

## MEMORANDUM

**TO: National Ambient Air Quality Standards for Particulate Matter: Proposed Decision Docket (EPA-HQ-OAR-2001-0017)**

**From: Tom Rosendahl  
Integrated Policy and Strategies Group, OAQPS**

**Date: December 20, 2005**

**Subject: Basis for proposed determinations regarding retention of the existing 24-hour PM<sub>10</sub> standard**

This memorandum summarizes our analyses to support the proposed decisions regarding whether the 24-hour PM<sub>10</sub> standard should be retained for areas that are currently violating that standard. We conducted the following two analyses:

1. We identified all urbanized areas with a population of at least 100,000 people that have a violating PM<sub>10</sub> monitor based on the most recent three years of data (generally 2002-2004 air quality data). Because each of these areas would meet the general criteria EPA is proposing for areas which are required to monitor under the proposed 24-hour PM<sub>10-2.5</sub> standard, EPA has proposed to retain the 24-hour PM<sub>10</sub> standard in these areas until designations are completed under a final 24-hour PM<sub>10-2.5</sub> standard.

Spreadsheet A (attached) contains a list of all urbanized areas within the United States that have a minimum population of 100,000 people and one or more monitors registering violations of the 24-hour PM<sub>10</sub> standard based on the most recent three years of data. There are 15 such areas.

2. In addition, we have identified all other locations with monitors registering violations of the 24-hour PM<sub>10</sub> standard based on the most recent three years of data. These monitors are located either in urbanized areas with a population between 50,000-100,000 people, or non-urbanized areas (i.e. population less than 50,000). Consistent with taking comment in our monitoring proposal regarding whether discretionary monitors sited in such locations should be eligible for comparison with the proposed 24-hour PM<sub>10-2.5</sub> NAAQS, we are taking comment on whether these locations, or some subset of these locations, should be required to retain the 24-hour PM<sub>10</sub> standard for the present.

To assist with this analysis, we have sorted these locations into groups, based on certain screening criteria which could be used to determine which of these locations would be appropriate for temporary retention of the 24-hour PM<sub>10</sub> standard. Specifically, we have created three additional spreadsheets:

Spreadsheet B (attached) contains those locations with at least one industrial source\* within one mile of the violating PM<sub>10</sub> monitor, based on data from the 2002 National Emission Inventory (NEI) or 2003 Toxic Release Inventory (TRI).

Spreadsheet C (attached) lists those locations with at least one industrial source\* within five miles of the violating PM<sub>10</sub> monitor, based on data from the 2002 NEI or 2003 TRI.

Spreadsheet D (attached) lists all other remaining locations with violating PM<sub>10</sub> monitors.

\* The sources within these inventories are classified according to the Office of Management and Budget's Standard Industrial Classification (SIC) code manual. In a rough attempt to screen out agricultural and mining sources, we have defined "industrial source" to include all those sources which have SIC codes of 1500 or above. This would exclude sources in Division A: Agriculture, Forestry and Fishing (i.e. SIC codes 0111-0971 including agricultural production – crops, livestock and animal specialties, agricultural services, forestry and fishing, hunting and trapping) and Division B: Mining (i.e. SIC codes 1011-1499 including metal and coal mining, oil and gas extraction, mining and quarrying of non-metallic minerals, except fuels). We recognize that Division A includes more than agricultural sources but for purposes of this analysis we excluded all sources in the division.

