# CANADA COAL INC. SPILL CONTINGENCY PLAN FOSHEIM PENINSULA COAL PROJECT NUNAVUT, CANADA

Date: October 2012

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#### 1. INTRODUCTION

This Spill Contingency Plan has been prepared specifically for the Fosheim Peninsula Coal Project operated by Canada Coal Inc. ("Canada Coal"). The plan demonstrates that Canada Coal Inc. will have appropriate response capabilities and measures in place to effectively address potential spills at its Nunavut Coal Project site.

#### 1.1 Corporate Details

Braam Jonker, President & CEO
Canada Coal Inc.
Suite 605
1166 Alberni Street
Vancouver, BC V6E 3Z3

#### 1.2 Term of Spill Contingency Plan

This version of the Canada Coal Inc. Spill Contingency Plan shall be in effect from date of acceptance of applicable land use permits. Any future changes and/or amendments will be submitted to the Nunavut Water Board, AANDC and the Qikiqitani Inuit Association.

#### 1.3 Purpose and Scope

The purpose of this Spill Contingency Plan is to provide a plan of action for all spills of hazardous materials that may occur on the Fosheim Peninsula Coal Project. This plan identifies key response personnel and their roles and responsibilities in the event of a spill, as well as the equipment and other resources available to respond to a spill. It details spill response procedures that will minimize potential health and safety hazards, environmental damage, and clean-up efforts. The plan has been prepared to ensure quick access to all information required in responding to a spill.

#### 1.4 Canada Coal Inc. Environmental Policy

It is the policy of Canada Coal Inc. to comply with all existing laws and regulations to help ensure the protection of the environment. Canada Coal Inc. cooperates with other groups committed to protecting the environment and ensures that employees, government, and the public is informed on the procedures followed to help protect the environment.

Canada Coal Inc. endeavours to take every reasonable precaution toward ensuring the protection and conservation of the natural environment and the safety and health of all employees and contractors from any potential harmful effects of stored materials and operations.

The plan is presented to all staff during their on-site orientation sessions. All employees and contractors are aware of the locations of the plan on site at the Fosheim Peninsula Coal Project and in Canada Coal's office.

During the orientation meeting, training sessions are scheduled to ensure employees have an understanding of the steps to be undertaken in the event of a spill. All employees and contractors are shown where spill kits are stored, are aware of their contents and are trained in using spill equipment and responding to spills. The company is committed to keeping personnel up to date on the latest technologies and spill response methods.

#### 2. PROJECT AND SITE DESCRIPTION

#### 2.1 Project Description

This project, located on Ellesmere Island in the Qikiqtaaluk Region of Nunavut, approximately 370 kilometres northwest of Grise Fiord, and 594 km northeast of Resolute Bay and consists of coal licences on both Inuit-Owned Lands (surface) and on Crown Lands. Canada Coal owns 75 active coal exploration licenses totalling 2,442,627 acres and has 11 pending coal exploration licences totaling 281,667 acres.

Canada Coal intends to conduct further exploration programs which may include geological mapping and sampling, diamond drilling, geophysical studies, heritage studies, environmental studies, and logistical studies. The aim of the work program(s) will be to delineate a coal resource within the Fosheim Peninsula area. The program(s) would ideally be conducted late May through early August (10-12 weeks) pending permitting, weather and other factors.

The exploration crew will consist of variable personnel (anticipated 2-30 people at any given time) including geologists, geophysicists, drilling crews, camp attendants, construction crews, environmental scientists, aircraft personnel, local guides, labourers, wildlife monitors, surveyors, project managers, and so forth. Personnel will be sourced locally where possible with the exception of key project personnel who will be retained through the project's technical advisors.

The Eureka Weather Station facility will be the base for the exploration crew and has permanent yearround facilities already in place as well as provisions for garbage and sewage disposal. A temporary exploration camp may be set up to be used as a stand-alone camp or in conjunction with Eureka pending project activities. Camp facilities, if required, will accommodate 20-30 people, and will be removed upon completion of the program.

