U.S. Shipboard Oil Pollution Emergency Plan

Island Tug and Barge Ltd.

Island Tug
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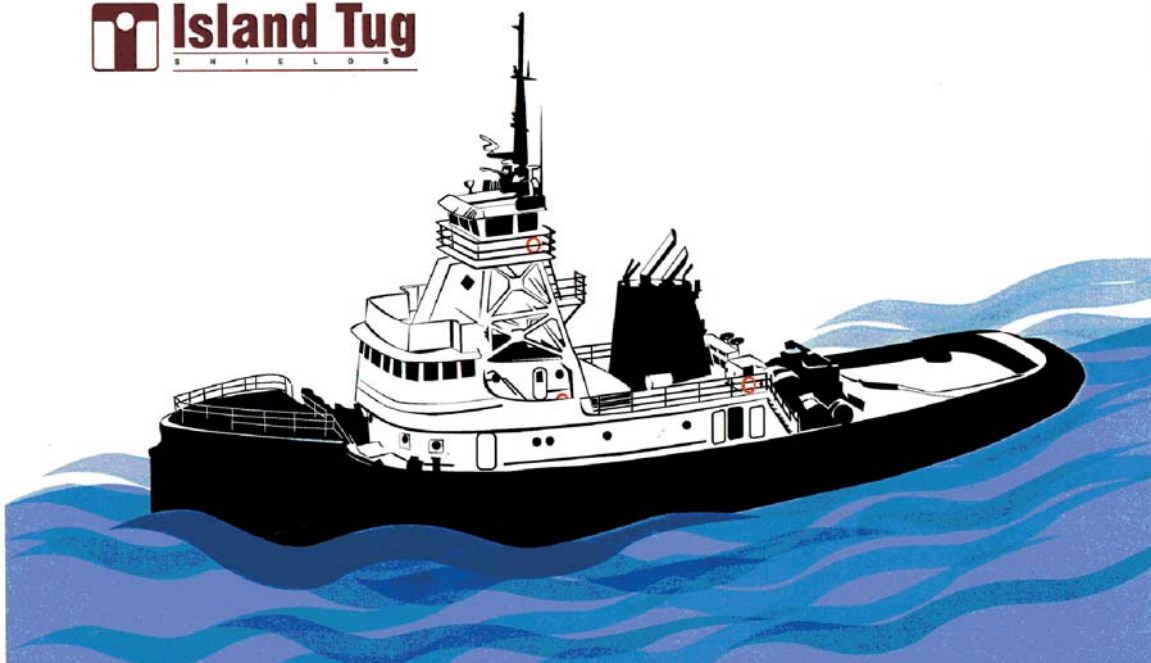

U.S. Shipboard Oil Pollution Emergency Plan

Prepared in accordance with:

- *33 CFR Part 155* of the Federal Register (Vessel Response Plans; Final Rule)
- *18 AAC 75.425* for Oil Discharge Prevention and Contingency Plans in the State of Alaska
- *Regulation 26, Annex 1* of the International Convention for the Prevention of Pollution from Ships, 1973 as modified by the Protocol of 1978

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US Shipboard Oil Pollution Emergency Plan

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	Alaska Chadux	
	Qualified Individual (O'brien's)	985 781 0804
	Five Alternate Qualified Individuals (O'brien's)	985 781 0804

February 2008

RECORD OF CHANGES

Amend-ment Number	Section and Page	Date Entered	Remarks	Name and Position of Person(s) Making Entry
4	Intro, Index, 1.2, 1.5, 1.8, 3.1, 3.8, A, B, C, New Sections D, E.	Rev. Date: Sep. 2004	Added two California COTP Zones to Plan.	Todd Barber Barber Consulting Co.
5	Intro, Index, 1.2, 1.3, 1.4, 1.5, 1.6, 1.8, 3.1, 3.4, 3.5, 3.6, 3.8, 3.10, 4.0, New Section F.	Dec 2005	Revision 5 for Adding Western Alaska COTP.	Todd Barber Barber Consulting Co.
6	Intro, Index, 1.8-3, 1.8-5, Monarch dwgs, new 1.8.7, 3.1 & new charts for W. AK, A-1, App.B, C-1, D-1, E-1, F-1.	July 2006	USCG changes for adding NTVs. Add new W. AK routes. Preliminary addition of ITB Supplier.	Todd Barber Barber Consulting Co.
7	Intro 1-1, Index, 1.8.4, 1.8-7, new 1.8.8, 2.0 all, 3.1, 3.3 all, A-1, B-1, C-1, F-1.	June 2007	Add Reliant and Resolution, Address AK legislation changes. Changes arising from April 06 exercise.	Todd Barber Barber Consulting Co.
8	Distribution List, Intro,, Index, 1.2, 1.3, 1.5, 2.0, 3.1, 3.3, 3.8, 3.9, A, B, C, D, E, F.	Feb 2008	5 Year mandatory update for USCG and Alaska DEC.	Todd Barber Barber Consulting Co.

ISLAND TUG AND BARGE LTD

SAFETY QUALITY AND POLLUTION PREVENTION

POLICY STATEMENT

Island Tug and Barge Ltd. is committed to the occupational health and safety of all company employees. It is the policy of Island Tug and Barge Ltd. to maintain a safe and pollution-free operating practice which complies with all relevant national and international regulations, standards, and guidelines.

It is also the policy of Island Tug and Barge Ltd. to meet or exceed our customer's expectations with every service.

The ITB Safety and Quality Manual describes the company's system for the safe operation of tugs and barges, prevention of pollution, and quality control. The system described by the manual has been reviewed and found in compliance with the requirements of I.M.O Resolution A741/18 – The International Safety Management Code—and with the requirements of the ISO 9002 quality standards.

All employees are expected to comply with Safety, Quality, and Pollution Prevention Regulations and Procedures at all times, and to take the necessary precautions to protect themselves, their colleagues, the ship, the barge, its cargo, and the environment. All employees are also expected to seek the most efficient way to meet or surpass the expectations of our customers.

Island Tug

ISLAND TUG AND BARGE LTD

SAFETY QUALITY AND POLLUTION PREVENTION

ESTABLISHED PROCEDURES

The Safety, Quality and Pollution Prevention Policy will be implemented and maintained at all levels of the company through the procedures and instructions of the Safety and Quality Management System (S.Q.M.S.). The system will meet all functional requirements of the ISM and ISO 9002 codes by enacting:

- Reporting procedures for accidents, hazardous occurrences, and non-conformities of safety and quality.
- Procedures covering preparations for and response to emergency situations.
- Procedures for internal audits, management reviews, dealing with non-conformities, and instituting preventive action.
- Procedures covering vessel maintenance and associated records for engines and equipment to ensure safe ship operation, the ability of all vessels to meet customer requirements, and the prevention of pollution.
- Procedures covering operations of the ships and shore based management with respect to ISM and ISO 9002.
- Procedures covering document control and the maintenance of records.
- Procedures for maintaining and verifying the integrity of a customer's product;
- Procedures for establishing clear contracts with customers;
- Procedures for the purchase of quality-critical goods and services;
- Procedures for establishing qualification, and training of personnel.

ISLAND TUG AND BARGE LTD

SAFETY QUALITY AND POLLUTION PREVENTION

OBJECTIVES

COMPANY OBJECTIVES ARE TO:

- Provide for safe practices in tug and barge operations and for a safe working environment;
- Establish safeguards against all identified risks;
- Continuously improve the safety management skills of personnel ashore and aboard ship;
- Prepare for emergencies related to both safety, environmental and property protection;
- Deliver products to customers on time;
- Deliver products to customers with product integrity maintained;
- Deliver products to customers safely and without pollution.

THESE OBJECTIVES WILL BE ACHIEVED BY:

- Maintaining high standards of seamanship, safety and quality consciousness, and individual accountability through a high level of employee qualification attained through careful hiring, promotion, and training.
- Continuously reviewing all mandatory rules, regulations, codes and guidelines that are relevant to company operations.
- Ensuring compliance at all times with documented operating procedures through a system of internal verification of procedures and activities.
- Keeping all personnel informed of any known or potential hazards that may affect themselves, their colleagues, the ship or the environment through effective distribution of pertinent documentation.
- Promoting employee participation in actions aimed at improving health, safety and quality.
- Maintaining effective communication between operations and management personnel.
- Maintaining a high standard of equipment maintenance and modernization.

INTRODUCTION

PURPOSE AND SCOPE

This Vessel Response Plan outlines Island Tug and Barge Ltd.'s response planning in the event of a marine oil spill involving one of their barges. The Plan has been prepared in accordance with the regulatory guidelines set forth in:

- *33 CFR Part 155* of the *United States Federal Register* (Vessel Response Plans; Final Rule)
- Alaska Department of Environmental Conservation (ADEC), Application and Review Guidelines for non-crude oil barges (18 AAC75).
- *Regulation 26, Annex 1* of the International Convention for the Prevention of Pollution from Ships, 1973 as modified by the Protocol of 1978.

VESSEL AND GEOGRAPHIC AREA OF OPERATION

ITB barges trade at various ports along the west coast of Canada and the United States.

	Island Trader	ITB 38	ITB 45	ITB Vancouver	ITB Provider	ITB Resolution	ITB Reliant	ITB Supplier
Official No.	822069	802744	392787	820184	822652	831000	830999	828529
VIN (USA)	822069	CG005614	392787	CG056658	CG061360	CG922800	CG922847	CG914556
Gross Tonnage	5,320	2,580	1,740	2,051	1,251	2,398	2,398	2,129
Capacity (bbls)	65,320	38,000	22,600	25,000	14,736	26,500	26,500	25,000
Length overall ft	368' 9”	270'	220'	250'	183'5”	255’9”	255’9”	245’
m	112.4m	82.30m	67.06m	72.81m	55.91m	77.96m	77.96m	74.68m
Breadth (mld) ft	68'11”	60'0”	58'0”	60'2”	53’10”	66’1”	66’1”	60’0”
m	21.00m	18.29m	17.68m	18.32m	16.40m	20.15m	20.15m	18.29m
Depth (mld) ft	31'6”	20'0”	19'1”	19'2”	18’0”	19’8”	19’8”	12’0”
m	9.60m	5.91m	5.00m	5.86m	5.50m	6.00m	6.00m	6.25m
Draft, design ft	21’0”	16’0”	14’0”	19'2”	18’0”	13’2”	13’2”	17’5”
m	6.4m	4.9m	4.3m	5.8m	5.5m	4.0m	4.0m	5.3m
Oil Type	Group I	Group I	Group I	Group I	Group III	Group I	Group I	Group I
COTPs:								
Puget Sound	X	X	X	X	X	X	X	X
SE Alaska	X	X	X	X		X	X	X
W. Alaska	X	X	X	X		X	X	X
Portland, OR	X	X	X	X		X	X	X
LA – L. Beach	X							
San Francisco	X							

ITB nontank vessel (> 400 GRT) towboats operate at various ports along the west coast of Canada and the United States:

	Island Monarch	Island Tugger
Official No.	326548	395515
IMO No. / USA VIN	6608414	8104101
Gross Tonnage	453	479
Volume Capacity	2,264 bbls	1,321 bbls
Length overall	136.0'	117.8'
Breadth moulded	32.0'	34.0'
Depth moulded	18.5'	15.78'
Draft, design	17.0'	14.0'
Approved COTP Zones	Puget Sound SE Alaska Western Alaska Portland, OR LA – Long Beach San Francisco	Puget Sound SE Alaska Western Alaska Portland, OR LA – Long Beach San Francisco
Oil Type	Group I	Group I

OIL SPILL RESPONSE CONTRACTORS

ITB relies on the services of the following oil spill response organizations:

SE Alaska COTP	• Southeast Alaska Petroleum Resource Organization (SEAPRO)
Western Alaska COTP	• Alaska Chadux Corporation • Alternate Compliance Agreement and Memorandum of Understanding regarding barges of opportunity for operations in the Nearshore Operating environment.
Puget Sound COTP	• Washington State Maritime Cooperative (WSMC) Emergency Communications Network and Oil Spill Response Organization (NRC Environmental Services) • National Response Corporation
Oregon COTP	• Maritime Fire and Safety Association (MFSA) Emergency Communications Network and Oil Spill Response Organization (Clean Rivers Cooperative) • National Response Corporation
Los Angeles – Long Beach COTP	• National Response Corporation
San Francisco COTP	• National Response Corporation
British Columbia	• Burrard Clean Operations

SALVAGE AND MARINE FIREFIGHTING CONTRACTOR

ITB relies on the services of the Marine Response Alliance (MRA) for salvage, lightering, and marine firefighting.

PROCEDURES FOR CONTACTING THE OWNER/OPERATOR

The head office of Island Tug and Barge Ltd. is located at:

55 Rogers Street
Vancouver, B.C. V6A 3X8 CANADA

Phone: 604 873 4312 (24 hours)
Fax: 604 873 4318

Qualified Individual and Alternate Qualified Individual services in the United States are provided by the O'Brien's Group:

Qualified Individuals(s)		24-Hour Contact
Qualified Individual	Name: James L. O'Brien Company: The O'Brien's Group	Phone: 985 781-0804 Fax: 985 781-0580
Alternate QIs	Names: Ben Benson, Sanjiv Beri, Tim Perkins, Gary Stankovich Company: The O'Brien's Group	Phone: 985 781-0804 Fax: 985 781-0580

INTEGRATION WITH OTHER PLANS

This Plan is intended to guide the employees and management of Island Tug and Barge Ltd. (ITB) in responding QUICKLY, SAFELY, and EFFECTIVELY to a marine oil spill involving one of their tank barges in U.S. waters. It will be integrated or used in conjunction with the corresponding response plans of ITB's oil spill response contractors and salvage and marine firefighting contractors.

