Appendix 11

Spill Response Plan

(reprint from Section 2.21 of the Project EMPGM)

SPILL CONTINGENCY AND RESPONSE PLAN

There is the potential for environmental damage from the accidental spillage of petroleum products and chemicals. To minimize the possible adverse effects on the environment of such a spill, DB Contractor has developed this plan to deal with a possible emergency situation. This plan includes guidelines for the reporting of a spill, training procedures, resource allocation and the supervision of containment and restoration procedures. The examples of environmental incident reporting forms (initial and follow-up) are provided in Appendix 8.

Any spill greater than or equal to 100litres of flammable/combustible liquids or waste oil (*Transportation of Dangerous Goods Act*, Class 3) will be immediately reported to the Provincial Emergency Program (PEP) (1-800-663-3456).

Pre-Emergency Planning

Noting the nature of this construction project and the very limited quantities of hazardous materials on site at any time, the possibility of a large spill is very remote. The text that follows applies to the more likely spill scenario to be encountered, i.e. a small spill needing immediate attention by staff on site.

Hazard Identification: Each phase of construction will be examined to identify the potential hazards. A WHMIS sheet will identify all hazardous compounds coming on site and this information will be available to all personnel. Hazardous compounds will be stored in secure locked containers on site in secured enclosures. Compounds used in the curing of concrete, lubricants, and fuel for small equipment will be present on site.

Risk Analysis: The greatest risk of spills on this site will be from petroleum products. These spills will be contained quickly with the available spill equipment onsite. Trailers will be equipped with sufficient spill absorbent materials and other tools to address and contain a small spill.

Resources Available: If required, emergency response for larger spills will be available. First responders such as fire departments have the capability to clean up a variety of spills. Other resources such as local environmental spill clean up companies can be called upon on an emergency basis also. Response will be consistent with specifications in the Environmental Incident Reporting Procedures (Appendix 1) for the Project.

Internal Alerting: Because timely and accurate reporting of an accidental spill can help to ensure quick and efficient response, this plan includes detailed information regarding both general and specific notification procedures.

Response Plan

Purpose

The purpose of this plan is to be able to initiate an immediate response with trained personnel and equipment to clean up an accidental spill and ensure minimal impact to the land or water environment in the immediate and surrounding area. Procedures for clean up, containment, disposal, and monitoring, including details regarding equipment and personnel allocation, are also presented. Finally, this plan contains a commitment for restoring the contaminated site to its previous state following an accidental spill.

The plan will be posted on site such that it is readily available to all personnel potentially involved in clean-up operations. A binder, separate from the EMP including a number of blank Environmental Incident Reporting Forms will be provided at the site office.

Spill Criteria

A spill, as defined by the Ministry of Environment, means a discharge of a pollutant into the natural environment from or out of a structure, vehicle or other container, that is abnormal in quality or quantity in light of all the circumstances of the discharge. Procedures will vary according to location, quantity and product spilled.

General Response

Initial response to any spill on the project site is:

1. Ensure safety in the spill area.
2. Stop the flow of the hazardous material if it is safe to do so.
3. Secure and isolate the spill area.
4. Assess the situation (identify product, equipment involved, affected area and spill status).

The first responders under the direction of the person in authority, usually the Segment Manager, will take action to prevent additional spillage, utilize on site resources, and notify the Environmental Monitor, the Province, and appropriate regulatory authorities.

With the occurrence of a minor spill, the DB Contractor will have the personnel and equipment available to clean up the contaminant and restore the location to pre-spill conditions. Current policy is to clean-up minor on-site spills less than the reportable criteria first and to contact the appropriate government agency after completion of the operation. In case of a spill over 100L, the DB Contractor will notify MoE (Provincial Emergency Program - PEP) immediately

and keep in close contact with the agency while the response is underway. The DB Contractor will use its own resources and private clean up companies, if necessary. In the unlikely event of a very large spill, the DB Contractor will request assistance from relevant government agencies. Any spill regardless of size reaching a watercourse will be reported immediately.

General Procedures and Reporting

Spills will be reported to the regulatory agencies when quantities of materials exceed the classifications laid out by the Transportation of Hazardous Goods Regulations (100 L or more for flammable liquids, e.g., gasoline). Spills, which do not exceed the above criteria, will be documented internally and reported to the Province. Reporting and response procedures will be consistent with those specified in the Environmental Incident Reporting Procedures (Appendix 1) for the Project.

Spills On Land

The first action for clean up of land based spills is to prevent the spread to watercourses or drainage ditches through containment and damming. Second, limit the saturation of the material deep into the soils by removal of the liquid by absorbents or pumping. When the free liquid is contained, steps can then be taken to collect all contaminated soil for later disposal.