Maps illustrating the regional context of the property and the project area are located in Appendix 2.

#### 2.2 Current Permits/Licences (Table 1)

Permit/License No.	Regulatory Body	Туре	Expiry	
Pending	AANDC	LUP	Application review in progress	
Pending	Qikiqtani Inuit Association	LUP	Application review in progress	
Pending	Nunavut Planning Commission	Conformity Analysis	Application Review in Progress	
Pending	NIRB	Project Screening	Application Review in Progress	
Pending	NWB	B Water Licence	Application Review in Progress	
Pending	AANDC	Quarrying Permit	Application Review in Progress	
To be submitted 2013	CLE	Heritage Permits	Not yet submitted	

#### 2.3 List of Hazardous Materials On-site

The proposed exploration program(s) may require various types of hazardous materials including: 1) up to 150,000 litres of jet fuel to be used for helicopter support, 2) up to 150,000 litres of diesel fuel to be used for diamond drilling and camp facilities, 3) up to 10,000 litres of gasoline to be used for ATV use, 4) up to 30,000 pounds of propane for heating, and 5) minor miscellaneous oils, greases, and polymers to be used for drilling purposes.

For all caches which exceed 1,230 litres (6 drums), drums/containers will be stored upright within "instaberms" sourced by Pigmalion Environmental Inc. or similar reputable fuel containment berm provider. Tarps may be utilized to cover the cache to eliminate contamination or rain/snow if it is safe to do so (helicopter travel in the vicinity is restricted).

The bulk of the hazardous materials will be stored in the immediate vicinity of the Eureka airstrip or the temporary camp facility using the previously described containment system. Drums/ containers will be mobilized to Eureka using Hercules aircraft out of ellowknife or similar. Fuel will likely be sourced out of ellowknife or Resolute Bay, although other locales may be considered.

The program will require a multitude of small caches distributed across Fosheim Peninsula as exploration progresses. These caches will be utilized for a variety of purposes including: diamond drilling (operational and transportation), geological prospecting, helicopter mobilization and demobilization from Ellesmere Island, and helicopter refuelling points from one coal exploration license block to another coal exploration license block. Small caches will remain in place for limited amounts of time (typically one week until the drilling rig moves to the next location) and will be completely removed in a timely manner.

The small caches will initially be sourced from the main cache locations at Eureka or the temporary exploration camp. Where known gravel point bars/landing locations exist, small caches may be laid out using twin otter aircraft. Alternately, caches will be distributed using helicopter support.

#### 2.4 Petroleum and Chemical Product Storage and Transport

All fuel will be stored no closer than the regulated distance from the normal high water mark of any water body (>30 metres). The main fuel cache will be located at the Eureka Weather Station or at the temporary exploration camp.

#### 2.5 Petroleum Product Transfer

Fuel transfer will be by wobble pump or grounded hand electric pump directly from fuel drums to helicopter, etc. Absorbent pads/mats and drip trays will be used where required. Spill kits will be on-site. No smoking will be permitted during fuel transfer.

#### 2.6 Exploration Equipment Maintenance

All maintenance work required for exploration equipment will utilize special procedures including the use of portable drip pans to manage motor fluids and other waste in an effort to contain potential spills.

#### 2.7 Spill Containment Equipment

Equipment available on site to assist in responding to a hazardous materials spill includes various hand held tools including shovels. In addition to these, one spill kit will be situated at each active drill site with additional spill kits located at the main cache.

Spill kits are located wherever fuel is stored or used. The typical spill kit has a sorbent capacity of 240 litres and the contents include:

- 1 360 litre/79 gallon polyethylene over pack drum
- 4 oil sorbent booms (5" X 10')
- 100 oil sorbent sheets (16.5" X 20" X 3/8")
- 1 drain cover (36" X 36" X 1/16")
- 1 Caution tape (3" X 500')
- 1 1 lb plugging compound
- 2 pair Nitrile gloves
- 2 pair Safety goggles
- 2 pair Tyvel coveralls
- 1 instruction booklet
- 10 printed disposable bags (24" X 48")
- 1 empty fuel drum

#### 2.8 Existing Preventative Measures

Planning for an emergency situation is imperative, due to the nature of the materials stored on site as well as the remoteness of the site. Along with the preventative measures outlined below, adequate training of staff and contractors is paramount.

