

NATO / CCMS Pilot Study
Prevention and Remediation in
Selected Industrial Sectors: Mega-
Site
Rock Bay Remediation Project

Robert MacDonald, Project Director, VEEP

Transport Canada

Ottawa, Ontario, Canada

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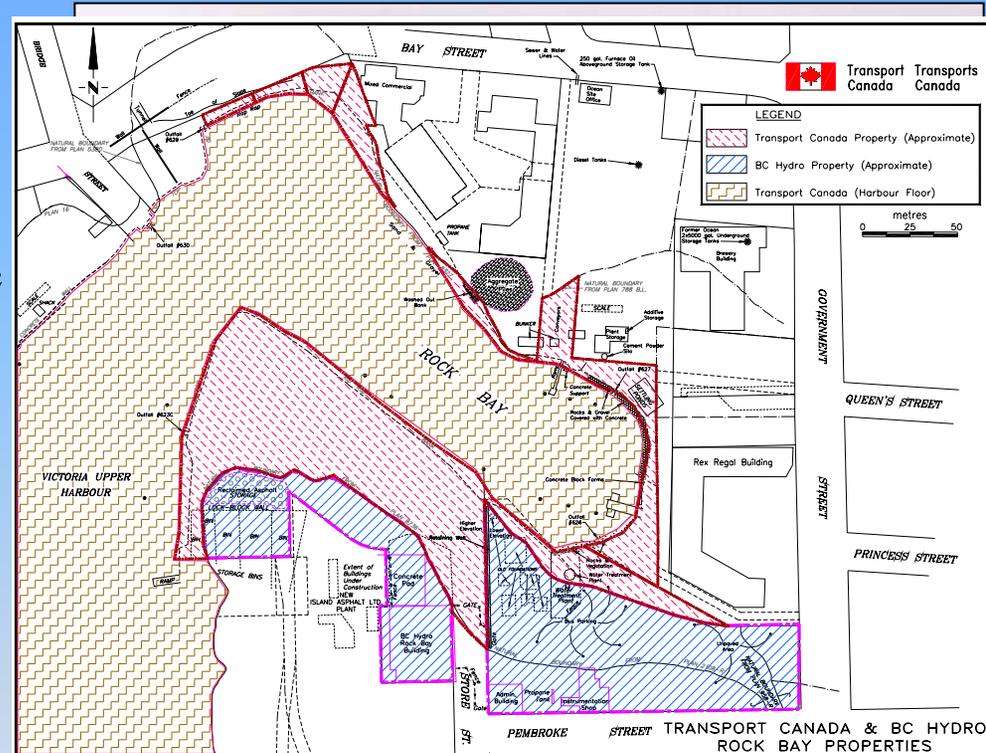
◆ Presentation Outline

- Project Location
- Background
 - History
 - Site Conditions
- Remedial Plan
- Project Characteristics
 - Partnership
 - Community
 - Air Quality
- Remedial Efforts



