

HSCL-P (SGPS-PSP-O/6 Feb 92) (310-2d) 1st End LTC Cherry/rr/
DSN 471-8167

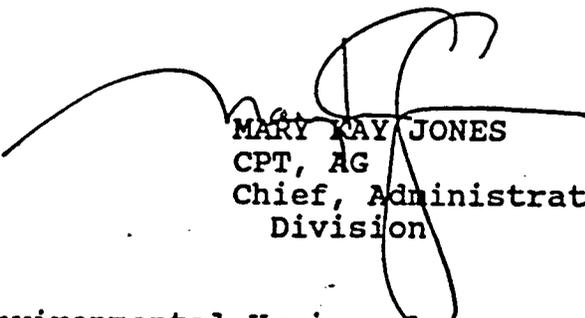
SUBJECT: Surveillance of Laser and Radiofrequency Radiation
Personnel

HQ, U.S. Army Health Services Command, Fort Sam Houston, TX
78234-6000 21 FEB 1992

FOR Commanders, HSC MEDCEN/MEDDAC, ATTN: ~~Chief, Preventive~~ *28 Feb 92*
Medicine Service

1. Forwarded for your action. Ensure that ophthalmologic service, optometry service, and outlying occupational health clinic personnel are aware of these revised surveillance requirements.
2. Our point of contact is COL Crast, Office of the Deputy Chief of Staff for Clinical Services, DSN 471-8167 or Commercial (512) 221-8167.

FOR THE COMMANDER:


MARY KAY JONES
CPT, AG
Chief, Administrative Services
Division

CF:
Commander, U.S Army Environmental Hygiene Agency,
ATTN: HSHB-MR-L, Aberdeen Proving Ground, MD 21010-5422



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
OFFICE OF THE SURGEON GENERAL
5109 LEESBURG PIKE
FALLS CHURCH, VA 22041-3258



FEB 6 1992

SGPS-PSP-O (40)

MEMORANDUM FOR See Distribution

SUBJECT: Surveillance of Laser and Radiofrequency Radiation
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1. Based on a Tri-Service working group consensus and information gathered since the last Policy Letter 86-01.0 was issued in 1986, our office has reviewed and modified the requirements for ocular surveillance of laser and radiofrequency radiation (RFR) personnel. Effective this date, the policy for ocular surveillance of laser and RFR personnel will be as follows.

2. Personnel Categories for Ocular Surveillance.

a. Laser Radiation. Laser personnel consist of two categories: incidental workers and laser workers.

(1) Incidental workers are workers whose work makes it possible, but unlikely, that they will be exposed to laser energy sufficient to damage their eyes. Examples are operators of fielded laser equipment, individuals involved in laser use on approved laser ranges, personnel involved in "force on force" laser training exercises when adequate protection (administrative and/or protective equipment is provided, and personnel involved on a short-term basis in Research, Development, Test and Evaluation (RDTE) or maintenance of laser equipment. This class will require only preplacement and termination examinations using the screening protocol in paragraph 4a(1), which is visual acuity only.

(2) Laser workers are employees who work routinely in laser environments and have a higher risk of accidental overexposure. Examples are personnel regularly involved in maintenance and RDTE of laser equipment or who work in situations where adequate protective measure cannot be provided. This class will require preplacement and termination examinations using the screening protocol in paragraph 4a(2), which is ocular history, visual acuity and amsler grid testing.

b. Radiofrequency Radiation (RFR). There are no designated personnel categories for RFR workers, because there is no scientific basis or epidemiological evidence to suggest that ocular surveillance is necessary.

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3. There are three categories of ocular surveillance examinations: preplacement, immediate and termination. Periodic ocular surveillance examinations are not required.

a. Preplacement examinations are performed on all individuals entering the laser field. The purpose of this examination is to determine the baseline visual and ocular status of the employee.

b. Immediate examinations will only be given when there is a known or suspected laser or RFR overexposure (in excess of five times the Permissible Exposure Limit delineated in TB MED 523), and will be performed within 24 hours of suspected overexposure, using the diagnostic protocol.

c. Termination examinations will be performed on personnel leaving the laser employment field, using the appropriate screening protocol.

4. Two different protocols will be used for ocular surveillance examinations: the screening protocol and the diagnostic protocol (these are depicted in the Ocular Surveillance Matrix enclosure).

a. Screening Protocol. A screening protocol will be used for preplacement and termination examinations of incidental and laser workers:

(1) Incidental laser personnel will have a screening for visual acuity (with correction) in each eye. If visual acuity is found to be less than 20/20, in either eye, the worker will be referred to an optometrist or ophthalmologist to determine the best corrected acuity and, if applicable, the cause of reduced acuity.

(2) Laser workers will have an ocular history, screening for visual acuity as in (1) above, and a test for central visual fields (Amsler Grid). An Amsler grid or similar pattern will be used to test macular function for distortions and scotomas. If any distortions or missing portions of the grid pattern are present, the worker will be referred to an optometrist or ophthalmologist for evaluation.

b. Diagnostic Protocol. The diagnostic protocol is used for immediate examinations, and will be performed by an optometrist, ophthalmologist or physician possessing the necessary skills. It consists of the following:

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(1) Ocular history, with emphasis on previous eye injury or disease and medication use (especially any photosensitizing medications).

(2) Distance visual acuity (with correction) in each eye. If the corrected distance visual acuity is poorer than 20/20 in either eye, a refraction will be performed to obtain the best corrected acuity.

(3) Amsler grid or similar pattern will be used to test macular function for distortions and scotomas.

(4) A slitlamp examination of the lens and cornea and an ophthalmoscopic examination of the fundus, both with a rapidly-acting, shortduration mydriatic (e.g., tropicamide) unless the use of a dilating agent is contraindicated by medical history and/or professional judgment. The following, as a minimum, are to be recorded:

- (a) Presence or absence of opacities in the media.
- (b) Sharpness of the outline of the optic nerve head.
- (c) Cup to disk ratio.
- (d) Ratio of the size of the retinal arteries to retinal veins.
- (e) Presence or absence of a well-defined macula.
- (f) Presence or absence of a foveal reflex.
- (g) Any retinal abnormality, however small or subtle.
- (h) A color fundus photograph (the preferred method) that includes the optic nerve head and macula may be used in place of (b) through (g) above.

(5) For any known or suspected overexposure contact the U.S. Army Environmental Hygiene Agency (DSN 584-3534) and the Letterman Army Institute of Research (DSN 586-3344) as soon as possible after the incident or accident.

5. Questions may be directed to LTC Doyne, (DSN 289-0311) or to the U.S. Army Environmental Hygiene Agency (DSN 584-3534).

FOR THE SURGEON GENERAL:

for 
RONALD R. BLANCK
Brigadier General, MC
Director, Professional Services

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FREDERICK J ERDTMANN, M.D.
COL, MC
Chief, Preventive and Military
Medicine Consultants Division

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