

Appendix Four

Fuel Management and Spill Contingency Plan

FUEL MANAGEMENT AND SPILL CONTINGENCY PLAN

WMC INTERNATIONAL LIMITED

MELIADINE WEST PROJECT

I. INTRODUCTION

PURPOSE

This Fuel Management and Spill Contingency Plan is designed to promote environmental awareness and safety, as well as facilitate the efficient cleanup of spills as the result of transportation incidents while in transit between Rankin Inlet and the WMC International Ltd. exploration site at Meliadine Lake involving the following substances:

- P-50 Diesel
- Jet A turbo fuel
- Hydraulic Oil
- Lube Oil
- Waste Oil
- Propane
- other materials hazardous to the safety of personnel and the environment

Principal objectives of the Spill Contingency Plan are:

1. To provide readily accessible emergency information to cleanup crews, Meliadine project personnel, KIA, and government agencies in the event of a spill.
2. To comply with the WMC International Ltd. environmental policy.
3. To comply with federal and territorial regulations pertaining to the preparation of contingency plans and notification requirements.
4. To promote the safe and effective recovery of spilled materials.
5. To minimize the environmental impacts of spills to water and/or land.
6. To facilitate the management of wastes according to environmental legislation.

SCOPE

This Plan addresses the organization of the WMC International Ltd. Meliadine West Gold Project spill response and related emergency measures. Alerting and notification procedures and cleanup strategies are outlined along with the duties and responsibilities of key spill response personnel. Emergency contacts are listed for WMC International Ltd, WMC contractors, local government agencies, and the NWT Power Corporation in Rankin Inlet. Emergency response equipment is listed that is available immediately (should a spill occur) from local freighting contractors, such as M & T Enterprises and the NWT Power Corporation in Rankin Inlet.

More information in support of this Transportation Spill Contingency Plan and ensuing spill response actions, is provided in the following appendices:

- Appendix A contains summaries of physical / chemical properties and emergency response measures for hydrocarbon substances to be transported to the Meliadine exploration camp.
- Appendix B contains an up-to-date inventory of spill response equipment and kits available at

various locations.

- Appendix C contains risk assessment and preventative measures.
- Appendix D contains NWT Spill Report Forms that are to be used to report spills.
- Appendix E contains a fuel storage monitoring plan.

This Fuel Management and Spill Contingency Plan is a companion to the WMC International Ltd. Exploration Division Draft Environmental Management System dated June 2000.

WMC will be contracting out the delivery of fuel and lubricants to the exploration site. The contractors will be trained for spill response and have spill kits that complement this Transportation Spill Contingency Plan. In the event of a spill the contractor is expected to implement a spill response immediately with WMC's plan serving as a back-up.

WMC International Ltd. Statement of Environmental Policy

The Company is committed to achieving compatibility between economic development and the maintenance of the environment. It therefore seeks to ensure that throughout all phases of its activities, WMC personnel and contractors give proper consideration to the care of the flora, fauna, air, land and water, and to the community health and heritage which may be affected by these activities. To fulfill this commitment, the Company will observe all environmental laws, and, consistent with the principles of sustainable development, will:

- Progressively establish and maintain company-wide environmental standards for our operations throughout the world.
- Integrate environmental factors into planning and operating decisions and processes.
- Assess the potential environmental effects of our activities and regularly monitor and audit our environmental performance.
- Continually improve our environmental performance, including reducing the effect of emissions, developing opportunities for recycling, and more efficiently using energy, water, and other resources.
- Rehabilitate the environment affected by our activities.
- Conserve important populations of flora and fauna that may be affected by our activities.
- Promote environmental awareness among Company personnel and contractors to increase understanding of environmental matters.

SITE DESCRIPTION

The winter transportation route for the WMC International Ltd. Meliadine West Gold Project begins at Rankin Inlet and ends at the exploration site (Figure 1; Page 5). The route includes a short distance of municipal road, sea ice on Hudson Bay, tundra and freshwater ice belonging to the Kivalliq Inuit Association and the lake ice of Meliadine Lake under federal jurisdiction. The Project Site is located at latitude 63 01 30 ' N latitude and 92 10 20' West longitude. The haul route distance from Rankin Inlet to the Meliadine Project exploration camp is 28 km.

Insert Figure 1 Site Map

SITE DESCRIPTION (continued)

Rankin Inlet Climate Profile

Month	Mean Temp. (deg. C)	Mean Hourly Wind Speed (km/h)*	Blowing snow (days/mo)*	Mean Total Precip. (mm)
January	-32.2	24	16	6.9
February	-30.3	23	12	6.7
March	-25.6	22	13	14.1
April	-16.6	21	8	15.5
May	-6.7	20	4	17.9
June	. 3.4	18	-	34.1
July	. 9.7	21	-	39.9
August	. 9.0	24	-	59.5
September	. 3.0	26	-	48.0
October	-5.6	25	6	34.9
November	-18.5	23	12	22.1
December	-27.9	22	13	8.6

* wind direction is predominantly from the northwest

Data source: Canadian Climate Data, Environment Canada

Period of record: 1981 - 1993

WEATHER FORECASTS

In the event of a spill, current weather conditions can be obtained at the exploration camp from the camp manager or the project geologist on duty:

**Phone 1 867 645 3308 or
1 604 881 6705**

Local weather forecast information is available by contacting the Rankin Inlet Flight Services Centre:

Phone 1 867 645 2773

and the Environment Canada Weather Forecast Centre:

Phone 1 900 565 5555

II. SPILL ACTION PLAN RESPONSE SEQUENCE

1. REPORT ALL SPILLS TO:

Exploration camp manager **Ph./Fax 867 645 3308 or Ph 604 881 6705**
Senior project geologist on site **Ph./Fax 867 645 3308 or Ph 604 881 6705**

The reporting requirement applies to all spills: on land, on water and on ice.

The reporting requirement applies equally to all substances covered by this contingency plan; fuels, hydraulic oil, lubricants, and waste oil.

All reports by telephone must be followed with a fax of the completed report form (see Appendix D) to the number indicated on the reporting form.

Reporting and notification described below must be made by the first observer of the spill or the observer's superior immediately upon the spill being under control, or on failure to gain control of the situation.

2. ALERT WMC Personnel:

SPILL OBSERVER

- IMMEDIATE SUPERVISOR or Meliadine Camp manager
 - WMC Meliadine Project Manager
 - Contractors (clean up)
 - On-Scene spill response coordinator
 - WMC Environmental Coordinator

3. NOTIFY AGENCIES:

24 HOUR NWT SPILL REPORT LINE	PHONE	1 867 920 8130
	FAX	1 867 873 6924
KIVALLIQ INUIT ASSOCIATION		1 867 645 2810
DIAND - Rankin Inlet		1 867 645 2831
Iqaluit		1 867 979 4405
Environment Canada - Yellowknife		1 867 920 6060
Fisheries and Oceans Rankin Inlet		1 867 645 2871
EMO - Rankin Inlet		1 867 645 5042;
		(645 3789 after work hours)

4. RECORD THE FACTS Use Spill Report Form from Appendix D

NOTE:	If the On-Scene Coordinator is not available when a spill is detected then the spill must be reported directly to NWT 24-hour spill report line without delay.
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INITIAL SPILL RESPONSE PRIORITIES

SAFETY FIRST

I. RESPOND QUICKLY

- 1 Identify the spilled material.
- 2 Ensure safety of yourself and others.
- 3 Shut off ignition sources - **NO SMOKING.**
- 4 Attend to Injured.
- 5 Assess the severity of the spill.
- 6 Call for assistance.
- 7 On-Scene Coordinator mobilizes Emergency Response Team.
- 8 Keep unnecessary people out of the area.
- 9 Wear impervious clothing, goggles, gloves.
- 10 Approach spill from upwind **IF SAFE TO DO SO.**
- 11 Stop product flow if possible.
- 12 Contain and recover spill as soon as possible.

II. RESPOND SAFELY

- 1 Do not contain gasoline or av gas if vapours might ignite.
- 2 Allow gasoline or av gas spills to evaporate.
- 3 See Appendix A - Product Guides for further information.

111. OBTAIN AND REPORT SPILL DETAILS

NWT Spill Report Forms are in Appendix D of this spill contingency and response plan.

