raised the question of establishing a "fail" threshold. It was again suggested that the manufacturer must establish their own fail threshold based on vacuum loss.

Tuesday meeting closed.

<u>NWGLDE- Thursday, October 25, 2012</u>

All members present (Greg Bareta via telephone)

Team Leader Updates

1. ATG and VTTT methods-
    a. Two ATG console comparisons: Franklin Fueling evo Console and OPW Site Sentinel Integra console. Both approved and listed.
    b. No ATG reviews pending. No new VTTT actions.
2. SIR- Fairbanks Environmental Wetstock Wizard Version 4.4. Listing approved- currently only approved using ATGs.
3. CITLDS- Site Sentinel Model iSite and Site Sentinel Integra with SLD Version 1. Approved and listed.
4. NVTTT- Interstitial/vacuum tank tightness testing being reviewed between NVTTT and Interstitial monitoring. Under review. No other activities.
5. Line leak detection-
    a. Franklin Fueling- new STP-MLD+, STP-MLD+AG, STP-MLD+D, and STP-MLD+B. Approved and listed.
    b. OPW Model 327- volumetric line leak detector. Approved and listed.
    c. Vaporless 3000/3000S under review for larger capacity and model number change.

    d. Large diameter- Hansa-Germany. Requested it to also be listed for smaller leak rate. Requested additional information from Hansa. No response as of yet.
6. Secondary and Spill Containment test methods
    a. Sump tester submitted from Incon. It is under review.
    b. Tanknology has a spill basin tester under review.
    c. Discussed listing procedure and criteria. PEI RP 1200 has been published and was discussed. Bill Moore had 3 copies of PEI RP 1200 to distribute to work group members.
7. Interstitial monitoring and out of use tank detector methods
    a. Franklin Fueling sensors- "S" added after acquisition of Beaudreau Electric. Requested some additional clarification from Franklin Fueling/Beaudreau ownership and individual company listings. Received a third-party inquiry regarding why this action was done. Team provided response.
    b. Steel Tank Institute- Requested vacuum interstitial monitoring listing. Includes multiple test methods (monthly, precision tightness testing). Protocol is not yet finalized. Therefore, listings cannot be completed or accepted at this time. Discussed the pending protocol. Tim will provide the draft protocol and send it out to the workgroup. The protocol will cover tightness testing, monthly or other intermittent monitoring, and continuous monthly monitoring.
    c. Tanknology request for listing also associated with this protocol development. At this time, this is waiting for protocol to be finished.
8. Aboveground and Bulk Storage Tank methods
    a. MassTech 24 and 72 hour bulk fuel storage tank test. Old protocols used. Requested updating the evaluation/documentation. Pending.
9. Admin
    a. Marcia announced that she will be retiring in about a year and that she will be working with Heather so that she can take over the web site maintenance at that time.

Vendor/ Evaluator Presentations

Probe shape and material has changed for the Alert Technologies- Randy Barnes. They simply explained the changes. They were requested to have a third party probe-comparison evaluation. They also indicated that they were acquired by Purpora Engineering. NWGLDE awaiting submittals requested during their presentations.

Ken Wilcox presentation concerned the interstitial vacuum testing protocol and testing (see notes above in Team Leader/Method updates above).

Battelle Protocol Workshop Review

Yesterday's meeting was Battelle asking for input to use in developing the protocols. This is the start of a work in progress. New protocols may render some of the old protocols obsolete, especially the amended protocols. The NWGLDE will be involved in reviewing any drafts of any new protocols. We will comment on the technical assessments and protocols when released.

Next LUSTLINE Article- Future articles discussed. Tim suggested an article about the Battelle revisions to the EPA protocols.

Use of line leak detectors with satellite dispensers- Greg Bareta discussed the issues that some systems have with conducting release detection all the way to the satellite systems. It can be accomplished as many of the manufacturers offer master-satellite dispenser systems specifically designed to allow detection.

Setup of ATGs after installation- Greg- Wisconsin requires plan reviews for any installation and includes the ATG setup in that submittal. He discussed the configurations that may be seen during installation- and items that should be reviewed upon installation (e.g. that the proper alarms are enabled at the site as some are disabled when they leave the shop). He discussed alarm programming, system setup data, etc. The group discussed which states require setup data and/or requiring probe and test functionality tests.

