Utah Animal Feeding Operations Air Quality Study

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Utah Division of Air Quality
Utah’s AFO/CAFO Program

- Since 1999 Utah has implemented a partnership approach in addressing environmental compliance issues at animal feeding operations.
EPA Agreement

The Environmental Protection Agency (EPA) announced the Air Quality Compliance Agreement (Agreement) on January 21, 2005.
EPA Proposal:

Start with enforcement based action to fund monitoring

- Monitor 28 sites nationally
- Determine emission factors
- Calculate site emissions based on animal-units or other factors
- Determine compliance with CAA permitting (Operating Permits), Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and the Emergency Planning and Community right-to-Know Act (EPCRA) reporting
Utah Position:

The proposed EPA Consent Order and Monitoring Plan was not the most efficient and appropriate means to address potential environmental impacts in Utah.
Utah Position:

No monitoring will occur in Utah or in any other rocky mountain state

- The proposed national monitoring may not be meaningful for arid farming

- There is no initial plan to reduce emissions, measure reductions, or determine Best Available Control Technologies (BACT) or Best Management Practices (BMP’s)
Memorandum of Understanding to establish a collaborative working relationship between the Utah Department of Environmental Quality (UDEQ) and the U.S. Environmental Protection Agency (EPA) to develop and implement the Utah Animal Feeding Operation Air Quality Strategy (AFO/AQS). The purpose of the AFO/AQS is to gather animal feeding operation (AFO) emission information and implement programs that achieve multiple environmental benefits.
The AFO/AQS will develop additional information useful and relevant in EPA’s evaluation and creation of an animal agriculture air emissions program. Specifically, the AFO/AQS will provide:

- Data from dry, arid regions
- Data from very rural communities
- Data of best management practices to reduce emissions
Information on cooperative solutions

- It will provide a balanced approach between water and air pollution problems.
- It will provide alternative approaches for other states or areas to achieve emission reductions with the incorporation of best management practices (BMPs).
- It will provide information to help in the development of Best Available Control Technology (BACT).
FOR UTAH CITIZENS AND AGRICULTURE COMMUNITY

- Continues to build on the cooperative relationships and cooperative approach established in the water quality program.
- Reduces the stress on the agriculture community of a new demand on limited resources and new processes to comply with.
- Places a higher focus on local input and local solutions.
- Allows an evaluation on a cost/benefit basis of BMPs for reducing air emissions.
- Helps maintain a viable agriculture industry in Utah.
Results of the MOU

- Ensure compliance with applicable Clean Air Act, CERCLA and Environmental Planning and Community Right-to-Know Act (EPCRA) provisions.
- EPA agrees that it will not target participants for inspection as a consequence of their participation in the Utah AFO/AQS.
Cache Valley Air Quality
PM 2.5 (ug/m3) Nation High Values

Graph showing PM 2.5 levels in various cities.
Cache Valley Air Quality

PM 2.5 (ug/m³)

Year

2002 2003 2004

Standard 65 ug/m³

1st High 98th %
Cache Valley Air Quality
Clear skies promote surface cooling and cold air drainage from mountain slopes. The cold dense air collects and pools in valley bottoms such as the Cache Valley.
Progress

- Identify funding
- Develop monitoring plan
- Monitor emissions
- Evaluate Best Management Practices
- Assist with compliance
Utah Agricultural Emissions Research

- Ag. Earmarks
- USDA
- NRCS UT
- 2007 UDAQ Building Block
- Producer Partners
- ARS
- USU SDL
- Research Team
- USU
- UDEQ
- MOU
- EPA
- Monitoring Plan
- USU Extension Service
- Conservation Districts UACD
- Utah Farm Bureau
- Emission and Dispersion of Gases and Particulates from Agricultural Operations
- Funding
- Collaboration
- BMP Evaluation