Spills Into Drainage Ditches or Water bodies

These spills have the potential for causing environmental damage. All spills near or into water, even those less than the reportable quantities, require immediate attention. The first response should be to immediately stop the spread of the spilled material downstream. This can be accomplished with the use of absorbent booms and absorbent material designed to pick up oil.

These spills will be immediately reported to the Province, Ministry of Environment, Department of Fisheries and Oceans and the Provincial Emergency Program dispatch.

Internal and Other Resources

One large, spill response kit will be within easy access of any active work area to provide for clean up of small and medium size spills or initial response to a large spill. An individual spill kit is required on any site construction related vehicle. An example of the equipment contained within these spill kits is provided below.

Large Spill Kit:

- 100 absorbent 'white' pads – polypropylene (fuels and lubes);
- 25 absorbent 'general purpose' pads – cellulose (glycol);

- 6 absorbent socks – polypropylene 3" x 48";
- 12 drain cover, neoprene 36"x 36";
- 1 roll of barrier tape – 300';
- 4 refuse bags (6 mil);
- personal protective equipment for two: nitrile gloves, splash goggles, poly-coated tyvek suit and boots;
- 1 spill kit container;
- list detailing contents of kit and where to obtain replacement items; and
- set of instructions on how to use each item in the kit.

Individual Spill Kit:

- 20 absorbent pads;
- 2 absorbent socks;
- 1 refuse bag; and
- goggles and gloves.

In the case of a very large spill, spill kit inventory and off-site materials can be called upon. Other materials available for spill response from outside and on-site sub-contractors include:

- shovels;
- vacuum trucks;
- booms;
- excavators;
- bags of absorbent; and
- loaders.

Emergency Backup

It is assumed that in the case of large spills DB Contractor will call on the resources of commercial spill clean up companies, the PEP, and local fire response teams.

Plan communication

This plan will be made available to all employees and sub-contractors on site. It will also be discussed at the initial site meeting and safety training sessions.

Monitoring of Clean-Up and Restoration

The clean up and restoration of every spill will be monitored by the Environmental Monitor. The Environmental Monitor will be in contact with the Environmental Manager and appropriate government agencies, as required. DB Contractor will be responsible for restoring the contaminated site to its previous state.

Debriefing

After the clean up of a significant spill is complete, DB Contractor will hold a debriefing with all involved personnel. This debriefing will include the following:

- What caused the spill? Review all stages of the incident from first identification to final clean up.
- What can be done to prevent a similar incident from happening again?
- Review with response personnel why the incident went right/wrong.
- What equipment was useful or not useful?
- Was there sufficient equipment?
- Nature of response; could the incident have been avoided?
- How could the response have been improved?

This debriefing will be included in a report to the Province and regulatory authorities, if required.

Report Filing

At the end of the clean up, a detailed environmental report will be filed with the province and government regulatory agencies, if required.

Emergency Telephone Numbers

Internal Contacts for spill reporting.

Position	Name	Telephone #
Environmental Manager (Hatfield)	Andrew Allan	office: 604-926-3261
		cellular: 604-315-3265
Environmental Monitor Section 1 (Hatfield)	Alex Sartori	cellular: 604-220-0199
Environmental Monitors Section 2, 3 and 4 (Cascade)	Mike Nelson	cellular: 604-815-9973
	Karina Andrus	cellular: 604-905-8218
	Jon Turner	cellular: 604-905-8913
Segment Manager Section 1 (PKS)	Brad Mytko	cellular: 604-833-1349
Segment Manager Section 2 (PKS)	Ryan Tones	cellular: 604-999-7401
Segment Manager Section 3 (PKS)	Chris Dandurand	cellular: tba
Segment Manager Section 4 (PKS)	Shane Petersen	cellular: 604-992-9449
Environmental Field Auditor (the Province)	Duncan Sutherland	cellular: 604-815-3608

External Contacts for spill reporting.

Organization	Telephone
Provincial Emergency Program (PEP)	1-800-663-3456
Fisheries and Oceans Canada, Fisheries Officer	604-892-3230
MoE, Conservation Officer	604-898-2175
DFO Radio Room	1-800-465-4336
Tri-Arrow Industrial Recovery Inc.	604-682-2751
Fire Emergency	911
Police Emergency	911
Ambulance	911

Spill Response Training

Spill response training will be undertaken as part of the health and safety program for site personnel. This training program will familiarize the workers with the location and use of spill equipment and the need to report all spills to the Segment Manager. The review will focus on:

- due diligence to prevent spills;
- safety procedures;
- roles and responsibilities;

- spill assessment;
- site security and safety;
- characteristics of petroleum products;
- spill containment and recovery;
- site restoration; and
- spill documentation.

Field demonstrations of correct procedures for spill response and mitigation will be scheduled periodically during mass safety meetings for each Project Segment.