Emergency Preparedness and Response Plan - Brenda Mine

GLENCORE

June 2012

Revised: November 2014

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

1.0 OVERVIEW

The objective of emergency planning and emergency preparedness is to ensure timely and appropriate response to emergencies and compliance with applicable laws, industry standards, and legal codes of practice. In accordance with Glencore's policies for Sustainable Development (i.e. environment, health and safety and community), emergency preparedness begins with prevention of emergency situations. As described in previous sections of the OMS manual, this is achieved through constructing, operating and maintaining systems to high standards, and by implementing continuous monitoring and surveillance programs to identify potential emergency scenarios. This section of the OMS manual describes response and communication procedures should an emergency situation occur.

The Brenda Mine site is committed to the following, in order of priority:

1. Protection of health and safety of employees and the public.

2. Protection of the environment.

3. Protection of company facilities.

This plan is intended to guide Brenda site staff in responding to incidents and system upsets at the site. Effort has been made to ensure that response guidelines to possible site emergency scenarios are included to better enable timely and appropriate action. This plan is intended to comply with applicable industry guides for emergency preparedness and response plans, federal, provincial and local regulatory requirements, and Glencore policies and management systems.

Potential emergency scenarios deemed relevant for the Brenda site are grouped into the following five categories:

1. Injury or Illness;

2. Fires;

3. Spills;

4. Other Incidents (for example, power outage, lower reclaim malfunction, or water quality incidents);

5. Dam/Impoundment Incidents

1.1 KEY SITE INFORMATION

TABLE 1–1 SITE INFORMATION

Name of Facility:	**Brenda Mine**
Company:	Glencore Canada Corporation Brenda Mine Suite 718, 22-2475 Dobbin Road Westbank, B.C. V4T 2E9 Phone: 250-317-0187
Site Manager:	Georges Guilleminot [redacted]
Location:	Latitude / Longitude: approximately 49° 52'N / 119° 58'W Principal Road Access: Highway 97C (Coquihalla Connector), 22 km west of Peachland. Exit at the Brenda Mine exit. Alternate Road Access: 27 km west of Peachland via Princeton Avenue / Silver Lake road.
Property Information:	Status: closed mine site Main Property Area: approximately 760 ha Drainages: Trepanier Creek, Peachland Creek Principal Facilities: decommissioned tailings impoundment (370.4 ha), decommissioned open pit with lake, water treatment facility with sludge storage facility, seepage collection, and pit pumping systems.

1.2 OVERVIEW OF REGULATORY REQUIREMENTS

In British Columbia, emergency preparedness and response is regulated under varying legislation and industry guidance documents, including, but not limited to the following:

Federal

- Canadian Environmental Protection Act, 1999 (S.C. 1999, c. 33)
- Implementation Guidelines for Part 8 of the Canadian Environmental Protection Act, 1999 - Environmental Emergency Plans",
- Environmental Emergency Regulations (SOR/2003-307)
- Transportation of Dangerous Goods Act, 1992 S.C. 1992, c. 34
- Transportation of Dangerous Goods Regulations SOR/2001-286
- Dam Safety Guidelines - Canadian Dam Association, 2007

Provincial

- Environmental Management Act, S.B.C. 2003, c. 53
- Spill Reporting Regulation B.C. Reg. 263/90
- Public Health Act Transitional Regulation B.C. Reg. 51/2009
- Transport of Dangerous Goods Act, B.C. 1996, c. 458
- Occupational Health and Safety Regulation B.C. Reg. 296/97
- Health, Safety and Reclamation Code for Mines in British Columbia (2008)
- Mines Act R.S.B.C. 1996, c. 293
- British Columbia Dam Safety Regulation, BC Reg 44/2000, (Water Act)
- Mines Regulation B.C. Reg. 126/94

It is noted here that although the federal Environmental Emergency Regulations (in effect in late 2003) apply to the Brenda Mine site, there are currently no products stored or used at the site that meet the minimum quantity criteria listed in Part 1 of the Regulations. The site will continue to monitor applicable federal, provincial and local regulatory requirements on an ongoing basis, and make any necessary revisions and/or notifications when required.

This plan first outlines key responsibilities of site staff, and then gives the overall communication flow in response to site incidents. In this Section you will find more details for specific responses to potential site scenarios. A detailed Contact List is also given. Finally, the end of this section addresses emergency response plan maintenance and insurance considerations.

1.3 OVERVIEW OF RESPONSIBILITIES

The Brenda Mine site maintains low staffing levels, and thus, site personnel typically assume more than one specific role in the management of emergencies and unusual incidents. 2 is intended to be a guide in determining specific responsibilities during an incident. In the event of a significant incident on site, the site manager (or designate) should review this list and ensure that there is clear understanding of the person responsible for each role.

TABLE 1–2 ROLES DURING SITE EMERGENCY OR UNUSUAL CONDITION

Role During Site Emergency or Unusual Condition	**Responsibility of**
In case of *imminent* danger to persons or to the environment – Call 9-1-1 (ambulance, police or fire) or the Emergency Management B.C.(Control Centre (spills, dam emergencies)	Any site personnel – Immediately
External Communications with: 1. Glencore Canada Corporation office 2. Government agencies 3. Media 4. General Public 5. Other Stakeholders (contractors, community members)	Site Manager Manager Reclamation and Projects
Notification and consultation of third party technical assistance Emergency Preparedness and Response (annual risk assessments, response planning, training, and plan reviews and updates)	Site Manager Manager, Reclamation and Projects
Field supervision of site personnel (either third party or employees)	Water Treatment Plant Coordinator
Post-incident Investigation	Site Manager

2.0 LEVELS OF EMERGENCY AND UNUSUAL CONDITIONS

Possible emergencies and unusual conditions at the Brenda Mine site may range from a potentially minor incident such as an abnormal reading at a dam groundwater monitoring well, through to a person injured on site requiring transport to medical aid, or to the highly unlikely and extreme event of a dam instability.

All of these conditions require site personnel to first be observant and recognize a potential emergency or unusual condition, then follow an established communication procedure and finally, respond appropriately.

For clarification purposes, the terms "imminent" and "impending" both mean the emergency is proceeding regardless of possible remedial actions.

Three levels of emergency conditions (or warning signs) can be identified in respect to the site operations. These are defined as follows:

Level 1 Unusual conditions that do not yet represent a potential emergency but do require investigation and resolution on a prompt basis.

Level 2 Conditions that represent a potential emergency if sustained or allowed to continue to progress, but no emergency situation are imminent.

Level 3 An emergency defined by either failure of a significant component of the Risk Management System (i.e., failure of a dam or a major Water Treatment Plant component) or a significant failure of the performance of a Risk Management System component. Such failure may have already occurred or is imminent.

Crisis Any kind of situation that falls outside normal business continuity and emergency response arrangements and, if not quickly accessible, might cause significant injuries or fatalities, significant property damage, medium or long term environment remediation (2 years and more) or negative impact on reputation. Crisis situation would be any catastrophic or major incidents as per Glencore's Risk Management Framework. Site manager is to notify immediately Manager Reclamation & Projects.

Typical situations that would be classified under the first two levels of emergency conditions (Level 1 or 2), and their potential or actual consequences and the actions to be taken, are outlined in the OMS Manual while the Level 3 emergencies and crisis are detailed in the following sections. Site surveillance walk-over carried out by the site personnel, and the annual dam safety inspections carried out by the Tailings Dam Engineer, should focus on the various conditions described in the OMS Manual.

2.1 DISTINGUISHING BETWEEN AN EMERGENCY AND A CRISIS

Any event that significantly threatens the health and safety of people, the environment, production or the company's reputation can be considered an emergency and a potential crisis in the making.

