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MCB CAMP LEJUENE  
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LETTER WITH ADDITIONAL COMMENTS ON THE DRAFT FEASIBILITY STUDY AND  
TECHNICAL MEMORANDUM REGARDING PILOT STUDY OPTIONS FOR OPERABLE UNIT  
15 (OU 15) SITE 88 MCB CAMP LEJEUNE NC  
08/18/2008  
NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

North Carolina  
Department of Environment and Natural Resources

Division of Waste Management

Michael F. Easley, Governor  
William G. Ross Jr., Secretary  
Dexter R. Matthews, Director



August 18, 2008

Attn: Gary Tysor  
NAVFAC Midlant Environmental RPM, Camp Lejeune  
Marine Corps North Carolina IPT  
6506 Hampton Blvd  
Norfolk, VA 23508-1273

RE: Additional Comments on Draft Feasibility Study and Technical Memorandum  
Regarding Pilot Study Options  
Operable Unit (OU) # 15, Site 88 at MCB Camp Lejeune, NC  
Soil and Groundwater  
Camp Lejeune, NC6170022580  
Jacksonville, Onslow County, North Carolina

Dear Mr. Tysor:

The NC Superfund Section has received and reviewed the Draft Feasibility Study and Draft Technical Memorandum (TM) Regarding Pilot Study options for Operable Unit (OU)#15, Site 88 at the Camp Lejeune, MCB Superfund Site located in Jacksonville, NC. The following comments are offered for the Partnering Teams consideration. If you have any questions or comments please contact me at (919) 508 8467.

**General Comments:**

1. As I stated in my original comments to the TM, a stronger oxidant or another remedy is recommended for treatment of the high concentrations of PCE/TCE at Site 88. Permanganate only treats the dissolved phase contaminants. Ninety percent or more of the PCE/TCE is adsorbed by the soil matrix in the aquifer.
2. After considering all the technologies in the Feasibility Study and consideration of the technologies in the TM for the proposed pilot studies, it is recommended that the feasibility study include a more tried and true technology for treating the deeper and higher concentrations in the area of MW-39MP and MW-18. The only injection technologies that have been effective at Camp Lejeune are Enhanced Reductive Dechlorination (ERD) at Site 89 and 78 south, Modified Fenton's at Site 35, and Horizontal Well Air Sparging at Sites 86 and 89. Other non-injection technologies that have been effective at Site 88 and Site 89 are Soil Mixing with ZVI mixed in and Electrical Resistance Heating (ERH).

1646 Mail Service Center, Raleigh, North Carolina 27699-1646  
Phone: 919-508 8400 \ FAX: 919-715-4061 \ Internet: [www.enr.state.nc.us](http://www.enr.state.nc.us)

Mr. Gary Tysor

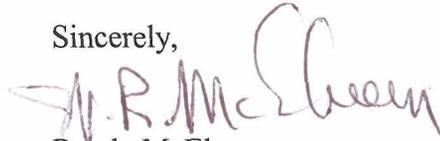
08-18-2008

Page 2 of 2

I recommend that we consider these technologies and other more aggressive technologies such as Persulfate in the Feasibility Study for application in the deeper and higher concentrations of the aquifer at site 88.

If you have any questions or comments, please contact me, at (919) 508 8467 or email [randy.mcelveen@ncmail.net](mailto:randy.mcelveen@ncmail.net)

Sincerely,

A handwritten signature in dark ink, appearing to read "Randy McElveen". The signature is written in a cursive style with a large, looped initial "R".

Randy McElveen  
Environmental Engineer  
NC Superfund Section

Cc: Dave Lown, NC Superfund Section  
Bob Lowder, EMD/IR  
Gena Townsend, USEPA