



## Press Statement

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### **Unreported Toxic Vapor Exposures at Hanford 10 Workers Sent for Medical Evaluation in June Incident, 3 Hospitalized**

#### **Group Calls for Independent Investigation**

On the morning of June 18, 2021, ten workers reported smelling odors in the location of the TX tank farm area, at the center of the Hanford Nuclear Site. The workers were sent for medical evaluation due to the vapor exposures on June 18. Three were hospitalized overnight. Workers reported typical vapor exposure symptoms including shortness of breath, coughing, chest pains, headaches, nausea, and strong odors. Some reported that these symptoms lasted for weeks after the event.

This mass vapor exposure incident followed the Hanford contractor's decision to downgrade the respiratory protections for tank farm workers. Hanford management had been planning to remove all respiratory protection in certain tank farms as a pilot experimental program. This plan was set to take effect in July, but was delayed due to the TX Farm exposures.

The tank farm contractor has not declared these exposures an official AOP-15 event, which is required for toxic chemical vapor exposure events. The Department of Energy (DOE) has so far been silent on the matter.

Hanford Challenge was informed by an internal source that the vents to the tanks in the TX Farm had been left open, instead of being closed as required. "Whether these exposures came from the ground during soil removal, vapors vented from a tank, or something else, the fact remains that workers were not protected," said Tom Carpenter, Executive Director of Hanford Challenge.

Hanford Challenge was informed by several sources that some of the exposed workers experienced "symptoms of cyanide poisoning." The tank farm contractor characterized that contention as a rumor. However, acetonitrile, a cyanide compound, is a toxic chemical that has been detected in tank vapors. A 2021 Hanford report also reveals that levels of cyanide in the TX

Farm tanks and in the groundwater near the TX Farm are very high. Groundwater samples taken next to the TX Farm had levels of cyanide at 10 times the maximum concentration limit.

“Cyanide poisoning is serious business, and an independent investigation should be conducted to determine whether workers were subjected to this chemical,” said Carpenter., “much less, why the existing protections failed these workers.”

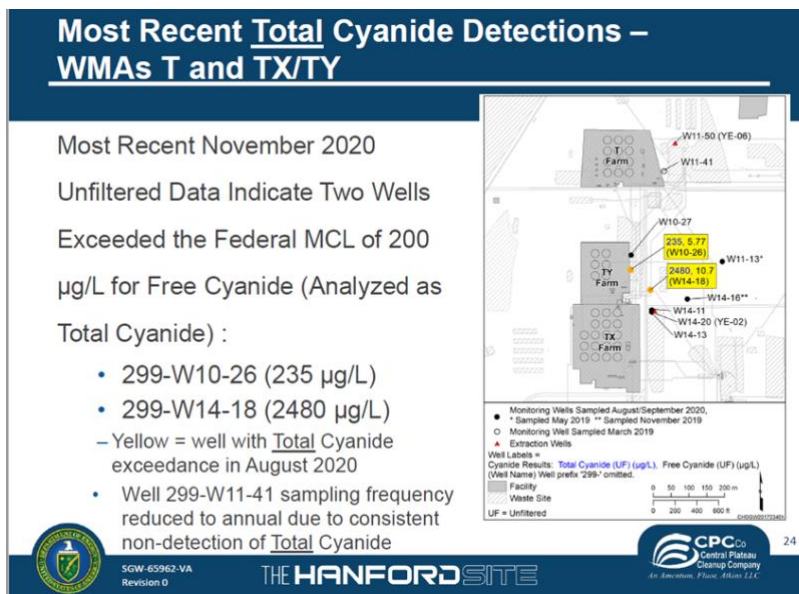


Image available at <https://pdw.hanford.gov/document/AR-13593>

“This latest exposure incident affirms that unless and until vapors can be captured and treated - removing the hazard from workers' breathing space - the only reliable way to protect tank farm workers is to provide them with supplied air respiratory protection at all times,” said Tom Carpenter.

“It is one thing to remove workers from vapor protections, have new workers suffer exposures and return to supplied air, but in this case, we are seeing a new and worrisome dynamic, denying that these were vapor exposures at all. This is unacceptable,” said Carpenter.

Workers were digging to move dirt in preparation for installing an asphalt cover in the 241-TX-Farm when the odors were smelled. Work was stopped and the workers exited the farm at some point after the workers reported smelling odors. Even though the workers were working in an area that required use of respiratory protection, they were only given Full Face Air Purifying Respirator (FFAPR) with chemical cartridges and Personal Ammonia Monitors.

The workers reported experiencing classic symptoms of vapor exposures, including coughing, headaches, nausea, metallic taste (sour, copper-like), light-headedness, chest pain, dizziness, fatigue, and shortness of breath.

Workers were taken to the Hanford clinic for evaluation, and three workers were transported to the local hospital and kept overnight. Several workers were given oxygen. Although all the

employees were eventually cleared to return to work, several continued to report symptoms weeks later, including headaches.

Monitoring by Hanford Industrial Hygiene Technicians occurred after the event and found no elevated chemical constituents nor any potential sources for the odors. The testing included soil testing, and tests of the mask filters.

Hanford site management has released no information about this incident to the public nor made reports to the State of Washington. The contractor has not filed a required incident report on its website.

“This lack of information sharing and reporting smells like a coverup. We do not want to see a return to downgraded worker protections that result in routine vapor exposures. The cycle of exposures must end at Hanford, and meaningful and long-lasting regulations should be enacted to assure that Hanford tank farm workers can conduct a cleanup without risking their own health and safety. Supplied air protects workers. This is what the site should be using until engineered solutions are in place that really work,” said Tom Carpenter, Executive Director of Hanford Challenge.

