

# **SPILL CONTINGENCY PLAN**



**MAJOR DRILLING GROUP INTERNATIONAL INC.****CRITICAL TASK PROCEDURE # 43/99**

<b>TASK</b>	<b>IMPLEMENTED</b>	<b>REVIEWED</b>
<b>HAZARDOUS MATERIAL SPILLS</b>	<b>Date Issued: 1999/12/12</b> <b>Reviewed by: D. R. Davies</b>	<b>Next Review Date: 2001/12/29</b> <b>Date Revised:</b>

**TASK PURPOSE AND IMPORTANCE**

The major steps are outlined in their correct order. All steps must be followed in accordance with the written sequence to achieve maximum safety and efficiency

**PURPOSE**

To protect and prevent the contamination, harm, and destruction of the environment and ensure the health and well being of employees.

**POLICY**

Employees are encouraged to exercise due diligence, comply with environmental regulations, and codes of practice to prevent accidental spills and contamination, of any description, especially those emanating from vehicles, machinery, and living quarters in remote areas that could result in the degradation of the environment and surrounds.

**PROCEDURE****STEP 1. – MAKE AN ASSESSMENT**

- Develop an inventory of petroleum, oil, and lubricants, batteries, drilling mud, flocculants, antifreeze, glycol, and propane, etc.
- Cleaning products such as detergents, soaps, degreasing agents, and hand cleaners.
- Heating materials heating oils, kerosene, etc.
- Ventilating and cooling systems.
- Equipment/vehicle service and maintenance.

**STEP 2. – REVIEW MATERIAL SAFETY DATA SHEETS (MSDS)**

- Review MSDS sheets to ensure all chemicals and drill fluids have an appropriate MSDS.
- Review MSDS for recommended spill clean-up methods and materials.
- Define the personal protective equipment required from the MSDS sheets.

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**STEP 3 – EMERGENCY SPILL CONTAINMENT KITS**

Emergency spill kits will be maintained at each drill site, and at a minimum should contain:

- Three (3) 4ft absorbent socks.
- Biodegradable absorbent material.
- Four (4) absorbent wipes.
- One (1) pair of rubber gloves.
- Two (2) sizes of disposable bags.
- Identification of product labels.

**STEP 4. – FUEL STORAGE TANKS**

- Berm-walls must be constructed around perimeter of fuel tanks/storage areas, and have the capacity of containing a minimum of 110% of the total volume of the tank/storage area.
- Fuel storage points shall be housed in a metal-lipped tray and have the capacity of containing a minimum of 110% of the total volume of the tank/storage area.
- Permeable absorbent matting shall be used at fuelling or fuel decanting points, under all drill rig motors, and where vehicles and equipment are serviced or repaired.
- Provide fuels tank/storage areas with suitable cover to prevent rain or snow from entering the berms or metal-lipped tray, reducing the containment capacity.
- Fuel storage tanks and chemicals must be located at a minimum of 30m from a watercourse and where any spillage can be effectively contained.
- Re-fueling or decanting of fuels should be restricted to daylight hours unless lighting is adequate (See Critical Task Procedure–DECANTING FUEL # 37/99.
- Any fuel spill regardless of size must be cleaned up immediately or removed for appropriate disposal.
- All spills must be reported to the supervisor.

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**STEP 5. – WATER STORAGE PUMPS**

- Contaminants from pumps shall not enter the watercourse at any time.
- Install a barrier of permeable absorbent matting or other similar material between the pump and watercourse to prevent contamination of the same.
- Locate pumps as far as possible from watercourses and on terrain sloping away from the watercourse.
- The pumping unit must be housed in a metal-lipped tray having a capacity of 110% of the volume of the lubricants and coolants used in the pump.
- The tray must be lined with absorbent material.
- The pump unit must be covered with suitable material to prevent snow or rain from building up in the tray, reducing the containment capacity.