## Spreadsheet A

| Area Name                                                                                                      | State  | Urban Area Population | Current Attainment Status | Meets NAAQS | Is there an UA>100k population in or as part of a current NA area | Is there a viol-PM10 monitor in that UA>100 |
|----------------------------------------------------------------------------------------------------------------|--------|-----------------------|---------------------------|-------------|-------------------------------------------------------------------|---------------------------------------------|
| 1 Birmingham urban area (Jefferson County, AL)                                                                 | AL     | 663,615               | Attainment/unclass.       | No          | yes                                                               | yes                                         |
| 2 Maricopa and Pinal Counties; Phoenix planning area (AZ)                                                      | AZ     | 2,907,049             | Nonattainment             | No          | yes                                                               | yes                                         |
| 3 Riverside, Los Angeles, Orange, and San Bernardino Counties; South Coast Air Basin (CA)                      | CA     | 11,789,487            | Nonattainment             | No          | yes                                                               | yes                                         |
| 4 Fresno, Kern, Kings, Tulare, San Joaquin, Stanislaus, Madera Counties; San Joaquin Valley planning area (CA) | CA     | 396,125               | Nonattainment             | No          | yes                                                               | yes                                         |
| 5 San Bernardino County (part); excluding Searles Valley Planning area and South Coast Air Basin (CA)          | CA     | 200,436               | Nonattainment             | No          | yes                                                               | yes                                         |
| 6 Riverside County; Coachella Valley planning area (CA)                                                        | CA     | 254,856               | Nonattainment             | No          | yes                                                               | yes                                         |
| 7 Simi Valley urban area (CA)                                                                                  | CA     | 112,345               | Attainment/unclass.       | No          | yes                                                               | yes                                         |
| 8 Lake County; Cities of East Chicago, Hammond, Whiting, and Gary (IN)                                         | IN     | 8,307,904             | Attainment/maint.         | No          | yes                                                               | yes                                         |
| 9 Wayne County; (part) (MI)                                                                                    | MI     | 3,903,377             | Attainment/maint.         | No          | yes                                                               | yes                                         |
| 10 St Louis urban area (MO)                                                                                    | MO     | 2,077,662             | Attainment/unclass.       | No          | yes                                                               | yes                                         |
| 11 Albuquerque urban area (NM)                                                                                 | NM     | 598,191               | Attainment/unclass.       | No          | yes                                                               | yes                                         |
| 12 Clark County; Las Vegas planning area (NV)                                                                  | NV     | 1,314,357             | Nonattainment             | No          | yes                                                               | yes                                         |
| 13 Columbia urba area (SC)                                                                                     | SC     | 671,407               | Attainment/unclass.       | No          | yes                                                               | yes                                         |
| 14 El Paso urban area (including those portions in TX and those portions in NM)                                | TX, NM | 674,801               | Nonattainment             | No          | yes                                                               | yes                                         |
| 15 Salt Lake County (UT)                                                                                       | UT     | 887,650               | Nonattainment             | No          | yes                                                               | yes                                         |

