

Minutes of the 2nd Aboveground Gasoline Storage Tank (AST) Enhanced Vapor Recovery (EVR) Workgroup Meeting on December 7, 2001

Meeting Place - San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) in Modesto, California. SJVUAPCD offices in Fresno and Bakersfield also participated via video teleconference.

Summary of Workgroup Meeting on September 18, 2001 – The minutes of the September 18, 2001 meeting can be viewed on Air Resources Board's (ARB) vapor recovery website at www.arb.ca.gov/vapor/vapor.htm.

Status of AST Monitoring Effort – The ARB has been monitoring an AST vapor recovery system since September 12, 2001. The system is a two-point balance system that includes a single dispenser mounted on top of a 1000-gallon insulated tank. The system also has a tank gauge and emergency vent. ARB staff is monitoring tank pressure and temperature, ambient temperature, and barometric pressure. Readings are taken every second and one-minute averages are recorded. Plots of tank pressure and temperature, and ambient temperature were shown. Preliminary data indicates that there is a correlation between ambient temperature and tank pressure. In many instances, the tank pressure exceeded 2 inches water column when ambient temperatures exceeded 80 degrees Fahrenheit (daily temperatures ranging from 60-100 degrees Fahrenheit). During cooler periods (daily temperatures ranging from 35-60 degrees Fahrenheit), tank pressures were mainly negative.

It is anticipated that three additional data acquisition systems will be built and installed on ASTs as early as January 2002. The working group reached consensus on what types of ASTs should be monitored and for how long. In general, the data acquisition systems will be installed on 2 each 1,000 gallon AST balance systems and on 2 each greater than 10,000 gallon AST balance systems. The balance systems will be monitored for a one-month period after which the acquisition systems will be removed and installed on 2 each 2,000 gallon vacuum assist systems and on 2 each greater than 10,000 gallon vacuum assist systems. The vacuum assist systems will be monitored for a one-month period. This cycle will be repeated again during the spring and summer months. The combination of balance and vacuum assist systems monitored may change so that at least one set of balance and vacuum assist system can be monitored at the same time. Some additional recommendations included:

- Consider monitoring vapor recovery configurations that have a side or remote vapor connection (i.e., longer run of vapor pipe will have a greater affect on tank temperatures and pressures);
- Consider gasoline throughput as a parameter in site selection;
- Have at least one tank as a control tank;
- Monitor fuel temperature and ensure vapor temperature probe is located in the tank headspace; and

- Extend the monitoring effort through the summer of 2002 and consider delaying the proposed AST EVR Board Meeting scheduled for October 2002.

Hand-Out and Discussion of Draft AST EVR Certification Procedure – A working draft Certification Procedure 206 (CP-206) was distributed to the workgroup for discussion (Working Draft CP-206 – “Certification Procedure for Vapor Recovery Systems at Gasoline Dispensing Facilities using Aboveground Storage Tanks, dated December 4, 2001”). The working draft CP-206 included the proposed enhanced vapor recovery requirements, specifications, and standards for AST vapor recovery systems.

Specific discussion items relating to the certification procedure included:

- What will be the gasoline throughput requirement for AST system certification testing?;
- What types of vehicles and the number of vehicles are required in Phase II efficiency testing? Many of the AST systems are used to fuel vehicle fleets;
- Manufacturers would like to use their non-system-specific components (once certified on a particular system) on any other certified systems without further ARB evaluation or testing. Examples of non-system-specific components discussed were fuel gauges and emergency vents;
- ARB is proposing to develop the ORVR Compatibility test procedure (instead of the system manufacturer) for AST vapor recovery system certification;
- ARB is researching the pressure decay equation in TP-201.3B to determine if the equation can be refined to more specifically target AST vapor recovery systems and the number or types of components installed on each of these systems. In many cases, an AST system may have only one P/V vent valve, one nozzle, and one spill containment drain valve. The current equation is not specific to the number or type of components.
- High gasoline loading rates into ASTs will cause fugitive emissions. Suggestions are to specify loading rates or require a restrictor in the drop tube to minimize fugitive emissions; and
- How to determine a minimum 75% reflectivity on tank exterior? Heat transfer was thought to be the biggest concern, not the reflectivity of the tank exterior.

Hand-Out of Interim AST Certification Guidelines – The Interim Guidelines for Certifying Vapor Recovery Systems Using Above Ground Storage Tanks (dated 11/30/01) was handed out to the Workgroup. These guidelines will be used to certify AST vapor recovery systems prior to the adoption of AST EVR certification procedures, standards, and specifications. The guidelines can be viewed on ARB’s vapor recovery website at www.arb.ca.gov/vapor/vapor.htm.

Schedule Next Meeting – The next AST EVR Workgroup meeting is tentatively scheduled for the first week of March, 2002. When the meeting is confirmed, an announcement will be sent to ARB’s vapor listserve and posted on ARB’s vapor recovery website. ARB is planning an AST EVR workshop following the EVR Tech Review Update on February 5, 2002. The purpose of the workshop is to give an update

on the progress of the AST EVR. Announcements will be posted on ARB's vapor recovery website at www.arb.ca.gov/vapor/vapor.htm and an e-mail sent to the Vapor Recovery Listserve.

Attendees:

SJVUAPCD in Modesto:

Pat Bennett, ARB
Joe Guerrero, ARB
Rich Erickson, DonLee Pump
John Ekhtiar, Convault
Paul McWhorter, Spill Prevention Compliance Corp.
Jim Swaney, San Joaquin Valley Unified APCD
Gary Reeves, San Joaquin Valley Unified APCD
Jim Harris, Amador Air District
Sandra Duval, CIOMA
Tony Ashby, Sierra Research, Inc.
Brad Holmes, Clay & Bailey Mfg. Co.
John Lewis, Utility Vault (Convault)
Ron Trengrove, TMS

SJVUAPCD in Fresno:

John Schroeder, San Joaquin Valley Unified APCD
Robert Vinson, San Joaquin Valley Unified APCD

SJVUAPCD in Bakersfield:

Catherine Riccomini, San Joaquin Valley Unified APCD
John Ludwick, San Joaquin Valley Unified APCD
Jack Bergman, Franklin Fueling Systems
Frank Bessler, Pomeco