

EXHIBIT NO. 1

(Reference: Item No. 4(F))

**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 NO. 2

(Reference: Item No. 4(G))

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

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

These values have been confirmed by measurement.

EXHIBIT NO. 3

(Reference Item No. 5b)

To find this location, start at I-79 Exit 3 to Waynesburg (2.3 miles to city limit). From Waynesburg go to Rogersville on SR18 to West Green Middle & Sr High School at 7.8 mile on odometer. Turn south on SR18 and travel 5.1 mi to SR3014 (always bearing to the left at any turns off SR18 along the way). At SR3014 turn left and travel 1.5 mi where a dirt road is found to the left. Take this dirt road about 0.5 mi to a pasture access gate. You will see farm buildings and the LAP-3000 site on a hill behind the buildings. The LAP-3000 site will be collocated with ESE air quality monitoring site. This lease deals only with the LAP-3000 portion of that location's operations.

EXHIBIT NO. 4

(Reference Item No. 6)

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 other. The antenna will have a beamwidth of $\sim 9^\circ$ by 9° and ~ 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 NO. 5

(Reference Item No. 10)

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

The system to be operated by Radian Corporation under this requested license will collect wind and virtual temperature profiles of the atmosphere above the location in para 5b. The data collected will be used to support the North American Research Strategy for Tropospheric Ozone (NARSTO)-Northeast field monitoring program. The planned operating schedule is 1 May through 30 September for the years 1995, 1996, and 1997. Due to the late start in arranging for sites, the 1995 observation period is expected to actually begin 1 June.

NARSTO is a joint effort among governmental and non-governmental organizations in Canada, The United States, and Mexico. NOAA and U.S. EPA are sponsors. NARSTO's principal goal is to develop a scientific and technological basis for managing tropospheric ozone. As an element of NARSTO, a public-private consortium has initiated the NARSTO-Northeast air quality study. This study is to encompass measurements, analyses, and modeling over the 1995-97 period, to assist in finding effective options for managing emissions of nitrogen oxides and volatile organic compounds in the Northeast U.S. Ozone Transport Region. As such, the LAP-3000 sites above are but a small part of the overall data gathering effort during this study. Established NWS rawinsonde sites, two new rawinsonde sites, aircraft sampling of air quality and meteorology, and surface air quality and meteorological networks will all be tapped. The LAP-3000 sites will fill spatial and temporal data voids deemed significantly important to the outcome of this study's results. Data from the LAP-3000 sites will be hourly profiles of low level winds (100 m to 5000 m) and virtual temperatures (100 m to 2500 m).

NOTE: This application is to provide the experiment with up to two (2) years beyond the last year 1997 mentioned above.