

REACH

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222-S Lab replaces a heap o' HEPA filters

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The 222-S Analytical Laboratory recently completed the removal and replacement of 96 high-efficiency particulate air filters, commonly called HEPA filters. They're the final filtration system for air that has passed from radiologically contaminated areas through filtered fume hoods before the air is released to the environment.

Why was this a big deal?

This work was originally scheduled to be performed over a 20-weekend period that would have encompassed 50 workdays. Through the use of enhanced work planning — including the use of numerous mockups and walkdowns — this job was completed in only eight actual workdays around the July 4 holiday, the following weekend and one additional weekend.

The biggest time-saver was performing the majority of the work without respiratory protection. The 222-S Laboratory is a Category 3 nuclear facility, and there were lots of concerns regarding the particulates in the filters.

So how did we do the job "off mask"? The initial entry was made with respiratory protection in order to obtain radiological and chemical survey data while performing some other cleanup activities.

Analysis of the data showed that the use of respiratory gear would not provide any additional protection and would increase the amount of time the workers would need to be in the area. This analysis, coupled with the fact that ventilation in the building would provide adequate protection for the workers, led to the decision not to use masks.



Workers replace HEPA filters in tight quarters at the 222-S Analytical Laboratory. In planning and completing the filter replacement, workers followed Integrated Environment, Safety and Health Management System principles by gathering information, identifying the hazards and applying sufficient controls.

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222-S Lab replaces a heap o' HEPA filters, cont.

"The needs of worker comfort in the high-heat environment, as well as keeping facility downtime to a minimum, drove us to look for better and faster ways to get the job done," said Brad Brannan, 222-S Radiological Control manager for Duratek Federal Services of Hanford. "As a result, the facility was down for exactly one day — July 5 — a day wedged between a holiday and a Friday off."

"This was a prime example of following Integrated Environment, Safety and Health Management System principles," said lead radiological control technician Jim Crockett of Fluor Hanford. "We gathered data, identified the hazards and applied sufficient controls."

Many workers said the teaming effort on this job played a major role in its success. As head of Fluor Hanford Analytical Services' ALARA (as low as reasonably achievable) program for radiological work safety, my own impression was one of workers supporting workers.

In an effort to ensure efficiency, there were several walkdowns performed with the workers assigned to the job. Keith Shoemaker, Fluor Hanford field work supervisor, said, "Between all the walkdowns and the five or six mockups we performed, we were very confident going into this job."

Workers were instrumental in ensuring that the appropriate administrative and engineered controls were in place. Other items that helped to make this project successful were:

- increasing the size of the work area to allow for ease of movement
- building and cooling a portable enclosure to provide workers with a better area to prepare for work
- using a chip collector to collect the waste before it went to the HEPA vacuum.

Facility Manager Don Hart of Duratek Federal Services applauded everyone involved. "The workers performed above and beyond expectation," he said. "All should be congratulated for their roles in completing this enormous project without a hitch." ♦

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