

Noomut Project: Spill Response Plan

THIS PLAN PREPARED MARCH, 2003

Plan Supervisor		B. Sandy Barham, Supervisor																													
Responsible for Initiation of Spill Response Procedures		Senior Geologist Comaplex Minerals Corp. 901 - 1015 4th St SW Calgary, Alberta T2N 1B2																													
Phone (w)		403 265 2846																													
Phone (h)		403 283 5794																													
Satellite		to be announced																													
Fax		403 232 1421																													
email		sbarham@comaplex.com																													
24 hr																															
Secondary Contacts		Placer Dome (CLA) Inc																													
Responsible for Initiation of Spill Response Procedures in absence of Supervisor																															
Mark Balog		Phone (w)	403 750 2560																												
		Phone (h)	403 288 9355																												
George Fink		Phone (w)	403 750 2550																												
		Phone (cel)	403 816 1353																												
			24 hr																												
Site Description (see map)		Site has low relief and is poorly drained. Soils are sandy and the lake beach is sand. The fuel cache is placed on a local topographic high (1-2 m above surrounding area) composed of gravels and glacial till.																													
Fuel Cache (Main Camp)		Yandle Fuel Cache																													
2003 JetB: 75 barrels		2003 JetB: 25 barrels																													
2003 Diesel: 40 barrels		2003 Diesel: 25 barrels																													
2003 Stove Oil: 20 barrels		2003 Propane: 20 100 lb tanks																													
2003 Propane: 25 100 lb tanks		SPILL RESPONSE KIT																													
SPILL RESPONSE KIT																															
Office Area		3 tents with heaters with 45 gallon heating fuel storage outside tents. Armoured electrical cables on surface from generator.																													
SATELLITE PHONE IN OFFICE TENT																															
Pit Privies		- moved periodically																													
Generator		2 cylinder diesel Deutz generator, heavy above ground electrical cables to kitchen and office																													
Kitchen/Sleeping Tent Area		5 sleeping tents (max.) with 45 gal. heating fuel storage outside tents																													
FIRST AID facility in sleeping tent closest to lake																															
SATELLITE PHONE IN DRILL FOREMANS TENT																															
Freshwater Intake - 3/4" poly B line with foot valve and screen		Kitchen sink, shower, dry sink, clothes washer.																													
2 - 45 gallon heating fuel storage tanks outside kitchen																															
Water Pump with hoses		3 100 lb propane on east side of kitchen for kitchen stove, hot water																													
Incinerator Area		heavy gauge steel incinerator waste fuel 45 gallon storage used in incinerator																													
SPILL RESPONSE PROCEDURES		ALL LIQUID PETROLEUM PRODUCT SPILLS EXCEEDING 1 LITER TO BE REPORTED																													
1		DETERMINE IF ANYONE OR THE ENVIRONMENT IS ENDANGERED																													
2		CONTACT SUPERVISOR, NOTE WHERE, TYPE AND QUANTITY OF SPILL																													
3		CONTACT SECONDARY CONTACT IF SUPERVISOR NOT AVAILABLE																													
4		DETERMINE NATURE OF CONTAMINANT AND CONSULT:																													