DIESEL - P 50 - SPILL RESPONSE ACTIONS

CONSIDER ACTION ONLY IF SAFETY PERMITS!

- **ELIMINATE IGNITION SOURCES**
- **STOP SOURCE OF DIESEL IF SAFE TO DO SO**

ON LAND

- Do not flush into ditches or drainage systems.
- Block entry into waterways and contain with earth, snow or other barrier.
- Remove small spills with sorbent pads.
- On tundra use peat moss and leave in place to degrade, if practical.

ON SNOW & ICE

- Block entry into waterways and contain with snow or other barrier.
- Remove minor spills with sorbent pads and/or snow.
- Use ice augers and pump to recover diesel under ice.
- Slots in ice can be cut over slow moving water to contain oil.
- Burn accumulated diesel from the surface using Tiger Torches if feasible and safe to do so.

ON MUSKEG

- Do not deploy personnel and equipment on marsh or vegetation.
- Remove pooled diesel with pumps and skimmers.
- Flush with low pressure water to herd diesel to collection point.
- 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 spill containment boom to concentrate slicks for recovery.
- On small spills, use sorbent pads to pick up contained oil.
- On larger spills, use skimmer on contained slicks.
- Do not deploy personnel and equipment onto mudflats or into wetlands

RIVERS & STREAMS

- Prevent entry into water, if possible, by building berm or trench.
- Intercept moving slicks in quiet areas using (sorbent) booms.
- Do not use sorbent booms/pads in fast currents and turbulent water.

STORAGE / TRANSFER

- Store closed, labelled containers outside away from flammable items.
- Electrically ground containers and vehicles during transfer.

DISPOSAL

- Segregate waste types.
- Place contaminated materials into marked containers.
- Consult camp manager on disposal procedures.

HYDRAULIC OIL SPILL RESPONSE ACTIONS
CONSIDER ACTION ONLY IF SAFETY PERMITS

- **ELIMINATE IGNITION SOURCES**
- **STOP SOURCE OF HYDRAULIC OIL IF SAFE TO DO SO**

ON LAND

- Do not flush into ditches or drainage systems.
- Block entry into waterways and contain with earth, snow or other barrier.
- Remove small spills with sorbent pads.
- On tundra use peat moss and leave to degrade if feasible to do so.

ON SNOW & ICE

- Block entry into waterways and contain with snow or other barrier.
- Remove minor spills with sorbent pads and/or snow.
- Use ice augers and pump when feasible to recover oil under ice.
- Burning hydraulic oil will not likely be feasible.
- Mechanical removal (scraping) can be tried.

ON MUSKEG

- Do not deploy personnel and equipment on marsh or vegetation.
- Remove pooled oil with pumps and skimmers.
- Flush with low pressure water to herd oil to collection point.
- Minimize damage caused by equipment and excavation.
- Burning is not likely possible.

ON WATER

- Contain spill as close to release point as possible.
- Use spill containment boom to concentrate slicks for recovery.
- On small spills, use sorbent pads to pick up contained oil.
- On larger spills, obtain and use skimmer on contained slicks.
- Do not deploy personnel and equipment on mudflats or wetlands.
- Remove contained oil with sorbent pads and/or skimmer.

RIVERS & STREAMS

- Prevent entry into water, if possible, by building berm or trench.
- Intercept moving slicks in quiet areas using (sorbent) booms.
- Do not use sorbent booms/pads in fast currents and turbulent water.

STORAGE / TRANSFER

- Store closed, labelled containers outside away from flammable items.
- Drums are likely to be used for containing collected hydraulic oil.

DISPOSAL

- Segregate waste types.
- Place contaminated materials into marked containers.
- Consult on camp manager on disposal procedures.

LUBE OIL SPILL RESPONSE ACTIONS

CONSIDER ACTION ONLY IF SAFETY PERMITS

- **ELIMINATE IGNITION SOURCES**
- **STOP SOURCE OF LUBE OIL IF SAFE TO DO SO**

ON LAND

- Do not flush into ditches or drainage systems.
- Block entry into waterways and contain with earth, snow or other barrier.
- Remove small spills with sorbent pads.
- On tundra use peat moss and leave to degrade if feasible to do so.

ON SNOW & ICE

- Block entry into waterways and contain with snow or other barrier.
- Remove minor spills with sorbent pads and/or snow.
- Burning is unlikely to be possible.
- Use ice augers and pump when feasible to recover oil under ice.

ON MUSKEG

- Do not deploy personnel and equipment on marsh or vegetation.
- Remove pooled oil with pumps and skimmers.
- Flush with low pressure water to herd oil to collection point.
- Burning is not likely to be possible.
- Minimize damage caused by equipment and excavation.

ON WATER

- Contain spill as close to release point as possible.
- Use spill containment boom to concentrate slicks for recovery.
- On small spills, use sorbent pads to pick up contained oil.
- On larger spills, obtain and use skimmer on contained slicks.
- Do not deploy personnel and equipment on mudflats or wetlands.
- Remove contained oil with sorbent pads and/or skimmer.

RIVERS & STREAMS

- Prevent entry into water, if possible, by building berm or trench.
- Intercept moving slicks in quiet areas using (sorbent) booms.
- Do not use sorbent booms/pads in fast currents and turbulent water.

STORAGE / TRANSFER

- Store closed, labelled containers outside away from flammable items.
- Electrically ground containers and vehicles during transfer.

DISPOSAL

- Segregate waste types.
- Place contaminated materials into marked containers.
- Consult camp manager on disposal procedures.

WASTE OIL SPILL RESPONSE ACTIONS

CONSIDER ACTION ONLY IF SAFETY PERMITS

- **ELIMINATE IGNITION SOURCES**
- **STOP SOURCE OF WASTE OIL IF SAFE TO DO SO**

ON LAND

- Do not flush into ditches or drainage systems.
- Block entry into waterways and contain with earth, snow or other barrier.
- Remove small spills with sorbent pads.
- On tundra use peat moss and leave to degrade if feasible to do so.

ON SNOW & ICE

- Block entry into waterways and contain with snow or other barrier.
- Remove minor spills with sorbent pads and/or snow.
- Burning is unlikely to be possible.
- Use ice augers and pump when feasible to recover oil under ice.

ON MUSKEG

- Do not deploy personnel and equipment on marsh or vegetation.
- Remove pooled oil with pumps and skimmers.
- Flush with low pressure water to herd oil to collection point.
- Burning is not likely to be possible.
- Minimize damage caused by equipment and excavation.

ON WATER

- Contain spill as close to release point as possible.
- Use spill containment boom to concentrate slicks for recovery.
- On small spills, use sorbent pads to pick up contained oil.
- On larger spills, obtain and use skimmer on contained slicks.
- Do not deploy personnel and equipment on mudflats or wetlands.
- Remove contained oil with sorbent pads and/or skimmer.

RIVERS & STREAMS

- Prevent entry into water, if possible, by building berm or trench. & Streams
- Intercept moving slicks in quiet areas using (sorbent) booms.
- Do not use sorbent booms/pads in fast currents and turbulent water.

STORAGE / TRANSFER

- Store closed, labelled containers outside away from flammable items.
- Electrically ground containers and vehicles during transfer.

DISPOSAL

- Segregate waste types
- Place contaminated materials into marked containers.
- Whenever possible suitable waste oils collected at the site will be disposed of by incineration.
- Consult camp manager on disposal procedures.

GASOLINE SPILL RESPONSE ACTIONS

CONSIDER ACTION ONLY IF SAFETY PERMITS

GASOLINE FORMS VAPOURS THAT CAN IGNITE AND EXPLODE

NO SMOKING

- **ELIMINATE IGNITION SOURCES**
- **STOP SOURCE OF GASOLINE IF SAFE TO DO SO**

ON LAND

- Block entry into waterways by diking with earth, snow or other barrier(s).
- Do not contain spill if there is any chance of igniting vapours.
- On shop floors and in work/depot yards, apply particulate sorbents.
- On tundra use peat moss and leave to degrade if feasible to do so.

ON SNOW & ICE

- Block entry into waterways by diking with snow or other barrier.
- Do not contain spill if there is any chance of igniting vapours.
- In work/depot yards, apply particulate sorbents.