Examples of such plans include:

- Southeast Alaska Petroleum Response Organization's (SEAPRO) *Technical Manual, 2001*. The SEAPRO plan is referenced throughout this contingency plan.
- Washington State Maritime Cooperative's *Oil Spill Response Plan*.

Copies of these plans have been provided to ITB by these organizations.

In SE Alaska, reference will be made to the Sub-Area sections of the *Federal / State Unified Response Plan* to ensure consistency with the response priorities and procedures of the federal and state authorities.

PLAN MAINTENANCE

The ITB President is responsible for ensuring that response capabilities, training and this U.S. Shipboard Oil Pollution Emergency Plan, are current and up-dated as required.

Proposals or recommendations for revisions to the Plan can be made, in writing, to:

Bob Shields
President
ISLAND TUG AND BARGE LTD.
55 Rogers Street
Vancouver, B.C. V6A 3X8
CANADA

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Figure 3.11.1 Public Relation Tips 3.11-3

Figure A-1 Washington Spill Notification / Alerting Process A-2

Figure B-1 Alaska Spill Notification / Alerting Process B-2

Figure C-1 Oregon Spill Notification / Alerting Process C-2

Figure D-1 California State Spill Notification / Alerting Process D-2

Figure E-1 California State Spill Notification / Alerting Process E-2

Figure F-1 Alaska State Spill Notification / Alerting Process F-2

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1 RESPONSE ACTION PLAN

1.1 EMERGENCY ACTION PLAN

1.1.1 OPERATIONAL SPILLS

WHENEVER AN OIL SPILL OCCURS IT IS THE DUTY OF THE PERSON FINDING THE SPILL TO IMMEDIATELY INFORM THE MASTER OR PERSON-IN-CHARGE, WHO SHOULD CALL OUT THE VESSEL RESPONSE TEAM. REMEMBER THAT AN OIL SPILL MAY CREATE A FIRE OR EXPLOSION HAZARD, REQUIRING SAFETY PRECAUTIONS TO BE OBSERVED.

Immediately following an operational spill, the Master and crew members (i.e., Vessel Response Team (VRT)) will initiate action to:

- protect themselves;
- stop the flow;
- secure the barge;
- deploy onboard response equipment to clean up the spill on the barge, and to contain and/or recover any oil spilled into the water around the vessel.

They will also immediately notify:

- terminal or shore personnel;
- the proper coastal federal and state/provincial authorities for the jurisdiction in which the spill has occurred;
- the appropriate primary response contractor (i.e., OSRO);
- the company's Emergency Response Team (ERT) in Vancouver.

The following operational spill occurrences are covered separately in this section:

Pipeline / Cargo Hose Leakage during Cargo Transfer 1.1-3
Tank Overflow during Cargo Transfer 1.1-5
Hull Leakage during Cargo Transfer 1.1-7

THESE PROCEDURES ARE A GUIDE WHICH DOES NOT LIMIT THE AUTHORITY OF THE MASTER OR PERSON-IN-CHARGE AS THE SENIOR COMPANY OFFICER AT THE SCENE OF AN INCIDENT. IN ALL CASES, THE MASTER OR PERSON-IN-CHARGE WILL TAKE WHATEVER ACTION HE DEEMS NECESSARY BASED ON HIS ASSESSMENT AND JUDGEMENT OF THE INCIDENT REQUIREMENTS AND PRIORITIES.

PIPELINE/CARGO HOSE FAILURE DURING CARGO TRANSFER

The following procedures are only to serve as a guide to the actions to be taken in the event of an incident. The order in which they are laid out is not necessarily chronological and the circumstances at hand may dictate an alternate order of response actions.

If a spill occurs during cargo transfer as a result of a cargo hose or pipeline failure, the following steps / measures should be considered and/or taken as soon as SAFELY possible:

1. IMMEDIATE ACTIONS

- Stop all cargo transfer operations to or from the barge, shut-off pumps, and close manifold valves.
- Determine the source of the spill and secure if possible.
- **Eliminate** all avoidable sources of ignition, where flammable vapours could be present, if applicable.
- Warn others in the immediate area, especially downwind of the spill .
- Consider closing air intake to barge houseworks and tug accommodation.

2. CONTAIN THE SPILL / SECURE THE AREA

- Close and seal all tank hatches, ullage ports.
- Ensure deck scuppers and valves that could allow product to be discharged into the water are closed and tight.
- Block potential escape points using equipment from the barge response kit and any other available spill control materials.
- Deploy sorbent boom, sweeps, and sheets to immobilize and contain the product so it can be picked up. When sorbents or other style dykes are used, keep them spill tight.
- Wear appropriate personal protective equipment and observe necessary safety precautions.
- Follow standard confined space entry procedures before entering enclosed spaces.
- Clear the area around the barge / dock of all unauthorized personnel

3. ASSESS THE SITUATION AND REPORT THE SPILL

- ☐ Assess the situation (refer to *Initial Incident Report Form* if available):
  - Type and quantity of product spilled
  - Is discharge secured or continuing?
  - Has spill entered the water?
  - Has it escaped the primary containment area?

- ☐ **Complete notification responsibilities** as outlined in *Section 1.2 - Reporting and Notification*. See *Contact Listing* for emergency numbers.

4. CLEAN UP THE SPILL

- ☐ Stay upwind of vapours - do not walk through spilled oil.
- ☐ Drain affected pipelines or cargo hoses to an empty or slack tank.
- ☐ Open spill tank(s) and allow pooled oil on deck to drain.
- ☐ Use clean, non-sparking tools to recover used sorbent materials.
- ☐ Store waste materials in leak-proof, sealable containers (e.g., steel or plastic drums, heavy duty 6 mil plastic bags).
- ☐ Store waste containers safely aboard the barge or in a contained area on shore to prevent further leakage or spillage.
- ☐ Consult with BC Environment - Waste Management Branch or state authorities before removing waste material for disposal. [1]
- ☐ **For marine containment & recovery procedures, see *Section 1.6 - Response Strategies.***

5. RESUME CARGO TRANSFER OPERATIONS

- ☐ Cargo transfer operations following a spill will not be undertaken until approved by the Incident Commander and Lead Agency.

[1] All waste materials generated by an oil spill are classified as *Special Waste* under the *BC Waste Management Act*. They must be stored, transported and disposed of in a manner that is in compliance with this Act, by specially licensed shippers. Failure to comply with this regulation could result in fines or penalties being imposed upon the company.

TANK OVERFLOW DURING CARGO TRANSFER

The following procedures are only to serve as a guide to the actions to be taken in the event of an incident. The order in which they are laid out is not necessarily chronological and the circumstances at hand may dictate an alternate order of response actions.

If a spill occurs during cargo transfer operations due to a cargo tank overflow, the following steps / measures should be considered and/or taken as soon as SAFELY possible:

1. IMMEDIATE ACTIONS

- Stop all cargo transfer operations to or from the barge, shut-off pumps, close manifold valves.
- Determine the source of the spill and secure if possible.
- **Eliminate** all avoidable sources of ignition, where flammable vapours could be present, if applicable.
- Warn others in the immediate area, especially downwind of the spill.
- Consider closing air intake to barge houseworks, tug accommodation.

2. CONTAIN THE SPILL / SECURE THE AREA

- Close and seal all tank hatches.
- Ensure deck scuppers and valves that could allow product to be discharged into the water are closed and tight.
- Block potential escape points using equipment from the barge response kit and any other immediately available spill control materials.
- Deploy sorbent boom, sweeps and sheets to immobilize and contain the product so it can be picked up. When sorbents or other style dykes are used, keep them spill tight.
- Wear appropriate personal protective equipment and observe necessary safety precautions.
- Follow standard confined space entry procedures before entering enclosed spaces.
- Clear the area around the barge / dock of all unauthorized personnel.

3. ASSESS THE SITUATION AND REPORT THE SPILL

- ☐ Assess the situation (refer to *Initial Incident Report Form* if available):
  - Type and quantity of product spilled
  - Is discharge secured or continuing?
  - Has spill entered the water?
  - Has it escaped the primary containment area?

- ☐ **Complete notification responsibilities** as outlined in *Section 1.2 - Reporting and Notification*. See *Contact Listing* for emergency numbers.

4. CLEAN UP THE SPILL

- ☐ Stay upwind of vapours - do not walk through spilled oil
- ☐ Reduce the tank level by transferring fuel to any empty or slack tank on the barge or to the shore.
- ☐ Drain the fuel hose to any empty or slack tank, if possible to do so safely, and without risk of further spillage.
- ☐ Consider the effects of product transfer on vessel trim and stability.
- ☐ Open spill tank and allow pooled oil to drain from deck, if applicable.
- ☐ Use sorbent pads or material to soak up spilled oil on barge deck.
- ☐ Use clean, non-sparking tools to recover used sorbent materials.
- ☐ Store waste materials in leak-proof, sealable containers (e.g., steel or plastic drums, heavy duty 6 mil plastic bags).
- ☐ Store waste containers safely aboard the barge or in a contained area on shore to prevent further leakage or spillage.
- ☐ Consult with BC Environment - Waste Management Branch or state authorities before removing waste material for disposal.
- ☐ **For marine containment & recovery procedures, see *Section 1.6 - Response Strategies.***

5. RESUME CARGO TRANSFER OPERATIONS

- ☐ Cargo transfer operations following a spill will not be undertaken until approved by Incident Commander and the Lead Agency.

HULL LEAKAGE DURING CARGO TRANSFER

The following procedures are only to serve as a guide to the actions to be taken in the event of an incident. The order in which they are laid out is not necessarily chronological and the circumstances at hand may dictate an alternate order of response actions.

If a spill occurs during cargo transfer operations due to a failure in the barge hull, the following steps / measures should be considered and/or taken as soon as SAFELY possible:

1. IMMEDIATE ACTIONS

- Stop all cargo transfer operations to or from the barge, shut-off pumps, close manifold valves.
- Determine the source of the spill and secure if possible.
- **Eliminate** all avoidable sources of ignition, where flammable vapours could be present, if applicable.
- Warn others in the immediate area, especially downwind of the spill.
- Consider closing air intake to barge houseworks, tug accommodation.

2. SECURE THE AREA

- Clear the area around the barge / dock of all unauthorized personnel.
- Wear appropriate personal protective equipment and observe necessary safety precautions.
- Follow standard confined space entry procedures before entering enclosed spaces.

3. LOCATE HULL FAILURE / SECURE THE SOURCE OF DISCHARGE

- Identify which tank(s) is leaking by visual inspection if possible.
- If visual inspection is not possible, carefully sound all tanks in vicinity of the spill - **do not open ullage plugs indiscriminately as loss of buoyancy or additional spillage could occur**.
- Consider the effects of product transfer on vessel trim and stability.
- Consider transferring product from the leaking tank to an empty or slack tank, to a shore tank or to another barge.

4. ASSESS THE SITUATION AND REPORT THE SPILL

- ☐ Assess the situation (refer to *Initial Incident Report Form* if available):
  - Type and quantity of product spilled
  - Is discharge secured or continuing?
  - Has spill entered the water?
  - Has it escaped the primary containment area?
- ☐ **Complete notification responsibilities** as outlined in *Section 1.2 - Reporting and Notification*. See *Contact Listing* for emergency numbers.

5. CLEAN UP THE SPILL

- ☐ Spread sorbent pads over oil on the water around the barge.
- ☐ Use clean, non-sparking tools to recover used sorbent materials.
- ☐ Store waste materials in leak-proof, sealable containers (e.g., steel or plastic drums, heavy duty 6 mil plastic bags).
- ☐ Store waste containers safely aboard the barge or in a contained area on shore to prevent further leakage or spillage.
- ☐ Consult with BC Environment - Waste Management Branch or state authorities before removing waste material for disposal. [1]
- ☐ **For marine containment & recovery procedures, see *Section 1.6 - Response Strategies.***

5. RESUME CARGO TRANSFER OPERATIONS

- ☐ Cargo transfer operations following a spill will not be undertaken until approved by the Incident Commander and the Lead Agency.

[1] All waste materials generated by an oil spill are classified as *Special Waste* under the *BC Waste Management Act*. They must be stored, transported and disposed of in a manner that is in compliance with this Act, by specially licensed shippers. Failure to comply with this regulation could result in fines or penalties being imposed upon the company.

1.1.2 SPILLS RESULTING FROM CASUALTIES

WHENEVER AN OIL SPILL OCCURS IT IS THE DUTY OF THE PERSON FINDING THE SPILL TO IMMEDIATELY INFORM THE MASTER OR PERSON-IN-CHARGE, WHO SHOULD CALL OUT THE SPILL RESPONSE TEAM. REMEMBER THAT AN OIL SPILL MAY CREATE A FIRE OR EXPLOSION HAZARD, REQUIRING SAFETY PRECAUTIONS TO BE OBSERVED.

