

# PROJECT FACT SHEET

**CONTRACT TITLE:** Monitoring of Particulate Matter from Stationary Sources

**ID NUMBER:** FEW 4325

**CONTRACTOR:** Sandia National Lab

**B & R CODE:** AB0555/AC1015

**ADDR:** P.O. Box 5800

**DOE PROGRAM MANAGER:**

Albuquerque, NM 87185

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**CONTRACT PERFORMANCE PERIOD:**

**PROJECT SITE**

07/15/1997 to 07/14/1998

**CITY:** Albuquerque

**STATE:** NM

**CITY:**

**STATE:**

**PROGRAM:** Environmental-Gas

**CITY:**

**STATE:**

**RESEARCH AREA:** Partnership

FUNDING (\$1000'S)	DOE	CONTRACTOR	TOTAL
PRIOR FISCAL YRS	200	0	200
FISCAL YR 1998	0	0	0
FUTURE FUNDS	0	0	0
<b>TOTAL EST'D FUNDS</b>	<b>200</b>	<b>0</b>	<b>200</b>

**OBJECTIVE:** Develop and demonstrate new techniques, and make real-time measurements of metals soot, and volatile organic compounds in products of combustion from diesel engines, spark ignition engines, gas turbines, and steam generators at exploration and production sites.

**PROJECT DESCRIPTION:**

**Work to be performed:** The three techniques that will be used are: 1) Laser Induced Breakdown Spectroscopy (LIBS) for continuous measurement of the size and concentration distributions of metals compounds suspended in gaseous combustion productions, 2) Laser Induced Incandescence (LII, for the measurement of fine carbon particles, and 3) infrared absorption using a quasi-phase-matched laser, based on periodically-poled lithium niobate to monitor classes of volatile organic compounds.

**PROJECT DESCRIPTION (Continued)****Background:****PROJECT STATUS:****Current Work:****Scheduled Milestones:**

Laboratory trials and field demonstration of LIBS	10/97
Laboratory development of LII	10/97
Assessment of laser absorption to measure volatile organic compounds	10/97
Field measurements using LIBS	09/98
Laboratory development of laser absorption	09/98
Continuous monitoring of metals & soot using LIBS and LII	09/99
Field demonstration of laser absorption	09/99
Selection of most promising instrument for commercialization	09/99
Design prototype	09/99

**Accomplishments:**