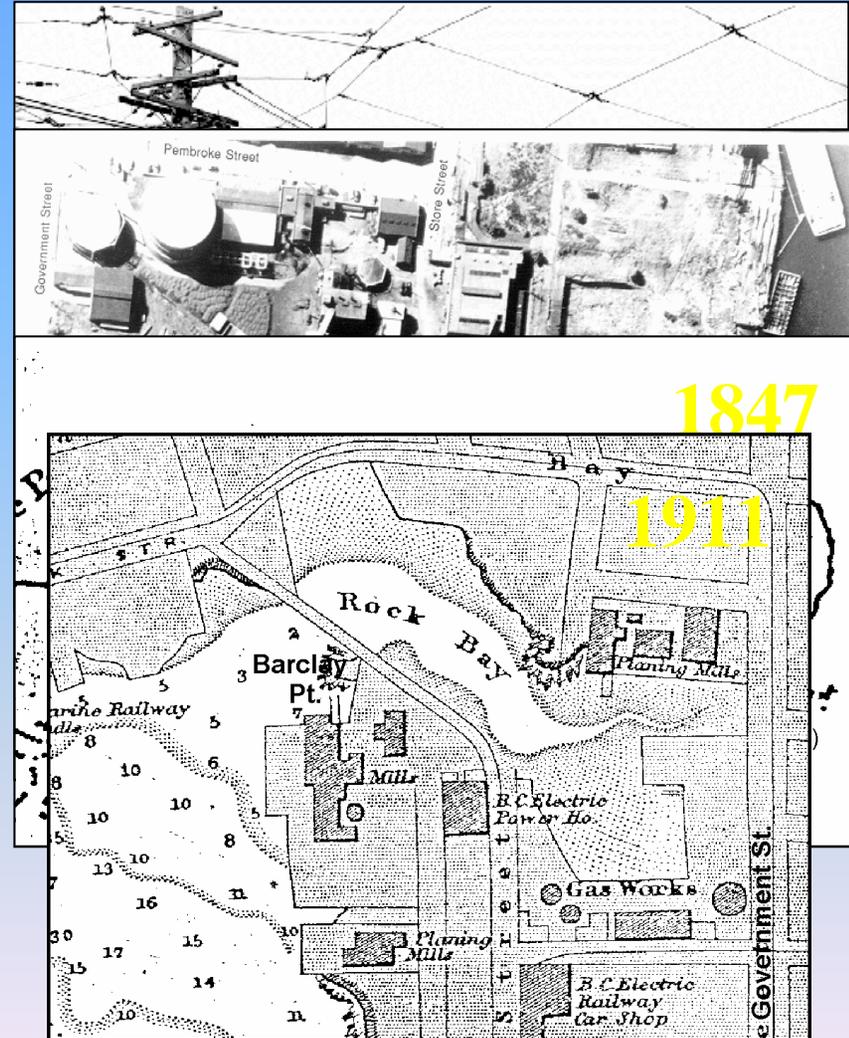
◆ Project Location

- Location
 - Downtown Victoria, BC (West Coast of Canada)
 - 1.2 km from BC Legislative Assembly
- Size
 - Uplands: 3.3 ha
 - Bay: 250 m (length) 100 m (width)
- Ownership
 - BC Hydro / Transport Canada
- Neighbours
 - Commercial & Industrial



