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Correction to KING 5's June 8, 2016 story on Vapors

The U.S. Department of Energy Office of River Protection is committed to the safety of its workers at the Hanford site and the public, as well as the protection of the environment. We'd like to take this opportunity to address and correct factual inaccuracies contained in KING 5's June 8 report, "Hanford continues to mislead workers about toxic vapors."

King 5 reported that since April 28, 51 workers, a record number, have suspected they've been exposed to vapors. Some are still too sick to return to work, mostly due to breathing problems.

- Concerning the tank farms workers who have visited HPMC (Hanford's on-site medical support) since April 28, not all of them smelled odors but some went to make sure they did not exhibit any symptoms because they were working at the same time others (who did smell odors) went to medical. Also of note is that smelling an odor does not necessarily mean tank vapors are present; other sources could be the cause of a detected odor. Workers are encouraged to go to site medical when they have a concern.
- All tank farms workers who received a medical evaluation in connection with an Abnormal Operating Procedure (AOP-15 event) Response to Reported Odors or Unexpected Changes to Vapor Conditions were released to return to work by HPMC, the site medical provider. This initial release is based upon inability of HPMC to detect any symptoms and allows workers to return to work outside of tank farms pending a blood test. All workers evaluated since April 28 have additionally been cleared by those blood tests to return to work in areas for which vapors may be present, as well.
- Workers have the option of seeking additional evaluation from their personal medical provider and/or may be away from work on personal sick leave for unspecified medical conditions that are protected by healthcare privacy laws.

KING 5 reported that workers are not adequately educated about the chemicals present at the Hanford tank farms or about personal monitoring data.

- Personal monitoring data is representative of air in the workers' breathing zone, which can be visualized as a hemisphere about 6-9 inches around the worker's face. Standard equipment to monitor the worker's breathing zone is an air pump the worker wears that takes air samples from the zone. It provides the most representative data for assessing exposure and efficacy of controls. As such, this data has been available on WRPS' internal website, and is now also available on the company's publicly accessible webpage.
- Surveys of affected areas are performed whenever there is an AOP Response to Reported Odors or Unexpected Changes to Vapor Conditions event. Notification letters are sent to employees, medical and the Site Wide Industrial Hygiene Database Administrator by the industrial hygienist when a survey report is finalized. Industrial Hygiene data is posted on the



- internal WRPS website. Personally Identifiable Information is removed from personal data in posted files.
- [The Chemical Hazard Awareness Training](#) (CHAT) that all workers are required to take is part of the Tank Farm specific training on hazardous substances at treatment, storage and disposal facility (TSDF) operations. CHAT provides tank farm workers with relevant chemical and vapor information about the hazardous waste stored at the TSDF. CHAT also provides information on industrial hygiene exposure assessment strategies and results, new technology for gas and vapor monitoring, methods to minimize exposures (e.g., existing engineering controls, work practices, tools), and lessons learned. CHAT refresher training is required every two years.
 - Information on AOP-015 events has been provided to the workforce primarily through email and text messages as soon as an AOP-015 event has been identified (Shift Office Event Notifications). Event Investigation Reports for the AOP-015 events are available on a WRPS internal webpage.

KING 5 cites sampling records that show readings far above OELs.

- The data cited by KING 5 is classified as “source” data, meaning it is from the ductwork comprising the exhaust systems prior to release and dispersion. It is not representative of either area data where individual workers are present or personal exposure data.
- DOE collects air samples in multiple locations at the Hanford Site. Air samples from inside tanks and from inside exhaust stacks may be above occupational limits, but these are not areas where workers are breathing. All air samples analyzed from the breathing zone of workers since 2005 have been below occupational limits. While discharge from stacks may enter the breathing zone, modifications have been made in recent years to extend the height of the ventilation stacks, moving vapors farther away from workers’ breathing space. The stacks range in height from 19 to 55 feet.

KING 5 reported that “it is up to the employees to choose what type of personal protective equipment” is required.

- Required personal protective equipment (PPE) is determined based on an extensive job hazards analysis conducted for each task. Additionally, more PPE (full protective gear w/self-contained breathing apparatus) is required during waste-disturbing activities and always in certain tank farms. Additionally, the tank farm contractor has established vapor control zones in certain areas of the tank farms. Different levels of PPE are required for these vapor control zones.
- Tank farms workers always have the option to upgrade the level of PPE they are wearing during work, unless the wearing of PPE would reduce overall worker safety for the work (e.g. if a worker needed to conduct work that required climbing a ladder, it would be less safe to do so wearing full PPE. in such cases additional protective measures are put in place.)

KING 5 reported that “Dimethyl mercury is so toxic there are no safe amounts tolerated in the state of Washington.”



- While it's true that DMM is a toxic substance, Washington State does establish limits as noted [here](#). You can find information from 2011 about the Washington State Department of Ecology's review of DOE's ventilation upgrades for double-shell tanks (and specifically addressing the issue DMM) [here](#).
- Washington State regulates mercury and dimethyl mercury emissions and these emission standards are being applied to the discharge of gases from stacks on facilities that promote dilution effects for both chemical and radiological hazards. Many of the chemicals of concern are toxic substances, but are well below [Operational Exposure Limits](#) (the exposure limits set by OSHA and ACGIH – note that the Federal action level is 50% of OEL and WRPS' administrative control level is 10% of the OEL) within the tanks. The highest concentrations of these substances in the tanks are less than OELs.

KING 5 reported that after WRPS took over as the Hanford tank farms contractor, dimethyl mercury was taken off the list of chemicals to be concerned about.

- DMM is not found in concentrations high enough to be on the COPC list per the protocol established by the IH program. In 2005, when limited data on DMM in the tanks was available, DMM was included on the initial list of COPCs. Since then, extensive testing has shown that the trace amounts of DMM in tank headspaces (several orders of magnitude lower than the OEL) do not meet the COPC criteria.
- The 2005 version of the Industrial hygiene technical basis added DMM to the COPC sampling list because "it was recently detected for the first time in tanks and its maximum concentration was deemed too uncertain to be omitted from the COPC List." The results from the collection of 131 DMM samples from 2005 – 2008.
- DMM is still tracked and monitored as part of regular Toxic Air Pollutant sampling performed by WRPS' Environmental Protection organization. Also, the COPC list is in the process of being updated this year in accordance with Tank Vapor Assessment Team recommendations.
- Extensive sampling of tank headspace and exhaust emissions for numerous chemicals, including DMM has been underway for many months and the results are due for collective data analysis this calendar year (as part of the Tank Vapor Assessment Team Implementation Plan phase 1).

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