ON MUSKEG

- Remove pooled gasoline with pumps, if safe to do so.
- Do not deploy personnel and equipment on marsh or vegetation.
- Low pressure flushing can be tried to disperse small spills.
- Burn **CAREFULLY** 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 digging.

ON WATER

- Contain or remove spills **ONLY AFTER VAPOURS DISSIPATE**.
- Use booms to protect water intakes.
- Skimming can be tried once light ends evaporate.

STORAGE / TRANSFER

- Store closed, labelled containers in cool, ventilated areas away from incompatible materials.
- Electrically ground containers and vehicles during transfer.

DISPOSAL

- Segregate waste types, if necessary.
- Place contaminated materials into marked containers.
- Consult camp manager on transportation and disposal requirements.

JET A (AVIATION FUEL) SPILL RESPONSE ACTIONS

CONSIDER ACTION ONLY IF SAFETY PERMITS

AV GAS FORMS VAPOURS THAT CAN IGNITE AND EXPLODE

NO SMOKING

- **ELIMINATE IGNITION SOURCES**
- **STOP SOURCE OF JET A IF SAFE TO DO SO**

ON LAND

- Block entry into waterways by diking with earth, snow or other barrier(s).
- Do not contain spill if there is any chance of igniting vapours.
- On shop floors and in work/depot yards, apply particulate sorbents.
- On tundra use peat moss and leave to degrade if feasible to do so.

ON SNOW & ICE

- Block entry into waterways by diking with snow or other barrier.
- Do not contain spill if there is any chance of igniting vapours.
- In work/depot yards, apply particulate sorbents.

ON MUSKEG

- Remove pooled av gas with pumps, if safe to do so.
- Do not deploy personnel and equipment on marsh or vegetation.
- Low pressure flushing can be tried to disperse small spills.
- Burn **CAREFULLY** 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 digging.

ON WATER

- Contain or remove spills **ONLY AFTER VAPOURS DISSIPATE**.
- Use booms to protect water intakes.
- Skimming can be tried once light ends evaporate.

STORAGE / TRANSFER

- Store closed, labelled containers in cool, ventilated areas away from incompatible materials.
- Electrically ground containers and vehicles during transfer.

DISPOSAL

- Segregate waste types, if necessary.
- Place contaminated materials into marked containers.
- Consult camp manager on transportation and disposal procedures.

PROPANE RESPONSE ACTIONS

GAS STORED IN CYLINDERS THAT EXPLODE WHEN IGNITED!

CONSIDER ACTION ONLY IF SAFETY PERMITS

KEEP ALL VEHICLES INCLUDING SNOWMOBILES AWAY FROM ACCIDENT AREA

Refer to Product Guide in Appendix A for:

Physical/Chemical Properties

Response to Fires

First Aid

- Vapours cannot be contained when released.
- Water spray can be used to knock down vapours if there is NO chance of ignition.
- Small fires can be extinguished with dry chemical or CO.
- Personnel should withdraw immediately from area unless a small leak is stopped immediately after it has been detected.
- If tanks are damaged, gas should be allowed to disperse and no attempt at recovery should be made.
- Personnel should avoid touching release point on containers since frost quickly forms.
- Stay clear of tank ends.

ACETYLENE RESPONSE ACTIONS

GAS STORED IN CYLINDERS THAT EXPLODE WHEN IGNITED!

CONSIDER ACTION ONLY IF SAFETY PERMITS

KEEP ALL VEHICLES INCLUDING SNOWMOBILES AWAY FROM ACCIDENT AREA

Refer to Product Guide in Appendix A for:

Physical/Chemical Properties
Response to Fires
First Aid

- Vapours cannot be contained when released.
- Water spray can be used to knock down vapours if there is NO chance of ignition.
- Small fires can be extinguished with dry chemical or CO.
- Personnel should withdraw immediately from area unless a small leak is stopped immediately after it has been detected.
- If tanks are damaged, gas should be allowed to disperse and no attempt at recovery should be made.
- Personnel should avoid touching release point on containers since frost quickly forms.
- Stay clear of tank ends.

III. SPILL RESPONSE CONTACTS

WMC International Ltd., Meliadine Project

TITLE	NAME	OFFICE	FAX
On-Scene Coordinators			
Logistics	Al Burdon	1613 727 3937	1 613 727 3970
Safety	Kirk Steeves	1613 727 3937	1 613 727 3970
Spill Cleanup Supervisors	Meliadine Camp	1 604 881 6705	
District Geologist	Alan Sexton	1613 727 3937	1 613 727 3970
Project Study Manager	Joe Campbell	1613 727 3937	1 613 727 3970
Environmental Coordinator	Ben Hubert	1 403 256 0017	1403 256 1228
	Residence	1 403 256 7114	1403 256 1228
CONTRACTORS			
M & T Enterprises Ltd.	Rankin Inlet	1 867 645 2778	1 867 645 2590
Y & C Enterprises Ltd.	Rankin Inlet	1 867 645 2546	1 867 645 2490
OTHERS			
NWT Power Corp.	Rankin Inlet	1 867 645 5300	1 867 645 2487

LOCAL TRANSPORTATION

Helicopters

CUSTOM HELICOPTERS	Staff House	1 867 645 3885
	Hanger	1 867 645 3939

Air Lines - Scheduled

First Air - Dispatch	1 867 873 8021
CalmAir	1 867 645 2900
Kivalliq Air	1 877 855 1500
Skyward	1 867 645 3200

Bombardier

Joe Kaludjak	1 867 645 2639
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Kowmuk's Taxi	1 867 645 3034
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Neighbouring Sites

NWT Power Corp.- Rankin Inlet	1 867 645 5300
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EQUIPMENT SUPPLIERS

Frontier Mining - Yellowknife	1 867 920 7617	spill kits & various sorbents
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Acklands - Yellowknife	1 867 873 4100	spill kits and various sorbents
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Dupont -	1 613 348 3616	emergency response centre for personnel and material
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Chemtrec	1 800 424 9300	Chemical Transportation Response Centre for personnel and material
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IV. DUTIES AND RESPONSIBILITIES

The roles and responsibilities of WMC personnel, contractors, and Government are described on the following pages.

WMC and CONTRACTOR PERSONNEL

Spill Observer - anyone on haul route or at fuel cache at any time

- Assess the initial severity of the spill and safety concerns.
- Report all spills to Melaidine Camp manager immediately.
- Determine the source of the spill and stop or contain it, if possible.
- Participate in spill response as member of cleanup crew.

On-Scene Coordinator (OSC) - WMC Meliadine Camp Manager

- Immediately reports the spill to NWT 24-Hour Spill Report Line at (403) 920-8130.
- Records the time of the report, source of information and details on location, size, type of spill as well as any other information available on the spill report form.
- Oversees the cleanup operation until it is satisfactorily completed.
- Together with the Spill Cleanup Supervisor, decides if additional equipment is required to contain and clean up spills.
- Notifies government agencies, WMC Site Manager, Project Manager and Environmental Coordinator on spill details.
- Oversees completion and distribution of Spill Report. Ensures investigation identifies measures to prevent similar spills in future.
- Ensures Response Team is adequately trained in spill response.
- Organises training courses for spill response teams.

Spill Clean Up Supervisors

- Supervise spill cleanup crew.
- Assist in initial and ongoing response efforts.
- With work crew, take initial action to seal off the source and contain spill.
- Continue actions until relieved or supplemented by other Supervisor.
- Decide with On-Scene Coordinator if mobilization of additional equipment from Spill Response Organization or Contractor is warranted.
- Assess whether burning is a viable clean up measure; consult with regulatory authorities at spill site.

Spill Cleanup Crew (Emergency Response Team)

- conduct cleanup of spills under direction of Spill Cleanup Supervisor(s).
- Deploy booms, sorbents and other equipment and materials as required.
- Take appropriate response measures.
- Continue cleanup as directed by Spill Cleanup Supervisor until relieved.

Project Manager, Melaidine West Gold Project

- Responsible for all communication with the media.
- Ensures that all press releases are accurate and in accordance with company policy.

- Makes financial decisions on major expenses during large spill response.
- Initiates Mutual Aid Agreements if proper response requires outside assistance.