		<table><tr><td>A:</td><td>Liquid Petroleum Spill Response Guide</td></tr><tr><td>B:</td><td>Propane Spill Response Guide</td></tr><tr><td>C:</td><td>Other Contaminant Spill Response Guide</td></tr></table>		A:	Liquid Petroleum Spill Response Guide	B:	Propane Spill Response Guide	C:	Other Contaminant Spill Response Guide																						
A:	Liquid Petroleum Spill Response Guide																														
B:	Propane Spill Response Guide																														
C:	Other Contaminant Spill Response Guide																														
		IF YOU ENCOUNTER A SPILL OF UNKNOWN SUBSTANCE, DO NOT SMELL, TOUCH, TASTE OR GET CLOSE TO THE PRODUCT, CALL THE																													
		24-Hour Spill Report Line (867) 920 8130																													
5		INITIATE SPILL CONTAINMENT AND CLEAN-UP PROCEDURES IF APPLICABLE																													
6		FILL OUT GNWT SPILL REPORT																													
REPORTABLE INCIDENTS		Report all spills immediately to the SUPERVISOR. Spills which initiate the SPILL RESPONSE PLAN include but are not limited to:																													
		<table><tr><td>- Jet Fuel (JetB)</td><td>1 liter</td><td>- calcium chloride salt</td><td>5 kg</td></tr><tr><td>- diesel fuel</td><td>1 liter</td><td>- lime</td><td>5 kg</td></tr><tr><td>- heating fuel</td><td>1 liter</td><td>- grey water</td><td>20 litres</td></tr><tr><td>- propane</td><td>10 lbs</td><td>- sewage</td><td>consult supervisor</td></tr><tr><td>- motor oil</td><td>1 liter</td><td>- battery acids</td><td>consult supervisor</td></tr><tr><td>- hydraulic oil</td><td>1 liter</td><td>- antifreeze</td><td>1 liter</td></tr><tr><td>- transmission fluid</td><td>1 liter</td><td>- other (notify SUPERVISOR)</td><td></td></tr></table>		- Jet Fuel (JetB)	1 liter	- calcium chloride salt	5 kg	- diesel fuel	1 liter	- lime	5 kg	- heating fuel	1 liter	- grey water	20 litres	- propane	10 lbs	- sewage	consult supervisor	- motor oil	1 liter	- battery acids	consult supervisor	- hydraulic oil	1 liter	- antifreeze	1 liter	- transmission fluid	1 liter	- other (notify SUPERVISOR)	
- Jet Fuel (JetB)	1 liter	- calcium chloride salt	5 kg																												
- diesel fuel	1 liter	- lime	5 kg																												
- heating fuel	1 liter	- grey water	20 litres																												
- propane	10 lbs	- sewage	consult supervisor																												
- motor oil	1 liter	- battery acids	consult supervisor																												
- hydraulic oil	1 liter	- antifreeze	1 liter																												
- transmission fluid	1 liter	- other (notify SUPERVISOR)																													
RESPONSE EQUIPMENT AND TRAINING		It is the responsibility of the SUPERVISOR to make sure you know how to respond to spills and where response equipment is. Ask the supervisor if you are unfamiliar with this plan.																													
		RESPONSE EQUIPMENT: SPILL RESPONSE KIT: At main camp and Yandle Fuel Caches WATER PUMP: Stored in dry with hoses ABSORBENT MATTING: 1 Roll stored in dry SHOVELS AND TOOLS: Stored in Dry																													
		Inventory of Spill Response Kit: 30 gal poly dot approved container with quicklok ring 5" x 10' oil select white absorbent boom 3/8" x 19 " x 144" Oil select white split roll 17"x 19" x 3/8" oil select absorbent pads Disposal bags with ties Set of Spill Procedures and Instructions (MEP Environmental, Winnipeg)																													

