



**Keystone
Environmental**
Knowledge-Driven Results



Contingency and Spill Response Plan

Derwent Way Soil Transfer and Barge Facility

Prepared for: Summit Earthworks Inc.

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PREFACE

This contingency and spill response plan is designed to conform to the *Environmental Management Act*, BC Contaminated Sites Regulation, BC Spill Reporting Regulation, and *Canada Shipping Act: National Spill Response Protocol*.

The barge loading facility receives graded Industrial Land Use (IL) soil and will not accept materials subject to the Transportation of Dangerous Goods Act or the Hazardous Waste Regulation. A registered Contaminated Sites Approved Professional (CSAP) will review material data prior to facility acceptance. The transfer station facilitates delivery of contaminated soils to soil treatment facilities in the Lower Mainland and Fraser Valley.

Soils are brought to the facility by truck and temporarily stored in the designated Waste Storage Area before being transferred to a barge and transported to an approved treatment facility.

Summit Earthworks Inc. (Summit) is committed to safeguarding the health and safety of its employees, the public and the environment and will work to minimize the potential impact of its operations by utilizing best available control technologies and operating procedures.

In the event of a spill, Summit's immediate priority is to the safety of its employees on the site and of members of the surrounding community. Once the risk to human health and safety is determined and mitigated, Summit will proceed to protect the environment from risk by containing and cleaning up the spill.

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1. EMERGENCY ACTION PLAN

The objective of the Emergency Action Plan is to delineate the sequence of initial notification and actions in responding to emergencies at the Barge Loading Facility to be located on Derwent Way in New Westminster (“the Site”). This plan is designed to promote a rational and effective emergency response and preserve a chronological record of actions taken.

The section of this plan relating to spills should be consulted for all spills that may occur; from large spills that need outside assistance to control, to minor operational spills that occur from time to time, which are controlled by on-Site staff. Summit site staff is responsible for the control and ultimate clean-up of spills on Site.

While all spills must be reported internally (see Section 6), only large spills, or potentially health or life threatening situations, shall require emergency notification. Spill control and containment will be the primary emergency response activity, followed by shut-down procedures if necessary, and finally clean up procedures.

Summit only accepts soils that are classified to be Industrial Land Use (IL) standard or below. No liquid wastes are permitted to be received at the facility. Soils arriving at the transfer facility that are not approved of, or arrive without the prescribed paperwork will not be accepted at the facility and will be turned away.

1.1 Shutdown Procedures

Shutdown procedures occur in situations where it is unsafe to continue Site operations.

Should a spill or leak occur, the primary response is to stop the leak if it is safe to do so (i.e., shut off pumps, close valves, block drains), control the spill or leak if it is safe to do so (i.e., use spill kit), and eliminate sources of fire and ignition. The Site Supervisor must be notified immediately to assess the severity of the spill, and Emergency Coordination Centre may be notified if it is determined that the spill qualifies as reportable. In the unlikely case that the Site must be evacuated based on assessment by the Site Supervisor or Emergency Coordination Centre, all Site staff and visitors to the Site must leave the Site immediately. Access to the Site (via road or barge) must be restricted until emergency services provides clearance to re-enter or additional information is provided indicating it is safe to do so.

In the case of potential flooding or other environmental hazard originating off-Site that requires shutdown of operations and evacuation of the site, the Site Supervisor will coordinate Site shutdown procedures. Shutdown in case of evacuation from flooding includes stopping work, securing the floating dock, sealing the south entrance from waste storage area with lock blocks and sandbags, shutting down all equipment and moving them to the north end of the facility, and evacuating employees and visitors. Access to the Site (via road or barge) must be restricted until emergency services provides clearance to re-enter or additional information is provided indicating it is safe to do so.

In the case of a severe storm event that renders on Site operations unsafe (high winds that affect the safe use of the barge or extreme rainfall events that cause flooding), the Site Supervisor will coordinate Site shutdown procedures. The Mission BC Gauge will be monitored to prepare for potential flood events. Should the water level at the Mission Gauge exceed 6.0 m then measures will be taken to minimise the soil stored on site. Should the Mission Gauge exceed 6.5 m then the operation will be shut down and evacuated from potential flooding. Flood protection measures include stopping work, securing the floating dock, sealing the south entrance from waste storage area with lock blocks and sandbags, shutting down all equipment and moving them to the north end of the facility, and evacuating employees and visitors. .

Contaminated soils will be the predominant waste types handled. The facility will not accept soils classified as toxic under Class 6.1 of the Federal Transportation of Dangerous Goods Regulation or soils with concentrations greater than that specified in the BC Ministry of Environment Protocol 11 for Contaminated Sites for Human Health Soil Ingestion Exposure for Industrial Land Use. Because of this, spills of soils planned to be handled at Site do not represent a human health hazard. Containment and clean-up response can be done with minimal risk of contaminating surrounding areas and decontamination procedures for these types of wastes are easily followed.

Liquid spills in the form of oil, waste oil, hydraulic fluid, oily water/bilge, gasoline, diesel, solvents, antifreeze, grease, etc. may occur on Site. The severity of the spill and the decontamination procedure depends on volume, proximity to the waterway, drains, or other pathways to the receiving environment.

1.2 Initial Response

On noticing a leak, spill, or equipment malfunction, the observer shall immediately stop work and shut down equipment. They will then alert other crew members on Site and notify the Site Supervisor. As the Site is small, with all sections within shouting and seeing distance, this alerting can be accomplished easily. The Site Supervisor, using approved Health and Safety procedures, shall then assess the potential safety hazard of the situation.

If the safety risk is moderate to high, the Site Supervisor shall assign the staff to initiate wider shutdown procedures, while the Site Supervisor completes a Spill Report Form (Section 1.3) and initiates emergency notification procedures (Section 1.4). All parties are to remain at the scene until the required information is gathered, if it is safe to do so.

Initial response to spills will be as follows:

- Stop work, shut down equipment involved.
- Assess safety risks in the spill area.
- Notify the Site Supervisor.
- Stop the flow of the material if safe to do so.
- Secure and isolate spill area.