Immediately following a casualty occurrence, the Master or Person-In-Charge and the Vessel Response Team will initiate action to protect themselves, secure the barge, and notify the proper authorities and the Emergency Response Team (ERT). If necessary, the ERT will proceed immediately to the Incident Command Centre at the company's head office to support the crew's efforts, and take over critical aspects of the casualty response.

The following casualty situations are covered separately in this section:

Grounding 1.1-10
Fire / Explosion 1.1-13
Collision 1.1-16
Hull Failure 1.1-19
Excessive List 1.1-21

THESE PROCEDURES ARE A GUIDE WHICH DOES NOT LIMIT THE AUTHORITY OF THE MASTER OR THE PERSON-IN-CHARGE AS THE SENIOR COMPANY OFFICER AT THE SCENE OF AN INCIDENT. IN ALL CASES, THE MASTER OR PERSON-IN-CHARGE WILL TAKE WHATEVER ACTION HE DEEMS NECESSARY BASED ON HIS ASSESSMENT AND JUDGEMENT OF THE INCIDENT REQUIREMENTS AND PRIORITIES. THE MASTER IS FULLY QUALIFIED AND HAS THE FINAL AUTHORITY ON ALL DECISIONS RELATING TO VESSEL STABILITY, DAMAGE ASSESSMENT AND APPROPRIATE RESPONSE ACTIONS. HE WILL CONSULT WITH OTHER CREW MEMBERS (E.G., 1ST MATE,CHIEF ENGINEER, BARGEMAN), ITB SHORE MANAGEMENT AND OTHER OUTSIDE EXPERTS, TIME AND CIRCUMSTANCES PERMITTING.

GROUNDING

The following procedures are only to serve as a guide to the actions to be taken in the event of an incident. The order in which they are laid out is not necessarily chronological and the circumstances at hand may dictate an alternate order of response actions.

Accidental grounding may occur due to loss of tug power, steering, or navigational error due to loss of visibility. Barge grounding can be a glancing blow, hard grounding, tug grounding, and on occasion grounding of both the tug / barge combination.

In the event that the barge runs aground, the following steps / measures should be considered and/or taken as soon as SAFELY possible:

1. IMMEDIATE ACTIONS

- ☐ Stop or slow tug engines.
- ☐ Sound General Alarm - muster crew to Emergency Stations.
- ☐ Ensure Crew Safety:
  - Ensure appropriate personal protective equipment is worn.
  - Determine whether there are injuries (number, type, severity or missing personnel).
- ☐ Assess the Situation:
  - Glancing blow, hard aground?
  - Wind, sea, tide, weather conditions?
  - Exposed or sheltered waters?
- ☐ Stop air intake to the accommodation spaces and non-essential air intake to the tug engine room.
- ☐ Consider towline condition; shorten, release, leave same?
- ☐ **Complete notification responsibilities** as outlined in *Section 1.2 - Reporting and Notification*. See *Contact Listing* for emergency numbers.

2. ASSESS DAMAGES SUSTAINED (VISUAL)

- ☐ Approach barge slowly and from upwind direction; keep tug in safe water, may need to use small boat.
- ☐ Maintain safe distance considering wind, tide, and weather conditions.
- ☐ Conduct visual assessment of damage sustained to the barge in the grounding:
  - Is the vessel firmly grounded or unstable?
  - What is the extent of grounding - partial or full length?
  - Is the hull damaged or holed at any point?
  - Is oil leaking into the water (i.e., cargo tanks pierced)?
- ☐ Take soundings to determine nature of bottom ground around the barge.
- ☐ Determine the likely effects of tidal, weather conditions and weather forecast on the barge's position and stability.

3. BOARD BARGE AND ASSESS DAMAGES SUSTAINED (If possible to do so safely)

- ☐ Follow standard confined space entry procedures before entering enclosed spaces.
- ☐ Check pump room / engine room for damage and flooding.
- ☐ Sound all cargo tanks and compartments to ascertain damage - **do NOT open ullage plugs indiscriminately as loss of buoyancy or additional spillage could occur.**

4. SECURE / STABILIZE THE BARGE

- ☐ Consult with the **Emergency Response Team (ERT)** and naval architect for additional expertise, time permitting.
- ☐ Assess current and potential drafts, trim, list and stability for the vessel, and estimated buoyancy required to refloat.
- ☐ Determine whether attempting to refloat the barge on its own vs. waiting for assistance poses a lower or higher risk to the crew and barge.
- ☐ Consider use of anchors to maintain position and prevent unexpected movement or shifting.

5. CONTAIN / CONTROL SPILLED OIL

- ☐ Ensure appropriate personal protective equipment is worn.
- ☐ Continue to take precautions against fire or explosion.
- ☐ If gasoline is escaping, disperse it away from the barge using fire hose streams to minimize risk of fire or explosion.
- ☐ Visually check the integrity of all slack or empty tanks.
- ☐ Consider transferring fuel to an undamaged slack tank if possible to do so without destabilizing the vessel.
- ☐ Consider isolating damaged cargo tank(s) to reduce further loss due to hydrostatic pressure during tide changes.

6. UPDATE / CONSULT WITH AUTHORITIES AND ERT

- ☐ Provide regular situation updates as required.
- ☐ Identify type of assistance required (i.e., salvage, divers, towboats, oil spill response, lightering).
- ☐ Movement, potential movement of barge to sheltered waters for further inspection / repairs.

IF THE BARGE CANNOT BE REFLOATED OR FREED WITHOUT ASSISTANCE:

7. STABILIZE THE PRESENT AND LIKELY POSITION OF THE BARGE USING ALL AVAILABLE MEANS TO MINIMIZE MOVEMENT UNTIL ASSISTANCE ARRIVES ON THE SCENE.

- ☐ Use tug / anchors to stabilize the vessel if possible and practical.
- ☐ Consider taking on ballast in slack or empty tanks.
- ☐ Visually confirm integrity of slack tankage before ballasting.
- ☐ Consult with the ERT and/or naval architect, time and circumstances permitting.
- ☐ Ensure all deck equipment is fully tied down or secure.
- ☐ Monitor the situation and wait for assistance to arrive.

FIRE / EXPLOSION

The following procedures are only to serve as a guide to the actions to be taken in the event of an incident. The order in which they are laid out is not necessarily chronological and the circumstances at hand may dictate an alternate order of response actions.

A fire / explosion involving the barge can be in the deck cargo area, deck house / pumproom, involve the dock and may occur while the tug barge combination is underway. The following steps / measures should be considered and/or taken as soon as SAFELY possible:

1. IMMEDIATE ACTIONS

- ☐ Sound General Alarm - muster tug crew to Emergency Stations.
- ☐ Stop all cargo transfer operations to or from the barge.
- ☐ Inform **Terminal** / local **Fire Department**.
- ☐ Stop ventilation and close fire doors, if applicable.
- ☐ Close and seal all tank hatches, ullage ports.
- ☐ **Complete notification responsibilities** as outlined in *Section 1.2 - Reporting and Notification*. See *Contact Listing* for emergency numbers.

2. ENSURE CREW SAFETY

- ☐ Ensure appropriate personal protective equipment is worn.
- ☐ Determine whether there are injuries - number, type, severity or missing personnel.
- ☐ Prepare serious injuries for immediate evacuation.
- ☐ Advise Tug Master on crew status and head count.
- ☐ Follow standard confined space entry procedures before entering enclosed spaces.

3. FIRE CONTROL AND SUPPRESSION

- ☐ Inspect the fire location to assess immediate damage and risk.
- ☐ Use available conventional fire equipment to control or extinguish fire, if possible to do so safely.
- ☐ Quickly assess the danger to crew members, dock, barge and tug and advise the Master:
  - What is the cause (i.e., electrical, fuel, other)?
  - Can it be brought under control?
  - Can it be isolated?
  - Can it be extinguished?

If fire in the deckhouse / pump room?

- ☐ Confirm no personnel in deckhouse / pump room.
- ☐ Use portable extinguishers to extinguish fire, depending on size and severity.
- ☐ Stop ventilation and close fire doors, if applicable.
- ☐ Consider activating automatic fire extinguisher release – *see Section 1.8 – Vessel Description* for descriptions of the firefighting systems on ITB vessels.

If fire is at an open hatch?

- ☐ Use portable extinguishers to extinguish fire, depending on size and severity.
- ☐ Close hatch using pike pole or other suitable tool.

If fire on the dock?

- ☐ Identify emergency escape route.
- ☐ Consider the necessity of vacating dock for barge's safety. If Yes, prepare to vacate dock, disconnect cargo hoses, ready tug.

4. DAMAGE ASSESSMENT

- ☐ Evaluate immediate threats such as potential hull damage, loss of stability, oil pollution, etc., in connection with the fire / explosion.
- ☐ Report status of fire to **Coast Guard, local Fire Department** and **ERT**.

- If there is a spill of oil in connection with the fire or explosion advise ERT and Coast Guard and request oil spill response contractor assistance.

IF THE FIRE DOES NOT POSE AN IMMEDIATE RISK TO CREW MEMBERS AND THE BARGE CAN BE SAFELY MOVED TO A SUITABLE SHORE LOCATION OR ANCHORAGE:

5. PROCEED TO ANCHORAGE AND CONTINUE FIRE FIGHTING ACTION

- Confer with the **ERT**, **Coast Guard (and/or Port Authority)** to discuss vessel movement options.
- Identify shore support requirements - e.g., medical aid, firefighting equipment, personnel.
- Proceed to nearest safe anchorage and continue efforts to control and extinguish the fire with the assistance of shore equipment and personnel (i.e., fire boat).

COLLISION

The following procedures are only to serve as a guide to the actions to be taken in the event of an incident. The order in which they are laid out is not necessarily chronological and the circumstances at hand may dictate an alternate order of response actions.

In the event of a barge collision with another vessel, while underway, the following steps / measures should be considered and/or taken when SAFELY possible:

1. IMMEDIATE ACTIONS

- ☐ Stop or slow engines - maintain tug in position of least danger.
- ☐ Sound General Alarm - muster crew to Emergency Stations.
- ☐ **Eliminate** all avoidable sources of ignition.
- ☐ **Complete notification responsibilities** as outlined in *Section 1.2 - Reporting and Notification*. See *Contact Listing* for emergency numbers.

2. ENSURE CREW SAFETY

- ☐ Ensure appropriate personal protective equipment is worn.
- ☐ Determine whether there are injuries - number, type, and severity or missing personnel.
- ☐ Prepare serious injuries for immediate evacuation.
- ☐ Advise **Master** or **Person-In-Charge** on crew status.

3. ASSESS DAMAGES SUSTAINED

- ☐ Follow standard confined space entry procedures before entering enclosed spaces.
- ☐ Conduct visual assessment of damage sustained in the collision.
  - Is the hull damaged or holed at any point?
  - Is oil leaking into the water
  - Are the vessels still joined from the collision?
  - Can the vessel proceed under its own power?
  - Is vessel stability / trim affected?

- What is the condition of the other vessel? (e.g., ensure there is no risk of fire or explosion on the other vessel).

- ☐ If vessels are joined, determine whether separation is possible and desirable.
- ☐ Contact other vessel Master to review damage assessment and options as required.
- ☐ Offer assistance to other vessel if required and if possible to do so safely without endangering the crew or vessel(s).
- ☐ Request other vessel to eliminate all avoidable sources of ignition.
- ☐ Determine the likely effects of tide, weather, and weather forecast conditions on the vessels' position and stability.

4. UPDATE THE AUTHORITIES AND ERT

- ☐ Report damage assessment findings to **Coast Guard** and **ERT** on an ongoing basis.
- ☐ Identify type and level of assistance required (e.g., salvage, towing, divers).

5. SECURE AND STABILIZE THE BARGE

- ☐ Ensure all spaces are kept closed including deckhouse, pumproom, or ballast spaces to establish fire and vapour barriers, and to help maintain buoyancy.
- ☐ Ensure openings to cargo and ballast tanks are tight, including vent lines, to conserve buoyancy.
- ☐ Consider trimming / listing barge to control inflow or outflow from compartments - do NOT change trim/list attitude if hull is severely damaged.
- ☐ If hull damage is severe and vessels remain engaged, consider remaining as is.
- ☐ If oil is leaking, limit further spillage by isolating penetrated tanks or transferring oil to empty or slack tanks.
- ☐ Disengage vessels if required and if safe to do so without endangering either vessel or risking spillage / further spillage of oil.

6. CONTAIN / CONTROL SPILLED OIL

- Continue to take precautions against fire or explosion.
- If gasoline is escaping, disperse it away from the vessel(s) using fire hose streams to minimize risk of fire or explosion.
- Consider transferring of cargo to an undamaged slack tank.
- Consider isolating of damaged oil tank(s) to reduce further loss due to hydrostatic pressure during tide changes.
- Deploy onboard response equipment to contain/recover material spilled on deck and in the water around the barge if possible to do so safely – see *Section 1.8 – Vessel Description* for listing of spill response equipment on board ITB vessels.

7. IF ABLE TO SEPARATE VESSELS SAFELY, PROCEED TO NEAREST SAFE ANCHORAGE TO UNDERTAKE FURTHER ASSESSMENT AND/OR REPAIRS

8. IF UNABLE TO MOVE BARGE, STABILIZE POSITION SECURELY AND WAIT FOR ASSISTANCE.

- Consult with the **ERT**, **Coast Guard** and other qualified experts.
- Maintain emergency readiness level appropriate to the prevailing circumstances.