030409NW83M00 Spill Response Plan-162e

A: Common Liquid Petroleum Product Emergency Response Guide

Gasoline / Jet B / Diesel			
ATTENTION		HIGHLY FLAMMABLE: Will be easily ignited by heat, sparks or flames.	
Fire or Explosion Hazard		Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks). Vapor explosion hazard indoors, outdoors or in confined spaces Containers may explode when heated.	
Health		Inhalation or contact with material may irritate or burn skin and eyes. Fire may produce irritating, corrosive and/or toxic gases. Vapors may cause dizziness or suffocation Runoff from fire control or dilution water may cause pollution	
Spill Response Procedures		1. Alert people in vicinity of spill to evacuate area, alert SUPERVISOR if in close proximity 2. Control sources of ignition and ventilate area if confined (indoors), stay upwind 3. Apply personal protective equipment as necessary	SPILL KIT LOCATED AT FUEL CACHE HONDA WATER PUMP LOCATED IN DRY WITH HOSES FIRE EXTINGUISHERS LOCATED IN EVERY TENT
SPILL - Site Control		4. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area) if safe to do so. 5. Do not touch or walk through spilled material. 6. Envelop source and spill with boom or berm sections from SPILL RESPONSE KIT 7. Throw absorbent pads from SPILL RESPONSE KIT into spill, wring into SPILL RESPONSE container for reuse. Retrieval should be done with gafts or pitchfork. 8. Containerize contaminated materials (soils, absorbent materials) and place in sealed SPILL RESPONSE container 9. Dispose of waste in manner approved by the SUPERVISOR 10 For spills exceeding 1 litre, fill out an NWT SPILL REPORT	Personal Care 4. If any person is contaminated, flush with water for 15 minutes 5. Remove clothing that may be contaminated (must be disposed of or thoroughly cleaned before reuse) 6. Thoroughly contaminated personal gear should be containerized within SPILL RESPONSE sealed container. 7. Move affected people to fresh air and notify DESIGNATED SENIOR FIRST AID INDIVIDUAL
FIRE		CAUTION: All these products have a very low flash point: Use of water spray when fighting fire may be inefficient. Small Fires: Dry chemical, CO2, water spray or regular foam Large Fires: Water spray, fog or regular foam. Use water spray or fog; do not use straight streams. Move containers from fire area if you can do it without risk. Cool containers with flooding quantities of water until well after fire is out. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. ALWAYS stay away from tanks engulfed in fire. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.	DISPOSAL ALL contaminated clean-up materials and impacted clothing to be stored in sealed container provided with spill response kit. Materials that can be safely combusted on site will be disposed of on-site Other materials retained in sealed storage and prepared for winter backhaul with waste fuels. SOURCE:

B: Propane Spill or Fire Emergency Response Guide

Propane			
ATTENTION		EXTREMELY FLAMMABLE easily ignited by heat, sparks or flames	
Fire or Explosion Hazard		<p>Vapors may form explosive mixtures with air.</p> <p>Vapors may travel to source of ignition and flash back.</p> <p>Vapors from liquefied gas are initially heavier than air and spread along ground.</p> <p>Vapor explosion hazard indoors, outdoors or in confined spaces</p> <p>Containers may explode when heated.</p> <p>Ruptured cylinders may rocket.</p>	
Health		<p>Vapors may cause dizziness or asphyxiation without warning.</p> <p>Contact with gas or liquefied gas may cause burns, severe injury and/or frostbite.</p> <p>May be irritating if inhaled at high concentrations</p> <p>Fire may produce irritating and/or toxic gases.</p>	
Spill Response Procedures		<p>1. Alert people in vicinity of spill to evacuate area, alert SUPERVISOR if in close proximity</p> <p>2. Control sources of ignition and ventilate area if confined (indoors), stay upwind</p> <p>3. Apply personal protective equipment as necessary</p> <p>Keep out of low areas.</p>	<p>SPILL RESPONSE KIT LOCATED AT FUEL CACHE</p> <p>HONDA WATER PUMP LOCATED IN DRY WITH HOSES</p> <p>FIRE EXTINGUISHERS LOCATED IN EVERY TENT</p>
		<p>SPILL - Site Control</p> <p>4. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).</p> <p>5. Do not touch or walk through spilled material.</p> <p>6. Stop leak if you can do it without risk.</p> <p>7. If possible, turn leaking containers so that gas escapes rather than liquid.</p> <p>8. Use water spray to reduce vapors or divert vapor cloud drift. Avoid allowing water runoff to contact spilled material.</p> <p>9. Do not direct water at spill or source of leak.</p> <p>10. Prevent spreading of vapors through sewers, ventilation systems and confined areas.</p> <p>11. Isolate area until gas has dispersed.</p> <p>12. Envelop source and spill with boom or berm sections from SPILL RESPONSE KIT</p> <p>13. Throw absorbent pads from SPILL RESPONSE KIT into spill, wring into SPILL RESPONSE container for reuse. Retrieval should be done with gaffs or pitchfork.</p> <p>14. Containerize contaminated materials (soils, absorbent materials) and place in sealed SPILL RESPONSE container</p> <p>15. Dispose of waste in manner approved by the SUPERVISOR</p> <p>16. Fill out an NWT SPILL REPORT</p>	<p>7. Move affected people to fresh air</p> <p>5. Remove and isolate clothing that may be contaminated</p> <p>6. Thoroughly contaminated personal gear should be containerized within SPILL RESPONSE sealed container.</p> <p>7. Move affected people to fresh air and notify DESIGNATED SENIOR FIRST AID INDIVIDUAL</p> <p>8. Clothing frozen to the skin should be thawed before being removed.</p> <p>9. In case of contact with liquefied gas, thaw frosted parts with lukewarm water.</p>
FIRE		DISPOSAL	
<p>DO NOT EXTINGUISH A LEAKING GAS FIRE UNLESS LEAK CAN BE STOPPED.</p> <p>Small Fires: Dry chemical or CO2.</p> <p>Large Fires: Water spray or fog.</p> <p>Move containers from fire area if you can do it without risk.</p> <p>Fire involving Tanks</p> <p>Fight fire from maximum distance or use unmanned hose holders or monitor</p> <p>Cool containers with flooding quantities of water until well after fire is out.</p> <p>Do not direct water at source of leak or safety devices; icing may occur.</p> <p>Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.</p> <p>ALWAYS stay away from tanks engulfed in fire.</p> <p>For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.</p>		<p>ALL contaminated clean-up materials and impacted clothing to be stored in sealed container provided with spill response kit.</p>	