- Assess the situation (identify product, equipment involved, affected area, spill status, time of spill).
- Begin containing and recovering the spill with on-site emergency spill equipment if safe to do so.
- If the spill is of a substance in an amount equal to or greater than the amount listed in the BC Spill Reporting Regulation Schedule, the person who had possession, charge or control of a substance immediately before its spill shall immediately report the spill to the Emergency Coordination Centre (ECC) (also referred to as the Provincial Emergency Program, or PEP; part of Emergency Management BC) by phoning 1-800-663-3456.
- Complete the spill report form, as described below.

1.3 Spill Report Form

Spill response procedures on the site will follow the Spill Reporting Regulation of the *BC Environmental Management Act*, appended to this plan for reference. A standard Spill Report Form shall be completed as soon as possible after detecting a spill. The information in the report will be used during notification if required and form an accurate record of events and decisions throughout the spill. Consequently, spill report forms shall be completed hourly for the first 24 hours after a spill, every 4 hours until 72 hours have passed or until the spill clean-up objectives are achieved. A personnel and equipment inventory should be kept to track workers and equipment used in the response. The inventory should include:

- Location used;
- Personnel responsible;
- Time used (logged in/logged out); and
- Performance or effectiveness.

A spill report form will be completed regardless of the size of the spill; all spills will be reported internally and spills that are of a substance in an amount greater than or equal to the amount listed in the BC Spill Reporting Regulation Schedule will be reported externally.

1.4 Emergency Notification Procedures

Emergency notification should proceed if a substance in an amount greater than or equal to the amount listed in the BC Spill Reporting Regulation Schedule is spilled or if a spill occurs that poses potentially hazardous risks to human health or the environment (Section 6).

The Emergency Coordination Centre (ECC) shall be notified by phoning 1-800-663-3456; the dispatcher will contact the appropriate Environmental Emergency Response Officer who will respond at their discretion.

If emergency notification is required, the Initial Responder or Site Supervisor shall contact the Emergency Coordination Centre (ECC) upon detecting and assessing severity of a spill, unless there is a life-threatening situation. The person making the call shall be prepared to give a concise and thorough recounting of the information received in the spill report.

The following information shall be provided when calling the ECC:

- Name and phone number of the person calling
- Name and phone number of the person who caused the spill
- Location and time of the spill
- Type and quantity of the substance spilled
- Cause and effect of the spill
- Details of action taken or proposed
- Description of the spill location and the surrounding area

1.4.1 Responding to a Fire

In response to a fire, the first call shall be made via 9-1-1 to the Local Fire Department. All personnel employed at the site will undergo emergency response training as well as the basics of fire prevention, fire safety and firefighting procedures, including evacuation of the site, if necessary.

Training will be ongoing at four-week intervals and will be part of the overall work program. Safety meetings fall in conjunction with the training schedule.

When called, the Fire Department and ECC will initiate their own communication procedures to all relevant staff members, on-Site employees, agencies and response team members.

1.4.2 Marine Spill

The 24-hour marine spill number is the same as the Emergency Coordination Centre (ECC) (1-800-663-3456). The marine spill number shall be the first contact and other agencies, such as the Canadian Coast Guard, may be contacted subsequently depending on the size and nature of the spill. The National Spill Response specifies that the Canadian Coast Guard is responsible for all spill response and recovery in Canada. Port Metro Vancouver has jurisdiction over this portion of the Fraser River, but the Coast Guard is the designated spill response agency for ship-based spills. The Coast Guard contracts spill clean up to Western Canada Marine Response Corporation on the west coast.

If the spill is determined to be an incident, the ECC will determine the next course of action.

1.4.3 Contact List

Contact information is:

Authority	Contact	Phone number
Emergency Services (police, fire, ambulance)	Emergency Dispatch	911
Emergency Coordination Centre (ECC or PEP)	Duty Officer	1-800-663-3456
Canadian Coast Guard		604-775-8881
Port Metro Vancouver Operations Centre	24/7 Operations Centre/ Port emergencies	604-665-9086
Summit Earthworks Inc.	Myles Hargrove	604- 825-2010
Western Canada Marine Response Corporation	24-hour spill emergency line	604-294-9116 or 1-855-294-9116
Royal Columbian Hospital		604-520-4253
Non-emergency local police	Non-emergency line	604-525-5411
Non-emergency local fire	Non-emergency line	604-519-1004
Tervita (3rd party spill response)	24 hr Emergency Response	1-800-327-7455
Terrapure Environmental (3rd party spill response)		604-596-6559

1.5 Command Structure Strategy

Leadership of a spill response will depend on the size of the spill. All spills, regardless of size, must be reported internally. If the spill is too small to require notification of government authorities, the Site Supervisor will notify BC Ministry of Environment (MoE) before conducting a safe and effective response and clean-up program. The Site Supervisor shall call other Summit staff for assistance as required. If the spill is determined to be large enough to call the Emergency Coordination Centre (ECC) (see section 1.2, and Appendix B for quantities) and additional personnel and equipment are required to manage the spill or incident, ECC will then establish a command structure fitting to the type and size of spill, whether there is a fire or a fire hazard and whether medical attention is required.

1.6 Timing Standards for Emergency Response Strategy

The Site Supervisor shall first ensure that immediate human health and safety concerns are addressed and stable. A call is then placed to the ECC if required. The next step is to activate the communications procedures followed by mobilizing personnel and cleaning up equipment. A basic time schedule for the early response procedures should be as follows:

- Assessment of fire or health hazards within 3 minutes;
- Evacuation of area other than employees and emergency response personnel;
- Complete stoppage of all work related duties and operations within 6 minutes;
- Complete spill report form within 10 minutes;

- Execution of first stages of communication procedures within 15 minutes;
- Activation of health and safety personnel for any medical emergency within 15 minutes;
- Prepare for arrival of outside spill response teams within 20 minutes; and
- Initiate mobilization for spill containment and clean-up activity within 20 minutes.