**STEP 6. – DRILL RIGS**

- Install a metal-lipped tray, under the drill rig motors and hydraulic pack, having a capacity of 110% of the total volume of the lubricants, fuel, and fluids, and lined with absorbent material. Drilling fluids must be contained by a berm constructed of soil and oil absorbent matting and strategically located to contain any inadvertent spill.
- Dispose of drilling fluids in accordance with client specifications or local authorities.
- Only drilling fluids or additives of non-toxic, biodegradable material shall be considered suitable for use.
- A MSDS must be readily available for all fuels, chemicals, and drilling fluids. etc.

**STEP 7. - VEHICLES AND MOBILE EQUIPMENT**

- Leaks or emissions of fuel, lubricants, or hydraulic fluid from vehicles or mobile equipment shall be repaired immediately and where this is not possible, must be locked out and removed from service until repairs can be affected.
- Report fuel, lubricant, and hydraulic fluid leaks to the supervisor in accordance with procedure # 55/99. MAINTENANCE OF FIELD EQUIPMENT.

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**STEP 7. - VEHICLES AND MOBILE EQUIPMENT (Cont.)**

- History of service, maintenance, and parts replacement, including removed oil filters from vehicles and mobile equipment shall be provided in accordance with Critical Task Procedure # 55/99. **MAINTENANCE OF FIELD EQUIPMENT.**
- Daily "walk-around" of vehicles and mobile equipment can quickly identify leaks that must be repaired as soon as possible.
- Formal monthly physical condition inspections must be carried out on all vehicles and mobile equipment to identify fuel, lubricant, and hydraulic fluid leaks.

**STEP 8. - WATER STORAGE PITS**

- Specification, construction, and monitoring of water storage pits shall be provided in accordance with Critical Task Procedure # 04/99. **WATER STORAGE PITS.**

**STEP 9. - STORAGE OF FLUIDS AND CHEMICALS**

- Fuels, lubricants, and hydraulic fluids, must be contained in sealed units.
- Containers must be stored on 10cm/4in. high pallets to makes it easier to identify leaks.

**STEP 10. - CONTAMINATED MATERIALS**

- All spill-contaminated materials must be collected, and contained in suitable bags and clearly labeled as to content.
- Prior to removal from site, the bags must be stored in a suitable location to prevent animals from gaining access to them.
- Different used fluids must be segregated and demarcated as to type.
- Area must be designated as a storage area for used fluids.
- Containers must be stored on 10cm high pallets to make it easier to identify leaks.
- The containers must be stored where they are protected from vehicle or mobile equipment collision.

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**STEP 10. – CONTAMINATED MATERIALS (Cont.)**

- Contaminated materials must be removed from site and disposed of by a recognized certified waste disposal agency.

**STEP 11. – SPILL RESPONSE**

In the event of a major spill the following steps must be initiated:

1. Immediately alert occupants in the vicinity to evacuate the area.
2. If a flammable, volatile material is spilled warn everybody, control sources of ignition and ventilate the area if necessary.
3. If any person is contaminated, flush with water for fifteen minutes or more.
4. Remove any clothing that may be contaminated.
5. Clothing must be thoroughly cleaned before re-use.
6. Apply personal protective equipment for protection.
7. Remove the source of pollution.
8. Envelope the source with permeable absorbent socks and/or berms.
9. Absorb the chemical with absorbing materials.
10. Containerize the polluted material and remove to waste storage facility.
11. Complete a *SafetyGram* and investigation report.

**STEP 12. – REPORTING THE SPILL**

In the event of a major spill the following steps must be initiate

1. Contact Branch Manager/Regional Manager of the emergency and provide the following details:
  - i. Name, location, and telephone number of caller.
  - ii. Location of the incident, if elsewhere other than drill site.
  - iii. Name or type of spilled product.
  - iv. Time and date of spill.

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- v. The size of the spill measured in area, units, and flow rates where applicable.
- vi. What has been done and what still has to be done to contain the spill.
- vii. If the containment methods were effective.
- viii. Nature and extent of personal injuries.
- ix. Nature and extent of property damage.

2. The Regional Manager/Branch Manager will contact the Safety Director at one of the following telephone numbers:

Corporate Office – Canada: 1-(506)-859-7670.  
Home: 1-(506)-861-1898.  
Cell: 1-(506)-381-7220.

informing him of the emergency and all known details at that time. The Regional Manager will also inform the client of the emergency.

