National Work Group on Leak Detection Evaluations (NWGLDE) Meeting

Gatlinburg, Tennessee, October 13-15, 2004

Wednesday, October 15, 2004

Welcome and introduction of visitors. A complete list of meeting attendees for the sessions is included at the end of these minutes. Welcome to Helen Robbins from Connecticut, newest Work Group member.

TEAM UPDATES

ATG TEAM – John Cernero

- Team has had one submittal for a system to be used in South America. This system used capacitance probes. (This item generated discussion below.)
- The work group discussed use of capacitance probes with oxygenated fuels in general and this system in particular. The review team reported that the probe had been used successfully in Europe and used multiple sensors on the probe. Some work group members stated that the probes would not be accepted in their states – and favored leaving the statement in the current list about capacitance probes not being acceptable with oxygenated fuels. Consensus was that the current statement is the best the work group can do right now…it allows the individual states to accept or not based on submission of additional data from the manufacturer.

CITLDS TEAM – Shaheer Muhanna

- Update to WRA PetroNetwork S-3 (Version D) listing to include acceptability of additional probes has been completed.

NVTTT TEAM – John Kneece

- Masstech 001 evaluation is nearly complete. Additional testing to validate claims about testing with larger ullage space has recently been completed. The full report should be available by the end of October. John Kneece is leading this review.
- EDG system for testing large tanks is still under review. Company has not responded to requests for more information.
- Mesa 2D system is still under review. Testing of water sensor for this method was not successful. Awaiting further submittals from manufacturer.

PIPELINE TEAM – John Kneece

- Listing for electronic line leak detectors (Veeder-Root) has been updated to reflect additional line volume for flexible piping. The listing reflects system capability to program bulk modulus for facility piping into software (versions 19 and higher). Scott Bacon had some concerns about programming actually being done correctly during site set up since the number of variables is growing.
- Masstech has submitted an evaluation for review. Additional information has been requested. John Cernero is leading this review.

- The group moved off this subject to a discussion of outreach efforts (pamphlets, LUSTLINE articles, bulletin board on web). This topic will be covered under new business.

SIR TEAM – Jon Reeder

- There has been no review activity for this team since the last meeting. No methods are currently under review, and there is no news of SIR method evaluations to be submitted in the near future.
- South Carolina had requested information on how the threshold might be changed during SIR analysis. Jon Reeder reported that a vendor is using confidence intervals to take the threshold up to nearly the standard (for example, 0.18gph for a 0.2gph leak rate). Confidence interval calculations were not done on the evaluation and the group consensus was that the threshold range reported in the evaluation (0.10gph - 0.16gph) should be the limits used in applying the method. (This topic was discussed further during Thursday's meeting).

INTERSTITIAL MONITORING METHODS TEAM – Tim Smith

- The activity rate for this team and the volunteers who joined the effort last spring remains high with 11 reviews completed since the last meeting.
- Advanced Fuel Filtration Systems' CVM vacuum monitoring system used a modified European standard for their testing and has been added to the list.
- SGB has three new listings to include the DLR-G overpressure system for piping and the VLp vacuum system for tanks.
- The Veeder-Root sensor listings have been updated.
- The Beaudreau vacuum-based system is under review. At issue are the four switch settings.
- The final version of EN 13160-2 (the European Standard for vacuum and pressure interstitial monitoring systems) has been added to the list of acceptable test protocols. Third party testing that proposes to use a modification of this protocol should get the modifications approved before the testing is conducted.
- Items under review include submittals from:
  - Armstrong Monitoring Corporation (evaluation done by Environment Canada)
  - The Ameron Hydrostatic Monitoring system for Dualloy piping is still under review. Some additional testing has been conducted but data has not been submitted.
  - Fuel Solutions-Eurotank, waiting for additional documentation.
  - Franklin Fueling vacuum system (evaluated using modified protocol)
  - The Robert Shaw Industrial Products FSL Series float switch sensors test has been reviewed but the team felt that a review of the function of the total system was needed due to possible RF modulation issues.
- Spring Patents / Technology Marketing and Transfer has submitted a test protocol along with the results of a test for a vacuum-based system. The protocol needs to be reviewed and accepted before the evaluation is reviewed. Mike Kadri is leading the protocol review. Work group members who would like to review this protocol, please contact Mike.
- The Western Fiberglass "Co-Flow" hydrostatic monitoring system for piping is still under review.

