



## Calaveras Dam Replacement Project

# Questions & Answers

## Naturally Occurring Asbestos



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[www.sfwater.org/sunolvalley](http://www.sfwater.org/sunolvalley)

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### 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](http://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 monitor ambient levels near offsite receptors at the ambient stations. Target monitoring levels (TMLs) calculated at the location of ambient stations are concentrations of asbestos in air with a built-in margin of safety for the protection of off-site receptors. The TML is used to assess the impacts from all sources of asbestos including local emissions, offsite emissions from more distant sources and activities and the Calaveras Dam Project.

#### **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.

#### **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 do Trigger Levels and Target Monitoring Levels change periodically?**

A: Over the course of a project as long as this one, there are a number of factors that may change the trigger level needed to be protective of offsite receptors. For example, the duration of the project or the size of the fibers that are released could change and therefore affect the calculation of the trigger levels. Therefore, we periodically review the actual site conditions, fiber size data, and other data, and recalculate the Target Monitoring Levels and Trigger Levels accordingly to maintain the same level of protectiveness.

**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.

**For More Information:**

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