1.7 Health and Safety Requirements

A spill response must strictly follow health and safety requirements outlined in Summit's Health and Safety Plan (issued under separate cover). Briefly, these requirements address:

- Medical clearance and monitoring of all project personnel;
- A safety orientation meeting for all field personnel;
- A designated work zone around the site where all personnel are required to wear protective clothing, if required;
- Respirators are to be worn at the discretion of the Health and Safety officer or Site Supervisor;
- Two workers shall be in sight of each other at all times while on site;
- Decontamination procedures for any equipment and personnel must be followed prior to departure from the site if required; and
- Activities such as smoking and eating are prohibited on the site.

2. CONTINGENCY PLAN MANAGEMENT

2.1 Authority and Commitment

Summit is committed to conducting a thorough clean-up of any spills that occur on the job site and to cover any costs that may arise from an accidental spill. The personnel on site will be trained to respond to spills and fires to minimize potential liabilities.

The entire offloading operation will be manned from the time the trucks arrive onsite to the time the barges are unloaded or loaded. Prior to the trucks arriving on the site, personnel will ensure all parts of the system (including emergency response systems) are functioning as intended. Prior to barge loading, personnel will confirm the barges are empty of debris, in good condition, and are properly closed. For barge unloading, a review of the barge will be completed following unloading. As part of the barging contract, Summit will require contractors to submit maintenance and training records.

3. HAZARD ANALYSIS

3.1 Soil Spill Analysis and Mitigation

3.1.1 Soil Spills on Land

Spillage of contaminated soils from trucks or handling equipment is expected to be the predominant potential source of spills. All equipment handling soil will be restricted in their movement around the work site. Trucks delivering soils will be allowed travel onto the site for unloading purposes. They will then travel directly to the covered and contained Waste Storage Area for designated unloading of the soil. A front-end loader working on site will load soil from the covered Waste Storage Area and deliver to the conveyor hopper at the waterfront. The loaders handling soils will have a one piece bucket to avoid leaks. Loader operators will be instructed to limit the size of each load to avoid spills. Soils unloaded outside the designated covered Waste Storage Area will be considered spills, and will require cleanup, and internal notification and documentation. Areas outside the Waste Storage Area that experience loaded truck or loader traffic will be bermed with concrete containment curbs to prevent soil from being tracked beyond these controlled areas.

The barge loading conveyor system is divided into two sections: the loading hopper set on top of concrete footing, and the conveyor belt body supported within a steel truss and is sloped back towards the shore. Soil spills around the hopper will be reported internally, cleaned up, and placed in the Waste Storage Area. The conveyor system itself will be covered with a stainless steel casing to guard against wind and precipitation. The conveyor system will also be underlain by a stainless steel spill tray, which will collect spills and direct it back towards the hopper.

The facility has a Stormwater Pollution Prevention Plan (SPPP) that outlines stormwater containment and treatment, if soil spills occur during storm events. Should contaminated soils come into contact with runoff in the Waste Storage Area, or Barge Loading Area (as defined in the SPPP), this runoff will be collected and treated as part of regular stormwater pollution prevention. The Waste Storage Area is bermed and contained within an HDPE liner to prevent contaminants from migrating to the subgrade. A collection sump within the Waste Storage Area pumps stormwater runoff to the treatment system for treatment and discharge. The unloading area south of the Waste Storage Area is paved and contained with curbs to contain soils tracked by trucks and on-Site equipment, and runoff that comes into contact with tracked soils. Catch basins in this area convey stormwater runoff to the treatment system for treatment and discharge. The Barge Loading Area is contained and bermed, with runoff and potential spills collected within a sump and pumped to the on-Site treatment system for treatment and discharge. The loaders will be restricted to the Site; trucks delivering contaminated soils will be washed and decontaminated before leaving the work site. Front-end loaders will be decontaminated before handling other soils.

A review of City of New Westminster maps indicates that no sanitary sewer or storm drain connections exist on Site, and none are proposed as part of this project. There is limited risk of spills on Site coming into contact with municipal infrastructure.

Soils within the Waste Storage Area will be restricted to the limits of the designed containment area. Soils spilled outside of the Waste Storage Area will be reported internally. This allows for internal documentation and assessment of all types of spills, even minor spills that do not require external reporting. Spill and incident reports will be reviewed annually to inform spill response procedures and indicate areas or procedures where improvements can be made.

3.1.2 Marine Spills

Spillage of soils from the conveyor system (at the end to the conveyor belt) and from the barges are expected to be a secondary source of potential spills. The body of the conveyor system will be fully contained within its casing, leaving the only source of potential marine spill at the conveyor chute. Depending on the soil density, temperature and wind speed, there is potential for some dust to be generated during barge loading. To minimise dust generation, the loading operations will be suspended during high wind conditions, and the barge may be sprayed with water during periods of increased dust risk. A dust monitor will be used to detect periods of dust generation, and will be used to direct mitigation measures such as spraying the soil with water or halting the loading. Spills from the barge are unlikely, as soils remain in place during transfer, until acceptance at the receiving facility.

In the event of a spill to the marine environment, the following mitigation measures will be implemented.

- Operations will stop and the on-Site Supervisor and VFPA will be informed of the spill and the estimated quantity and contents of the spill.
- Sediment samples will be collected at the spill location and downstream from the spill location.
- Should the sediment samples indicate a potential risk to the environment, a proposal to the VFPA will be prepared to remediate the sediments.
- In consultation with a qualified dredging professional, the site operator will determine if the material can be effectively recovered. This will depend on a number of factors including but not limited to tide level and volume released.
- In the event of a large spill, on-Site personnel in consultation with VFPA will determine if a suction dredge or similar needs to be mobilized to the spill site for recovery.
- Post-spill and clean up water and sediment sampling would be conducted onsite and in adjacent areas to determine the potential effects of the spill and confirm that clean-up is completed consistent with the applicable provincial and federal guidelines.

Similar to soil spills on land, soils spilled outside of the Waste Storage Area will be reported internally. This allows for internal documentation and assessment of all types of spills, even minor spills that do not require external reporting. Spill and incident reports will be reviewed annually to inform spill response procedures and indicate areas or procedures where improvements can be made.

Barge operators operate under separate spill response plans, and are responsible for spill response procedures when they are considered the person who had possession, charge or control of a substance immediately before its spill.