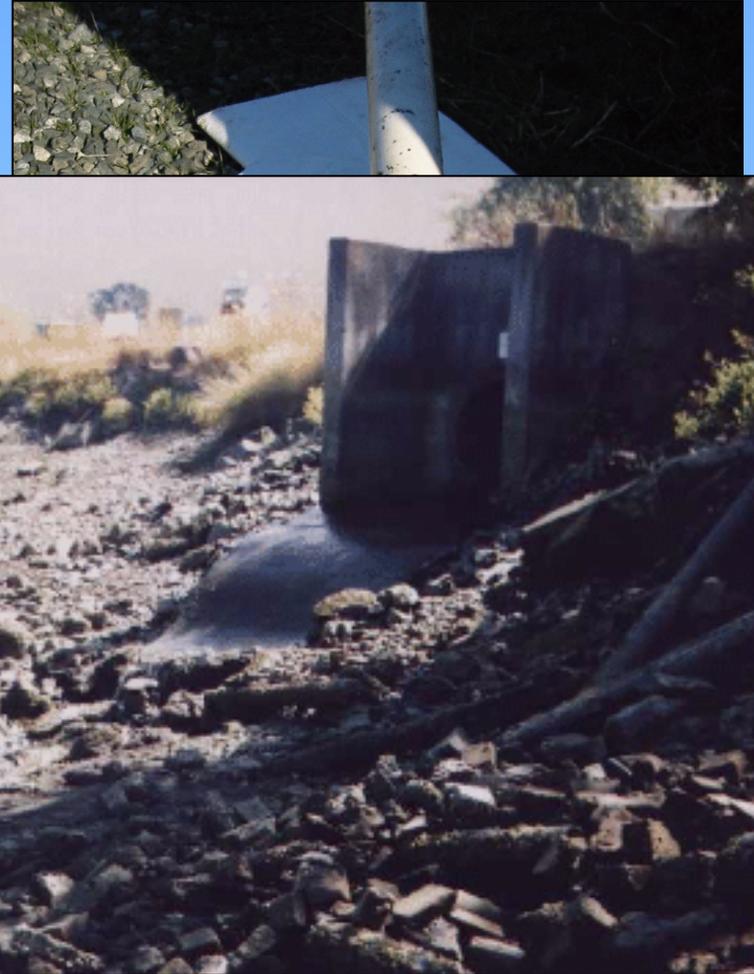
◆ Background - History

- 1843 - HBC Establishes Fort Victoria
- 1862 - 1952 - Coal gasification plant
- Late 1800s to 1949 - Sawmills at Barclay Pt. & head of bay
- 1949 to 1993 – Barclay Pt. used for propane tanks
- 1860s to 1970s - Infilling of Rock Bay

