

Summary
Minutes of Meeting
National Work Group On Leak Detection Evaluation
October 4 – 6, 2000
Dana Point, California

October 4, 2000

EXECUTIVE SESSION

8:15 a.m. PDT

Chair called meeting to order. All Work Group members present.

TEAM REPORTS:

Administration – Curt Johnson

Newest copy of the list, 8th Edition, is being prepared

Group decided list should continue to show defunct companies and products because inspectors would be seeing equipment in field.

Discussion of how to keep addresses updated for companies on the list (no consensus).

EPA/OUST has discontinued producing paper copies of the list; instead, the list will be posted electronically on the OUST web page.

OUST will prepare CD with list to be distributed to member states at the national meeting.

OUST to send card/letter to states and companies on the list with notification of the web address.

Review of team assignments/reassignments (* = new assignment):

<u>team</u>	<u>chair</u>	<u>member(s)</u>
Tank Volumetric/ATG	Russ Brauksieck	Beth DeHaas, *Jon Reeder
Tank Continuous	Shahla Farahnak	*Mike Kadri
Tank Non-Volumetric	Jeff Tobin	Shahla Farahnak, *John Kneece
Pipeline	Jeff Tobin	John Kneece, *Shahla Farahnak
SIR	Jon Reeder	*Mike Kadri
Sensor/Vacuum	*Tim Smith	Shahla Farahnak
Administration	Curt Johnson	Tim Smith

Pipeline – Jeff Tobin

Discussion of threshold for listing on one piping testing system...0.01gph or 0.05gph...the listing has changed over time. Jeff will pursue further info.

United Testing Services—no further action.

Marley Pump—added FX1DV to big-flo page.

Non-Volumetric Tank Testing – Jeff Tobin

Little activity.

Sensor/Vacuum – Tim Smith

Some activity.

Polymer strip sensors can be reused after recovery time. Recovery times from test do not match up with field experience

There has been a recall of some discriminating sensors.

Evaluation package on 15 sensors has been received...under review.

SIR – Jon Reeder

Received evaluation that included all manifolded systems and was not under the protocol.

Further information requested.

Discussion of appropriateness of T-Test as part of evaluation protocol—no consensus.

Discussion of data sets. Explanation of why data sets from manifold systems cannot be used to address single tanks of comparable total capacity

One system used 0.1 gph threshold during evaluation, but report includes statement that system would perform at 95/5 at 0.166 threshold. Will ask owner to identify the threshold the system would be marketed at...if both, will create separate listing for the higher threshold.

Volumetric/ATG – Russ Brauksieck

No activity in the volumetric testing area.

Several ATG systems still in the process.

Evaluation of one unit against 4 different probes yielded different pd/pfa for each. Will list each as separate system.

Discussion ensued of how inspector could verify the probe in use at a site. No consensus.

EMCO and Coggins systems under review.

Probe comparison protocol is complete.

PetroVend listing—amended waiting time between dispensing and testing to 30 minutes.

Bulk Tank Protocol (volumetric) needs more work. There are three evaluations pending review under this protocol, L&J/EDG and Coggins.

Continuous Tank – Shahla Farahnak

Should we list both protocols under this category? Consensus was to only list the current one.

Marley system—still under review.

When new evaluation for existing system is submitted, group needs to determine if new software was used in the evaluation. If so, should ask vendor to rename this version to differentiate from versions previously submitted.

EBW/AZI/Alert Technologies/INCON all have evaluations in the process.

Old Business and discussion

Work group currently has opening for another member. Requests for interested volunteers have not produced a sufficient pool of candidates for the selection process to begin. Tim Smith will go through RPMs to ask about interested volunteers.

Protocol reviews –

Bulk Tank – still need some changes, KWA is working on them. Team to review current draft. Discussion of how to get new ATG listings...New ATG's need to be evaluated using ATG protocol, if the system uses a new probe with the original ATG then should use probe comparison protocol to demonstrate compatibility and performance consistency in new configuration.

Format changes for list –

On 1st listing for equipment/method, issue date will be in upper right corner of list page. If the listing has been changed from original listing, a revision date will be added in upper right corner of page.

Administrative changes to list Edition 8 –

Table of Contents...delete “Tightness Test” from bulk tank line, delete “Leak Detection Method” from interstitial line.

Meeting dates for future meetings will be posted on EPA web page. Will also ask Ken Wilcox to post dates on his page.

Adjourned at 5:30 p.m. PDT.

OCTOBER 5, 2000

OPEN SESSION

8:15 a.m. PDT

Convened by chairman.

