Physiological Monitoring Keeps Hanford Workers Safe in the Heat

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Hanford tank farms workers are monitored for heart rate and body temperature during high-heat conditions.

RICHLAND, Wash. – EM's Hanford Office of River Protection tank operations contractor Washington River Protection Solutions (WRPS) has a multilayered, nationally recognized approach to keeping workers safe during the hot summer months.

Physiological monitoring is a key component of ensuring the safety of those working outdoors who often wear multiple layers of personal protective equipment.

"Traditional heat stress controls are implemented through monitoring of meteorological data," said Larry Yearsley, an industrial hygienist with Hanford's Industrial Hygiene Safety & Health Division. "The addition of physiological monitoring allows for a more individualized approach to employee safety and health and is another example of the site's commitment to DOE's Voluntary Protection Program."

Working through cooperative efforts among labor, management, and government at DOE contractor sites, the **Voluntary Protection Program** promotes improved safety and health performance through public recognition of outstanding programs.

In physiological monitoring, a wireless heart rate monitor provides remote, real-time assessment of heat strain and core body temperature of employees. This gives workers an early indication they may be at risk of a heat-related issue.

WRPS won a prestigious **Campbell Innovation Challenge** award in 2017 for its **groundbreaking physiological monitoring program**.

"This program implemented an innovative solution to an environmental challenge that identified the worker physiological experience. Before the physiological monitoring program, we used meteorological and instrument monitoring, measuring ambient temperature, humidity, and wind speed to identify heat stress situations," said Jeremy Hartley, WRPS environment, safety, health, and quality manager. "The importance of being able to reduce heat stress disorders for the safety of our workers is a great benefit."

Other heat mitigation controls include cooling tents that provide shade, water misters, and a place to rest and remove protective equipment to hydrate. In addition to an extensive heat stress prevention communications campaign, using early morning shifts reduces worker exposure to hot, daytime weather.