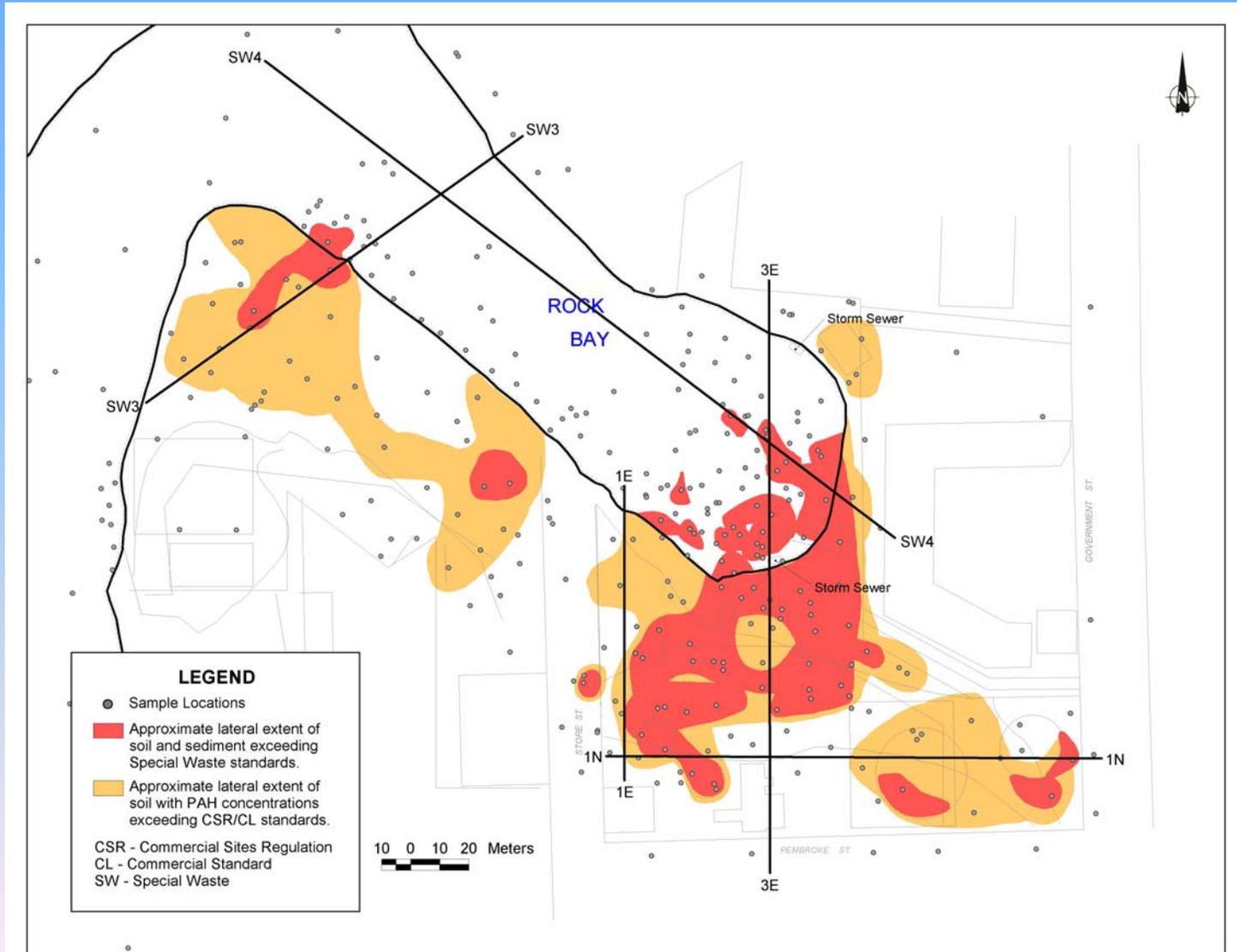


◆ Background – Site Conditions

- Soil
 - Coal-tar & PAHs
 - Metals & hydrocarbon fuel
- Groundwater
 - PAHs (in vicinity of soil)
 - Cyanide, sulphate and metals (Cr, Hg, Se, Ag, Sn, Pb and Cu)
- Sediments
 - PAHs (Coal Tar)
 - PAHs and Metals (Outfall)
 - Presence of human waste & road runoff (PAHs)

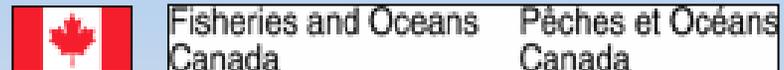
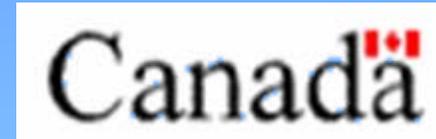


◆ Background – Site Conditions



◆ Remedial Plan - Objectives

- Partnerships
 - BC Hydro
 - Transport Canada
 - City of Victoria
- Agency Cooperation
 - Federal
 - Provincial
- Property Management
- Divestiture / Disposal
- Federal, Departmental & Corporate Goals



◆ Remedial Plan

- Removal of all soil
 - > CSR CL (39,000 m³)
 - > HW (11,000 m³)
- Removal of all sediment
 - > HW (6,900 m³)
 - Sediment Ecological RA
- Off-Site Destruction / Disposal
- Estimated Cost:
 - \$33 Million
- City Stormwater Management Plan