Agenda:

Jack Quigley (U of W-M) – Protocol Project

Beth DeHaas (Maine DEP) – Results of Recent Study in Maine

Allen Porter (Tanknology - NDE) – VACUTECT Listing

Ken Wilcox (KWA) – Testing of Product Sensing Cables

<u>Attendee</u>	<u>Representing</u>	<u>Phone</u>
Curt Johnson	Alabama DEM/NWGLDE	334-271-7986
Mike Kadri	Michigan DEQ/NWGLDE	517-335-7204
Russ Brauksieck	New York DEC/NWGLDE	518-457-3891
Beth DeHaas	Maine DEP/NWGLDE	207-287-7883
Jeff Wilcox	Ken Wilcox Associates	310-318-0715
Jeff Tobin	Montana DEQ/NWGLDE	406-444-1417
Jon Reeder	Florida DEP/NWGLDE	813-744-6100 x472
Ken Wilcox	Ken Wilcox Associates	816-443-2494
Michael Gibson	NESCO	480-897-3808
Kevin Keegan	Tanknology	847-888-4836

Shahla Farahnak	California SWRCB/NWGLDE	916-227-4350
Tim Smith	USEPA/NWGLDE	703-603-7158
Allen Porter	Tanknology-NDE	480-948-0411
John Kneece	South Carolina DHEC/NWGLDE	803-898-4364
Jack Quigley	U of W – Madison	608-265-2083
Rick Sales	INCON	207-283-0156
Mark Sisco	East Coast Associates	973-228-3448

PRESENTATIONS

JACK QUIGLEY – Proposal for New Protocol Development

- Developed protocols will become public domain.
- Patentable/copyright ideas should already be protected, otherwise, UofW-M will handle through normal process.
- Recommendations for members of ad hoc committee should be sent to Curt Johnson.
- Once ad hoc committee is established, sub group of 5 or 6 would be assigned to work a particular development/review issue.
- Revenues
 - Grant is in place for determining problems of existing protocols. Accounting will be under UofW-M rules.
 - Possibility of approaching insurance community to fund development of future protocols. Within the system there will be no commingling of funds.
 - Suggestion from the floor to approach states for separate funding for new protocols.
- Discussion of possible sources of protocol rewrites (UL, existing 3rd Party Testing agencies, API)...no consensus.
- Developer/maintainer cannot own protocols; they must become public domain.
- States could be polled for available funds to address rewrite and development of new protocols.

PRESENTATION – JACK QUIGLEY – Process for Review of Existing Protocols

- Review validity of statistical methods for all protocols. Simplify where possible. Gather inputs from community about points of concern with existing protocols. Points from the floor included LUSTLINE Survey and through EPA Regions. Funding for this review ends Aug 30, 2001.
- By Dec 5, 2000, inputs from work group should come through Curt Johnson.
- The following additions/comments were made to main points on slides:

Slide 1 – General Comments

Simplify weather considerations, but don't delete weather as a variable.

Slide 2 – Modifications to Volumetric Tank Tightness Testing

Add: Leak rate variability with product level
Temperature compensation

Slide 3 – Modifications to ATGS Protocol

Add: Effect of product level

Temperature
Low product level testing
0.1gph testing

Slide 4 – Modifications for Non-Volumetric Tightness Tests

Add: Water table issues
Backfill considerations
Free product considerations
Product level

Slide 5 – Statistical Inventory Reconciliation

Needs overall review
Need to add new variables (consider those for other methods)
Include manifold testing protocol
Address threshold issues
Curt gave list of concerns gathered from previous meetings
Look at design for stand-alone vs vendor serviced SIR
Consider data source restrictions (probe vs manual stick)
Look at minimum number of days for valid analysis

Slide 6 – External Methods Vapor and Groundwater Monitoring

No comments

Slide 7 – Pipeline Protocol

Leave large pipelines out

PRESENTATION – BETH DEHAAS – Maine DEP (NWGLDE)

Maine requires an annual check of spill/overflow, leak detection and corrosion protection by certified inspectors. Recent study looked at approx. 10% of active facilities with information from 262 facilities.

Only 72% of facilities comply with the annual inspection requirement.

Problems were discovered at 29% of the 1999 inspections.. The most common problems were with overflow devices, spill buckets and tank interstitial leak detection probes.

At the spring 2000 study, 61% of the problems discovered during the 1999 inspection had been repaired.

A total of 39% of the facilities in the study either did not have an inspection done or did not repair the problems found during the inspection. .

One retail gasoline facility owner submitted all their 1999 inspection results to us. These reports were reviewed and compared to the results of the 70 retail gasoline facilities in the original study

Most common problems were.

- Lids not functional
- Spill buckets not functional
- Overflow protection not functional or missing
- Crash valves not properly secured.

Other problems discovered during annual inspections:

- Corrosion at electrical connections
- Worn dispenser hoses
- Improper programming of ATG
- Stage I vapor recovery connection too high

Analysis

Annual inspections are important along with follow up to make sure repairs are done
Annual inspection by a trained inspector allows detection of small problems before they become big ones.

Vapor recovery efforts may defeat overfill (ball float)

Spill bucket and overfill protection system maintenance is a continuing problem

Lids beat up

Buckets cracked

Corrosion due to salt

Overfill systems inaccessible to inspection

Sensors for double wall monitoring (especially in piping sumps) defeated by water in sumps.

Future considerations

Separate certifications for inspectors (vs installers)

New log sheets for inspection results

Annual verification of leak detection, spill and overfill equipment is important.