3.2 Oil or Fuel Spill Analysis and Mitigation

There is a potential for equipment working on site, and for the barge, to release oil, waste oil, hydraulic fluid, oily water/bilge, gasoline, diesel, solvents, antifreeze, grease, etc. to the receiving environment. The barge, dock, and soil receiving area will be equipped with spill kits to respond to this type of spill. High traffic areas are paved to prevent infiltration of spills to the subsurface, and contained by curbs to the east, west, and south of the Waste Storage Area. Staff will be trained in the use of materials stored in spill response kits, and on the chain of communication required when providing initial response to a spill.

A 2,500 litre, above-ground storage tank (AST) may be present on Site for fuelling of Site equipment. This storage tank will be a double-walled, vacuum-monitored tank placed on a concrete pad. The concrete pad will provide an impervious surface for small drips and leaks during filling and refuelling. The tank and concrete pad will be protected with bollards to provide a visual barrier and prevent impact from trucks and on-Site equipment. Engineered drawings and as-built drawings will be produced for the tank and the design will be registered with the Petroleum and Allied Petroleum Products Storage Tanks Regulations. Fuelling will be completed at a minimum distance of 30 m from the high water mark.

In the event oils or fuel are spilled on the soil or gravel road, the soils or materials that are suspect are to be excavated, segregated, and placed onto an impermeable surface and protected from the elements to prevent rain erosion or wind losses. This soil will be sampled consistent with the methods outlined in the Ministry of Environment's Technical Guidance on Contaminated Sites 1: Site Characterization and Confirmation Testing and applicable federal standards and guidelines. On the basis of these results, soils or materials will be classified and relocated or disposed of consistent with the requirements of their classification.

In the event oils or fuel are spilled on an impermeable surface such as the paved access road, the spill must be stopped (i.e. using shut-off valves) and controlled (i.e., using spill booms or absorbent pads) to contain the spread of the spill. All spills are to be reported internally, some spills may require notification of the Emergency Coordination Centre if they meet reportable limits in the BC Spill Reporting Regulation. All absorbent material used during cleanup must be disposed of by an approved contractor, and decontamination procedures must be followed to prevent contamination of further areas.

Barge operators operate under separate spill response plans that are specific to the type of materials and fuels used on that barge, and are responsible for spill response procedures when they are considered the person who had possession, charge or control of a substance immediately before its spill.

4. SENSITIVITY ANALYSIS

While sensitivity analyses are generally included in contingency plans to provide information to aid the spill responders in planning and responding to the spill, the sensitivity analysis for this site is brief, primarily because of the nature of waste material received. Still, there are considerations in biological, social and economic aspects that may be affected by a spill that should be taken into account.

4.1 Biological Sensitivities

Negative impact of a spill will come in the form of potential surface and ground water contamination. A spill within or off the site must be contained locally to minimize such impact. Soils spilled on land should be considered a "very low" spill risk because they are non-flowing materials, whereas soil spilled adjacent to, or in the water, is considered a higher risk. Oils, grease, fuels and solvents are considered a high spill risk.

Federal and Provincial Transportation Regulations cover all safety aspects of transporting special wastes. There is also a response program in place to deal with a spill of waste materials. Summit has established a transportation monitoring program of incoming waste delivery. This system will track incoming shipments so that any accidents can be quickly reported to ECC for their timely response.

4.2 Socio-Economic Sensitivities

The socio-economic implications of a spill on or off the job site would depend on the nature of the spill. A soil spill on land, away from the marine environment, would have minor implications, whereas a soil spill into the marine environment or an oil spill may have greater consequences.

5. SPILL RESPONSE ORGANIZATION AND LOGISTICS

The purpose of this section is to identify a response team structure that can cope effectively with spills that may accidentally occur at the work site.

5.1 Command System

Response to larger spills will be handled by the ECC or their delegate, at their discretion. As the potential maximum size of spill is moderate - the size of a response team will be limited. Consequently, the command structure will be limited with few intermediates between the Incident Commander and the Response Crews. The designated on-site safety officer, Site Supervisor, or the company safety officer will assume responsibility for overall direction of the response operation. The on-site safety officer or Site Supervisor will have authority to undertake any activity at his/her discretion.

Depending on the situation of a spill, the ECC or delegate may assign command staff for functions of liaison, safety, and information. A liaison officer will liaise with assisting agencies. The safety officer or Site Supervisor will be responsible for ensuring the safety of all personnel and has authority to stop/prevent any unsafe actions. The safety officer or Site Supervisor may also advise on any issues of public safety. The information officer has the responsibility of assembling and distributing accurate and complete information on the event. The information officer is the point of contact for any outside group (media, government agency, public) that desires information on the event.

5.2 Communications

Communication on or off site can be accomplished effectively in person. The on-site telephone lines serving the work area may be used for outside communications. Cellular phones are available at all times on the site.

6. SPILL REPORTING AND LIAISON

The size of spill that will require reporting is dependent on the substance spilled and the corresponding specified amount under the Spill Reporting Regulation. A spill to the water of any size or a spill to land greater than 25 kg or 25 L will be reported internally for corrective actions. Any spill of a substance that can cause pollution in an amount greater than or equal to 200 kg or 200 L will be reported per Schedule 1 in the Regulation. As part of the Management Agreement, Summit does not accept Hazardous Waste soils at the facility.

6.1 Spill Reporting Contact List

This section is to emphasize local contacts for district and regional offices of response agencies that require reports of the spill event. The prime contacts are:

Contact		Phone
Emergency Control Centre	Duty Officer	1-800-663-3456
Summit Earthworks Inc.	Myles Hargrove	604-825-2010

Contact these agencies individually within a reasonable time (half a day) following a spill.

6.2 Spill Reporting

The contents of the report under the Spill Reporting Regulation should include, to the extent practical:

- The reporting person's name and telephone number;
- The name and telephone number of the person who caused the spill;
- The location and time of the spill;
- The type and quantity of the substance spilled;
- The cause and effect of the spill;
- Details of action taken or proposed to comply with section 3 of the Spill Reporting Regulation¹;

¹ Where a spill occurs, the person who immediately before the spill had possession, charge or control of the spilled substance shall take all reasonable and practical action, having due regard for the safety of the public and of himself or herself, to stop, contain and minimize the effects of the spill.

