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near point sources. There is a higher initial cost associated with finding and setting up new monitoring sites than the annual operating cost of the monitor itself. Because of this and because of limited State monitoring resources, not all monitors initially freed up can be immediately placed around a targeted source, but will be phased in over a period of time.

For the reasons stated above, EPA proposes to direct States to redeploy SO<sub>2</sub> monitors around targeted sources of  $SO_2$  and respan the instrumentation at selected sites to measure values above 0.5 parts per million (ppm). The monitors will be sited at microscale, middle, or neighborhood distance from the targeted sources in order to best measure high, 5-minute concentrations of SO<sub>2</sub>. Micro, middle, neighborhood, and urban scales are all more completely defined in 40 CFR part 58, appendix D. The EPA and States will first monitor around those sources in areas with population with the greatest potential to exposure to 5-minute, peak SO<sub>2</sub> levels. The EPA and States will consider discontinuing the operation of existing monitors and relocate them for the purpose of monitoring around targeted sources (see part 58 discussion published elsewhere in this notice for monitoring requirements).

## B. Implementing the Targeting Strategy

As discussed earlier, the available air quality and exposure information indicates that a large degree of protection against exposure to shortterm peak SO<sub>2</sub> concentrations is provided by the current NAAQS. Full implementation of the Acid Rain Program will result in further reduction of SO<sub>2</sub> emissions and the likelihood of peak SO<sub>2</sub> concentrations. The available data indicate, however, that peak concentrations of SO2 can still occur around certain sources or source types with some frequency, suggesting asthmatic individuals who reside in the vicinity of such sources or source types will be at greater health risk than indicated for the asthmatic population as a whole. These assessments have led EPA to conclude that any regulatory measures adopted to provide additional protection should be implemented through a risk-based targeted strategy that focuses on those individual sources more likely to produce high 5-minute peaks.

Therefore, in order to gather more information, to focus implementation efforts on those sources that EPA's existing data suggest may pose the greatest health risk, and to allocate monitoring resources as efficiently as possible, EPA has developed an approach to guide States in developing a prioritized list of sources to be targeted for monitoring. As further discussed below, potential sources have been placed in one of three groups based on the overall likelihood of the source category to emit high 5-minute  $SO_2$  peaks. However, before redeploying monitors, States must evaluate each of these facilities individually, basing their decision on more specific information such as size, configuration, compliance history and proximity to population centers.

As just described, States need to review their current  $SO_2$  monitoring networks to determine which monitor sites should continue operating and which should be discontinued and relocated around potential sources. The EPA will work with each State to develop a targeted  $SO_2$  monitoring plan to implement the strategy, based on the number of targeted sources,  $SO_2$ monitoring resources, and within a reasonable time horizon.

The EPA believes that new locations for siting monitors should be in the vicinity of sources suspected of causing short-term SO<sub>2</sub> peaks. Some examples of sources which emit SO<sub>2</sub> are petroleum refineries, sulfuric acid plants, fossil fuel-fired industrial boilers, utility boilers, pulp and paper mills, iron and steel mills, wet corn milling operations, nonferrous smelters, carbon black manufacturing, portland cement manufacturing, phosphatic fertilizer production, and natural gas production. This list is not exhaustive and could potentially include other process sources with known emissions of SO<sub>2</sub>. These sources have the ability to emit relatively large quantities of SO<sub>2</sub> over short durations. Such large quantities of emissions may be due to releases from batch type operations, operational malfunctions or upsets requiring control equipment bypasses, control equipment malfunctions that can result in uncontrolled emissions to the atmosphere, startup/shutdown, short stacks subject to downwash, or fugitive emissions.

## 1. Ranking of Source Categories

The information most heavily relied on in developing this ranking of source categories was: (1) Available 5-minute air quality data documenting the number of high, short-term concentrations observed in the vicinity of various sources by monitoring networks (Table 3–1, EPA, 1994b); (2) estimates of exposures from various source types, which integrated a source's likelihood to emit short-term SO<sub>2</sub> peaks with the size and activity of the surrounding population, as

summarized in Table 3-5, Table B-1, and Table B-2 (EPA, 1994b), as well as accompanying documentation (Rosenbaum et al., 1992; Stoeckenius et al., 1990; Burton et al., 1987); and (3) the Geographic Targeting Data Base for nonutility sources that is derived from combining a census of manufacturing, the EPA Facilities Index System, and the EPA Aerometric Information Retrieval System (AIRS) into a projected source impact data set. This data base, which will be available through AIRS, is a data set of nonutility sources sorted on the projected annual process emissions per source and per size category.

In order to further refine the ranking of source categories, both within and between groups, EPA solicits technical information concerning several issues which include: (1) The likelihood of source categories to produce short-term  $SO_2$  peaks; (2) the characteristics, within a source category which cause a subset of facilities to be more likely to produce short-term  $SO_2$  peaks; and (3) the factors which are likely to drive the variability in  $SO_2$  emissions of individual facilities within a source category.

The ranking described here separates source categories into three groups: A, B, and C. In pursuit of this targeting strategy, EPA intends to require States to evaluate groups A, B, and C sources and produce a refined monitoring plan. States are free to substitute, e.g., group B sources for group A sources in their priority schemes, but should provide a reasoned justification for finding that the risks posed by these sources justifies such substitution. Ultimately, EPA anticipates that sources in all three groups will be assessed for their exposure potential and appropriate actions taken to address them. The EPA believes that there is a higher probability of finding individual sources that produce high, short-term ambient concentrations of SO<sub>2</sub> within each source category in group A than in the other groups. As such, they are judged in general to pose the highest risk of exposing population in their vicinity to high, short-term concentrations of SO<sub>2</sub>, as well as potentially exposing some individuals to several peaks per year.

The source categories within group A were generally found to meet two of the three following characteristics. Either the source category contained SO<sub>2</sub> sources which: (1) Have a high emission rate, (2) are near monitors which measured 5-minute peaks, or (3) are estimated, based on exposure analysis, to expose a high number of asthmatics living in their vicinity at elevated ventilation rates to SO<sub>2</sub> concentrations greater than 0.6 ppm. In addition, these source categories are known to have