

A
Revised Emergency Preparedness and Response Plan
Giant Nickel
As per The Ministry of Energy and Mines Orders
January 27, 2015



Giant Nickel
Tailings Facility
(Closure Property)

EMERGENCY PREPAREDNESS and RESPONSE
PLAN



REVISION SHEET: BOOK _____

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- Book # 3 - Senior Environmental Specialist

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1. INTRODUCTION

The Giant Nickel Mine Closure Site (Giant Nickel) wholly owned by Barrick Gold Inc. (Barrick) no longer employs site-dedicated staff. However, personnel from Nickel Plate Mine (a Barrick closure property located outside of Penticton, BC) have the responsibility of the remaining site obligations at Giant Nickel, including water quality analysis, site inspections and other related work.

The closed Giant Nickel mine site is located approximately 11 km north of Hope, BC; the underground nickel and copper mine operated continuously from 1959 to 1974 and produced a reported 31,979,700 kg of nickel and 14,151,550 kg of copper from 4,158,230 tonnes of ore. Tailings generated from the ore processing circuit during this period were deposited in the Upper Tailings Storage Facility and the Lower Tailings Storage Facility that formed the overall tailings impoundment (the “Giant Nickel TSF”). Prior to that, the mine and mill were operated intermittently from the 1920s to the 1950s, and tailings generated during this era are understood to have been placed in what is referred to as the Historic Tailings Deposit, located north and adjacent to the more modern Upper TSF. The Giant Nickel TSF is located in the watershed of an unnamed tributary to Stulkawhite Creek (also known as Texas Creek), which flows into the Fraser River approximately 2.7 km downstream of the Giant Nickel TSF. The Upper and Lower TSFs were assigned a Dam Classification of Very High (Knight Piésold, 2014), following the scheme summarized in Table 2-1 of the 2013 Dam Safety Guidelines of the Canadian Dam Association (CDA, 2013).

Most of the reclamation and rehabilitation work for closure of the Giant Nickel TSF was conducted over three periods: in 1972 (a limited extent of topsoil cover placement and vegetation, as progressive reclamation during operations); in 1980 (direct seeding of tailings in the Upper TSF); and from around 1994 to 2000 (additional cover soil placement, seeding and fertilizing, emergency outlet channel construction and general care and maintenance work). Since 2000, the Giant Nickel TSF has been under long term care and maintenance.

Section 10.6.8 of the Health, Safety and Reclamation Code for Mines in British Columbia states that a major impoundment classified as High or Very High failure consequence during operation and closure shall have an Emergency Preparedness Plan. This Emergency Preparedness and Response Plan (EPRP) has been developed to comply with regulatory requirements and CDA (2013) Dam Safety Guidelines (for internal and external use), and is intended to provide the managing staff of the Giant Nickel TSFs (i.e. Nickel Plate Mine Closure Staff), regional officials, and the Royal Canadian Mounted Police (RCMP) with guidance in the unlikely event of a tailings-related incident.

2. IDENTIFICATION OF RESPONSE LEVEL

It is important to distinguish between the various levels of response and the different requirements of each response level. Emergency situations may result from the following or a combination of the following:

- Structural failure of the Upper TSF and/or Lower TSF resulting in the release of fluids and solids from the impoundment
- Seismic event
- Seismic event resulting in the release of fluids or fluidized solids Structural integrity issues affecting the Upper TSF and/or Lower TSF embankments, such as the development of cracks, slumps or bulges, without the release of fluids and solids
- Onset of or changes to seepage from the impoundment, including location, elevation and colour
- Severe rain or wind storm event
- Wildfire
- Flooding of the impoundment from sudden snowmelt, storm event, diversion of a natural or artificial watercourse (including by beaver activity) or other causes
- Ground instability above the Upper TSF
- Severe soil erosion of an embankment slope or cover soil
- Blockage of, or erosion to, a diversion ditch or overflow channel
- Significant human activity on or around the tailings impoundment, whether intentionally malevolent (i.e. vandalism) or not

2.1. Hazardous Condition or Incident (Level #1)

The hazard or incident does not pose an immediate danger to the downstream community, structures, or environment but the hazard or incident could develop into a dangerous situation.

