

3.8 Spill Response - POL Resupply Activities

Part II Section 6.2 of the EPP describes the bulk POL resupply process for NWS sites. Transportation of the bulk POL is performed by contractors and subcontractors who must each possess their own Spill Contingency Plan.

FRONTEC will report spills related to fuel resupply and fuel transfer to NWSO, even though the contractor's spill plan may apply.

Command structure and spill response action plans for spills during site resupply are shown in Figures 5 and 6. These plans illustrate spill responses during resupply by:

- a. Sealift (e.g. vessel or barge); and
- b. Airlift (e.g. rotary wing or fixed wing aircraft).

Figures 7 through 10 depict response plans for land and freshwater/marine spills at unattended and attended NWS sites.

**FIGURE 5 - FLOW CHART FOR FUEL SPILL RESPONSE
DURING BULK POL RESUPPLY BY SEALIFT**

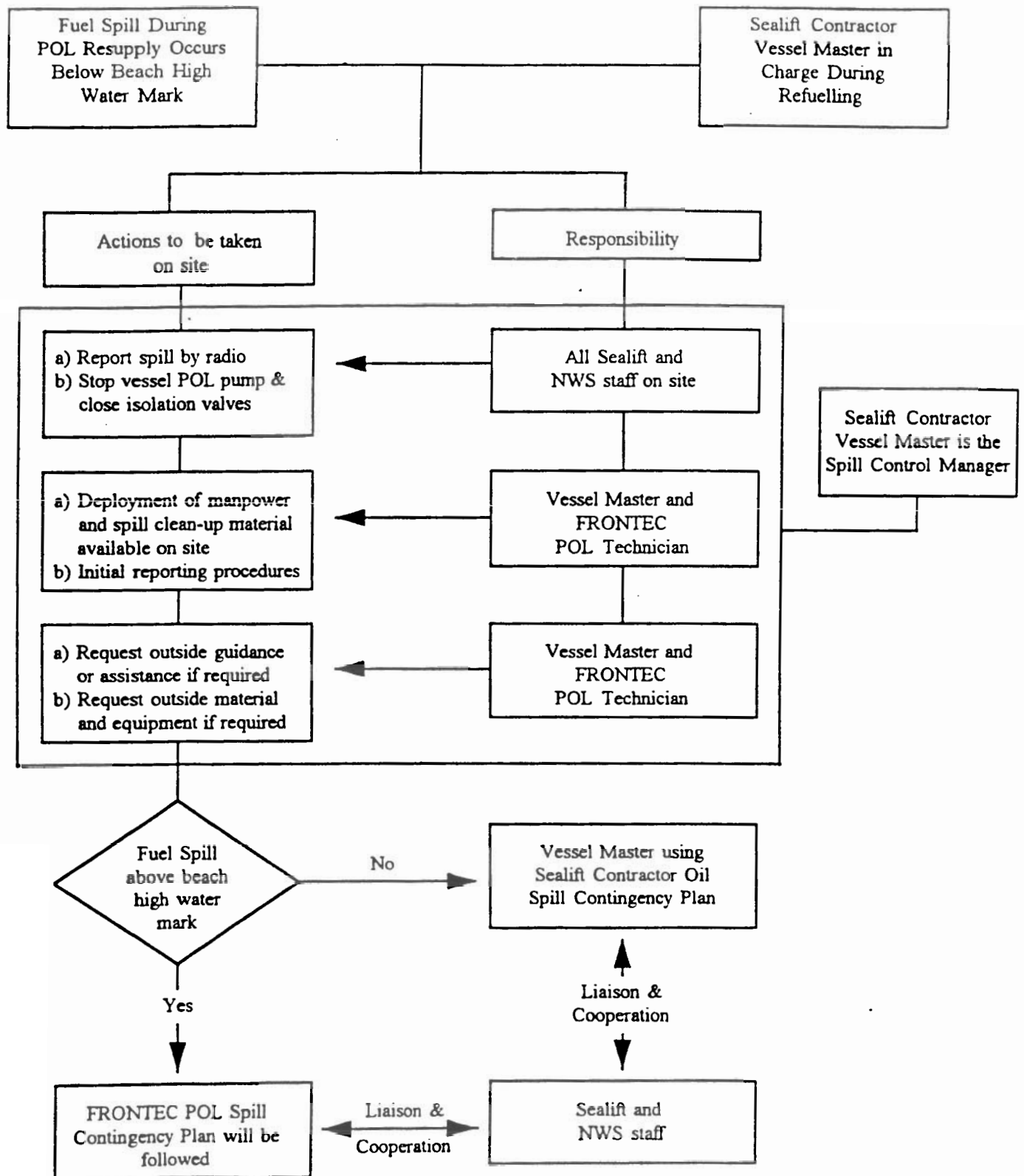


FIGURE 6 - FLOW CHART FOR FUEL SPILL RESPONSE DURING BULK POL RESUPPLY BY AIRCRAFT

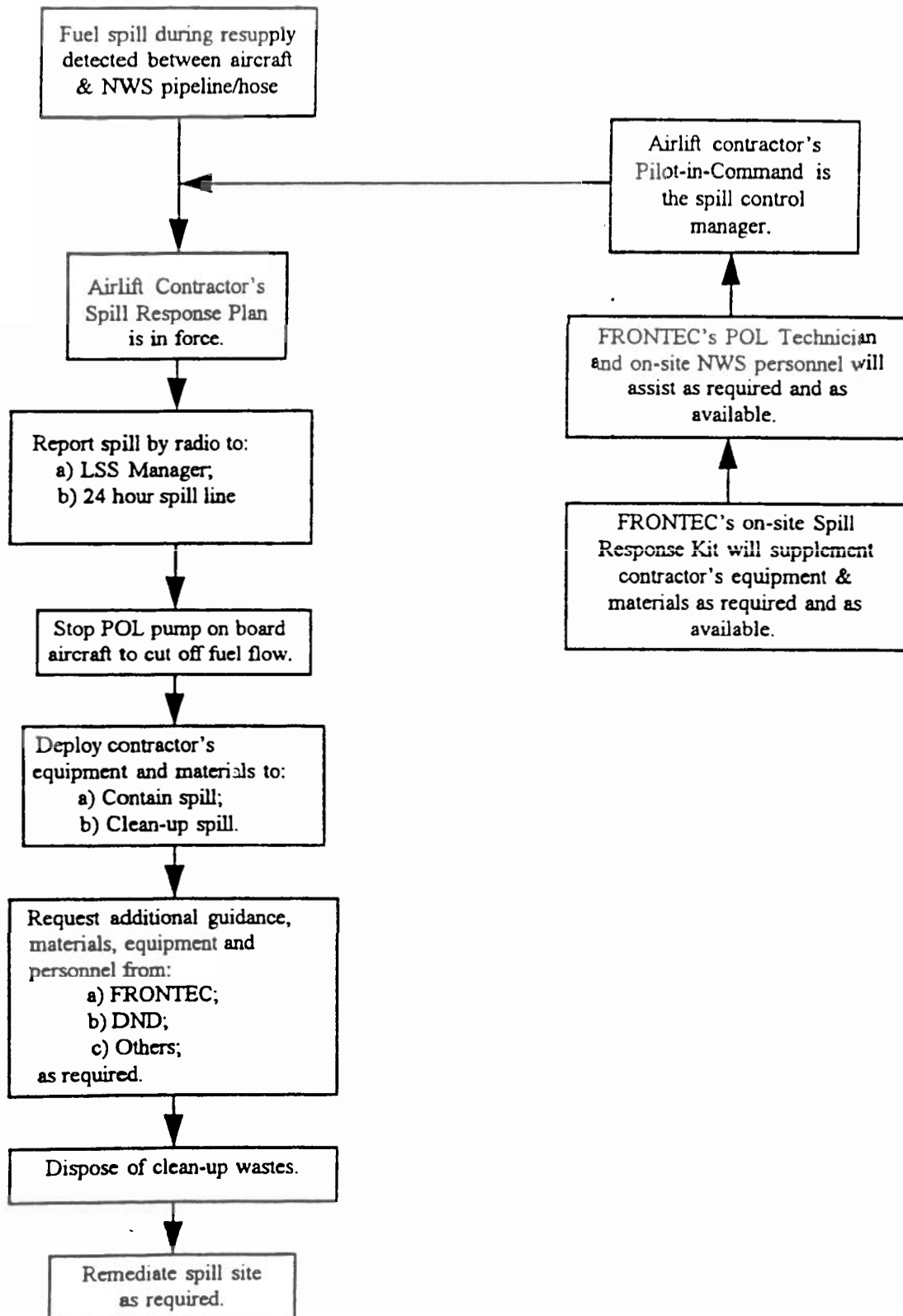
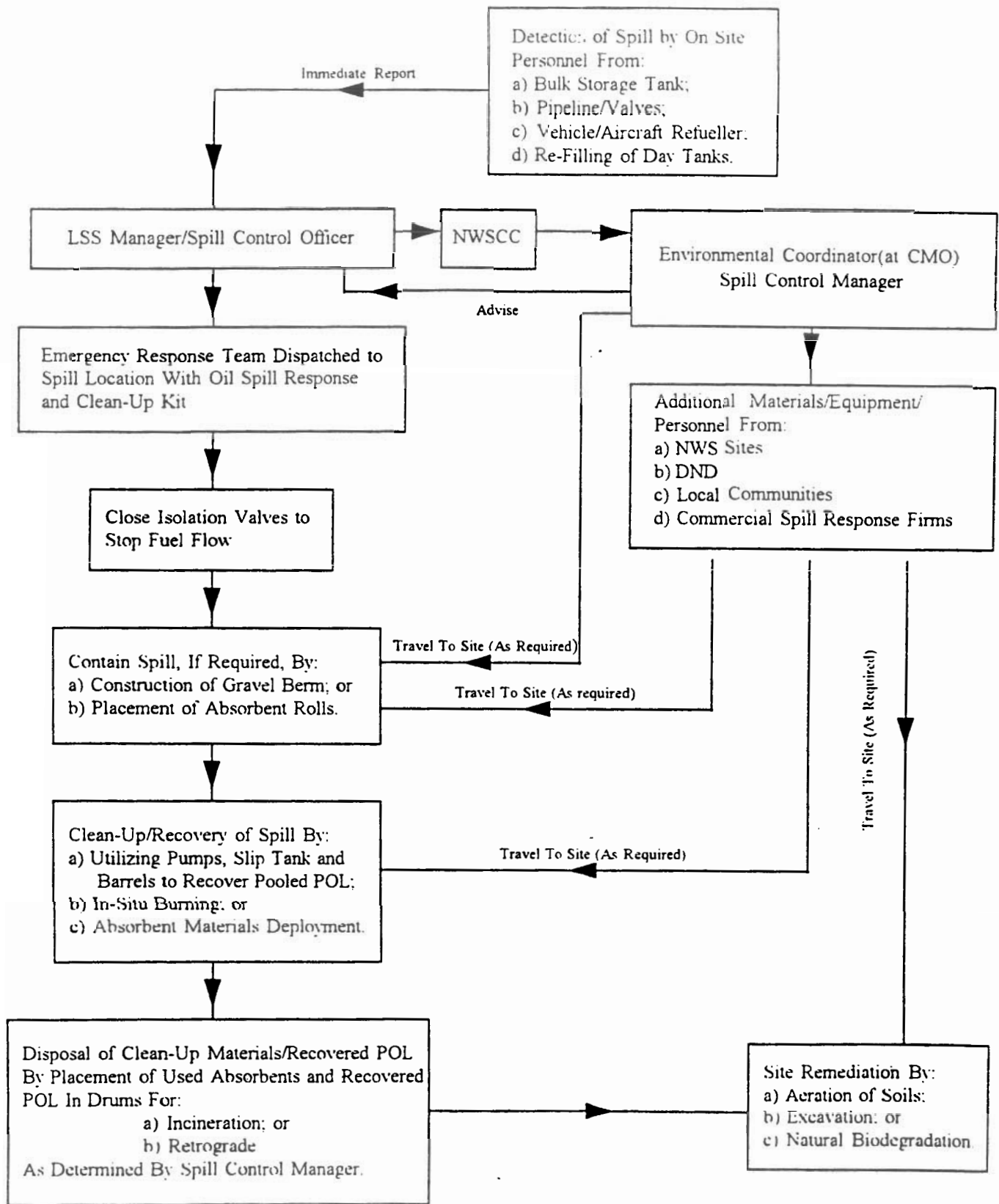
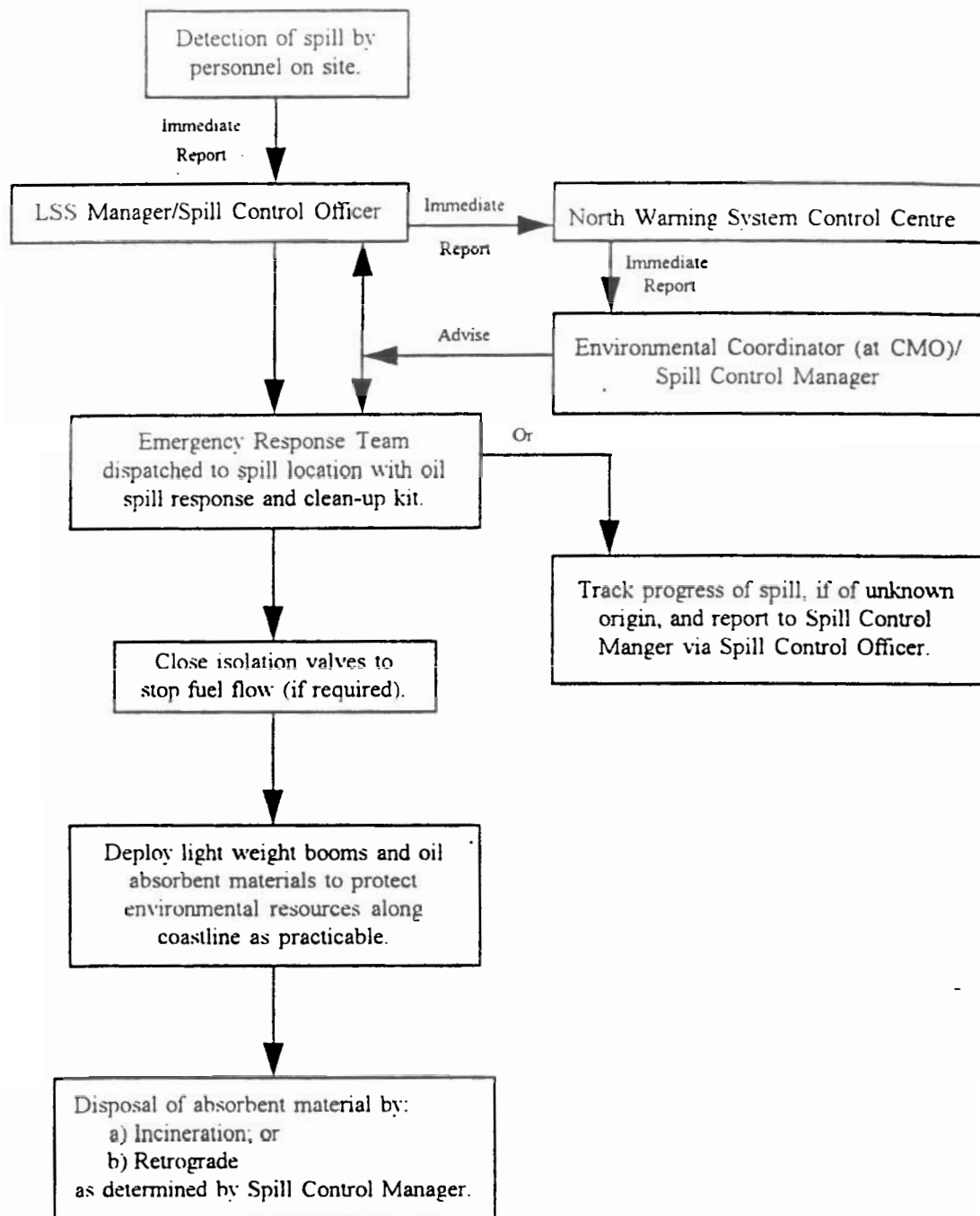


