E: DUTIES AND RESPONSIBILITIES

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

CMF and CONTRACTOR PERSONNEL

Spill Observer - anyone on haul route, at fuel cache, camp, or drill site at any time
- Assess the initial severity of the spill and safety concerns.
- Report all spills to Meliadine 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) - CMF 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, CMF Site Manager, CMF 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.
- Organizes 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, Meliadine 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.

F: EXTERNAL RESOURCES - contractors and consultants

CMF 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 CMF personnel, however caused.
- Reports all spills immediately to the CMF On-Scene Coordinator (OSC) or Camp Manager
- Responsible for the training of their personnel on spill response.
- Develops and maintains company specific contingency plans for the CMF Meliadine West Gold Project which conforms to this CMF Spill Contingency Plan and related policies.

Environmental Consultants

- Provide advice to CMF 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 Meliadine West Gold exploration program is carried out on Inuit Owned Land administered and managed by the KIA who has issued land use permits to CMF 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 licenses under the Nunavut Land Claims Agreement and the Nunavut Waters and Nunavut Surface Rights Tribunal Act. Conditions of the water license usually include the authorized limits of water use, sources of water use, effluent discharge limits, monitoring and reporting requirements. As well, licenses require that Spill Contingency Plans be submitted for approval. Enforcement of the provisions of the water license is carried out by Inspectors from the Water Resources Division (Department of Indian and Northern Affairs). Periodic inspections are conducted by water license 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 CMF 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. 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 applies a Habitat Management Policy whereby the objective is to achieve a no net loss of fish habitat. On occasion, DFO Inspectors visit spill sites to investigate possible impacts to fish habitat.

G: 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.

WMC International Ltd., Emergency Management System Plan, August 2001.

ACKNOWLEDGMENTS

CMF gratefully acknowledges the use of the WMC International Ltd's Emergency Management System Plan that was based fundamentally on BHP Diamonds Inc. Transportation Spill Contingency Plan.

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.

Flammable Immiscible Liquids

Gasoline Low Flash Point (burns easily)

Jet A

Turbo B

Diesel Fuel

Waste Oil

Lube Oil

High Flash Point.

DIESEL

TYPICAL PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Clear, yellow or red
ODOUR: Petroleum
SOLUBILITY: Insoluble
VAPOUR
DENSITY: Will sink to ground levels

FLASH POINT: 40EC (minimum)
POUR POINT: -50 to -6EC
VISCOSITY: Not viscous
SPECIFIC
GRAVITY: Floats on water (0.8 - 0.9)

SAFETY MEASURES

WARNINGS

- Vapors are heavier than air and form easily at high temperatures.
- Empty containers can contain explosive vapors.
- Toxic gases form upon combustion.
- Eye contact causes irritation.
- Material can accumulate static charges.
- Inhalation of vapors 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 vapor 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 CO_2, dry chemical, alcohol foam or water fog.
- Use water to cool containers exposed to fire.

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 vapors 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
ODOUR: Petroleum
SOLUBILITY: Generally insoluble
VAPOUR
DENSITY: Few vapors emitted

FLASHPOINT: 215EC
POUR POINT -25EC
VISCOSITY: Medium (265cSt @ 15EC)
SPECIFIC
GRAVITY: Floats on water (0.9)

SAFETY MEASURES

WARNINGS

- Vapors are heavier than air but are unlikely to form.
- Toxic gas can form in fire and at high temperatures.
- CO, CO_2, and dense smoke are produced upon combustion.
- Oil mist or vapor 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 RUBBE**R).
- Use of organic vapor cartridge respirator is highly unlikely.

PRECAUTIONS

- Avoid excessive heat, which can cause formation of vapors.
- 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 CO_2, dry chemical, alcohol foam or water fog.

NOTE: Water or foam may cause frothing.

- Use water to cool containers exposed to fire.

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 vapors 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
ODOUR: Petroleum
SOLUBILITY: Generally insoluble
VAPOUR
DENSITY: Few vapors emitted

FLASHPOINT: 190 to 220EC
POUR POINT: -35 to -400EC
VISCOSITY: Medium (255cSt @15EC)
SPECIFIC
GRAVITY: Floats on water (0.9)

SAFETY MEASURES

WARNINGS

- Vapors are heavier than air but are unlikely to form.
- Toxic gas can form in fire and at high temperatures.
- CO, CO_2, and dense smoke are produced upon combustion.
- Oil mist or vapor 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 RUBBE**R.)
- Use of organic vapor cartridge respirator is highly unlikely.