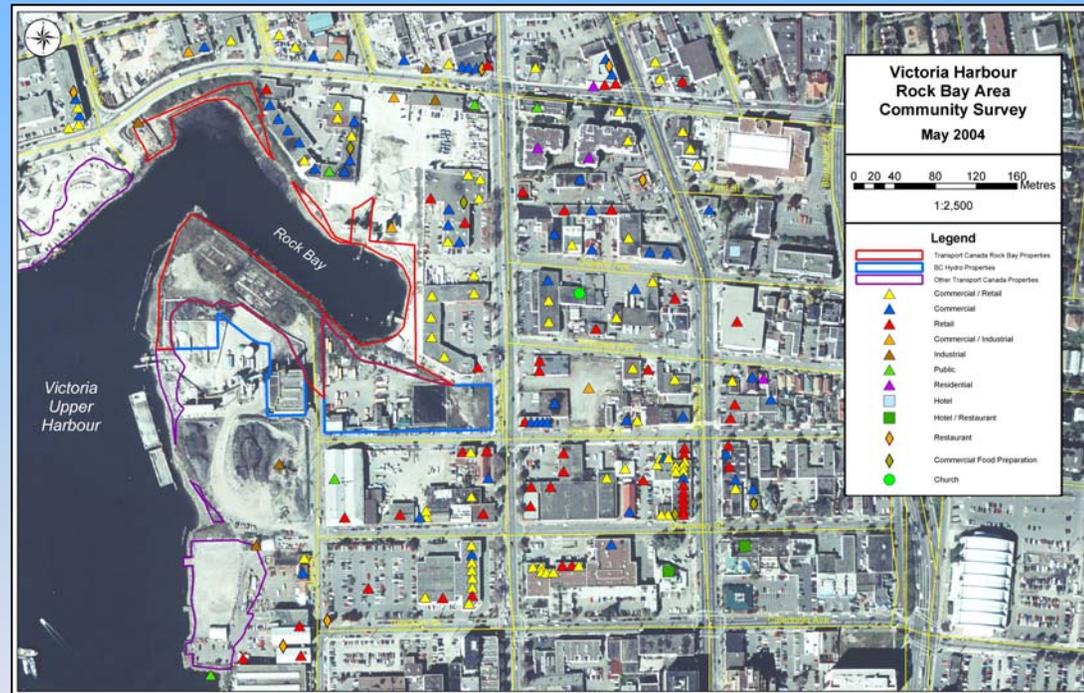
◆ Project Characteristics - Partnership

- BC Hydro & Power Authority
 - Provincial Crown Corporation
- Transport Canada
 - Federal Department
 - Organizational Change
- Characteristics
 - Protective Mandates
 - Common Approach
 - Cost Savings
 - Coordinated and Harmonized
- Integrated Joint Management Structure



◆ Project Characteristics - Community

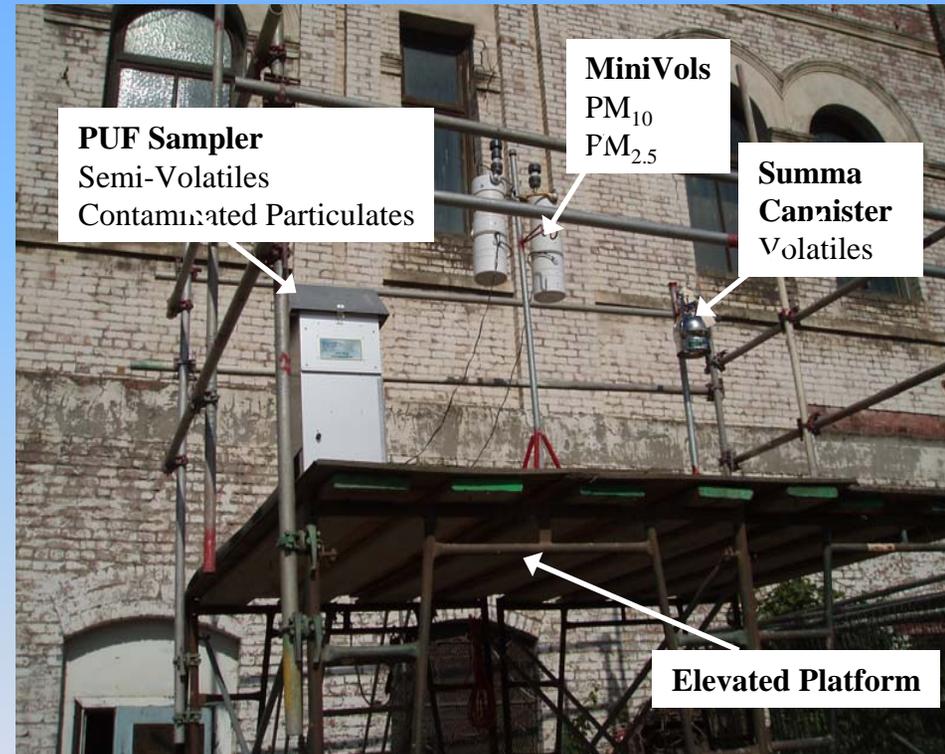
- Project Planning & Research
- Construction Considerations
 - Developed with City
 - CEAA
- Community Survey
- Communications
 - Presentations
 - On-site Community Information Office
 - Telephone Contact
 - Newsletters
 - Site Tours