FIGURE 7 - FLOW CHART FOR LAND POL SPILL RESPONSE AT NWS ATTENDED SITES

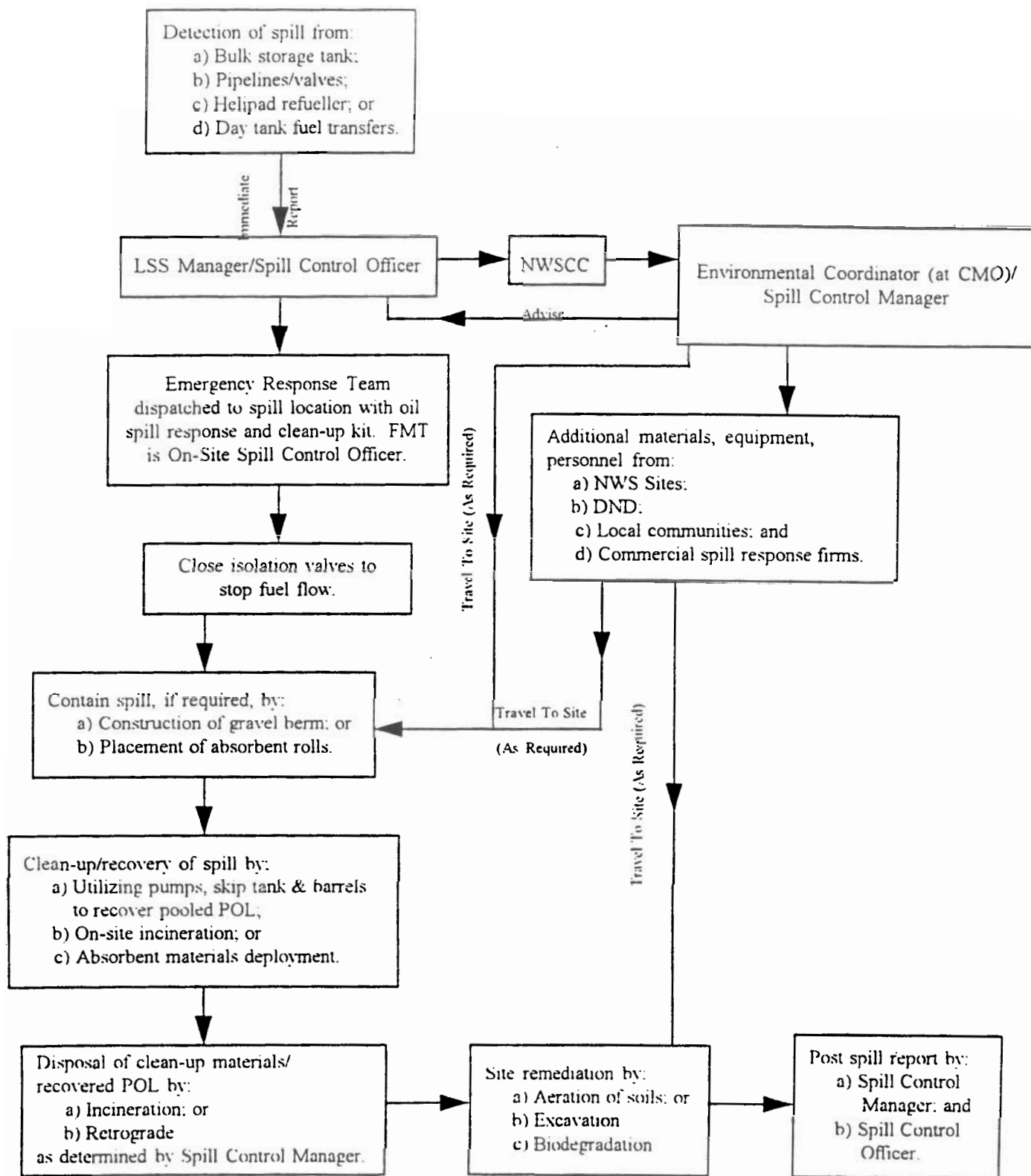


**FIGURE 8 - FLOW CHART FOR FRESHWATER AND MARINE POL SPILL
RESPONSE AT NWS ATTENDED SITES**



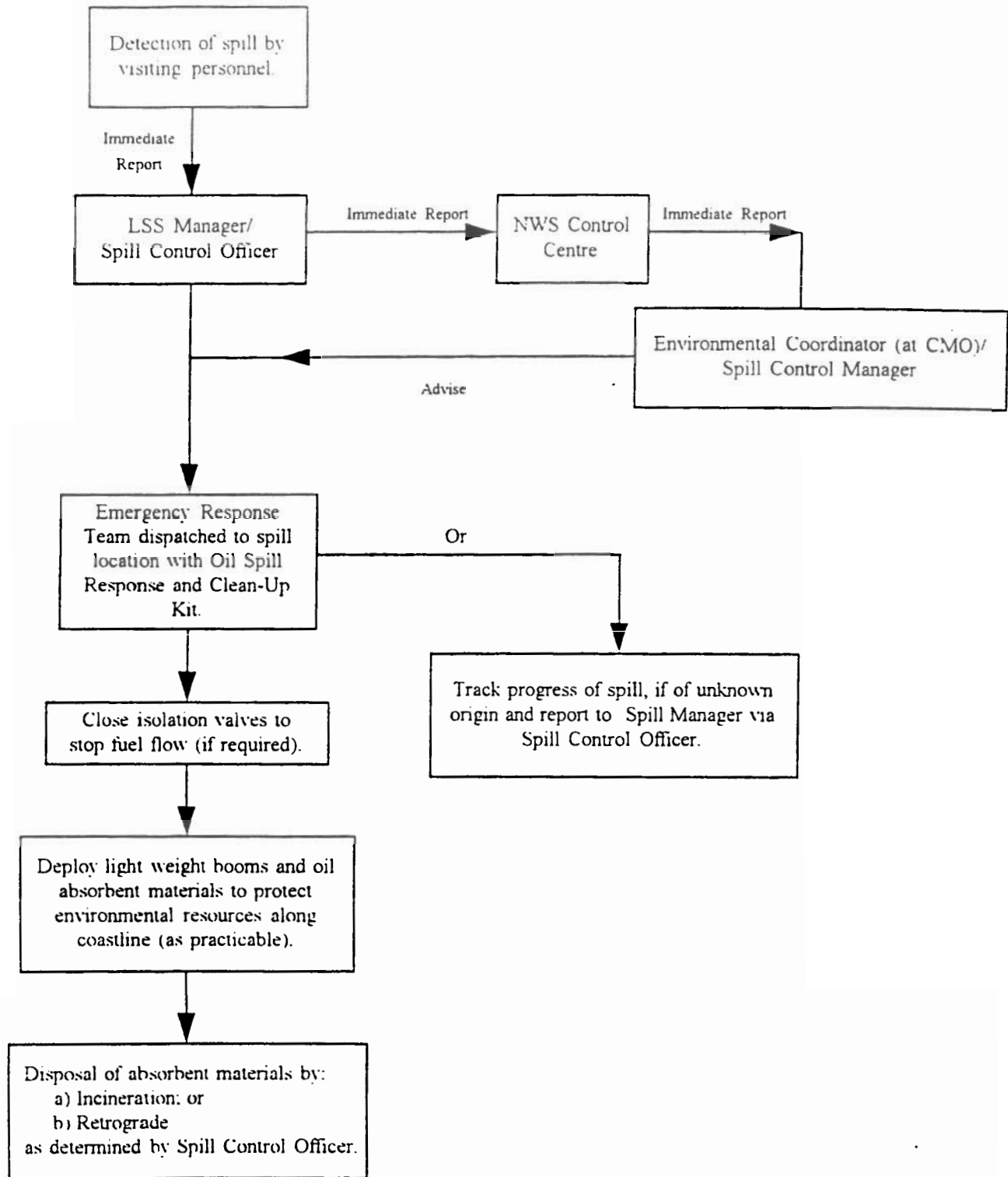
- NOTES: 1) Remediation of the spill affected area by:
 a) Evaporation; and
 b) Natural dispersion through wave action and wind.
- 2) Bulk fuel re-supply responses are as shown in Figures 5 & 6.
- 3) This spill response scenario assumes that the marine based POL spill originates from O&M activities of the NWS.