It is important to distinguish between an emergency, which can and should be handled at the operations level in accordance with the various Risk Management and Emergency Preparedness Programs, and a crisis that requires immediate notification of the Crisis Management Team and the full or partial implementation of the Glencore Copper Canada Crisis Management Plan, discussed in Section 2.2.

Emergency situations must be carefully monitored by management on-site to assess whether they have the potential to become a crisis.

2.2 CRISIS MANAGEMENT

The Copper Canada Crisis Management Plan (September 2013) is included under separate cover. A crisis is a sudden or unexpected event or action that could significantly and immediately affect a company's ability to carry out its business, damages a company's reputation and/or threatens the health, safety and well-being of employees, the community, the environment or the public at large. As per Glencore Risk Management Framework, a crisis would be any events resulting in Catastrophic or Major consequences and notification must be made immediately to the following email address:

DL CA Copper - Cu Canada Crisis Team

Catastrophic and Major incidents also require immediate verbal reporting to the Manager Reclamation and Projects, along with a documented Incident Report Template Section A & B that shall be prepared with whatever information is available and forwarded **within 24 hours**. Refer to the Incident Reporting Procedure for subsequent requirements. Catastrophic and Major incidents are defined as:

1. Injury or Damage to Assets or Loss of Operations. An event, which has caused:
   a. single or multiple fatalities;
   b. single or multiple permanent incapacity/total disability/health effects;
   c. life threatening injury to a person(s), i.e. injuries that require immediate, aggressive action by site, ambulance and medical staff, such as urgent or emergency surgery, admittance to an intensive care or high dependency facility; or
   d. damage to assets or property to a value greater than US$50 million.
2. Environmental Damage. Category 4 or 5 Environmental incidents, defined as follows:
   a. Category 4 (Major): serious environmental impact, with long-term effect (2 to 10 years), requiring significant remediation; or
   b. Category 5 (Catastrophic): permanent or lasting more than 10 years environmental damage or effect, requiring major remediation.
3. Negative Media Attention. National or international media attention/public exposure of a serious, negative consequence.

2.2.1 METALLURGY OPERATIONS EXPECTATIONS FROM SITE

The following is expected from the site when contacting the Crisis Management Team:

1. Timely, detailed information about what is going on.
2. Define any support /resources needed.
3. Expect multiple questions to verify if the situation is a crisis and an understanding for further escalation.

3.0 COMMUNICATION

Communication of a potential or actual emergency is essential, in order to get others more qualified to assess the situation or to assist in response. Good communication will allow for a more complete and rapid response. In all situations, notification, to the Site Manager, Reclamation and Projects Manager and Closed Sites Sustainable Development Coordinator is required. In more severe situations, Emergency Assistance communication with an external response team or agency may be needed. The notification procedures and flowchart are described below and are shown on Figure 1.

3.1 EMERGENCY ASSISTANCE

If there is imminent and substantial danger to people, the environment, or to company property that overwhelms on-site resources, outside assistance must be summoned quickly. Possible examples include: a sudden injury or illness, a fire that cannot be easily put out by an extinguisher, a spill that threatens the environment and can't be contained, or a catastrophic structural failure that threatens personnel or the public.

In the event of an emergency or unusual situation related to geotechnical matters, all information shall be forwarded to the Tailings Dam Engineer immediately so the situation can be assessed and remedial actions taken promptly.

In the event that Emergency Assistance is necessary, take the steps shown in section 3.2.

3.2 EMERGENCY ASSISTANCE PROCEDURE

In case of an Emergency requiring immediate outside assistance, take the following steps:

1. Call 9-1-1 (to summon ambulance, police or firefighters) or call the Emergency Management B.C. (1-800-663-3456) (for spills, dam emergencies or any other public safety issue).

2. Be prepared to give the following information:

    a. your name and Brenda Mine phone number (250-317-0187) and/or cellular phone #;

    b. the location and time of the incident (give detailed route instructions: Brenda Mine site, highway 97C 22 km west of Peachland);

    c. (if dam emergency) the dam structure involved;

    d. the nature of the emergency situation (e.g. injury, fire, spill, etc.);

    e. the number of persons injured;

    f. the cause of the emergency (e.g. truck accident, sudden collapse, or unknown causes);

    g. actions taken to control the problem and their effect (e.g. first aid is being given, or isolation valves have been closed);

    h. the names of the agencies on the scene; and

    i. the names of other persons or agencies advised concerning the incident.

3. Respond to the incident, ensuring safety of yourself and others.

4. Notify the Site Manager as soon as possible.

3.3 NOTIFICATION

Notification is done to alert others of an unusual condition that has occurred or is still occurring, that may require action. It is to be done promptly, but there is typically time to first gather more information on a situation, to analyses possible causes, and to perhaps take some initial remedial measures.

Internal Notification is given to the Site Manager. As a general rule, always inform the Site Manager of any unusual incident that has occurred on site, any anomalous monitoring results, or any potentially hazardous condition. If in

doubt about the significance or importance of something you have observed, err on the side of caution -- report it to the Site Manager. The Site Manager will then investigate and determine necessary actions.

External Notification is communication to persons or agencies outside of the Brenda Mine site. Typically, external notification is done by the Site Manager or the Manager Reclamation and Projects. Contact details (names of key individuals and telephone numbers) are listed in Section 6.1. Refer to Figure 1 for the communication flow chart. Some key persons or agencies that may be notified of an incident are:

i) ***Government:*** in the event of a spill exceeding threshold quantities, certain health and safety incidents, or certain dam or pit stability incidents, the Site Manager is required to notify the provincial Emergency Management B.C. program, the Mines Inspector, or possibly other local agencies, i.e. Kelowna Fire Department. The threshold criteria for government notification are in accordance with i) the Schedule in the Environmental Management Act Spill Reporting Regulation (B.C. Reg. 376/2008, last amended December 9, 2008), and ii) the Health, Safety and Reclamation Code for Mines in British Columbia (2008). Table 4–3 give general guidelines as to when such reporting may be required, and the applicable regulations may be referred to directly for more information.

ii) ***Downstream-Affected Persons:*** although very unlikely, an incident could result in off-site effects, for example a spill, dam instability, or water quality issue. In this case, effort must be made to ensure that all those potentially affected by the situation are notified and given directions to reduce their exposure. Actions must also be taken to prevent the public from unknowingly being affected by the situation (e.g. possibly by restricting access to nearby roads and waterways). The Site Manager will work closely with provincial and municipal authorities to ensure that notification of Downstream-Affected persons is comprehensive and timely. As required by permit PE-263, a list of current water license holders in Trepanier Creek is maintained by Brenda site staff (see Section 7.2), in order to assist in their notification by the Provincial Emergency Management in the event of a water quality issue.

iii) ***Dam Engineer:*** in the unlikely event of a potential stability situation with the tailings impoundment, water and sludge dams/dykes, the project engineer is immediately consulted, and after investigating, may recommend mitigative actions.

