

**Table A-4.B. Evaluation factors for total liquid extraction**

Remedial time frame	Concern	Moderate
	Discussion	Medium. Depends on soil type, LNAPL type, release size, footprint, and end point (e.g., LNAPL thickness, sheen, or oil transmissivity goal). Low-permeability soils and heavier LNAPL require more time to remediate.
Safety	Concern	Moderate
	Discussion	The remediation equipment is either placed in a compound or trailer mounted. There are moving parts, piping under pressure and vacuum, and potential for vapor accumulation in remediation trailers. There may be electrical concerns with a submersible pump in a well with LNAPL.
Waste management	Concern	Moderate to high
	Discussion	Recovered LNAPL and groundwater need to be managed and properly disposed. LNAPL should be recycled if possible. Process water may need treatment prior to disposal.
Community concerns	Concern	Moderate
	Discussion	Although, equipment is usually out of sight, there is a potential for concerns with noise, odors, volatile emissions, aesthetics, and access issues.
Carbon footprint/energy requirements	Concern	Moderate
	Discussion	Remediation runs continuously or cycles.
Site restrictions	Concern	Moderate
	Discussion	Typically, all equipment is in a compound, and piping is below ground. Equipment typically can be deployed in manner to accommodate many site restrictions. Power needs to be supplied to the system, and produced water needs treatment.
LNAPL body size	Concern	Low
	Discussion	Capable of remediating large and small LNAPL plumes. Lithology and permeability determine the spacing between recovery wells.
Other regulations	Concern	Moderate
	Discussion	May need a permit to discharge water. Electrical codes may govern equipment placement and use.
Cost	Concern	Moderate
	Discussion	Capital costs are higher than skimmer pumps, and operation and maintenance are much higher to maintain the system, but potentially for a shorter time frame. Separation of emulsified oil requires special equipment and additional maintenance.
Other	Concern	
	Discussion	