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MCB CAMP LEJUENE
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LETTER REGARDING FISH DATA FROM ORDE RECREATIONAL AREA POND MCB CAMP
LEJEUNE NC
9/15/1993
AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY

Agency for Toxic Substances
and Disease Registry
Atlanta GA 30333

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SEP 15 1993

Brigadier General Lawrence H. Livingston
Commanding General
Camp Lejeune Marine Corps Base
PSC 20004
Camp Lejeune, North Carolina 28542-0004

Dear General Livingston:

This is in response to your staff's request for clarification of our July 1993, letter regarding our concerns with fish data from the Orde Recreational Area pond. In the letter, we stated that the reported polychlorinated biphenyl (PCB) levels in fish were 8 - 11 parts per million (ppm) which exceeds the Food and Drug Administration's (FDA) Action Level of 2 ppm. Therefore, the Agency for Toxic Substances and Disease Registry (ATSDR) is concerned that the levels of PCBs in those fish represent a health hazard to people who eat fish from that pond.

In our evaluation of the data in the report (Camp LeJeune 1990 Site Summary Report (page 3-81) subheading "Tissue," fish sampling data from 1984), we determined that the units were reported incorrectly. The units for the data in the report were actually listed as micrograms per liter ($\mu\text{g}/\text{L}$, or parts per billion (ppb)).

The L in $\mu\text{g}/\text{L}$ is probably incorrect because liters are a measure of volume and tissue samples are analyzed by weight. The Environmental Protection Agency's (EPA's) Environmental Services Division (ESD) (Region IV) laboratory reports fish tissue analyses by weight, typically kilograms (kg). ATSDR assumed the L was supposed to be kg.

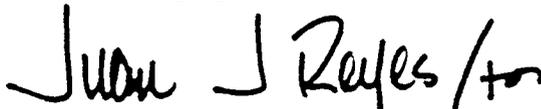
BHC-A (benzene hexachloride - alpha isomer, an insecticide) was also detected in fish tissue and the concentration was listed as 0.1 $\mu\text{g}/\text{L}$. According to EPA, fish oils make the sample difficult to analyze because the oils cause interferences that make the output on the laboratory equipment more difficult to evaluate. To attain a detection limit as low as 0.1 ppb would require extensive sample preparation (to extract the oils from the sample). When EPA (ESD) needs to use a low detection limit for the alpha isomer of BHC, they generally can prepare the sample to attain 7 ppb. For those reasons, ATSDR assumed the μg was actually mg and the L was

actually kg and the units were mg/kg or ppm. When your staff contacted the laboratory which performed the analyses to verify these conclusions, they explained that they do not keep back records for 1984.

Until you conduct more fish sampling and the analytical results are available, ATSDR recommends that the pond at the Orde Recreational Area be posted "catch and release fishing only." We have been coordinating with your environmental office on future fish tissue sampling plans. ATSDR would like a copy of future sampling results when they are available. If you have any questions or comments, please have your staff contact Ms. Carole Hossom, Federal Programs Branch, at:

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Sincerely yours,



Robert C. Williams, P.E., DEE
Director
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Enclosure

cc:

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