

PROGRESS REPORT, GRANT ID# XA-96963001-0
SAN DIEGO AIR POLLUTION CONTROL DISTRICT
JUNE 16, 2008 THROUGH DECEMBER 31, 2009
- FINAL REPORT -

Since the previous progress report, additional equipment has been purchased and remaining programs have been implemented. Current status and anticipated future progress follow:

- Pursuant to purchase of the DRI OC/EC carbon analyzer and onset of carbon sampling at the El Cajon and Escondido monitoring sites, a third SASS sampler was installed at the Diego-Beardsley Street site, situated in an Environmental Justice locale. Sampling at this site commenced August 8, 2008. OC/EC data for year 2008 were submitted to AQS this Spring, and will continue to be submitted annually.
- Since the last update, a Microwave Accelerated Reaction System sample digestion unit was purchased for the LC-ICP-MS system. Sample analysis methodology has been developed, and analysis of the sample backlog has begun. Current samples will be processed as they are received, and the 3-year backlog should be depleted by mid-2010. It is expected that at least two years' metals data will be submitted to AQS in 2010.
- The special modification devised for the GCMS Toxics program's dilution system has been installed and put to use successfully ever since. This modification made it possible to prepare calibration standards from two gas standard cylinders concomitantly, thus allowing the addition of acrolein and other carbonyls to the calibration mix.
- The special-order dilution system for through-the-probe toxics audits purchased from Entech Instruments has been acceptance tested and will be put to use in 2010. This instrument is expected to provide at least ten years of service.
- After it was determined that the efficacy of the Entech Instruments "cold trap dehydration" method for analysis of carbonyl compounds from canisters by GCMS was poor (providing unacceptably high detection limits), the District was granted permission to divert that allotted grant apportionment to the purchase of a new HPLC system. The new HPLC has been installed and in use since July, 2009. This instrument purchase has allowed continuation of the current carbonyl program, and is also expected to provide many years of outstanding service. The cost of this analyzer was \$62,000.
- The District was unable to assemble sufficient supporting justification for purchase of the air quality dispersion model specified in the grant proposal. EPA Region 9 subsequently allowed the allotted funding to be redirected towards the purchase of a new BIOS positive displacement, primary piston prover flow standard for the laboratory, and additionally two portable field units to be used for various ambient sampler flow calibrations and flow audits. The total expenditure on this package was \$31,000. This state-of-the-art technology will support the District's toxics quality assurance program for many years to come.

- Toxics sampling at three San Diego locations has been ongoing since January, 2007. Toxics data for 2007 were submitted to AQS this year. The sampling regimen created through this grant is expected to continue well into the foreseeable future. Already a much broader understanding of toxics distribution throughout the County has been established, and within a few short years trend patterns should begin to become apparent.

The San Diego APCD is extremely grateful for having been afforded the privilege to participate in this Community Scale Toxics Grant program. The purchase of the new monitoring equipment and the enhancement of the District's analytical laboratory capabilities have not only provided immediate insight to previously unanswered questions concerning the status of San Diego Air Basin toxics, but have also provided the basic infrastructure to continue the sampling which was initiated with this grant for years to come. This is a most worthwhile program, and we shall continue to provide positive feedback and to recommend higher levels of funding as opportunities arise.