- A description of the spill location and of the area surrounding the spill;
- The details of further action contemplated or required;
- The names of agencies on the scene; and,
- The names of other persons or agencies advised concerning the spill.

A Spill Report Form is attached to this contingency plan in Appendix A.

6.3 Public Information

Immediately upon notification, the MoE Project Manager, or delegate, may attend the scene at their discretion. Initial statements about a spill will be confined to facts that will not be in dispute, such as:

- Identification of the location, name of project involved;
- Time of accident;
- Type of material spilled;
- Action being taken to control and clean up the spill; and
- The company's position concerning prevention of pollution, and actions planned to respond to a spill.

Any information released can be used in legal action, so all response crew members are required to adhere to these public information guidelines. **Under no circumstances should any information be released by the crew concerning:**

- Speculation concerning liability for the spill or its legal consequences
- Speculation regarding the cause of the spill. An extended inquiry may be needed to determine the actual cause. Legal liability could be affected by what is said
- Estimate of damage expressed in dollars
- Estimates of damage to ecology
- Promises that property, ecology or anything else will be restored back to normal
- Requests for, or implications of, need for volunteers to help
- Opinions concerning the appropriateness of government response to the spill

An approved facts sheet may be prepared and distributed to police and response crews to relay to interested media and onlookers, if approached.

7. CONTAINMENT AND CONTROL

7.1 Spill Kits

Spill kits will be placed on the barge, the dock, and various locations on site, including at the site scale house. The kit is designed to contain and clean-up minor spills that may occur, and provide initial response to larger spills before the Fire Department or agency response teams arrive.

Spill kits must be maintained in a functional condition with sufficient sorbent materials, gloves and portable disposable containers for used sorbent material.

The locations of large site spill kits shall be clearly signed and the kits themselves must be signed to identify the spill capacity for which the kits are intended. Figure 1 shows the locations of the spill kits. Spill kits must be checked on a regular basis to ensure all contents of the kits are replenished.

Each spill response kit contains:

- 50 absorbent pads
- 4 booms
- 1 bag of granular absorbent
- Shovels
- Heavy duty disposal bags
- Roll of heavy duty plastic sheeting
- 4 pairs rubber lined work gloves
- Sets protective clothing – waterproof overalls, hard hats, gloves, gum boots, goggles, respirators
- Copy of Emergency Response Plan with notification procedures and contact telephone numbers, and spill report forms
- Site plan
- Up to 80 sandbags (empty)
- Small tool kit

In addition, emergency kits at the site scale house will contain:

- 6 volt flashlights
- Clipboard and writing pad
- 100 ft. 1/4" rope
- Medical first aid kit
- Eye wash station
- 20-litre buckets

- Fire extinguisher – foam and dry
- ladder
- 100' fire hose (connectable)
- Trash pump
- Water storage tank
- Hammer
- Axe

The spill kits will be restocked after use. Several items of equipment that are used during the course of regular project operations are maintained on site and suitable for emergency response. These are discussed below.

Any additional response equipment needed for responding to major spills must be brought on site by the response agencies such as the Fire Department or ECC crews.

7.2 Equipment Capabilities and Limitations

Water storage on site is limited to the water storage tank. The water should be adequate in most circumstances to fight fires.

Water will be drawn from the on-site storage tank as required in the event of an emergency. There will be one portable auxiliary water pump (trash pump) located on the site that will be mobilized in the event of fire. Water will be drawn directly from the storage tank and will be equipped with 100 ft of standard fire hose.

7.3 Equipment Storage and Maintenance

Summit maintains a scale house on Site for storage of response equipment and other unused equipment. Spill kits are located in strategic locations throughout the Site (see Figure 1). The scale house will be locked whenever Summit personnel are not on site. Keys can be obtained through Summit personnel listed in the notification section of this contingency plan (Section 1.4.3). If required, a set of keys can be left with the local Fire Department.

7.4 Above Ground Fuel Storage Tank Requirements

The above ground fuel storage tank has been reviewed to meet Federal Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations (Storage Tank Regulation). Below is a list of requirements relevant to the proposed 2,500 L fuel tank.

References are from the CCME “Environmental Code of Practice for Aboveground and Underground Storage Tank Systems Containing Petroleum and Allied Petroleum Products.”

1. Section 3.6 of the above Code of Practice lists design standards for specific tank construction and materials.

2. Design, fabrication and installation of the aboveground storage tank system will be in conformance with the NFCC.
3. The storage tank will be registered with BC ENV.
4. Overfill protection in conformance with API RP 2350-96– visual and audible alarm located in an area that is continually occupied by workers/employees.
 - a. A shop-fabricated storage tank system having a capacity of less than 5 000 L may be provided with overfill protection in the form of visual monitoring and gauging of the level in the storage tank system by trained employees in constant attendance throughout the transfer operation and who are located so as to be able to promptly shut down the flow, or communicate immediately with the person controlling the delivery so that the flow can be shut down promptly
5. Secondary containment achieved by the tank being a double walled vacuum monitored tank.
6. The tank corrosion protection will be in conformance with the Storage Tank Regulation.
7. The leak detection for tank and dispenser will be in conformance with Part 6 of the Storage Tank Regulation.
8. Control of emissions for volatile organic compounds in conformance with CCME PN 1180, “Environmental Guideline for Controlling Emissions of Volatile Organic Compounds from Aboveground Storage Tanks.”
9. As-built drawings will be prepared for the storage tank and include the following:
 - a. the outline of all storage tanks;
 - b. the centerline of all piping or piping groups;
 - c. the centerline of all underground electrical power and monitor sensor conduit;
 - d. building foundation outlines;
 - e. secondary containment systems; and
 - f. property lines.
10. Leak testing must be done before the tank is put into service and any time a leak is suspected in primary or secondary containment of the tank or related components.
 - a. An automatic tank gauge system with a precision leak detection capability shall be designed, built, and approved in conformance with ORD-C58.12-1992, “Leak
11. An automatic leak detection device, including a high-technology secondary containment monitoring device and precision line leak detection device will be implemented in such a manner that:
 - a. when the automatic leak detection device is activated, product flow shall be shut off; and
 - b. except for on-site maintenance activities, when the automatic leak detection device is turned off or bypassed for more than one minute, product flow shall be terminated.