HULL FAILURE

The following procedures are only to serve as a guide to the actions to be taken in the event of an incident. The order in which they are laid out is not necessarily chronological and the circumstances at hand may dictate an alternate order of response actions. Qualifed divers and/or salvage companies will be called on to assess and/or repair damages below the waterline – see Contact Listing.

In the event that oil is observed leaking from the barge while underway for no immediately obvious reason or cause (e.g., collision, grounding), the following steps / measures should be considered and/or taken when SAFELY possible:

1. IMMEDIATE ACTIONS

- ☐ Stop or slow tug engines depending on the circumstances and conditions.
- ☐ Sound General Alarm - muster crew to Emergency Stations.
- ☐ **Eliminate** all avoidable sources of ignition.
- ☐ Ensure appropriate personal protective equipment is worn.
- ☐ **Complete notification responsibilities** as outlined in *Section 1.2 - Reporting and Notification*. See *Contact Listing* for emergency numbers.

2. LOCATE AND SECURE THE SOURCE OF DISCHARGE

- ☐ Follow standard confined space entry procedures before entering enclosed spaces.
- ☐ Conduct a visual assessment of the hull to determine type, location and extent of hull failure.
- ☐ Locate the exact source of discharge or failure if possible to do so safely.
- ☐ If visual inspection is not possible, carefully sound all tanks in the vicinity of the spill - do NOT open ullage plugs indiscriminately as loss of buoyancy or additional spillage could occur.
- ☐ Evaluate immediate threats including loss of buoyancy and/or stability, pollution risk, fire or explosion.
- ☐ Consider reducing the level in leaking tank by transferring product to slack tank(s).

- ☐ Consider the possibility of pumping water into the leaking tank to create a water cushion to prevent further loss.

3. UPDATE AUTHORITIES AND ERT

- ☐ Report all relevant information to **Coast Guard** and ERT including:
  - type, location and extent of hull damage
  - exact location of the spill
  - type and quantity of product spilled
  - likely spill movement based on wind, tide and current.
  - condition of the barge and spill status.

4. IF DISCHARGE IS SECURED WITHOUT FURTHER SPILLAGE

- ☐ Refer to *Section 1.6 - Response Strategies*. An attempt will be made by the crew to initiate the containment of oil spilled on the water. This assumes that the protection of life and securing the safety of the barge is in hand.
- ☐ The tug/barge will remain with and monitor the slick, staying upwind until the Coast Guard and response contractor(s) have arrived and the situation is under control.

EXCESSIVE LIST

The following procedures are only to serve as a guide to the actions to be taken in the event of an incident. The order in which they are laid out is not necessarily chronological and the circumstances at hand may dictate an alternate order of response actions.

If the barge develops an excessive list or loss of stability while underway, the following steps / measures should be considered and/or taken as soon as SAFELY possible:

1. IMMEDIATE ACTIONS

- ☐ Stop engines or slow engines depending on the circumstances and conditions.
- ☐ Sound General Alarm - muster crew to Emergency Stations.
- ☐ **Eliminate** all avoidable sources of ignition.
- ☐ Issue appropriate personal protective equipment.
- ☐ **Complete notification responsibilities** as outlined in *Section 1.2 - Reporting and Notification*. See *Contact Listing* for emergency numbers.

2. IDENTIFY THE CAUSE OF STABILITY LOSS

- ☐ Identify and isolate the cause or source of listing.
- ☐ Assess the present and likely future risk to the barge.
  - Is the cause identifiable?
  - Can it be controlled or stabilized?
  - Will it worsen?
  - Can stability be restored without placing undue stress on the hull?
  - Is the barge at risk of foundering or sinking?
  - Can the barge proceed safely with present list, and no further worsening or change?

- Report all findings to **Coast Guard** and **ERT.**
- **In the event the barge takes on a list, not due to the loading condition, do not remove hatch cover or deck plugs until deck cargo is removed and the barge is in shallow water. Then, sound for water through deck plug, CAREFULLY removing or replacing one plug at a time until the damaged compartment is found.**

INTITIAL INCIDENT REPORT FORM (Page 1)

HS	Harmful Substances Report (in bulk)		/HS//
AA	Ship Identity - vessel name, official number, call sign, flag, towing vessel name (if applicable), details of tow (if applicable).	AA/	_____ _____/
BB	Date and time of event	BB/	____ ____ ____ ____ ____ ____ Z//
CC	Position (latitude / longitude) or	CC/	____ ____ ____ ____N/S/ ____ ____ ____ ____ ____ ____ E/W//
DD	Position (bearing & distance from landmark)	DD/	//
EE	True course	EE/	____ ____ ____ //
FF	Speed in knots and tenths of knots	FF/	____ ____ ____ //
LL	Route information (intended track)	LL/	//
MM	Radio communication (station(s) guarded)	MM/	//
NN	Next report (date, time of next report)	NN/	//
PP	Type & quantity of cargo / bunkers on board	PP/	//
QQ	Brief details of defect, damage, deficiency, other limitations	QQ/	//
RR	Description of pollution, including estimate of quantity lost	RR/	//
SS	Weather and sea conditions	SS/	//
TT	Contact details of ship's owner / operator / agent	TT/	**Island Tug: 604-873-4312** //
UU	Ship size and type	UU/	Length: _ _ _ _ _ _ _ _ _ _ Breadth: _ _ _ _ _ _ _ _ _ _ Draught: _ _ _ _ _ _ _ _ _ _ Type: **Fuel Barge** _ _ //
XX	Remarks: Brief details of incident Current condition of the vessel Need for outside assistance Actions being taken Number of crew and details of any injuries Details of P&I Club and local representative Others	XX/	//

If no outside assistance is required, this should be clearly stated.

INTITIAL INCIDENT REPORT FORM (Page 2)

Additional information to be sent to the Emergency Response Team and/or other agencies at the same time as Page 1 of the *Initial Incident Report Form* or as soon as possible afterward (See *Section 2.2*).

1.2 REPORTING AND NOTIFICATION

General

The reporting procedures to be followed by the Master or other person in charge of the vessel after an oil pollution incident, as outlined in this Plan, are based on guidelines developed by the International Maritime Organization.

1.2.1 WHEN TO REPORT

ACTUAL DISCHARGE

An immediate report to the proper authorities and management is required whenever there is:

- **a discharge of oil resulting from damage to the vessel or its equipment**
- **a discharge, during the operation of the vessel (i.e., during fuel transfer or maintenance)**
- **an emergency discharge for the purpose of securing the safety of the vessel or saving life**

PROBABLE DISCHARGE

Although an actual discharge may not have occurred, a report is required if there is the probability of a discharge.

In judging the probability of a discharge and whether a report should be made, the following factors as a minimum, should be taken into account.

PROBABLE SPILL ASSESSMENT FACTORS

- **level of risk to crew members and their condition, morale, and state of calmness**
- **nature and extent of damage sustained by the vessel**
- **failure or breakdown of machinery or equipment which may adversely affect ability to maneuver, navigate or operate pumps**
- **the location of the vessel and its proximity to land or other navigational hazards**
- **traffic density**
- **weather, tide, current, and sea state**

As a general guide, the Master should report in cases of:

- **damage, failure or breakdown which affects the safety of the barge/tug and crew, or other shipping such as collision, fire, explosion, structural failure, instability, or excessive list**
- **failure or breakdown of machinery or equipment which results in impairment of the safety of navigation such as steering gear, electrical generating system, propulsion, or essential ship borne navigational aids**

Follow Up Reports

Once the vessel has transmitted an initial report, further reports should be sent at regular intervals to keep those concerned informed of developments. Follow up reports to coastal states should be in the style given in *Section 1.2.2,* and should include information about every significant change in the vessel's condition, the rate of the release and spread of oil, weather conditions, and details of agencies notified and clean-up activities.

1.2.2 INFORMATION REQUIRED

Copies of the *Initial Incident Report Form* are located at the end of this section. This form outlines the critical information about a marine casualty or spill incident that should be communicated clearly and accurately throughout the initial notification process to enable appropriate action to be taken by all responders.

The format is consistent with the General Principles for Ship Reporting Systems and Ship Reporting Requirements, including Guidelines for Reporting Incidents Involving Dangerous Goods, Harmful Substances and/or Marine Pollutants, adopted as Resolution A.648(16) by the International Maritime Organization (IMO), and should be followed so far as possible, (Note: The reference letters in the form do not follow the complete alphabetical sequence as certain letters are allocated to information required for other reporting formats).

The following information should be included when completing the report form:

AA/	Ship Identity (name, official number, flag, towing vessel if applicable and call sign)
BB/	Date and time of incident: a 6-digit group giving day of month (first two digits), hours and minutes (last four digits)
CC/	Ship's position, giving latitude: a 4-digit group in degrees and minutes suffixed with N (North) or S (South); and longitude: a 5-digit group in degrees and minutes suffixed with E (East) or W (West); or
DD/	Ship's position by true bearing (first 3 digits) and distance (stated) from a clearly identified landmark
EE/	True course (as a 3-digit group)
FF/	Speed (in knots and tenths of a knot as a 3-digit group)
LL/	Route information - details of intended track
MM/	Full details of radio stations and frequencies being guarded

NN/ Time of next report (a 6-digit group as in B)

PP/ Types and quantities of cargo and bunkers on board

QQ/ Brief details of defect, damage, deficiency, other limitations

RR/ Description of pollution. These should include the type of oil, an estimate of the quantity discharged, whether the discharge is continuing, the cause of the discharge, and , if possible, an estimate of the movement of the slick.

SS/ Weather and sea condition, including wind force and direction and relevant tidal or current details

TT/ Name, address, telex, facsimile, and telephone numbers of the ship's owner or representative (manager or operator of the ship, or their agents)

UU/ Details of length, breadth, tonnage, and type of ship

XX/
- Brief details of the incident
- Current condition of the barge/tug
- Names of other ships involved
- Action taken with regard to the discharge and movement of the ship
- Personnel injuries sustained
- Whether medical assistance is required.

If no assistance is required, this should be clearly stated.

Sufficient information about the incident must be obtained to enable those contacted to react appropriately to the situation and specific circumstances of the incident. This information must then be communicated CLEARLY, ACCURATELY, and CONCISELY at all levels of the notification process. As more information becomes available, it can be added to what is already known, or to replace outdated or inaccurate information.

Reports should be transmitted by the quickest available means to the Emergency Response Team (ERT) and to the Canadian or US Coast Guard.

The following additional information should be sent to the ERT either at the same time as the initial report or a soon as possible thereafter:

- further details of damage to ship and equipment
- whether damage is still being sustained
- assessment of fire risk and precautions taken
- disposition of cargo on board and quantities involved
- number of casualties
- damage to other ships or property
- time assistance was requested and time assistance expected to arrive at the scene
- name of salvor and type of salvage equipment
- whether further assistance is required

- priority requirements for spare parts and other materials
- details of outside parties advised or aware of the incident
- any other important information

After transmission of the information in an initial report, as much as possible of the information essential for the safeguarding of life and the protection of the ship and the marine environment should be reported in a supplementary report to the coastal state and the ERT, in order to keep them informed of the situation as the incident develops. This should include items A, P, Q, S, and X as appropriate as well as any changes in any items already relayed.

1.2.3 WHOM TO CONTACT

Figure 1.2.1 and *Figure 1.2.2* on pages 1.2-9 and 1.2-10 show the initial notification/ reporting procedure, for US or Canadian waters respectively that is to be strictly followed for all oil spill or marine emergency incidents involving company owned or operated vessels. This will ensure that a standard spill reporting procedure is in place, that adequate internal and external response personnel and resources are mobilized during the critical first hours following detection, and that the appropriate regulatory and other government agencies are properly notified.

INTERNAL NOTIFICATION

All spills or potential spills are to be reported immediately by the **Master** or **Person-In-Charge** of the vessel to company management by contacting the Island Tug and Barge **24 hour number**. An **On-call Manager** will be notified.

The On-call Manager will notify the Qualified Individual (for U.S. Spills) and complete the mandatory Coastal State Notifications. If an on-call manager cannot be immediately reached or if the circumstances warrant it, the Master or P-I-C of the vessel must directly notify Qualified Individual (for U.S. Spills) and the appropriate government agencies.

The Manager or his designate will notify the **Emergency Response Team (ERT)**. Contact numbers for all ERT personnel are listed in Contact Listing section.

COASTAL STATE CONTACTS

The On-call Manager will normally complete the mandatory Coastal State Notifications. If an on-call manager cannot be immediately reached by the vessel or if the circumstances warrant it, the Master or P-I-C of the vessel must directly notify the appropriate government agencies.

Regulatory Spill Reporting Requirements (US)

For incidents or spills occurring in US waters, the Manager (or Master or Person-In-Charge) will immediately notify:

US COAST GUARD
National Response Centre (Washington, D.C.)
1-800-424-8802 (24 Hours)

In the State of Washington, the Manager (or Master or Person-In-Charge) will report the incident/spill to:

Washington State Maritime Cooperative (WSMC)
(206) 448-7557
VHF Radio Channel 20

If requested, the WSMC will in turn notify the US Coast Guard, the Washington State Emergency Management Division / Washington State Department of Ecology, and its primary response contractor, Foss Environmental.

