

National Institutes of Health  
Office of Research Services  
Division of Occupational Health and Safety

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## Non-Ionizing Radiation Program

**Technical Assistance Branch**  
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## **1.0. Purpose**

The NIH non-ionizing radiation safety program (NIRP) is intended to minimize occupational exposure to non-ionizing radiation (NIR) by:

- a) Providing employee information regarding the recognition, evaluation and control of the hazards associated with sources of NIR;
- b) Reviewing plans for the installation of new sources of NIR;
- c) When requested, provides affected employees with information regarding source-appropriate safety principles; and
- d) Evaluating NIR levels when requested by employees or when sources are identified during safety surveys.

## **2.0. Scope**

Sources of NIR located at NIH facilities include:

- telecommunication and data transfer antennas;
- microwave ovens;
- high intensity magnets, including magnetic resonance imaging (MRI) devices, nuclear magnetic resonance (NMR) devices ultraviolet lamps; and
- alternating current electromagnetic field sources such as electrical power lines, transformers; electrical panels, and electrical appliances.

Lasers, which also produce non-ionizing radiation, are managed under the Laser Safety Program document available on the Division of Occupational Health and Safety's (DOHS) website (<http://www.ors.od.nih.gov/sr/dohs/Documents/NIH%20Laser%20Safety%20Program.pdf>).

## **3.0 Responsibilities**

### **3.1 The Division of Occupational Health and Safety, Office of Research Services:**

- a) The Technical Assistance Branch (TAB) is the functional group within DOHS responsible for managing the NIRP. A TAB industrial hygienist is assigned as the NIRP Manager.
- b) The NIRP Manager:
  1. Provides and facilitates the development, promulgation and implementation of the NIRP.
  2. Provides consultative services related to the recognition, evaluation and control of NIR hazards and maintains appropriate NIR policy and guidelines.
  3. Conducts surveys for non-ionizing radiation and recommends exposure control measures.
  4. Reviews and updates the NIR program on an annual basis.
  5. Notifies employees of their non-ionizing radiation exposure when applicable.
  6. In conjunction with the Principal Investigator (PI) or responsible official:
    - a. Ascertain whether warning devices (signs, alarms, etc.) are necessary and assists in the selection of appropriate safety control measures.

- b. Reviews major NIR equipment purchases (except microwave ovens) and related construction plans to ensure adequate hazard control.
- 7. Investigates accidents resulting from NIR operations.
- 8. Ensures appropriate corrective actions are taken to prevent employee exposures exceeding recommended occupational levels.
- 9. Maintains an inventory of non-ionizing radiation sources.

### **3.3 Occupational Medical Service (OMS):**

- a) Provides employee consultation for any incidents involving exposure to elevated levels of NIR.

### **3.4 Division Directors, Managers, Supervisors, and Principal Investigators:**

- a) Identifies and reports NIR sources to the NIRP Manager.
- b) Assist DOHS in identifying employees who may be at risk of over-exposure to NIR.
- c) Requests DOHS to evaluate employee NIR exposure.
- d) Ensures maintenance and repair work on or around NIR equipment are performed safely by qualified and trained individuals.
- e) Maintains and informs employees of Occupational Safety and Health Administration regulations and NIH NIRP policies.
- f) Provides adequate instruction and training on the proper and safe use of NIR equipment to potentially affected personnel.
- g) Prohibits the operation of a NIR equipment without adequate control of hazards.
- h) Takes appropriate corrective actions to ensure NIR equipment is operating within manufacturer's parameters.
- i) Notifies the NIRP Manager when an adverse incident resulting, from the use of a NIR, system has occurred or is suspected of having occurred.
- j) Prohibits the modification of a NIR system if it may introduce additional safety hazards.

### **3.5 NIR System Operators and Personnel Working Around NIR**

- a) Follows personnel protection measures related to NIR exposures.
- b) Energizes a NIR system or works with or near a NIR system, only when authorized by the responsible PI or the responsible official.
- c) Obtains appropriate training on the procedures and policies related to safe operation of NIR equipment.
- d) Immediately informs the PI and or immediate supervisor and OMS when a person knows or suspects that an exposure exceeding safe occupational levels has occurred.
- e) Immediately reports to OMS for any work-related injuries/illnesses and health concerns.

## **4. Reporting Requirements**

- a) NIH employees and contractors must notify NIRP Manager when a potentially hazardous NIR source is used at NIH facilities.
- b) If a NIR system is modified, such that the hazards are substantially increased, the NIRP Manager should be consulted to ensure that appropriate safety controls are incorporated into the modified system.