

EXHIBIT 1

[Reference: Item Number 4(F), Modulating Signal]

The pulse duration is adjustable from 400 nanoseconds to 12 microseconds. Bi-phase (180°) modulation may be employed in minimum intervals of 400 nanoseconds.

The pulse repetition frequency is also adjusted to the mode of operation, but cannot exceed 50 KHz.

EXHIBIT 2

[Reference: Item Number 4(G), Necessary Bandwidth]

Simple calculation using the minimum 400 nanosecond pulse/code cell durations yields:

Signal Level Below Peak	Bandwidth
-3 dB	2.2 MHz
-10 dB	3.7 MHz
-20 dB	12.7 MHz

These values have been confirmed by measurement.

Exhibit 3

SCAQMD Radar Wind Profiler Site: Los Angeles International Airport, CA



04/11/2001

EXHIBIT 4

[Reference: Item Number 6, Directional Antenna]

The antenna system will consist of one steerable four-panel micro-patch phased array planar antenna with sidelobe reduction fence. The antenna will be pointed vertically with electrically switched delays introduced to point it 23.5° off vertical in planes that are 90° from the other. The antenna will have a beamwidth of approximately 9° by 9° and approximately 26 dB of gain.

Normal operation will consist of sequential transmissions in each of three (two oblique and one vertical) or five (four oblique and one vertical) directions.

EXHIBIT 5

[Reference: Item Number 10, Project Description]

URS Corporation 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 URS Corporation.

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). At least three more identical systems are being proposed to collect data in the remainder of the four counties that make up the South Coast Air Basin.

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.