In the State of Alaska, the Manager (or Master or Person-In-Charge) must also notify:

Alaska Dept. of Environmental Conservation (ADEC)
Central Area Response Team (Anchorage): 907 269-3063
Northern Area Response Team (Fairbanks): 907 451-2121
Southeast Area Response Team (Juneau): 907 465-5340
Outside normal business hours: 800 478-9300

Also notify ADEC Marine Vessel Section: 907 269-3072

In the Oregon State, the Manager (or Master or Person-In-Charge) must also notify:

The Oregon Emergency Response System (OERS)

The Maritime Fire and Safety Association
(if on the Columbia River)

Washington State Emergency Management Division
(if on the Columbia River)

In the State of California, the Manager (or Master or Person-In-Charge) must also notify:

Fish and Game's Office of Spill Prevention
and Response (OSPR)
1-888-334-2258

The Governor's Office
of Emergency Services (OES).
1-800-852-7550 (In State)
916-845-8911 (Outside State)

Regulatory Spill Reporting Requirements (Canada)

The Manager (or Master or Person-In-Charge) will report the incident **WITHOUT DELAY** to the Canadian Coast Guard's **Marine Communications and Traffic Services Centre (MCTS)** in Vancouver or Prince Rupert:

Coast Guard MCTS Centre (Vancouver)
(604) 666-6011 or 1-800-889-8852 (24 Hours)

VHF Radio:	**Vancouver**	**Channel 12**
	Fraser River	**Channel 74**
	Strait of Georgia	**Channel 11**

Coast Guard MCTS Centre (Prince Rupert)
(250) 627-3074 (24 Hours)

MCTS will in turn notify, as required, the agencies listed below (see *Appendix A* for 24 Hour Emergency Numbers):

- **Transport Canada Marine Safety Branch (Pollution Prevention Officer)**
- **Corporation Port / Commission Port (spills in a Port)**
- **Environment Canada (spills into waters frequented by fish)**
- **Provincial Emergency Program (PEP) (all spills greater than 100 L)**

PEP will in turn notify BC Environment and all other provincial government agencies who might become involved in the response effort.

NOTE:

Corporate policy is that all spills will be reported directly to key government agencies by Company personnel as soon as it is safely possible, rather than relying on other agencies to do so. This policy applies to spills in either Canadian or US waters.

PORT CONTACTS

The ITB Corporate ERT will endeavor to directly contact the appropriate Port Authority when it is safe and practicable to do so. The Canadian Coast Guard's Marine Communications and Traffic Services Centre (MCTS) will notify the appropriate Port Authority (if necessary) as part of its standard call out procedure.

NOTIFICATION OF RESPONSE CONTRACTOR(S)

If a spill has occurred as a result of the incident, the Master (or Manager or Person-In-Charge) will also alert appropriate contractor(s) to begin or prepare for potential deployment of response personnel and equipment to the spill site.

The company's primary oil spill response contractors for marine oil spill incidents are:

LOCATION	SPILL RESPONSE CONTRACTOR
Canadian Waters	• Burrard Clean Operations
Puget Sound COTP	• WSMC Primary Response Contractor (NRC Environmental) • National Response Corporation (NRC)
SE AK COTP	• SEAPRO
Western AK COTP	• Alaska Chadux • Alternate Compliance Agreement and Memorandum of Understanding regarding barges of opportunity are pending for Island Tug operations in the Nearshore Operating environment.
Portland COTP	• National Response Corporation (NRC) • MFSA Primary Response Contractor (Clean Rivers)
Sanfrancisco and Los Angeles – Long Beach COTP	• National Response Corporation (NRC)

LOCATION	SPILL MANAGEMENT CONTRACTOR
Canadian Waters	• Burrard Clean Operations (LEAD) • The O'Brien's Group (SUPPORT)
US Waters	• The O'Brien's Group (LEAD) • Burrard Clean Operations (SUPPORT)

In addition to oil spill contractors a variety of other contractors may need to be alerted including marine salvage, towing vessels, etc. A list of contractors and suppliers relating to a vessel casualty and/or marine oil spill incident is provided in the *Contact Listing* section.

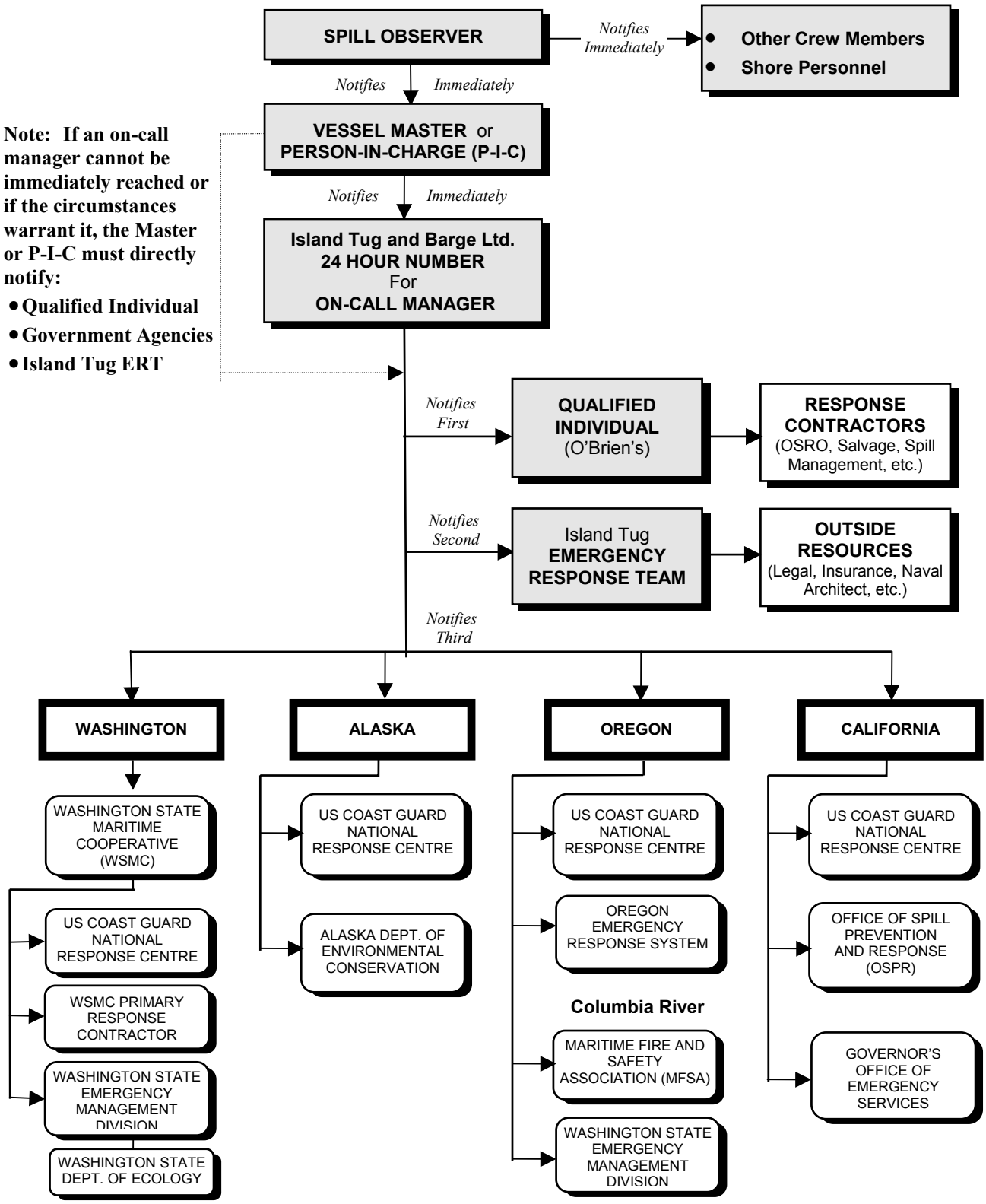

Figure 1.2.1 - Initial Marine Emergency Reporting Procedure (US WATERS)

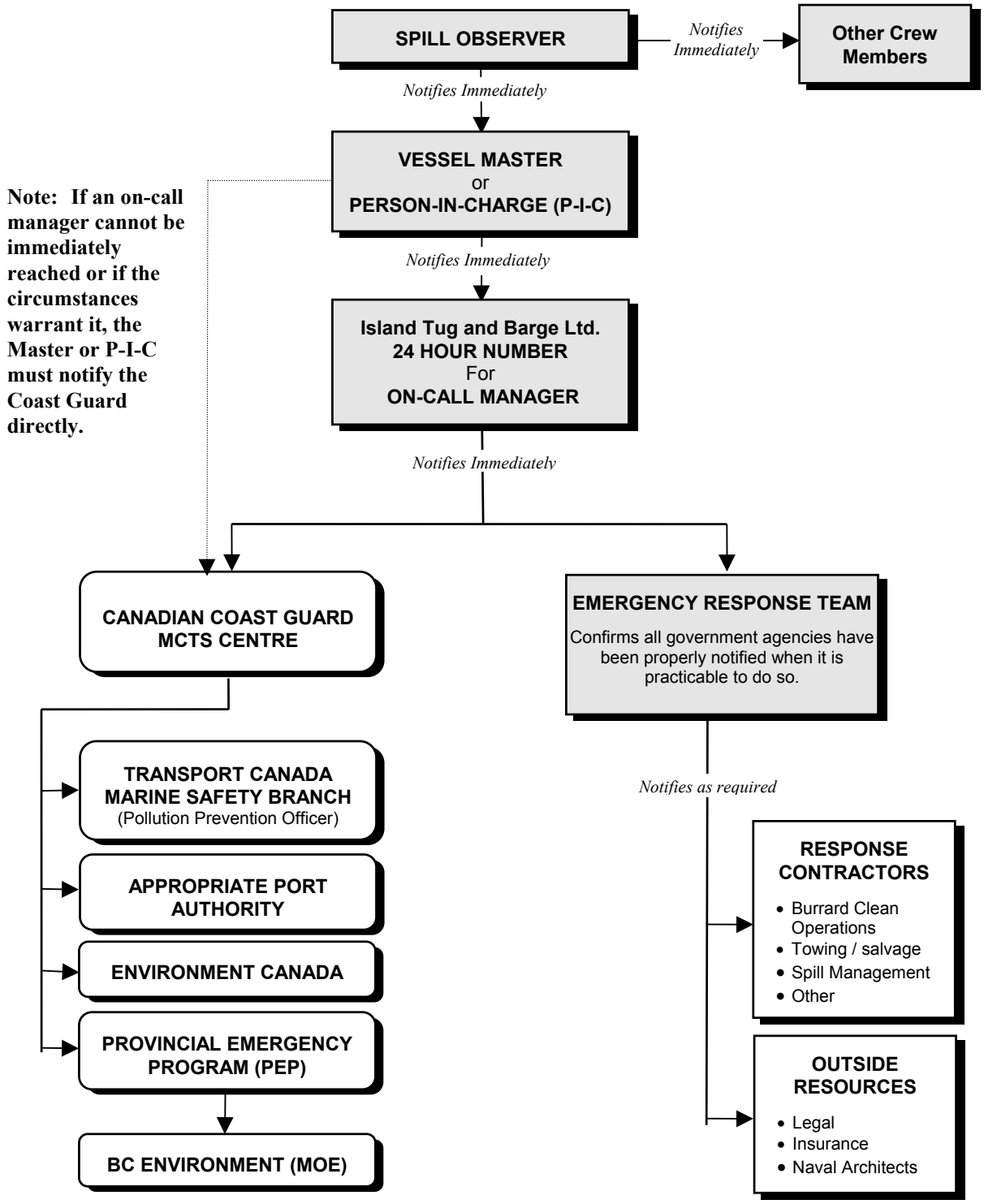

Figure 1.2.2 - Initial Marine Emergency Reporting Procedure (CANADIAN WATERS)

1.2.5 DISCHARGE REPORTING REQUIREMENTS

Figures 1.2.3, 1.2.4, and *1.2.5* illustrate the substance reporting requirements for spills on water or land for the States of Washington, Alaska, and Oregon.

	Description of Discharge	Immediately	5 Hours	24 Hours	7 Days
1)	Hazardous substance other than oil, in any amount	x			
2)	Discharge of oil to water in excess of 55 gallons	x			
3)	Discharge of oil to water, causing film, sheen or discoloration affecting 1,000 sq. feet or more of water surface	x			
4)	Discharge of oil to water causing sludge or emulsion deposit beneath water surface	x			
5)	Discharge of oil to water, other than a discharge described in 2, 3, 4, or 6 of this table.	x			
6)	Discharge of oil to water in an amount less than 1/2 pint and causing film, sheen or discoloration affecting less than 100 sq. ft. of water surface	x			
7)	Discharge of oil to land, in excess of 55 gallons.	x			
8)	Discharge of oil to land, in excess of 10 gallons, but 55 gallons or less.	x			
9)	Discharge of oil to land, 10 gallons or less.	x			

Figure 1.2.3 - Discharge Reporting Requirements (Washington)

	Description of Discharge	Immediately	Within 48 Hours
1)	Hazardous substance other than oil, in any amount	x	
2)	Discharge of oil to water in any amount	x	
3)	Discharge, including a cumulative discharge, of oil in excess of 55 gallons solely to land outside an impermeable containment area or structure	x	
4)	Discharge of oil solely to land in excess of 10 gallons but 55 gallons or less		x
5)	Discharge of oil in excess of 55 gallons, if it is the result of the escape or release of oil from its original storage tank, pipeline, or other immediate container into an impermeable secondary containment area or structure		x

Figure 1.2.4 - Discharge Reporting Requirements (Alaska)

Generally, for any type of petroleum product, an immediate report to the Oregon Emergency Management System is required if the product, in any quantity, is released into the waters of the state and would produce a visible oily slick, oily solids, or coat aquatic life, habitat or property with oil.

