Attachment K

DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Centers for Disease Control and Prevention

Initial Evaluation Summary

Health Consultation – Evaluation of Air Dispersion Modeling of the Mirant Potomac River Generating Station Emissions in Alexandria, Virginia.

Background

The Alexandria Health Department asked the Agency for Toxic Substances and Disease Registry (ATSDR) to

- evaluate air dispersion modeling data of Mirant Potomac River Generating Station (PRGS) emissions, and
- provide recommendations for additional studies.

This is a summary of the initial evaluation phase of the health consultation.

What did ATSDR do?

ATSDR evaluated air dispersion modeling data of Mirant PRGS emissions provided by

- The Environmental Protection Agency
- The City of Alexandria
- Mirant PRGS

In addition, ATSDR has modeled average 1-hour emissions.

What do the modeling results suggest?

Past emissions from Mirant PRGS could have been a health hazard. Confirmation that exposures occurred as estimated by the model may not be possible.

Current emissions from Mirant PRGS might cause sensitive populations to experience a reaction to sulfur dioxide during short-term (5-15 minutes) exposures. We do not know if this is true around Mirant PRGS because we do not know if

- The estimated concentrations are accurate,
- If the location of the estimated concentration is accurate, or
- How frequently the exposure of concern occurs or for how long.

What does the initial evaluation address?

This initial evaluation addresses only *short-term exposure levels to sulfur dioxide estimated from air dispersion modeling.* Modeling by itself is not used to conclude that a hazard exists. ATSDR has a responsibility to inform the requestor when exposures of concern are indicated, but additional efforts are needed to confirm modeling estimates.

ATSDR is aware that emissions from power plants contain other contaminants and can address these exposures as more data is obtained. Sulfur dioxide was identified as a significant contaminant of concern. The scientific information is sufficient to indicate a concern for sensitive populations. Exposure may occur to these populations in residential areas around Mirant PRGS.

How concerned should residents be?

If the modeling is representative of actual exposures, people who have asthma should be aware of the potential for adverse effects and protect themselves, particularly when exercising. Asthmatic children may also be more vulnerable than adults.

ATSDR does not yet know how often, when, and the locations where people may be exposed at levels of concern. For example, do levels of concern occur several times a day or only once per week? Does it occur during the middle of the day or late at night? Does it occur over the Potomac River or at Marina Towers?

What does ATSDR recommend?

ATSDR recommends

- Considering health education as a prudent public health activity to enable sensitive populations to make informed decisions to protect themselves from potentially adverse short-term exposures to sulfur dioxide.

- Obtaining data to fill the data gaps. ATSDR is attempting to identify additional information that will enable ATSDR to more accurately assess the health impact of Mirant PRGS emissions.

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