High Resolution Site Characterization at Petroleum Underground Storage Tank Release Sites Applicability, Benefits, and Costs

Battelle Bioremediation Symposia Austin, TX May 10, 2023

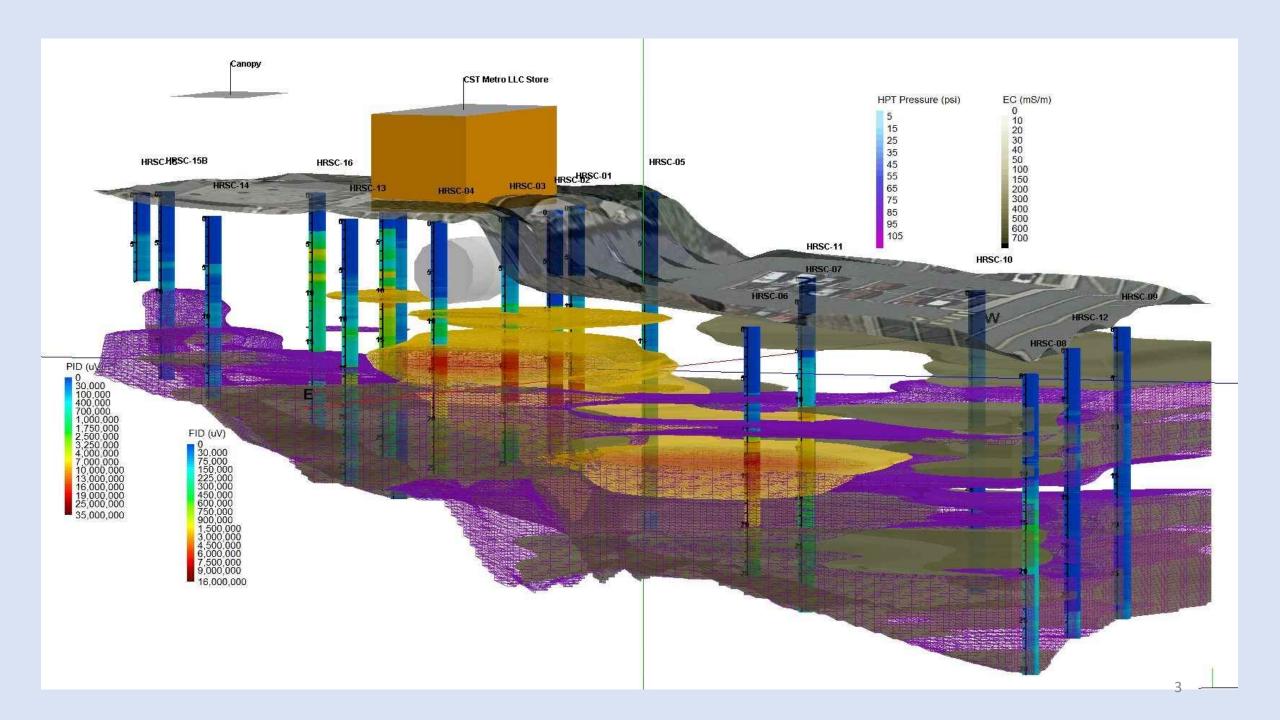
Tom Schruben, EPA OUST



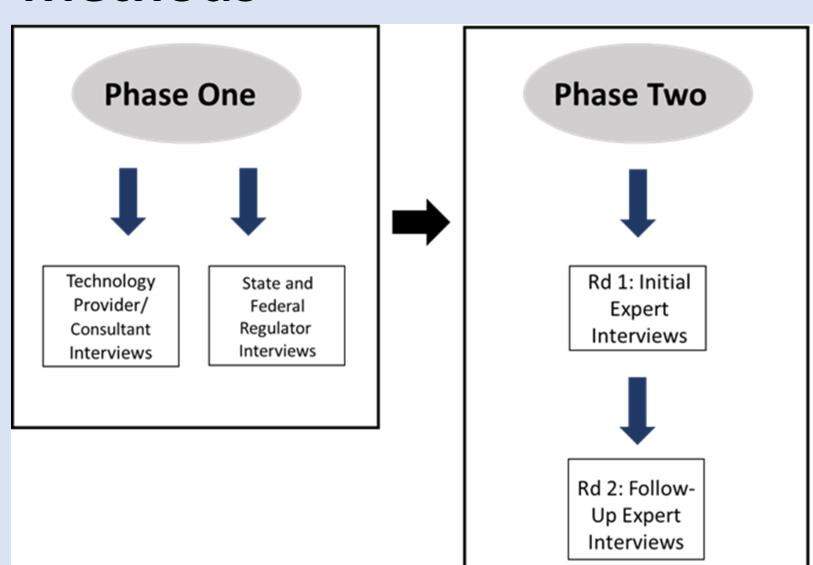
Goals

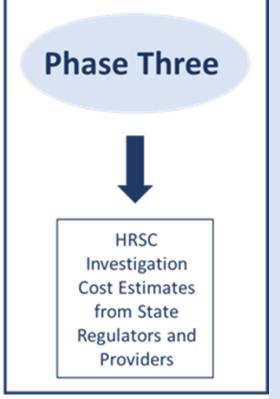
Questions we wanted to answer for petroleum UST release sites:

