**Section 291.301 Contents of the Air Quality Study Submitted in Support of a Permit Application for an SO2 or TSP Emission Source**

The air quality study shall include the following:

a) A description of the nature and location of the sulfur dioxide or particulate emission sources at the subject facility, including but not limited to:

1) Diameter, height, exit gas temperature, and exit gas velocity for all stacks or vents through which the pollutant is emitted into the atmosphere,

2) Description of the fuels used to include type, sulfur content, ash content, heat content, and ultimate analysis,

3) Description of the type of fuel combustion equipment to include method of firing and maximum firing rate,

4) Specific description of the location of the emission sources (Universal Transverse Mercatur (UTM) coordinates or latitude/longitude) and a plot plan.

b) A summary of all ambient air quality data collected since January 1, 1973, at monitors located within a 50-mile radius of the emission source and collected by the owner and/or operator of the emission source. The summary should include: annual averages; maximum and second highest short-term averages for each month; and the number of times the short-term AAQS were exceeded during each month.

c) A general description of the method by which the air quality study was conducted to include the method which was used to identify the maximum ground-level concentration of pollutant contributed to by the subject facility and the location of such maximum concentration.

d) A summary of all meteorological data collected by the owner or operator of the emission source since January 1, 1973, at monitors located within a 50-mile radius of the specified pollutant emission source provided that such data were used in the development of the emission limitation.

e) A description of and justification for all point source data, area source data and meteorological data which were input to the dispersion models.

f) An identification of and an estimate as to the frequency, characteristics, probable time of occurrence and duration of meteorological conditions associated with the maximum short-term ground-level concentration of the specified pollutant contributed to by the subject facility. A description of the techniques used in arriving at the above estimates should be included.

g) A detailed description and complete listing of all dispersion models and plume rise equations which were used to develop the emission limitation to include all model equations. This is not necessary if CDM and the AQSTM are exclusively utilized as received from the Agency, except that a statement that CDM and the AQSTM were used should be included.

h) A detailed description of the method that was used to determine total background pollutant concentrations in the vicinity of the subject facility for the annual model and for each of the meteorological conditions considered in performing the analysis is such background concentrations are different than those given in Section 291.103.

i) A detailed description of all dispersion model validation and calibration procedures to include the regression equations, correlation coefficients and other statistical data which indicate the reliability of the modeling results for the various situations modeled.

j) A detailed description of the technique used to allocate area source emissions from the county level to the sub-county level.

k) A detailed description of the technique used to project growth for the maintenance period.

l) A statement of the base year used for the analysis and the reasons for selection of the base period.

m) Detailed maps of the study area which include: topographic features, bodies of water, and locations of point and area sources.

n) Data tables which include but are not limited to:

1) Short-term and annual background concentrations which were determined for all meteorological conditions considered in the air quality study,

2) Calculated ground-level concentrations, calibrated and uncalibrated, from all short-term and annual dispersion modeling.

o) The type, number and location of meteorological monitoring devices from which data was obtained for use in performing the study including a discussion of the suitability of the location of such monitors.

p) The type, number and location of instruments for the continuous monitoring and recording of pollutant emissions which were used by the subject facility to determine emissions for use in the study.

q) A description of the system and procedures used for acquisition and storage of ambient air quality, meteorological and emissions data.

r) A description of the procedures utilized for validation of air quality, meteorological and emissions data for use in the study.

s) Identification of company personnel responsible for use performance of the air quality study so as to provide a point of contact.

t) An explicit statement of the emission limitation which is proposed for the source.