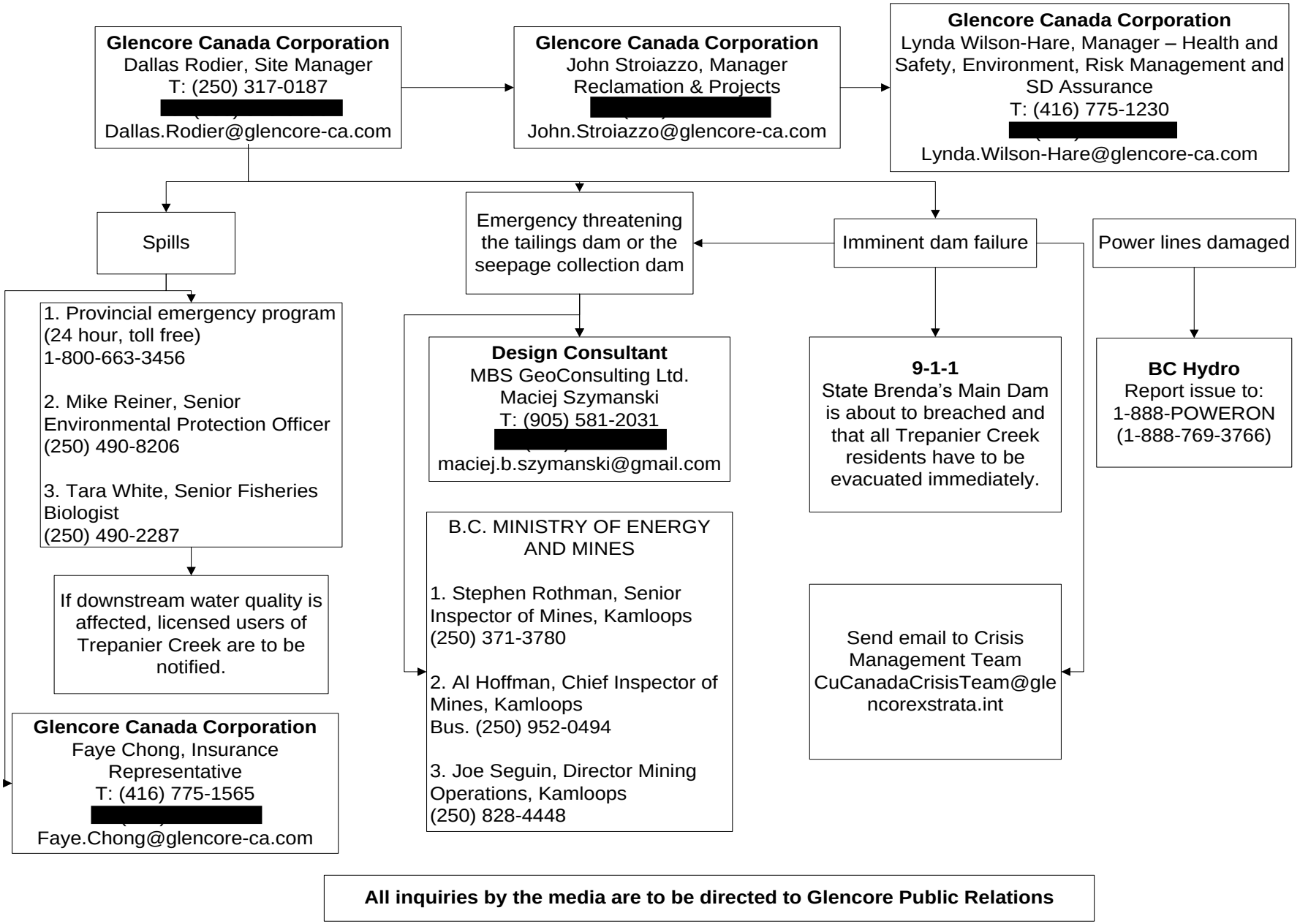
iv) ***Corporate:*** corporate personnel must be notified in the event of significant incidents on site, particularly events where external notifications to government agencies or downstream affected persons has been necessary. Corporate notification will include as a minimum the Manager of

Reclamation and Projects, the HSE Manager and Faye Chong from the insurance group (see Section 8.2 for insurance considerations). With respect to emergency response, any emergencies must be immediately and verbally reported to the Manager of Reclamation and Projects.

3.4 OTHER COMMUNICATION

During and after a significant event, it may be necessary to respond to questions and concerns by the media, general public, special interest groups, and other stakeholders. The Manager Reclamation and Projects and Site Manager are responsible for this communication.

FIGURE 1 COMMUNICATION FLOW CHART



4.0 RESPONSE GUIDES TO EMERGENCY AND UNUSUAL CONDITIONS

The following sections give specific information to assist in the management of certain emergency and unusual conditions at the Brenda Mine site. These potential emergency scenarios have been identified in this Plan based on the results of risk assessments previously conducted at the Site. These situations include:

1. Injury or Illness;
2. Fires;
3. Spills;
4. Other Incidents (for example, power outage, lower reclaim malfunction, or downstream water quality incidents);
5. Dam / Impoundment Incidents

Included in each section are i) key observations and indications that may point to a potential emergency developing, ii) initial response and notification considerations, and iii) on-site and off-site resources. Controls in place for each of the specific identified risks are listed in the facility Risk Registers and relevant Brenda Mine site documented Plans.

The guides presented are not intended to be an exhaustive list, nor are intended to be rigid step-by-step procedures to management of an incident. They are intended to be used as a management tool, and to cover the range of potential incidents at the Brenda Mine site. During an actual incident, common sense, good communication, and flexibility are needed to use these guides and formulate an appropriate response to the situation. It is noted that in all potential emergency situations , employees and contractors will be notified of an emergency using the two-way radio communications system, and are required to meet at one of the two (2) designated muster points; the main or Peachland access gates. Site personnel will indicate where to go and will provide directions if needed.

All must report immediately to site personnel when at muster point. Site Manager or his designate will proceed with a headcount based on the sign in sheet that all workers must fill when entering on Brenda Mine property. Site personnel will attempt to reach via radio any missing person. If no answer is provided, it will be assumed that the missing worker has been injured and a

rescue team will be dispatched to the latest known location if it is safe to do so. If not, Search & Rescue professionals will be alerted and asked to provide support.

The access gates will be then locked to prevent unauthorized entry on site and it is expected that all non-essential personnel will either stay at the muster point or leave site as per Site Manager's decision. The gates can be remotely opened to permit authorized entry on Brenda Mine site. Site personnel or responders will assess the situation and control access via the gates as required when possible and according to the level and hazard potential of the emergency.

4.1 INJURY AND/OR ILLNESS

Injuries or illness of site personnel, contractors, or visitors may occur. Based on information included in the facility's Risk Register, injuries that could occur from work activities or exposure at the Brenda Mine site include the following, without being limited to:

- Working at heights
- Working alone or near water
- Confined space entry
- Occupational exposure to hazardous materials
- Energy control

Of primary consideration is the distance from the Brenda Mine site to the nearest hospital (approximately 40 minutes). Therefore, for all but the most minor of injuries or illnesses, any person injured or ill should be transported closer to medical aid as soon as possible. On-site Glencore employees all have received a Level 1 First Aid training.

The response guide for Injury or Illness situations is given in Table 4–1.

4.2 FIRES

The response guide for Fires is given in Table 4–2. There is potential for both forest fires and structural fires at the Brenda Mine site; of key importance is for personnel to evaluate when it is safe to attempt to extinguish a fire single-handedly, and when outside assistance may be required. Table 4–2 presents some evaluation criteria for this situation.

4.2.1 WILDFIRE CONSIDERATIONS

A wildfire is a term for an unplanned or unwanted natural or person-caused forest fire which requires suppression action. Wildfire monitoring and suppression actions in non-urban areas are typically managed by the Protection Branch of the British Columbia Forest Service. When a wildfire threatens a community or key infrastructure, the Office of the Fire Commissioner, in consultation with the Ministry of Forests may issue one of the following notifications:

- ***Evacuation Alert:*** this is not a request for immediate evacuation, but a warning of imminent threat to life and property, and request to be ready to leave on short notice, and to be prepared for worsening conditions.

- ***Evacuation order:*** an order to leave the area immediately (evacuees should register at their designated reception centre).

In the event that an alert is issued for the Brenda Mine area, the following actions will be implemented:

- ***Evacuation Alert:*** all non-essential site personnel will leave the site, and all non-essential tasks will be postponed. If he has not already done so, the Site Manager will liaise with the local Kamloops Fire Centre to review the existing Brenda site infrastructure, coordinate any necessary site access for firefighting personnel, and confirm the actions being taken to protect the site. Based on this information the Site Manager will identify appropriate primary and secondary evacuation routes from site, and meet with site staff to develop the evacuation procedure. Preparations for site evacuation will commence, including off-site backup and transfer of digital information, and pumping lower reclaim pond to the lowest possible level. Normal site activities as describe in the OMS Manual will not resume until an 'All Clear' order for the Brenda site has been issued by the Office of the Fire Commissioner.