- In what situations could HRSC help?
- When does it save time and money?
- What are the barriers to wider use?



Methods





Utility

Quickly identify the extent of a large release.

Quickly identify the movement toward receptors.

Plan remedy that will cost more than \$100,000.

Large release has occurred into complex layered soils.

Determine screen placement in complex soils.

3rd round of investigation to define the extent.

CSM does not explain LNAPL movement.

CSM does not explain persistent or recurring LNAPL.

Differentiating between new and old releases.

Designing injection remedy.

Persistent or recurring levels in excess of cleanup goals.

Remedy has failed.

Present the CSM graphically to the public, stakeholders, or litigants.

Determine the volume of LNAPL and flow pathways for a MNA or NSZD remedy.

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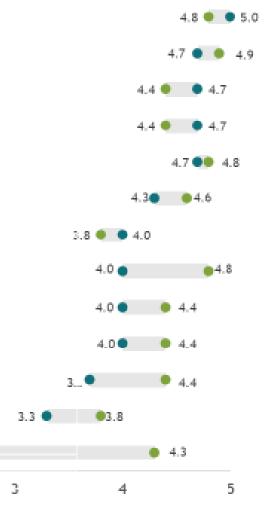
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3

In active remediation for over 10 years.



4.3

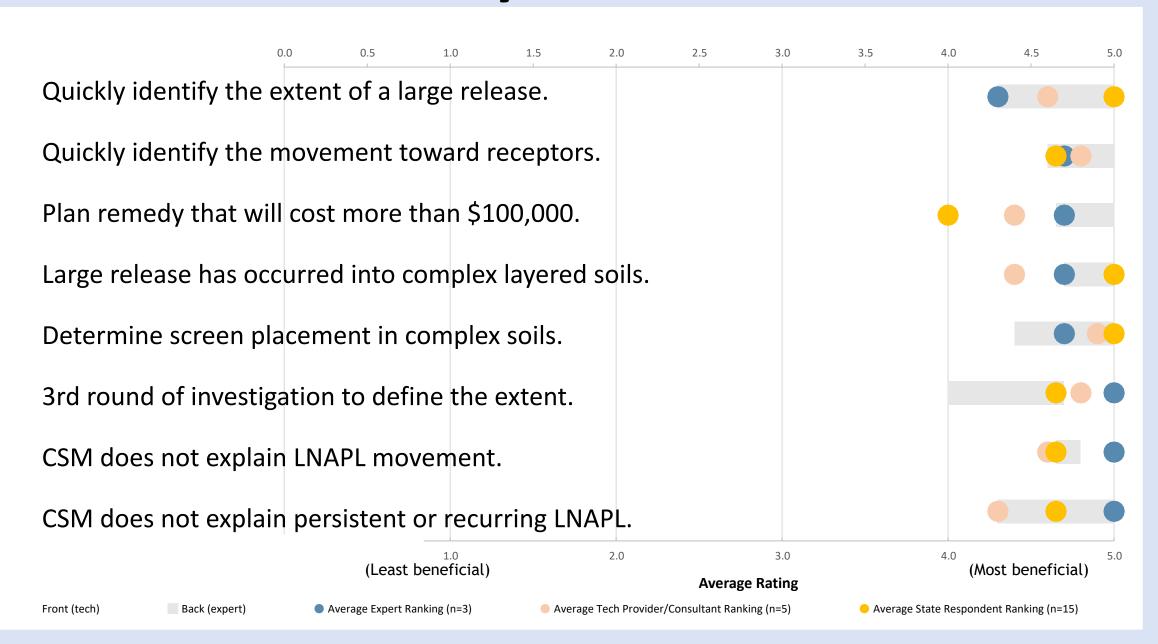
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5