Environmental Coordinator

- Provides cleanup advice to the On-Scene Coordinator and Spill Cleanup Supervisor.
- Assists the Project Manager in the preparation of press releases.
- Develops safe and effective spill management and prevention practices.
- Provides advice to the Spill Cleanup Supervisor of storage and disposal options.
- Updates and distributes Contingency Plan.
- Ensures that there is follow up reports prepared on the spill event, clean up and environmental impacts.

Legal Counsel

- Advises the Project Manager and Environmental Coordinator as requested on issues related to:
Legislative authority of various government agencies;
Questions of due diligence;
Costs/fines and liabilities, regulations including penalties associated with regulations;
Consults with the corporate insurance coordinator and advises the Project Manager on matters related to insurance.

WMC Board of Directors

- Establishes corporate environmental policy based on the recommendations of the Environmental Management Committee.

EXTERNAL RESOURCES - contractors and consultants

WMC Fuel Haul Contractors

- Ensure that their best effort is made to maintain spill equipment which shall be available and be applied to a spill incident on site when required.
- Initiates cleanup in the absence of WMC personnel, however caused.
- Reports all spills immediately to the WMC On-Scene Coordinator (OSC).
- Responsible for the training of their personnel on spill response.
- Develops and maintains company specific contingency plans for the WMC Meliadine West Gold Project which conforms to this WMC Spill Contingency Plan and related policies.

Environmental Consultants

- Provide advice to WMC on spill response strategies, counter measure technologies, impact assessments and post spill monitoring and site rehabilitation.

Neighbouring Operations

- Supply spill response equipment, materials and manpower, as required, when requested to do so.

EXTERNAL RESOURCES - Kivalliq Inuit Association and Nunavut Water Board

KIA

The WMC International Ltd. Melaidine West Gold exploration program is carried out on Inuit Owned Land administered and managed by the KIA. It has issued land use permits to WMC for the exploration activities. Inspectors from KIA routinely inspect land use sites for compliance to terms and conditions of permits. While KIA receives data from spills reported to the NWT Spill Line, it is expected that all spills on Inuit Owned Land be reported directly to KIA. The same form as used for the Spill Line may be used for reporting to KIA.

Nunavut Water Board

The Nunavut Water Board issues water licences under the Nunavut Land Claims Agreement. Conditions of the water licence usually include the authorized limits of water use, sources of water use, effluent discharge limits, monitoring and reporting requirements. As well, licenses are expected to require that Spill Contingency Plans be submitted for approval. Enforcement of the provisions of the water licence is carried out by Inspectors from the Water Resources Division (Department of Indian and Northern Affairs). Periodic inspections are conducted by water licence inspectors.

EXTERNAL RESOURCES - GOVERNMENT

Department of Indian and Northern Affairs (DIAND)

The Northern Affairs program of DIAND administers the Territorial Lands Act and Regulations. Through this legislation land use permits are issued. One of the conditions of land use permits is the requirement to report all spills to a 24 hour government run report line (403-920-8130). Land Use Permits may also address matters of environmental conservation and protection including waste disposal, sources of borrow materials, open pit mining, road alignments, land reclamation and closure requirements. Enforcement of the provisions of the land use permits is carried out by the Operations Division of DIAND through Resource Management Officers located at the District Offices.

Inspection of WMC project activities located on Crown Land by Resource Management Officers is conducted periodically.

Environment Canada (EC)

The Environmental Protection and Conservation Service of Environment Canada administers the Canadian Environmental Protection Act (CEPA) and Section 36 of the Fisheries Act. For the latter this specifies that unless authorized by regulation, any effluents discharged into fish bearing water must be non-toxic. Environment Canada officials have in the past laid charges in the NWT under the Fisheries Act for spills of oil and other hazardous material.

EC is responsible for providing environmental advice to federal and territorial government agencies and for the preservation and enhancement of environmental quality.

Department of Fisheries and Oceans (DFO)

The Department of Fisheries and Oceans (DFO) administers the habitat protection provisions of the Fisheries Act. This includes provisions for prohibiting the blocking of fish passageways and the destruction of fish habitat. DFO operates under a Habitat Management Policy whereby the objective is to achieve a net gain of fish habitat within the NWT. On occasion DFO Inspectors visit spill sites to investigate possible impacts to fish habitat.

V. REFERENCES

BHP Diamonds Inc. Transportation Spill Contingency Plan. January 1997.

Department of Transportation. Environmental Guidelines for the Construction, Maintenance and Closure of Winter Roads in the Northwest Territories. Prepared by Stanley Associates Engineering Ltd. 1993.

Northwest Territories Water Board. Guidelines for Contingency Planning. 1987.

ACKNOWLEDGMENTS

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APPENDIX A

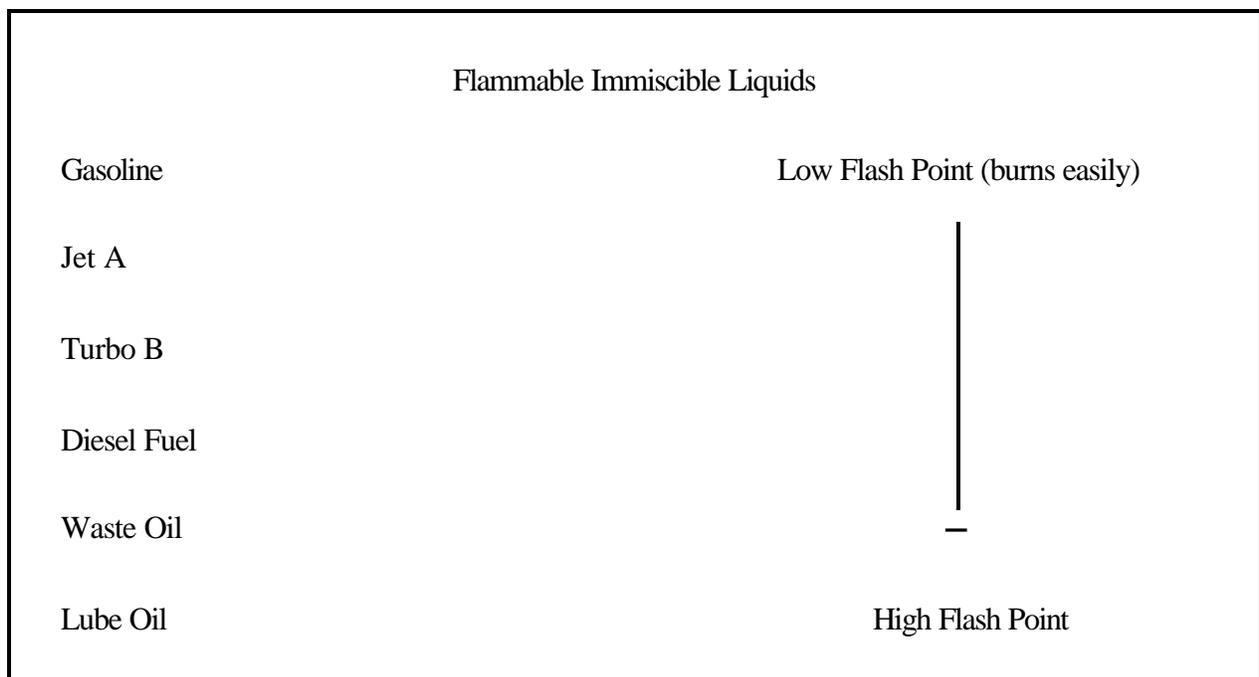
PRODUCT GUIDES

The materials included in this Plan can generally be divided into two categories:

- flammable immiscible liquids
- flammable compressed gases

1 Flammable Immiscible Liquids

These substances are all hydrocarbon-based and will ignite under certain conditions. Gasoline and aviation fuel pose the greatest fire (and safety) hazard and usually cannot be recovered when spilled on water. The remaining materials generally do not pose a hazard at ambient temperatures. They are all insoluble, float unless mixed into the water column and can be recovered when safety allows.



DIESEL

TYPICAL PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Clear, yellow or red	FLASH POINT:	40EC (minimum)
ODOUR:	Petroleum	POUR POINT:	-50 to -6EC
SOLUBILITY:	Insoluble	VISCOSITY:	Not viscous
VAPOUR		SPECIFIC	
DENSITY:	Will sink to ground levels	GRAVITY:	Floats on water (0.8 - 0.9)

SAFETY MEASURES

WARNINGS

- Vapours are heavier than air and form easily at high temperatures.
- Empty containers can contain explosive vapours.
- Toxic gases form upon combustion.
- Eye contact causes irritation.
- Material can accumulate static charges.
- Inhalation of vapours can cause irritation of the respiratory tract, headache, vomiting, and unconsciousness.

