Naturally Occurring Asbestos Air Monitoring Data

The following questions and answers will assist you when reading the results from our air monitoring stations. The findings are uploaded on a weekly basis online at our website under "Calaveras Dam Air Monitoring Results" at www.sfwater.org/sunolvalley

Q: Why are there two graphs for each station and what is the difference between Amphibole and Total Asbestos?
A: There are two basic types of asbestos – amphibole and chrysotile. Amphibole fibers are generally considered to be more of a health concern if inhaled than the chrysotile variety. Therefore, we have developed more conservative goals explicitly for amphibole fibers. For additional protection, we measure the airborne concentration of each asbestos type individually, and evaluate them against two standards: one for amphibole asbestos only and another for total asbestos (amphibole plus chrysotile). This allows us to ensure that we are protecting the public from both types of asbestos.

Q: Why are some data points missing on given days on the graph?
A: Sampling often is not conducted on days when no work is being performed that might result in disturbance and release of asbestos-containing soil or rock dust. Also, the remote location of some of the sampling stations (many are reached via steep dirt roads) makes them inaccessible during periods of heavy rains that result in hazardous road conditions. We monitor the number of missed tests weekly, and ensure that we are below a number that could compromise a statistically valid data set. So far, we are well under this value and do not anticipate any issues with too many missed data points.

Q: What is a Target Monitoring Level?
A: We strive to maintain asbestos concentrations coming from the project to levels that are only a small fraction of target levels at ambient stations. However, because other sources of asbestos not associated with the project may also contribute to measurements at ambient stations, target levels were set for these monitoring stations to reflect potential contributions from both types of sources.

Q: What is a Trigger Level?
A: Trigger Levels represent concentrations of airborne asbestos fibers at Perimeter Monitoring Stations. They are set such that, if not exceeded on average over the course of the project, emissions from the site will not have contributed unacceptably to the health risks of people who live, work, or recreate in the vicinity of the project site.

We periodically review and revise the Trigger Levels as we obtain new data and project conditions change. In this way we are making sure that Trigger Levels both incorporate our best understanding of the site and remain as closely aligned with project conditions as possible. We strive to keep concentrations below their corresponding trigger level (one for amphibole and one for total asbestos) every day.

Q: How did you come up with these Target Monitoring Levels?
A: The Target Monitoring Levels represent average asbestos exposure that are likely within local background or represent no more than a maximum acceptable health risk to an individual breathing air containing that concentration of asbestos continually for the original duration of the project. Separate Target Monitoring Levels are established for amphibole and total asbestos.

Q: How did you come up with these Trigger Levels?
A: Trigger levels are calculated for each Perimeter Air Monitoring Station based on data from existing health studies and regulatory standards and modified by considering meteorology, location, topography, and proximity to construction areas and populated areas of the valley. Trigger levels are set to assure that receptors do not experience exposures from the project that would lead to a risk exceeding one in 100,000 over the course of the project.

Q: Why are there new trigger levels which are higher than the older levels?
A: Because we did not originally have project specific data, trigger levels were set using an approach to address our lack of information about project dusts. Now that we have actually measured the characteristics of asbestos in project dusts, we were able to use the actual site data with a more sophisticated statistical procedure to derive trigger levels that better reflect what we know about site conditions. It is important to note that the new trigger levels are designed to protect public health to the same level (one in one-hundred thousand chance of increased cancer risk) as the old levels.

Q: What does it mean if a monitoring result reaches or exceeds the corresponding Trigger Level?
A: Isolated exceedances do not indicate that exposures pose an unacceptable risk to the public. It is only if the Trigger Level is exceeded by the average concentration over the full course of the project that exposures could result in unacceptable risk. The project team, in response to exceedances, reviews work activities and could alter its work practices and enhance its dust control measures to bring those levels back down. Ultimately this could result in stopping work altogether if need be, to protect the public and our workers.

Q: What does it mean if the result reaches or exceeds the Target Monitoring Level?
A: Multiple exceedances of the target monitoring levels at ambient sampling stations are not in itself cause for alarm as long as the average remains below the target monitoring level. The general view for this project is that the ambient monitoring stations help us ensure that the Calaveras Dam Replacement Project does not contribute unacceptably to existing background levels of Naturally Occurring Asbestos already present in some locations in the valley.

The majority of ambient station exceedances are not directly attributable to construction activities at CDRP. This is evident by ambient exceedances on Sundays and other days with no Calaveras construction activity. The long-term running average at each Ambient Station remains well below the Target Monitoring Level. Therefore, the SFPUC is still achieving the health-protective risk thresholds established for the CDRP.

Q: Why are some results currently missing from stations P9 and P10?
A: Currently, the contractor is not performing any construction activity in the area of these station locations in the southern end of the reservoir. Once activity begins, these stations will become active.

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