ABOVEGROUND STORAGE TANK METHODS TEAM– Mike Kadri

- Mike Kadri has completed his initial review of an AST test protocol. The protocol has been returned to Ken Wilcox Associates and Ken Wilcox has provided his verbal approval. This

protocol will be added to the list on the website. Mike will send electronic copies to Jon Reeder and Tim Smith (see comment under List Administration).

SECONDARY CONTAINMENT TESTING METHODS TEAM – Scott Bacon

- Ken Wilcox Associates has developed a draft protocol to evaluate hydrostatic test methods for tank-top sumps and under-dispenser containment. Peer review has not been conducted.
- California is currently using a "hydrostatic test" for 24 hours—the standard is <¼" loss.
- Florida also requires secondary containment testing on a five-year cycle.

LIST ADMINISTRATION TEAM – Curt Johnson

- The next edition of the List will be published early in 2005. These are the deadlines:
  - November 15th – Deadline for list inputs to Curt.
  - December 15th – Deadline for draft list out to group for review.
  - January – Publish date
- Lamar Bradley will produce CD copies of the list for distribution in Seattle.
- Electronic copies of acceptable protocols need to go to Tim Smith and to Jon Reeder. At the same time, Curt Johnson needs the title, author, and date of each acceptable protocol.
- Jon Reeder collected website support dues from the group to pay the $100 annual license fee. Jon also asked Tim to research availability of some new software support for the website. Jon reported that the daily use rate on the site remains high and that there are quite a few downloads of the directions for submitting an evaluation for review.

<u>REVIEW OF TEAM ASSIGNMENTS</u>

ATG – John Cernero (Team Leader), Mike Kadri, Jon Reeder, Lamar Bradley
CITLDS – Shaheer Muhanna (Team Leader), Helen Robbins
NVTT – John Kneece (Team Leader), Scott Bacon
IM & Out of Tank – Tim Smith (Team Leader), Scott Bacon, Helen Robbins
Because of the high workload the Interstitial Monitoring Methods team will continue to get assistance from Lamar Bradley, Shaheer Muhanna, and Jon Reeder.
PIPELINE – John Kneece (Team Leader), John Cernero
SIR – Jon Reeder (Team Leader), Lamar Bradley
AST – Mike Kadri (Team Leader), John Cernero, Jon Reeder
SECONDARY CONTAINMENT – Scott Bacon (Team Leader), Shaheer Muhanna, Tim Smith
ADMINISTRATION – Curt Johnson (Team Leader), Tim Smith, Jon Reeder, Scott Bacon

<u>PROTOCOLS UNDER REVIEW</u>

1. Spring Patents protocol submittal.

NEW BUSINESS

WORK GROUP OUTREACH – (This discussion began during the team reports)

- Three possible methods for work group outreach were discussed: a newsletter, a website bulletin board, and LUSTLINE articles. Discussions about a newsletter did not lead to group support. The ongoing nature of a newsletter plus distribution and publication management issues were major detractors. Jon Reeder explained how a website bulletin board might work allowing real time access to discussions and information. Jon has experience managing such a site. Although this idea seemed attractive, there were concerns about set up costs, concerns that a bulletin board would/could become a sounding board for commercial endeavors and concerns about the work group's liability for information posted in a public forum. After more discussion of the bulletin board, consensus was that we should not try it at this time. Someone suggested using LUSTLINE as a routine forum for work group information, and as the group discussed this, the idea of publishing the work group response to FAQs (frequently asked questions) surfaced. The group decided to try this approach and chose a recent question/response about electronic line leak detectors as the trial item. John Kneece is to submit the first article using the question and answer about ellds. Scott Bacon is to contact Ellen Frye about the work group submitting these on a regular basis. In a related action, Jon Reeder is to set up an email address for Questions@NWGLDE.org . Curt will screen the questions and forward them to the appropriate team/group member for a response. Group members are reminded to archive their responses to questions as potential LUSTLINE fodder.