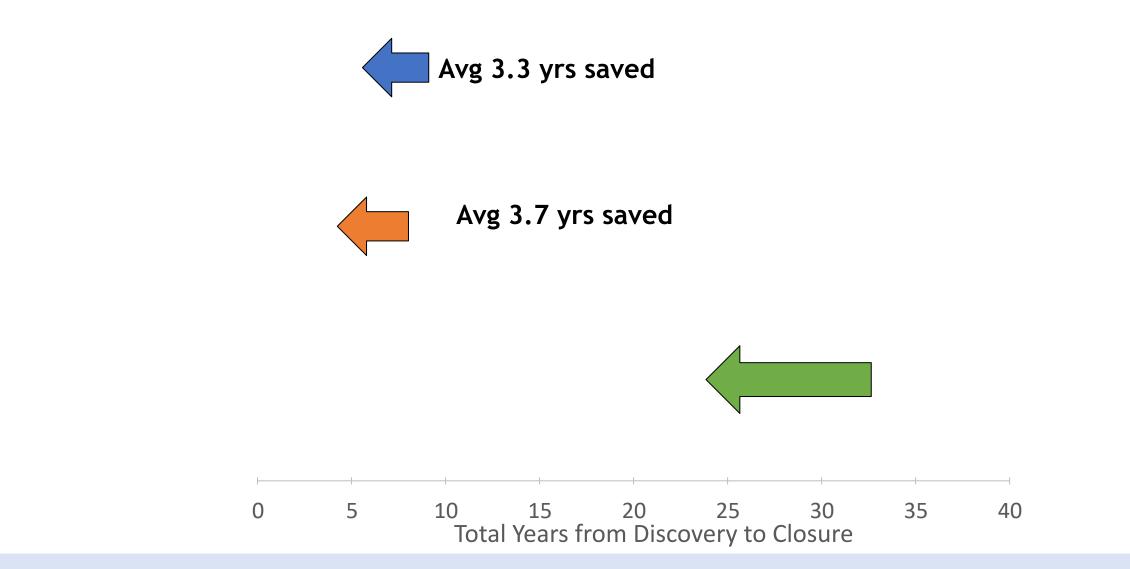
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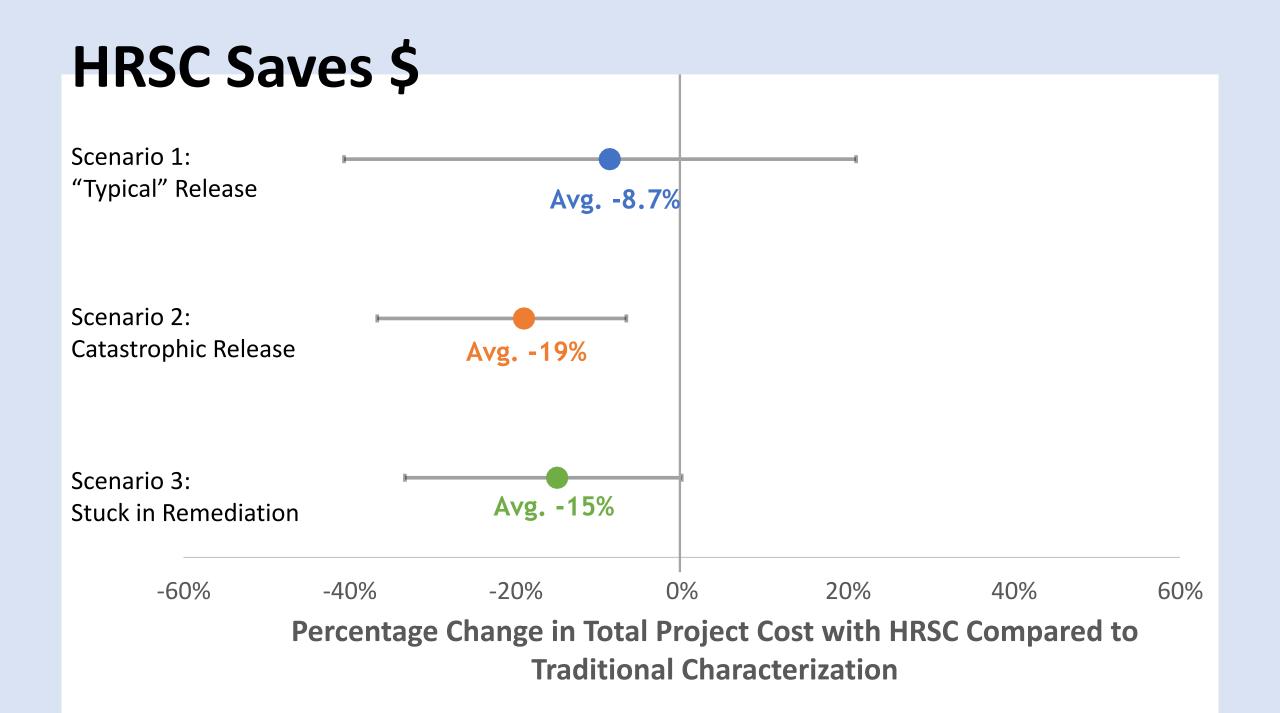
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Consensus on Utility

