

WTP Waste Treatment and Immobilization Plant



Making History, Protecting Future Generations

RADIOLOGICAL CONTROL FAQS

for Subcontractors

SPRING 2025

TRAINING QUESTIONS:

Contact WTCC Training at wtcctrn@bechtel.us

DOSIMETRY REQUIREMENT OR ISSUANCE QUESTIONS:

Contact WTCC Dosimetry at wtccdosimetry@bechtel.us Onsite, located at T01.01.165-020

near the T-01 southeast entrance.

FAQs ABOUT WTP

At the *Waste Treatment and Immobilization Plant* (WTP), maintaining a strong safety culture and the safety of our team members and visitors is extremely important. We are completing key steps to reach hot commissioning, which is when we will introduce radiological and chemical tank waste to the plant. That is expected to occur in August.

Between now and then, here's what our subcontractor colleagues can expect at WTP:

We are in an important phase called <u>cold commissioning</u>. In this phase, we conduct a series of final tests to verify that the plant's systems function and operate properly and safely *without using radioactive materials*. The duration of WTP's cold commissioning testing varies depending on system complexity, testing scope, and technical challenges. It can take several months to complete; we began cold commissioning in December 2024.

WTP facilities such as the Low-Activity Waste (LAW) Facility and the Effluent Management Facility (EMF) have been "**radiologically posted for proficiency**." This proficiency period is critical to the project because it allows our team to build and reinforce skills they learn before radiological hazards are introduced.



Below are some frequently asked questions (FAQs) about the current radiological proficiency period at WTP and what our supplier and subcontractor colleagues should understand:

What is a proficiency period?

- It is a brief period before we introduce radiological hazards in which we will work as if there is a radiological hazard in place. During this time, staff learn how the plant signage will be posted for day-to-day radiological conditions, how to respond to abnormal and emergency conditions when radiological hazards are present, and how to operate the facility when tank waste is being processed.
- It is an opportunity to refine safety and procedures and ensure the team is fully prepared and familiar with all radiological postings, controls and work practices that manage exposure to as low as reasonably achievable, *before* hazards are present.

Why are there "rad signs" if there is no radiological material?

- Adding radiological postings before the actual radiological hazards exist (planned to occur in August) allows staff to learn how to work within the radiological control requirements, procedures, and radiological work permits that are established for worker safety.
- The signs familiarize staff with the process for entering and exiting these areas.

Why is it important to follow all postings?

- Following all postings provides staff proficiencies to discover opportunities to develop good safety habits **BEFORE** hazards are officially at WTP.
- It is critical that all those visiting these facilities practice as if the hazards are real to ensure proper behavior when waste is introduced.
- "Situational Awareness" will promote and ensure team members will conduct and educate worker safety.
- Adhering to all postings helps build a culture of safety and trust early on.

Am I safe?

- Yes. We have the programs, procedures, and controls in place with expert team members needed for worker safety.
- Humans are exposed to naturally occurring radiation every day. The potential risk of working with or around radioactive materials can be compared to other accepted risks in our everyday lives.
- Examples of small amounts of radiation in everyday life, such as:
 - Medical x-rays from dental or chest exams.
 - Natural sources like rocks, soil, concrete, and brick.
 - **Flying on airplanes**, where higher altitudes mean more cosmic radiation.
 - **Food**, such as bananas, contain small amounts of naturally occurring radioactive materials
- Exposure is expressed as a dose equivalent. The unit of its measure is called "rem." Exposure at the Hanford Site is measured in millirem or "mrem," which is 1/1000 of a rem.
- In the United States, the average person receives a radiation dose of approximately 620 mrem each year from naturally occurring background radiation and manufactured sources, such as those listed above.
- The federal legal limit for allowable dose to a radiological worker is 5,000 mrem per year.
- Radiological workers at WTP are initially limited to 500 mrem per year. For most radiological workers at Hanford, the typical dose is below 100 mrem per year.





How will I know if I'm safe?

- Our trained and knowledgeable Radiological Control Technicians (RCTs) routinely monitor and conduct radiological surveys of the facility. The facility is posted with the signs appropriate for the hazard and hazard level present (e.g., Buffer Area, Radiation Area, Contamination Area, etc.). Workers are protected from the hazard when they recognize these hazards and follow the postings and requirements of the respective posting.
- RCTs are also available in work areas that have potential for worker exposure to radiation and radiological contamination. These RCTs will provide support discussions regarding radiological controls established for safe conduct of work at safety briefings. They also will monitor and sample the work area as dictated by the radiological work permit to ensure worker exposures are maintained to as low as reasonably achievable.



All radiological hazards at the Hanford Site are easily identifiable using the international sign for radiation — a black or magenta "trefoil" on a yellow background with the words "Caution" or "Danger." Entry into any of these areas requires specific training and strict compliance with access requirements.

Will I have to wear a dosimeter?

 You will be issued a dosimeter (often referred to as a TLD) if you will be entering areas where dosimeters are required, or if you have the potential to receive a dose that requires monitoring by dosimetry.

If I do, how do I know what level of exposure I've received?

 Dosimeters must be returned when you finish your visit. Visitors assigned a dosimeter will receive a report 30 to 90 days after their visit. If there are any questions about your report, you may contact WTCC Dosimetry Technical Authority at (509) 827-5584 during normal business hours (Mon-Thurs 6:30 a.m. to 5 p.m.)





Additional information about access, training, and points of contact:

- Authorized Personnel requiring access to the LAW or EMF facilities beyond the airlocks must complete Rad Worker I training
 and will be issued a "dosimeter" or Thermoluminescent dosimeter (TLD). It is imperative that all visitors and workers follow
 all facility postings.
- Additional areas throughout the LAW and EMF facilities may require additional training/certifications such as Rad Worker II, personal protective equipment (PPE), and exit surveys.