



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

N91192.AR.000716
NIROP FRIDLEY
5090.3a

REPLY TO THE ATTENTION OF: SR-6J

November 15, 2004

Commander
Southern Division
Naval Facilities Engineering Command
Attn: Dan Owens, Code ES32
P.O. Box 190010
North Charleston, SC 29419-9010

Subject: Review of the Response to Comments on the Draft Report for a Field Application to Enhance In-Situ Bioremediation of Chlorinated Solvents via Vegetable Oil Injection. Naval Industrial Reserve Ordnance Plant, Fridley, Minnesota

Dear Mr. Owens:

The United States Environmental Protection Agency, Region 5 (EPA) Federal Facilities Response Section has finished the review of the Response to Comments on the Draft Report for a Field Application to Enhance In-Situ Bioremediation of Chlorinated Solvents via Vegetable Oil Injection, located at the Naval Industrial Reserve Ordnance Plant, Fridley, Minnesota.

The responses to USEPA's comments appear to be acceptable, issues remain on several of the concerns raised in the original comments. During our October 6, 2004 Technical Team Meeting we agreed that activities included in the proposed Work Plan Addendum should help resolve these issues. The following comments identify some issues, but do not require any further responses from the Navy at this time.

If you have any questions, please call me at (312) 886-6450 or e-mail me at smith.thomas1@epamail.epa.gov

Sincerely,

A handwritten signature in black ink that reads "Thomas L. Smith".

Thomas L. Smith, PG
Remedial Project Manager

cc: David N. Douglas, MPCA
Mark Sladic, Tetra Tech NUS, Inc
Venky Venkatesh, CH2M Hill
Laura Pugh, TechLaw
Richard H. Kuhlthau, TechLaw

COMMENTS

1. The previous response was adequate. No response is necessary.
2. The response is adequate. While it does not appear necessary to repeat the hydrogeologic discussion from the 2003 Annual Monitoring Report (AMR), it is recommended that those elements of site hydrogeology essential to the evaluation of the Pilot Scale Project be fully discussed and evaluated in the Final Report.
3. The previous response was adequate. No response is necessary.
4. The previous response was adequate. No response is necessary.
5. The response is adequate. While the response does not fully address the concerns identified in the comment, it has been agreed, based on discussions at the October 6, 2004 Technical Team Meeting, that the factors influencing distribution of total organic carbon (TOC) will be fully investigated during the planned activities included in the Addendum to the Work Plan for the Pilot Scale Study.
6. The response is adequate. It is not agreed that an analysis of contaminant trends prior to and after the system start-up is not relevant to the evaluation of the success of the pilot test. However, based on discussions at the October 6, 2004 Technical Team Meeting, it was agreed that such an analysis would be difficult to accomplish. It is hoped that, as indicated in the Navy's response, the carbon isotopes studies included in the Addendum to the Work Plan for the Pilot Scale Study will help to differentiate the impact of the vegetable oil injection from underlying trends in groundwater quality.
7. The response is adequate.
8. The previous response was adequate. No response is necessary.
9. The response is adequate.
10. The response is adequate. While the total molar concentration plots were not provided during the October 6 meeting, it is anticipated that these plots will be provided as part of the Technical Memorandum submitted after completion of the first round of sampling that will be conducted under the Addendum to the Work Plan for the Pilot Scale Study.

11. The previous response was adequate. No response is necessary.
12. The previous response was adequate. No response is necessary.
13. The previous response was adequate. No response is necessary.
14. The response is adequate.
15. The previous response was adequate. No response is necessary.
16. The previous response was adequate. No response is necessary.
17. The previous response was adequate. No response is necessary.
18. The previous response was adequate. No response is necessary.

Additional Comments on Revised Section 5, Conclusions and Recommendations

1. The response is adequate.
2. The response is adequate.
3. The response is adequate.
4. The response is adequate.