

# Continued Discussion of In-Situ Bioremediation

- Treatability Study (TS) at LHAAP-58

- Groundwater was collected from monitoring well 35AWW08 and a soil sample was collected near the well using direct push technology.
- One lactate based carbon source (e.g. sodium lactate) and one vegetable oil based carbon source (e.g. emulsified vegetable oil (EVO)) were evaluated during the TS.
- The following environments were constructed in the laboratory:
  - Anaerobic sterile control
  - Anaerobic active control
  - Treatment microcosm with lactate-based carbon source
  - Treatment microcosm with EVO-based carbon source.
- Seven post-baseline events were performed to document the progress of the TS. These included:
  - Microcosm Sampling
  - Chemicals of concern
  - pH
  - Chlorinated volatile organic compound and dissolved hydrocarbon gasses
  - Anion parameters
  - Volatile fatty acids
  - Total organic carbon

# Continued Discussion of In-Situ Bioremediation Cont.

- **Treatability Study (TS) at Site 58**

- The results of the TS indicated that both treatment microcosms achieved completed dechlorination (reduction of PCE/TCE to ethene). The chlorinated VOCs in the control microcosms remained stable as expected. Similarly, reductions in sulfate concentrations were observed in both treatment microcosms.
- The lactate-based amendment is a relatively fast substrate compared to the EVO-type substrates as evidenced by the TS data and is proposed for use as a carbon source during remedial action for LHAAP-58 groundwater, as needed.

# In-situ Bioremediation

## LEGEND

PRESSURE GAGE	Ⓟ
FLOW METER	Ⓢ
VALVE - GATE	⊗
VALVE - BALL	⊗
QUICK-CONNECT UNION	—┘┐—
AIR RELEASE VALVE	Ⓜ