- ***Evacuation Order:*** all personnel will immediately leave the site, and will not return until the 'Evacuation Rescinded' order for the Brenda site has been issued by the Office of the Fire Commissioner.

4.3 SPILLS

With reagent use on-site along with small amounts of fuel, an accidental release of product outside of a containment area could occur. Spills of the greatest consequence to personnel safety and the environment could occur while the product is being transported on the site (e.g. during reagent delivery), or where a product is being used near a waterway (e.g. heavy equipment, or a gas-

powered pump operating near a pond or ditch). Accidental releases during reagent product transfer and within the water treatment plant are typically confined to the plant's secondary containment systems, however if managed incorrectly, could pose a safety hazard to personnel.

It is important to clarify responsibility for accidental product releases. For products used, transported and delivered to the site by a third party contractor (e.g. fuel, treatment plant reagents), Glencore does not assume ownership and responsibility for the product until delivery into the designated storage facility is complete. Thus, response to an accidental release of product during transport or delivery is the responsibility of the product vendor and the transporting party. For significant spills, each of the transporters of water treatment plant reagents have a contractual relationship with a company to assist in spill response; these contacts are listed in Section 6.2. Third party contractors operating their own equipment on site are also expected to respond to accidental product releases from their equipment (e.g. hydraulic line ruptures, leaks). Brenda Mine site staff will offer aid to third party contractors (including transporters) working in Brenda operating areas, and will communicate via radio in these cases. The degree of aid response will be a function of the seriousness of the incident, and the degree to which Brenda staff can respond without jeopardizing: i) the health and safety of company personnel, and ii) the fundamental control of their operations. The assistance of Glencore personnel is not to be considered to indicate that Glencore is directing or taking control of the cleanup, or that it will relieve the contractor of their responsibility and liability as related to the spill. It is the responsibility of the contractor/third party to dispose of the spilled materials and any contaminated soils in an appropriately permitted off-site disposal facility. Verification of the appropriate disposal of the contaminated materials should be sent to Glencore.

Of primary consideration during a spill is ensuring personnel and public safety. Products such as sulphuric acid, ferric sulphate, caustic solution, and lime are corrosive and may react upon contact with soil or water. Personnel, including contractors, are to be familiar with the properties of the various site products through regular review of the Materials Safety Data Sheets (MSDS's), located in the main control room of the water treatment plant, and are to ensure that appropriate personal protective equipment is used when handling products.

Large volume spills of these reagents, as could occur during a tanker accident, require self-contained breathing apparatus and extensive training, and cannot be safely responded to using on-site resources alone. Steps to manage such a situation are included in the response guide for Spills in Table 4–3.

On-site equipment for response to spills is stored in the Spill Contingency Shed located on the main access approximately 100 m above the Coquihalla gate. An inventory of contents is given in Section 7.1.

4.4 OTHER INCIDENTS

Power Outage: Although it typically will not evolve into an emergency situation, there are important repercussions of a power outage that an operator should be aware of and react to, including:

- lower reclaim pump system will not be operative. If a longer duration outage is predicted, operator should consider activating the lower reclaim emergency generator system.

- site data communications will begin to be affected for outages of 45 minutes or longer, as the UPS systems for the PLC's and alarm dialer begin to lose power. Control room computers, phone and radio repeaters are connected to the office UPS system, which with prudent use will have 24 to 72 hours of emergency power.

- main Coquihalla gate will be inoperative during an outage, and will need to be manually opened.

A response guide for power outages is given in Table 4–4.

Lower Reclaim Situations: As indicated above, a power outage will render the lower reclaim pump system inoperative until power is restored or the operator activates the lower reclaim emergency generator. Other potential situations include a pump failure or line failure. Failure of a pump and/or pump motor is relatively simple to remediate through activating the standby pump (under normal settings the standby pump will activate automatically). A line failure presents more of a potential disruption to the pump system, and if not promptly addressed, could cause erosion of the toe and left abutment area of main tailings dam. As discussed in Section 5.2, the SCADA system will automatically stop the pumps under low line pressure conditions, thus reducing erosion issues. Therefore, the focus of response will likely be in maintaining lower reclaim pond inventory levels sufficiently low while repairs to the line are completed. The pond has five days storage capacity (15,000 m^3±) above its lower operating level (5 foot mark in the pump house sump), which in most cases will be sufficient to effect repairs. If more time is required to complete line repairs, other short-term contingency measures may be required (e.g. placement of a temporary line).

Water Quality Incidents: A water quality incident would typically be a scenario of an adverse change in discharge or downstream water quality. This may be a result of one or more factors, such as:

- Change in downstream flow conditions;

- Sabotage or other criminal activity;

- Sampling, laboratory or measurement error; or
- Operational error.

These are potentially serious situations, as there may be downstream effects to water users and/or to aquatic life. On the other hand, when the water quality situation is indicated only by a single anomalous sample or measurement, it is important to systematically determine if the results are accurate, and to look at all potential causes. A guide to this procedure is given in Table 5–2.

TABLE 4–1 RESPONSE GUIDE TO INJURY OR ILLNESS

Signs and Observations	Risk Considerations	Initial Response	Resources	Notification and Follow-Up to Incident
– Person has been injured; or is showing signs of illness	Potential hazard to others -- the cause of injury or illness may afflict others (e.g. carbon monoxide, or electrical hazard) The Brenda Mine site is approximately 40 minutes from the nearest hospital -- as such, all injuries/illnesses other than very minor situations should be managed promptly.	Ensure no further hazards -- Determine cause of injury or illness, and ensure that potential hazards are controlled Use first aid to assess and treat person. **Activate 9-1-1 immediately** if the person: -is unconscious or incoherent, -is unable to breathe adequately, -is experiencing a suspected heart attack, -is bleeding profusely, -has a suspected spinal injury, -is unable to walk, -has received electrical burns, *or* -if you are uncertain of their condition, or cannot adequately assist them with the available people/equipment on site. If 9-1-1 has been activated, ensure that access gates are open. ***Due to remoteness of site, for all but very minor conditions, any person sustaining illness or injury should be immediately transported to medical aid or home (as appropriate for their condition)***	ON SITE: Brenda staff members are certified in occupational first aid level 1 First aid kit and blankets are located in main control room at water treatment plant 3RD PARTY: call **9-1-1** for ambulance assistance ***Note: Peachland is not able to leave their fire protection area because of legal obligations to those inside the area***.	Notify Site Manager immediately if person is referred to medical aid. Refer to BC Health, Safety & Reclamation Code, and Workplace Health & Safety Regulations to determine if incident is to be reported to Chief Inspector of Mines, or Worksafe BC. Make report of incident in Incident Report Form or Workplace Accident Report Book, located in the main control room of the water treatment plant. Ensure any other required forms/reports are completed.