PERSONAL PROTECTION

- Always wear impervious, chemical-resistant clothing, gloves, footwear, and goggles; nitrile, Viton and PVC are suitable materials (**DO NOT USE NATURAL RUBBER or NEOPRENE.**)
- Wear full-face organic vapour cartridge respirator where oxygen is adequate, otherwise wear positive pressure SCBA.

PRECAUTIONS

- Monitor for explosive atmosphere.
- Avoid contact with strong oxidizers, such as nitric acid, sulphuric acid, chlorine, ozones, peroxides.
- Eliminate ignition sources.
- Restrict access and work upwind of spill.

RESPONSE TO FIRES

CONSIDER ACTION ONLY IF SAFETY PERMITS!

- Wear SCBA in confined areas.
- Shut off fuel supply.
- Extinguish fire with CO₂, dry chemical, alcohol foam or water fog.
- Use water to cool containers exposed to fire.

**DIESEL
RESPONSE TO SPILLS
CONSIDER ACTION ONLY IF SAFETY PERMITS!**

ON LAND

- **ELIMINATE IGNITION SOURCES.**
- Do not flush into ditch/drainage systems.
- Block entry into waterways.
- Contain spill by diking with earth, snow or other barrier.
- Remove minor spills with peat moss and/or sorbent pads.
- Remove large spills with pumps or vacuum equipment.

ON WATER

- Use booms to contain and concentrate spill.
- Remove spill using sorbent, skimmer or vacuum truck.
- Protection booming can be considered for water intakes.

STORAGE & TRANSFER

- Store closed, labelled containers in cool, ventilated areas away from incompatible materials.
- Electrically ground containers and vehicles during transfer.

DISPOSAL

- Segregate waste types.
- Place contaminated materials into marked containers.
- Consult with environmental authorities during final disposal.

FIRST AID

EYES

- Flush eyes immediately with fresh, warm water (NOT HOT WATER) for 20 minutes while holding the eyelids open.
- Remove contact lenses, if exposed to vapours or liquid.
- Get prompt medical attention.

SKIN

- Remove and launder contaminated clothing.
- Wash skin thoroughly with soap and water.
- Get medical attention.
- Discard saturated leather articles.

INHALATION

- Move victim to fresh air.
- Perform artificial respiration if victim not breathing.
- Provide oxygen if victim is having difficulty breathing.
- Get prompt medical attention.

INGESTION

- **DO NOT INDUCE VOMITING;** if victim is conscious; give milk or water to drink. If vomiting begins, keep victim's head below hips to prevent aspiration.
- **Get prompt medical attention.**

HYDRAULIC OIL

TYPICAL PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Straw-yellow liquid	FLASHPOINT:	215EC
ODOUR:	Petroleum	POUR POINT	-25EC
SOLUBILITY:	Generally insoluble	VISCOSITY:	Medium (265cSt @ 15EC)
VAPOUR		SPECIFIC	
DENSITY:	Few vapours emitted	GRAVITY:	Floats on water (0.9)

SAFETY MEASURES

WARNINGS

- Vapours are heavier than air but are unlikely to form.
- Toxic gas can form in fire and at high temperatures.
- CO, CO₂, and dense smoke are produced upon combustion.
- Oil mist or vapour from hot oil can cause irritation of the eyes, nose, throat and lungs.

PERSONAL PROTECTION

- Always wear impervious, chemical-resistant clothing, gloves, footwear, and goggles; PVC, Nitrile, and Viton are suitable materials (**DO NOT USE NATURAL RUBBER**).
- Use of organic vapour cartridge respirator is highly unlikely.

PRECAUTIONS

- Avoid excessive heat, which can cause formation of vapours.
- Avoid contact with strong oxidizers, such as nitric acid, sulphuric acid, chlorine, ozones, peroxides.
- Eliminate ignition sources.
- Restrict access and work upwind of spill.

RESPONSE TO FIRES

CONSIDER ACTION ONLY IF SAFETY PERMITS!

- Wear SCBA and eye protection when responding to fires.
- Shut off fuel supply.
- Extinguish fire with CO₂, dry chemical, alcohol foam or water fog.
NOTE: Water or foam may cause frothing.
- Use water to cool containers exposed to fire

**HYDRAULIC OIL
RESPONSE TO SPILLS
CONSIDER ACTION ONLY IF SAFETY PERMITS!**

ON LAND

- Prevent additional discharge of oil.
- Do not flush into ditch/drainage systems.
- Block entry into waterways.
- Contain spill by diking with earth, snow or other barrier.
- Remove minor spills with peat moss and/or sorbent pads.
- Remove large spills with pumps or vacuum equipment. Spill can also be mechanically removed if oil is too viscous to be pumped.

ON WATER

- Use booms to contain and concentrate spill.
- Remove spill using sorbent, skimmer or vacuum truck.
- Protection booming can be considered for water intakes/marinas.

STORAGE & TRANSFER

- Store closed, labelled containers in cool, ventilated areas away from incompatible materials.

DISPOSAL

- Segregate waste types.
- Place contaminated materials into marked containers.
- Consult with environmental authorities during final disposal.

FIRST AID

EYES

- Flush eyes immediately with fresh, warm water (NOT HOT WATER) for 20 minutes while holding the eyelids open.
- Remove contact lenses, if exposed to vapours or liquid.
- Get prompt medical attention.

SKIN

- Remove and launder contaminated clothing.
- Wash skin thoroughly with soap and water.
- Get medical attention.
- Discard saturated leather articles.

INHALATION

- Move victim to fresh air.
- Perform artificial respiration if victim not breathing.
- Provide oxygen if victim is having difficulty breathing.
- Get prompt medical attention.

INGESTION

- **DO NOT INDUCE VOMITING**; if victim is conscious; give milk or water to drink. If vomiting begins, keep victim's head below hips to prevent aspiration.
- Get prompt medical attention.

LUBE OIL

TYPICAL PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Amber liquid	FLASHPOINT:	190 to 220EC
ODOUR:	Petroleum	POUR POINT:	-35 to -400EC
SOLUBILITY:	Generally insoluble	VISCOSITY:	Medium (255cSt @15EC)
VAPOUR		SPECIFIC	
DENSITY:	Few vapours emitted	GRAVITY:	Floats on water (0.9)

SAFETY MEASURES

WARNINGS

- Vapours are heavier than air but are unlikely to form.
- Toxic gas can form in fire and at high temperatures.
- CO, CO₂, and dense smoke are produced upon combustion.
- Oil mist or vapour from hot oil can cause irritation of the eyes, nose, throat and lungs.

PERSONAL PROTECTION

- Always wear impervious, chemical-resistant clothing, gloves, footwear, and goggles; nitrile, PVC and Viton are suitable materials. (**DO NOT USE NATURAL RUBBER.**)
- Use of organic vapour cartridge respirator is highly unlikely.

PRECAUTIONS

- Avoid excessive heat, which can cause formation of vapours.
- Avoid contact with strong oxidizers, such as nitric acid, sulphuric acid, chlorine, ozones, peroxides.
- Eliminate ignition sources.
- Restrict access and work upwind of spill.

RESPONSE TO FIRES

CONSIDER ACTION ONLY IF SAFETY PERMITS!

- Wear SCBA and eye protection when responding to lube oil fires.
- Shut off fuel supply.
- Extinguish fire with CO₂, dry chemical, alcohol foam or water fog.
NOTE: Water or foam may cause frothing.
- Use water to cool containers exposed to fire.

**LUBE OIL
RESPONSE TO SPILLS
CONSIDER ACTION ONLY IF SAFETY PERMITS!**

ON LAND

- Prevent additional discharge of oil.
- Do not flush into ditch/drainage systems.
- Block entry into waterways.
- Contain spill by diking with earth, snow or other barrier.
- Remove minor spills with sorbent and/or peat moss.
- Remove large spills with pumps or vacuum equipment. Spill can also be mechanically removed if oil is too viscous to be pumped.

