

What Problem is DOE Addressing?

1. DOE has thousands of waste isolation sites. Some are managed by LM, some are in transition and many are currently being cleaned up. Cleanup of the larger sites continues to 2035 or beyond. Any or all of these sites could pose a risk to workers and/or the environment and must be monitored to ensure that the isolation measures are performing as intended.
2. DOE owns hundreds of contaminated groundwater plumes that cannot be completely cleaned up in the short term. Cleanup of these plumes is a long-term task - we need to take actions so these plumes will not expand, and also document that the plumes are stable or shrinking.
3. We need to be creative and innovative. Performance monitoring as now practiced is expected to be the greatest cost factor when it is continued for decades.
4. New performance monitoring technologies should make the problem more manageable. We need to identify such technologies as soon as possible and put them to use.

Here's What DOE Needs:

1. Integrated monitoring systems where multiple pieces of data fit together to create a comprehensive picture of site performance.
2. Monitoring tools that require fewer samples or that measure performance more directly.
3. Better early warning indicators that performance may be slipping to enable quick corrective measures.
4. Computer models that can be used to integrate large data sets into easily understood representations and forecasts of performance.

The Challenge for this Workshop:

1. Identify new monitoring and modeling tools and systems that can improve the state-of-the-art in performance monitoring.
 - a. What's available now?
 - b. In the near-term (within 3 years)?
 - c. In the long-term?
2. Tell the Department how performance monitoring needs to change according to site closure status.
3. Are there better ways to indicate that containment measures are effective? Identify those measures? Is the remediation successful?
4. How can monitoring and modeling tools or concepts improve communication with regulators and stakeholders?