

**Real Property Institute of Canada**  
**2008 Federal Contaminated Sites National**  
**Workshop**

Tuesday April 29, 2008

**Stream B: Remediation Management**  
**Introductory Comments**

**Dirk van Zyl**  
**Professor of Mine Life Cycle Systems**

[dvanzyl@mining.ubc.ca](mailto:dvanzyl@mining.ubc.ca)

(604) 827-3462



**UNIVERSITY OF BRITISH COLUMBIA**  
**NORMAN B. KEEVIL Institute of Mining Engineering**

tel: 604 822 2540 fax: 604 822 5599 517, 6350 Stores Road, Vancouver, BC V6T 1Z4 [www.mining.ubc.ca](http://www.mining.ubc.ca)

# Outline

- Project management basics
- What is so different in remediation management?
- Legacy issues
- Some insights from organizational behavior
- The richness of this session

# Project Management Basics\*

- Basic process groups (“project life cycle stages”):
  - Initiating
  - Planning
  - Executing
  - Monitoring and controlling
  - Closing
- Processes are described in terms of:
  - Inputs (documents, plans, designs, etc.)
  - Tools and techniques (mechanisms applied to inputs)
  - Outputs (documents, products, etc.)

\* Project Management Body of Knowledge (PMBOK), Project Management Institute

# Project Management Basics (2)

- Nine knowledge areas:
  - Project integration management
  - Project scope management
  - Project time management
  - Project cost management
  - Project quality management
  - Project human resource management
  - Project communications management
  - Project risk management
  - Project procurement management

# What is so Different in Remediation Management?

- Difficult organizational issues – different approach to project management?
- Complex regulatory issues and agreements
- Community engagement – new challenges
- Broad expectations of performance:
  - Financial
  - Schedule
  - Outcomes of project
  - Long-term performance
- Unique technological solutions/ applications
- Understanding natural processes

# Legacy Issues:

Risk = hazard + outrage\*

- \* *Sandman, Peter M. (1993) Responding to Community Outrage: Strategies for Effective Risk Communication, American Industrial Hygiene Association, Fairfax, VA. 142 pp*

# Core of Outrage Argument

- Outrage is as real as hazard
- Outrage is as measurable as hazard
- Outrage is as manageable as hazard
- Outrage is as much part of risk as hazard
- Outrage is as much part of the risk communicator's job as hazard

*Experts are usually right about hazard and the public is usually right about outrage*

# Risk Communication

- Two tasks:
  - Need to talk better, to explain that the hazard is low
  - Need to listen better, to hear that the outrage is high and take action to reduce it
- Solution is to take public outrage as seriously as hazard and to keep them separate

*Outrage exerts enormous influence on the priorities and actions of legislators, regulators, and regulated industries*

# Components of Outrage

1. Is it Voluntary or Coerced?
2. Is it Natural or Industrial?
3. Is it Familiar or Exotic?
4. Is it Not Memorable or Memorable?
5. Is it Not Dreaded or Dreaded?
6. Is it Chronic or Catastrophic?
7. Is it Knowable or Not Knowable?
8. Is it Controlled by Me or by Others?
9. Is it Fair or Unfair?
10. Is it Morally Irrelevant or Morally Relevant?
11. Can I Trust You or Not?
12. Is the Process Responsive or Unresponsive?

# Other Outrage Factors

13. Effect on Vulnerable Populations
14. Delayed vs. Immediate Effects
15. Effect of Future Generations
16. Identifiability of the Victim
17. Elimination vs. Reduction
18. Risk-Benefit Ratio
19. Media Attention
20. Opportunity for Collective Action

# Some Insights from Management Behavior

- You get what you reward
- You deserve what you tolerate

# The Richness of this Session

- Accounting and reporting rules
- Involving traditional knowledge of Elders in remediation plan development
- Integrated risk management
- Stakeholder engagement for project in National Park
- Achieving social and economic benefits for aboriginal and northern peoples, businesses and communities
- Sustainability and remediation – hydrocarbon aspects
- Remediation of Canadian Forces Base
- Website tool for selection of rehabilitation technologies

**Let us sit back and learn from  
the practitioners!!!**