A report must also be made if a release into the waters is likely.

The above excludes normal discharges from properly operating marine engines.

If spilled on land, any quantity of oil over 1 barrel must be immediately reported to the Oregon Emergency Management System.

Figure 1.2.5 - Discharge Reporting Requirements (Oregon)

Any amount of petroleum product entering, or threatening to enter, the marine environment is to be reported to the California OSPR and OES.

Figure 1.2.6 - Discharge Reporting Requirements (California)

1.2.6 CONTACT LISTING

This contact list contains the regular and 24 hour contact numbers for ITB personnel and agencies or organizations who would be notified in the event of an oil spill in U.S. waters in Washington, Oregon, and Alaska – see *Figure 1.2.1 – Initial Marine Emergency Reporting Procedures (U.S. Waters)*. It includes:

- ITB Emergency Response Team (ERT) and advisors
- U.S. Federal Agencies and State Agencies
- Federal Agencies (Canada) and Provincial Agencies (B.C.)
- Oil Spill Response Organizations (OSRO)

Emergency Contacts List

Island Tug

ITB 24 Hour Number: 604 873 4312 (Fax: 604 873 4318)

CORPORATE EMERGENCY RESPONSE TEAM				
POSITION AND NAMES		**OFFICE**	**HOME**	**CELL**
Incident Commander and Alternates (A)				
President	Bob Shields	604 873 4312	604 266 1964	604 341 1971
General Manager	Steve Pollock (a)	604 873 4312	604 469 0857	604 202 6769
V.P. Operations	Jack Davies (a)	604 873 4312	604 420 6730	604 202 6771
Command Staff				
Media / Public Relations	Bob Shields	604 873 4312	604 266 1964	604 341 1971
Government Liaison	Sandra Say	604 873 4312	604 469 1446	
Health and Safety	Stephen Shimek	604 873 4312		604 312 7467
Security	John Staynor	604 873 4312	604 986 3837	604 961 9935
Planning / Operations Section				
Section Chief	Steve Pollock	604 873 4312	604 469 0857	604 202 6769
	Hugh Welch	604 298 3011		604 818 8683
Vessel Casualty	Andy Farmer	604 298 3911	604 583 4332	604 813 8441
Logistics / Finance Section				
Section Chief	Gary Gilraine	604 873 4312	604 224 1579	604 209 2835
	Beth Vandermoor	604 873 4312	604 944 1095	604 862 3942

SHOP BARGE CONTACTS				
POSITION AND NAME(S)		**OFFICE**	**HOME**	**CELL**
Shore Engineer	Andy Farmer	604 298 3911	604 583 4332	604 813 8441
Asst. Shore Engineer	Leo Trudeau	604 298 4366	604 937 5711	604 319 3805
Mechanic	Steve Ross	604 298 3011		
Administrative Assistant	Susan Masi	604 298 4366	604 591 2890	604 341 4217
Shop Barge FAX		604 298 3645		

VESSEL CONTACTS

VESSEL	NUMBER
Georgia Transporter	604 341 3179
Island Brave	604 323 6770
Island Chief	604 970 7374
Island Crown	604 202 6774
Island Defender	604 809 8563
Island Monarch	604 202 6773
Island Scout	604 202 5528
Island Tugger	604 970 8007
Island Wave	604 662 9517
Emergency Messaging Number	1 800 262 8722

OIL COMPANIES

NAME	Business	Emergency
Chevron Emergency Response	604 668 5300 press 1	604 668 5427
Petro-Canada Burrard Products Terminal	604 933 3000	604 933 3009
Imperial Oil Limited Environmental Emergency	604 469 8300 press 8278	604 469 8251
Petro-Marine Skagway Plant	907 983 2259	Plant Manager after hours: 907 983 2898 Tim 907 612 0049 (Cell)

CUSTOMERS

Refer to voyage trip report for customer contact name and telephone number.

CORPORATE OUTSIDE RESOURCES				
POSITION AND NAME(S)		**OFFICE**	**HOME**	**FAX**
Legal Cousel				
Alexander Holburn Beaudin Lang	David McEwen	604 484 1770		604 484 9700
Fasken Martineau DuMoulin	Gary Catherwood	604 631 3131		604 631 3232
Insurance Company				
AON Reed Stenhouse Ltd.	Doreen Egger	604 688 4442		604 682 4026
Media Consultant			Cell	
Communicate Public Affairs	Jocelyn Fraser	604 731 6164	604 512 1951	
Naval Architects				
BMT		604 253 0955		604 253 5023
Robert Allan Ltd.	Robert Allan	604 736 9466	604 736 2809	604 736 9483
Dixon Naval Architect	Eric Dixon	604 922 3996		604 908 8792
Response Consultants				
Barber Consulting Co.	Cliff Barber	604 925 3150	604 925 3150	604 925 3170
John Staynor	John Staynor	604 961 9935	604 982 8030	604-982-8031
The O'Brien's Group		24/7 Response 985 781 0804		

CANADIAN FEDERAL AGENCIES		
	BUSINESS	**EMERGENCY**
Canadian Coast Guard		
Emergencies:		
Pacific Region Office	604 775 8881	604 666 6011/800 889 8852
Oil Pollution (MCTS Vancouver)		604 666 6011/800 889 8852
Marine Communications And Traffic Services Centre:		
Vancouver	604 666 6011	604 666 6011/800 889 8852
Prince Rupert	250 627 3074	250 627 3074
Search And Rescue		800 567 5111
Marine Weather	604 666 3655	
Transport Canada		
Marine Safety - Pacific	604 666 5300	604 666 6011/800 889 8852
Marine Security	604 666 5300	1-877-455-0626
Marine Safety – Cargo Services	604 666 3636	
Dangerous Goods		
Canutec	613 992 4624	613 996 6666 (collect)
Environment Canada		
Oil Or Chemical Spill Reporting	604 666 6100	604 666 6100
Weather Reports - One On One - Live	900 565 5555	900 565 5555
Fisheries And Oceans		
Violation Reporting	604 666 3500	604 666 3500 / 800 465 4336
Pacific Pilotage Authority		
Office	604 666 6771	604 666 6776 (Dispatch)
Labour Canada		
Federal Labour Program	604 872 4384	604 872 4384 / 800 641 4049

CANADIAN PORT AUTHORITIES		
	BUSINESS	**EMERGENCY**
Fraser River Port Authority Office	604 524 6655	604 524 6655
Nanaimo Port Authority Office Harbour Master (Pager)	250 753 4146	250 754 5053 250 755 3787 (pgr)
North Fraser Port Authority Habour Master	604 273 1866	604 329 1670 (cell) 604 328 0874 (cell)
Prince Rupert Port Authority Habour Master	250 627 8899	250 627 3074
Port Alberni Port Authority Habour Master	250 723 5312	250 731 5839 (cell)
Vancouver Port Authority Emergencies	604 665 9000	604 665 9346

BRITISH COLUMBIA PROVINCIAL CONTACTS		
	BUSINESS	**EMERGENCY**
Ambulance	604 872 5151	911
Ministry Of Environment	604 582 5200	800 663 3456
Provincial Emergency Program		800 663 3456
Workers Compensation Board (WCB) Injury, Spills, Etc. After Hours Emergency For Accident Reporting	604 273 2266	604 273 7711

INDUSTRIAL SUPPORT		
	BUSINESS	**EMERGENCY**
Corporate Accounts Set Up With The Following:		
Special Waste Disposal	604 255 9090	604 841 1123
BC Rentals (Pumps)	604 323 1222	604 323 1222
Donmar Consulting Ltd. (Sorbent Materials)	604 220 3396	604 736 9501
G.D. Trucking (Contract Carriers)	604 841 3473	604 841 3473
Absorbent Materials		
Burrard Clean Operations	604 294 6001	604 294 9116
3m Canada (Richmond)		519 451 2500
Versatech	604 271 7500	604 271 7500
Brenntag Inc. (Vancouver)	604 513 9009	604 685 5036
Aqua Guard	604 980 4899	604 767 3864
Hazmasters	604 420 0025	604 420 0025
Guillevin Int. Co. (Fleck Bros. Division)	604 395 3000	778 839 6821
Aircraft		
Air Canada	888 247 2262	888 247 2262
Harbour Air	604 274 1277	604 278 3478 (Dispatch)
PENTA Aviation	604 273 1166	604 273 1166
Northwest International Jet	604 273 5573	877 828 5452
Helijet	800 665 4354	800 665 4354
	604 270 1484	604 270 1484
Westcoast Air	800 347 2222	800 347 2222
Executive Aircraft	604 273 6688	604 273 6688
Cranes		
Sterling Crane (Burnaby) – 200 T	604 468 0222	604 468 0222
Mega Cranes (Surrey) – 200 T	604 599 4200	604 599 4200
Gwil Crane – 400 T	604 291 9401	604 291 9401
Diving		
All Sea Enterprises (underwater ship repair)	604 980 9613	604 980 9613
Fraser Burrard Diving Ltd.	604 278 3323	604 278 3323
Canpac Divers (North Vancouver)	604 255 4828	604 255 4828
Lightering / Salvage / Tugboats		
Seaspan International Ltd.	604 988 3111	604 988 3111
SMIT Towing Ltd.	604 255 1133	604 255 1133
Pipefitters		
Western Oil (Vancouver)	604 514 4787	604 514 4787

INDUSTRIAL SUPPORT (Continued)		
	BUSINESS	**EMERGENCY**
Pumps		
Canadian Dewatering Ltd.	604 888 0042	
BC Rentals	604 323 1222	604 323 1222
Harrigan Rentals And Equipment Ltd.	604 291 6411 (Burnaby) 604 877 1411 (Van)	
Spill Response Clean-up / Disposal / Vaccum Trucks		
A&A Anderson Tank Cleaning Service	604 277 1628	604 277 1628
Veolia Environmental Services	604 525 5261 800 430 5261	604 525 5261 800 430 5261
Burrard Clean Operations	604 294 6001	604 294 9116
CEDA Emergency Response Team	604 540 4100	604 540 4100
Mcrae's Septic Tank Service (Burnaby)	604 434 8313	604 434 8313
Clean Harbors Canada (Delta)	604 940 0894	604 940 0894
Sprayaway Marine Services Ltd.	604 433 8020	

MEDIA			
ORGANIZATION AND CONTACT		**PHONE**	**FAX**
Wire Service			
Canadian Press	News Desk	604 687 1662	
Broadcast News		604 687 2464	
Note: Provides Simultaneous Contact With Broadcast Outlets And/Or Most Daily Newspapers			
Daily Newspapers (Vancouver)			
The Vancouver Sun	Newsroom	604 605 2180	604 605 2323
The Province	Newsroom	604 605 2063	604 605 2720
Community Newspapers (Burnaby)			
The Burnaby Now	Editor	604 444 3451	604 444 3460
Television Stations			
CBC - CBUT Vancouver	News Director	604 662 6801	604 662 6878
CityTV Vancouver		604 876 1344	604 874 5206
New VI		250 381 2484	250 381 2485
CH TV		250 383 2435	250 384 7766
Global		604 420 2288	604 422 6466
CTV	News Hotline	604 609 5800	604 609 5894
Radio Stations			
CKNW	News Room	604 331 2832	604 331 2787
CKWX	News Desk	604 873 6397	604 873 0877
CBC	News Desk	604 662 6900	604 662 6913
CFUN	News Desk	604 871 9000	604 871 2901
CHQM	Office	604 871 9000	604 871 2901

US FEDERAL CONTACTS		
	BUSINESS	**EMERGENCY**
US Coast Guard		
National Response Centre (Washington, DC)		**800 424 8802**
Sector Logistics Juneau, Alaska	907 463 2457	907 463 2000
Sector Anchorage, Alaska	907 271 6700	907 271 6700
Sector Portland, Oregon	503 240 9301	503 240 9301
Sector Sanfrancisco, California	415 399 3547	415 399 3547
MSO Los Angeles Long Beach, California	800 221 8724	800 221 8724
MSO Puget Sound (24 hours)		206 217 6232
MSD Ketchikan, Alaska	907 225 4496	907 228 0220
MSD Sitka, Alaska	907 966 5454	907 463 2000
US Environmental Protection Agency		
California (Region 9)	800 300 2193	800 300 2193 800 424 8802 (NRC)
Anchorage, Alaska (Region 10)	907 271 5083	206 553 1263 800 424 8802 (NRC)
Washington and Oregon(Region 10)	206 553 1263	206 553 1263 800 424 8802 (NRC)

WASHINGTON STATE AGENCIES		
	BUSINESS	**EMERGENCY**
Department of Ecology	360 407 6000	800 258 5990
NW Region (Bellevue)	425 649 7000	800 258 5990
SW Region (Olympia)	360 407 6300	800 258 5990
Eastern Region	509 329 3400	800 258 5990
Central Region	509 575 2490	800 258 5990
Emergency Management Division (report spills)		800 258 5990 or 253 912 4904
Fish and Wildlife	360 902 2200	
State Patrol (Bellvue)	425 455 7700	425 455 7700