All hazardous materials arrive by air as needed throughout periods of active exploration. They are unloaded by airplane and helicopter pilots and Canada Coal staff and contractors and carefully placed in the fuel storage and hazardous materials storage areas.

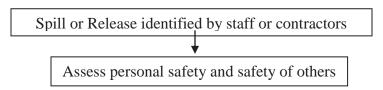
The designated fuel monitor conducts daily visual inspections to check for leaks or damage to the fuel storage containers, as well as for stained or discoloured soils/snow around the fuel storage areas and adjacent equipment. For example, lids/caps are checked for tight seals. A checklist is used to ensure no areas are missed.

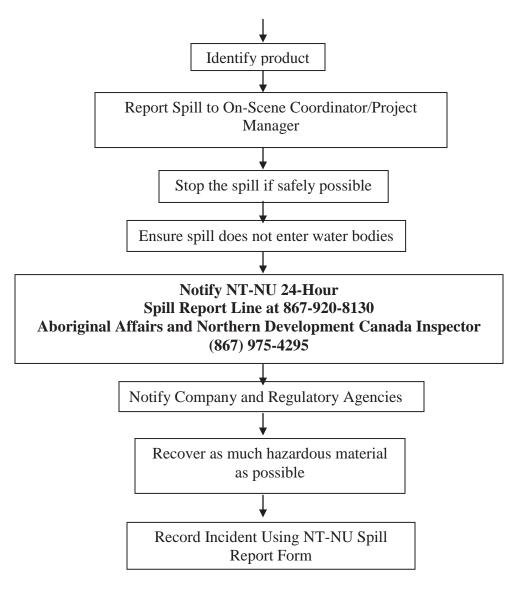
#### 2.9 Copies of Spill Contingency Plan

Several copies of the plan are kept on-site at all times and at the camp fuel caches. As well copies will also be located at Canada Coal offices.

#### 3. RESPONSE ORGANIZATION

The following is a flow chart to illustrate the sequence of events in the event of a hazardous material spill occurring at the Ellesmere Island Project.





#### 3.1 Spill Response Team

Susan O'Donnell of DMT Geosciences Ltd. will be the On-Scene Coordinator for the Fosheim Peninsula Coal Project and will appoint and train appropriate personnel to make up the Fosheim Peninsula Coal Spill Response Team for the Fosheim Peninsula Coal Project.

The key personnel that make up the Nunavut Coal Spill Response Team are as follows:

On-Scene Coordinator Susan O'Donnell, DMT Geosciences Ltd.

Project Manager Susan O'Donnell, DMT Geosciences Ltd.

Canada Coal Rep Braam Jonker

Drilling Response Rep TBD

In addition to the On-Scene Coordinator/Project Manager, variable personnel are available on site to assist in spill response and cleanup activities. The number of personnel on site varies based on the specific exploration activities being conducted at any one time throughout the year.

#### The responsibilities of the On-Scene Coordinator are as follows:

- Assume complete authority over the spill scene and coordinate all personnel involved.
- 2. Evaluate spill situation and develop overall plan of action.
- 3. Activate the spill contingency plan
- Immediately report the spill to: NT-NU 24-Hour Spill Report Line (867) 920-8130 Aboriginal Affairs and Northern Development Inspector (867) 975-4295 Other regulatory agencies and Canada Coal management (see *Table 2 – Emergency Contacts*).
- 5. Obtain additional manpower, equipment, and material if not available on site for spill response.

#### The responsibilities of the Project Manager are as follows:

- 1. Provide regulatory agencies and Canada Coal management with information regarding the status of the cleanup activities.
- 2. Prepare and submit a report on the spill incident to regulatory agencies (including the AANDC Inspector) within 30 days of the event.

