

## **EXHIBIT PROJECT DESCRIPTION**

[Reference: FCC Electronic Form 442, Project Description]

Vaisala, Inc. (formerly URS/Radian) and Sonoma Technology Incorporated have entered into a Cooperative Research and Development Agreement with the National Oceanic and Atmospheric Administration (NOAA) to further expand and commercialize the wind and temperature profiling technology developed by NOAA. The wind profiling radar depends on the scattering of transmitted signals by irregularities in the index of refraction of the atmosphere. The irregularities are caused by turbulent eddies created by the wind. By receiving the back-scattered signal and determining the Doppler frequency shift, the speed of the wind can be determined. Temperature data can also be obtained by measuring the propagation velocity of an acoustic signal in the axis of the vertical radar beam. The hardware involved will be a receiver/modulator, a final amplifier/preamplifier, a digital control and data processor, and an antenna system. These items were developed by NOAA and are fabricated by Vaisala.

The radar wind and temperature profiler system will be owned and operated by the South Coast Air Quality Management District (SCAQMD), a regulatory government agency that manages air pollution control in the southern California counties of Los Angeles, Orange, Riverside and San Bernardino. The U.S. Environmental Protection Agency (US EPA) has required, by federal regulation (40 CFR 58), that ozone non-attainment areas, such as the South Coast Air Basin, establish Photochemical Assessment Monitoring Stations (PAMS) to provide measurements of ozone and its precursors, as well as detailed surface and upper-air meteorological data. This system will meet the upper-air PAMS requirements by collecting wind and virtual temperature profiles of the atmosphere above the location identified in Paragraph 5(b). Four identical systems are currently in place to collect data in the four counties that make up the South Coast Air Basin. FCC license have been previously granted for identical equipment at the Los Angeles International Airport (Call Sign WC2XPZ), Ontario International Airport (WC2XQA) and in Moreno Valley (WC2XQB), and Irvine, CA (WG2XBE).

The data collected from these systems will include hourly profiles of low-level winds between 100 and 5000 meters above ground level (m AGL) and virtual temperatures between 100 and 2500 m AGL. This data will be collected to improve meteorological analyses, as well as air quality forecasting and modeling in the South Coast Air Basin. It will provide valuable information to characterize the meteorological conditions that lead to high ozone concentrations and an improved characterization of the boundary-layer airflow. This instrument at Whiteman Airport will provide meteorological information along a major air pollution transport route.