## Spreadsheet B

| index | Number<br>fac.TRI_1MI | Number<br>fac.NEI_1MI | Cumm. TPY<br>PM10_1MI | Cumm. TPY<br>PM25_1MI | Cumm. TPY<br>SO2_1MI | Monitor<br>Site Code | COUNTY          | ST | Existing PM10 NA area name   |
|-------|-----------------------|-----------------------|-----------------------|-----------------------|----------------------|----------------------|-----------------|----|------------------------------|
| 1     | 1                     | 11                    | 79                    | 26                    | 277                  | 295100092            | St. Louis City  | MO |                              |
| 2     | 2                     | 8                     | 0                     | 0                     | 3760                 | 060791005            | San Luis Obispo | CA |                              |
| 3     | 1                     | 7                     | 0                     | 0                     | 2628                 | 010736004            | Jefferson       | AL |                              |
| 4     | 1                     | 3                     | 5                     | 0                     | 0                    | 350010029            | Bernalillo      | NM |                              |
| 5     | 1                     | 3                     | 0                     | 0                     | 1                    | 450790018            | Richland        | SC |                              |
| 6     | 1                     | 2                     | 0                     | 0                     | 175                  | 060711234            | San Bernardino  | CA | Trona, CA                    |
| 7     | 0                     | 2                     | 0                     | 0                     | 0                    | 061131003            | Yolo            | CA |                              |
| 8     | 0                     | 2                     | 31                    | 0                     | 2                    | 350130017            | Dona Ana        | NM |                              |
| 9     | 0                     | 2                     | 0                     | 0                     | 0                    | 560250001            | Natrona         | WY |                              |
| 10    | 3                     | 1                     | 0                     | 0                     | 0                    | 350010026            | Bernalillo      | NM |                              |
| 11    | 1                     | 1                     | 0                     | 0                     | 1609                 | 160770010            | Power           | ID |                              |
| 12    | 1                     | 1                     | 0                     | 0                     | 1609                 | 160770011            | Power           | ID |                              |
| 13    | 0                     | 1                     | 0                     | 0                     | 711                  | 040030011            | Cochise         | AZ | Douglas (Cochise County), AZ |
| 14    | 0                     | 1                     | 23                    | 0                     | 4                    | 040139993            | Maricopa        | AZ |                              |
| 15    | 0                     | 1                     | 0                     | 0                     | 0                    | 060250003            | Imperial        | CA | Imperial Valley, CA          |
| 16    | 0                     | 1                     | 0                     | 0                     | 0                    | 060250007            | Imperial        | CA | Imperial Valley, CA          |
| 17    | 0                     | 1                     | 0                     | 0                     | 0                    | 060270004            | Inyo            | CA | Owens Valley, CA             |
| 18    | 0                     | 1                     | 0                     | 0                     | 0                    | 060271001            | Inyo            | CA | Coso Junction, CA            |
| 19    | 0                     | 1                     | 0                     | 0                     | 0                    | 060732007            | San Diego       | CA |                              |
| 20    | 0                     | 1                     | 0                     | 0                     | 1272                 | 120890005            | Nassau          | FL |                              |
| 21    | 0                     | 1                     | 52                    | 0                     | 0                    | 270674415            | Kandiyohi       | MN |                              |
| 22    | 0                     | 1                     | 0                     | 0                     | 0                    | 320230010            | Nye             | NV |                              |
| 23    | 0                     | 1                     | 68                    | 68                    | 0                    | 350439012            | Sandoval        | NM |                              |
| 24    | 0                     | 1                     | 0                     | 0                     | 5258                 | 560370869            | Sweetwater      | WY |                              |
| 25    | 8                     | 0                     | 0                     | 0                     | 0                    | 560010801            | Albany          | WY |                              |
| 26    | 8                     | 0                     | 0                     | 0                     | 0                    | 560370859            | Sweetwater      | WY |                              |
| 27    | 1                     | 0                     | 0                     | 0                     | 0                    | 320030601            | Clark           | NV |                              |
| 28    | 1                     | 0                     | 0                     | 0                     | 0                    | 391450021            | Scioto          | OH |                              |
| 29    | 1                     | 0                     | 0                     | 0                     | 0                    | 530650004            | Stevens         | WA |                              |