12. The suction pump will be equipped with a single check valve installed directly below the suction pump and piping shall slope so the contents of the pipe will drain back to the storage tank if the suction is broken.
13. Spills, overfills, and storm water from product transfer areas shall be contained, treated and disposed of in conformance with the applicable provincial or territorial regulations, guidelines or policies.
14. The concrete pad will slope away from the tank base towards a sump at a slope greater than 1%.

7.5 Safety of the Clean-up Crew

Standard workplace procedures as outlined in the site Health and Safety Plan continue to be in effect for response workers. Some of the key requirements are discussed below.

Fire hazard should be assessed prior to assigning response tasks to personnel.

The organic gas levels on site shall be tested at the time of a spill with an organic gas monitor operated by the facility/project safety officer or Site Supervisor. If levels are excessive, workers shall wear respirators. All response personnel on site shall be equipped with personal respirators.

Full protective clothing shall be worn by response workers. On leaving the site, the outer clothing shall be considered contaminated and undergo decontamination procedures (shower and washings).

8. ASSESSMENT AND SURVEILLANCE

8.1 Monitoring Procedures

The Site will be considered “clean” when all soil, surface water and groundwater contamination is removed from the Site. A lack of visual or olfactory indications of contamination does not necessarily mean that all contamination has been removed. A qualified environmental consultant will have to be retained to collect soil samples to be tested for contaminants of concern. The Project Manager will arrange to have a consultant on-site during the clean-up program.

8.2 Documentation Procedures

In addition to the reporting procedures described in Section 1, a full report of the spill event will be submitted to regulatory agencies and companies affiliated with the project listed in Section 1.4.3, as required. This report will summarize the details outlined in the series of spill report forms completed during the spill. A post-mortem analysis will be conducted on the spill response, identifying any shortfalls and recommending improvements.

9. TRAINING

9.1 Objectives

The training objectives are to prepare all field crew personnel in response procedures. The procedures that need to be reviewed include most topics described in this contingency plan:

- Notification procedures
- Health and Safety Procedures
- Hazard Analysis
- Sensitivity Analysis
- Response Command System
- Reporting Requirements
- Equipment Inventories and Operation
- Spill Assessment and Monitoring Procedures
- Financial Procedures

9.2 Training of Personnel

Training required of the field crew includes standard safety and health procedures. First aid and CPR courses are applicable to this project and must be taken.

Response training involves working through practice scenarios of spills on the site. The procedures identified in the objectives above will be described using this plan as reference to the goals and requirements of a response. The main thrust of the training sessions will concentrate on administrative and reporting requirements of the crew.

To better facilitate employees, all training will occur on site and will encompass the full range of in-classroom and hands-on training. Employees will learn correct emergency reporting procedures, as well as understand and implement field response procedures.

A good understanding is required of all working and mechanical components in and around the site. As part of the total training package, employees will be made familiar with the overall facility operation.

The total length of time required for training is estimated at 1 day and will offer employees a good understanding of the emergency response procedures and reporting duties. All training will be held on site and will be part of the responsibility of senior Summit personnel.

The facility will work closely with the local fire department in setting up procedure and training and to improve overall firefighting capabilities of the community.

10. SPILL CONTROL AND CLEAN-UP PROCEDURES

The following procedures should be followed as soon as possible by site personnel:

15. Remove personnel from spill site; remain upwind.
16. Contact emergency response team.
17. Put on protective clothing (respirator, coveralls, boots, gloves, safety glasses, hard hat).
18. Prevent liquids from entering water courses, drains, streams, etc. by diking or by digging ditches.
19. Absorb any liquids with absorbents and/or soils.
20. Cover spill area with plastic if appropriate.
21. Take other actions as directed by Summit's emergency coordinator.
22. Delineate spill area.
23. After removing contaminated clothing, place in plastic bag and seal.
24. Wait for Summit's emergency response team to arrive, and comply with the police and fire department's instructions.

10.1 Restoration of Spill Site

Corrective measures include, but are not limited to the following:

1. Assess quantity spilled.
2. Delineate the area of contamination through sampling and analytical testing.
3. Evaluate available clean-up technologies (skimmers, vacuum trucks, booms, absorbent pads, etc.).
4. Assess impact of clean-up on environment.
5. Continuously evaluate worker safety.
6. Evaluate treatment and/or disposal options.

11. LIMITATIONS

Findings presented in this plan are based upon (i) a desktop review of client-provided drawings for the proposed works on the subject site, and (ii) a desktop review of publicly-available site data. Calculations and estimations reflect conditions expected at the specific site location at the time the work was conducted. Site conditions may vary from that extrapolated from the data collected during this investigation. Consequently, while findings and conclusions documented in this plan have been prepared in a manner consistent with that level of skill and care normally exercised by other members of the environmental science and engineering profession practising under similar circumstances in the area at the time of the performance of the work, this plan is not intended, nor is it able, to provide a totally comprehensive review of past, present, or future site environmental conditions. This plan must be read and used in its entirety.

We trust this information meets your requirements at this time. Please contact us if you have any questions.

