

**Table A-20.B. Evaluation factors for physical or hydraulic containment**

|                                      |            |   |
|--------------------------------------|------------|---|
| Remedial time frame                  | Concern    | Low   |
|                                      | Discussion | Very short to deploy, but potential long-term application. Time to construct containment structure varies with type, length, depth, and other logistical factors. Time to achieve remedial goals depends on site-specific requirements (e.g., mitigate risk, remove LNAPL, reach regulatory standards in groundwater, etc.).  |
| Safety                               | Concern    | Low to moderate   |
|                                      | Discussion | Some potentially significant safety issues, but construction related and typically routine. The use of large, heavy equipment can be a factor. Potential side wall collapse during excavation and long-term geotechnical stability. In addition, if a slurry wall is the containment structure of choice, the excavated materials may come into contact with workers. |
| Waste management                     | Concern    | Moderate  |
|                                      | Discussion | Significant liquid waste stream may be generated. Soils visibly saturated with LNAPL cannot be used in the slurry mix and are segregated. Excess slurry and soils not included in the slurry mix are waste materials. Pumping-based hydraulic interception may require treatment of effluent.   |
| Community concerns                   | Concern    | Low to moderate   |
|                                      | Discussion | Typically familiar with and accustomed to excavation/construction work. Concerns may be significant due to volatile emissions, odors, traffic, exhaust, etc. If a sheet pile containment structure or aboveground effluent treatment is used, noise could be a factor. Also, the public may see containment as not equal to cleanup.                                  |
| Carbon footprint/energy requirements | Concern    | High  |
|                                      | Discussion | Equipment emissions and energy requirements large. Energy is used for the excavation machinery and trucks to haul the wastes off site. In addition, for volatile LNAPLs, the slurry trench generates volatile emissions. Active hydraulic interception requires energy for pumping and treatment.   |
| Site restrictions                    | Concern    | High  |
|                                      | Discussion | Disruptive technology, physical space, and logistical demands significant. Due to the use of large, heavy equipment and the need for approximately 20–30 feet of clearance on either side of the physical containment structure, could be limited due to buildings, utilities, and natural habitats.  |
| LNAPL body size                      | Concern    | Low to moderate   |
|                                      | Discussion | Applicable to only migrating portion of the LNAPL. The extent of the containment infrastructure depends on the LNAPL body needing to be contained.  |
| Other regulations                    | Concern    | Low to moderate   |
|                                      | Discussion | Normal construction, well, storm water, and discharge permitting. Other regulatory agencies may need to be included in decision making for the alignment of the containment infrastructure due to wetlands impacts; floodplain construction; water rights of adjacent land owners; or other federal, state, or local regulations.                                     |
| Cost                                 | Concern    | Moderate to high  |
|                                      | Discussion | Depends on the length and depth of the physical containment structure, the type of physical containment structure chosen, and any possible site restrictions.   |
| Other                                | Concern    |   |
|                                      | Discussion |   |