#### 4. REPORTING PROCEDURE

The On-Scene Coordinator must be notified immediately of any spill either by phone, radio, or in person.

The following is the spill reporting procedure:

- Report immediately to the NT-NU 24-Hour Spill Report Line
   (867) 920-8130
   Aboriginal Affairs and Northern Development Canada Inspector (867) 975-4295
   And other regulatory agencies, and Canada Coal management
   (see Table 2 Emergency Contacts)
- 2. Complete the NT-NU Spill Report Form and fax the report to the NT-NU 24-Hour Spill Report Line fax (867) 873-6924.

Table 2 – Emergency Contacts

CONTACT	TELEPHONE NUMBER			
AANDC - Land Use Inspector	(867) 975-4280			
Canada Coal – Braam Jonker - President	(604) 992 5600 (mobile)			
Environment Canada 24 hour Duty Officer	(867) 766-3737, (867) 873-8185 (Fax)			
INAC – Water Resource Officers, Iqaluit, NU	Iqaluit (867) 975-4298			
Qikiqtani Inuit Association	(867) 979-5391			
Nunavut Tunngavik Inc., Cambridge Bay	(867) 983-2517			
Fixed wing provider	To be provided			
Heli provider	To be provided			
Iqaluit Fire Department	(867) 979-4422			
RCMP, Iqaluit	(867) 978-1111			
Qikiqtani General Hospital – Iqaluit	(867) 975-8600			
Expeditor	To be provided			
On-Site Project Geologist	Information to be supplied once phone system is			
	established on the property			
Fisheries and Oceans	(867) 979-8007			
Nunavut Department of Environment	(867) 975-7700			
Robert Eno, Nunavut Department of	(867) 975-7748			
Environment, Waste Manifests				
Manager, Pollution Control and Air Quality,	(867) 975-7748; (867) 975-7739			
Environmental Protection, Govt of Nunavut				

#### 5. <u>ACTION PLANS</u>

#### 5.1 Initial Action

The instructions to be followed by the first person on the spill scene are as follows:

- 1. Always be alert and consider your safety first.
- 2. If possible, identify the material that has been spilled. If you are not sure of the material, use caution and consider your safety first.
- 3. Assess the hazard of people in the vicinity of the spill.
- 4. If possible, safely try to stop the flow of material to minimize potential for environmental impacts.
- 5. Immediately report the spill to the On Scene Coordinator.
- 6. Resume any effective action to contain, mitigate, or terminate the flow of the spilled material.

The following pages include specific instructions to be followed in the response to an aviation fuel, gasoline, diesel, or similar, spill.

### 5.2 SPILL RESPONSE ACTIONS GASOLINE, DIESEL, AVIATION FUEL

Take action only if safety permits – stop the source flow if safe to do so and eliminate all ignition sources.

**Never smoke** when dealing with these types of spills.

#### On Land

Build a containment berm using soil material or snow and place a plastic tarp at the foot of the berm for easy capture of the spill after all vapours have dissipated.

Remove the spill by using absorbent pads or excavating the soil, gravel or snow.

Remove spill splashed on vegetation using particulate absorbent material.

#### On Muskeg

Do not deploy personnel and equipment on marsh or vegetation.

Remove pooled gasoline or Jet B with sorbent pads and/or skimmer.

Flush with low pressure water to herd oil to collection point.

On advice from regulatory agencies, burn only in localized areas, e.g., trenches, piles or windrows.

Do not burn if root systems can be damaged (low water table).

Minimize damage caused by equipment and excavation.

#### On Water

Contain spill as close to release point as possible.

Use containment boom to capture spill for recovery after vapours have dissipated.

Use absorbent pads to capture small spills.

Use skimmer for larger spills.

#### On Ice and Snow

Build a containment berm around spill using snow.

Remove spill using absorbent pads or particulate sorbent material.

The contaminated ice and snow must be scraped and shovelled into plastic buckets with lids, 205 litre drums, and/or polypropylene bags.

