Specific Recommendations and Proposal to Collaborate from the MIT Superfund Research Program

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It is the collective view of the MIT Superfund Research Program that the following actions are needed.

- A deeper characterization of DAPL
  - The MIT SRP offers to assist in this effort
  - The MIT SRP requests a sample of DAPL
- Monitoring of ongoing nitrosamine formation and nitrosamine levels over time
  - The MIT SRP offers to help
  - The MIT SRP team is developing a rapid NDMA sensor and offers to test NDMA levels in water in and around the Olin Chemical Superfund Site
  - The MIT SRP requests access to water samples
- Testing and monitoring of additional nitrosamines beyond NDMA in DAPL, LNAPL, and soil/sediment.
  - The MIT SRP team is developing analytical approaches to detect and identify multiple N-nitrosamines
  - The MIT SRP requests water samples for analysis (surface water and well water)

Additional Recommendations:

- More aggressive remediation of LNAPL and soil/sediment
  - Build effective barriers, including containment walls that extend to bedrock and permanent, secure, impermeable caps
  - Securely remove and contain contaminated LNAPL and soil/sediment without spreading contaminants beyond the site
- Communicate the intended fate of treated, excavated, or otherwise removed contamination
- Chemical contaminants should not be transferred to another site that risks human exposure
- A critical evaluation of pump-and-treat for DAPL and LNAPL remediation
  - Evidence of efficacy for this method should be established
  - Treated waste should be tested for remaining contaminants and nitrosamine precursors before it is re-released into any environment

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- Characterization and remediation of nitrosamine precursors in DAPL, LNAPL, and soil/sediment
- If nitrosamine concentrations do not decrease significantly on site or in the plume, alternative remediation methods should be identified and applied