2.2. Potential Dam Emergency (Level #2)

Downstream agencies or communities may need to take steps to mitigate damage or prepare for evacuation.

2.3. Imminent or Actual Hazard or Incident (Level #3)

Widespread and immediate evacuation of the downstream population is required.

3. RESPONSES

3.1. Levels of Response and Notification Procedures

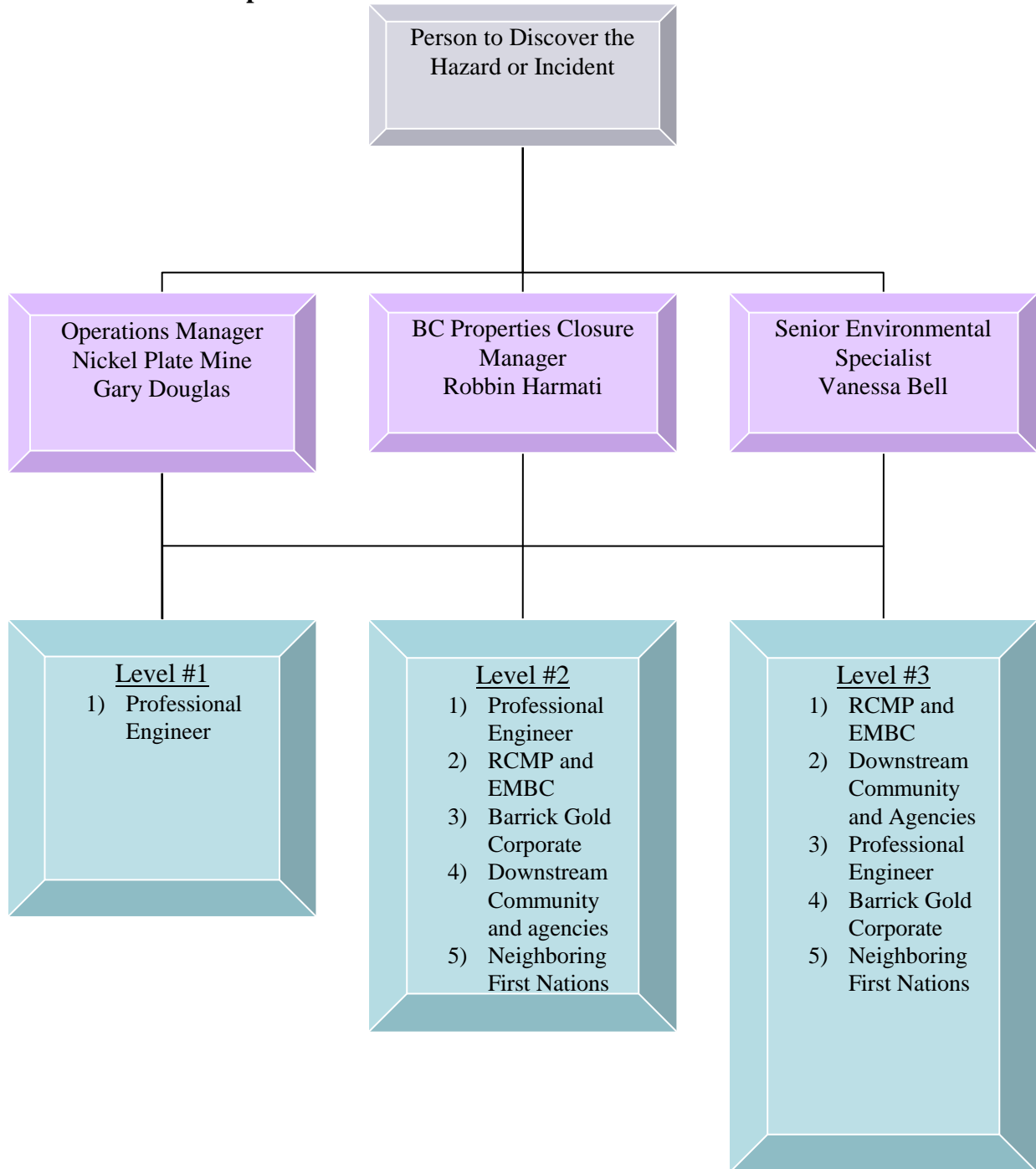


Figure 1 – Notification Procedures

Level #1

Upon notification of a potential hazard affecting the Giant Nickel tailings impoundment, and assessment of that hazard as a Level 1 condition, Nickel Plate Mine staff (Operations Manager, Senior Environmental Specialist, and/or BC Properties Closure Manager) will consult a professional engineer as required and mobilize workers and equipment as necessary.

Level #2

Upon notification of a potential hazard affecting the Giant Nickel tailings impoundment, and assessment of that hazard as a Level 2 condition, Nickel Plate Mine staff (Operations Manager, Senior Environmental Specialist, and/or BC Properties Closure Manager) will immediately consult with a professional engineer; activate the Emergency Operations Center and the Site Command Post; notify the RCMP and the Emergency Management BC, also known as Provincial Emergency Program (PEP); prepare the downstream residents, businesses and agencies for a potential evacuation with the assistance of the local RCMP detachment; and notify representatives of the Yale, Union Bar and Chawathil First Nations; and mobilize workers and equipment as necessary.

Level#3

Upon notification of a potential hazard affecting the Giant Nickel tailings impoundment, and assessment of that hazard as a Level 3 condition, Nickel Plate Mine staff (Operations Manager, Senior Environmental Specialist, and/or BC Properties Closure Manager) will immediately activate the Emergency Operations Center and the Site Command Post; contact the Emergency Management BC, also known as Provincial Emergency Program (PEP), and RCMP and to assist with the evacuation of downstream residents, businesses and agencies; and assist with the mobilization of emergency response team(s), workers and equipment. Additionally the Nickel Plate Mine staff will notify representatives of the Yale, Union Bar and Chawathil First Nations and contact a professional engineer and/or consultant and request assistance as necessary.