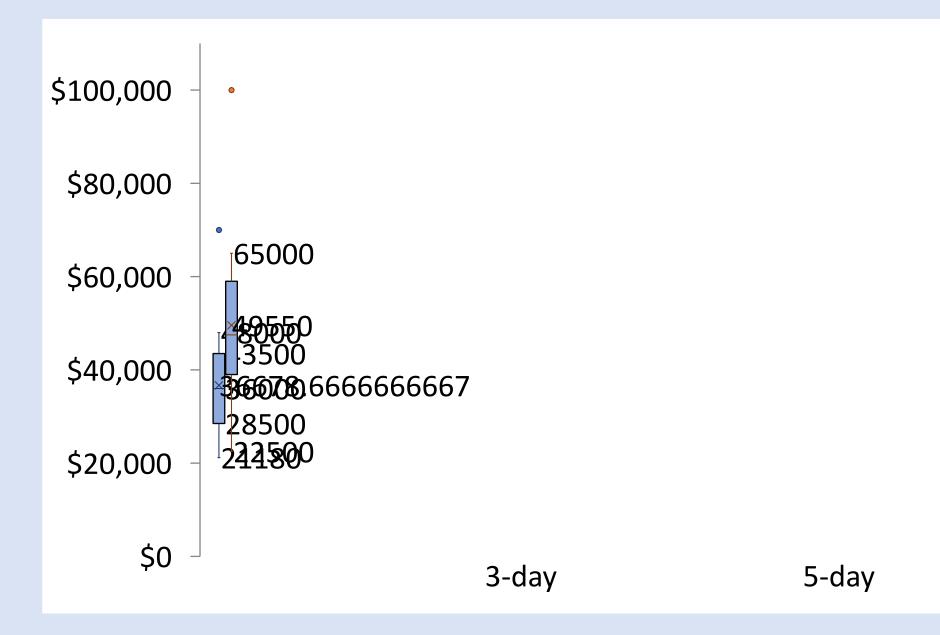


HRSC Saves Time

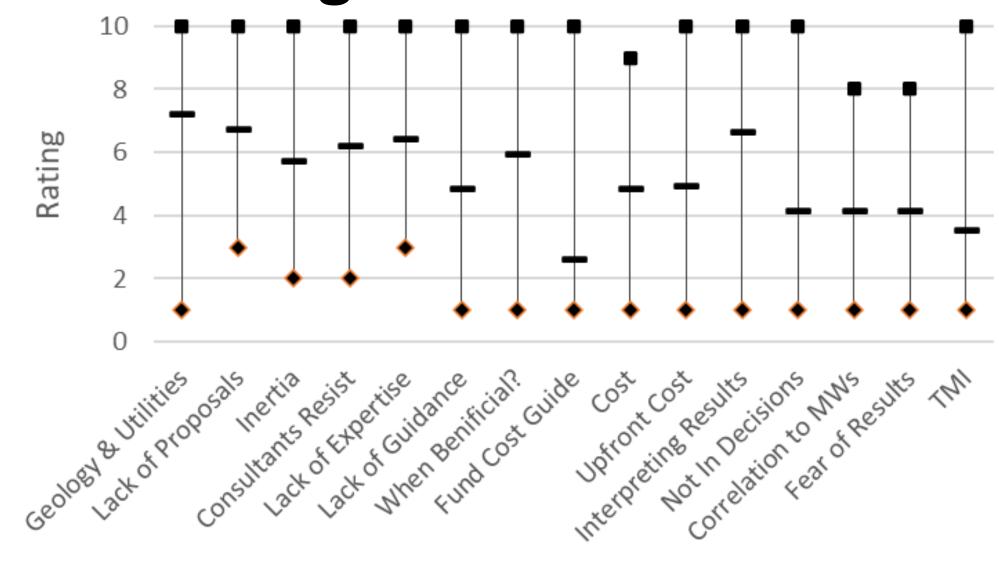




HRSC Cost



Barrier Ratings



- Max Rating ◆ Min Rating Average Rating

Conclusions and Next Steps

Worth the investment

Present findings to EPA, state, and industry partners

Develop guidance for using HRSC in Indian country

Work with ITRC on additional guidance and training

Work with partners to overcome barriers

Questions?



Alex Wardle: Wardle.Alexander@epa.gov

Tom Schruben: Schruben.Thomas@EPA.gov