DISCLAIMER STATEMENT -

- Lamar Bradley distributed a draft disclaimer statement with four elements—system performance, system evaluation, system endorsement, and safety. The group commented on each element, then compared this statement to the existing disclaimer sheet in the LIST. Consensus was to retain original disclaimer statement (however, delete the phrase, "leak rates blind to vendor.") and add Lamar's wording below the original statement on the published edition of the list. Jon Reeder is to also add the general disclaimer (the original statement from the LIST) on the web site using "include on every page" technology along with a link to the "full" disclaimer so that users are aware these items exist. That way, users will "not have an excuse for not knowing what we don't do."

HIGH PRESSURE/VACUUM WARNING –

- Scott Bacon voiced concern about lack of warnings on the high pressure/vacuum release detection methods in so far as the rated operating pressure for the equipment. He pointed out the standing warning on SGB equipment. The group agreed with these concerns and worked to craft a generalized statement for this method. The statement agreed on is "Warning – Damage to the tank and piping may result if the pressure or vacuum generated by this leak detection equipment exceeds the UST system manufacturer's warranty." Scott will coordinate with Curt and Jon to get this statement properly placed.

GLOSSARY EXPANSION –

- Jon Reeder suggested expanding description of some methods in the method index, i. e. vapor monitoring and groundwater monitoring under the sensors. The group agreed with

this. Tim Smith will draft revisions to the method index and send the draft to the work group for review.

DOUBLE WALL PIPELINE TEST METHOD –

- The group discussed discrepancies in the listing for continuous interstitial monitoring methods (dw piping and some dw tanks). For example, the STI Permatank is listed on both interstitial monitoring and on the DW Tank Tightness Test method. Curt Johnson, Tim Smith, and John Kneece to review the DW listing and make sure they are listed under the proper method.

ADDING PIPING LENGTH TO LISTINGS –

- After a discussion of pros and cons to adding a conversion table to the piping testing and monitoring listings (to convert length to gallons for the popular piping sizes), consensus was to add conversion table to the inspector resources on web site. Jon Reeder has the table and will post it.

WORK GROUP PRESENTATION AT NATIONAL MEETING –

- Curt Johnson has requested a spot on the national meeting agenda for a work group presentation. Tentative subjects for the presentation include the process for getting a method/equipment listed, a comparison of USEPA protocols and the European protocols and a description of California's process for developing and proofing special protocols for that state's specific needs. Curt requested the group consider presentation options during the evening and be prepared to discuss them the next day.

END OF WEDNESDAY MEETING

THURSDAY, October 14, 2004

WELCOME AND INTRODUCTIONS – see attendance listings at end of document

VENDOR PRESENTATIONS – There were no vendor presentations at this meeting.

OPEN DISCUSSION PERIOD -

ESTABROOK EZ 3 LOCATOR PLUS –

- Curt Johnson reported that a field inspector had noticed what appeared to be multiple testing events of the same tank using the water sensor with this method…questioned whether or not the operation of the method followed that used during third party testing. Group reviewed directions from the operations manual dealing with water sensor calibration. Ed Kubinsky, CROMPCO Corp., is a certified tester with this method. He discussed the water sensor calibration procedure and the concept that failing results will repeat. If the tester was getting mixed results, something was not stable. The tester has to stay with the method to get repeatable results. Scott Bacon, Jon Reeder, and John Kneece had all observed testing using this method and agreed that the water sensor was quite sensitive and calibration might take multiple tries. It was concluded that the NWGLDE list data sheet adequately addressed this under the water sensor calibration procedure.

- Jon Reeder expressed some concern with the worksheet used for test calculations…in particular the consistent addition of 0.5 in the table. Jon discussed this sheet with Ed Kubinsky after the session.

SPILL BUCKET TESTING

- Ed Kubinsky of CROMPCO Corp. discussed spill bucket testing that they have performed. They use the Sherlock Test method developed in England where a 1psi vacuum is used to test the spill bucket for leaks. This method can also test dispenser pans and sumps. Mr. Kubinsky said the fail rate of spill buckets was 70 to 80 percent.