TABLE 4–2 RESPONSE GUIDE TO FIRES

Signs and Observations	Risk Considerations	Initial Response	Resources	Notification and Follow-Up to Incident
– Observation of smoke or fire – Smoke Alarm in Water Treatment Plant, Tailings Barge, or Lower Reclaim	Danger to personnel (smoke inhalation, toxic fumes) Potential explosion of flammable products or explosive gases Potential for forest fire Loss of company property	When a fire is discovered: 1. Assist any person in immediate danger to safety, if it can be done without injury to yourself. 2. Summon assistance of others on site by radio. 3. Decide if you will attempt to fight the fire yourself. 4. If you decide not to fight a fire that is in a building, evacuate the building immediately, closing any doors and windows on the way out. If the fire is outside, move upwind from the area. 5. Call for Emergency Assistance (**9-1-1**) if fire cannot be controlled. However, the site has no fire protection since ***Peachland is not able to leave their fire protection area due to legal obligations to those inside the area***. If 9-1-1 has been activated, ensure that access gates are open. **DO NOT FIGHT A FIRE IF….** 1. You do not know what is burning 2. The fire is spreading rapidly 3. You don't have adequate or appropriate equipment 4. You might inhale toxic smoke 5. You do not have a path to retreat to safety	ON SITE: Fire extinguishers are installed throughout property, mainly near the main entrance of each building – see *Fire Extinguisher Locations.xls* for listing and locations. 3RD PARTY: call **9-1-1** for firefighting assistance ***Note: Peachland is not able to leave their fire protection area because of legal obligations to those inside the area***.	Notify Site Manager if there has been a fire on site. Refer to BC Health, Safety & Reclamation Code, and Workplace Health & Safety Regulations to determine if incident is to be reported to Chief Inspector of Mines, or Worksafe BC. Ensure that any extinguishers used are serviced immediately.

Learn how to use a fire extinguisher: http://www.fireextinguishertraining.com

TABLE 4–3 RESPONSE GUIDE TO SPILLS

Signs and Observations	Risk Considerations	Initial Response	Resources	Notification and Follow-Up to Incident
– Reagent transport accident – Leak from tank or line – Release of product from heavy equipment (e.g. hydraulic line)	Spilled product may be corrosive or toxic; may enter waterway; or may react with other products to produce toxic fumes or other by-products.	Ensure the safety of yourself, other site personnel and the public **If unsafe to do so, do not approach the spill site.** 1. Identify product(s) spilled. 2. Validate with the MSDS the product inherent hazards. 3. If area is safe to approach, put on personal protective equipment appropriate to the product spilled. Approach the area cautiously, from upwind if possible. 4. Have an appropriate fire extinguisher available, and extinguish any fire. 5. Account for all personnel, assess and give first aid for any injuries. Move injured away from area if there is a hazard. 6. Control access to area, and cordon off a safe distance from product. 7. Reduce or eliminate product flow if possible (e.g. closing isolation valves, or opening relief/drain valves) 8. Contain spilled product if possible (e.g. by ditching, berming, or pumping). Direct flow away from waterways and ditches. 9. Remove spilled product and any contaminated soil, and place in appropriate containers. Dispose of in accordance with regulatory requirements.	ON SITE: Spill Contingency Shed (located 100 m above main Coquilhalla gate) (see Table 7–1 for full inventory listing) MSDS Sheets: located in main control room. 3RD PARTY (see Contact List): Quadra Chemicals (Reagent Supplier) Reagent Transporters: Northwest Tank Lines (ferric/sulphuric), Shadow Lines (lime), Harms Pacific Transport (caustic) **9-1-1** for ambulance assistance Provincial Emergency Coordination Centre (**9-1-1** and ask for **Kelowna Fire** – they administers and operates the regional hazardous materials response team)	Spilled product and contaminated soil Spills *to outside* of designed containment structures, and *at or above* threshold quantities must be reported by the Site Manager to Provincial Emergency Coordination Centre (1-800-663-3456), for example: Petroleum Products (Class 3): ≥100L Sulphuric Acid, Ferric Sulphate or Caustic (Class 8): ≥5 kg Flocculant (unclassified, but potential to cause pollution): ≥ 200 kg Acetylene, Nitrogen, or Oxygen (Flammable or Non-flammable gases, Class 2): ≥ 10 kg
CAUTION: Most spills are of small volume, and may be managed using on-site personnel and equipment. However, large volume reagent spills (such as a tanker rupture of a caustic or sulphuric acid delivery truck) cannot be safely responded to with on-site resources alone. In such a case, control public and personnel access to area, and call using hand-held radio, wait for qualified assistance.				

TABLE 4–4 RESPONSE GUIDE TO POWER OUTAGES

Signs and Observations	Risk Considerations	Initial Response	Resources	Notification and Follow-Up to Incident
– No power to one or more main power circuits	HIGH VOLTAGE -- considerable risk of injury if unqualified persons attempt to remedy situation possible downed lines or poles -- repair required prior to re-energizing loss of phone system and radio repeater in extended outages temporary loss of pumping capabilities, particularly at lower reclaim (and upper reclaim during spring runoff)	Account for all persons on site Ascertain extent of power outage (circuits affected) If main power systems are affected, call in on-call electrician See electrical "troubleshooting" section of OMS Manual (6.2.1) Change radios to channel 2 (direct) if repeater loses battery power. Ensure cellular phones are adequately charged. Conserve computer power by turning off monitors. Manually open Coquihalla access gate using motor release key. Gate will be inoperable for the duration of the outage, so should be left in the open position. Activate lower reclaim emergency generator and pump system, if required due to water levels and duration of power outage (see Appendix C-1 in OMS manual). Upper reclaim pump will require a rented emergency generator which will need to be wired in before system can be activated.	ON SITE: Lower Reclaim Emergency Generator (see App. C-1 of OMS Manual) 3500W 120/240V Portable Generator, Water Treatment Plant Upper Reclaim (Requires wiring-in of a rented generator before activating) 3RD PARTY: On-Call Electrician See also Contact List under "High Voltage Line Crews", and "Electrical and Instrumentation"	Note details of incident and response in daily log book. Review cause of incident, response, and determine any actions to be taken to prevent reoccurrence or to improve response.

TABLE 4–5 RESPONSE GUIDE TO WATER QUALITY INCIDENTS

Signs and Observations	Risk Considerations	Initial Response	Resources	Notification and Follow-Up to Incident
– Evidence of sabotage or tampering with control outlets, or water treatment plant control systems – Laboratory results indicate water quality not meeting permit requirements – Plant operated at higher rate than indicated for 1:1 dilution of Trepanier Creek flow – A spill or other accidental release at the Brenda site with potential to affect downstream waters – Complaints from downstream users – An off-site water quality incident that may affect Trepanier or Peachland drainages (e.g. highway spill, road washout, other sediment control issues)	Potential effects to downstream water quality - to water users and to aquatic life It is important to seek support of other collaborating observations and not rely on a single laboratory result.	1. Notify Site Manager by radio communication. 2. Verify that treatment plant operating rate is appropriate for downstream flow conditions. 3. Check all discharge systems to ensure proper function. 4. Verify water quality results (e.g. by re-sampling, having lab re-run analysis). 5. Develop monitoring plan to assess extent and duration of event. Consider the nature of the potential contaminant (e.g. reagent, solids, or non-compliant water) and the need to determine secondary effects to biological systems (aquatic, wildlife, livestock, and humans). 6. Site Manager will notify the Manager Reclamation and Projects.	ON-SITE: Treatment Plant SCADA data Trepanier Creek Flow data Historical water quality data 3RD PARTY: Contract laboratory (ALS Environmental)	Site Manager will determine if notification of downstream users and Ministry of Environment is necessary. If water quality does not comply with the guidelines, Site Manager will contact the Provincial Emergency Coordination Centre (1-800-663-3456) and provide the water license holders to ensure they are notified. (Refer to Table 7–3) Report sabotage or tampering to the RCMP (250-768-2880)

5.0 SITE IMPOUNDMENTS EMERGENCY AND UNUSUAL CONDITIONS

This section reviews the potential for sudden and accidental releases at Brenda tailings, seepage reclaim, polishing water and sludge storage facilities. It covers all Brenda dams and dykes with emphases on the Main Dam and Saddle Dam, which are rated as extreme consequence dams. Although the rest of dam/dyke structures are lower consequence dams/dykes, features peculiar to each of these structures are also highlighted here to facilitate the site personnel in dealing with emergency situations.