◆ Project Characteristics – Air Quality

Potential for odours during excavation / stock piling / transport

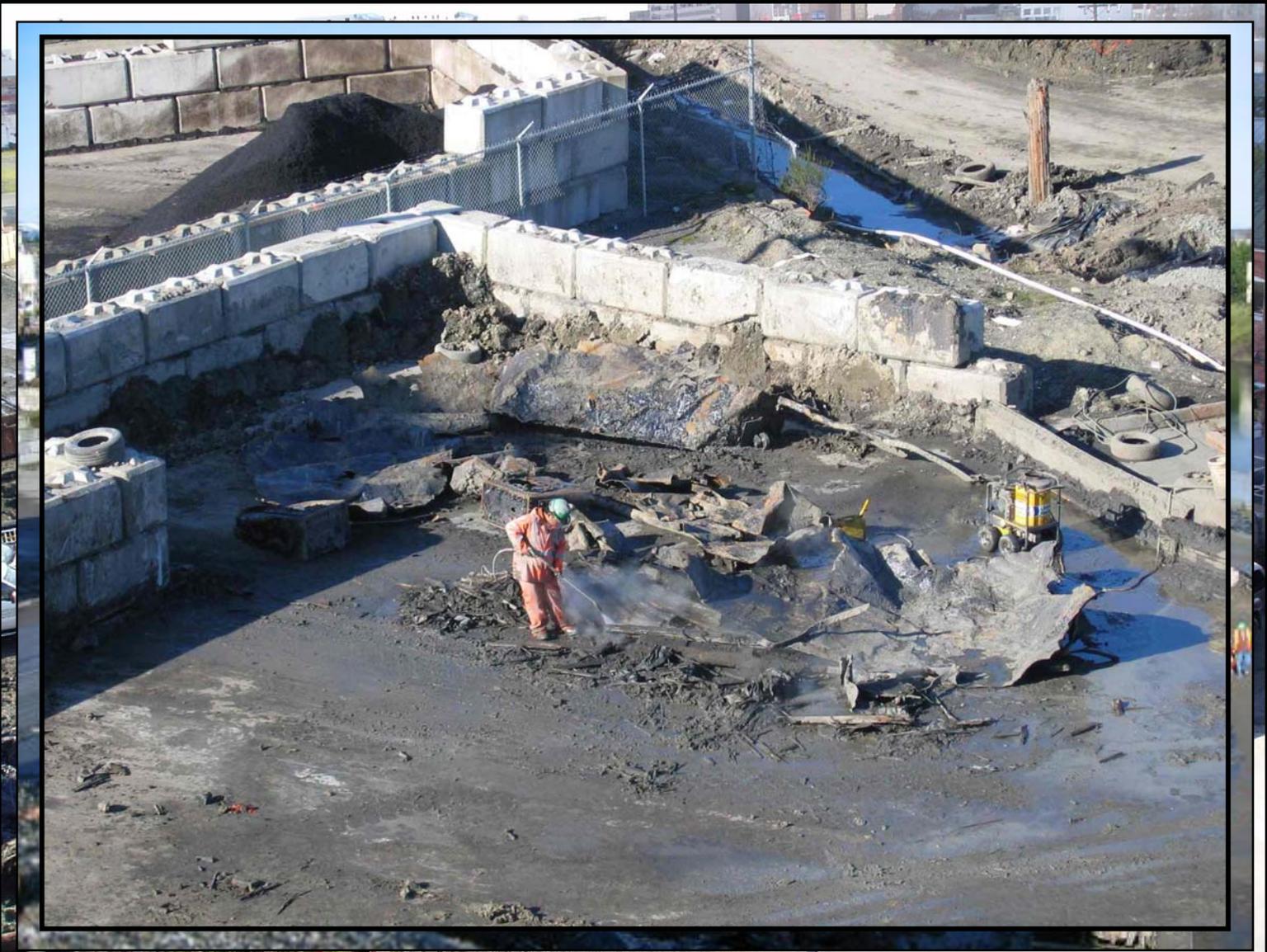
- Baseline Ambient Air Quality Study
- Modeling and Risk Assessment of Potential Levels
- Action Levels Established
- On-going Monitoring Program
- Communication with Health & Environmental Agencies

