



# **Bamberton Quarry Fuel Management and Spill Contingencies**

Date Revised: November 30, 2018

## Table of Contents

1.0	Background and Objectives .....	2
2.0	Fuel and Lubricant Storage .....	3
3.0	Equipment Refueling and Lubrication .....	4
4.0	Fuel Spill Prevention, Containment and Response .....	5
4.1	Spill Prevention Procedures .....	6
4.2	Spill Identification, Assessment and Notification Procedures.....	6
5.0	Spill Emergency Contact Numbers .....	7
6.0	Mine Location and Access Map .....	8

### **1.0 Background and Objectives**

Operations at the Bamberton Quarry include the use of a number of hazardous substances including gasoline, diesel fuel, lubricating oils and grease. The use and storage of these substances must be conducted in a manner that reduces risk to human health safety, and protects the environment from accidental release and potential contamination of land or water.

Requirements and guidelines for handling, transportation and storage of fuels and lubricants, including statutory requirements and recommended practices, are described in detail in *A Field Guide to Fuel Handling, Transportation and Storage* published by the Ministry of Environment<sup>1</sup>.

With reference to this publication, a hydrocarbon management plan has been developed for the Bamberton Quarry that will ensure suitable and effective procedures will be employed when transporting, handling and storing fuel and lubricating products. These procedures will mitigate potential health and safety risks to mine personnel; prevent the threat of fire and explosion; and provide actions to be taken to protect the terrestrial and aquatic environments from unintentional spills.

The Bamberton Quarry Fuel Management and Spill Contingency Plan covers fueling, operational servicing, spill prevention, emergency response, spill contingency, and clean-up for fuels and lubricants stored on or off the mine site. The plan will be located on site and can be made available to the Regional Inspector upon request. The Mine Manager will be responsible to ensure all workers on the site are aware of and fully understand the intent and contents of the plan.

---

<sup>1</sup> [http://www.env.gov.bc.ca/epd/epdpa/industrial\\_waste/petrochemical/pdfs/fuel\\_handle\\_guide.pdf](http://www.env.gov.bc.ca/epd/epdpa/industrial_waste/petrochemical/pdfs/fuel_handle_guide.pdf)

## 2.0 Fuel and Lubricant Storage

Fuel and lubricants will be delivered to the mine site as needed to re-supply fuel and oil tanks on mobile and fixed equipment. Currently no bulk fuel storage will be located on mine site.

1. For containers used to store flammable or combustible liquids (gasoline, diesel fuel, etc.), only containers that meet appropriate design specifications under the Fire Code will be used.
2. Containers will be maintained in good condition and not used if they are damaged, rusting or leaking.
3. Containers will be adequately sealed with proper fitting lids, caps, bungs or valves to prevent spills and leaks.
4. Containers will be marked at a safe maximum fill level corresponding to about 90% capacity.
5. All fuel containers will be labelled in accordance with WHMIS and the Fire Code.
6. Fuel and chemical containers will be stored in an appropriately designed containment area.
7. Fuels and lubricants will be stored at a distance greater than 30 metres from a stream, lake or wetland. Any storage at a closer distance must be approved by an inspector.
8. Signs will be posted prohibiting smoking in areas near fuel caches or where storage and dispensing is carried out.
9. One (1) 20-B:C rated or two (2) 10-B:C rated fire extinguishers will be located where containers are stored within a building or structure.
10. Storage sites or facilities will be kept clean and well organized.
11. All empty fuel drums and chemical containers will be removed from the property on a monthly basis, at minimum.
12. All hydrocarbon and chemical containers will be removed from the mine site upon completion of mining activities.
13. An emergency spill response and containment kit will be maintained in close proximity to fueling and storage areas. The kit must have the capacity to contain and clean up 100% of a spill from a failure of the largest volume of a fuel or lubricant container plus 10%.

### 3.0 Equipment Refueling and Lubrication

No bulk refueling tanks are currently located on the mine site. Primary on-site fueling of equipment will be conducted by a commercial company specializing in fuel management and mobile fueling. The company operates under ISO-based national standards program for quality, safety and environmental protection. Secondary fueling may occur using 200 to 300 litre Tidy Tanks attached to mine-site and/or contractor pick-up trucks.

1. Only authorized personnel may operate mobile refueling dispensers and must be aware of their responsibilities while supervising other fuel transfer activities.
2. Prior to refueling, vehicle engines must be turned off and no open sources of ignition or smoking will be located within 7.5 metres of the vehicle.
3. While refueling, the operator will be in control of the fueling nozzle at all times. Place fuel nozzle into the fuel tank fill tube and then turn on power for the dispensing pump. Do not use any object or device that is not an integral part of the fuel nozzle to maintain the flow of fuel.
4. Routinely observe the fuel piping, dispensing pump, and hose assembly during fuel transfer to determine if any leaks are present. Immediately report and contain any observed leaks.
5. Fuel tanks will not be filled beyond their safe maximum fill level corresponding to about 90% capacity of the receiving tank.
6. Mobile equipment will not be refueled or serviced within 50 metres of any watercourse and precautions must be taken to ensure possible spills will not enter waterways, storm water drains and ditches.
7. Impermeable, oil absorbent matting will be used when refueling and servicing mobile equipment. Used matting will be carefully recovered and placed within heavy duty plastic garbage bags. The garbage bags must not leak and will be securely stored until they can be properly disposed of at an authorized waste management facility.
8. An emergency spill response and containment kit will be maintained in close proximity to the refueling area. The kit has the capacity to contain and clean up 100% of a spill from a failure of the largest volume of a fuel or lubricant tank plus 10%.

