

# HOW ONE INDUSTRIAL HYGIENIST INTRODUCED REAL-TIME MONITORING INTO HIS COMPANY

## Exposure Monitoring Case Study



I just came on board as an Industrial Hygienist, the first for this company. Right away I found several activities and processes that concerned me from an employee exposure perspective. I needed to move quickly to quantify problems and recommend changes.

I knew my TSI SidePak™ AM520 Personal Aerosol Monitor was what I needed to measure aerosol and dust exposure levels. The great thing about instruments like the SidePak AM520 Monitor, is the benefit of real-time information. I don't have to sample four hours to collect enough aerosol for analytical limits of detection, plus wait five days to get my results back from the lab. With the AM520, I can take one hour personal breathing zone samples on a couple of workers at each process step and have a pretty good picture of exposure variation by the end of the shift.

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I started with processes that looked the most out of control. I was able to get a decent sample from all processes in two full days using two SidePak AM520 Monitors. I know my AM520 doesn't give me a number that directly compares to the OSHA Permissible Exposure Limit, but from my past experience at my previous company, I know photometer data can give me good enough information to start making some changes. Better yet, I know the photometer will show me the reduced aerosol mass concentration right away, while making the corrections. There is nothing better than instant answers!



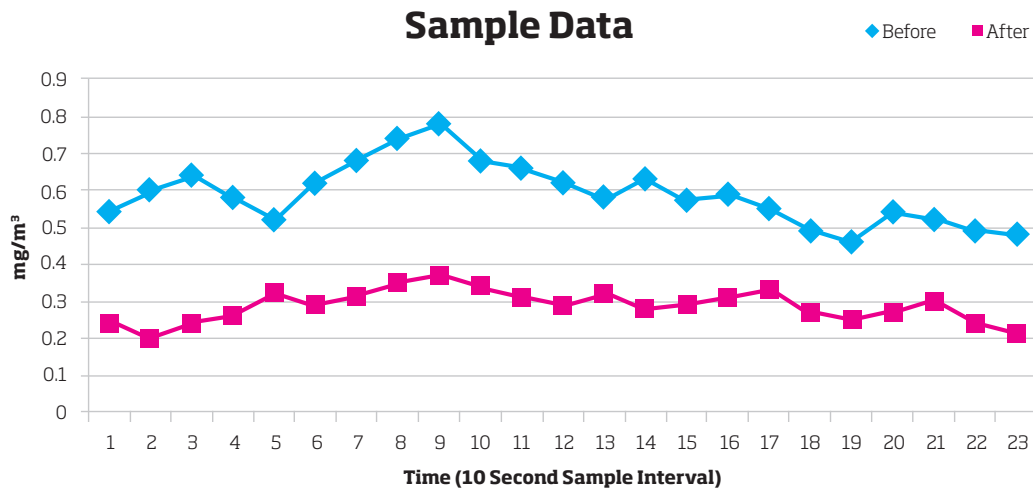
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We were able to identify several processes of concern. Using the collected AM520 Monitor data, I was able to prioritize a list of recommended changes for management. We worked together to adjust or add engineering controls as necessary. The AM520 enabled me to take measurements (right on the shop floor) as we made the changes to verify the implemented control measure worked. This would have taken weeks, maybe months, if I was sending air sample cassettes out to a lab for analysis.



The graph provided is an example of the mass concentration reduction that we were looking for. Blue is before the change, pink is after making the change.



Next quarter I'm renting some sample pumps to collect gravimetric samples to verify that the controls we have implemented have indeed lowered our employee exposure below the Permissible Exposure Limit. After all the work we've recently done with the SidePak AM520 Personal Aerosol Monitor, I don't expect any surprises. I should also mention, that our Corporate Risk Manager was very complementary to our recent investigation employing a direct reading instrument as it not only saved both time and money but did it without generating a file full of high exposure sampling reports to weed through.



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