## Spreadsheet C

| index | Number<br>fac.TRI_5MI | Number<br>fac.NEI_5MI | Cumm. TPY<br>PM10_5MI | Cumm. TPY<br>PM25_5MI | Cumm. TPY<br>SO2_5MI | Monitor<br>Site Code | COUNTY          | ST | Existing PM10 NA area name |
|-------|-----------------------|-----------------------|-----------------------|-----------------------|----------------------|----------------------|-----------------|----|----------------------------|
| 1     | 43                    | 169                   | 1108                  | 1144                  | 8274                 | 295100092            | St. Louis City  | MO |                            |
| 2     | 17                    | 94                    | 0                     | 0                     | 5385                 | 010736004            | Jefferson       | AL |                            |
| 3     | 2                     | 87                    | 0                     | 0                     | 25                   | 061131003            | Yolo            | CA |                            |
| 4     | 6                     | 26                    | 0                     | 0                     | 93                   | 450790018            | Richland        | SC |                            |
| 5     | 3                     | 17                    | 0                     | 0                     | 2                    | 060732007            | San Diego       | CA |                            |
| 6     | 2                     | 15                    | 0                     | 0                     | 3760                 | 060791005            | San Luis Obispo | CA |                            |
| 7     | 0                     | 11                    | 0                     | 0                     | 0                    | 061112002            | Ventura         | CA |                            |
| 8     | 5                     | 10                    | 26                    | 0                     | 29                   | 350010029            | Bernalillo      | NM |                            |
| 9     | 1                     | 10                    | 24                    | 7                     | 2                    | 290970003            | Jasper          | MO |                            |
| 10    | 4                     | 8                     | 40                    | 30                    | 1762                 | 391450021            | Scioto          | OH |                            |
| 11    | 1                     | 8                     | 0                     | 0                     | 9                    | 060251003            | Imperial        | CA | Imperial Valley, CA        |
| 12    | 6                     | 7                     | 36                    | 36                    | 13                   | 350010026            | Bernalillo      | NM |                            |
| 13    | 3                     | 7                     | 0                     | 0                     | 1089                 | 560250001            | Natrona         | WY |                            |
| 14    | 1                     | 7                     | 101                   | 11                    | 40                   | 350130017            | Dona Ana        | NM |                            |
| 15    | 0                     | 7                     | 0                     | 0                     | 19                   | 060250003            | Imperial        | CA | Imperial Valley, CA        |
| 16    | 5                     | 6                     | 1327                  | 509                   | 29854                | 401010167            | Muskogee        | OK |                            |
| 17    | 0                     | 6                     | 0                     | 0                     | 19                   | 060250007            | Imperial        | CA | Imperial Valley, CA        |
| 18    | 0                     | 6                     | 26                    | 3                     | 2                    | 350130018            | Dona Ana        | NM |                            |
| 19    | 0                     | 5                     | 63                    | 1                     | 0                    | 270674415            | Kandiyohi       | MN |                            |
| 20    | 3                     | 4                     | 0                     | 0                     | 5038                 | 120890005            | Nassau          | FL |                            |
| 21    | 2                     | 4                     | 25                    | 0                     | 0                    | 020200018            | Anchorage       | AK |                            |
| 22    | 2                     | 4                     | 25                    | 0                     | 0                    | 020200044            | Anchorage       | AK |                            |
| 23    | 1                     | 4                     | 0                     | 0                     | 285                  | 060711234            | San Bernardino  | CA | Trona, CA                  |
| 24    | 0                     | 4                     | 25                    | 0                     | 1                    | 020200043            | Anchorage       | AK |                            |
| 25    | 0                     | 4                     | 68                    | 68                    | 0                    | 350439012            | Sandoval        | NM |                            |
| 26    | 3                     | 3                     | 1                     | 1                     | 0                    | 481410057            | El Paso         | TX |                            |
| 27    | 1                     | 3                     | 0                     | 0                     | 16                   | 060290015            | Kern            | CA | Indian Wells Valley, CA    |
| 28    | 0                     | 3                     | 68                    | 0                     | 5                    | 040139993            | Maricopa        | AZ |                            |
| 29    | 0                     | 3                     | 0                     | 0                     | 0                    | 320230010            | Nye             | NV |                            |
| 30    | 0                     | 3                     | 0                     | 0                     | 10223                | 560370869            | Sweetwater      | WY |                            |
| 31    | 1                     | 2                     | 15                    | 10                    | 4                    | 530650004            | Stevens         | WA |                            |
| 32    | 1                     | 2                     | 0                     | 0                     | 0                    | 560050907            | Campbell        | WY |                            |
| 33    | 0                     | 2                     | 0                     | 0                     | 5                    | 350130020            | Dona Ana        | NM |                            |

