South Coast
Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

August 15, 2012

Ms. Rena Kambara
Los Angeles County
Department of Regional Planning
320 West Temple Street, 13th floor
Los Angeles, CA 90012

Baldwin Hills Air Quality Study Work Plan and Quality Control Plan

Dear Ms. Kambara:

The South Coast Air Quality Management District (AQMD) appreciates the opportunity to comment on the above-mentioned document prepared by Sonoma Technology Inc. (STI). Overall, the proposed measurement approach described in the work plan seems appropriate given the limited resources and the objectives of this study. Both the advantages and limitations of each measurement technique are thoroughly described, and the QA/QC section includes sufficient details to provide confidence that many requirements for data quality are fulfilled. Below are AQMD's comments and ideas that should be considered for inclusion in the study:

- Drill rig engines, diesel-powered construction machines, and other non-road mobile equipment operating within the Baldwin Hills Oil Field area may be potential sources of ultrafine particles (UFPs). UFP emissions were not accounted for in the "Baldwin Hills Community Standard's District Environmental Impact Report" (2008), were not measured during MATES III, but are likely to be elevated within and around the study area. Exposure to UFPs has been linked to various respiratory and cardiovascular diseases, and other adverse health effects. For a more complete characterization of the air quality in the Oil Field area, black carbon (BC) measurements at the four selected sampling sites should be complemented by concurrent measurements of the particle number concentration.

- Collocated BC measurements should be performed before, during and after the study to estimate measurement precision. For this purpose, the four Aethalometers used should be placed inside one of the sampling sites and operated side-by-side for at least one day to assess any instrument biases. Also, if funding allows, semi-continuous XRF measurements should also be taken a different distances from (and downwind of) the Oil Field to estimate trace element concentrations at receptor sites and in the community.

- The use of the PTR-TOFMS spectrometer seems appropriate and, overall, is preferred to that of passive samplers. If the PTR-TOFMS spectrometer is selected, a recommendation would be to analyze the independent verification samples by TO-15 GC/MS, instead of GC/FID. Also in this case, measurements at receptor sites and in the community downwind of the Oil Field are also recommended. If passive VOC samples will be collected instead, duplicate samples should be taken at regular intervals throughout the entire duration of the study, and one independent analytical comparison or technical evaluation should be conducted. The total number of duplicate samples should equal (at least) 10% of the total number of field samples. Another consideration for collection of the passive VOC sampling would be 24-hr integrated canister samples which would be more comparable to similar air toxics studies being conducted during the same time (i.e. MATES IV). Also, the historical seasonality for PM and for photochemical species such as benzene and carbonyls in the South Coast Basin should be taken into account when selecting the monitoring periods for these two compound classes. Higher PM (including metals and BC), is typically observed in the winter time, while higher VOCs and carbonyls are usually measured in the summer time. Given the short time limitations for the metals and the VOC continuous monitoring, perhaps more information can be garnered by switching from the proposed spring/fall time frame to a summer/winter one.

- Thorough consideration of meteorological parameters were applied to the study design to achieve a representative time frame that could be extrapolated for a long term estimation. We recommend that, if possible, more information is incorporated regarding the oil field operation to ensure that the time frame proposed has not only atmospheric representativeness but also activity representativeness to make sure the activity being measured is typical of operations. In the "Business Proposal" document, STI proposed to instrument all drill rigs operating in the Oil Field with global positioning system (GPS) data loggers to provide continuous information on the location and status of the drill rigs. This time activity information could help with the interpretation of the air quality monitoring data collected at the four sampling locations. Although this was originally listed as an "optional task", this important activity was not mentioned in the work-plan.

Thank you again for the opportunity to review and comment on this document. If you have any questions, please contact Dr. Phillip Fine, Planning Manager, at (909)396-2239, pfine@aqmd.gov.

Sincerely,

Mohsen Nazemi, P.E.
Deputy Executive Officer
Engineering & Compliance

MN:PF:EP:am

cc: Barry Wallerstein, AQMD
Chung Liu, AQMD
Ed Pupka, AQMD
Phil Fine, AQMD
William Thompson, AQMD
Pat Hachiya, LA County Dept. of Regional Planning