



PIMA COUNTY

ENVIRONMENTAL QUALITY

MEMORANDUM

DATE: October 8, 2015

TO: Chuck Huckelberry
County Administrator

FROM: Ursula Nelson
Director

RE: Beryllium Monitoring Study Results

I am writing to let you know that Pima County's Department of Environmental Quality (PDEQ) concluded the air quality monitoring associated with the Beryllium Monitoring Study on September 30, 2015. PDEQ began this special monitoring study on July 11, 2007, in response to public concerns. The purpose of the study was to determine levels of beryllium in the air surrounding the Materion Ceramics, Inc. (Materion) (previously Brush Ceramics, Inc.) facility.

In over eight years of daily monitoring, there have been more than 3,200 samples collected at six monitoring locations; and all analyzed filters, except one, have had non-detectable amounts of beryllium. The only sample for which beryllium was detected was on July 22, 2009. On that day, the Tucson region experienced an exceptional dust event that originated in Casa Grande. A PDEQ monitor in another area of Tucson upwind of the SUSD monitor also had high levels of particulates, and beryllium was detected on that filter as well. PDEQ consulted with Dr. Betterton at the UA regarding the detection. UA experts determined the beryllium detected on that date was naturally occurring due to an exceptional dust event and was not related to Materion operations. In nature, it is not uncommon for beryllium to be found in rocks and soil.

Materion has been permitted by PDEQ since 1980 for beryllium emissions from their manufacturing process. This facility has an existing air filtration system that captures and removes any beryllium from the air prior to being emitted through their stack. The permit allows PDEQ to make unannounced inspections of the facility at any time and Materion is required to perform stack tests any time at the request of PDEQ. They are also required to assess new technology to determine if there are better methods to monitor emissions from the facility. Several years ago, after assessing new technology, Materion purchased and installed in-stack particle detectors to test their potential use at the facility.

After a 45-day public comment period, meetings with the community, and discussions with SUSD staff and other interested parties, the Materion air quality permit was revised to include a requirement to operate particulate detectors in addition to the existing air pollution control

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filtration system. The new air quality permit was issued by PDEQ in April 2015. The key additional monitoring requirements in the permit include:

- operate the particle detectors at any time their air filtration system is operating;
- set off alarm systems within the facility if readings exceed a set level;
- notify PDEQ if the alarm system has been triggered; and,
- perform maintenance of this system and keep records of such maintenance.

The in-stack particle detector system provides instantaneous information on particulate levels within the pollution control system. This provides Materion the ability to run operational checks of the system and conduct maintenance immediately if necessary in contrast to the 90-day turnaround previously required for the PDEQ Beryllium Monitoring Study filters to provide information.

In response to comments received during the Materion permit revision public comment period, PDEQ continued operation of the beryllium air monitoring network for an additional six months to ensure the particle detectors were working properly. The six months are over and the air monitors continued to show no presence of beryllium, so the Beryllium Monitoring Study was officially concluded.

Information regarding the Beryllium Monitoring Study and the Materion Air Quality Permit will remain available on the PDEQ website for public review.

If you have any questions or would like additional information, please contact me at 724-7454.

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cc: John M. Bernal, Deputy County Administrator for PW
Richard Grimaldi, Deputy Director for EQ Division