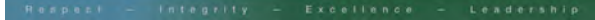


Development of Remedial Objectives for the former Cape Breton Development Corporation Mine Closure Program

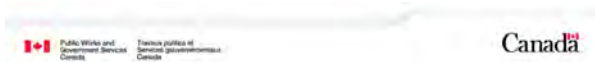
Presentation to "IMWA 2010" September 2010 Cape Breton University

Belinda Campbell – Public Works and Government Services Canada
André Gauthier – Environment Canada

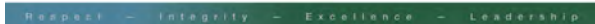


Presentation Outline

- Program background and where we are?
- Why we needed to develop Remedial Objectives?
- Remedial Objectives Guidance Documents



Victoria Junction Coal Wash Plant



Princess Colliery



Princess Colliery - Today



Gowrie Coal Wash Plant





Gowrie Coal Wash Plant - Today

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Dominion #4

Public Works and Government Services Canada / Services publics et Services gouvernementaux Canada



Dominion #4 - Today



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Background

- CBDC (now ECBC) is a Federal Crown Corporation and falls under federal jurisdiction.
- Public Works and Government Services Canada is common service provider to the GoC.
- Expertise in environmental, engineering, IT, project management, communications, GIS, real property management.
- PWGSC contracted by CBDC in 2001 to deliver Site Closure Program

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Background

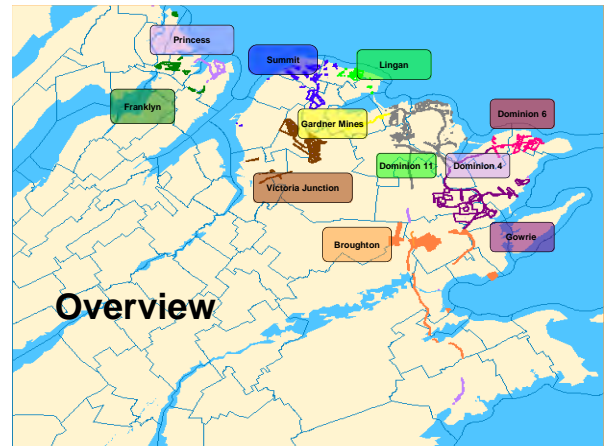
- CBDC formed in 1967 and stopped mining coal (2000), then turned its attention to cleaning up and closing out its industrial sites.
- CBDC owned over 700 properties, 1000 sq km, in 35 communities - urban lots, forest, fields, wetlands and ocean frontage.
- Some hosted industrial activity as far back as the 1800's
- Clean-up to deal with waste rock piles and seeps, inorganic contaminants, mine water, mine workings and other potential contamination and hazards.

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Need for Development of Remedial Objectives

- CBDC was a federal Crown Corp and not permitted by province
- Large number of sites (700 odd)
- Short time frame (6 years for RAP to complete)
- 4-6 Consultants at any one time
- 6 PWGSC Project Managers
- 4 CBDC Project Managers
- 5 Other government departments (NSE, NSDNR, HC, EC, DFO)
- Consistent commitment to other stakeholders (NWAFFG, MLAs, etc)

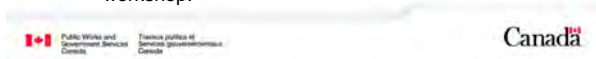


Overview

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Remedial Objectives Guidance Docs

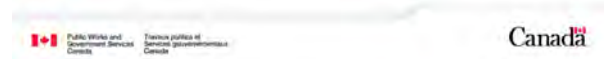
- To establish a consensus on remediation objectives and closure standards (CBDC, PWGSC, Regulators, Consultants, etc)
- Streamline the consulting process and promote a consistent approach
- The first step was to systematically ID issues/challenges/obstacles
- Broad themes were identified by PWGSC and refined by a facilitator conducting interviews with PM's and consultants, organizing meetings and a workshop.



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Remedial Objectives Guidance Docs

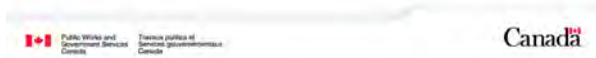
- As per the recommendations in that report, a number of committees and sub-committees were formed to lead the work on specific themes.