3. If for any reason the Safety Director cannot be reached, contact the Vice President-Operations at one of the following telephone numbers:

Corporate Office – Canada: 1-(506)-857-8636.  
Home: 1-(506)-857-9204.  
Cell: 1-(506)-381-3824.

informing him of the emergency and all known details at that time.

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**STEP 12. - REPORTING THE SPILL (Cont.)**

4. The Safety Director or in his absence the Vice President-Operations; will contact the Board of Directors at the following telephone number or fax number:

1-(416)-360-5333.

Fax: 1-(416)-360-4419.

advising of the emergency and all known details at that time.

5. In the event of a major spill emergency occurring in Canada, the Safety Director or Vice President-Operations, will report the emergency to Environment Canada at one of the following applicable telephone numbers: (24 hour numbers).

- New Brunswick/Nova Scotia/PEI. 1-800-565-1633.
- NFLD/Labrador 1-800-563-2444.
- Quebec 1-800-265-0237
- Ontario 1-800-268-6060
- Manitoba 1-204-944-4888
- Saskatchewan 1-800-667-7525
- Alberta 1-800-222-6514
- NWT 1-867-920-8130
- British Columbia 1-800-663-3456



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**STEP 13. – CHEMICALS REQUIRING MSDS**

Listed below are some materials known to be available at most drill sites and rigs for which MSDS must be readily available to employees.

1. Antifreeze
2. Arox 22
3. Automotive Oil
4. Aviation Gasoline
5. Battery Acid
6. Bentonite
7. Bio Cut Water Soluble Lubricant
8. Bleach
9. Butane
10. Calcium Chloride
11. Cement
12. Chain oil
13. Clay treat II
14. Dexon II
15. DD955 Viscosifier
16. DD2000 Viscosifier
17. Deisel
18. DDR Grease
19. Drill Rod Heavy Grease
20. EZ Mud
21. Fire Extinguishers
22. Gasline Antifreeze
23. Gasoline
24. Glycol
25. Marvelube Grease
26. MAPAC

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**STEP 13. - CHEMICALS REQUIRING MSDS (Cont.)**

Listed below are some materials known to be available at most drill sites and rigs for which MSDS must be readily available to employees.

- 27. Hydraulic fluids
- 28. Hydrofluoric Acid
- 29. Insect Repellent
- 30. Kleen-Start
- 31. Linseed Soap
- 32. OBX
- 33. One 133
- 34. Spray Paint
- 35. Propane
- 36. Thread Compound
- 37. Torqueless Torque Reducer
- 38. Unirex Grease
- 39. Ultra Vis
- 40. Quick gel
- 41. Radiator Coolant
- 42. Raid
- 43. Snowmobile Oil
- 44. Varsol
- 45. WD40

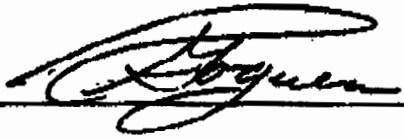
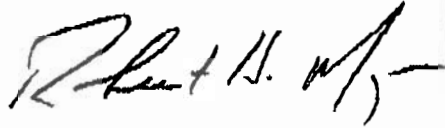

The above list is not intended to be exhaustive or prescriptive, and an audit must be carried out to determine what materials and chemicals are actually available at sites and drill rigs, and if applicable MSDS are readily available to employees in accordance with the Occupational Health and Safety Program - Section 10 - WHMIS

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**TASK PURPOSE AND IMPORTANCE**

The attached procedure has been approved for implementation. The major steps are outlined in their correct order. All steps must be followed in accordance with the written sequence to achieve maximum safety and efficiency.

<b>DATE</b>	<b>NAME</b>	<b>POSITION</b>	<b>SIGNATURE</b>
00/07/20	R. GOGUEN	CEO	
00/07/20	R. H. MORGAN	V.P. OPERATIONS	
00/07/20	D. R. DAVIES	SAFETY DIRECTOR	
00/07/20		JHSC CO - CHAIRPERSON	