ON WATER

- Use booms to contain and concentrate spill.
- Remove spill using sorbent, skimmer or vacuum truck.
- Protection booming can be considered for water intakes.

STORAGE & TRANSFER

- Store closed, labelled containers in cool, ventilated areas away from incompatible materials.

DISPOSAL

- Segregate waste types.
- Place contaminated materials into marked containers.
- Consult with environmental authorities during final disposal.

FIRST AID

EYES

- Flush eyes immediately with fresh, warm water (NOT HOT WATER) for 20 minutes while holding the eyelids open.
- Remove contact lenses, if exposed to vapours or liquid.
- Get prompt medical attention.

SKIN

- Remove and launder contaminated clothing.
- Wash skin thoroughly with soap and water.
- Get medical attention.
- Discard saturated leather articles.

INHALATION

- Move victim to fresh air.
- Perform artificial respiration if victim not breathing.
- Provide oxygen if victim is having difficulty breathing.
- Get prompt medical attention.

INGESTION

- **DO NOT INDUCE VOMITING**; if victim is conscious; give milk or water to drink. If vomiting begins, keep victim's head below hips to prevent aspiration.
- Get prompt medical attention.

WASTE OIL

TYPICAL PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Black to brown liquid	FLASHPOINT:	100 to 200EC
ODOUR:	Petroleum	POUR POINT:	-30 to -400EC
SOLUBILITY:	Generally insoluble	VISCOSITY:	Medium (200 - 300 cSt)
VAPOUR		SPECIFIC	
DENSITY:	Few vapours emitted	GRAVITY:	Floats on water (0.9)

SAFETY MEASURES

WARNINGS

- Vapours are heavier than air but are unlikely to form.
- Toxic gas can form in fire and at high temperatures.
- CO, CO₂, and dense smoke are produced upon combustion.

PERSONAL PROTECTION

- Always wear impervious, chemical-resistant clothing, gloves, footwear, and goggles; nitrile, PVC and Viton are suitable materials (**DO NOT USE NATURAL RUBBER.**)
- Use of organic vapour cartridge respirator is highly unlikely.

PRECAUTIONS

- Avoid excessive heat, which can cause formation of vapours.
- Avoid contact with strong oxidizers, such as nitric acid, sulphuric acid, chlorine, ozones, peroxides.
- Eliminate ignition sources.
- Restrict access and work upwind of spill.

RESPONSE TO FIRES

CONSIDER ACTION ONLY IF SAFETY PERMITS!

- Wear SCBA and eye protection when responding to lube oil fires.
- Shut off fuel supply.
- Extinguish fire with CO₂, dry chemical, alcohol foam or water fog.
NOTE: Water or foam may cause frothing.
- Use water to cool containers exposed to fire

**WASTE OIL
RESPONSE TO SPILLS
CONSIDER ACTION ONLY IF SAFETY PERMITS!**

ON LAND

- Prevent additional discharge of oil.
- Do not flush into ditch/drainage systems.
- Block entry into waterways.
- Contain spill by diking with earth, snow or other barrier.
- Remove minor spills with peat moss and/or sorbent pads.
- Remove large spills with pumps or vacuum equipment. Spill can also be mechanically removed if oil is too viscous to be pumped.

ON WATER

- Use booms to contain and concentrate spill.
- Remove spill using sorbent, skimmer or vacuum truck.
- Protection booming can be considered for water intakes.

STORAGE & TRANSFER

- Store closed, labelled containers in cool, ventilated areas away from incompatible materials.

DISPOSAL

- Segregate waste types.
- Place contaminated materials into marked containers.
- Consult with environmental authorities during final disposal.

FIRST AID

EYES

- Flush eyes immediately with fresh, warm water (NOT HOT WATER) for 20 minutes while holding the eyelids open.
- Remove contact lenses, if exposed to vapours or liquid.
- Get prompt medical attention.

SKIN

- Remove and launder contaminated clothing.
- Wash skin thoroughly with soap and water.
- Get medical attention.
- Discard saturated leather articles.

INHALATION

- Move victim to fresh air.
- Perform artificial respiration if victim not breathing.
- Provide oxygen if victim is having difficulty breathing.
- Get prompt medical attention.

INGESTION

- **DO NOT INDUCE VOMITING**; if victim is conscious; give milk or water to drink. If vomiting begins, keep victim's head below hips to prevent aspiration.
- Get prompt medical attention.

GASOLINE

TYPICAL PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Colourless liquid (can be dyed)	FLASH POINT:	-50EC
ODOUR:	Gasoline/Petroleum	FREEZING PT:	-60EC
SOLUBILITY:	Insoluble	VISCOSITY:	Not viscous (< 1 cSt)
VAPOUR		SPECIFIC	
DENSITY:	Will sink to ground levels	GRAVITY:	Floats on water (0.7 - 0.8)

SAFETY MEASURES

WARNINGS

- **Vapours form instantaneously, and are heavier than air.**
- Empty containers can contain explosive vapours.
- Vapours can travel to distant sources of ignition and flash back.
- Eye contact causes irritation.
- Material can accumulate static charges.
- Inhalation of vapours can cause irritation of the respiratory tract, headache, vomiting, and unconsciousness.

PERSONAL PROTECTION

- Always wear impervious, chemical-resistant clothing, gloves, footwear, and goggles; nitrile, Viton and PVC are suitable materials (**DO NOT USE NATURAL RUBBER or NEOPRENE.**)
- Wear full-face organic vapour cartridge respirator where oxygen is adequate; otherwise wear positive pressure SCBA, if circumstances warrant.

PRECAUTIONS

- Monitor for explosive atmosphere.
- Avoid contact with strong oxidizers, such as nitric acid, sulphuric acid, chlorine, ozones, peroxides.
- Eliminate ignition sources.
- Restrict access and work upwind of spill.

RESPONSE TO FIRES

CONSIDER ACTION ONLY IF SAFETY PERMITS!

- Wear SCBA in confined areas.
- Shut off fuel supply.
- Extinguish fire with CO₂, dry chemical, alcohol foam or water fog.
- Use water to cool containers exposed to fire.

**GASOLINE
RESPONSE TO SPILLS
CONSIDER ACTION ONLY IF SAFETY PERMITS!**

ON LAND

- **ELIMINATE IGNITION SOURCES.**
- Do not flush into ditch/drainage systems.
- Block entry into waterways.
- Contain spill by diking with earth, snow or other barrier.
- Remove minor spills with peat moss and/or sorbent pads.
- Cover pools with foam to prevent vapour evolution if gasoline presents a fire hazard; otherwise allow vapours to dissipate.

ON WATER

- **ELIMINATE IGNITION SOURCES.**
- **DO NOT ATTEMPT TO CONTAIN OR REMOVE SPILLS.**
- Protection booms can be considered for water intakes.

STORAGE & TRANSFER

- Store closed, labelled containers in cool, ventilated areas away from incompatible materials.
- Electrically ground containers & vehicles during transfer.

DISPOSAL

- Place contaminated materials into segregated marked containers.
- Consult with environmental authorities during final disposal.

FIRST AID

EYES

- Flush eyes immediately with fresh, warm water (NOT HOT WATER) for 20 minutes while holding the eyelids open.
- Remove contact lenses, if exposed to vapours or liquid.
- Get prompt medical attention.

SKIN

- Remove and launder contaminated clothing.
- Wash skin thoroughly with soap and water.
- Get medical attention.
- Discard saturated leather articles.

INHALATION

- Move victim to fresh air.
- Perform artificial respiration if victim not breathing.
- Provide oxygen if victim is having difficulty breathing.
- Get prompt medical attention.

INGESTION

- **DO NOT INDUCE VOMITING;** if victim is conscious; give milk or water to drink. If vomiting begins, keep victim's head below hips to prevent aspiration.
- Get prompt medical attention.