THRESHOLD VALUES FOR SIR CALCULATIONS –

- The group discussed this subject again during this session (carryover from Wednesday session). Jon Reeder talked about the method value for threshold vs. the field data value for threshold. The value used in the evaluation for the threshold was 0.1gph, however, the description of the method said that the value could be as high as 0.16gph. Mike Kadri and Lamar Bradley said their states will not accept passing SIR results with a threshold greater than 0.1gph. Jon Reeder said Florida will not accept threshold values greater than the value in the method description (0.16gph). John Kneece said South Carolina will follow Florida's lead.

WHY ISN'T RELEASE DETECTION WORKING? –

- Mike Kadri questioned whether or not we have any verification that release detection methods are working in the field. Scott Bacon agreed with Mike's concern saying this was the impetus for California's search for better methods. John Cernero suggested that increased inspection frequency was a way to gather release detection performance information and to increase compliance in this area. Ed Kubinsky from Crompco Corp. said that his crews do find that the release detection equipment is by and large working…and that the key seems to be routine maintenance and annual operability testing. Jon Reeder and John Kneece agreed and pointed out that the manufacturer's statements about operability testing not being required have led many owners/operators to just not do any type of operability check or routine maintenance. Lamar Bradley said that a regulation change that specified an annual operability check and a routine maintenance schedule would be very desirable. Scott Bacon said that California's experience with annual operability checks of equipment at a UST facility has shown that there is almost always some kind of problem with operability. The consensus was that annual operability checks, routine maintenance requirements and increased inspection frequency would all help verify that release detection equipment was not just in place, but also operating properly. In a related issue, Mike Kadri asked Sam Gordji how a third party evaluator dealt with the issue of performance deficiencies in the field. Sam's response was that an evaluator had a responsibility to point out data deficiencies and deficiencies in the protocol. This discussion ended without an action item.

DISCUSSION OF SPRING 2005 MEETING –

- Seattle, WA, March 16 – 18, 2005. (National UST/LUST Meeting is March 14 – 16)
- Need to continue to work on presentation – John Kneece to draft proposal for presentation, but only after the presentation was accepted by the conference committee.
- Tim Smith to arrange for meeting room and table at State Fair.
- Lamar Bradley to produce CDs for the 12th Edition of List and have them at the meeting.

- Tim Smith to get NWGLDE business card reprint.
- Helen Robbins to take minutes at this meeting.

DISCUSSION OF FALL 2005 MEETING –
- Primary choice for meeting was Connecticut. Backup location was New Orleans.
- Helen Robbins will make arrangements for meeting. She is to contact NEIWPCC to begin process of selecting site and making reservations.
- Primary date is October 11 – 14. Backup date is October 4 – 7.

MATERIALS LISTED ON INDEX VS MATERIALS USED DURING 3RD PARTY –
- Lamar Bradley had several questions on this issue:
  - For example, one sensor was listed as being tested with gasoline, synthetic gasoline, and JP-4. Will this sensor detect other materials, for example, diesel and kerosene?
  - And how about sensors that are listed as having been tested with benzene and 2-methyl butane?
  - If listing does not list material being stored, how is inspector to make the call?
- Jon Reeder said the performance requirements for out of tank vapor detection in FL were 500ppm for gasoline and 50ppm for diesel.
- Mike Kadri commented that these sensors are tested with volatilized product/materials in a laboratory, not under field conditions. He has always had a concern that the concentration levels for vapors under field conditions would not be sufficient to be detected by these sensors.
- There was no resolution of this issue.

THROUGHPUT LIMITATIONS ON LLDs –
- Mahesh Albuquerque (visitor from Colorado UST program) had a question about limitations on leak detector capability based on throughput (actually based on activity level which is a function of throughput). The group discussed some possible responses to this issue. No further discussion.

FRANKLIN FUELING SYSTEMS PROBE USE –
- Curt presented request from Franklin Fueling to list an EBW continuous tank gauge including use of EBW probes with an INCON tank gauge. Curt had requested they conduct a probe comparison test to validate the EBW probes as compatible with this use. Curt passed along the message and follow-up to Shaheer Muhanna.

HOW MUCH NEEDS TO CHANGE TO SPARK RECERTIFICATION –
- Scott Bacon asked if we had guidelines on how many elements of a system could change before a new evaluation was needed.
- Tim Smith commented that we had discussed this before. This issue gave rise to the probe comparison protocol. Tim suggested that we might need to establish parameters that would tell when a new evaluation was needed. The group's response was varied with most agreeing that changes without a new evaluation occurred often, especially with small components and with software packages that support the equipment.
  - John Cernero suggested a disclaimer on listing that if components or software change, the system might not meet the standards.

