

Just the Facts...

Fact Sheet for Soldiers and Families: Radiation at the Tuwaitha Nuclear Research Center (TNRC), Iraq is at Safe Levels

Since 2003, U.S. Soldiers have served at the Tuwaitha Nuclear Research Center (TNRC) in Baghdad, a 23,000-acre site located 12.4 miles (20 km) south of Baghdad. In order to ensure U.S. Soldiers were and are safe, the U.S. Army Center for Health Promotion and Preventive Medicine (USACHPPM) conducted an extensive radiation assessment. A summary of what USACHPPM found is below.

Important facts:

- Since 2003, more than 750 Soldiers have been monitored for radiation exposure at TNRC. Roughly three-fourths of those individuals had no measurable radiation exposure, in other words, a “0” radiation dose. For those individuals who did receive measurable levels of radiation exposure, doses were all safe (well within the U.S. Nuclear Regulatory Commission (NRC) safety standards).
- In 2003, just prior to the invasion of Iraq by Coalition Forces, Saddam Hussein’s guards abandoned the TNRC and it was then extensively looted by local Iraqi civilians. Despite the widespread damage and destruction, radiation monitoring conducted at that time by U.S. Forces demonstrated that the radiation levels within the site were safe.
- Shortly after that time, all radiation sources at TNRC were consolidated into a storage bunker within the site or removed, further reducing any potential for radiation exposure.
- There is no indication that depleted uranium (DU) weapons were fired in the vicinity of TNRC and there was no DU measured in any of the many environmental samples collected at the TNRC.

What kind of health risk assessment has been done at TNRC?

In 2003, a multidisciplinary team from USACHPPM conducted a comprehensive radiation survey at TNRC because U.S. forces were then securing the facility. Thousands of radiation measurements were taken; hundreds of environmental samples were collected in and around buildings that were accessible and structurally sound; and the survey team wore monitors on their uniforms (called “personnel dosimeters”) to measure actual radiation exposure and the resulting dose. The survey team also bivouacked with 1st Armored Division Soldiers in TNRC’s main complex, exposing the survey team to the same radiation levels at the site around the clock for the duration of their 10-day mission.

The survey team identified a total of 21 buildings/ areas with radioactive sources and/or radioactive contamination. Radiation dose estimates, called “upper-bound radiation worst-case dose estimates,” were then calculated for hypothetical categories of personnel who may have entered the TNRC unaware of potential radiation sources. Examples are those who conducted security sweeps of accessible and structurally safe buildings AND walked through areas/buildings with radiation sources; those who walked through areas found to contain elevated levels of radiation, but did not enter any buildings; and those who did not enter inside the TNRC complex at all. A comprehensive health risk assessment was also conducted based on the environmental samples collected.

What were the results of the original 2003 assessment?

During the 2003 assessment, potential radiation exposures at TNRC should have been the highest for U.S. forces because the site was abandoned and severely looted. However, results of the measurements taken at that time clearly show that even the radiation worst-case dose estimates (the “upper-bound”) were well within safe standards established by the NRC. Additionally, dosimetry results from the USACHPPM survey team who were actively looking for radioactive sources and were consequently exposed to radiation were also well within these safe limits.

Radiation exposure has been linked to leukemia and other forms of cancer. How do you know for sure that personnel have not been exposed to unsafe levels of radiation at TNRC?

Rumors and conflicting reports about the radiation at TNRC circulated from the early phases of the war until now, even though site conditions have significantly improved over time. Given the proven link between high levels of radiation exposure and cancer, it is understandable that Soldiers might be concerned about their doses at TNRC. However, there are several reasons why USACHPPM is confident that radiation levels at TNRC are safe:

- Even in 2003, when the site was in the worst condition with respect to the risks to U.S. forces, measured radiation exposure levels were well within safe limits established by the NRC.
- The radiation doses received by the USACHPPM survey team of radiation experts—who were actively looking for radiation sources at TNRC, were also well within safe limits established by the NRC.
- Since that time, all radiation sources at TNRC have been identified and secured or removed, further reducing any potential for radiation exposure.
- Ongoing monitoring over the past 4 years of U.S. personnel entering and occupying the TNRC demonstrates that no one was overexposed to radiation.

Can I be tested for radiation exposure since I served at TNRC?

Yes. Even though radiation sources and doses at TNRC clearly indicate levels are safe, Soldiers, after discussion with their health care provider, can submit a urine sample for analysis. Soldiers can request this analysis from any supporting medical treatment facility.

For more information:

USACHPPM Health Physics: <http://chppm-www.apgea.army.mil/hp/>

Navy Deployment Resources: http://www-nehc.med.navy.mil/postdep/EP/Depleted_uranium.htm

Air Force Institute for Operational Health: <http://www.brooks.af.mil/units/airforceinstituteforoperationalhealth/index.asp>

Occupational Safety and Health Administration (OSHA): <http://www.osha.gov/SLTC/radiation/index.html>

U.S. Environmental Protection Agency (USEPA) Radiation Protection: <http://www.epa.gov/radiation/>

National Council on Radiation Protection and Measurements: <http://www.ncrponline.org/>

World Health Organization: http://www.who.int/ionizing_radiation/en/