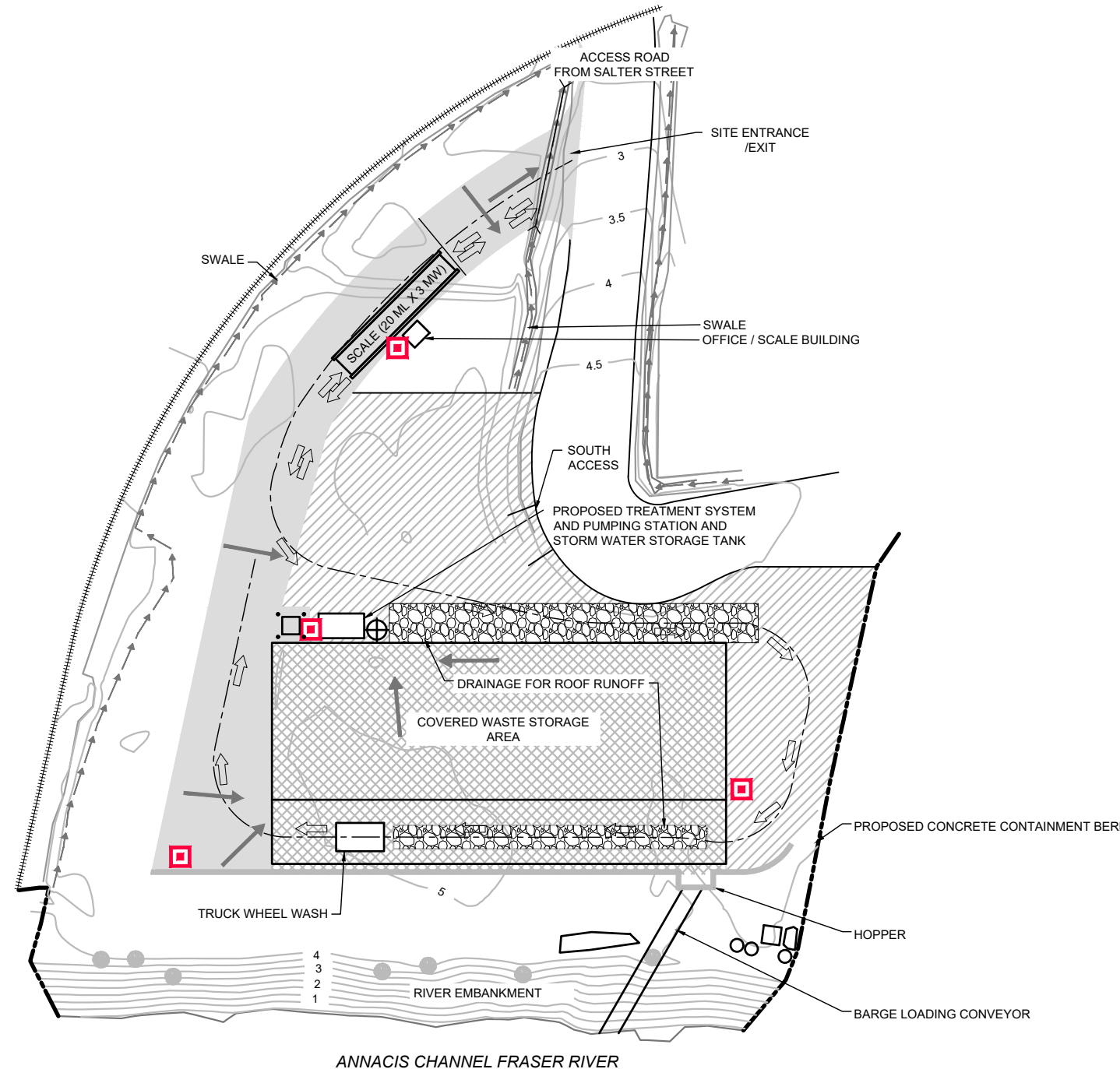
Sincerely,

Keystone Environmental Ltd.

Jason Christensen, P.Eng.
Senior Engineer

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FIGURE 1
SPILL KIT LOCATIONS



LEGEND

- SITE
- - - PROPOSED ROAD CENTRE LINE
- SWALE
- SHORELINE
- RUNOFF FLOW DIRECTION
- ← TRAFFIC DIRECTION
- TOP OF BANK
- ||||| RAIL LINE
- > CULVERT
- PROPOSED CONTAINMENT BERM
- PAVED AREA
- /// GRAVEL ACCESS ROAD
- SKILL KIT (ADDITIONAL SPILL KIT LOCATED ON DOCK)
- CONTAINED AREA UNDER ROOF

NOTES:
 1. THIS DRAWING IS FOR GENERAL INFORMATION ONLY.
 LOT BOUNDARIES AND FEATURES ARE APPROXIMATE.

No.	DATE	DESCRIPTION	BY	APPROVED
04	7/17/19	Issued for Submission	T.L.	
03	7/10/19	Issued for Submission	A.B.	
02	2/26/19	Issued for Submission	T.L.	
01	11/07/17	Issued for Client Review	T.L.	
00	10/02/17	Issued for Client Review	A.B.	
REVISIONS				



Keystone Environmental Ltd.
 Ste. 320 4400 Dominion Street
 Burnaby, British Columbia

Derwent Way
 New Westminister, B C

DESIGN	ARK	APPROVED	
DRAWN	SG/HL	CHECKED	ARK
SCALE	 SCALE: 1:750(approx.)		

CLIENT	Summit Earthworks Inc.	DATE	10/02/17
Derwent Way Barge Loading Facility Spill Kit Location Plan		SHEET No.	3 of 3
		PROJECT No.	12943-109
		REVISION No.	04
		DRAWING No.	17-12943-03

APPENDIX A

SPILL REPORT AND NOTIFICATION FORM

SPILL REPORT AND NOTIFICATION FORM – SUMMIT RECYCLING INC.

SPILL REPORT

Reported by: _____

Address: _____

Phone: _____

Date: _____

Time: _____

Date Contacted	Telephone	Group or organization
	1-800-663-3456	Provincial Emergency Program (PEP)
	911	Fire department
	911	Police – emergency dispatch
	911	Ambulance
	604-825-2010 (cell) 604-825-2010 (office)	Summit Recycling Inc. Myles Hargrove
	1-800-663-3456	Ministry of Env't. Emerg. Coord. Centre
	604-666-1140 604-666-6100	Canadian Env't. Protection Service (EPS) Env't. Emergency Group (PEP will call EPS)

PLEASE DESCRIBE BELOW OR ON ADDITIONAL PAGES IF REQUIRED

Location and time of the spill/release:

How the spill/release occurred, if witnessed (cause and effect):

Type of material:

Amount released:

Emergency response activities undertaken & time of action (including names of agencies on scene and names of persons or agencies advised of spill):

Equipment/facilities used:

Additional Comments:

Completed by:

Checked by:

Site Supervisor

Facility Manager

APPENDIX B

BC SPILL REPORTING REGULATION

B.C. Reg. 263/90
O.C. 1223/90

Deposited August 10, 1990

This consolidation is current to July 25, 2017.