ALASKA STATE AGENCIES		
	BUSINESS	**EMERGENCY**
Dept. of Environmental Conservation (ADEC)		
Central Area Response Team, Anchorage	907 269 3063 Fax: 907 269 7648	**907 269 3063** **800 478 9300** (aft hrs)
Northern Area Response Team, Fairbanks	907 451 2121 Fax: 907 451 2362	**907 451 2121** **800 478 9300** (aft hrs)
Southeast Area Response Team, Juneau	907 465 5340 Fax: 907 465 2237	**907 465 5340** **800 478 9300** (aft hrs)
Marine Vessel Section	907 269 3072	
Ketchikan District Office	907 225 6200 Fax: 907 225 0620	907 465 5340 800 478 9300 (aft hrs)
Dept. of Fish and Game - Habitat and Restoration	907 465 4290	800 478 9300

OREGON STATE AGENCIES		
	BUSINESS	**EMERGENCY**
Oregon Emergency Response System (OERS)	503 378 6377 or 800 452 0311 (in state)	503 378 6377 or 800 452 0311 (in state)

CALIFORNIA STATE AGENCIES		
	BUSINESS	**EMERGENCY**
Governor's Office of Emergency Response		
In State	**(916) 845-8510**	**800 852 7550**
Out of State	**(916) 845-8510**	**916 845 8911**
Office of Spill Prevention and Response (OSPR)	**(916) 445-9338**	**1-888-334-2258**

WASHINGTON MARITIME COOPERATIVE		
	BUSINESS	**EMERGENCY**
WASHINGTON STATE MARITIME COOPERATIVE 24 hours	206 448 7557	206 448 7557

INDUSTRIAL SUPPORT - United States		
	BUSINESS	**EMERGENCY**
Towboats/Salvage /Lightering/Firefighting		
Crowly Maritime Salvage	800 248 8632	800 248 8632
Marine Response Alliance (MRA)	206 332 8200	206 332 8200
Foss (Washington)	206 281 3800	
Maritime Dispatch		206 281 3800
Response Organizations - United States		
SEAPRO (S.E. Alaska)	907 225 7002	907 225 7002
Washington State Maritime Cooperative	206 448 7557	206 448 7557
Foss (Washington)		206 281 3800
.		
Maritime Dispatch	206 281 3800	
Alaska Chadux		
(Western Alaska COTP Zone)	907 348 2365 888 831-3438	907 348 2365 888 831 3438
National Response Corporation	631 224-9141	800 899 4672
(Washington / Oregon / California)	206 546 7170 (fax)	
Cook Inlet Spill Prevention and Response	907 776-5129	907 776-5129
(Cook Inlet Alaska)		
Maritime Fire and Safety Association	503 220 2055	503 220 2055
(Columbia River Oregon)	VHF 16 & 18A	VHF 16 & 18A
Other		
Aero-Metric US - IR photography (Alaska)	907 272 4495	907 272 4495

For additional phone numbers for Washington and Alaska State, refer to the WSMC Oil Spill Response Plan, SEAPRO Technical Manual, and Alaska Chadux Response Manual.

INTITIAL INCIDENT REPORT FORM (Page 1)

HS	Harmful Substances Report (in bulk)		/HS//
AA	Ship Identity - vessel name, official number, call sign, flag, towing vessel name (if applicable), details of tow (if applicable).	AA/	_____ _____/
BB	Date and time of event	BB/	____ ____ ____ ____ ____ ____ Z//
CC	Position (latitude / longitude) or	CC/	____ ____ ____ ____N/S/ ____ ____ ____ ____ ____ ____ E/W//
DD	Position (bearing & distance from landmark)	DD/	//
EE	True course	EE/	____ ____ ____ //
FF	Speed in knots and tenths of knots	FF/	____ ____ ____ //
LL	Route information (intended track)	LL/	//
MM	Radio communication (station(s) guarded)	MM/	//
NN	Next report (date, time of next report)	NN/	//
PP	Type & quantity of cargo / bunkers on board	PP/	//
QQ	Brief details of defect, damage, deficiency, other limitations	QQ/	//
RR	Description of pollution, including estimate of quantity lost	RR/	//
SS	Weather and sea conditions	SS/	//
TT	Contact details of ship's owner / operator / agent	TT/	**Island Tug: 604-873-4312** //
UU	Ship size and type	UU/	Length: _ _ _ _ _ _ _ _ _ _ Breadth: _ _ _ _ _ _ _ _ _ _ Draught: _ _ _ _ _ _ _ _ _ _ Type: **Fuel Barge** _ _ //
XX	Remarks: Brief details of incident Current condition of the vessel Need for outside assistance Actions being taken Number of crew and details of any injuries Details of P&I Club and local representative Others	XX/	//

If no outside assistance is required, this should be clearly stated.

INTITIAL INCIDENT REPORT FORM (Page 2)

Additional information to be sent to the Emergency Response Team and/or other agencies at the same time as Page 1 of the *Initial Incident Report Form* or as soon as possible afterward (See *Section 2.2*).

ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION

OIL & HAZARDOUS SUBSTANCES SPILL NOTIFICATION

ADEC SPILL #	**ADEC FILE #**	**ADEC LC**
PERSON REPORTING	**PHONE NUMBER**	**REPORTED HOW?** Troopers phone fax

DATE/ TIME OF SPILL	**DATE/TIME DISCOVERED**	**DATE/TIME REPORTED**

LOCATION	****SUBSTANCE TYPE** CR, EHS, HS, NC, PW, UNK	****PRODUCT**

QUANTITY SPILLED ☐ gallons ☐ pounds	**QUANTITY CONTAINED** ☐ gallons ☐ pounds	**QUANTITY RECOVERED** ☐ gallons ☐ pounds	**QUANTITY DISPOSED** ☐ gallons ☐ pounds

POTENTIAL RESPONSIBLE PARTY C-Plan Holder? YES ☐ NO ☐	****FACILITY TYPE**

****SOURCE OF SPILL**	☐ 400 GT Vessel?
****CAUSE OF SPILL**	☐ Accident ☐ Human Factors ☐ Structural/Mechanical ☐ Other
****CLEANUP ACTIONS**	
****DISPOSAL METHODS AND LOCATION**	

****RESOURCES AFFECTED/THREATENED** (Water sources, wildlife, wells. etc.)	**SURFACE AREA AFFECTED**	**SURFACE TYPE**
COMMENTS		

DEC USE ONLY

SPILL NAME, IF ANY	**NAMES OF DEC STAFF RESPONDING**	**C-PLAN MGR NOTIFIED** YES ☐ NO ☐

DEC RESPONSE ☐ phone follow-up ☐ field visit ☐ took report	**CASELOAD CODE** ☐ First and Final ☐ Open/No LC ☐ LC assigned	**CLEANUP CLOSURE ACTION** ☐ NFA ☐ Monitoring ☐ Transferred to CS or STP

STATUS OF CASE OPEN CLOSED DATE CASE CLOSED _____

COMMENTS

REPORT PREPARED BY	**DATE**

revised April 19, 2002

ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION

OIL & HAZARDOUS SUBSTANCES SPILL NOTIFICATION

**** Please see reference sheet when completing these columns.**

1.3 HEALTH AND SAFETY

Safety is of paramount importance when responding to any oil spill. All standard safety precautions with respect to fire and explosion potential must be diligently applied before proceeding with containment and clean-up activities. ITB's strict policy is that no one is expected to put himself, other crew members and responders, or members of the general public at risk while attempting to respond to an oil spill incident.

All response procedures outlined in this Plan are to be conducted in accordance with the following priorities:

1. Protection of Life (including crew members, outside responders, and the public);
2. Protection of Property (including residences, businesses, and public facilities);
3. Protection of the Environment.

1.3.1 RESPONSIBILITY

The Tug Master is always responsible for ensuring the safety of the tug, barge, and crew. In the event of an oil pollution incident, the Tug Master will continue to ensure the safety of his crew during a response effort.

In such cases that the incident is beyond the capability of the tug and barge crew, and the resources of ITB's OSROs are called upon, ITB will request that the OSRO provide a Safety Officer. The duties of the OSRO safety officer are described in the OSRO's manual (e.g., *SEAPRO Technical Manual Part I, Section 1.3.1 – Safety Officer Duties*, *Alaska Chadux Response Manual Part I – Section 1.3.1 – Safety Officer Duties*).

1.3.2 HAZARD IDENTIFICATION

The three main hazards associated with petroleum product spills are:

- Fire
- Explosion
- Exposure through skin contact, inhalation, ingestion, and aspiration)

All ITB crew members have completed the *Canadian Coast Guard's Marine Oil Spill Shoreline Workers' Safety Course*, which describes the hazards associated with responding to petroleum product spills, and the appropriate safety precautions to be taken by responders – see *Section 3.9.1 – Types of Response Training.*

ITB barges have hazardous gas detectors in the pumprooms of its barges but do not carry portable hazardous gas detectors for entry into the spill scene. For hazardous gas detection for responder entry into the spill scene, ITB will rely on contractors. In Southeast Alaska, SEAPRO is the contractor and has provided ITB with the following information on their hazardous gas detection equipment:

Type of Instrument	Location	Parameters measured	Calibration Frequency and personnel
Dräeger CMS	OSRV Neka Bay, OSRV Rudyerd Bay	benzene, H_2S, and O_2	Per use calibration/ Safety Officer and Assigned Trained Personnel
Industrial Scientific model # TMX 412	OSRV Neka Bay, OSRV Rudyerd Bay	CO, O_2, H_2S LEL	Per use and monthly calibration/ Safety Officer and Assigned Trained Personnel
Multi Rae	Ketchikan Office	CO, O_2, H_2S LEL	Per use and monthly calibration/ Safety Officer and Assigned Trained Personnel

For the remainder of Alaska, Chadux is ITB's contractor who have hazardous gas detection equipment including a TMX 412 Gas Meter by Industrial Scientific (O2, %LEL, CO, H2S), a Draeger CMS (Benzene, hydrocarbons), Sensodyne Pump (petroleum hydrocarbons). All of this equipment is located in Anchorage.

1.3.3 MATERIAL SAFETY DATA SHEETS (MSDS)

Island Tug & Barge's WHMIS Manual set (3 Volume Set) contains all the Material Safety Data Sheets for products which employees may come in contact with. Copies are maintained on all Island Tug and Barge vessels.

Critical Sections on each sheet are:

- Section 4 **Fire and Explosion Hazard**
  (i.e., general hazards, fire fighting)
- Section 6 **Health Hazard Information**
  (i.e., inhalation, eye and skin contact, ingestion)
- Section 7 **Preventive and Corrective Measures**
  (i.e., personal protection, handling/storage/shipping, land and water spill response)
- Section 8 **First Aid Measures**
  (i.e., inhalation, eye and skin contact, ingestion)

1.3.4 SAFETY CONSIDERATIONS

Figure 1.3.1 outlines key protective actions that should be taken in the event of a spill of any product, and special precautions in dealing with spills of `Low Flash' Products such as Unleaded Gasolines, Jet Fuel `B' and Aviation Gasolines.

1.3.5 SITE SAFETY AND HEALTH PLAN

The *Site Safety and Health Plan* from ITB's OSRO (e.g., SEAPRO, Chadux, etc.) is to be used as the basis for site safety planning in the event of a marine oil spill.

1.3.6 OIL TRANSFER PROCEDURES

Detailed oil transfer procedures for ITB barges, as required by USCG Title 33 CFR 155.750, are contained in the vessel specific Operations Manuals which are maintained on board the vessels.

1.3.7 HEALTH AND SAFETY OFFICIALS

Responsibility for clarification, communication, and enforcement of ITB's existing health and safety standards and procedures rest with:

Barge and Tug:	**Tug Master**
ITB Management:	**Safety and Quality Manager**

For all products:

Following occurrence of a spill, immediately:

- ☐ **Stop** all cargo loading and unloading operations.
- ☐ **Eliminate** all sources and potential sources of ignition.
- ☐ **Assess** the situation – identify the product spilled and associated hazards.
- ☐ **Never** rush in.
- ☐ **Locate** the spill source and stop the flow if possible to do so SAFELY.
- ☐ **Warn or notify** people in the area and those in areas that might be affected (e.g., down wind, down stream) and clear areas at risk.
- ☐ **Always approach** the spill from the direction of the tide and wind (equal distance).
- ☐ **Wear** impervious clothing, gloves, and appropriate eye protection.
- ☐ **Do NOT** wade or walk through spilled material.
- ☐ **Measure** for potentially explosive vapours before approaching a spill in a confined space (e.g., barge pump room, empty tanks, tank headspace).
- ☐ **Follow** confined space entry procedures closely**.**
- ☐ **Remove** under clothing or porous clothing immediately if contaminated and wash exposed area.
- ☐ Fuel oils in a fine spray or leak on a hot surface, will **ignite** as readily as gasoline.

Figure 1.3.1 – Key Safety Considerations

For 'low flash' products - Additional

- ☐ **Always approach** the spill from direction of tide and wind (equal distance).
- ☐ **Measure** for potentially explosive vapours before approaching the spill scene (including barge pumproom and area beneath dock).
- ☐ **DO NOT** attempt to boom or contain on water.
- ☐ **Divert** spilled product away from the vessel and dock area using fire hose streams, prop-wash from the tug or spill boos in a deflective capacity. (Tug positioned upwind and upstream of the spill).