The loss of containment from a breached main dam or saddle dam could result in a discharge of tailings and water that would have a significant impact on Trepanier Creek and/or Peachland Creek, and ultimately Okanagan Lake. The ensuing flood could result in loss of life, property and/or environment damage downstream, including Coquihalla Highway. The accidental and sudden loss of water and sludge's stored in other facilities could result in contamination of the soil and groundwater within and/or outside of the Brenda site.

It is important, therefore, to prevent mishaps due to natural or man-made events. Although the possibility of such an event is extremely remote, the following sections outline possible emergency situations, procedures to be taken and personnel and agencies to be contacted under such circumstances. Appropriate actions shall be taken promptly by all personnel involved in order to prevent and/or mitigate any undesirable consequences of such emergency situations. Response procedures developed for this potential risk were developed using the results and recommendations from the August 29, 2011 "XCC, Brenda Closed Site Loss of Containment of Catastrophic Hazard Dams" report prepared by Dyadem.

5.1 DOWNSTREAM CONSIDERATIONS

An inundation study carried out in 1986 (Klohn Leonoff, 1986) for the scenario of a breach at the tailings main dam shows a maximum flood stage of 15 m to 18 m could occur in Trepanier Creek in the area of the Municipal District of Peachland. From time zero when initiation of failure of the dam commences, flooding (defined as a creek stage greater than 3 m) may start about 1.5 hour later, and the peak stage may occur approximately 2.5 to 3 hours after initiation of dam failure. The travel time of the peak of the flood from the dam to Okanagan Lake would be about 0.5 hours.

Since this study in 1986, tailings deposition ceased in 1990, and pond water volume has been substantially reduced through maintaining the pond level

below 1385 m elevation. Thus, the 1986 inundation study could be over-estimating the volume of potential water release outcome in the unlikely event of a tailings main dam breach under today's post-closure operating conditions. Nonetheless, it does serve to indicate critical time factors and flood magnitudes. See Appendix A to view the 1986 inundation plan and profile for Trepanier Creek.

According to the 2010 Dam Safety Review carried out at the Brenda Mine, the following consequence ratings were identified:

TABLE 5–1 DAMS CONSEQUENCE RATINGS

Storage Dam/Dyke	*Consequence of Failure*
Main Tailings Dam	Extreme
Saddle Tailings Dam	Extreme
Lower Seepage Recovery Dam	Significant
Upper Seepage Recovery Dam	Significant
Polishing Pond North Dyke	Low
Polishing Pond South Dyke	Low
Sludge Storage Dyke	Significant

Emergency preparedness and response at the Brenda Mine facility is carried out in accordance with the requirements laid out under the provincial 2000/2001 B.C. Dam Safety Regulations and the federal Canadian Dam Association, Dam Safety Guidelines, 2007, for these consequence ratings.

5.2 UNUSUAL CONDITIONS AND EMERGENCY SITUATIONS

This section addresses "emergency situations" that could pose a threat to the structural integrity of the dam structures or result in the release of tailings materials, pond water, or sludge into the surrounding environment. Unusual conditions are typically discovered through the routine monitoring and surveillance programs discussed in Brenda Mine OMS Manual. Addressing of potential problems at this stage will aid in preventing many emergency situations from developing.

Emergency situations may include, but are not limited to, the following:

- Failure or suspected impending failure of the tailings dams, water and/or sludge retention dams/dykes;

- Slumping, sliding, cracking or bulging of tailings dams, water and/or sludge retention dams/dykes;

- Rapid increase or unexplained cloudy appearance of seepage through the tailings dams, water and/or sludge retention dams/dykes and/or their foundations;

- Breakage of pipelines, which may result in dam erosion and/or release of water and/or sludge;

- Large earthquakes;

- Extreme floods;

- Severe storms; and

- Sabotages and other criminal activities.

The most extreme dam emergency event would be a sudden failure of either the tailings main dam or tailings saddle dam. This event is highly unlikely given the structures' design criteria, operating parameters, and monitoring and surveillance programs. However, recognition and response to such an event must be rapid, and ensure that notification of downstream users is done quickly, and that appropriate government agencies are notified to assist in response. A response guide for a tailings main dam or saddle dam failure is given in Table 5–2.

In the event of an emergency, prompt action shall be taken to avoid delays which could have serious consequences. Particular attention shall be given to inspecting and, where necessary, repairing the dam structures and associated spillways following unusual or extreme events. All unusual events shall be reported to the Site Manager. In an unlikely event that high seepage flows occur downstream of the dam structures, and particularly if seepage water is carrying soil particles from the dams or their foundations, it shall be reported immediately and the information forwarded to the designated geotechnical engineering consultant. In the event of an emergency or unusual situation, all instrumentation in the area shall be monitored during and/or immediately following the event by the site personnel. This information shall be forwarded to the consultant immediately so that the situation can be assessed and remedial actions taken promptly.

TABLE 5–2 RESPONSE GUIDE TO SITE IMPOUNDMENTS –MAIN TAILINGS DAM OR SADDLE TAILINGS DAM FAILURE IN PROGRESS

Signs and Observations	**Risk Considerations**	**Initial Response**	**Notification and Follow-Up to Incident**
Deterioration of unusual condition at either tailings dam. Major sand movement and large seepage flow observed at Main Dam finger drains Imminent failure of either tailings dam due to "piping" internal erosion, slope failures, crest settlement, or dam overtopping leading to uncontrolled release of stored water and tailings	*Downstream Effects:* *Main Dam:* tailings and water inundation to highway 97C and upper Trepanier Creek. Inundation of lower reclaim pumpback system and main access to site. Possible flooding of lower Trepanier Creek in the area of Municipal District of Peachland, including rural property and the Trepanier Creek water intake. Detrimental water quality, potentially resulting in temporary loss of use of drinking and irrigation water to Trepanier bench, and possible effects on aquatic life in creek. Potential effects on Okanagan Lake. *Saddle Dam:* tailings and water inundation to Princeton Avenue and upper Peachland Creek and Peachland Lake. Possible flooding of Peachland Lake and effects to District of Peachland water intake structure. Detrimental water quality, potentially resulting in temporary loss of use of drinking and irrigation water to Peachland residents, and possible effects on aquatic life. Potential effects on Okanagan Lake.	**Notify the Site Manager.** To the extent that it is safe to do so, make all efforts to control personnel and public access to the area. Standby to assist as required. **If immediate downstream evacuation is necessary, the following actions will be taken by the Site Manager** (or designate if not immediately available). Alert all other site personnel and ensure that they are out of the downstream area. Immediately contact 9-1-1 and ask for Fire as they operate regional emergency program. Provide the following information: a) the reporting person's name and telephone number; b) the location and time of the incident (*location: Brenda Mine Site, 22 km up highway 97C from Peachland*); c) the dam structure involved, either: - [*Brenda Mine Main Tailings Dam*] or [*Brenda Mine Saddle Tailings Dam*] d) the nature of the emergency situation: *Dam failure; potential danger to:* *[if Main Dam: highway 97C and Trepanier Creek downstream users and facilities);* *[if Saddle Dam: Princeton Avenue and Peachland Creek and Lake downstream users and facilities]* e) the cause of the emergency, if known; f) actions taken to control the problem and their effect; g) the names of the agencies on the scene; and h) the names of other persons or agencies advised concerning the incident.	Site Manager makes appropriate notifications to government, corporate, dam engineer, the public and media. Follow-up actions will be determined on a case-by-case basis.

6.0 RESOURCES AND CONTACT PERSONNEL

The following sections give contact information for corporate, government, and third party resources. This information is to be reviewed every year, and updated as new information is available. Although every effort is made to ensure that the contact information pages inserted in this manual are the most up-to date, key personnel involved in emergency response are responsible to ensure that: i) they inform Brenda site staff of their most up-to date personal contact information, and ii) that they are in possession of the most up-to date contact information pages.