C: MSDS SHEET SUMMARY and Other Hazardous Material Guide

SUBSTANCE		HEALTH HAZARDS	SPILL PROCEDURE	DISPOSAL PROCEDURE	FIRST AID
UNKNOWN SUBSTANCE			SPILL'S HOTLINE (867) 920 8130		
Jet Fuel A (see GUIDE A)	FIRE HAZARD (DRY CHEMICAL)	Inhalation - may cause central nervous effects, aspiration of oil into lungs. Ingestion may cause pneumonitis which can be fatal. Eye and skin irritation. Prolonged exposure	Remove personnel, eliminate ignition sources, ventilate area if applicable. Stop leak if it can be done safely. Contain spill and absorb with SPILL RESPONSE KIT. Collect impacted	Dispose of impacted materials in sealed SPILL RESPONSE KIT container. Dispose of as hazardous waste. Small amounts of impacted materials may be combusted with	Eyes - flush with water for at least 15 minutes. Wash skin with soap and water. Inhalation - remove to fresh air. Ingestion - DO NOT INDUCE VOMITTING. Consult MSDS sheet and get medical
Diesel Fuel (see GUIDE A)	FIRE HAZARD (DRY CHEMICAL)	Skin and eye irritant. Inhalation - lung irritant. If aspirated to lungs may cause pneumonitis which can be fatal. Prolonged exposure has caused cancers in laboratory	Remove personnel, eliminate ignition sources, ventilate area if applicable. Stop leak if it can be done safely. Contain spill and absorb with SPILL RESPONSE KIT. Collect impacted	Dispose of impacted materials in sealed SPILL RESPONSE KIT container. Dispose of as hazardous waste. Small amounts of impacted materials may be combusted with	Eyes - flush with water for at least 15 minutes. Wash skin with soap and water. Inhalation - remove to fresh air. Ingestion - DO NOT INDUCE VOMITTING. Consult MSDS sheet and get medical
Gasoline (see GUIDE A)	FIRE HAZARD (DRY CHEMICAL)	Inhalation - may cause central nervous effects, aspiration of oil into lungs. Ingestion may cause pulmonary edema pneumonitis which can be fatal. Eye and skin irritation. Prolonged exposure has caused cancers in	Remove personnel, eliminate ignition sources, ventilate area if applicable. Stop leak if it can be done safely. Contain spill and absorb with SPILL RESPONSE KIT. Collect impacted materials in sealed spill response container.	Dispose of impacted materials in sealed SPILL RESPONSE KIT container. Dispose of as hazardous waste. Small amounts of impacted materials may be combusted with	Eyes - flush with water for at least 15 minutes. Wash skin with soap and water. Inhalation - remove to fresh air. Ingestion - DO NOT INDUCE VOMITTING. Consult MSDS sheet and get medical advice if serious.
Propane (SEE GUIDE B)	FIRE HAZARD (DRY CHEMICAL)	Liquid may cause frostbite, blisters, blurred vision if in eyes. Narcotic asphyxiant. Dizzines, disorientation, excitation.	Stop leak if safe to do so, eliminate all sources of ignition, ventilate area, evacuate all personnel, propane will settle in low areas.	Move leaky cylinder to safe area and allow to discharge at moderate rate.	Eyes - wash with large amounts of water for 15 minutes. Frostbite - warm area with lukewarm water or wrap in blankets. Inhalation - move to fresh air.
