

# Minnesota Pollution Control Agency

January 30, 1996

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

Mr. David Cabiness, Code 1862  
Mr. Scott Glass, Code 18610  
Commanding Officers  
Southern Division  
Naval Facilities Engineering Command  
P.O. Box 190010  
North Charleston, South Carolina 29419-9010

RE: Naval Industrial Reserve Ordnance Plant

Dear Mr. Cabiness and Mr. Glass:

Thank you for inviting us to the recent meeting at the Naval Industrial Reserve Ordnance Plant (NIROP) to discuss seismic imaging and other geophysical techniques that are being considered for the remedial investigation for Operable Units 2 and 3 for the NIROP Site (Site). The purpose for considering these techniques has been previously identified by the U.S. Navy (Navy) and the regulatory agencies.

The Minnesota Pollution Control Agency (MPCA) staff listened to the suggestions made by the United States Geological Survey (USGS) staff that attended the meeting. It is our strong impression that the USGS feels that seismic reflection inside the building is of very limited usefulness due to the problems with the concrete floor, rebar in the concrete floor, fill below the buildings and interferences from equipment vibrations. A number of potential problems were also discussed concerning ground penetrating radar use within the building which leads us to believe that its usefulness is very limited also.

Based on the discussion at this meeting, unless the Navy provides rationale otherwise, the Navy shall follow the course of action identified below.

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The Navy shall:

1. Compile regional and existing Site geological data;
2. Develop a conceptual model of geological conditions at the Site from this data paying particular attention to the location, extent, depth and thickness of fine grained units which may influence the movement or accumulation of dense nonaqueous phase liquids (DNAPL) at the Site;
3. Decide what additional geologic information is needed to focus the remedial investigation; determine the geologic controls for DNAPL accumulation and migration; and refine the hydrogeologic model of the Site;
4. Decide what geophysical work can be done outside the building to better refine the geologic conditions outside the building to aid in the interpretation of what the geology might be beneath the building. Potentially, this information will be used to focus some of the work within the building.

Geophysical investigation shall be used to investigate the geologic conditions in the barrel disposal areas in the North 40 to determine the location of fine grained units which may influence the migration or accumulation of DNAPL in the North 40. Again, in all areas particular attention shall be paid to fine grained units which might influence the movement or accumulation of DNAPL at the site;

5. Decide whether additional data can be acquired by completing seismic reflection and/or ground penetrating radar lines (which might include running lines through the main building's storm and sanitary sewers). Our impression from the USGS meeting is that these technologies will have limited usefulness within the building and that use of these technologies may be very experimental;
6. Complete a test line to see if site conditions are amenable to the above techniques;

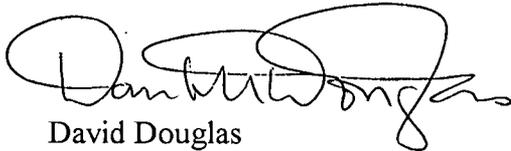
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7. Gather additional geophysical information (additional lines) if warranted;
8. Decide whether data can be acquired from within the building by geoprobe or soil borings at the same time that soil samples are taken;
9. Integrate geophysical and geological data to improve the conceptual model;
10. Go back to Item 3 until the Navy and the regulatory agencies are satisfied with the results of this investigation; and
11. Include a plan and schedule for completing this work, in the Remedial Investigation/Feasibility Study (RI/FS) Workplan for Operable Units 2 and 3.

Please review this letter and respond within 21 days of its receipt so that the RI/FS Workplan for Operable Units 2 and 3 will not be unduly delayed.

If you have any questions regarding this letter, please contact me at (612) 296-7818.

Sincerely,



David Douglas  
Project Manager  
Response Unit 1  
Site Response Section  
Ground Water and Solid Waste Division

DD:ch

cc: Sidney Allison, Navy, Southern Division  
Thomas Bloom, U.S. Environmental Protection Agency