

News from the **Oklahoma Corporation Commission**

Office of Public Information - Phone (405) 521-4180 FAX (405)521-6945

FOR IMMEDIATE RELEASE

Contact: Dana Boren

Reference:

New Technology Speeds Fuel Inspections

OKLAHOMA CITY— The person on the service station driveway looking at what appears to be a hand-held calculator may be watching something in gasoline that you can't see.

Corporation Commission fuel inspectors are using this "special vision" to check octane levels at retail stations to help ensure that motorists are getting the grade of gasoline the pump label says they are buying.

The octane checks are made with portable, battery-powered analyzers that use infrared light beams to probe, calculate and compare the molecular structure of the motor fuel, which then determines octane level. Corporation Commission fuel inspectors started using this new technology early in 1996. Oklahoma is one of 15 states using infrared technology for screening octane.

"This has greatly improved our octane testing program because we no longer have to send every sample to Oklahoma City for testing. We can test octane levels in less time and with greater frequency which ultimately means safer fuel for Oklahoma motorists," Ray Smith, Fuel Division director, said.

A screening test on the new portable octane analyzers takes less than one minute and can be completed on site at the service station. In 1971, when Oklahoma began its octane testing program, the only method of inspection was to take samples from retail stations and send them to the fuel laboratory in Oklahoma City for testing in knock engines, which measures fuel combustion efficiency. Turnaround time, including time for the sample to be transported to the lab, could take up to three hours for samples in the Oklahoma City area or up to a day and a half for samples from elsewhere in the state.

The knock engines are still the primary method for octane testing. If a sample fails the octane analyzer screening test, the sample is re-tested in a knock engine to verify results.

The octane analyzer screens the four primary grades of octane: 87 unleaded, 89 unleaded plus, 91 premium and 93 super. It also screens octane levels in gasoline containing ethanol and the intermediate blends of octane if applicable.

The speed and productivity benefits of the portable analyzers are illustrated by octane testing logs. In fiscal year 1995, when all testing was done in the knock engines, 1,920 tests were completed, an average of 160 tests per month. In the first seven months of this fiscal year, there were 3,143 tests, an average of 449 tests per month.