ATMOSPHERIC DISPERSION STUDY
July 2003 – Oklahoma City

Briefing before the City Council
of Oklahoma City, Oklahoma

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updated information in June 2003

ATMOSPHERIC DISPERSION STUDY
Primary Participants

Sponsors:

- U.S. Department of Energy.
- U.S. Department of Homeland Security.
- U.S. Department of Defense – Defense Threat Reduction Agency.

Scientific Investigators:

- DOE National Laboratories.
- National Oceanic and Atmospheric Administration Labs.
- DOD Laboratories.
- University of Oklahoma.
- U.K. Defence Science and Technology Laboratory.
- Several other universities and private companies.

ATMOSPHERIC DISPERSION STUDY
Purpose

Collect wind and tracer data in and around downtown Oklahoma City to:

- Gain new knowledge about the movement of contaminants in and around cities and into and within buildings.
- Improve, refine and verify computer models that simulate dispersion of contaminants in urban areas.

Computer models allow emergency management, law enforcement and other personnel to train for and respond to potential terrorist attacks in urban areas.

ATMOSPHERIC DISPERSION STUDY
Approach

- Conduct preliminary studies.
- Prepare plan with required documentation (NEPA, FAA).
- Obtain site permissions and install equipment.
- Site approximately 200 portable wind stations.
- Site more than 200 portable tracer samplers.
- Release sulfur hexafluoride tracer gas at three locations.
- Conduct ten tracer experiments during July 2003.
- Conduct four building infiltration experiments.

ATMOSPHERIC DISPERSION STUDY
Safety and Benefits

Safe Approach:

- Only safe, inert tracer gases released to track air movement.
- Used safely internationally by scientists and industry for decades.

Benefits:

- Important study to help protect homeland against chemical and biological threat.
- Strong collaboration with international partners.
- Opportunity for OU to enhance its excellent meteorology program through research and student participation.
- Data can be used to improve air quality models.