3.2. Emergency Operations Center

As there is no on-site staff at Giant Nickel, Barrick's Nickel Plate Mine closure property located outside of Penticton, BC will serve as the initial location for an Emergency Operations Center in the event of a Level 2 or Level 3 condition at the Giant Nickel tailings impoundment. The Nickel Plate Mine closure property is staffed 24 hours per day, 7 days per week, and houses reference material for Giant Nickel that may be required in event of an emergency. Specifically, the Emergency Operations Center will be the Administrative Office shared by the Plant Operator and the Senior Environmental Specialist and is fully equipped with communications systems, emergency contact

information and reference material. Depending on the nature and anticipated duration of the event, Barrick may set up a temporary Emergency Operations Center closer to Giant Nickel.

3.3. Site Command Post

Barrick owns property along the Trans-Canada Highway just north of Hope, BC; a portion of the property is currently used as parking for the Hope Rod and Club. In the event of a Level 2 or Level 3 incident, Nickel Plate Mine staff and associated emergency response team(s) would use the Barrick-owned portion of the Hope Rod and Gun Club parking lot as a Site Command Post.

3.4. Contact Directory

Emergency Management BC or Provincial Emergency Program (PEP) 1-800-663-3456

Giant Nickel Tailings Impoundment Coordinates:
Latitude: 49°29'01.19"N Longitude: 121°27'24.65"W Elevation: 480 MASL

Barrick Personnel

Position	Employee	Office Telephone	Mobile telephone	Residence Telephone
BC Properties Closure Manger	Robbin Harmati	(250-292-8266)	(250) 575-4049	(250) 490-9834
Operations Manger	Gary Douglas	(250) 292-8295	(250) 488-0044	(604) 850-3106
Senior Environmental Specialist	Vanessa Bell	(250) 292 -8294	(250) 317-6901	(250) 862-9419
Mine Closure Manager Corporate Environment	Joe Girardo	(801) 990-3737	(775) 777-4798	
Director, Environment Capital Projects and Mine Closure	Jim Alto	(801) 990-3803	(801) 231-7854	
Senior Manager, Geotechnical Engineering Corporate Technical Services	Michael Shelbourn	(801) 990-3853	(801) 556-8484	(801) 582-9121
Media Relations – VP Communications	Andy Lloyd	(416) 307-7414		