PRECAUTIONS

- Avoid excessive heat, which can cause formation of vapors.
- 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 CO_2, dry chemical, alcohol foam or water fog.

NOTE: Water or foam may cause frothing.

- Use water to cool containers exposed to fire.

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 vapors 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
ODOUR: Petroleum
SOLUBILITY: Generally insoluble
VAPOUR
DENSITY: Few vapors emitted

FLASHPOINT: 100 to 200EC
POUR POINT: -30 to -400EC
VISCOSITY: Medium (200 - 300 cSt)
SPECIFIC
GRAVITY: Floats on water (0.9)

SAFETY MEASURES

WARNINGS

- Vapors are heavier than air but are unlikely to form.
- Toxic gas can form in fire and at high temperatures.
- CO, CO_2, 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 vapor cartridge respirator is highly unlikely.

PRECAUTIONS

- Avoid excessive heat, which can cause formation of vapors.
- 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 CO_2, dry chemical, alcohol foam or water fog.

  NOTE: Water or foam may cause frothing.
- Use water to cool containers exposed to fire.

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 vapors 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: Colorless liquid (can be dyed)
ODOUR: Gasoline/Petroleum
SOLUBILITY: Insoluble
VAPOUR
DENSITY: Will sink to ground levels

FLASH POINT: -50EC
FREEZING PT: -60EC
VISCOSITY: Not viscous (< 1 cSt)
SPECIFIC
GRAVITY: Floats on water (0.7 - 0.8)

SAFETY MEASURES

WARNINGS

- **Vapors form instantaneously, and are heavier than air.**
- Empty containers can contain explosive vapors.
- Vapors can travel to distant sources of ignition and flash back.
- Eye contact causes irritation.
- Material can accumulate static charges.
- Inhalation of vapors 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 vapor 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 CO_2, dry chemical, alcohol foam or water fog.
- Use water to cool containers exposed to fire.

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 vapor evolution if gasoline presents a fire hazard; otherwise allow vapors to dissipate.

ON WATER

- **ELIMINATE IGNITION SOURCES.**
- **DO NOT ATTEMPT TO CONTAIN OR REMOVE SPILLS.**
- 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 & 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 vapors 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
ODOUR: Gasoline/Petroleum
SOLUBILITY: Negligible
VAPOUR
DENSITY: Will sink to ground levels

FLASH POINT: -20 to - 250EC
FREEZING PT: -50EC
VISCOSITY: Not viscous (<7 cSt)
SPECIFIC
GRAVITY: Floats on water (0.75 0.8)

SAFETY MEASURES

WARNINGS

- Vapors instantaneously form, and are heavier than air.
- Low-lying areas can trap explosive vapors.
- Vapors can travel to distant sources of ignition and flash back.
- Eye contact causes irritation.
- Material can accumulate static charges.
- Inhalation of vapors 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 vapor 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 CO_2, dry chemical, AFFF foam or water fog.
- Use water to cool containers exposed to fire.

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 vapor evolution if avgas presents a fire hazard; otherwise allow vapors to dissipate.

ON WATER

- **ELIMINATE IGNITION SOURCES.**
- **Contain or remove spills ONLY AFTER VAPOURS DISSIPATE.**
- Protection booming 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 vapors 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: Colorless gas
ODOUR: Natural gas odor
SOLUBILITY: Insoluble
VAPOUR
DENSITY: Will sink to ground levels

FLASH POINT: -104EC
FREEZING PT: -190 EC
VISCOSITY: n/a
SPECIFIC
GRAVITY: Liquid floats on water

SAFETY MEASURES
WARNINGS

- Vapors form instantaneously, and are heavier than air.
- Vapors can travel to distant sources of ignition and flash back.
- Eye contact causes irritation.
- Material can accumulate static charges.
- Inhalation of vapors 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 vapor 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 CO_2, dry chemical, alcohol foam or water fog.
- Use water to cool containers exposed to fire.

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 vapors 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