



Citizens Advisory Board
Idaho National Engineering and Environmental Laboratory

**Proposed Plan for Remediation of Contaminated Groundwater
Plume at Test Area North**

The Idaho National Engineering and Environmental Laboratory (INEEL) Citizens Advisory Board (CAB) has been interested in the ongoing remediation program addressing groundwater contamination at Test Area North (TAN) for many years. We understood that the original Record of Decision for remediation at TAN involved selection of the best available technology to reduce the risks associated with the groundwater contamination. We were nonetheless concerned regarding the extremely high costs associated with the "pump-and-treat" strategy, particularly in light of the relatively low effectiveness of that technology in reducing risks and removing contamination from the groundwater. We have been hopeful that the ongoing treatability studies would result in identification of an alternative technology that was more effective and cost effective.

Consequently, we were pleased to receive the recent Proposed Plan for Groundwater Remediation at TAN and to learn that recent treatability studies were successful. We appreciate DOE's willingness to extend its public comment period on the Proposed Plan to accommodate the INEEL CAB's schedule, and we submit this recommendation addressing our comments on the Proposed Plan.

It appears that the new remedy presented in the Proposed Plan-involving monitored natural attenuation in the distal zone, in situ bioremediation in the hot spot, and pump-and-treat in the medial zone-is both economically and environmentally preferred over current reliance solely on pump-and-treat. We applaud this successful demonstration of the value of expenditures on research and development. The INEEL CAB recommends that the process of identifying and demonstrating emerging technologies with potential merit serve as a model for future efforts. We are particularly excited that successful demonstration of in situ bioremediation may have widespread applications.

We do have some concern regarding the potential for lead contamination that could result from the lactate amendment that is currently proposed to stimulate the bioremediation. We understand that the three agencies-the Department of Energy's Idaho Operations Office, the State of Idaho, and Region X of the U.S. Environmental Protection Agency-are in agreement that it is safe to assume the amendment will pose no risk of lead contamination. The INEEL CAB recommends implementation of the preferred alternative presented in the Proposed Plan. However, we also recommend that DOE conduct ongoing monitoring of all contaminant levels to ensure that the assumption (that the lead in the lactate amendment will pose no risk) is a good assumption. If the maximum contaminant levels (allowed under law) for any contaminant are exceeded as a result of the new remedy, then the INEEL CAB recommends:

- Immediate cessation of use of the lactate amendment until the source of the contamination can be identified and
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- Immediate implementation of groundwater contamination treatment measures to reduce the concentration of contaminants before risks increase to unacceptable levels.
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The INEEL CAB further recommends that DOE:

- Develop contingency plans for immediate implementation in the event that bioremediation results in increased concentrations of contaminants; and
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- Continue to search for an alternative amendment that would pose lower risks.
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The INEEL CAB was favorably impressed with the well-written Proposed Plan that is well organized and nicely formatted.

The INEEL CAB was particularly pleased with the timely incorporation of an emerging technology into its cleanup program. We hope that DOE will continue to be as protective as possible by continuing to monitor emerging technologies and considering implementation of any that appear promising. We are particularly interested in emerging technologies that would reduce overall cleanup costs and/or enhance environmental protection.