#### **Storage and Transfer**

All contaminated water, ice, snow, soil, and clean up supplies will be stored in closed, labelled containers. All containers will be stored in a well ventilated area away from incompatible materials.

#### Disposal

All contaminated material will be transported to an appropriate disposal facility.

#### 6.0 PROCEDURES FOR TRANSFERRING, STORING, AND MANAGING SPILL-RELATED WASTES

In most cases, spill cleanups are initiated at the far end of the spill and contained moving toward the centre of the spill. Sorbent socks and pads are generally used for small spill cleanup. A pump with attached fuel transfer hose can suction spills from leaking containers or large accumulations on land or ice, and direct these larger quantities into empty drums. Hand tools such as cans, shovels, and rakes are also very effective for small spills or hard to reach areas. Heavy equipment can be used if deemed necessary but may be constrained by transportation to site constraints.

Used sorbent materials are to be placed in plastic bags for future disposal at an approved disposal facility. All materials mentioned in this section are available in the spill kits located at the Eureka Weather Station. Following cleanup, any tools or equipment used will be properly washed and decontaminated, or replaced if this is not possible.

For most of the containment procedures outlined in Section 5, spilled petroleum products and materials used for containment will be placed into empty waste oil containers and sealed for proper disposal at an approved disposal facility.

#### 7.0 PROCEDURES FOR RESTORING AFFECTED AREAS

Once a spill has been contained, Canada Coal will consult with the Aboriginal Affairs and Northern Development Canada Inspector assigned to the property to determine the level of cleanup required. The Inspector may require a site-specific study to ensure appropriate cleanup levels are met. Criteria that may be considered include natural biodegradation of oil, replacement of soil and re-vegetation.

#### 8.0 TRAINING

All employees working on the Fosheim Peninsula Coal Project will be trained in the safe operation of all machinery and tools to help prevent hazardous material spills. All employees on site will also be required to participate in an orientation session, during which all locations of the spill plan and spill kits will be provided. An overview of the plan will be provided by the On-Scene Coordinator leading the orientation session. Specific training sessions are scheduled for individuals directly involved in handling hazardous materials to ensure they know all steps to be undertaken in handling these materials, as well as the steps involved in the event of a spill, including the proper use of spill kits.

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## APPENDIX 1 NT/NU Spill Report Instructions and Form

#### Instructions for Completing the NT-NU Spill Report Form

This form can be filled out electronically and e-mailed as an attachment to spills@gov.nt.ca. Until further notice, please verify receipt of e-mail transmissions with a follow-up telephone call to the spill line. Forms can also be printed and faxed to the spill line at 867-873-6924. Spills can still be phoned in by calling collect at 867-920-8130.

