



## Project Summary

# Recommended Operating Procedure No. 45: Analysis of Nitrous Oxide from Combustion Sources

Judith S. Ford

This recommended operating procedure (ROP) has been prepared for use in research activities conducted by EPA's Air and Energy Engineering Research Laboratory (AEERL). The procedure applies to the measurement of nitrous oxide ( $\text{N}_2\text{O}$ ) in dry gas samples extracted from gas streams where  $\text{N}_2\text{O}$  concentrations range from 0.5 to 200 parts per million (ppm).  $\text{N}_2\text{O}$  concentrations are interpreted by an electron capture detector (ECD). The ECD uses a  $^{63}\text{Ni}$  constant current cell. The upper limits of this procedure can be extended by changing the sample loop pressure to reduce the volume of sample in the loop or by diluting the sample.

ROPs describe non-routine or experimental research operations where some judgment in application may be warranted. ROPs may not be applicable to activities conducted by other research groups and should not be used in place of standard operating procedures. Use of ROPs must be accompanied by an understanding of their purpose and scope.

*This Project Summary was developed by EPA's Air and Energy Engineering Research Laboratory, Research Triangle Park, NC, to announce key findings of the research project that is fully documented in a separate report of the same title (see Project Report ordering information at back).*

---

**Judith S. Ford** is the EPA Project Officer (see below).

The complete report, entitled "Recommended Operating Procedure No. 45: Analysis of Nitrous Oxide from Combustion Sources," (Order No. PB 90-238 502/AS; Cost: \$15.00, subject to change) will be available only from:

National Technical Information Service

5285 Port Royal Road

Springfield, VA 22161

Telephone: 703-487-4650

The EPA Project Officer can be contacted at:

Air and Energy Engineering Research Laboratory

U.S. Environmental Protection Agency

Research Triangle Park, NC 27711

United States  
Environmental Protection  
Agency

Center for Environmental Research  
Information  
Cincinnati OH 45268

---

Official Business  
Penalty for Private Use \$300

EPA/600/S8-90/053

•

•

•

•