



Closed Petroleum Sites: Bringing Some Perspective

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INTRODUCTION

“WHAT ARE THE ODDS?”

- Brief & Relevant History of Vapors
- Discuss a Petroleum Project for MPCA
- Use History & Results to Provide Perspective

HISTORICAL INFO – PART 1

- More than 17,000 closed petroleum sites
- MPCA's vapor assessment began in 2008
- Majority of work – Early to mid '90s

HISTORICAL INFO – PART 2

ASTM E 1527-13 – PHASE I ESA

ASTM E 2600-15 – VEC GUIDANCE

#1) Petroleum Site within 0.1 miles

CONCLUSION #1

Phase I ESAs Will Identify LOTS of Petroleum Sites

#2) Look at closed files WITH TODAY'S EYES

PROJECT SCOPE - INITIAL

“What About the Closed Sites?”

- Currently reviewing “highest risk” closed sites (LNAPL, schools, residential)
- Our instructions: look at sites with today’s eyes
- To date, we have reviewed 249 files

PROJECT RESULTS - INITIAL

- To date, we have fully reviewed **249** files
- We have recommended vapor work at **223** sites.

CONCLUSION #2

90-95% of Phase I ESAs w/petroleum = REC/VEC

PROJECT RESULTS – PHASE II

- Sites drilled: **69**
- Site requiring additional work: **7**
- At current pace, approximately 22 of 249 sites will require either additional sampling or mitigation.

CONCLUSION #3

ONLY 10% of Phase IIs w/petroleum need more

PROJECT RESULTS – PHASE II

- Sites requiring additional work: 7
- Only when there is very shallow groundwater, the receptors are in contact with contaminated soil, or they are directly above LNAPL body.

CONCLUSION #4

Predicting petroleum results isn't hard

PROJECT RESULTS – PHASE II

- 223 Phase I ESAs w/petro = REC/VEC
- 22 Phase IIs w/petroleum need more
- **What about the other 200 sites????**

CONCLUSION #5
MOST Sites Fall Into Gray Area!

THE GRAY AREA

- Making Decisions NOT Following Requirements
- Risk Tolerances & Liability Protection Desires
- Be Prepared for Most Likely Alternative

CONCLUSION #6
TEAM COMMUNICATION IS KEY!

SUMMARY

- **90-95% of Phase I ESAs w/Petroleum = REC/VEC**
- **ONLY 10% of Phase IIs w/Petroleum Need More**
- **Predicting Petroleum Results isn't Hard**
- **Most Sites Fall Into Gray Area**
- **Communication around Risk Tolerance is Critical**