  - Scott said the disclaimer should address if changes were significant or could affect functionality.
  - Shaheer said we could include this statement with the LIST.
  - Mike said that we needed to communicate this issue to the vendors.
- Tim Smith is going to try to pull together a mailing list/email list of vendors so we might tell them of our concerns.
- John Kneece to do strawman letter with this message, "Please alert the NWGLDE of modification to the software program or functional elements of this system."
- Suggestion to add statement about changes to the listing procedures went without action.

END OF THURSDAY MEETING

FRIDAY, October 15, 2004

See attendance lists below.

TRACER TESTING –

- The group discussed validity of water detection measurement in high water areas as valid tracer testing. Several states do not accept Tracer in high water areas. Mahesh Albuquerque had some questions about laboratory detection limits on samples…specifically what are the ppm/ppb detection levels and how does the regulator know what levels were detected? John Kneece was pretty sure the detection levels are detailed in the original 3rd party reports (1990 and 1992). Jon Reeder said the method was used extensively in Florida as an AST release detection method. Tennessee and South Carolina use Tracer as the "go to" method when traditional testing shows failures or inconclusive results. Mike Kadri had some questions about the enhanced release detection capabilities. John Kneece to send documentation for enhanced level (0.005gph) to Mike.

FILE RETENTION DISCUSSION –

- Since the last NWGLDE meeting, Scott Bacon has determined that the quantity of files being held in CA come to around 270 linear inches (at 260 pages per inch, that is over 70,000 pages). This quantity does not include those files held in other states. Additionally, without an inventory by name and date, it will be impossible to determine what other files need to be added to the collection. The logistics of collecting these files, sorting them and labeling them to be scanned and stored digitally seems to be overwhelming. Additionally, costs for the scanning project and providing storage capacity on a hard drive somewhere could be prohibitive. Consensus was that potential use did not seem to justify costs. As an alternative, Jon Reeder suggested creating a list of what had been reviewed and by whom to help track where the records might be. Curt will start an Excel spread sheet to begin this effort. Scott Bacon said that in California, several years ago, these files were requested to be kept for 10 years, and after that they will be destroyed. Scott will request that the state of California keep these files past the 10-year time frame.

TEAM MEETINGS AND ADJOURNMENT

Next FALL Meeting – Connecticut. Contact Helen Robbins for information on this meeting.

Meeting Attendees – Wednesday – Friday, October 13 - 15, 2004

Name	Affiliation	Phone	E-mail
Mahesh Albuquerque	CO OPS	303-318-8533	mahesh.Albuquerque@state.co.us
Scott Bacon	CA SWRCB	916-341-5873	bacons@swrcb.ca.gov
Lamar Bradley	TN UST	615-532-0952	lamar.Bradley@state.tn.us
John Cernero	USEPA R6	214-665-2233	cerneroJohn@epa.gov
Tracy England	OR DEQ	541-298-7255 ext.36	england.tracy@deq.state.or.us
Curt Johnson	ADEM	334-271-7986	cdj@adem.state.al.us
Mike Kadri	MDEQ	517-335-7204	kadrim@michigan.gov
Stephen Kent	KY DEP	502-564-5981	stephen.kent@ky.gov
John E. Kneece	SC DHEC	803-896-6841	kneeceje@dhec.sc.gov
Shaheer Muhanna	GUST	404-362-2579	shaheer.Muhanna@dnr.state.ga.us
Jane Roach	TN UST	865-594-5447	jane.roach@state.tn.us
Jon Reeder	FL DEP	831-744-6100 est.472	jon.reeder@dep.state.fl.us
Helen Robbins	CT DEP	860-424-3291	helen.robbins@po.state.ct.us
Tim Smith	USEPA-HQ	703-603-7158	smith.timr@epa.gov

Additional Attendees – Thursday, October 15, 2004

Name	Affiliation	Phone	E-mail
Sam Gordji	SSG Associates	662-234-1179	samgordji@hotmail.com
Edward Kubinsky	Crompco Corp	610-278-7203	ed@crompco.com