

FY-03-XLVII-116

“Long-Term Mercury Monitoring At North Dakota Power Plants”

CONTRACTOR: Energy & Environmental Research Center

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PARTICIPANTS

<u>Sponsor</u>	<u>Cost Share</u>
Great River Energy	\$5,800
Basin Electric Power Coop	\$30,800
Minnkota Power Coop	\$30,800
Montana Dakota Utilities	\$30,800
OtterTail Power Co	\$30,800
DOE	\$188,667
NDIC	<u>\$129,000</u>
Total Cost	\$446,667

Project Schedule - 10 Months

Contract Date – 9/18/02
Start Date – 9/19/02
Completion Date – 4/1/03

Project Deliverables

Commitment – 9/19/02√
Quarterly Report (1) – 11/1/02√
Quarterly Report (2) – 2/1/02√
Draft Report – 3/1/03√
Final Report – 4/1/03 √

OBJECTIVE / STATEMENT OF WORK

The overall goal of the project is to compile key information on the abundance and variability of mercury species in flue gas from ND power plants as measured before and after air pollution control systems. Specific objectives are as follows: 1) Determine the emission levels of mercury; 2) Determine the distribution of oxidized versus elemental mercury; 3) Determine the variability of mercury emissions with respect to plant configuration; and 4) Determine the variability of mercury emissions with respect to operational variations and coal variability. The EERC will conduct mercury sampling and continuous monitoring for approximately three weeks at the Milton R. Young Station and at the R. M. Heskett Station. Data previously collected at the Stanton Station and the Coal Creek Station will be made available. The ND information will be compared to EPA ICR data.

STATUS

The project has been completed. Data collected at the Milton R. Young Station indicate that mercury variability in the coal and flue gas was essentially the same. Further, comparison of variability before and after the wet FGD had minimal impact on variability. Data collected at the R. M. Heskett Station showed flue gas variability was less than coal variability, indicating the plant configuration and operations reduced mercury variability. Limited data collected from the Stanton Station Unit 10 spray dryer/fabric filter configuration also reduced mercury variability.