



---

2007 Sustainability Summary  
Highland Valley Copper  
Operations

---

**Teck**

---

# Letter from the General Manager

---

We are pleased to present the 2007 summary of sustainability performance at Highland Valley Copper. The primary highlight for 2007 was the formal extension of our mine life to 2019. While this was wonderful news, the added life presents challenges as the Operation changes from one that until recently had been scheduled to close in 2008, to one gearing up for the future.

During the year both crushers in the Valley Pit were relocated to the pit rim; this move was necessary to enable development of the portion of the pit where they had previously been located. The longer ore hauls that resulted from the crusher relocation and the additional movement of waste rock related to the 2019 extension required replacements to the mining fleet, extensive hiring and upgrades and improvements to the concentrator and related infrastructure.

We had a number of key successes in 2007. We are very proud to report that on-site safety performance improved markedly, with a 39% reduction in lost-time injuries as compared to 2006. Further, our employees demonstrated tremendous generosity and support for the United Way campaign and other charitable initiatives; community pride and spirit is at an all-time high. A key success in biodiversity and conservation was the completion of a comprehensive three-year program to document the use of mine site reclaimed areas by birds. In addition, we were successful in revegetating 24 hectares of new land. A total of 24,857 conifer and deciduous seedlings were planted at different locations around the site.

We continue to engage with the community through meetings, open houses and through community investment. The open house was again a success where community members had the opportunity to tour the site. We continue to engage with the community and First Nations regarding the landfill project, a proposal to develop a large, integrated solid waste management centre at the mine site.

The project would potentially include a large regional landfill facility with a high quality composting operation for organic waste, an e-waste collection facility and, possibly, a waste-to-energy bio-reactor where landfill gas is converted for energy use. In 2007, we're proud to report that HVC employees donated \$245,000 and the company matched and topped up this donation for a total of \$500,000 to the United Way, an organization that brings together diverse partners at the local level to initiate action on community issues and problems.

Challenges included a substantial training requirement; recent retirements and the hiring related to the mine life extension have meant that one-quarter of the Operation's employees now have less than two years experience at the site. Dust emissions have been an increasing concern as successes in blasting and crushing have significantly reduced the size of the material being conveyed to the Mill. While this is very positive for mill performance, the increased fines content has resulted in increased dust emissions from the conveying system. Consequently in 2007 we began construction of a cover over one of the three coarse ore stockpiles. Covers over the remaining stockpiles will be completed in 2009. Additionally, improving our energy management systems has been made a priority goal.

Wolf Nickel  
General Manager

## Overview of Operation/Facility

Located in south-central British Columbia, Highland Valley Copper (HVC) is Canada's largest non-ferrous metal mine. The Operation, which is 97.5% owned by Teck Cominco, had a workforce of 1,045 at the end of 2007, and makes a substantial economic contribution to many local communities. In 2007, 139,500 tonnes of copper in concentrate and 1,800 tonnes of molybdenum in concentrate were produced and these concentrates were sold throughout the world. Processed copper is used primarily for electrical transmission and piping, while processed molybdenum is an important alloy used in steel production and as a lubricant.

## Goals and Objectives

The Operation has set the following Goals and Objectives for 2008:

- certify the HVC Environmental Management System (EMS) to the ISO 14001:2004 standard by the end of 2008
- reduce reportable spills in 2008 by 22% from the 2007 reportable spills baseline
- initiate an investigation into increasing molybdenum levels in the seepage from the Trojan Tailings Pond
- establish an HVC Energy Use and GHG Emissions Management Plan
- complete construction of a cover over Coarse Ore Stockpile No.3
- based on a recent study, submit an application for a Site-Specific Water Quality Objective (SSWQO) for sulphate in Pukaist Creek.

## Environmental Programs

Highland Valley's work on achieving an ISO 14001:2004-compliant EMS continued throughout 2007. Rising molybdenum levels in the seepage from the Trojan Tailings Pond resulted in the decision to re-route this water for exclusive on-site use, rather than being released to the environment. Test work was conducted to generate data to aid in development of an SSWQO for sulphate in Pukaist Creek, a water course originating below the tailings pond.

The design for a cover for one of the Coarse Ore Stockpiles was completed, and construction began in 2007. This cover will significantly reduce dust losses, which had been increasing in recent years. Covers for the remaining two stockpiles will be completed in 2009.

There was 1 spill of reportable volume during the year compared to 4 in 2006, and 3 incidents of permit non-compliance in 2007 compared to 1 the year before.

## Safety and Health

A comprehensive review of the Safety and Health Program was undertaken in 2007, and was approved by year-end; training based on the new program will be completed in early 2008.

