



Quality management for contaminated land – a consultant's perspective

Andrew Petsonk

WSP Environmental

Stockholm

+46 8 688 64 16

”How Clean is Clean”

Where are the quality issues ?

■ Investigation

- Planning
- Sampling
- Analyses
- Interpretation (incl. Risk assessment and selection of remedial alternatives)

■ Remediation

- Design
- Purchasing
- Implementation
- Monitoring and interpretation
- Documentation

Two main actors

■ Swedish EPA

- QA for investigations, report 4667, 1997
- Remedial requirements, report 4807, 1997
- QC for handling grants, 2003 revised 2006
- Various other guidance documents

■ Swedish Geotechnical Society (SGF)

- Course on investigation and remediation, since 1995
- Field guide, 2001 revised 2004
- Health and safety during investigations, 2002
- Certification of sampling personnel, since 2006
 - General, soil, sediment, waste, ground water

Two (three) main actors

■ Swedish EPA

- QA for investigations, report 4667, 1997
- Remedial requirements, report 4807, 1997
- QC for handling grants, 2003 revised 2006
- Various other guidance documents

■ Swedish Geotechnical Society (SGF)

- Course on investigation and remediation, since 1995
- Field guide, 2001 revised 2004
- Health and safety during investigations, 2002
- Certification of sampling personnel, since 2006
 - General, soil, sediment, waste, ground water

■ (ISO + SIS)



Ongoing projects

■ Swedish EPA

- Guidance for risk assessment
- Guidance for selection of remedial alternatives
- Updated guidance for remedial requirements

■ SGF

- Contaminated buildings
- Requirements for *in situ* remediation



What's missing ?

■ "How Clean is Clean"

- Not in terms of assessment endpoints and remedial goals
- But with regard to
 - a) What needs to be monitored to verify correct assessment of endpoints and attainment of goals, and
 - b) How verification should be done

■ Statistical definitions

- Listed up front for investigations and remediation