## 4.0 Fuel Spill Prevention, Containment and Response

Mine site personnel must be fully trained in spill containment and response. In the event of a fuel spill, the operator (if safe to do so) will immediately contain and remediate any spill of hydrocarbon or other deleterious substances. Fuel nozzle and pump will be shut off and spill response equipment such as absorbent materials will be used to control the spill and to collect the spilled substance. All fuel spill incidents regardless of size will be immediately reported to the Mine Manager or Supervisor.

Emergency spill containment kits will be located on-site, in vehicles and heavy equipment as required. The kits must be routinely checked to ensure contents are complete and usable. Missing or damaged items of the kit must be immediately replaced. A list of required emergency spill equipment and kit locations is provided in Table 1.

Table 1. List of contents for emergency spill containment kits required for all heavy equipment, refueling vehicles and fuel caches.

<b><i>Bamberton Quarry – Emergency Spill Kit Contents and Required Locations</i></b>	
<b><i>Required Location of Kits</i></b>	<b><i>Minimum Recommended Spill Kit Contents</i></b>
On all heavy equipment	<ul style="list-style-type: none"> <li>• Round nose shovel or equivalent</li> <li>• 5 - 18"X18" absorbent pads or equivalent</li> <li>• <i>Heavy duty plastic garbage bag or equivalent</i></li> </ul>
Pickup trucks carrying auxiliary fuel tanks greater than 100 liters, Fuel Caches, and Pickups	<ul style="list-style-type: none"> <li>• Round nose shovel</li> <li>• 10 - 18"X18" absorbent pads or equivalent</li> <li>• 2 – 3"x48" absorbent socks</li> <li>• 1 – small container of bio-remediation agent (Oil Gator)</li> <li>• 1 – small container of stop leak putty/crystals (Plug N' Dyke)</li> <li>• Heavy duty plastic garbage bag or equivalent</li> <li>• <i>Personal protective equipment (not part of kit)</i></li> </ul>

## 4.1 Spill Prevention Procedures

Spill incidents could impose significant impacts on workers' health, require companies to cover large cleanup costs as well as result in serious damage to the environment. Emphasizing situational awareness combined with a commitment to spill prevention can help minimize the risk of a spill.

1. The company will develop and maintain policies and procedures on spill prevention and response.
2. Mine personnel will be properly trained in spill prevention and response.
3. Supervisors will review any proposed activity that could pose a potential risk for worker safety of environmental contamination.
4. Any worker who is aware of any potential or actual release of a pollutant to the environment must first attempt to prevent the release, then immediately contact their supervisor.
5. All work shall be planned to limit the uncontrolled release of pollutant materials to the environment, so far as is practical.
6. Approved containers shall be used for the transport and storage of potential pollutants. All such containers shall be labeled as to the contents and the potential hazard.

## 4.2 Spill Identification, Assessment and Notification Procedures

Mine site workers must be able to identify the type and quantity of spilled material, the type of receiving environment (land or water) at risk, and assess the level of risk to personnel and the environment prior to taking action. They must ensure that complete and accurate assessments are made, and appropriate safety procedures and the use of personal protective equipment are being employed. An intense and quick response is essential to minimize potential health or ecological damage.

1. *Identify Spilled Material:* For spills of gasoline or other flammable liquids, immediately clear and secure the site and notify the Mine Manager or Supervisor. Continue to monitor the situation until help arrives. Use extreme caution, further spill assessment and response for these types of liquids is often too dangerous for untrained first responders.
2. *Safety Action:* Determine safety and protective equipment needed for working in or around the spill. Provide first aid to any injured person; monitor vapor levels and develop a preliminary safety action plan.

3. *Initial Spill Description:* Identify tank volume; note the time duration of the spill from tank or line; note any fire hazards and physical hazards; determine if the spill has stopped; and determine if the spill can be contained at source.
4. *Containment and Recovery:* Determine key personnel, equipment and materials needed for initial containment, recovery, and clean-up for spill to land or spill to water.
5. *Reporting:* The Mine Manager or Supervisor must be immediately notified of all spills. Spills greater than 100 litres of TDG Class 3 – flammable/combustible liquids or waste oil must be reported immediately to the Provincial Emergency Program (PEP).
6. *Monitoring:* Initiate a safety and environmental monitoring program to identify potential effects of the spill.
7. *Cleanup and Remediation:* Develop in cooperation with key agencies an action plan for the cleanup and remediation of the impacted areas.

## 5.0 Emergency Contact Numbers

### EMERGENCY – 911

<b>Coast Mountain Resources Ltd.</b>	<b>Office - 778-356-4056</b>
Rick Hannah, Manager Operations	250-883-3645
Richard Grainger, Manager	778-967-1150
Jeff Aeichele, Supervisor	250-710-0520
Tom Burnside, Supervisor	250-701-3977
Kristin Sahlen, Administration	250-678-7577
<b>Emergency Contacts</b>	
Provincial Emergency Program (PEP)	<b>1-800-663-3456</b>
Mill Bay Fire Rescue (Hall 1)	250-743-5563
Malahat Volunteer Fire Department	250-743-2103
Ray Hollenberg, Northwest Response Ltd.	250-847-4556

## 6.0 Bamberton Quarry Location and Access Map

