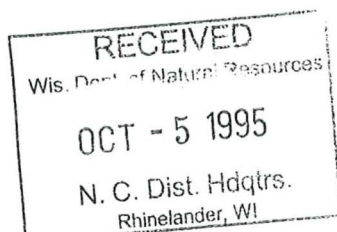


REINHART | BOERNER | VAN DEUREN
NORRIS & RIESELBACH, S.C.

ATTORNEYS AT LAW

October 2, 1995



Mr. Scott Watson
Department of Natural Resources
Rhinelander, WI

Dear Scott:

Re: C.M. Christiansen Co's Former Pole
Dipping Facility

Enclosed for consideration by Mr. Krietlow and other Department personnel involved in the design of the stream and sediment study of Military Creek is a critique of the study's design by Robert D. Edstrom, Ph.D., and Bette Premo, Ph.D. I hope that their critique is given careful consideration in determining the final study design. (I have included only that portion of the correspondence from Drs. Edstrom and Premo that pertains to the study design.)

If Mr. Krietlow or others have questions about or responses to the critique, I suggest they be directed to Drs. Edstrom and Premo.

Thank you for your consideration of the above.

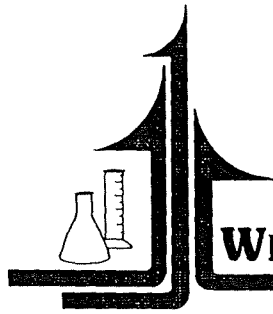
Sincerely,

A handwritten signature in cursive script, appearing to read "Ray Roder".

Raymond M. Roder

7159RMR:JRJ

cc Robert D. Edstrom, Ph.D. (w/enc.)



ECOLOGICAL CONSULTING AND
ENVIRONMENTAL LABORATORY SERVICES

WHITE WATER ASSOCIATES, INC.

September 29, 1995

Mr. Raymond Roder
Reinhart, Boerner, Van Deuren,
Norris & Rieselbach, S.C.
7617 Mineral Point Road
P.O. Box 2020
Madison, Wisconsin 53701-2020

Re: C.M. Christiansen Co.- Wisconsin DNR Military Creek Work Plan

Dear Mr. Roder:

I have recently reviewed the proposed Wisconsin Department of Natural Resources (WDNR) work plan for the field sampling of Military Creek and adjacent wetland soils. There are a few comments I would like to make about the WDNR proposed activities.

The first point that I believe requires comment is from page 10: Military Creek: first paragraph of the work plan. It is proposed by the DNR to analyze one combined segment (0-18 inches) of the reference site sediment core sample but all subsequent core samples will be separated into two segments (0-6 inches and 6-24 inches) for analysis. This would be an inadvisable approach in experimental design that must be re-examined by the WDNR. The reference site sediment core sample must be treated exactly the same as all other core samples.

If I may explain in detail, a control site (or in this case termed a reference site) is the sampling location which determines no effect, no impact, or ambient contaminant levels. By combining the entire length of the core, existing chemical concentrations in the sediments will be effectively diluted by clean sediments within the core; thereby lowering the overall chemical concentrations at that location. Any data comparisons by ourselves, or the WDNR, between the downstream segmented cores and the reference site sample would be questionable because of the different manner in which they were analyzed. It is also important to point out that because the reference site (i.e. control site)

would appear overly clean by this manner of sampling and analysis, any sediment contamination attributable to potential sources upstream from the C.M. Christiansen Co. property would be diluted by these activities at the reference site but not the other sediment sampling sites. In all cases, the reference site and downstream samples must be handled and analyzed in identical manners.

The second point that I believe is worthy of comment, and related to the above discussion, is the location of the reference site for the sediment sampling. In the last meeting with the WDNR, I indicated that a control site should be chosen to approach true ambient conditions of the creek surface water and stream sediments further upstream than was chosen for the WDNR 1992 sediment sampling activities. I recommend that station MC-1-A be retained in the work plan, however, for the purposes of this investigation, I believe that one additional reference station upstream from the confluence of Military Creek and the unnamed creek on the survey is needed to confirm ambient conditions upstream. Although the extra sampling location will result in extra cost for sample analyses, I believe the data from this additional location are necessary for reliable downstream data comparisons. Additionally, since the creek bottom alternates between sandy and mucky areas, a core at the reference site should not consist entirely of sand.

The intent of the WDNR to analyze samples for chlorinated pesticides is questionable. Attachment 5 of the work plan lists the pesticides supposedly detected in soils from the property. There are a number of contradictions in this data table that indicate to me some analytical problems may have existed with these samples. I will outline these contradictions briefly.

- 1) Chlordane was produced and applied in pest control as a mixture of chlorinated camphenes with over a hundred major and minor components. If gamma-Chlordane was detected in soil samples alpha-Chlordane should also be detected in the sample. These two compounds are stereoisomers and are virtually identical in the environment. WDNR analyses showed no alpha-Chlordane in these samples.

- 2) Lindane was a pesticide also applied as a mixture. Lindane is in reality gamma-BHC, the major component of a four component mixture. If they are detecting beta and delta-BHC; gamma-BHC (Lindane) should also be present because it was overwhelmingly the major component of the pesticide mixture. Again, WDNR analyses show no gamma-BHC in these samples.

- 3) Aldrin was a chlorinated cyclodiene pesticide (similar to Endrin, Dieldrin, and Chlordane)

used in the far south for the control of fire ants. For many years, this compound was used by the U.S. EPA in their methodologies for pesticide analysis of environmental samples as a "retention marker" in gas chromatographic analyses. This compound was added to environmental samples partly because it behaves similarly to many other chlorinated pesticides but also because of its rare occurrence in environmental samples. I do not believe that it was ever used in this part of the country, certainly not in northeastern Wisconsin.

4) Again, Endosulfan was a two compound mixture, Endosulfan I and Endosulfan II. These are not specified in the data table.

5) There are a number of other chemicals in this table (Endrin Aldehyde, Endrin Ketone, and Endosulfan Sulfate) that may exist in the soils at lower concentrations than those indicated in the table. They are degradation products of the parent pesticides. However, given the use history of this site, the presence of the entire assemblage of chlorinated pesticides at these concentrations in these soils defies rational explanation.

Furthermore, in the "Notes on Organic Qualifiers" document, page 6, paragraph 2, from the WDNR file, the reviewer states that pesticides were found in the laboratory blank associated with these samples and that this "may be indicative of an analytical problem within the lab". This seems believable. With the availability of Mass Spectrometry at the Wisconsin State Laboratory of Hygiene, it is a reasonable question to ask "Why wasn't the existence of these pesticides in these soil samples confirmed with Full Scanning Mass Spectrometry?".

The comments offered hereafter are non-specific in nature but nonetheless deserving of mention because they pertain to the apparent inequity between the thoroughness of documentation by a state regulatory agency and that of private sector. Within the WDNR work plan there are no cross references between analytical methodologies to insure comparability between data already generated and those data proposed to be generated. The level of documentation in this work plan does not support what will be performed by the WDNR. Macroinvertebrate characterizations are reasonably outlined, however, the methodologies for the toxicity testing, the chemical analyses to be performed (Section 700 Instrumentation, etc.), and the citations from the Quality Assurance Manual are not included and unaccountable.

In a similar vein, all of these analyses and tests (with a few exceptions) proposed by the WDNR are