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Remedial Objectives Guidance Docs

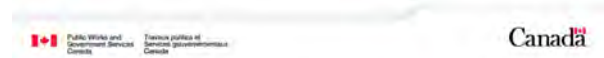
- Committees
 - Remedial Objectives Advisory Committee (ROAC)
 - Made-up of senior representatives from SOA consultants, PWGSC, CBDC
 - Provide overall advice to CBDC and PWGSC re. Remedial objectives.
 - Provide guidance/advice to sub-committee.
 - Assumes the lead in areas not covered by sub-committees (i.e. Communications, EMS,...).



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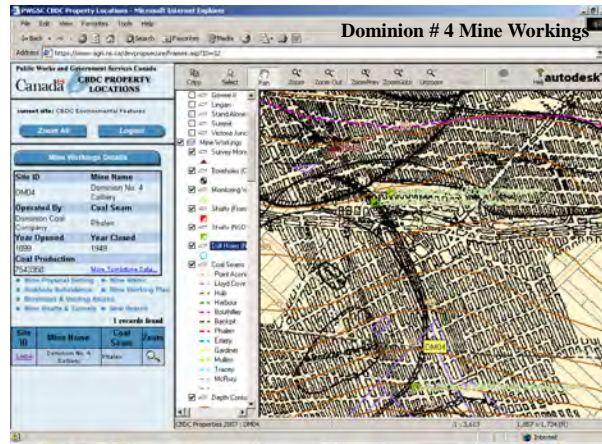
Remedial Objectives Guidance Docs

- Sub-Committees
 - Risk Assessment / Regulatory Framework sub Committee (RARFC)
 - HH&ERA framework and standard TOR
 - Screening criteria for water, sediment, soil
 - CRA for small sites (no waterbodies)
 - Fish habitat and wetland assessment methodology
 - Consensus on compliance point, toxicity testing
 - Regulator interaction/engagement flow chart
 - etc...

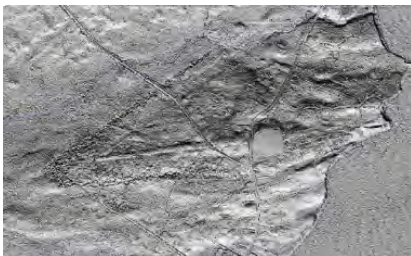


Remedial Objectives Guidance Docs

- Sub-Committees
 - Health & Safety / Mine Workings sub-Committee (HSMWC)
 - Mine Workings Protocol to establish a systematic approach to identifying and assessing the potential for unstable ground, unsecured mine openings, mine water discharge and release of hazardous gas.
 - Comprehensive Step-wise approach to defining, investigating, securing and monitoring mine workings features.



Use of LiDar



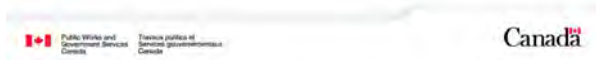
Remedial Objectives Guidance Docs

- Sub-Committees
 - Land Use / Encroachment sub-Committee (LUEC)
 - Probable land-use plan
 - Legacy optimization approach
 - Encroachment policy



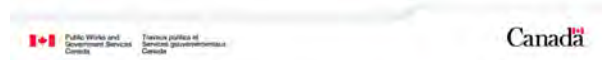
Remedial Objectives Guidance Docs

- Sub-Committees
 - Long-Term Maintenance, Monitoring / Design Criteria sub-Committee (LTMMC)
 - General Principles: estimate the long term liability, reduce the level of activity, design for facilitated maintenance, abnormal events contingency, standard 'manual' for the ongoing system of monitoring after completion.



Remedial Objectives Guidance Docs

- Ongoing Development
 - Environmental Effects Monitoring (EEM)
 - Roughly designed after Metal Mining Effluent Regulations required EEM program though not required
 - Environmental Protection Plan Auditing Protocol
 - A checklist and audit program to ensure construction activities meet compliance
 - Closure and Record of Site Conditions Reporting
 - Template and ToC in development for the consistent reporting of reclamation activities or site conditions



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Gowrie Coal Wash Plant



Gowrie Coal Wash Plant - Today



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Those responsible...

CBDC and PWGSC PMs

Alan Kehoe	John White
Vince MacDonald	Kate McCarthy
Donnie Peckam	Kirk Garrison
Joseph MacPhee	Cory Alexander
Joe Shea	Allan Gillis
Sylvia MacDonald	Alana Devaney
Dave Mayich	Leslie MacMillan
Carla MacQuarrie	Helen Whitman
John White	Lawrence Cress
Devin Doane	Aaron Bower

Consultants

AECOM
 SENES
 AMEC
 CRA
 Stantec
 AG Research
 ADI
 CBCL



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Questions?



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