Lost-time injury (LTI) performance improved markedly in 2007: the Operation recorded 11 LTIs compared to 18 in 2006. The LTI frequency for the year was 0.93 incidents per 200,000 hours worked.

A total of 70 people were employed in the Modified Work Centre for varying periods during the year. The Centre provides appropriately-structured work for employees recovering from injuries or illness.

## Reclamation and Closure

Revegetation completed in 2007, comprised 24 hectares of new land resulting in a total reclaimed category of 2,366 ha. A total of 24,857 conifer and deciduous seedlings were planted at different locations around the site.

The use of biosolids from the Greater Vancouver Regional District and the Fraser Valley Regional District for reclamation efforts continued in 2007, with approximately 43,500 tonnes of material being applied.

### **Conservation, Biodiversity Initiatives**

A comprehensive three-year program to document the use of mine site reclaimed areas by birds was completed in 2007; the results of this study have been highlighted as a 2007 sustainability report Case Study. Over the study period, 192 different species were recorded within the mine operating area; to date, 53% of the regularly-occurring species in British Columbia have been recorded within the study area. The creation of diverse habitats is a part of the Operation's reclamation program and has been successful in attracting birds and providing sites for both breeding and foraging.

### **Audits (Site internal)**

Internal audits were performed by the Site Safety Department on the following Safety Program Elements: Evacuation Procedures, Vehicle Safety and Confined Spaces.

In addition, audits were conducted by Highland Valley staff of all companies handling waste products produced by the Operation and sent offsite for treatment. As a result of those audits, one company is no longer being used.

### **Energy Efficiency and GHG Emissions Management**

In 2007, the two Valley Pit crushers were relocated from within the pit to the pit rim; the relocation was necessary to allow material under the crushers to be mined. While the move significantly lowered the electricity consumed by the conveyor system, it increased diesel consumption as all of the ore had to be transported by truck to the new crushers.

The increased diesel used in the haul fleet resulted in the Operation's Greenhouse Gas emissions (both direct and indirect) rising to 144,415 tonnes for the year, an increase from 2006 due to haul distances.

### **Community Outreach, Engagement, Dialogue**

At the annual Open House held on August 6, the mine hosted 1,953 visitors, who joined in site tours and related information sessions. An additional 189 tours were conducted for the general public over the summer months, with 1,597 people participating.

Highland Valley Copper is evaluating an opportunity to establish a regional landfill project on a portion of disturbed land at the mine site. The project is undergoing environmental assessment and four public meetings were held in local communities to discuss the project and provide an opportunity for the public to submit comments to the government agencies reviewing it.

A DVD describing the Operation and the mining process was completed in 2007. The video was developed to better inform the public about Highland Valley Copper and industry in general. Copies were sent to all employees and will be distributed to selected visitors and other parties in the future.

Four complaints were received in 2007 and were resolved under the property's Complaint Management Policy.

## Aboriginal Relations

Numerous meetings were held with a number of local First Nations related to the Landfill Project. Agreements are in place with five local First Nations to provide funding to enable their participation in the review process.

## Community Development/ Good Neighbour Practices

During the Operation's United Way Campaign, HVC employees donated \$245,000; the company matched and topped up this donation for a total of \$500,000. This total was significantly higher than previous total donations of \$234,000 in 2005, and \$364,000 in 2006.

A donation of used equipment valued at \$500,000 was made to the Trades and Technology program at Thompson Rivers University. The equipment will be used to train heavy duty mechanic apprentices, including those from HVC. Additionally, HVC paid \$64,800 in educational awards to 66 dependents of our employees.

During the year, funding provided by Teck Cominco supported the following community projects:

- Logan Lake Community Trails Network \$75,000
- Ashcroft Arena Revitalization \$50,000
- Cache Creek Elementary School Playground Equipment \$22,000
- Kamloops Art Gallery \$10,000
- British Columbia Wildlife Park \$500,000
- Merritt Walk of Stars Society \$25,000

## Emergency Preparedness and Risk Management

A new Crisis Management Manual was developed in 2007 which will ensure better communication and coordination of activities in the event of a crisis.

During the year the HVC Mine Rescue Team was asked by the Ministry of Energy Mines and Petroleum Resources to assist in the rescue of an equipment operator who had been buried by a pit wall failure at the nearby Greymont Mine. The rescue was a success and the operator was recovered from his machine with only minor injuries after being buried for over 13 hours.

## Human Resources

The Operation employed 1,045 employees at the end of 2007 – 82 more than the previous year. Recruiting activity in 2007 was the highest since 1987, resulting in the hiring of 150 full-time staff.

At the end of 2007, 56 employees were involved in apprenticeships in nine different trades; the highest number of apprentices in at least the last 20 years. During the year, the company employed 43 different students throughout the Operation.

