7.15 Operation and Maintenance (O&M) of Existing NO_x Combustion Modification Equipment

Objective: The objective of this project is to evaluate the effect of good operating and maintenance procedures on existing low-NO_x combustion modification equipment, especially low NO_x burners to determine if NO_x can be kept at or below original design conditions.

Approach: The project will include taking existing low-NO_x designed equipment and installing oxygen trim systems with CO monitors to insure continued low-NO_x operation. Both the low-NO_x designs with oxygen trim systems and CO monitors, and low-NO_x designs without these modifications will be regularly monitored over the period of three months to determine the impact of the modifications.

Rationale: A paper study was recently completed on utility boilers equipped with low-NO_x burners in which long-term continuous monitor data (NO and O_2 or CO_2) were analyzed. Of the nine units analyzed, two were equipped with oxygen trim systems and CO monitors. These two were capable of achieving lower NO_x levels, on a consistent basis, than the other seven units. It is very desirable to apply oxygen trim systems with CO monitors to other boilers equipped with low-NO_x burners to determine their effect. If NO_x can be consistently maintained at lower levels, this would be a very cost effective means of NO_x control. The data from this study is needed by OAQPS, EPA Regional Offices, and state agencies.

Resources ($1000's):

FY81	FY82	FY83
43	100	0

Milestones:

- Initiate work assignment; 3/82
- Complete analysis of two boilers using oxygen trim systems; 6/82
- Complete installation of oxygen trim systems and CO monitors; 8/82
- Complete field evaluation; and 11/82
- Complete final draft report; 1/83

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