6.1 BRENDA MINE SITE CONTACT PERSONNEL AND RESOURCES

GLENCORE CANADA CORPORATION	Office	Cell	Home
Dallas Rodier, Site Manager	250-317-0187	[redacted]	
Trevor Kostiuk, Contract operator	Same		
John Stroiazzo, Manager Reclamation and Projects	647-292-5767		
Matthew Payten, Legal Counsel	416-775-1203		
Faye Chong, Insurance rep	416-775-1565		

Emergency Management B.C. (any public safety issue)	1-800-663-3456
Okanagan Region Environmental Protection Division (EPD)	250-490-8200
Kelowna General Hospital	250-862-4000
Westbank RCMP	250-768-2880 (or 911)

DISTRICT OF PEACHLAND	Office	Cell	Home
Administration (call cell after hours)	250-767-2647	[redacted]	
Bruce Smith, Regional Emergency Operations Coordinator	250-469-6339		
Joe Mitchell, Director of Operations	250-767-2108		
Wayne Marceniuk, Head Water Mechanic	250-767-2108		
Shawn Grundy, Water Mechanic	250-767-2108		
Peachland Fire Chief	250-767-6055		

KELOWNA HEALTH CENTRE	Office
Health Protection Department (Inspections)	250-979-7665

Highway Emergencies	**1-800-663-7623**
Forestry District Office	**1-800-661-4099**
Forest Fire Reporting	**1-800-663-5555**

REAGENT SUPPLIERS

Ferric Sulphate, Sulphuric Acid, Caustic Soda, Lime

QUADRA CHEMICALS	Office	Cell	Home
Rob Piccolo, Account Manager	604-940-2830 x 308	[redacted]	
Valerie Zalesky, Customer Service	604-940-2830 x 329		
Jeff Rowat, Regional Operations Manager	604-940-2830		

Flocculant

BASF Canada Inc.
Emergency Spill Response ***CANUTEC*** (613) 996-6666

HIGH VOLTAGE LINE CREWS

ADVANCED POWERLINES (Kelowna)	Office	Cell
Wade Jackson	250-765-3776 or 250-861-5540	[redacted]
Sean Dawson		

HIGHLAND POWERLINES (Kamloops)	Office	Cell	Home
Ray Henry	(250) 374-7446	[redacted]	
Steve Oryschak			

ELECTRICAL AND INSTRUMENTATION

ELECTRICAL CONTRACTOR	Office	Cell
CANYON ELECTRIC, Tim Leardo	250-276-3260	[redacted]

INTERIOR INSTRUMENTS (Kelowna)	Office	Cell	Home
Brad Anderson	250-717-8813	[redacted]	
Ken Hansen	Same		

BC TRANSMISSION CORPORATION	
Emergencies	604-455-1900 or 604-455-1708
To schedule outage	604-455-1767

BC HYDRO	
Power Outages	1 888 POWERON (1 888 769-3766)

HAZARD TREES

Right-Of-Way Operations Group	
Emergencies	250-868-5713
Phil Mudge	250-870-7881
Joel Sherwin	250-870-7884

GENERAL CONTRACTORS

ANSELL CONSTRUCTION	Office	Cell	Home
Tim Ansell	250-769-4293	[redacted]	
Brian Ansell			

PUMP SERVICE AND REPAIR

MEARL'S MACHINE WORKS	Office	Cell	Home
Greg Anderson	250-763-0109	[redacted]	
Mike Hall	Same		

ENGINEERING

MBS GeoConsulting Limited (all dams, dykes and diversions)	Office	Cell	Home
Andy Small	506-444-9585	[redacted]	

GOLDER ASSOCIATES (geotechnical, soils/groundwater)	Office	Cell	Home
Al Robison	250-860-8424	[redacted]	
Rick Peleshytyk or Gerald Imata	250-860-8424		

FOCUS CORPORATION (general consultants – water management)	Office	Cell
Charlie Higgins, P.Eng.	250-980-5500	[redacted]

7.0 EQUIPMENT RESOURCES

7.1 SPILL CONTINGENCY EQUIPMENT AND SUPPLIES

Spill contingency equipment and supplies are stored in two locations on-site: i) main supply located in spill contingency shed, located on the main site access

road, approximately 100 m above the Coquihalla gate; and ii) quick response spill kit, located in a large crate in the booster pump house. Supplies are stored in these two separate locations to ensure availability of response equipment in case of a road blockage (i.e. a jack-knifed tanker truck).

TABLE 7–1 INVENTORY OF SPILL CONTINGENCY SHED

5- universal sorbent dikes	200- universal sorbent sheets
75 each – 25 kg – bags of hydrated lime	40 each – 25 kg - sandbags
48 each – 25 kg – bags of Sodium Bicarbonate	1 each - Standard Level 1- First Aid kit
2 each - flashlights	3 each - complete suits of raingear
3 pairs – neoprene rubber boots (Two size 12 and one size 10)	2 pair - rubber gloves
2 each - shovels	9 each - flares
4 each - rolls of barricade tape	3 each - 10kg dry chemical fire extinguishers
1 each – CO_2 fire extinguisher	4 each - safety vests
2 each - half face acid respirators	2 pair - safety glasses
2 each - hard hats with full face shields	2 each - axes
1 case - 1 liter sample bottles (15 bottles and marker)	1 each - litmus test kit
flourescine dye powder	

TABLE 7–2 INVENTORY OF QUICK RESPONSE SPILL KIT, BOOSTER PUMP HOUSE

100- universal sorbent sheets 17”X19”X1/4”	20 each – 25 kg – bags of hydrated lime
20 each – 25 kg - sandbags	20 each – 25 kg – bags of Sodium Bicarbonate
2 each - shovels	2 each - 10kg dry chemical fire extinguishers
2 each - axes	1 each - litmus test kit
2 each - flashlights	1 each - hard hat with full face shield
1 each - complete suit of raingear	2 each - half face acid respirators
1 pair – neoprene rubber boots	1 pair - neoprene rubber gloves

7.1.1 EQUIPMENT FOR EMERGENCY ENTRY INTO WATER TREATMENT PLANT

In case of a suspected release of a small amount of acid reagent (e.g. pump or feed line leak), personal protective equipment is stored in the spill response kit in the booster pump house to allow safe entry of personnel into the water treatment facility. The equipment (boots, gloves, full face shield, complete suit of raingear, half-face acid respirator) is intended to permit a short duration entry in order to open the bay doors for ventilation, investigate the situation and conduct initial response such as equipment shutdown. Entry should not be attempted without a second person on site, or by personnel not trained in the use of respirators. Note that an acid respirator provides protection from those vapors and gases typically generated from acids. The respirator does not supply oxygen, nor is intended to provide protection from dangerous accumulations of most other gases or vapors. External resources (e.g. Peachland fire department) should be summoned to assist in suspected large releases such as a tank rupture.

7.1.2 PIPELINE REPAIR EQUIPMENT

Large diameter stainless steel pipe repair clamps with rubber lining are stored in the booster pump house in case of a pipeline leak. One set of clamps to repair a 24-inch line is stored on the main feed line into the booster pump house. One set of clamps for a 16-inch line repair is located in the WTP on a plywood shelf.

7.1.3 OTHER EQUIPMENT

First Aid Kits: The main site first aid kit and blankets are stored in the water treatment plant control room. An emergency kit is located in the spill contingency shed. Smaller kits are carried in the site light vehicles, and ATV.

Fibre Bags: approximately 30 fibre bags that may be used for sandbags are stored in the booster pump house.

7.2 TREPANIER CREEK WATER USERS

A list of water license holders on Trepanier Creek is given in Table 7–3. This list is updated annually, in order to assist in their notification in the event of a water quality issue.

