Feb11,2019

Downloaded blank of PM for the state of California

<https://aqs.epa.gov/aqsweb/airdata/download_files.html#Blanks>

## 8. Blanks Data Files

### 8.1. Content

These files contain the field, trip, and lab blanks measurements. Blanks are collection media that are not used to collect sample data but are analyzed to determine possible contamination paths and levels in normal samples.

<https://aqs.epa.gov/aqsweb/airdata/FileFormats.html>

### 1.2. Pollutant Standards

An important concept to understand in interpreting summary data is that of a "pollutant standard". The national ambient air quality standards (NAAQS, <http://www3.epa.gov/ttn/naaqs/criteria.html>) all have an averaging time and a form. Furthermore, each pollutant may have several applicable standards based on the date of issuance, the duration of the sample, and a primary or secondary standard.

When comparing data to a NAAQS, EPA must aggregate the data according to the rules of the applicable pollutant standard. In order to do this, we must summarize the same data various ways. So the annual and daily summary files will (possibly) contain multiple records that have been calculated using different rules and starting metrics. These are differentiated by the Pollutant Standard. (The Annual Summary file also contains a Metric Used column indicating the metric reflected in the summary calculations.)

For an example of metric, consider ozone. Its standard form is the "annual fourth-highest daily maximum 8-hr concentration". So we first calculated 8-hour averages. Then we calculate the daily maximum of these 8-hour averages. Then, in the annual summary record, all metrics (mean, maxes, percentiles) are based on the daily maximum 8-hour average, not the individual sample values.

In this study we have used hourly ozone, PM2.5, T, RH data to avoid calculation biases.

Website for codes and reference of PM2.5-PM10

<https://www.epa.gov/aqs/aqs-memos-technical-note-reporting-pm25-continuous-monitoring-and-speciation-data-air-quality>