A. Report Date/Time	The actual date and time that the spill was reported to the spill line. If the spill is phoned in, the Spill Line will fill this out. Please do not fill in the Report Number: the spill line will assign a number after the spill is reported.				
B. Occurrence Date/Time	Indicate, to the best of your knowledge, the exact date and time that the spill occurred. Not to be confused with the report date and time (see above).				
C. Land Use Permit Number /Water Licence Number	This only needs to be filled in if the activity has been licenced by the Nunavut Water Board and/or if a Land Use Permit has been issued. Applies primarily to mines and mineral exploration sites.				
D. Geographic Place Name	In most cases, this will be the name of the city or town in which the spill occurred. For remote locations – outside of human habitations – identify the most prominent geographic feature, such as a lake or mountain and/or the distance and direction from the nearest population center. You must include the geographic coordinates (Refer to Section E).				
E. Geographic Coordinates	This only needs to be filled out if the spill occurred outside of an established community such as a mine site. Please note that the location should be stated in degrees, minutes and seconds of Latitude and Longitude.				
F. Responsible Party Or Vessel Name	This is the person who was in management/control/ownership of the substance at the time that it was spilled. In the case of a spill from a ship/vessel, include the name of the ship/vessel. Please include full address, telephone number and email. Use box K if there is insufficient space. Please note that, the owner of the spilled substance is ultimately responsible for any spills of that substance, regardless of who may have actually caused the spill.				
G. Contractor involved?	Were there any other parties/contractors involved? An example would be a construction company who is undertaking work on behalf of the owner of the spilled substance and who may have contributed to, or directly caused the spill and/or is responding to the spill.				
H. Product Spilled	Identify the product spilled; most commonly, it is gasoline, diesel fuel or sewage. For other substances, avoid trade names. Wherever possible, use the chemical name of the substance and further, identify the product using the four digit UN number (eg: UN1203 for gasoline; UN1202 for diesel fuel; UN1863 for Jet A & B)				
I. Spill Source	Identify the source of the spill: truck, ship, home heating fuel tank and, if known, the cause (eg: fuel tank overfill, leaking tank; ship ran aground; traffic accident, vandalism, storm, etc.). Provide an estimate of the extent of the contaminated/impacted area (eg: 10 m²)				
J. Factors Affecting Spill	Any factors which might make it difficult to clean up the spill: rough terrain, bad weather, remote location, lack of equipment. Do you require advice and/or assistance with the cleanup operation? Identify any hazards to persons, property or environment: for example, a gasoline spill beside a daycare centre would pose a safety hazard to children. Use box K if there is insufficient space.				
K. Additional Information	Provide any additional, pertinent details about the spill, such as any peculiar/unique hazards associated with the spilled material. State what action is being taken towards cleaning up the spill; disposal of spilled material; notification of affected parties. If necessary, append additional sheets to the spill report. Number the pages in the same format found in the lower right hand corner of the spill form: eg. "Page 1 of 2", "Page 2 of 2" etc. Please number the pages to ensure that recipients can be certain that they received all pertinent documents. If only the spill report form was filled out, number the form as "Page 1 of 1".				
L. Reported to Spill Line by	Include your full name, employer, contact number and the location from which you are reporting the spill. Use box K if there is insufficient space.				
M. Alternate Contact	Identify any alternate contacts. This information assists regulatory agencies to obtain additional information if they cannot reach the individual who reported the spill.				
N. Report Line Use Only	Leave Blank. This box is for the Spill Line's use only.				





MT-NU 24-HOUR SPILL REPORT LINE TEL: (867) 920-8130 FAX: (867) 873-6924 EMAIL: spills@gov.nt.ca

53/11								REPORT LINE USE ONLY	
Α	REPORT DATE: MONTH - DA	Y-YEAR	AR		TTIME	☐ ORIGINAL SPILL R	☐ ORIGINAL SPILL REPORT, OR		
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G	ANY CONTRACTOR INVOLVE	CONTRACTOR	CONTRACTOR ADDRESS OR OFFICE LOCATION						
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Н	SECOND PRODUCT SPILLED (IF APPLICABLE)		QUANTITY IN L	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES			U.N. NUMBER		
1	SPILL SOURCE		SPILL CAUSE	SPILL CAUSE			AREA OF CONTAMINATION IN SQUARE METRES		
J	FACTORS AFFECTING SPILL	DESCRIBE ANY	DESCRIBE ANY ASSISTANCE REQUIRED			HAZARDS TO PERSONS, PROPERTY OR EQUIPMENT			
K									
L	REPORTED TO SPILL LINE BY	POSITION	EMPLOY		ER	LOCATION GALLING F	FROM T	ELEPHONE	
M	ANY ALTERNATE CONTACT	POSITION	POSITION		ER	ALTERNATE CONTACT	Г А	LTERNATE TELEPHONE	
			REPORT LIN	E USE O	NLY	LOUNING			
N	RECEIVED AT SPILL LINE BY POSITION STATION OPERATOR		EMPLOYER			LOCATION CALLED		REPORT LINE NUMBER	
LEAD	DAGENCY DEC DOOR DE			6921	SEICANCE CLASSICO CLA	YELLOWKNIFE, NT		867) 920-8130	
LEAD AGENCY   EC   CCG   GNWT   GN   TILA   IN			THE DIED DIE	B LTC SIGNIFICANCE DIMINOR DIMAJO			PREMARKS		
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