Third Party Evaluations Location Concerns- Started with a request from a vendor to a third party evaluator that the evaluator conducting the test at the vendor location. We realize that evaluators may need to go offsite to test under certain tank system configurations (evaluator facility has limitations- tank size, piping size, etc). The test method is to be evaluated in an environment controlled by the evaluator, even if offsite, and there are concerns about first party involvement in the test. It was discussed that as long as the evaluator has control of the location, environment or test conditions, the location may be irrelevant. The workgroup believed that vendor-owned sites should only be used during third party evaluations if they offer something that the evaluator location lacks to conduct the testing. We also discussed how data that is used for SIR evaluations is obtained, manipulated, and is evaluated. This topic will be revisited when the new protocols are drafted.

What effect NEW EPA protocols may have on future evaluations- The discussion was raised about the pros and cons of having old equipment evaluated under the new methods. Should we accept the current listings that were evaluated under the old protocols? The workgroup felt that current listings would remain in place and unchanged. Will we render the old protocols obsolete and only maintain them for historical reference for the listings that used those protocols? Some protocols such as the existing VTTT protocol may become obsolete, but others such as NVTTT may not. New equipment evaluations will need to be conducted under the new protocols. This will be further resolved upon release of the new protocols.

Day End

NWGLDE- Friday, October 26, 2012

1. Discuss Policy and Procedures manual (PAP) to add to PAP manual for adding evaluation dates and evaluation- Drafts are being circulated and sent to Curt to be finalized. Some of the revisions were discussed, including the third party evaluation dates on listings. The only way sometimes to tell what the revision was on each date is to review the listings over time and note the differences. The work group discussed ways to potentially track those changes. Tim requested Curt add to the SOP some of the procedures that Curt and Lamar do as chairman and vice-chair. Curt and Lamar agreed to document the steps that they take to "polish" the listings.
2. Sensors used with ethanol blends including optical sensors and refractive index sensor- As Battelle is currently working on this project, no additional discussion at this time.
3. TankTech Stand Alone and Phoenix Systems- The workgroup discussed the UL listing for field constructed tank systems. Members would like to see third party, or other official certification, of the double walled system interstitial tank tightness tests not only for field constructed tanks but for shop fabricated tanks as well. The workgroup notes that such third party evaluated interstitial tightness tests for any prescribed precision standard do not currently exist for most shop fabricated tanks and all field fabricated tanks. TankTech will be submitting a third party evaluation, performed by Ken Wilcox Associates, soon.
4. Draft intermittent detector definition- No additional discussion warranted.
5. Draft PAP- Set deadline to try to have complete prior to next meeting
6. CITLDS at high throughput facilities- Already discussed throughout other protocol discussions. The configuration of the high throughput facilities affects how the equipment may function, but doesn't necessarily affect the piece of equipment itself.
7. File Retention committee- Bill is still working on optical character code scanning of archived files that Curt sent him. Send files or scans of documents to Bill Moore.
8. Update on "Under Review" "Not Listed" "Review Completed" Lists. Lamar provided a copy of the Under Review list to the workgroup. Send Lamar any corrections. Earlier

suggestion was mentioned here- to include a comments field to note the changes that occur. Be sure to email Lamar changes.

9. Add Link to Equipment pictures- Decided to during the past meeting(s), but have not yet had the opportunity to add any yet.
10. Greg had posed some questions to ATG manufacturers about software changes for ATG consoles- Still conducting research at this time.
11. Review policy memos- Already discussed. Please review policies before next meeting and bring changes.
12. Next spring meeting- Tampa, Florida.
13. Fall meeting associated with the National Tanks Conference in Denver, CO- We will submit an abstract to have a 20 years of NWGLDE session at the conference.
14. Peter will be taking minutes at the spring meeting. Bill will be taking minutes at the fall meeting.
15. Curt noted that API RP 1615 mentions NWGLDE and that we may need to clarify how API characterizes our intent and applicability.
16. 20th anniversary article of LUSTLine- How have the listings have changed?
17. Tim provided the following additional article suggestions for LUSTLine articles- 20th anniversary article discussing list changes made from the beginning of NWGLDE until now; industry trends; new applications of vacuum interstitial monitoring.

Meeting adjourned.