**FIGURE 9 - FLOW CHART FOR LAND POL SPILL RESPONSE AT NWS
UNATTENDED SITES**



NOTE: Spills detected at: a) BAR-DA1, Liverpool Bay;
b) BAR-E Horton River; or
c) PIN-1BD, Keats Point
must be reported to the Inuvialuit Land Administrator (See Annex B).

**FIGURE 10- FLOW CHART FOR FRESHWATER AND MARINE POL SPILL
RESPONSE AT NWS UNATTENDED SITES**



NOTES: 1) This spill response scenario assumes that the freshwater or marine based POL spill originates from O&M activities of the NWS.
 2) Spills detected at: a) BAR-DA1, Liverpool Bay;
 b) BAR-E, Horton River; or
 c) PIN-1BD, Keats Point
 must be reported to the Inuvialuit Land Administrator (See Annex B)

4.0 SPILL RESPONSE TRAINING PROGRAM

4.1 Purpose

The POL Spill Response Training Program will provide instruction in all aspects of spill response stated in the plan for:

- a. All NWS site personnel; and
- b. All CMO personnel involved in the O&M of NWS sites.

The training program will further provide information regarding the Spill Response Plan for:

- a. NWSO personnel;
- b. FRONTEC personnel; and
- c. Subcontractors engaged in NWS site O&M activities.

4.2 Contents

Spill Response Training will include the following subjects:

- a. Spill Awareness and Prevention;
- b. Methods of Detection;
- c. POL Storage and Distribution Systems;
- d. POL Products on NWS Sites;
- e. Types of Spill and Seasonal Considerations;
- f. Reporting Procedures and Initial Responses;
- g. Spill Response Kit Familiarization;
- h. Clean-Up and Site Remediation Methods;
- i. Occupational Health and Safety; and
- j. Post Spill Review Process and Documentation.

4.3 Implementation

Instruction methods employed in Spill Response Training will include:

- a. Lectures;
- b. Audio-visual presentations;
- c. Spill simulation and site remediation exercises; and

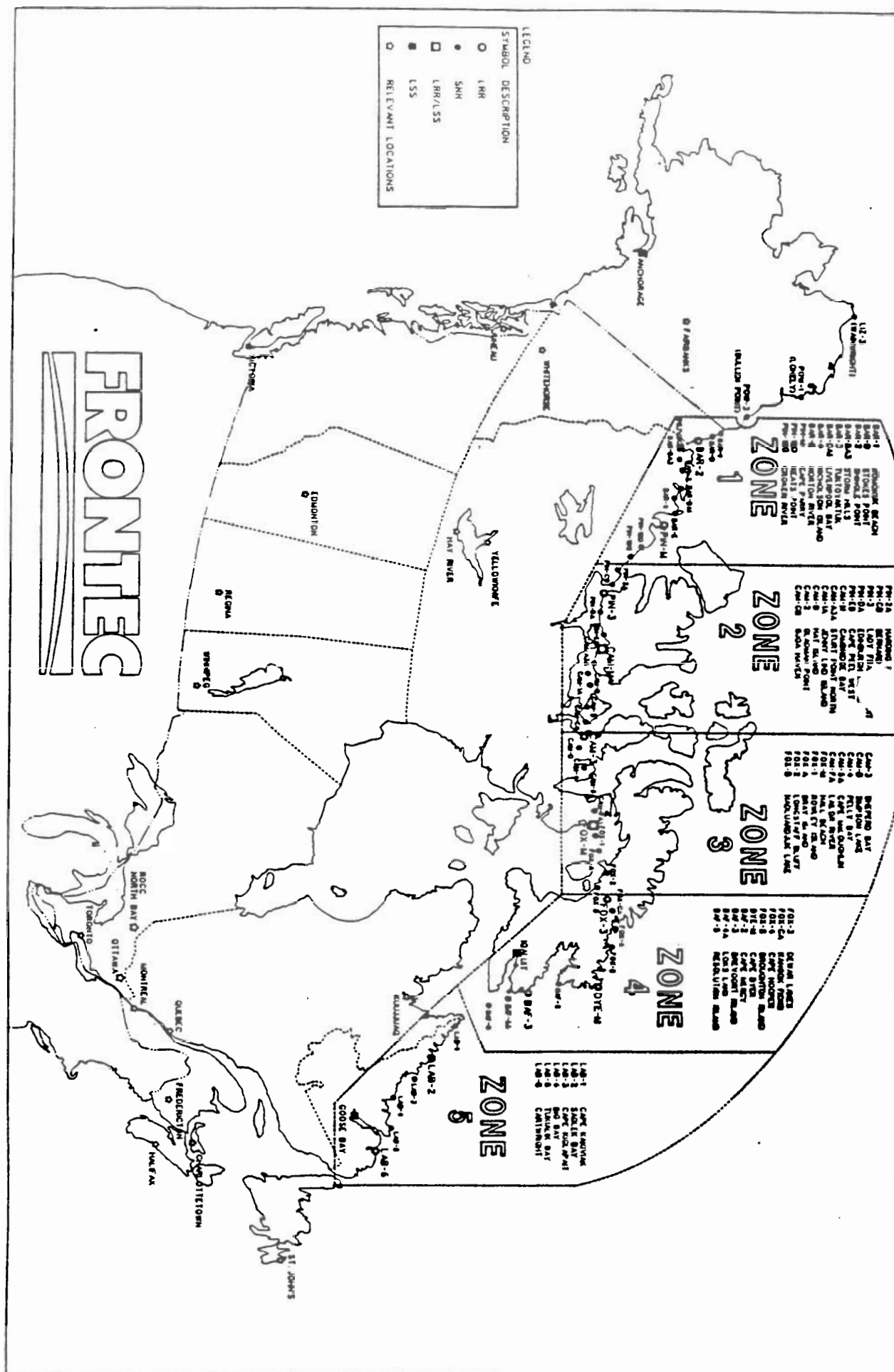
- d. Distribution of site specific information packages which will include:
 - i. Site maps;
 - ii. Identification of Spill Control Points;
 - iii. Location of spill response equipment and materials; and
 - iv. Site specific, special considerations.



