

Proposed Design Elements for Remote Sensing Technology Pilot Project

- Begin program in January, 2003
- Continue program through June, 2004, if funds available

Element 1: Data Collection and Off Cycle – High Emitter and Low Emitter Detection

Data Collection:

- Collect minimum of one million valid records and up to two million records using state-of-art equipment.
- Use two remote sensing devices at multiple approved sites. Sites approved by State.
- Collect at all times of day and all days of week.
- Collect records in basic and enhanced areas.
- Report on before and after repair results for all directed vehicles (see below).

High Emitter Detection:

Direct the following quantity of high emitter vehicles to State Contracted Referee and Consumer Assistance Program (CAP) Stations for test/inspection and repair (if necessary) or to a State Contracted Dismantler.

- 1,000 vehicles using both “on road emissions measurement systems (OREMS)” and a roadside inspection (BAR to staff).
- 1,000 vehicles using OREMS only.
- 1,000 vehicles using OREMS and HEP.

(State to pay up to \$500 for repairs through CAP and \$100 co-pay for above vehicles.)

- 500 vehicles for mandatory inspection and repair.
- 500 vehicles for voluntary inspection and repair.

(State to pay for cost of test for above vehicles. However, dollar incentives to be provided if unable to get 500 vehicles in each category for inspection/repair.)

Low Emitter Detection:

- Direct 1,000 low emitter vehicles to State Contracted Referee stations for test/inspection. (State to pay for cost of test/inspection.)

Element 2: Characterize the Fleet for Program Evaluation

- BAR/ARB to evaluate data to determine use for Program Evaluation in future years.

Element 3: Remote System Monitoring – OBD II, using “Network Car” capability

- Install 1,000 transponders on privately owned and heavy duty 1999 and newer vehicles.
- Monitor failures and pay for repairs and emissions testing.
- Include on-cycle and off-cycle vehicles and enhanced (60%) and basic (40%) areas.
- Monitor failures and pay for emissions- related repairs on current ARB study of 1,000 taxicabs with transponders.
- Prepare cost-effectiveness study on results.

Element 4: Paper Study of Relevant Remote Sensing Programs

- Gather 20 most relevant published Remote Sensing Technology Reports that meet following criteria:
 1. Substantial population size (to be determined by BAR/ARB)
 2. Include high emitter identification, clean screen, and emission modeling information
 3. Are five years old or newer
 4. Were completed in USA or Canada
- Analyze published reports.
- Summarize and report on what other states or communities are doing with remote sensing technology.

Element 5: Potential Research on Remote Sensing Equipment

BAR/ARB have identified the following potential studies or state-of-art technology to include in the remote sensing technology pilot, if funds are available:

- Use in multi-lane setting (toll booths and overpasses)
- Use in bunkers
- Stop light deployment
- Testing of diesel particulate matter and/or ammonia