Battery Acids	FIRE and EXPLOSION HAZARD (DRY CHEMICAL)	Mist inhalation hazard if charged or spilled. Acid burns to skin and eye irritation. Hydrogen gas explosion hazard during battery charging.	- ventilate area, remove combustible materials. Control with dyking with soda or lime. Cover or collect NEUTRALIZED waste. Extinguish fire with dry chemical fire	- Place NEUTRALIZED waste in suitable container. Dispose of as hazardous waste.	-Wash thoroughly with soap. Remove impacted clothing. Rinse eyes for 15 minutes. Consult MSDS sheet and get medical advice if serious.
Antifreeze (Ethylene Glycol)		Respiratory irritation with prolonged exposure. Kidney, liver and bladder problems reported in animals.	SMALL - absorb on sand or other non-combustible material. Place in disposal container.	Dispose of in accordance with MOE recommendations. Consult MSDS sheets.	- Inhalation - remove to fresh air, - wash with soap and water, - remove impacted clothing, - flush eye for 15 minutes, -ingestion -induce vomiting, drink
Motor Oil	FIRE HAZARD (DRY CHEMICAL)	Ingestion - may cause nausea and diarrhea. On skin may cause minor skin irritation.	Clean up as soon as possible. Absorb large spills with absorbant mating or SPILL RESPONSE KIT	Place absorbant materials in sealed appropriate container. Dispose of as hazardous waste. Small amounts may be	Inhalation - move to fresh air. Ingestion - DO NOT INDUCE VOMITTING. Eyes - flush with water for 15 minutes. Used motor oil may be a carcinogen.
Hydraulic Oil	FIRE HAZARD (DRY CHEMICAL)	Mists may cause respiratory irritation	Clean up with absorbant mating. Collect impacted soils for disposal.	May incinerate small amounts of impacted materials. Larger volumes stored as waste oil for winter backhaul	Wash skin with soap and water. Flush eye with water for 15 minutes. Inhalation - remove to fresh air. Consult MSDS sheet and get medical advice if
Automatic Transmission Fluid	FIRE HAZARD (DRY CHEMICAL)	Avoid breathing mists - may cause respiratory irritation. Mild eye irritant.	Absorb with absorbant mating. Collect mating and impacted soils for disposal	Used oil should be treated as hazardous waste. May incinerate small amounts of impacted materials.	Inhalation - remove to fresh air. Eyes -flush with water for 15 minutes. Skin - wipe off excess and wash with soap and water. Consult MSDS sheet
Poly-Drill 133-X	FIRE HAZARD (DRY CHEMICAL)	Prolonged skin contact may produce skin irritation and inflammation.	Soak up spill with absorbent material. Place residue in sealed labelled container. Solidify with sand.	Dispose of as hazardous waste. Small amounts may be incinerated.	Wash exposed skin with soap and water. Flush eye with water for 15 minutes. Inhalation - remove to fresh air. Do not induce vomiting. Get medical
Poly-Drill O.B.X.	FIRE HAZARD (DRY CHEMICAL)	May cause skin and eye irritation. Do not ingest.	Clean up spill with gloves. Avoid inhalation. Spill areas can be hazardously slippery.	Dispose of spilled material in suitable container.	Wash exposed skin with soap and water. Flush eye with water for 15 minutes. Inhalation - remove to fresh air. Do not induce vomiting. Get medical