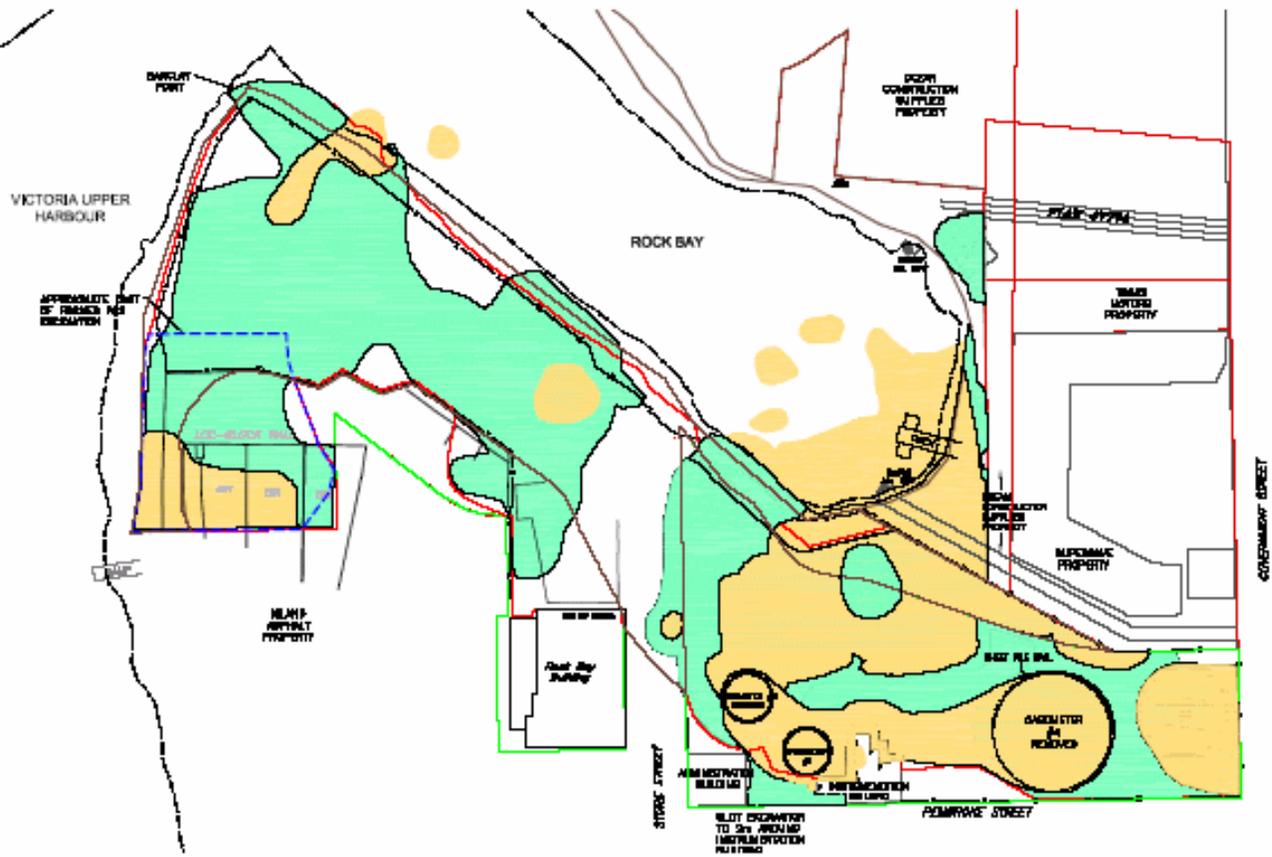


◆ Remedial Efforts

- Heterogeneous Fill
 - Increased Overall Volumes
 - Greater Volumes of Hazardous Material
- Unknown Structures
- Additional Supports
 - Deeper contamination
- Outfall
 - Drain Approx. 25% of City
 - Relocation and reinstallation
 - Licence Required:
 - » sampling,
 - » performance standards &
 - » restoration provisions







NOTES

1. GENERAL DIVISION IN DASHED

REFERENCE DRAWINGS

ENCL. NO.	DATE	DESCRIPTION

CLIENT NAME

Transport Transports Canada Canada

PROJECT LOCATION

ROCK BAY VICTORIA BC

DATE

REVISED (MAY 27, 2005) CONTAMINATED SOIL & SEDIMENT AREAS - ALL DEPTHS

ISS BY	SCALE	DATE	ISS BY
AKK	1:1250	2005-05-10	AKK
REV. DATE	BY	CHK	DEK

◆ Questions or Comments

Robert K. MacDonald
Project Director – VEEP
Transport Canada



Phone: 604-666-5381

Email: macdork@tc.gc.ca



Doug Grimes
Project Manager, Rock Bay
BC Hydro and Power Authority

Phone: 604-623-3813

Email: doug.grimes@bchydro.bc.ca

