

Safety & Environmental Newsletter

May 2013

Throughout the course of a day we are surrounded by radiation. There are two general types of radiation. The first is ionizing which has enough energy to remove tightly bound electrons from the orbit of an atom (Ex. X-rays, gamma rays). The second is non-ionizing radiation: cell phones, microwave ovens, radios, and visible light. The WFF Safety Office has both ionizing and non-ionizing radiation safety programs in place to help ensure the safe use of both forms of radiation.

Radio Frequency or RF is non-ionizing electromagnetic radiation and the primary hazard to personnel is heating of the body. In general, at WFF any transmitter (including handheld units) must receive approval from the Frequency Utilization Management Working Group (WFUMWG) and then the WFF Director. This process is initiated by the WFF Spectrum Manager (SM) Code 569. The SM looks at potential frequency interferences and verifies equipment licensing. The SM coordinates review of the RF system by other WFUMWG members like the NAVY, NOAA, and the WFF Safety Office.



The Radio Frequency Safety Officer (RFSO) reviews the request and calculates the Hazards of Electromagnetic Radiation to Personnel (HERP) and Ordnance (HERO) hazard distances. When a system has a hazard distance of concern then operating restraints are placed on the system to mitigate the hazard. Systems must avoid impacting areas such as buildings, roof tops, parking lots, roadways, ordnance storage and transportation. The Safety Office performs RF field surveys at least annually for all NASA RF systems that have hazards that may impact personnel. The RFSO verifies safe levels are maintained and that cut outs are working properly. Such systems also employ hazard warnings such as red and blue lights and warning signs. A red flashing light indicates the radar is active and may move or rotate at any time. The blue light indicates that the system is powered up and maybe transmitting.

One example is the NPOL radar (NASA POLarized RADio Detection And Ranging system) used by Code 610.W to study precipitation. This system when operated in the field next to N159 is restricted from transmitting below 6 degrees elevation when between 180 degrees and 75 degrees Azimuth. The elevation selected prevents potential worker exposure in buildings, roadways, parking lots, and on rooftop. After set up, restrictions were verified by field testing the RF levels.



Any individuals with questions or concerns regarding any type or form of radiation are encouraged to contact the Safety Office for additional information or to request a survey.



Prevent Stormwater Runoff Pollution



10 Things You Can Do to Prevent Stormwater Runoff Pollution

- ◆ Use fertilizers sparingly and sweep up driveways, sidewalks, and gutters
- ◆ Never dump anything down storm drains or in streams
- ◆ Vegetate bare spots in your yard
- ◆ Compost your yard waste
- ◆ Use least toxic pesticides, follow labels, and learn how to prevent pest problems
- ◆ Direct downspouts away from paved surfaces; consider a rain garden to capture runoff
- ◆ Take your car to the car wash instead of washing it in the driveway
- ◆ Check your car for leaks and recycle your motor oil
- ◆ Pick up after your pet
- ◆ Have your septic tank pumped and system inspected regularly



For more information, visit
www.epa.gov/nps or
www.epa.gov/npdes/stormwater

Keep FOG out of the Drain



Even with hot water, Fats, Oils, and Greases (FOG) do not completely dissolve as they flow down the drain. Instead they accumulate on the inside of drain pipes, narrowing the pipes, until a blockage or backup occurs.

A blockage could just be a nuisance in your kitchen sink or a more serious threat to the environment if grease and sewage erupt from a sanitary sewer manhole along the sidewalk or road.

To prevent sanitary sewer overflows, follow these simple tips:

- ◆ Never pour grease down the drain.
- ◆ Always use a paper towel to wipe out greasy pans before washing pans in the sink. Dispose of the paper towel in the trash can.
- ◆ Recycle or reuse grease by collecting grease and oil in closed containers.

For more information or to request a FOG poster for your kitchen, contact Owen Hooks at extension 1941.

Spring is Here!

Can you match these female birds to their common name?



Northern Cardinal
 House Sparrow
 White Breasted Nuthatch

Blue-Winged Teal
 Eastern Bluebird
 Mallard

American Robin
 Barn Swallow
 Mourning Dove