ANNEX A

NWS SITES ZONE MAP





ANNEX B

**EMERGENCY SPILL REPORTING PROCEDURES
CONTACT LISTINGS and SPILL REPORT FORM**

FRONTEC Contact List

NWSCC/ECF for LRR Sites	(705) 494-6011 ext 8030
NWSCC/MCF for SRR Sites	(705) 494-6011 ext 8003
Sam Cheng, Environmental Coordinator	(613) 728-2241 (H) (613) 593-2321 (Beeper)
Barb Thomson, Environmental Coordinator (Alternate)	(613) 567-0155 (H)
Dave Christian, Manager, Facilities Engineering	(613) 748-6594 (H)
Sandy Taylor, Director, Site Operations	(613) 825-7367 (H)
Jody Langelier, Deputy Manager, NWS Operations	(613) 834-9018 (H)
Hank Nemeth, Manager, Logistics	(613) 567-0338 (H)
Pete Keens, Supervisor, POL	(819) 561-6578 (H)
Kate Low, Corporate Communications & Public Affairs	(613) 727-5325 (H)
Lillian Hvatum, Manager, Northern Affairs	(403) 979-2182 (H)

24 Hour Spill Line

Northwest Territories	(403) 920-8130
Yukon	(403) 667-7244
Newfoundland and Labrador (Coast Guard)	(709) 772-2083
Ontario MOEE (reporting to MOEE is recommended by Environment Canada Spill Line)	1-800-268-6060

NWSO Emergency Response Contact

<u>Contact</u>	<u>Designation</u>	<u>(W)</u>	<u>(H)</u>
Jim Boissonneault	R&CS 2-17	(613) 992-9743	1-613-543-3435
Capt. Z. Szabo	R&CS 2-14	992-0692	(613) 825-7646
Maj. Chan	R&CS 2-SP	996-4093	(613) 834-6741
Col. D.A. Noonan	DAEPM (R&CS)	996-5705	(613) 834-4210

Newfoundland and Labrador

Department of Environment and Lands

Goose Bay Office, Director of Government Service Centre
Dave Noseworthy (709) 896-5709

24 Hour Oil Spill Line (Coast Guard) (709) 772-2083

Fisheries and Oceans

Goose Bay - Marine Communications & Traffic Services Centre (709) 896-2252

R.C.M.P.

Nain, Labrador (709) 922-2862

Cartwright, Labrador (709) 938-7218

Department of Tourism, Culture, and Recreation

Biologist, Goose Bay - James Schaefer (709) 896-2732

Resource Archaeologist, Historic Resources - Martha Drake (709) 576-2460

Canadian Wildlife Service

Wildlife Biologist, St. John's - Pierre Ryan (709) 772-5585

Northwest Territories

24 Hour Spill Report Line (403) 920-8130

Inuvialuit Land Administration (403) 977-2202

Indian and Northern Affairs Canada

Inuvik Region District Manager - Rudy Cockney (403) 979-3361

Iqaluit Region District Manager - Dan Elliot (819) 979-4405

Environment Canada - Environmental Protection Branch -NWT Division

Yellowknife, Manager - Laura Johnston	(403) 920-6060 (403) 873-8185 (fax)
Chief Environmental Engineer - Ed Collins	(403) 920-6061

Government of NWT

Environmental Protection Officer - Ken Hall	(403) 873-6476
Department of Transportation, Environmental Affairs	(403) 873-7063

Baffin Region Renewable Resources - Stations

Iqaluit - John Stevenson	(819) 979-5011
Steve Pinksen	(819) 979-5013
Kevin Robertson	(819) 979-5017
Arctic Bay	(819) 439-9945
Broughton Island	(819) 927-8966
Pond Inlet	(819) 899-8819
Igloolik	(819) 934-8999

Keewatin and Inuvik Renewable Resources - Stations

Regional Office	(403) 982-7240
Paloyoaq (Spence Bay)	(403) 561-6231
Gjoa Haven	(403) 360-7605
Cambridge Bay - Luke Coady	(403) 983-7314
Coppermine - Josh Hunter	(403) 982-7250 (403) 982-3996 (H)
Inuvik	(403) 979-7201
GNWT Prince of Wales Northern Heritage Center Director of Culture and Heritage, Yellowknife Charles D. Arnold	(403) 973-7551

Yukon

Renewable Resources, Parks, Resources and Regional
Planning, Director - Jay McIntyre, Whitehorse

(403) 667-5261
(403) 668-7823 (fax)

Heritage Branch - Jeff Hunston, Whitehorse

(403) 667-5363

Head of Emergency Response, George Balmer

(403) 667-3406
(403) 667-7962 (fax)

Environment Canada - 24 Hour Emergency
(Conservation and Protection, Yukon)

(403) 667-7244

Parks Canada

Departmental Operations Manager - William A. Fox

(403) 979-3248
(403) 979-4491 (fax)

Ontario

Environment Canada (Toronto)

Spill Line

(416) 346-1971

Phillip Baker

(416) 973-1059

Steven Clements

(416) 973-1061

PCB Spills, Bob Kramel

(416) 973-5858

Ontario MOEE Spill Line

1-800-268-6060

ENVIRONMENTAL EMERGENCY REPORT FR-06

SPILL REPORT

A	<i>Report Date:</i>	<i>Date and Time of Spill (known or suspected):</i>	
B	<i>Location and Map Coordinates (if known) and Flow Direction if moving:</i>		
C	<i>Party Responsible/Responding:</i>	FRONTEC Logistics	
D	<i>Substance(s) Spilled and Estimated Quantities: (metric volumes and masses required)</i>		
E	<i>Cause of Spill:</i>		
F	<i>Spill Terminated or Continuing?:</i>		
G	<i>Extent of Contaminated Area and Depth of Contamination, if possible:</i>		
H	<i>Factors Affecting Spill or Recovery: (temperature, wind, snow, ice, terrain, buildings etc.)</i>		
I	<i>Containment: (none, natural, booms, dykes, etc.)</i>		
J	<i>Action(s) Taken or Proposed to Contain, Recover, Clean-Up or Dispose of Substance:</i>		
K	<i>Assistance Required? If so, what form of assistance?:</i>		
L	<i>Hazard(s) to Persons or Property or Environment: (e.g. fire, drinking water, threat to fish or wildlife)</i>		
M	<i>Comments and/or Recommendations:</i>		
N	<i>Reported By:</i>	<i>Position:</i>	<i>Employer:</i>
	<i>Location:</i>	<i>Telephone:</i>	
O	<i>Reported To:</i>	<i>Position:</i>	<i>Employer:</i>
	<i>Location:</i>	<i>Telephone:</i>	
P	<i>Agencies Contacted, and Date and Time of Contact:</i>		