JET A
TYPICAL PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: White or pale yellow liquid	FLASH POINT: -20 to - 250EC
ODOUR: Gasoline/Petroleum	FREEZING PT: -50EC
SOLUBILITY: Negligible	VISCOSITY: Not viscous (<7 cSt)
VAPOUR	SPECIFIC
DENSITY: Will sink to ground levels	GRAVITY: Floats on water (0.75 0.8)

SAFETY MEASURES

WARNINGS

- Vapours instantaneously form, and are heavier than air.
- Low-lying areas can trap explosive vapours.
- Vapours can travel to distant sources of ignition and flash back.
- Eye contact causes irritation.
- Material can accumulate static charges.
- Inhalation of vapours can cause irritation of the respiratory tract, headache, vomiting, and unconsciousness.

PERSONAL PROTECTION

- Always wear impervious, chemical-resistant clothing, gloves, footwear, and goggles; nitrile and Viton are suitable protective materials (**DO NOT USE NATURAL RUBBER, NEOPRENE, OR PVC**).
- Wear full-face organic vapour cartridge respirator where oxygen is adequate; otherwise wear SCBA, if circumstances warrant.

PRECAUTIONS

- Monitor for explosive atmosphere.
- Avoid contact with strong oxidizers, such as nitric acid, sulphuric acid, chlorine, ozone, peroxides.
- Eliminate ignition sources.
- Restrict access and work upwind of spill.

RESPONSE TO FIRES
CONSIDER ACTION ONLY IF SAFETY PERMITS!

- Wear SCBA in confined areas.
- Shut off fuel supply.
- Extinguish fire with CO₂, dry chemical, AFFF foam or water fog.
- Use water to cool containers exposed to fire.

JET A
RESPONSE TO SPILLS
CONSIDER ACTION ONLY IF SAFETY PERMITS!

ON LAND

- **ELIMINATE IGNITION SOURCES.**
- Block entry into waterways; do not flush into ditch/drain systems.
- Contain spill by diking with earth, snow or other barrier.
- Remove minor spills with sorbent or explosion-proof pump.
- Cover pools with foam to prevent vapour evolution if avgas presents a fire hazard; otherwise allow vapours to dissipate.

ON WATER

- **ELIMINATE IGNITION SOURCES.**
- **Contain or remove spills ONLY AFTER VAPOURS DISSIPATE.**
- Protection booms can be considered for water intakes.
- Recover slicks using skimmer and sorbent, if volumes warrant.

STORAGE & TRANSFER

- Store closed, labelled containers in cool, ventilated areas away from incompatible materials.
- Electrically ground containers & vehicles during transfer.

DISPOSAL

- Place contaminated materials in segregated, marked containers.
- Consult with environmental authorities during final disposal.

FIRST AID

EYES

- Flush eyes immediately with fresh, warm water (NOT HOT WATER) for 20 minutes while holding the eyelids open.
- Remove contact lenses, if exposed to vapours or liquid.
- Get prompt medical attention.

SKIN

- Remove and launder contaminated clothing.
- Wash skin thoroughly with soap and water.
- Get medical attention.
- Discard saturated leather articles.

INHALATION

- Move victim to fresh air.
- Perform artificial respiration if victim not breathing.
- Provide oxygen if victim is having difficulty breathing.
- Get prompt medical attention.

INGESTION

- **DO NOT INDUCE VOMITING;** if victim is conscious; give milk or water to drink. If vomiting begins, keep victim's head below hips to prevent aspiration.
- Get prompt medical attention.

PROPANE
TYPICAL PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Colourless gas	FLASH POINT:	-104EC
ODOUR:	Natural gas odour	FREEZING PT:	-190 EC
SOLUBILITY:	Insoluble	VISCOSITY:	n/a
VAPOUR		SPECIFIC	
DENSITY:	Will sink to ground levels	GRAVITY:	Liquid floats on water

SAFETY MEASURES

WARNINGS

- Vapours form instantaneously, and are heavier than air.
- Vapours can travel to distant sources of ignition and flash back.
- Eye contact causes irritation.
- Material can accumulate static charges.
- Inhalation of vapours can cause irritation of the respiratory tract, headache, vomiting, and unconsciousness.

PERSONAL PROTECTION

- Always wear impervious, chemical-resistant clothing, gloves, footwear, and goggles; nitrile and Viton are suitable protective materials (**DO NOT USE NATURAL RUBBER, NEOPRENE, OR PVC**).
- Avoid frostbite burn to skin and eyes from contact with propane.
- Wear full-face organic vapour cartridge respirator where oxygen is adequate, otherwise wear positive pressure SCBA.

PRECAUTIONS

- Monitor for explosive atmosphere.
- Avoid contact with strong oxidizers, such as nitric acid, sulphuric acid, chlorine, ozones, peroxides.
- Eliminate ignition sources.
- Restrict access and work upwind of spill.

RESPONSE TO FIRES
CONSIDER ACTION ONLY IF SAFETY PERMITS!

- Wear SCBA in confined areas.
- Shut off fuel supply.
- Extinguish fire with CO₂, dry chemical, alcohol foam or water fog.
- Use water to cool containers exposed to fire.

PROPANE
RESPONSE TO GAS RELEASES
CONSIDER ACTION ONLY IF SAFETY PERMITS!

ON LAND

- **ELIMINATE IGNITION SOURCES.**
- **DO NOT ATTEMPT TO CONTAIN OR REMOVE SPILLS**

ON WATER

- **ELIMINATE IGNITION SOURCES.**
- **DO NOT ATTEMPT TO CONTAIN OR REMOVE SPILLS.**

STORAGE & TRANSFER

- It is not possible to collect released material.

DISPOSAL

- Consult with environmental authorities if the disposal of any contaminated materials is required.

FIRST AID

EYES

- Flush eyes immediately with fresh, warm water (NOT HOT WATER) for 20 minutes while holding the eyelids open.
- Remove contact lenses, if exposed to vapours or liquid.
- Get prompt medical attention.

SKIN

- Remove and launder contaminated clothing.
- Wash skin thoroughly with soap and water.
- Get medical attention.
- Discard saturated leather articles.

INHALATION

- Move victim to fresh air.
- Perform artificial respiration if victim not breathing.
- Provide oxygen if victim is having difficulty breathing.
- Get prompt medical attention.

INGESTION

- **DO NOT INDUCE VOMITING;** if victim is conscious; give milk or water to drink. If vomiting begins, keep victim's head below hips to prevent aspiration.
- Get prompt medical attention.

ACETYLENE
TYPICAL PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Colourless gas	FLASH POINT:	-18EC
ODOUR:	Garlic - like	FREEZING PT:	-82EC
SOLUBILITY:	Slightly soluble	VISCOSITY	n/a
VAPOUR		SPECIFIC	
DENSITY:	Will sink to ground levels	GRAVITY:	(0.6) Liquid floats on water

SAFETY MEASURES

WARNINGS

- Vapours form instantaneously, and are heavier than air.
- Empty containers can contain explosive vapours.
- Vapours can travel to distant sources of ignition and flash back.
- Eye contact causes irritation.
- Material can accumulate static charges.
- Inhalation of vapours can cause irritation of the respiratory tract, headache, vomiting, and unconsciousness.

PERSONAL PROTECTION

- Always wear impervious, chemical-resistant clothing, gloves, footwear, and goggles; nitrile and Viton are suitable protective materials (**DO NOT USE NATURAL RUBBER, NEOPRENE, OR PVC**).
- Wear full-face organic vapour cartridge respirator where oxygen is adequate, otherwise wear positive pressure SCBA.

PRECAUTIONS

- Monitor for explosive atmosphere.
- Avoid contact with strong oxidizers, such as nitric acid, sulphuric acid, chlorine, ozones, peroxides.
- Eliminate ignition sources.
- Restrict access and work upwind of spill.

RESPONSE TO FIRES
CONSIDER ACTION ONLY IF SAFETY PERMITS!

- Wear SCBA in confined areas.
- Shut off fuel supply.
- Extinguish fire with CO₂, dry chemical, alcohol foam or water fog.
- Use water to cool containers exposed to fire.

ACETYLENE
RESPONSE TO GAS RELEASES
CONSIDER ACTION ONLY IF SAFETY PERMITS!

ON LAND

- **ELIMINATE IGNITION SOURCES.**
- **DO NOT ATTEMPT TO CONTAIN OR REMOVE RELEASES**

ON WATER

- **ELIMINATE IGNITION SOURCES.**
- **DO NOT ATTEMPT TO CONTAIN OR REMOVE RELEASES**

STORAGE & TRANSFER

- Store closed, labelled containers in cool, ventilated areas away from incompatible materials
- Electrically ground containers & vehicles during transfer.

