

Air Working Group
Notes from meeting on December 15, 2009
3:00 to 5:00
UTA: Southern Pacific Conference Room

Attendees: Marc Heileson, Bryce Bird, Mick Crandall, John Thomas, Reed Soper, John Janson, Linda Hansen, Frank Lilly, Cameron Cova by teleconference

Guest Speakers: Rob Paul from Spectrum Engineering, Jerry Johnson from EMI Filtration, Jerry Ludwig from Environmental Health & Engineering (conference call), Paul Roberts from Sonoma Technology (conference call)

1. Air Filtration discussion – John Janson arranged to have at the meeting and introduced two local experts in filtration and mechanical systems. Jerry Johnson discussed the various filter technologies and provided two handouts describing the relative size of materials and what carbon filters can remove from the air (attached to email and on webpage). Jerry went on to explain filter specifications and their performance. Based on a 0.3 micron particle size, which is the basis for comparing performance between filters, a filter is designed to capture a percentage of the 0.3 micron particulates. Currently, a filter with a MERV 8 rating is standard for buildings and captures up to 30% of the 0.3 micron particulates. MERV 13 is an 85% effective filter; MERV 16 is a 98% effective filter. HEPA filters are 99.7% effective. Carbon filters are good at capturing chemicals, gaseous and other odors. Jerry related that the more stringent the filtering requirements are there is a corresponding increase in energy use to run the system. Rob Paul from Spectrum Engineering demonstrated the basic system elements of an air handling system. He emphasized that each system is unique and that a specific design and installation is necessary for filters and other mechanical equipment.
2. Las Vegas techniques and lessons learned – Marc Heileson arranged to have available at the meeting and introduced two experts who have participated in the US 95 Air Monitoring and Filtration effort. Jerry Ludwig from Environmental Health and Engineering located in Needham, Massachusetts and Paul Roberts from Sonoma Technology located in Petaluma, California. Jerry focused on the filters and mechanical systems and Paul focused on the monitoring and results. Both the PowerPoint and PDF presentations are attached and on the webpage. The presentations provide much better info than I can provide in these notes, so please review the presentations. One of the key points Jerry described is his ‘Ideal MSAT Filter’ system consisting of a MERV 8 pre-filter, a MERV 15 final filter and then a carbon filter for the gas phases. In the US 95 effort, the air handling units had this ‘Ideal MSAT Filter’ system added with an additional booster fan. One of the key points that Paul related to the AWG is that meteorology; emission output and the urban background pollution levels are all inter-related and variable.

3. The revised goals of the AWG were prepared and ready to be presented by Frank Lilly, however, the group determined to discuss them at the next meeting.

4. Next Meeting: January 5, 2010, 3-5 at UTA in the Southern Pacific Room.