Environmental Management Act

SPILL REPORTING REGULATION

[includes amendments up to B.C. Reg. 376/2008, December 9, 2008]

Contents

- 1 Interpretation
- 2 Report
- 3 Further action

Schedule

Interpretation

1 In this regulation:

"Act" means the *Environmental Management Act*;

"PEP" means the Provincial Emergency Program continued under the *Emergency Program Act*;

"spill" means a release or discharge into the environment, not authorized under the Act, of a substance in an amount equal to or greater than the amount listed in Column 2 of the Schedule opposite that substance in Column 1;

"substance" means a substance, product, material or other thing listed in Column 1 of the Schedule to this regulation.

[am. B.C. Regs. 321/2004, s. 28 (a) and (b); 220/2006, Sch. s. 3.]

Report

2 (1) For the purposes of section 79 (5) of the Act, a person who had possession, charge or control of a substance immediately before its spill shall immediately report the spill to PEP by telephoning 1-800-663-3456.

(2) Where it appears to a person observing a spill that a report under subsection (1) has not been made, he or she shall make the report referred to in this section.

(3) A report under this section shall include, to the extent practical,
(a) the reporting person's name and telephone number,

- (b) the name and telephone number of the person who caused the spill,
- (c) the location and time of the spill,
- (d) the type and quantity of the substance spilled,
- (e) the cause and effect of the spill,
- (f) details of action taken or proposed to comply with section 3,
- (g) a description of the spill location and of the area surrounding the spill,
- (h) the details of further action contemplated or required,
- (i) the names of agencies on the scene, and
- (j) the names of other persons or agencies advised concerning the spill.

[am. B.C. Reg. 220/2006, Sch. s. 4.]

Further action

- 3** Where a spill occurs, the person who immediately before the spill had possession, charge or control of the spilled substance shall take all reasonable and practical action, having due regard for the safety of the public and of himself or herself, to stop, contain and minimize the effects of the spill.

Schedule

[en. B.C. Reg. 376/2008.]

Reportable Levels for Certain Substances

- 1** In this Schedule:

"Federal Regulations" means the Transportation of Dangerous Goods Regulations made under the *Transportation of Dangerous Goods Act* (Canada);

"Hazardous Waste Regulation" means B.C. Reg. 63/88.

Item	Column 1 Substance spilled	Column 2 Specified amount
1	Class 1, Explosives as defined in section 2.9 of the Federal Regulations	Any quantity that could pose a danger to public safety or 50 kg
2	Class 2.1, Flammable Gases, other than natural gas, as defined in section 2.14 (a) of the Federal Regulations	10 kg
3	Class 2.2 Non-Flammable and Non-Toxic Gases as defined in section 2.14 (b) of the Federal Regulations	10 kg
4	Class 2.3, Toxic Gases as defined in section 2.14 (c) of the Federal	5 kg

	Regulations	
5	Class 3, Flammable Liquids as defined in section 2.18 of the Federal Regulations	100 L
6	Class 4, Flammable Solids as defined in section 2.20 of the Federal Regulations	25 kg
7	Class 5.1, Oxidizing Substances as defined in section 2.24 (a) of the Federal Regulations	50 kg or 50 L
8	Class 5.2, Organic Peroxides as defined in section 2.24 (b) of the Federal Regulations	1 kg or 1 L
9	Class 6.1, Toxic Substances as defined in section 2.27 (a) of the Federal Regulations	5 kg or 5 L
10	Class 6.2, Infectious Substances as defined in section 2.27 (b) of the Federal Regulations	1 kg or 1 L, or less if the waste poses a danger to public safety or the environment
11	Class 7, Radioactive Materials as defined in section 2.37 of the Federal Regulations	Any quantity that could pose a danger to public safety and an emission level greater than the emission level established in section 20 of the "Packaging and Transport of Nuclear Substances Regulations"
12	Class 8, Corrosives as defined in section 2.40 of the Federal Regulations	5 kg or 5 L
13	Class 9, Miscellaneous Products, Substances or Organisms as defined in section 2.43 of the Federal Regulations	25 kg or 25 L
14	waste containing dioxin as defined in section 1 of the Hazardous Waste Regulation	1 kg or 1 L, or less if the waste poses a danger to public safety or the environment
15	leachable toxic waste as defined in section 1 of the Hazardous Waste Regulation	25 kg or 25 L
16	waste containing polycyclic aromatic hydrocarbons as defined in section 1 of the hazardous Waste Regulation	5 kg or 5 L
17	waste asbestos as defined in section 1 of the Hazardous Waste Regulation	50 kg
18	waste oil as defined in section 1 of the Hazardous Waste Regulation	100 L
19	waste containing a pest control product as defined in section 1 of the Hazardous Waste Regulation	5 kg or 5 L
20	PCB Wastes as defined in section 1 of the Hazardous Waste Regulation	25 kg or 25 L

21	waste containing tetrachloroethylene as defined in section 1 of the Hazardous Waste Regulation	50 kg or 50 L
22	biomedical waste as defined in section 1 of the Hazardous Waste Regulation	1 kg or 1 L, or less if the waste poses a danger to public safety or the environment
23	A hazardous waste as defined in section 1 of the Hazardous Waste Regulation and not covered under items 1 – 22	25 kg or 25 L
24	A substance, not covered by items 1 to 23, that can cause pollution	200 kg or 200 L
25	Natural gas	10 kg, if there is a breakage in a pipeline or fitting operated above 100 psi that results in a sudden and uncontrolled release of natural gas

[Provisions of the *Environmental Management Act*, S.B.C. 2003, c. 53, relevant to the enactment of this regulation: sections 53, 79 (5) and 92]