

Remedy Optimization in the Era of Performance-Based Contracting

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The US Army Corps of Engineers (USACE) Environmental and Munitions Center of Expertise (EM CX) has been conducting remedy optimization since 1998 using the Remediation System Evaluation (RSE) approach. This approach is an independent, expert, and holistic look at the remedy to assure effectiveness, reduce costs, and a realistic exit strategy. RSEs are conducted at the request of an agency and would be conducted periodically until the desired end state is attained.

Performance-based contracts (PBCs) do not provide specific instructions for the contractor to perform their work, instead providing clear objectives and realistic metrics to evaluate performance. The contracts may have terms of five or more years. By not constraining the contractor, the expectation is that the contractor would continually optimize the remedy while meeting objectives. The success of a PBC from the owner's point of view depends on crafting the objectives and metrics. Poorly stated goals and inappropriate metrics, particularly for long-term remedies, can result in unexpected risks (and costs) shifted back to the "owner." Note that a PBC would normally shift significant amounts of risk to the contractor and this comes at a premium in the contract price, unless the contractor anticipates ways to shift risk back to the owner.

Remedy optimization can be valuable in several ways when PBCs are planned or in-place. A RSE prior to letting a PBC can provide "seed" ideas that all of the bidders can consider in preparing their bids, leading to lower PBC costs. Optimization evaluations conducted during a PBC, independent from the PBC contractor, can assess the progress of the remedy and identify pitfalls that the contractor's approach may be creating for the "owner." The PBC contractor may not be very cooperative with the optimization. Ideas offered in the optimization can benefit the public and environment, particularly if green and sustainable remediation (GSR) concepts are part of the optimization. The optimization evaluation may recommend alternative formulations of objectives and metrics for the PBCs.

It is not yet clear that, for remedy implementation, that PBCs guarantee cost savings compared to traditional contracting and optimization approaches. Sharing of risk between owner and contractor, with periodic independent, expert optimization evaluations, may well provide more cost and time saving than PBCs. This would, however, depend on the ability for the "owner" to assure that the optimization recommendations are implemented.

The EM CX is currently developing suggestions for the Army's optimization efforts. The report is in preparation.