Professional Consultants

Knight Piésold	Jamie Cathcart	(604) 685-0543 Ext.275	(778) 387-2892
Knight Piésold	Graham Greenaway	(604) 685-0543	(604)-762-8342

Emergency Contacts – Always Call 911

RCMP – Hope, BC	(604) 869-7750

Government Agency Contacts			
Emergency Management BC or Provincial Emergency Program (PEP) 1-800-663-3456			
Ministry of Energy and Mines	Jim Dunkley – Acting Regional Director	(250) 952-0732	
BC Ministry of Environment	Environmental protection Divison	(250) 387-9997	
Ministry of Forest Lands and Natural Recourse Operations	Kevin Walker	(604) 586- 4409	
Department of Fisheries	Marine Pollution Incident	1-800-889-8852	
District Highways Office	Operations Manager	(604) 795-8201	
Downstream Contacts			
CN Railway	Emergency Contact Line	1 800 465 9239	
CP Railway	Emergency Contact Line	1 800 716 9132	
45 structures downstream of the Giant Nickel Tailings Facility not all structures are inhabited – RCMP to Notify			
Other Contacts			
	Contact	Office Telephone	Mobile Telephone
Local Radio Station: CBC Radio 1		(604) 662-6801	
Rick’s Excavating - Hope, BC	Rick Limb (Owner)	(604) 869-3232	(604) 795-0459
Emil Anderson Maintenance Company		1 800 667 5122	
Wiens Mfg. Ltd		(604) 869-2756	
Yale First Nations	Ken Hansen - Chief	(604) 869-0013 ext. 123	(604)869-6459
	Natural Resource Manager - Steven Patterson	(604) 869-0013	
Union Bar First Nations	Andy Alex - Chief		(604)869-02701
Chawathil First Nations	Rhoda Peters - Chief	(604) 869-9994	

4. PREVENTATIVE AND REMEDIAL ACTION

4.1. Site Inspections

In accordance with Provincial regulations and following CDA (2013) Dam Safety Guidelines, formal dam safety inspections for the Giant Nickel Upper and Lower TSFs are to be completed annually by a qualified professional engineer and dam safety reviews are conducted every five years. Visual inspections and routine maintenance of the Giant Nickel tailings impoundment are to be carried out by Nickel Plate Mine personnel a minimum of four times per year, coinciding with water quality sample collection. The inspections will include but will not be limited to:

- review of diversion ditches, overflow channels, cover soil and vegetation, embankment slopes and other ground conditions at and around the tailings impoundment;
- condition of access and inspection trails for authorized personnel;
- verification that warning signs and other posted public notices are in place;
- general brush removal as required; and
- clearing of debris as needed from the Lower TSF overflow channels.

Additional inspections of both the Upper and Lower TSF are completed after any significant storm event.

5. COMMUNICATION SYSTEMS, EQUIPMENT AND MATERIALS

As there is no permanent staff at Giant Nickel nor remaining infrastructure, emergency communication would primarily be through the use of radios and cellular telephones. In the event that equipment and material are required, local contractors should be contacted first (Wien's Mfg. Ltd, Rick's Excavating in Hope, BC, and or Emil Anderson Maintenance Company). *See Contact Directory located on page 9*

6. EMERGENCY PREPAREDNESS PLAN – ADDITIONAL INFORMATION

In the event of a Level 2 or Level 3 Emergency notification, the Nickel Plate Mine Staff will direct communities and agencies within the flood inundation path, as identified in the Mapping found in Appendix A, and the Yale, Union Bar and Chawathil First Nations, to initiate their emergency plans for the corresponding Emergency notification (Level 2 or Level 3).