Guaranteed Remediation Program (GRiP)
Blending technology, experience and business considerations to provide:

- Accelerated closure
- Closure cost certainty
- Dependable environmental liability transfer
CONSULTING
If you’re not a part of the solution, there’s good money to be made in prolonging the problem.
PREMISE: After 25 + years of RCRA / CERCLA “induced” experience isn’t it reasonable to expect the consulting industry to:

- Accelerate the process of environmental liability closure
- Assume some, if not all, of the risks the industry has built T&M understandings on, such as:
  - Regulatory uncertainties
  - Unidentified / unexpected site conditions
  - Remedy performance
- Engage in “pay for performance” contracts that incorporate provisions for:
  - Cost certainty
  - Time certainty
  - Aligning goals of clients and consultants
- Remain financially sound - provide uninterrupted service
- In summary, just **STEP UP!**

**ARCADIS** Effective liability transfer through accelerated closure.

*Infrastructure, buildings, environment and communications*
Alignment of Objectives

“Traditional Situation”

Cost Reductions
Timely Project Completion

Client / Owner

Consultant

Maintain Project Activity

Bill Hours

Effective liability transfer through accelerated closure.
Alignment of Objectives
Identify and Align Ultimate Objectives

Favorable financial mgmt and closure of environmental liabilities

Consultant

Maximize Profitability

Guaranteed Performance

Client / Owner

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So how does guaranteed remediation work?

**Remediation Provider**

+ $8,000,000

**IN RETURN**

1. Contractual commitment (guarantee) to achieve project completion:
   - ASAP
   - Regardless of actual cost
2. Willing to:
   1. Assume operator status
   2. Sign onto Consent Orders
3. Commitment (guarantee) supported by:
   1. Consultants own balance sheet
   2. Financial strength of insurance partner

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In order for this to work... every project needs a solid strategy containing the following elements:

- $10,000,000 liability
- $8,000,000 closure

- Regulatory Support
- Cost Effective Decision Making
- Process Efficiencies
- Technology Advantages

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Carbohydrate Injection System

Batch Tank

Solenoid Distribution

Molasses Tank

Cadillac

... or the Chevy

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Technology Advantages:

- Perform below ground what was previously done above ground
- Utilize and enhance natural processes wherever possible

Infrastructure, buildings, environment and communications
ARCADIS GRiP Value Proposition

- Achieve “Project Completion” ASAP
  - Thereby avoiding prolonged windows of potential exposure (real or perceived)
- Provide flexibility in defining “Project Completion”
- Maximize the reuse potential of the “impaired asset” - avoid remediation strategy extremes, such as:
  - Land use restrictions
  - Encumbering remedial approaches (above ground extraction and treatment operations)
  - MNA approach (w/ long monitoring tails)
- Enable early re-use / sale / concurrent development to occur
- Provide project cost certainty
- Provide cost certainty at substantially less than the clients benchmark
- Provide such certainties while assuming responsibility for:
  - Regulatory uncertainties / re-openers
  - Unexpected site conditions (hydrogeology, contaminant mass)

ARCADIS Effective liability transfer through accelerated closure.
ARCADIS GRiP… how is this different?

- Lead with technology
- Self-perform all of our projects
- Program manage ALL of our GRiP projects at the Corporate level with hand picked teams drawn from 2000 staff nation-wide assigned on every job
- Put our balance sheet at risk
- Use insurance as a “worst case” risk management tool only!
- Show our insurance partners a willingness to assume larger risks than anyone else in the marketplace

MOST IMPORTANTLY:

At the end of the day, the only really effective means by which to transfer liability is to eliminate environmental liabilities as quickly as possible!!

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Program operating / evolving effectively for > 9 years
47 contracts executed (ranging from < $.5M to > $25M)
Total contracted value of more than $120,000,000
16 sites closed (average duration of 4 years)
Closed first DOD site ever under GFPR (2.5 years)
Enabled > $1,000,000,000 in property redevelopment to occur
Both Federal and local regulatory agencies supportive of approach
Sites need not always be well characterized
Clients closure cost benchmarks are not very strong – most are overstated and not believed
Guaranteed price has some value in setting contingent environmental liability reserves
Useful tool for dispute resolution
Approach is only a tool and should be used judiciously
Value as a “liability transfer tool” varies from client to client
Limited PM resources in marketplace capable of implementing
Considerable mis-information in marketplace
Portfolios of multiple sites can offer greater value still
Case History #1: Washington Square Mall
Germantown, Wisconsin

1998

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Geologic Cross Section

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Initial Carbon Injection

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Initial Carbon Injection
Effective liability transfer through accelerated closure.
Groundwater Remediation Results Monitoring
Well MW-13
Successful Remediation / Property Redevelopment

- 20 months
- $1,500,000 guaranteed cost
- Enabled $70,000,000 of value

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**Case History #2**: Emeryville, CA

**Location of Injection Points**

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Injection Well Installation (inside Former Plating Building)

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Effective liability transfer through accelerated closure.

Average Treatment Results for Total and Hexavalent Chromium

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IRZ Technology Treatment Results

Pilot Study

MW-14

Remediation Injection Events

Treatment Results for Hot Spot Area

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IRZ Technology Treatment Results

Pilot Study

MW-14

Remediation Injection Events

Treatment Results for Hot Spot Area

Effective liability transfer through accelerated closure.
• 30 months to complete
• $600,000 guaranteed remediation cost
• T&M price > $3,000,000

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