Noomut Project Spill Response Plan and Emergency Contacts:

Plant Supervisor		B. Sandy Barham		Phone (w)	403 265 2846
(SPILL PLAN AUTHORITY)		Senior Geologist	Phone (h)	403 283 5794	24 hr
		Comaplex Minerals Corp.	Satellite	TBA	
		901 - 1015 4th St SW	Fax	403 232 1421	(Cgy office)
		Calgary, Alberta T2N 1B2	email	sbarham@comaplex.com	
Other Contacts					
(WITH AUTHORITY TO INITIATE SPILL PLAN)		Comaplex Minerals Corp	Phone (w)	403 750 2560	
		Mark Balog	Phone (h)	403 288 9355	
		George Fink	Phone (w)	403 750 2550	
			Phone (cel)	403 816 1353	24 hr
Other Contacts:					
Expeditor		Eskimo Point Lumber Supply (Arviat)		867-857-2752 (office)	
		Ryan St. John (Arviat)		867-857-2752 (office)	
		Ryan St. John (Arviat)		867-857-2364 (home)	
		Don St. John (Arviat)		867-857-2767 (home)	
		Marlin Van Rooy		867-645-5609	
Mine Inspector (Rankin Inlet)					
Skyward Aviation		Bert Livingston	204 679 1370	24 Hour cel phone	
SHIPPING AND MAILING					
General Camp E-mail		noomut@comaplex.com			
Mail: C/O Eskimo Point Lumber Supply, Arviat, NU, X0C 0E0					
Ship to (Ground to Churchill):		Ship VIA:			
Comaplex Minerals, Noomut Camp		Eskimo Point Lumber Supply			
C/O Eskimo Point Lumber Supply		895 Jarvis Ave, Winnipeg, Manitoba			
Arviat, NU X0C 0E0, 867-857-2752		R2X 0A1, 204-586-8221			
EMERGENCY CONTACTS					
EMERGENCY EVACUATION					
24 HOUR LINES					
SKYCAR AIR AMBULANCE		204 778 6600	Can dispatch Caravan to Henik Lake and will arrange transport south		
MUSTANG HELICOPTERS		403 874 2050	Contact: Chuck Grandy		
RCMP ARVIAT		867 857 1111	Phone will forward to Iqaluit if no one in Arviat Office		
ARVIAT HEALTH CLINIC		867 857 2816	Nurse on call 24 hours per day		
AIR EMERGENCIES					
24 HOUR LINES					
MARINE AND AIR SEARCH AND RESCUE		613 965 3870			
Mustang Helicopters		403 874 2050	Contact: Chuck Grandy		
Skyward Aviation		204 679 1370	24 Hour cel phone		
Mustang Helicopters		403 886 5995	when available		
LOCATION INFORMATION					
Camp Location		Lat	61 deg	34 min	38 sec
		Long	97 deg	8 min	31 sec
Henik Lake Airstrip		Lat	61 deg	39 min	00 sec
		Long	97 deg	21 min	27 sec
Yandle Field Area		Lat	61 deg	45 min	52 sec
		Long	96 deg	36 min	8 sec
CAMP COMMUNICATIONS					
CAMP MSAT		TBA			
DRILL FOREMAN MSAT		TBA			
GEOPHYSICAL CREW SAT		TBA			
HELICOPTER SAT		TBA			
FM Radio Frequencies		154.49			
Geological, Geophysical Staff		165.45			
Drill Crews		165.45			

SPILLS HOTLINE		867 920 8130
-----------------------	--	--------------