## Spreadsheet C

| index | Number<br>fac.TRI_5MI | Number<br>fac.NEI_5MI | Cumm. TPY<br>PM10_5MI | Cumm. TPY<br>PM25_5MI | Cumm. TPY<br>SO2_5MI | Monitor<br>Site Code | COUNTY     | ST | Existing PM10 NA area name   |
|-------|-----------------------|-----------------------|-----------------------|-----------------------|----------------------|----------------------|------------|----|------------------------------|
| 34    | 4                     | 1                     | 0                     | 0                     | 0                    | 060290011            | Kern       | CA |                              |
| 35    | 2                     | 1                     | 0                     | 0                     | 1609                 | 160770010            | Power      | ID |                              |
| 36    | 2                     | 1                     | 0                     | 0                     | 1609                 | 160770011            | Power      | ID |                              |
| 37    | 1                     | 1                     | 0                     | 0                     | 1                    | 040230004            | Santa Cruz | AZ | Nogales, AZ                  |
| 38    | 1                     | 1                     | 0                     | 0                     | 0                    | 060254004            | Imperial   | CA | Imperial Valley, CA          |
| 39    | 1                     | 1                     | 852                   | 805                   | 19310                | 560230800            | Lincoln    | WY |                              |
| 40    | 0                     | 1                     | 0                     | 0                     | 711                  | 040030011            | Cochise    | AZ | Douglas (Cochise County), AZ |
| 41    | 0                     | 1                     | 0                     | 0                     | 0                    | 060254003            | Imperial   | CA | Imperial Valley, CA          |
| 42    | 0                     | 1                     | 0                     | 0                     | 0                    | 060270004            | Inyo       | CA | Owens Valley, CA             |
| 43    | 0                     | 1                     | 0                     | 0                     | 0                    | 060271001            | Inyo       | CA | Coso Junction, CA            |
| 44    | 0                     | 1                     | 0                     | 0                     | 6                    | 060510005            | Mono       | CA | Mono Basin, CA               |
| 45    | 8                     | 0                     | 0                     | 0                     | 0                    | 560010801            | Albany     | WY |                              |
| 46    | 8                     | 0                     | 0                     | 0                     | 0                    | 560370859            | Sweetwater | WY |                              |
| 47    | 1                     | 0                     | 0                     | 0                     | 0                    | 320030601            | Clark      | NV |                              |
| 48    | 1                     | 0                     | 0                     | 0                     | 0                    | 560050891            | Campbell   | WY |                              |