This fits an historical decades-old pattern of disclosures about toxic vapor incidents, followed by media, union, public interest, and regulatory pressure on Hanford that results in requirements for tank farm workers to utilize fresh air provided by SCBA tanks. But because this method is expensive to deploy, slows down the work, and disliked by many in the workforce, Hanford management returns, again and again, to reducing the protections while beefing up monitoring.

This latest incident is the best indictment of the “monitor not protect” approach.

The latest exposures come on the heels of a [just-released report](#) from the Washington State Department of Commerce that conducted a survey of some 1,600 Hanford workers who reported that 57% of those surveyed had been exposed to toxic vapors.

- Nearly a third, 32%, reported they had long-term exposure to hazardous materials at the nuclear reservation, rather than exposure during a single incident. The survey was conducted by the [Hanford Healthy Energy Workers Board](#). The board was created by the Legislature and directed to survey workers and then provide recommendations to better meet the health care needs of Hanford workers.
- Over 21% of those surveyed said they had illnesses due to a short-term exposure to hazardous materials at Hanford. In addition, 28% said they had illnesses from long-term exposure to hazardous materials at Hanford.

Though no formal communications to the public, or to the State of Washington, was made, Hanford Challenge requested, and was granted, a meeting with the tank farm contractor on this subject.

*end*

## **Background**

The respirators given to the workers in this incident are ineffective against many toxic vapors known to be in the Hanford tanks, and that periodically vent from the tanks. The fact that workers smelled strong odors through their masks is itself indicative of the failure of the mask to prevent the exposure.

The local paper, the *Tri-City Herald*, ran [an article](#) on the TX Farm vapor exposures, on August 3, 2021. (Article behind paywall).

Vapor events, called AOP-15 events, are required to be reported on a [company website](#) due to a lawsuit settlement from September 2018. This has not occurred. A senior contractor manager told Hanford Challenge that since the contractor was unable to show that the vapors originated from a tank, they had not declared this to be an AOP-15 event.

This raises the question of whether the contractor is evading reporting requirements for past vapor events by simply not calling such events AOP-15 events. Here is a [link to the Hanford contractor's website](#) describing the AOP-15 procedure.

The symptoms reported by workers as well as the nature of the odors are consistent with past toxic chemical vapor exposure events, such as metallic taste, headaches, shortness of breath, nausea, dizziness, chest pains and the like. Some workers required oxygen to be administered, and three workers were hospitalized overnight. Some workers reported symptoms such as headaches weeks after the exposures. It is unconscionable that the contractor has failed to characterize this as a vapor event.

There is a long history of workers and advocates like Hanford Challenge and UA Local 598 challenging Hanford management to provide effective protection and medical response to Hanford tank farm workers who are exposed to toxic chemical vapors. The TX Farm is the location of prior vapor incidents, as well as the tragic contamination of a worker named Dan Golden in 2002, who was inadvertently splashed with tank waste. He died of cancer five years later.

After numerous reports, such as the seminal 2003 “Knowing Endangerment” report by Tom Carpenter and Clare Gilbert with the Government Accountability Project, Hanford was finally sued in federal court by Hanford Challenge, UA Local 598 Pipefitters union at Hanford, and Washington State Attorney General Bob Ferguson, in 2015. ([Click here](#) for a timeline of reports, news, and litigation).

After years of litigation, the case finally settled in September 2018. In that settlement agreement, Hanford managers committed to maintaining effective health and safety protections and to test and consider installing an engineered control system that combines thermal oxidation, carbon adsorption, and catalytic conversion of the combustion products intended to capture or destroy tank vapor constituents. Three years later, that system is still being studied, and has not been implemented as of yet.

Hanford also agreed to assess respiratory protection requirements for tank farm workers. To our knowledge, no experts have found that it would be reasonable for workers to have zero respiratory protection in Hanford's tank farms. Hanford's own expert panel determined that downgrades from full-on use of supplied air were only allowed in specific areas under specific circumstances.

Some important findings by the federal judge in the lawsuit included that the tank vapors were potentially hazardous to health, that workers who had been exposed had suffered injuries and illnesses as a result of their exposures, and that the State of Washington could enforce provisions under the federal environmental law known as RCRA – the Resource Conservation and Recovery Act – that related to toxic tank vapor emissions from the tanks.

Until an effective engineered solution for trapping and destroying the chemicals in the tank vapors is in place, tank farm workers at Hanford should be required to always wear supplied air respiratory protection when working in a tank farm. Monitoring tank emissions and after-the-fact sampling of the air simply does not work, as is well-established.

Links:

- [Hanford Challenge Vapors Timeline](https://www.hanfordchallenge.org/chemical-vapor-exposures) - Reports, background, lawsuit-related materials
- [Tri-City Herald Article](#) - (behind Paywall)
- [Hanford Tank Vapors Website: https://hanfordvapors.com/whats-in-the-tanks/vapors-events/aop-015-event-investigation-reports](https://hanfordvapors.com/whats-in-the-tanks/vapors-events/aop-015-event-investigation-reports)
- [2021 Survey of Workers by Hanford Healthy Workers Board: Hanford Healthy Energy Workers - Health Care Needs Assessment and Recommendations https://www.commerce.wa.gov/wp-content/uploads/2021/06/Hanford-Healthy-Energy-Workers-Healthcare-Needs-Assessment-and-Recommendations.pdf](https://www.commerce.wa.gov/wp-content/uploads/2021/06/Hanford-Healthy-Energy-Workers-Healthcare-Needs-Assessment-and-Recommendations.pdf)