

**UTAH DIVISION OF AIR QUALITY**  
**Provisions to Ensure BACM/BACT**  
**For the Salt Lake City, UT Serious PM<sub>2.5</sub> Nonattainment Area**

**Executive Summary**

The following collection of documents presents an analysis to ensure Best Available Control Measures, to include Best Available Control Technologies (BACM/BACT), within the Salt Lake City, UT PM<sub>2.5</sub> nonattainment area. This area was designated (in 2009) as not attaining the 2006 24-hour National Ambient Air Quality Standard (NAAQS). This analysis was prepared to support a Serious Area State Implementation Plan (SIP), and addresses the requirement in Clean Air Act (CAA) Section 189(b)(1)(B) to submit provisions ensuring the implementation of best available control measures no later than 4 years after the area was reclassified to Serious. It has been conducted in accordance with the SIP Requirements for the PM<sub>2.5</sub> NAAQS in Subpart Z of 40 CFR 51. These provisions are generally independent of, and are to be determined without regard to, the quantitative demonstration of attainment.

**Organization**

This section of the Technical Support Documentation describes the consideration of possible control measures and their inclusion or elimination from consideration as part of the overall control strategies in the PM<sub>2.5</sub> Serious Area SIP for the Salt Lake City nonattainment area.

A basic description of the process to be employed is followed by four sections, each addressing one of the fundamental sectors of the emissions inventories (Area sources, large stationary Point sources, Non-road mobile sources, and On-road mobile sources).

**BACM/BACT Requirements**

Section 189(b) of the CAA requires that, in addition to the provisions submitted to meet the requirements relating to the Moderate Area SIPs, implementation plans for Serious Areas would need to include provisions to assure that best available control measures for the control of PM<sub>2.5</sub> will be implemented no later than 4 years after the date of reclassification to Serious.

*“Best available control measure (BACM)”* – is defined as any technologically and economically feasible control measure that can be implemented in whole or in part within 4 years after the date of reclassification (to Serious) and that generally can achieve greater permanent and enforceable

emissions reductions ... than can be achieved through the implementation of Reasonably Available Control Measures (RACM) on the same sources. BACM is also defined to include BACT, and EPA notes in its interpretation of BACM that while BACT for existing sources in the context of NAAQS implementation is separate and distinct from the requirement for BACT under the PSD program, consistency with past policy indicates that BACT determinations for PM2.5 NAAQS implementation are to follow the same process and criteria that area applied to the BACT determination process for the PSD program.

EPA's nod to the PSD process in determining BACT is also analogous to its interpretation of RACT, wherein RACM would refer to measures of any type that may be applicable to a wide range of sources (mobile, area, or stationary), whereas RACT refers to measures applicable to stationary sources. Similarly, BACT may be regarded as a type of BACM specifically designed for stationary sources, though in many instances control *measures* may be applied to point sources and *technologies* may be applied to non-point sources.

In general, the combined approach to BACM and BACT includes the following steps:

- Step 1: Develop a comprehensive inventory
- Step 2: Identify potential control measures. The list should include options not previously considered as RACM/RACT for the area.
- Step 3: Determine whether an available control measure is technologically feasible.
- Step 4: Determine whether an available control measure is economically feasible
- Step 5: Determine the earliest date by which a feasible control measure can be implemented in whole or in part

For each technologically feasible measure, a state should evaluate the economic feasibility through consideration of factors such as the capital costs, operating and maintenance costs, and cost effectiveness (i.e. annualized \$/ton).

### **Source Categories**

In examining emission controls, it is helpful to categorize the sources of those emissions into the same basic groupings used in the compiling of the emissions inventories: stationary point sources, area sources, non-road mobile sources, and on-road mobile sources.

The BACM analysis portion of the Technical Support Document (TSD) is presented in Chapter 5 "Control Strategies" which contains a Background section at 5.a. followed by sections 5.b.

through 5.e devoted to each of the four basic source categories (Area, Point, Non-Road, and On-Road Mobile Sources respectively). Section 5.c. "Point Sources" contains subsection 5.c.iii which contains the BACT Evaluation Reports for each of the large stationary point sources.