217 employees participated in the Operation's Health and Wellness program; this is up from 106 employees in 2006.



	2007	2006	2005
<b>Health &amp; Safety Statistics</b>			
Total Recordable Incident Frequency	3.03	4.09	2.55
Fatalities	✔ 0	0	0
Lost Time Injuries (LTI)	✔ 11	18	5
LTI Frequency	✔ 0.93	1.80	0.51
Severity	✔ 15.42	59.48	8.06
<b>Permit Compliance</b>			
Number of Excursions	✔ 3	1	4
% Compliance Water	✔ 93.62%		
% Compliance Air	✔ n/a		
<b>Reportable Spills</b>			
Number	✔ 1	4	1
Weight (kg)	✔ 13.6	216	
Volume (L)	✔ 0	120	
<b>Energy Use</b>			
Electricity (TJ) <sup>(1)</sup>	✔ 3,272	3,497	3,467
Fuel (TJ)	✔ 1,701	1,276	1,172
Carbon Energy Intensity in Product (GJ/t)	✔ 12.0	7.4	6.4
Energy Intensity in Product (GJ/t)	✔ 35.2	27.7	25.5
<b>GHG Emissions</b>			
CO2 equivalents (kt) (Direct)	✔ 116	86	78
CO2 equivalents (kt) (Indirect)	28		
CO2 equivalents (kt) (Total)	144		
Carbon Intensity in Product (t/t) (Direct)	✔ 0.82	0.50	0.43
Carbon Intensity in Product (t/t) (Total)	1.02		
<b>Production - Metal Contained in Concentrate (000 tonnes)</b>			
Copper	139.5	170.4	179.0
Molybdenum	1.8	1.8	2.9


		2007	2006	2005
<b>Recycling <sup>(2)</sup></b>				
Total solid materials (tonnes)		6332	3973	4579
Total solid materials external (tonnes)	✔	5,932		
Total solid materials internal (tonnes)		400		
Total solid materials (m <sup>3</sup> )	✔	1,500	382	
Total liquid materials (m <sup>3</sup> )		595	384	427
Total liquid materials external (m <sup>3</sup> )	✔	514		
Total liquid materials internal (m <sup>3</sup> )		81		
Total items counted (count)		20,108	24,411	16,290
Total items counted external (count) <sup>(3)</sup>	✔	1,400		
Total items counted internal (count)		18,708		
<b>Managed Waste</b>				
Total Waste Rock ('000 tonnes)	✔	27,901	14,905	
Total tailings dry ('000 tonnes)	✔	47,802	50,700	
Total solid non-haz. material to landfill (tonnes)		2,254	2,130	
<b>Water Conservation <sup>(4)</sup></b>				
Total groundwater withdrawal (m <sup>3</sup> /yr)	✔	6,918,632	7,311,812	7,587,098
Total surface water withdrawal (m <sup>3</sup> /yr)	✔	14,726,517	20,500,866	17,018,489
Total volume of water recycled/reused (m <sup>3</sup> /yr)	✔	74,078,021	71,918,201	69,972,167
Total percentage water recycled/reused %	✔	342%	259%	284%
<b>Reclamation</b>				
New reclamation for the year (ha)	✔	24		
Reclaimed to date (ha)	✔	2,366	2,352	2,322
Land to be reclaimed (ha)	✔	2,990	2,985	3,004
Trees/shrubs planted (count)	✔	24,857	71,120	65,370

(1) Highland Valley Copper electricity usage represents the period from January 4, 2007 to January 3, 2008.

(2) Highland Valley Copper recycling figures have been separated into "internal" and "external" due to data integrity issues. Only data representing recycling sent offsite ("external") was reviewed by Deloitte & Touche LLP.

(3) The recycling of tires sent offsite from Highland Valley Copper has been measured in the past as a "count". For 2008 and subsequent years, it will be measured in tonnes, as HVC will start weighing their tires in 2008.

(4) Highland Valley Copper water conservation figures for 2006 and 2005 were initially reported in the 2006 Sustainability Report using 2004 and 2005 numbers based on the timing of their water balance report from their consultant. The 2007 Sustainability report does in fact now report correct 2007, 2006 and 2005 figures.

Deloitte & Touche LLP reviewed selected environmental, health and safety data in the 2007 Sustainability Report. Their Independent Reviewers' Report is available on page 54. Only performance data with the following symbol  was independently reviewed by Deloitte & Touche LLP.

---

HIGHLAND VALLEY COPPER OPERATIONS  
British Columbia, Canada

Wolfe Nickel  
General Manager  
[wolfe.nickel@teck.com](mailto:wolfe.nickel@teck.com)  
[www.teck.com](http://www.teck.com)

---

**Teck**