ANNEX C

SPECIFICATIONS FOR MATERIALS AND EQUIPMENT POL EMERGENCY RESPONSE AND CLEAN-UP KITS

POL SPILL RESPONSE AND CLEAN-UP KITS

POL SPILL KIT FOR BAR-B, STOKES POINT

Item Description	U/I	QTY
Absorbent Sheets	Ea	50
Absorbent, oil	Bag	20
Absorbent W	Bag	20
Shovel	Ea	5
Pitchfork	Ea	3
Gloves, rubber lined	Pair	5
Plastic Bags (3 mil)	Bag	20
Salvage drum (85 US gal)	Ea	3

POL SPILL KIT FOR SRRs

Item Description	U/I	QTY
Absorbent, oil (7 kg)	Bag	12
Salvage drum (85 gal)	Ea	2
Shovel	Ea	2
Gloves, rubber lined	Pair	1
Wheelbarrow	Ea	1

POL SPILL KIT FOR LRRs

Item Description	U/I	QTY
M50 Oil spill containment boom 200 mm dia. (package of 40 ft)	Section	8
M90 Oil absorbent roll 36" X 300' X 3/8 inch thick	Roll	10
M75 Oil absorbent sheet 18" X 18" X 3/8 inch thick	Sheet	200
Absorbent, oil: 7 kg	Bag	150
Absorbent, water/oil: 7 kg	Bag	20
Shovel, spade type	Ea	2
Pitchfork	Ea	2
Gloves, rubber lined	Pair	20
Plastic Bags, 3 mil	Bag	100
Plastic, polyethylene, 6 mil: 1000 m ² rolls	Roll	4
Pump, electric transfer 12 volt	Ea	1
Pump, flammable liquids with hoses Gorman Rupp Pump	Ea	1
Pump, hand transfer electric	Ea	1
Sliptank, portable: 100 gal	Ea	1
Polypropylene rope	Ea	1
Dresser couplings, various sizes	Ea	5
Respirator, activated carbon	Ea	3
Safety goggles	Ea	2

LRR SITE

BAR-2
PIN-M
PIN-3
CAM-M
CAM-3
FOX-M
FOX-3
DYE-M
BAF-3
LAB-2
LAB-6

POL SPILL KIT LOCATION

Warehouse/Garage Mezzanine
Warehouse B13C
Hangar
ATB Hangar, Warehouse
Warehouse B13A
Garage, Cold Storage Warehouse
ATB/Warehouse B13A Cage
Radio Terminal Building
ATB
ATB
Water Storage Building

TOTAL ABSORB INC.

9311 River Drive • Richmond
British Columbia
V6X 1Z1

Phone: (604) 273-7860

Fax: (604) 273-0502

ALF03

Absorbent

AND Absorbent "W"



