

Remediation and Risk Management of Extractable Petroleum Hydrocarbon Contamination in Freshwater Sediments

BC Perspective RemTech – October 20th, 2011





- Site Overview
- Collapsed Area
- Investigation
- Remediation
- Risk Assessment
- Risk Management
- Conclusions

Outline



Site Overview





Site Overview







Site Overview





Collapsed Area





Investigation

Collapsed wharf



Partially buried metal debris piles

View from under the wharf





Because of the debris, APEC 4 was carried forward as an AEC.







Remediation





How do we know when we can stop sediment remediation?







EcoNomics

Benchmarks

Habitat

Physical-chemical properties

Toxicity Testing









- % survival: no significant effects

Chironomids

– % survival and growth: no significant effects







Risk Management

Lines of Evidence

- Habitat
- Physico-chemical properties
- Toxicity testing

Considerations

- Erosional and depositional
- River flow
- Artesian groundwater

Mitigation

- Cap design



Conclusions





Before

February, 2010



August, 2011



Acknowledgements





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