Discussion:

Who inspects? How are they trained? Answers varied from: State trains 3rd party to state establishes requirements to state hires and trains state inspectors.

PRESENTATION – ALLEN PORTER – Tanknology – NDE

Request for Rewording of VACUTECT Summary Page (pg 197) on List.

Position was that method accounted for effects of ground water above tank bottom by:

Assuring sufficient vacuum

Installing water sensor

Running test the required time

Discussion points:

- Determining depth of water in the tank basin relative to tank bottom
- Measuring for water ingress during test and placement of water sensor.
- Setting of initial point and vacuum that would be applied across the tank wall
- Most stringent assumption is not high water, but water just above bottom of tank with high product level, but high water condition does make the test more difficult.
- Limits on vacuum calculations and vacuum application.
- If depth of water in backfill relative to tank bottom is unknown, test time is determined assuming water just above tank bottom—while test pressure is determined assuming water above top of tank.

At the end of the presentation, Tanknology was told that the listing would be reworded to address concerns of regulatory community as well as those voiced by Tanknology. This revision process would use both telephone and written coordination to work out a listing agreeable to both sides. Jeff Tobin was to be the primary contact for the Work Group. Allen Porter was to be the primary contact for Tanknology-NDE.

PRESENTATION – KEN WILCOX (Ken Wilcox Associates)

Testing Recovery of Product Sensitive Cable (Sump and Well Sensors)

Looked at voltage degrade from repeated exposures of cable.

Cable required less time to respond with each repeated exposure until it reached a point that the system would not reset...i.e., the cable failed in the "alarm" mode.

Member concern was that if exposure damages cable, how can the owner conduct annual function check of cable? Discussion yielded no consensus.

OCTOBER 5

EXECUTIVE SESSION

Convened at 1:30 p.m. PDT. All members of work group present.

TOPIC 1

3rd Party Testing of SIR for 20,000 gallon tanks

Can data from existing SIR records be used as input for 3rd Party testing of methods at 20k tank range?

Using data was OK based on precedent from testing of other methods.

TOPIC 2

Protocol Development and Review

- Univ. of Wisconsin project is for a review of existing protocols with product being a list of things that should be corrected/clarified.
- Group discussed possible sources for rewrite.
- Discussion of "interim" protocols as well as those developed since the original 7. Suggestion was that some states might fund review of these protocols within the framework of the U of W-M project.

TOPIC 3

Tanknology Presentation and Discussion

Discussion of tank volume relative to testing and certifications.

Jeff Tobin took suggestions from members during this discussion and will coordinate with Tanknology. If members have other inputs, they should go to Jeff before October 17th.

- After rewrite, review, final...copy of listing to be included in 8th Edition of list will be forwarded to Tanknology.

TOPIC 4

Discussion of Changes to List for 8th Edition

- Members discussed wording changes to other listings...consensus was that after the Tanknology listing for VACUTECT was finalized, would review list for other methods that would be better described using some of the statements on the Tanknology listing.
- If Bulk Tank Protocol is finished, then will have some methods under that protocol to add.

OCTOBER 6, 2000

EXECUTIVE SESSION

8:00 a.m. PDT. Convened by chair. All Work Group members present.

- Reworded VACUTECT listing page distributed. Members to review and comment.
- Revisited use of SIR tank data for data set for 3rd party testing. Same consensus...OK. Based on criteria for other data sets, will use 3 months passing SIR data to certify tank tightness.

- Review and recertification on non-volumetric method on hold pending acoustic engineer input to validate claim about empty tank testing.
- UC-Davis study presented at National meeting is being recrafted to present conclusions and data more clearly. Shahla will ask work group members to comment. Work group position was that this study and report was not as useful as we had hoped but that continued research and study in this area should be encouraged.
- Tim Smith announced that Regions 1, 4, and 6 are conducting leak autopsies as part of the FY 2001 plan.
- Russ Brauksieck reported on alternative fuels work group...effects of ethanol, compatibility issues with existing UST systems...permeability studies. Draft report due in January.
- Shahla Farahnak– California preparing RFP for field evaluation of leak detection systems. Work Group members who would like to review RFP should contact Shahla.
- OUST initiatives
 - USTfields.
 - National compliance initiative. Trying to establish national numbers/goals for operational compliance. Tim will send list of initiatives to NWGLDE members.
- Discussion of next meeting in conjunction with National Annual UST/LUST Conference, Albuquerque, March 2001. Shahla to take minutes. Tim Smith to verify room reservations for meeting.
- Curt suggested NWGLDE have slot on program at the National Meeting talking about the list and how it might be used. Tim to check with conference coordinator to make sure NWGLDE has slot on program.
- Another possible topic for national meeting is cathodic protection system testing...how it should be done and what is not being done. (Maine is doing a study on cathodically protected steel tanks and the results should be available by the end of November.)
- Alabama tentatively identified as site for meeting next fall. Curt Johnson to work location/billeting issues and propose dates. OUST to post dates on web and notify Ken Wilcox Associates of dates for inclusion on Wilcox web site.

TEAM Meetings Until Adjournment at 5:00 p.m. PDT.