



State of North Carolina  
 Department of Environment, Health, and Natural Resources  
 Division of Epidemiology  
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*F.F.*

James G. Martin, Governor  
 William W. Cobey, Jr., Secretary

J. N. MacCormack, M.D., M.P.H.  
 Director

November 6, 1990

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ENVIRONMENTAL SCIENCES DIV.

MEMORANDUM

TO: Ken Eagleson  
 Water Quality Section  
 Division of Environmental Management

FROM: Kenneth Rudo, Ph.D., Toxicologist *KHR*  
 Environmental Epidemiology Section

SUBJECT: Slocum Creek Fish Tissue Data  
 Cherry Point NPDES No. NC0003816  
 Craven County

After analyzing the data contained in your July 16, 1990 memo, I would like to offer the following evaluation.

Levels of metals in both whole fish and fillets in the east and west prong of Slocum Creek and Slocum Creek off the Cherry Point WWTP were uniformly low and were not at concentrations that would cause any health risks upon consumption of these fish. Fish fillet samples taken in Slocum Creek off Mill Creek, approximately 1.3 miles from the WWTP, indicate elevated levels of copper, zinc, and lead. The elevated levels were found primarily in longnose gar and gizzard shad, two inedible fish species. Lead levels were elevated to an extent in these two species such that if these fish were consumed by children, a significantly increased health risk would be evident. Insufficient data exists from edible fish species at this sampling site to accurately assess at this time, the levels of these three metals.

Until more sampling data from edible fish can be analyzed from the Slocum Creek site off Mill Creek, and possibly from another site between WWTP and Mill Creek, an assessment of any health risks from fish consumption based on the effects of metal discharges from the Cherry Point facility cannot be made. However, due to the preliminary data that indicates elevated lead, copper, and zinc levels in several fish species, and health-related concerns over the lead

Mr. Ken Eagleson

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levels in these species, the Environmental Epidemiology Section would recommend that any change in the permit involving relocating the discharged wastewater from Slocum Creek to the Neuse River be delayed until a more complete health risk assessment can be made.

If you have any further questions, please feel free to contact me at (919) 733-3410.

KR:km

cc: Mr. Jay Sauber  
Mr. Steve Tedder  
Mr. Preston Howard  
Dr. John I. Freeman