TABLE 7–3 TREPANIER CREEK WATER LICENCE HOLDERS – ALPHABETICAL LISTING

TREPANIER CREEK DOWNSTREAM WATER USERS REPORT **Generated: May 2014** **(Source: http://a100.gov.bc.ca/pub/wtrwhse/water_licences.input)**	**Water District / Precinct: VER - PEACHLAND** **Status: Current, Pending, or Active Application** **Stream Name: Trepanier Creek**

Licensee	Mailing Address	Phone #
District of Peachland	5806 BEACH AVE PEACHLAND BC V0H1X7	General 250-767-2647 Emerg 250-868-162
Todd Graham Stanley & Kelly June	[redacted]	
Transportation & Highways Ministry Of	523 COLUMBIA ST KAMLOOPS BC V2C2T9	250-828-4284
Verwoerd Cydney et al	[redacted]	
Rothfusz Marinus et al		
Dash Arlen Victor		
Szalka George E & Colleen		
Dwight & Roberta Kirkwood		
Regional District Of Central Okanagan	1450 K.L.O. ROAD KELOWNA BC V1W3Z4	General 250-763-4918 Emerg Parks/Utilities 250-868-5299
Dixon Trevor D & Profeit Laurie L	[redacted]	
Douglas Turner		
Pellerin Eric J		
Ralph Roy & Olive May		
York Bruce Allen & Patricia Jane Klymoch		
Chase Joel D & Jennifer L		
Ingram Dennis F & Beverley M		
Fullforce Diamond Drilling Ltd	6261 MILLER RD PEACHLAND BC V0H1X7	250-767-6457?

Licensee	Mailing Address	Phone #
Peterson Kevin Charles	[redacted]	
578816 BC Ltd		
Thiesmann Helmut & Gail		
To Be Determined (Lic C103637)		
To Be Determined (Lic C104243)		
Muir Colin E & Valerie A		
To Be Determined (Lic C106007)		
955759 BC Ltd		
Hooper Lloyd Edward & Jackson Deborah Le		
C F Mineral Research Ltd		
Klein Jessica S		
Barry Gilbert & Jean		
Fipke Charles E c/o Neil Fipke		
Clements James H et al		

8.0 PLAN ADMINISTRATION AND OTHER CONSIDERATIONS

8.1 PLAN MAINTENANCE AND EMERGENCY PREPAREDNESS

This Plan shall be fully reviewed annually concurrent with the site's internal OMS manual, and any updates made as required. The Plan is also reviewed

during quarterly staff safety meetings. At a minimum, the Plan is required to be reviewed and updated every seven (7) years, in accordance with the Provincial Regulations.

The Brenda Mine site conducts annual desk-top risk assessments that are conducted by internal Glencore personnel for potential emergency situations identified in this Plan. As part of this review, and in accordance with the B.C. Dam Safety Regulations, the facility conducts a review of the downstream conditions (from the dam).

Technical experts and/or relevant stakeholders such as contractors, outside response agencies and/or regional emergency preparedness agencies may be involved in the risk assessment process for Glencore's identified hazards, where relevant. It is at this time that the Brenda Mine site will conduct an assessment of outside response agencies and their available resources to respond to each of the identified risks.

At a minimum, the Plan will be provided to the District of Peachland Regional Emergency Operations Coordinator upon any changes to the site, personnel or emergency response procedures.

As stated previously, contact information, such as that provided in Section 6.2, will be updated as changes occur. Personnel should take the opportunity to review the adequacy of this plan following a significant incident on site, and suggest potential improvements for later versions.

Key training of site personnel includes first aid, use of fire extinguishers, and Workplace Hazardous Materials Information Systems (WHMIS). Site personnel are required to be familiar with this emergency Plan, particularly communications procedures, on-site and off-site resources, and safe handling of hazardous products at the site. With a small site staff, full scale simulations may not be feasible; however "tabletop" practices involving discussion of response to scenarios, and practice in communications, are beneficial in making personnel familiar with this plan and testing the system.

Brenda staff will work with key contractors including reagent suppliers and transporters to ensure clarification of joint responsibilities under this Plan.

8.2 INSURANCE CONSIDERATIONS

Insurance requirements for reporting and exclusions are as follows (updated based on March 07, 2014 communication from Faye Chong – see actual and current policy for verification):

1. The CGL does not exclude pollution with respect to non-owned automobile coverage, so any pollution caused by or in connection with an automobile

accident (even if it's a contractor hauling for us but for which we might have liability) should be reported ASAP. For clarification, Non-owned Automobile is defined as leased/rented for a period no longer than 30 days within Canada or the United States of America.

2. The CGL excludes coverage for:
    a) pollution from our own properties and from other properties that were used for handling or storing or disposing or processing waste;
    b) pollutants transported as waste or handled, stored or treated, disposed of or processed as wastes by or for us;
    c) emissions of pollutants from premises used by us where we (or contractors or subcontractors) brought the pollutants on site; and
    d) operations that are essentially waste treatment operations.

There are a couple of exceptions to the exclusions in 2 and these bring back coverage for certain pollution emissions. For instance:

    e) any personal injury or property damage caused by heat, smoke or fumes from a fire which becomes uncontrollable or breaks out from where it was intended to be, or by lightning, windstorm, explosion, vandalism or malicious mischief, riot or civil commotion, automatic sprinkler leakage, collision or upset of an automobile or aircraft, or
    f) "any other emission of pollutants, provided that such emission of pollutants:
        i) is detected within twenty (20) days after the commencement of the emission; and
        ii) is reported to the Insurer within forty (40) days of being detected; and
        iii) does not occur in a quality or with a quality that is routine or usual to the business of the Insured; and
        iv) is neither expected nor intended from the standpoint of the insured."

If in doubt as to whether a pollution release is covered, report it to Faye Chong (office: 416-775-1565 cell: 416-219-9166).

3. The CGL excludes all clean-up costs from coverage, unless they are consequent upon personal injury or property damage covered under the policy. So if we were ordered to simply clean up a spill on or under our own property that wouldn't be covered unless there is a third party property damage or personal injury involved. In several jurisdictions, damage to the environment, especially the surrounding environment, the water table etc, might be considered third party damages that would need to be mitigated and therefore could potentially be covered. If in doubt as to whether a clean up is covered, report it.

4. We have modified our policy to ensure that "waste" does not include materials that are being recycled, reconditioned or reclaimed or tailing ponds. Such materials are therefore not considered pollutants under the pollution exclusion. If in doubt as to whether a release of waste is covered, report it.
5. The self-insured retention under the liability program is $500,000 for pollution. If there is a serious release that could result in third party liability, report it to Faye Chong as soon as it becomes known. It will not necessary mean that a claim will be file under the policy but it will mean that if a claim is not filed, it was done consciously and not by omission.
6. If the above noted discovery and reporting requirements are not met, there is no coverage under the policy, unless caused by the named perils in #2 e above. The release of pollutants may or may not be covered under the policy but should nevertheless be reported to preserve our rights under the policy if it is covered.
7. In addition to the CGL, we also have some additional coverages, including for debris removal under our property insurance program for on site releases from any covered property claim; pollution liability under our automobile liability policy from accidents involving our owned or operated automobiles; and pollution liability from marine losses under our charterers liability coverage. Whatever coverages we have, they all have timely reporting requirements so if there is a spill or release it needs to be reported to us ASAP.

9.0 REFERENCES

BR.12.58.78-2011.08 Brenda Site Dam Risk Assessment

BR.12.58.78-2011.08 Main Dam External Factors

BR.12.58.78-2011.08 Main Dam Internal Factors

BR.12.58.78-2011.08 Saddle Dam External Factors

BR.12.58.78-2011.08 Saddle Dam Internal Factors