

For CG-82 use only	Requestor: INTERNAL CG	DHS review required?
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### CG RETIRED MBRS HEALTH CONCERNS

**QUESTION:** U.S. Coast Guard retired members were unknowingly exposed to Agent Orange and ionizing radiation over their careers (due to being stationed at Loran units). Though the Veterans Administration and Department of Occupational Health (e.g. Coast Guard's Chief of Occupational Medicine) have allegedly identified this issue, the U.S. Coast Guard in turn has not attempted to notify members who had the potential of exposure to these risks. According to the retired member who asked the question, people are still suffering. In addition, this failure of notification is further magnified because Agent Orange exposure is claimed to continue to affect the member's offspring. The member would like to see the U.S. Coast Guard acknowledge this issue and notify the potential Coast Guardsmen & woman to be screened for possible exposure.

Will the Coast Guard do this? [823 note: CCG acknowledged the member's question and informed him that in addition to a direct response, the CG would also published the response in the CPOA magazine.]

**ANSWER:** Since Agent Orange and Ionizing Radiation are separate exposure issues, we'll address them independently below:

#### "Agent Orange"

The Environmental Health Division, CG-1133 has been the lead office engaged in discussion with the ATON community regarding a recent claim of CG personnel's potential exposure to "Agent Orange" in the 1960s and 1970s. CG-1133 is responsible for prospective assessment of all current and potential injury and illness threats to Active Duty, Reserve, Civilian and Auxiliary and retrospective evaluation of historical VA medical claims determining service related disability.

The term "Agent Orange" refers to a defoliant blend of 2,4,5-Trichlorophenoxyacetic acid (2,4,5-T) and 2,4-Dichlorophenoxyacetic acid (2,4-D). It is the dioxin (TCDD) contamination of the 2,4,5-T that is blamed for illness associated with exposure to Agent Orange (Note: 2,4-D continues to be commercially available). Agent Orange was developed in the 1940s and was legally available as an herbicide in the United States until the mid 1980s. The USDA allowed the use of 2,4,5-T on all food crops until 1970, and on rice fields until 1985.

Based on this recent claim, CG-1133 determined that during the 1960s and 1970s, the Coast Guard ATON mission involved brushing and spraying the riverbanks with herbicides (possibility containing 2,4,5-T) based on interviews and written statements of members from that era. It is probable, despite no written records of 2,4,5-T usage by Coast Guard units, Coast Guard personnel could have made use of 2,4,5-T as an herbicide in/around shore-based aids since it was an effective and legal herbicide readily available on the United States market.

2,4,5-T is considered only a moderately toxic herbicide; however, during its manufacture, a contaminant, 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) can be created if proper temperature control is not maintained. The 2,4,5-T manufactured for commercial usage in the United States and used by the Coast Guard, was reported to have much lower dioxin levels than that prepared for military purposes.

Again, it is the dioxin (TCDD) contamination of the 2,4,5-T that is blamed for illness associated with Agent Orange.

All research to date indicates that Coast Guard members were not exposed to the herbicide (2,4,5-T) with higher dioxin (TCDD) content. CG-1133 will continue to respond appropriately to any VA claims from past or present service members regarding any suspected occupational exposures. It is unnecessary, at this time, for CG members, Active or Retired, to undergo medical screening or notification regarding this issue.

#### Ionizing Radiation Exposure at CG Loran Stations

The Office of Safety and Environmental Health (CG-113) was recently notified of a potential health hazard associated with power amplifying units emitting ionizing radiation at CG LORAN stations. These vacuum tube transmitter units were used from the mid 1970s through the present and included the AN/FPN-42, 44, and 45 series transmitters. CG-1133 is the lead investigative office, working closely with the Electronic Navigation branch (CG-5432) to query personnel involved with these units and quantitatively validate the potential exposures by frequency, dose, and duration.

The Coast Guard was engaged in field evaluations at LORAN stations during the 1980s and 1990s. Conclusive radiation testing in 1993 validated low dose radiation emissions from cathode ray transmitter tubes. This potentially exposed CG personnel working with these units to low-dose radiation from the mid 1970s through 1993. Since 1994, all transmitter tubes were shielded with an acrylic-lead shield to block the x-radiation emissions from the power amplifying units. Moreover, the Coast Guard began replacing cathode ray transmitter tubes with non-radiation emitting solid state technology. To date, all but four of the vacuum tube transmitter units have been changed. However, the historical use and potential exposure warrants retrospective study on the potential health risks associated with ionizing radiation.

CG-1133 is working with National Institute of Health (NIH) in developing a risk matrix of most relevant health risks based on the levels of exposure likely to have occurred. Until then, we are unable to recommend any type of specific screening based on the low-dose ionizing radiation exposures. CG-1133 expects more information from this effort in November 2008 and we will provide appropriate guidance based on our scientific research.

Updates will be posted on the CG-113 website: <http://www.uscg.mil/cg1/cg113/default.asp>.

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