

FACT SHEET No. 24-030-0520

RADIO FREQUENCY RADIATION OVEREXPOSURE INCIDENT REPORTING

Electronic devices and systems that generate radio frequency (RF) electromagnetic energy include:

- radars,
- radios,
- satellite communications terminals,
- broadcast stations,
- electronic countermeasures, and
- high-power microwave systems (such as active denial systems).

These RF systems are safe when operated according to the manufacturer's instructions or operation manuals. In case of accidental overexposure, personnel who operate or maintain RF radiation sources should be aware of the basic reporting procedures for confirmed or suspected overexposure.

INITIAL RESPONSE

An RF overexposure is defined as exposure to RF radiation which exceeds the applicable maximum permissible exposure in Department of Defense (DoD) Instruction 6055.11. This DoD Instruction refers to Institute of Electrical and Electronics Engineers standard C95.1-2345. If an RF radiation overexposure is suspected, follow the procedures in Department of the Army Pamphlet (DA Pam) 385-24. The system operator should document the status of the system to include: date of operation, location, equipment setup, photos if possible, description of incident, and any anomalies. If an RF component is broken (such as a waveguide), take the RF system offline and retain the broken component for later examination. Individuals should also report any RF shocks or burns as a result of contact with energized RF conductors (such as the antenna).

COMMAND RESPONSE

Once a unit suspects or confirms an RF or microwave overexposure incident, they should notify their Command and installation Radiation Safety Officer (RSO) or Safety Officer within 24 hours. The affected person should seek immediate medical attention. The RSO or Safety Officer will notify the following:

1. Army Public Health Center, Nonionizing Radiation Division, DSN 584-3353/3932, commercial 410-436-3353/3932, or 1-800-222-9698 (24-hour phone line).
2. The Army Safety Office at DSN 227-1194/1128, commercial 703-697-1194/1128 or DSN 289-0132, commercial 703-756-0132 or email usarmy.pentagon.hqda-aso.mbx.army-safety-office@mail.mil. During non-duty hours, contact Army Operations Center at DSN 227-0218, Commercial 703-697-0218.
3. If the incident meets the requirements to file an accident report per Army Regulation 385-10 and Department of the Army Pamphlet 385-40, the RSO will submit an online report at <https://reportit.safety.army.mil>

MEDICAL RESPONSE

For confirmed or suspected RF overexposure incidents follow the procedures in DA Pam 40-506. Often times, the exposed individual will be asymptomatic. This is attributable to the large margin of safety incorporated in the exposure standards. However, exposure to RF radiation of sufficient intensity and duration can result in heating effects. Symptoms may include excessive perspiration, increased respiration rate, pain, and an increase in body temperature. A sensation of heating does not necessarily mean an overexposure has occurred. Medical providers may obtain further guidance from the DOD electromagnetic field hotline at 1-888-232-3764, DSN 798-3764, commercial 937-938-3764, or email esoh.service.center@us.af.mil.

REFERENCES

DoD Instruction 6055.11, Protecting Personnel from Electromagnetic Fields, 19 August, 2009
DA Pam 385-24, The Army Radiation Safety Program, 30 November 2015
Army Regulation 385-10, The Army Safety Program, 24 February 2017
DA Pam 385-40, The Army Accident Investigations and Reporting, 18 March 2015
DA Pam 40-506, The Army Vision Conservation and Readiness Program, 15 July 2009