DISPOSAL

- Consult with environmental authorities if the disposal of any contaminated materials is required.

FIRST AID

EYES

- Flush eyes immediately with fresh, warm water (NOT HOT WATER) for 20 minutes while holding the eyelids open.
- Remove contact lenses, if exposed to vapours or liquid.
- Get prompt medical attention.

SKIN

- Remove and launder contaminated clothing.
- Wash skin thoroughly with soap and water.
- Get medical attention.
- Discard saturated leather articles.

INHALATION

- Move victim to fresh air.
- Perform artificial respiration if victim not breathing.
- Provide oxygen if victim is having difficulty breathing.
- Get prompt medical attention.

INGESTION

- **DO NOT INDUCE VOMITING;** if victim is conscious; give milk or water to drink. If vomiting begins, keep victim's head below hips to prevent aspiration.
- Get prompt medical attention.

APPENDIX B
RESPONSE EQUIPMENT INVENTORY

RESPONSE EQUIPMENT INVENTORY

During the exploration phase of the project, spills occurring along the transportation route will be remedied by the appropriate personnel depending on the party responsible for the spill, the location of the spill, and the extent of the environmental threat. Larger spills will involve the coordination of WMC International personnel (including the Emergency Response Team), contractors, and WMC Mutual Aid Partners. For the purposes of listing response equipment, the equipment will be listed by contractor and site.

Mobile Equipment

From **Y & C Enterprises** (645 2546)

Equipment located in Rankin Inlet that can be used for spill countermeasures includes:

- 1 740 Champion grader
- 1 backhoe
- 1 BW 75 compactor
- 1 tractor and end dump
- 1 Cat 950 loader
- 1 Cat 966 loader
- 1 Cat 966 loader
- 1 Cat D3 dozer
- 1 Cat D5 dozer
- 1 Cat D6E dozer
- 1 Cat D6D dozer
- 1 Cat D8K dozer
- 9 tandem dump trucks
- 1 5000 gal. skid mounted storage tank
- 1 trash pump

From **NWT Power Corporation** (645 5300)

Spill equipment available:

- fuel sorbent material
- pumps and hoses
- night operating equipment (portable generator light stand and cords)
- winter clean up equipment (chain saw)
- hand tools (shovels, rakes, wrenches)
- safety equipment

From **Municipality of Rankin Inlet** (645 2525) contact Fire Department (645 2895)

Heavy Equipment available:

- portable lighting
- front end loader
- dump truck
- backhoe
- bull dozer
- grader
- snow plow
- vacuum truck
- fire truck

Mutual Aid Partners

In the event of a major spill requiring additional resources, equipment and manpower will be made available through mutual aid agreements with the Canadian Coast Guard, the Hamlet of Rankin Inlet and the NWT Power Corporation.

Canadian Coast Guard (CCG) - Rankin Inlet Inventory

Material from the CCG inventory at Rankin INLET is available on a cost recovery basis and will be made available on request to the GNWT EMO representative who will be billed by CCG for material consumed and who will then recover costs from WMC accordingly.

1500' X 24"	oil containment boom
6	boom towing devices
6	5/8" tow lines X 100' c/w snap hooks
6	anchoring devices
6	Danforth anchors (22 lbs)
6	3/8" X 75' trip lines
6	trip line marker buoys type mb40
8	bales disposable boom (8" X 10' X 4 lengths per bale)
9	bales sorbent pads (18" X 18" X 3/8" X 100 pads)
10	sorbent rolls (36" X 150' X 3/8")
5	boxes of oil snare
2	1000 gal. portatanks
1	Spate pump
2	lengths 3" oil resistant suction hose - 50' each.
2	lengths oil resistant discharge hose - 50' each.
1	TDS-118 light medium oil skimmer c/w diesel power pack
1	spare parts kit for TDS-118 skimmer
1	4Kva diesel generator
1	16' aluminum boat
1	25 hp outboard motor
2	3000 psi portable high pressure washer
2	sets portable lights (each set has 3 X 500 watt halogen lamps, spare bulbs, 100" ext. cord and carrying case)
2	coils 1/4" polypropylene rope (1200')
2	coils 1/2" polypropylene rope (600')
2	coils 5/8" polypropylene rope (600')
72	pair disposable coveralls
120	pair work gloves
12	hard hat liners
40	dust / mist disposable masks
40	pairs assorted rain gear
20	pair safety glasses
20	safety vests
20	pair sunglasses
2	20' steel ISO containers
1	tool box

APPENDIX C

RISK ASSESSMENT & PREVENTATIVE MEASURES

RISK ASSESSMENT & PREVENTATIVE MEASURES

The purpose of Risk Assessment and preventative Measures for the Fuel Management and Spill Contingency Plan is to identify potential problems, suggest preventative measures to minimize the possibility of a mishap, and outline contingency plans in place to deal with the mishap once it has occurred. A summary table is provided on the next page.

The number of accidents and resulting fuel spills will vary depending on a number of factors: human error, mechanical failure, road conditions, weather conditions, etc. Over the past 10 years, the number of truck spills on winter roads supplying mines has decreased (personnel communication with Regulatory Agencies & Trucking Contractors). This seems to be as a result, in large part, to posting and enforcing speed limits, and increased experience and training of drivers.

A mishap that could occur with the transportation of fuel and supplies for the Meliadine West Gold Project can be separated into one of the following:

- A Delta goes through the ice - leaking
- A Delta goes through the ice - not leaking
- A Delta is upset on land or ice - leaking
- A Delta is upset on land or ice - not leaking

A Delta going through the ice and leaking is expected to be rare event.

Generally, the prevention of mishaps (potential problems) are the same and can be grouped together, as in the table on the next page.

Table C - 1 Risk Assessment, Preventative Measures, and Contingency Plans

Potential Problem	Preventative Measure	Contingency Plan
<p>Delta Mishap - general</p>	<p>Y & C is expected to enforce a safe operating code for all Delta operators delivering fuel to the</p> <p>Strict rules of the road are enforced: no drinking is allowed on or around the transportation route,</p> <p>Drivers should be required to complete checklists and document all matters that require servicing & repair; mechanics should carry out the work as appropriate</p>	<p>Driver knows what to do:</p> <ol style="list-style-type: none"> 1. The major freight carriers should have a contingency plan, For example Y & C Enterprises Ltd. 2. WMC will provide each vehicle that will haul fuel with a copy of this contingency plan. 3. Each driver should have a roll of plastic, shovel, absorbent material, metal buckets and knife in order to contain small spills. <p>Clear lines of communication:</p> <ol style="list-style-type: none"> 1. Depending on the severity of the to ensure safety spill, notification follows the Transportation Spill Response Organization with the appropriate personnel contacted - External and Internal <p>Response team know what do to:</p> <ol style="list-style-type: none"> 1. Freight carriers have to demonstrate to WMC adequate spill response experience & training 2. WMC Emergency Response Team receives training as new members are added <p>Approvals are obtained to burn spilled and recovered fuels at previously selected disposal sites - usually borrow pits.</p>

APPENDIX D

SPILL REPORT FORM

(make copies as required)

APPENDIX E

FUEL STORAGE MONITORING PLAN

The fuel storage monitoring plan will consist of the following daily and weekly inspections conducted by WMC personnel that have been trained in the use of fuel pumping equipment and fuel spill response.

The following inspections will be conducted and recorded on a daily basis:

1. All tanks, lines, pumps, hoses, valves and fittings will be inspected for leaks or damage.
2. Ensure proper fuel only is dispensed into the correct tanks and barrels for use in the camp and associated exploration work.
3. Ensure that the "No Smoking" signs posted in the area of the fuel tanks are always clearly visible.
4. Ensure that all personnel on site abide by the "No Smoking" rule within the distances outlined in the regulations for fuel tanks.
5. Ensure all spill response equipment and PPE (Personal Protection Equipment) is clearly visible and easily accessed.

The following inspections will be conducted and recorded on a weekly basis:

1. Fuel levels in all primary tanks checked and compared against the fuel dispensed from each primary tank for each week.
2. Outer tanks checked for fuel leakage from the primary tank.
3. Spill response equipment checked.
4. PPE checked.