ATTENDANCE LIST

National Work Group on Leak Detection Evaluations

Columbus, OH

October 23, 25, 26, 2012

Name	Representing	Phone Number	Email address
Randy Barnes	AlenTech Technologies	3174320753	randyb@alentech.com
Shaheer Muhamma	EPD - NWGLDE	404-362-2579 -	shaheer.muhamma@dnr.state.ga.us
William Moore	Utah UST - NWGLDE	801-536-4106	billmoore@utah.gov
Peter Rollo	NWGLDE	302-395-2500	Peter.Rollo@state.de.us
Curt Johnson	NWGLDE	334-271-7986	cdj@adem.state.al.us
Patrick Toms	VAREC, INC	770 810 9469	patrick.t.toms@varec
Amy Dindal	Battelle	561-598-6505	dindala@Battelle.org
Steve Purpora	Purpora Engineering	262-268-1150	SAP@PurporaEngineering.com
Ed Kubinsky	Crompco	610-276-5914	ed.kubinsky@crompco.com
Randy Boucher	Franklin Fueling	207-571-1137	boucher@franklinfueling.ca
Helen Robbins	NWGLDE	860-424-3291	helen.robbins@ct.gov
Marcia Poxson	NWGLDE	517-373-3290	poxsonm@michigan.gov
Heather Peters	NWGLDE	573-751-7877	heather.peters@dnr.mo.gov
Charles Fenton	HCINA	603-828-1670	cfenton@hcina-llc.com
Wayne Geyer	STI	847-438-8265	wgeyer@steeltank.com
Sam Gordon	SSG Associates	662-234-1179	samgordon@greenee.com
Ken Cornett	Veeder-Root	860-651-2825	KCornett@veeder.com
Mike Juranty	NWGLDE	603 271-6058	michael.juranty@des.nh.gov
EARLE DRACK	DirAction, LLC	610-506-5701	earle.drack@diractionllc.com
Jamie J. Coyville	Southern Tank Testers	337-332-5787	jamie@southerntank.com
April Underdal	Southern Tank Testers	800-618-0025	april@southernt[illegible]
Chris Ramshaw	Purpora Engineering	4142949058	chris@purporaengineering.com

ATTENDANCE LIST

National Work Group on Leak Detection Evaluations

Columbus, OH

October 23, 25, 26, 2012

Name	Representing	Phone Number	Email address
DAVE EMMINGTON	VEEDER-ROOT	916 638-2066	DEMMINGTON@VEEDER.COM
Ken Wilcox	KWA	816-305-4642	kwilcox@kwaleak.com
KENT REID	VR	860 651 2710	Kreid@veeder.com
Howard Dockery	Simmons	972-497-9002	Howard.Dockery@Simmons-corp.com
Kevin Keegan	Tanknology	800-666-0288	kkeegan@tanknology.com
Lamar Bradley	NWGLDE	(615) 532-0952	Lamar.Bradley@tn.gov
TIM SMITH	US EPA-OUST	(703) 603-7158	SMITH.TIMR@EPA.GOV
Craig Wilcox	Ken Wilcox Associates	(816) 443-2494	cwilcox@oasistan.com
GREG YOUNG	VAPORLESS MFG., INC.	928-775-5191	GYOUNG@VAPORLESS.com
Melissa Kennedy	Battelle	(614) 424-7601	kennedym@battelle.org
TONY MILLS	OPW	(708) 369 3528	tmills@opwfms.com
Pete Neil	OPW	985-855-7459	pneil@opwfms.com
BILL JONES	WRA	401-886-4747	wjones@wrafoxassociates.com
Anne Gregg	Battelle	614-424-7419	greggaf@battelle.org

ATTENDANCE LIST

National Work Group on Leak Detection Evaluations

Columbus, OH

October 23, 25, 26, 2012

Name	Representing	Phone Number	Email address
Lamar Bradley	TDEC-NWGLDE	(615) 532-0952	Lamar.Bradley@tn.gov
Curt Johnson	AL-NWGLDE	(334) 271-7986	cdj@adem.state.al.us
Heather Peters	MO-NWGLDE	573-751-7877	heather.peters@dnr.mo.gov
Peter Rollo	DNREC-NWGLDE	302-395-2500	PETER.ROLLO@STATE.DE.US
TIM SMITH	US EPA-OUST	703-603-7158	SMITH.TIMR@EPA.GOV
Shahan Muhammad	GA EPD	404-362-2579	Shahan.Muhammad@dnr.state.ga.u
Marcia Poxson	MI-DEQ	517-~~410~~ 373-3290	Poxsonm@michigan.gov
Mike Juranty	NWGLDE-NHDES	603 271-6058	michael.juranty@des.nh.gov
William Moore	NWGLDE-UtahDEQ	801-536-4106	billmoore@utah.gov
Helen Robbins	NWGLDE-CT DEEP	860-424-3291	helen.robbins@ct.gov