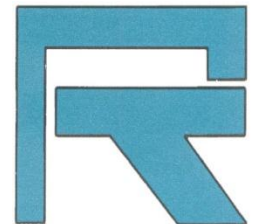


MANAGING RISKS TECHNICALLY

**PA Brownfields Conference
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Gary R. Brown, P.E.
President
RT Environmental Services, Inc.



CAP DISRUPTION

- “Dig One” Notices
- UECA Issues
- Exposures
- Excavated Material Management

CLEANUP LEVEL CHANGES

- Soil Vapor/Unaddressed Media
- Impacts from Soil Vapor
- Multi-Party Complications

CHANGES IN CLEANUP LEVELS

- TCE/Federal v. State – Soil Vapor
- Arsenic – Groundwater – Pending Change

IMPRACTICALITIES

- Stream Source Areas
- PENNTOX D/SW LOAD Inapplicability
- Continuing Low Level Release

SHORT TERM V. LONG TERM CONSIDERATIONS

- Full Cleanup
- Managing Impacted Materials in Place

NORTH PENN CASE STUDIES

- New Contaminant – Acrolein
- Facility With Day Care (Recent Construction)
- Shallow Groundwater – Failed Transaction – Risk Assessment or SVE
- Between Release Sites – Tested and Okay (State Standards)

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MANAGING RISKS TECHNICALLY

- By Gary R. Brown, P.E., President, RT Environmental Services, Inc.

Once remediation is completed at a cleanup site, a number of risks still have to be managed, going forward.

Such risks include:

- Cap disruption (intentional and unintentional, and exposure to impacted soil).
- Changes in cleanup levels, or new “media concerns”, including potential impacts from soil vapor, not assessed at the time of previous remediation.
- Implementation of more stringent cleanup levels, such as for arsenic in groundwater, or, for TCE in soil vapor.

Situations sometimes also arise at active manufacturing or other sites, where there is no easy way to address a release, under a state Brownfields program, because “attainment” cannot be reliably achieved. In such instance, risk assessment techniques or long-term monitoring can sometimes be used, but, unfortunately “impracticalities” will occasionally lead to an inability to attain an acceptable standard as a permanent remedy.

This presentation will focus on current due diligence issues, and design issues associated with soil vapor and indoor air cleanup levels, which result in having to reassess previously “cleaned up” sites. Focus will be on several case studies in “North Penn” area, near Philadelphia, where widespread solvent contamination in groundwater is causing sites to have to be further assessed during subsequent transactions.