

Assignment Name: Stormwater management and containment for Elkford Mine and assistance on Selenium removal		ID#: 21
Country: Canada Location within Country: British Columbia	Approx. value of the contract: Not available.	
Name of Client: TECK COAL	Approx. value of the professional services provided under the contract: US\$ 420,000	
Address:	Total No. of staff-assigned to Project: 4	
Start date (month/year): March 2010	Total No. of staff-months of the assignment: 9	
Completion date (month/year): November 2011	Duration of assignment (months): 20	
<u>Narrative description of Project:</u> Design and construction guidance for various stormwater management plans for open cast coal mine pits located in the Elkford Mine lease.		
<u>Description of actual services provided by professional engineering staff within assignment:</u> In addition to general SWMP development, there was co-ordination of surface water decanting systems (from open pits) for active treatment of discharge for Selenium, prior to passive treatment solutions and before release to the environment (Elk River). Design and development of pilot plants for active treatment of selenium led by CH2MHill and required co-ordination of surface water management facilities to ensure optimized location and size of selenium removal plants. Project solutions were under increased scrutiny from regulators due to compliance breaches in the 12 months prior to the project commencing.		
<u>Description of Activities provided by RWI</u> Led the design team for the solution development for various gravity and pumped stormwater management systems (piped), and various open-channel solutions for diverting and conveying the stormwater run-off and stormwater decant from the exiting mine pits. The designs had to consider the relatively short remaining life of the mine and minimize the overall capital investment while allowing the mine to maintain operational integrity of the drainage systems in post-closure status. A secondary component was the investigation for and development of various passive treatment systems, including horizontal roughing filters, manufactured wetlands and flood attenuation ponds. These were provisionally developed to allow for a lower treatment regime for the preliminary design of the selenium treatment plant.		