### Spreadsheet D

| index | Number      | Number      | Cumm.           | Cumm.           | Cumm.          | Number      | Number      | Cumm.           | Cumm.           | Cumm.          | Monitor Site |                               | Existing PM10 NA<br>area name |                     |
|-------|-------------|-------------|-----------------|-----------------|----------------|-------------|-------------|-----------------|-----------------|----------------|--------------|-------------------------------|-------------------------------|---------------------|
|       | fac.TRI_1MI | fac.NEI_1MI | TPY<br>PM10_1MI | TPY<br>PM25_1MI | TPY<br>SO2_1MI | fac.TRI_5MI | fac.NEI_5MI | TPY<br>PM10_5MI | TPY<br>PM25_5MI | TPY<br>SO2_5MI | Code         | COUNTY                        |                               | ST                  |
| 1     | 0           | 0           | 0               | 0               | 0              | 0           | 0           | 0               | 0               | 0              | 0            | 020201004 - Anchorage         | AK                            |                     |
| 2     | 0           | 0           | 0               | 0               | 0              | 0           | 0           | 0               | 0               | 0              | 0            | 021700008 - Matanuska-Susitna | AK                            |                     |
| 3     | 0           | 0           | 0               | 0               | 0              | 0           | 0           | 0               | 0               | 0              | 0            | 040213008 - Pinal             | AZ                            |                     |
| 4     | 0           | 0           | 0               | 0               | 0              | 0           | 0           | 0               | 0               | 0              | 0            | 040213011 - Pinal             | AZ                            |                     |
| 5     | 0           | 0           | 0               | 0               | 0              | 0           | 0           | 0               | 0               | 0              | 0            | 060250004 - Imperial          | CA                            | Imperial Valley, CA |
| 6     | 0           | 0           | 0               | 0               | 0              | 0           | 0           | 0               | 0               | 0              | 0            | 060250005 - Imperial          | CA                            | Imperial Valley, CA |
| 7     | 0           | 0           | 0               | 0               | 0              | 0           | 0           | 0               | 0               | 0              | 0            | 060270021 - Inyo              | CA                            | Owens Valley, CA    |
| 8     | 0           | 0           | 0               | 0               | 0              | 0           | 0           | 0               | 0               | 0              | 0            | 060270021 - Inyo              | CA                            | Owens Valley, CA    |
| 9     | 0           | 0           | 0               | 0               | 0              | 0           | 0           | 0               | 0               | 0              | 0            | 060270022 - Inyo              | CA                            | Owens Valley, CA    |
| 10    | 0           | 0           | 0               | 0               | 0              | 0           | 0           | 0               | 0               | 0              | 0            | 060270022 - Inyo              | CA                            | Owens Valley, CA    |
| 11    | 0           | 0           | 0               | 0               | 0              | 0           | 0           | 0               | 0               | 0              | 0            | 060270022 - Inyo              | CA                            | Owens Valley, CA    |
| 12    | 0           | 0           | 0               | 0               | 0              | 0           | 0           | 0               | 0               | 0              | 0            | 060270024 - Inyo              | CA                            | Owens Valley, CA    |
| 13    | 0           | 0           | 0               | 0               | 0              | 0           | 0           | 0               | 0               | 0              | 0            | 060270024 - Inyo              | CA                            | Owens Valley, CA    |
| 14    | 0           | 0           | 0               | 0               | 0              | 0           | 0           | 0               | 0               | 0              | 0            | 060270025 - Inyo              | CA                            | Owens Valley, CA    |
| 15    | 0           | 0           | 0               | 0               | 0              | 0           | 0           | 0               | 0               | 0              | 0            | 060270025 - Inyo              | CA                            | Owens Valley, CA    |
| 16    | 0           | 0           | 0               | 0               | 0              | 0           | 0           | 0               | 0               | 0              | 0            | 060271003 - Inyo              | CA                            | Owens Valley, CA    |
| 17    | 0           | 0           | 0               | 0               | 0              | 0           | 0           | 0               | 0               | 0              | 0            | 060271003 - Inyo              | CA                            | Owens Valley, CA    |
| 18    | 0           | 0           | 0               | 0               | 0              | 0           | 0           | 0               | 0               | 0              | 0            | 060271003 - Inyo              | CA                            | Owens Valley, CA    |
| 19    | 0           | 0           | 0               | 0               | 0              | 0           | 0           | 0               | 0               | 0              | 0            | 060271003 - Inyo              | CA                            | Owens Valley, CA    |
| 20    | 0           | 0           | 0               | 0               | 0              | 0           | 0           | 0               | 0               | 0              | 0            | 060510011 - Mono              | CA                            | Mono Basin, CA      |
| 21    | 0           | 0           | 0               | 0               | 0              | 0           | 0           | 0               | 0               | 0              | 0            | 060510011 - Mono              | CA                            | Mono Basin, CA      |
| 22    | 0           | 0           | 0               | 0               | 0              | 0           | 0           | 0               | 0               | 0              | 0            | 300350101 - Glacier           | MT                            |                     |
| 23    | 0           | 0           | 0               | 0               | 0              | 0           | 0           | 0               | 0               | 0              | 0            | 300350104 - Glacier           | MT                            |                     |
| 24    | 0           | 0           | 0               | 0               | 0              | 0           | 0           | 0               | 0               | 0              | 0            | 320030023 - Clark             | NV                            |                     |
| 25    | 0           | 0           | 0               | 0               | 0              | 0           | 0           | 0               | 0               | 0              | 0            | 320030075 - Clark             | NV                            | Clark County, NV    |
| 26    | 0           | 0           | 0               | 0               | 0              | 0           | 0           | 0               | 0               | 0              | 0            | 350130019 - Dona Ana          | NM                            |                     |
| 27    | 0           | 0           | 0               | 0               | 0              | 0           | 0           | 0               | 0               | 0              | 0            | 560070831 - Carbon            | WY                            |                     |
| 28    | 0           | 0           | 0               | 0               | 0              | 0           | 0           | 0               | 0               | 0              | 0            | 560070835 - Carbon            | WY                            |                     |
| 29    | 0           | 0           | 0               | 0               | 0              | 0           | 0           | 0               | 0               | 0              | 0            | 560370865 - Sweetwater        | WY                            |                     |
| 30    | 0           | 0           | 0               | 0               | 0              | 0           | 0           | 0               | 0               | 0              | 0            | 560370868 - Sweetwater        | WY                            |                     |