WHERE

ALL LAND SPILLS

Inside and outside

ALL OIL SPILLS

Oceans, creeks, and puddles

CATCH BASINS

MACHINE SHOP AREAS

IN THE BAG CONTROL

HOSPITALS, AIRPORTS

and HOME SPILLS

PACKING for TRANSPORT

WHAT

CHEMICALS

DETERGENTS

EFFLUENTS

EMULSIONS

PAINTS

FUELS

OILS

WHY

COST EFFECTIVE

NATURAL WOOD FIBRE

Biodegradable • Nontoxic

DUST FREE • No silica

INCINERABLE

Low ash • Clean Burning

LANDFILL DISPOSABLE

ABSORBS AND RETAINS

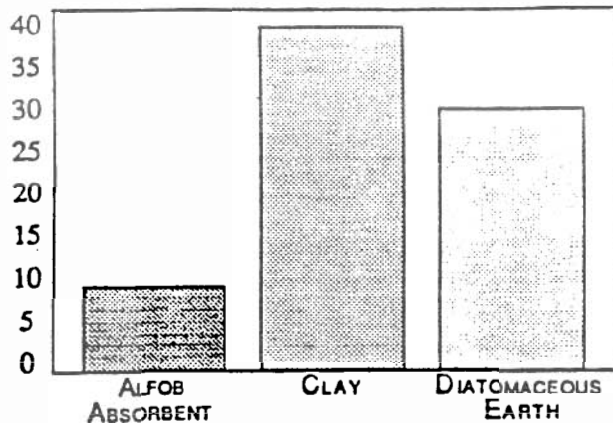
Three times its weight

LIGHT WEIGHT • User friendly

2

Pounds
per Cubic
Foot

WEIGHT

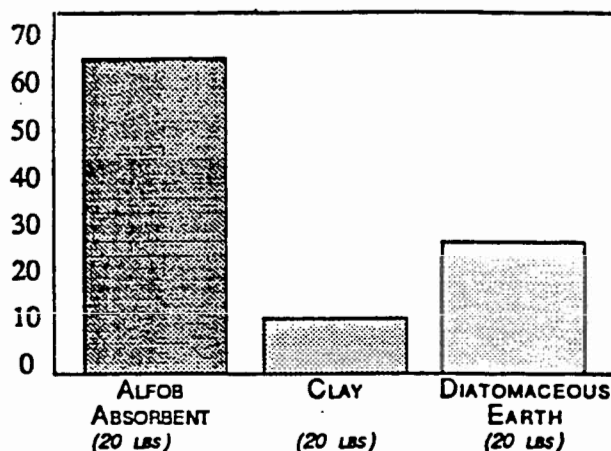


ALFOB

Absorbent

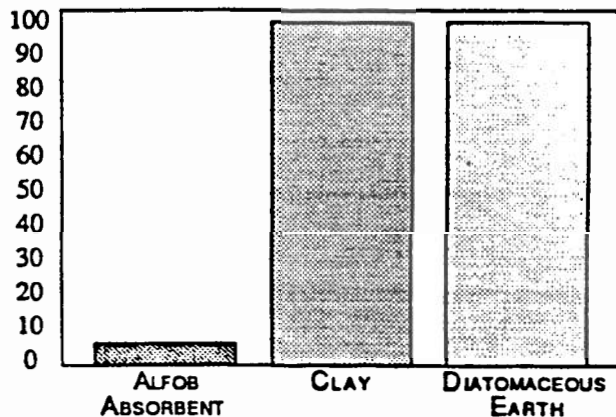
ABSORBENT CAPACITY

Liquid
Pounds
Absorbed



ASH WEIGHT

Percent
by Weight
After
Incineration



DATA SOURCE

E.P.A. Report #E.P.A./600/2-87/047
Guidance Manual for Selection and
Use of Sorbents for Liquid Hazardous
Substance Release

TOTAL ABSORB INC.

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Phone: (604) 273-7861

SUBSTANCES ABSORBED BY ALFOB ABSORBENT

CERCLA LIQUID FUNCTIONAL GROUPS

Acidic compounds [organic]	Esters and ethers
Alcohols and glycols	Esters [halogenous]
Aldehydes	Halides [inorganic]
Aliphatic hydrocarbons	Heavy metals
Aliphatics [halogenous]	Ketones
Amides, anilides, imides	Nitro/nitroso compounds
Amines [alkyl]	Organophosphates
Amines [aryl]	Oxides [alkylene]
Aromatic hydrocarbons	Peroxides
Aromatics [halogenous]	Phenols and cresols
Cyanates and isocyanates	Sulfates and sulfites
Cyanides and nitriles	Sulfides and mercaptans

Source: U.S. Environmental Protection Agency Report #600/2-87/047

Note: Inorganic acids, Caustics, Hydrazines and Hydrazides are not suitable for the use of woodfibre/cellulose absorbents.

EXAMPLES OF LIQUIDS AND CHEMICALS ABSORBED BY ALFOB ABSORBENT

Oils/Fuels	mineral oil, jet fuel, gasoline, diesel, hydraulic fluid, Skypdrol, motor
Coolants	antifreeze, transformer oils [including PCBs].
Paints	mineral oil and latex base paints, lacquers, shellacs, thinners.
Polymers	water treatment flocculants, viscosity enhancers.
Alcohols	methyl alcohol, ethyl alcohol, isopropyl alcohol.
Medical/Biological	blood, serum, pharmaceuticals, sewage.
Solvents	methyl ethyl ketone [MEK], methyl isobutyl ketone [MIBK], tetrahydrofuran [THF], etc.
Toxics	chromates, cyanides, sulfides, battery acid, etc.
Insecticides/Herbicides ..	diazon, DDT, roundup.

TO
ORDER

" Fax: (604) 273-0502

TOTAL ABSORB IN

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British Columbia • V6X 1Z1

HEALTH HAZARD INFORMATION

Inhalation: N/A
Contact with Skin or Eyes: N/A
Skin Absorption: N/A
Ingestion: Non Toxic
Injection: N/A

HEALTH EFFECTS or RISKS FROM EXPOSURE (explanation in lay terms)

Acute: None
Chronic: None Known
NO ASBESTOS CONTENT

FIRST AID - EMERGENCY PROCEDURES

If product has been ALTERED by sorption or hazardous chemicals or materials, immediately begin decontamination with running water and continue for at least 15 minutes. Remove exposed or contaminated clothing, taking care not to contaminate the eyes. Victim and rescuers must seek immediate medical attention.

If chemical is in eyes, open victim's eyes while under gentle running water. Use sufficient force to open eyelids. Have victim "roll" eyes. Minimum flushing is for 15 minutes.

If chemical is inhaled, remove victim to fresh air and use artificial respiration to support vital functions. Remove or cover gross contamination to avoid exposure to rescuers.

Victim of chemical exposure and all rescuers must be taken for medical attention. Take a copy of Label and MSDS of spilled chemicals to physician or health professional with victim.

SUSPECT CANCER AGENT?

This product's ingredients are NOT FOUND on the following lists:

• Federal OSHA Z List • NTP • IARC • CAL/OSHA

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

None

RECOMMENDATIONS TO PHYSICIANS

Treat symptoms of exposure.
No human toxicity known or reported.

TO
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R

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REACTIVITY DATA

Stability: Stable *Conditions to Avoid:* None

Materials with which Substance is Incompatible:

Fuming inorganic acids may degrade material
Strong caustics
Hydrazines and Hydrozides

Hazardous Polymerization: Will not occur

SPILL, LEAK, AND DISPOSAL INFORMATION

Spill and Leak Response:

Spills of this product are considered NON-HAZARDOUS.

Preparing Wastes for Disposal:

Waste disposal must be in accordance with appropriate federal, provincial, and local regulations. This product, if unaltered by the handling, may be disposed of as a non-hazardous waste. If this product has been used to clean up hazardous chemicals or materials, then the residue **MUST** be treated as a hazardous waste, including proper disposal.

SPECIAL HANDLING INFORMATION

Ventilation and Engineering Controls:

As required for the chemicals or materials being cleaned up with this product.

Respiratory Protection:

As required for the chemicals or materials being cleaned up with this product.

Eye Protection:

As required for the chemicals or materials being cleaned up with this product.

Hand Protection:

As required for the chemicals or materials being cleaned up with this product.

Body Protection:

As required for the chemicals or materials being cleaned up with this product.

Work and Hygiene Practices:

Use normal workplace and hygiene practices when using this product in its UNALTERED state.

Storage and Handling Practices:

Store in dry area away from moisture. Handle bags with normal caution to prevent damage.

LABELLING

No precautionary statements or DOT labels required.

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Phone: (604) 273-7860