Safe Work Practices - Personnel

Small Boats

- ☐ **Must** wear life jackets
- ☐ **Never** overload craft
- ☐ **Minimize** movement
- ☐ **Secure** equipment
- ☐ **Carry** necessary fuel
- ☐ **Verify** lights
- ☐ **Don't** stand
- ☐ **Check** boom tow lines and fittings
- ☐ **Do not speed or make fast turns**
- ☐ **Use care** when refuelling gas tanks
- ☐ **Secure** portable radios
- ☐ **Remember** "rules of the road"

General

- ☐ **Wear** proper clothing, rainwear and boots
- ☐ **Provide** comfort items: water, food, first-aid kit, etc.

Figure 1.3.1 - Key Safety Considerations (cont'd)

1.4 COMMUNICATIONS

In the event of a marine oil spill incident involving an ITB vessel in Canadian or U.S. waters, it will be essential to ensure quick, reliable, and accurate communications between any or all of the following:

1. ITB's vessel at the scene of the spill;
2. On-site responders;
3. OSRO offices
4. Various government agencies (e.g., ADEC, WDOE, USCG, CCG, OEM);
5. ITB's head office/Command Centre in Vancouver, B.C..

ITB's vessels and head office are equipped to ensure that they can communicate with each other and other responders, regardless of location within ITB's area of operations in Canadian and U.S. waters.

1.4.1 VESSEL COMMUNICATIONS

All ITB vessels are equipped with the following communications equipment which will be used during an oil spill response operation:

- VHF Marine Radiotelephones and portable radios:
  Used primarily for communications with on-site responders such as the OSRO, plus various government agencies at the scene of the spill.
  - Tugs VHF 67
  - Barges VHF 69

- Single Sideband Radio (SSB):
  Used primarily for communication with ITB's head office in Vancouver.

- Qualcomm Satellite Communications

- Inmarsat C

- Cellular telephone:
  Use primarily for communication with ITB's head office in Vancouver, ITB's ERT members travelling to the spill site, OSRO head offices, and government agencies.

NOTE: May be unreliable if the spill is located outside of or beyond normal cellular transmission zones.

- Fax
- Email
- Boatracs Satellite Messaging System:
  Provides reliable written messaging capability via satellite between all vessels regardless of location and the company's head office in Vancouver. Used primarily for communication of vital information or directions to and from the vessel and the ITB Command Centre.

1.4.2 ITB COMMAND CENTRE

The ITB Command Centre in Vancouver will communicate with the vessel using some or all of the systems and equipment outlined above.

Communications with the OSRO offices and government agency offices in the appropriate jurisdiction will take place via:

- Regular land telephone lines;
- Cellular telephone;
- Facsimile and/or E-Mail.

1.4.3 ERT MOBILE COMMUNICATIONS

ITB ERT personnel may deploy by the fastest means available to the centre nearest to the spill site to establish a field Command Centre. While enroute, they will stay in contact with the Vancouver Command Centre and outside responders using cellular telephones. ERT members will also be equipped with portable VHF radios to be used upon arrival at or near the spill site for communicating with OSRO personnel and the ITB vessel, and laptop computers for communicating with Vancouver, and OSRO offices via e-mail.

Once the field Command Centre is in place, the ERT will also use available land telephone lines and fax machines as well.

1.4.4 RESPONSE ORGANIZATION (OSRO) COMMUNICATIONS

ITB's OSROs maintain significant quantities of communications equipment for use during a spill response operation within their respective operating areas.

SEAPRO's and Chadux's inventories are outlined in *Section 1.4 – Communications* of their respective manuals and include:

- VHF marine radios;
- Multiple land telephone lines;
- Cellular and satellite phones plus a portable repeater station;
- Facsimile and E-Mail equipment.

During a spill response effort, ITB will establish and maintain communications with the OSRO using the most appropriate combination of these systems depending on the spill location and operating limitations (if any) of the equipment (e.g., cell phone reception).

Figures 1.4.1 and *1.4.2* provide a list of *VHF-FM Radio Frequencies* and *VHF Marine Band Frequencies - United States* respectively. *Figure 1.4.3* shows primary radio frequencies that may be used for responding to spills in Alaska.

The following is some key contact information for ITB's contractors. For a more detailed contact listing, refer to the OSRO's response manual.

Southeast Alaska Petroleum Resource Organization (SEAPRO)
Phone (907) 225-7002 (24 Hour) or 1-888-225-7676 (AK only)
Fax (907) 247-1117

Washington State Maritime Cooperative (WSMC)
Phone (206) 448-7557
Channel 20 VHF

Burrard Clean
Phone (604) 294-6001 (Office) (604) 294-9116 (24 hr Emergency)
Fax (604) 294-6003
Channel 6 VHF (Between Boats) 18A and 82 VHF (Secondary)

Maritime Fire and Safety Association & Clean Rivers Co-operative Inc.
Phone (503) 220-2055 (24 hr)
Fax (503) 295-3660

Channel 16 VHF & 18A VHF (MFSA call sign WHW656)

Alaska Chadux Corporation
Phone 1 888 831-3438 24 hours
or 907 348-2365
Fax 907 3482330

National Response Corporation (NRC)
Phone 1-800-899-4672 (4NRC) 24 hours
Fax 631-224-9086 (IOC)
Fax 631-224-9082 (Main)

1.4.5 GOVERNMENT AGENCY COMMUNICATIONS

The U.S. Coast Guard and state environmental departments have their own VHF and/or UHF frequencies for secure internal communications and a full range of radio, telephone, and electronic communications equipment for emergency and spill response purposes. ITB will communicate directly with the appropriate agencies using whatever systems are best suited to the location and conditions of the incident.

Purpose	Channel	Use
DISTRESS/SAFETY/Hailing	16	International
Coast Guard	22	International
Intership Safety	06	International
Navigation and Vessel Traffic	11, 12, 13, 14, 67, 71, 74	
Ports Operations	77	Intership only
	20	Shipshore only
	01, 05, 12, 14, 17, 63, 65, 66, 73, 74	
Commercial Operations	08,88	Intership only
	63	Shipshore only
	01, 07, 09, 10, 11, 18, 19, 63, 65, 67, 72, 73, 78, 79, 80	
Fishing Industry	78, 79	
Towboat Industry	07, 10, 18, 63, 65	
Ships-to Aircraft	06, 08, 09, 16, 18, 67, 68, 72	
Public Correspondence	01	Intership in U.S.
--Marine Operator	02, 03	
(telephone service)	23, 24, 25, 26, 27, 28, 60, 64, 84, 85, 86, 87, 88	
Digital Selective Calling	70	USA- Intership and shipshore CANADA-
State Control	17	
Environmental and Class "C" EPIRB	15	

Figure 1.4.1 - VHF-FM RADIO FREQUENCIES

Channel	Receive	Transmit		Channel	Receive	Transmit
01	160.650	156.050		60	160.625	156.025
02	160.700	156.100		61	160.675	156.075
03	160.750	156.150		62	160.725	156.125
04	160.800	156.200		63	160.775	156.175
05	156.300	156.250		64	160.825	156.225
06	156.300	156.300		65	160.875	156.275
07	160.950	156.350		65A	156.275	156.275
07A	156.350	156.350		66	160.950	156.325
08	156.400	156.400		66A	156.325	156.325
09	156.450	156.450		67	156.375	156.375
10	156.500	156.500		68	156.425	156.425
11	156.550	156.550		69	156.475	156.475
12	156.600	156.600		70	156.525	156.525
13	156.650	156.650		71	156.575	156.575
14	156.700	156.700		72	156.625	156.625
15	156.750	156.750		73	156.675	156.675
16	156.800	156.800		74	156.725	156.725
17	156.850	156.850		77	156.875	156.875
18	161.500	156.900		78	161.525	156.925
18A	156.900	156.900		79	161.575	156.975
19	161.550	156.950		79A	156.975	156.975
19A	156.950	156.950		80	161.625	157.025
20	161.600	157.050		81	161.675	157.075
21	161.650	157.050		81A	157.075	157.075
21A	157.050	157.050		82	161.725	157.125
22	161.700	157.100		83	161.775	157.175
22A	157.100	157.100		83A	157.175	157.175
23	161.750	157.150		84	161.825	157.225
23A	157.150	157.150		85	161.875	157.275
24	161.800	157.200		86	161.925	157.325
25	161.850	157.250		87	161.975	157.375
26	161.900	157.300		88	162.025	157.425
27	161.950	157.350		88A	157.425	157.475
28	162.000	157.400				

Figure 1.4.2 - VHF MARINE BAND FREQUENCIES - UNITED STATES

Channel	Receive	Transmit	Ship/Ship	Ship/Shore	Note
6	156.300	156.300	Yes	No	Ship to Aircraft
7A	156.350	156.350	Yes	Yes	
8	156.400	156.400	Yes	No	
9	156.450	156.450	Yes	Yes	
12	156.600	156.600	Yes	Yes	
16	156.800	156.800	Yes	Yes	Distress Call
18A	156.900	156.900	Yes	Yes	
20	157.050	157.050	Yes	Yes	
21	161.650	157.050	--	Yes	USCG Restricted
22	161.700	157.050	Yes	Yes	USCG
65A	156.275	156.275	Yes	Yes	
69	156.475	156.475	Yes	Yes	
80A	161.625	157.025	Yes	Yes	
83	151.175	161.725	--	Yes	Repeater
	155.295	155.295			ADEC

Figure 1.4.3 – EMERGENCY RADIO CHANNELS FREQUENTLY USED IN ALASKA

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1.5 DEPLOYMENT STRATEGIES

Deployment strategies outlines the initial actions that will be taken by ITB personnel to:

- Contain and clean up the spill around the vessel;
- Protect sensitive resources around the spill site;
- Notify and mobilize the appropriate OSRO depending on the location of the spill;
- Transport personnel, equipment and other supplies to the spill site;
- Transport ERT personnel and establish a field Command Centre at or near the spill site.

1.5.1 INITIAL RESPONSE ACTIONS

Following detection of a spill from an ITB vessel, ITB crew members will take immediate action to:

- Ensure the safety of all personnel;
- Stop the flow of product;
- Contain the spill on the deck of the barge or around the vessel;
- Clean up spilled oil using on board response equipment (e.g., boom, sorbent materials).

The following will be notified as soon as safely possible to do so:

- Terminal/shore personnel (if loading or unloading at a facility);
- Government/regulatory agencies (e.g., CCG, USCG, ADEC, etc.);
- ITB head office in Vancouver, B.C.;
- Designated Oil Spill Response Organization (OSRO).

The vessel Master is the designated **Vessel Response Team Leader**. He is responsible for:

- Initiating and supervising appropriate response actions by the crew;
- Ensuring the safety of all personnel;
- Assessing the situation and reporting the spill to ITB management and ensuring the spill is reported to the proper authorities;
- Ensuring notification of the appropriate OSRO.

The initial response procedures that will be taken by ITB crew members following an oil spill are clearly outlined in *Section 1.1 – Emergency Action Plan* of this Plan. The procedures are laid out in checklist form for a number of possible spill scenarios including *Operational Spills* and *Spills Resulting from Vessel Casualties* as shown below:

Section	Type of Spill	Page
	OPERATIONAL SPILLS	
1.1.1	**Pipeline/Cargo Hose Leakage during Cargo Transfer**	**1.1-3**
	Tank Overflow during Cargo Transfer	**1.1-5**
	Hull Leakage during Cargo Transfer	**1.1-7**
	SPILLS RESULTING FROM CASUALTIES	
1.1.2	**Grounding**	**1.1-10**
	Fire/Explosion	**1.1-13**
	Collision	**1.1-16**
	Hull Failure	**1.1-19**
	Excessive List	**1.1-21**

Minor operational spills will be contained and cleaned up by ITB vessel personnel using equipment and supplies carried on the vessel – *see Section 1.8 - Vessel Descriptions* for a list of spill response equipment and materials carried on barges. If a spill occurs while loading or unloading at an oil handling facility, shore-based equipment and personnel may be utilized if readily available from the terminal.

For instance, ITB has received a copy of the *Oil Discharge and Prevention Plan* for Petro Marine's facility in Skagway, AK. If a spill occurred during unloading at this site, ITB personnel would attempt to coordinate their efforts with Petro Marine responders to maximize the effectiveness of the response – see *Section 1.5 – Deployment Strategies* and *Section 1.6 – Response Strategies* in the Petro Marine plan for reference.

1.5.2 PROTECTION OF SENSITIVE RESOURCES

ITB personnel will try to protect sensitive resources in the immediate area of the spill using on board response equipment until outside assistance (i.e., OSRO) arrives. This will be done by:

1. **Containing as much as oil as possible on the barge by:**
   - Stopping the flow of product immediately;
   - Shutting off all pumps;
   - Blocking drains and scuppers.

2. **Containing oil in the water around the barge (excluding low flash products like gasoline) by:**
   - Deploying the barge's containment boom around the spill to prevent it from moving away from the vessel with the tide and/or wind;
   - Using sorbent pads to recover trapped oil inside the containment boom.

3. **Protecting the most sensitive resources around the spill site (including residences, businesses, and human use resources, and environmental sensitivities such as fish or bird habitats, spawning grounds, marshes, and wetlands) by:**
   - Deploying available boom in the most appropriate protective pattern (i.e., exclusionary, deflection, cascading) having regard to the direction of tides, currents, and winds and the most likely movement of oil outside the containment area around the barge – see *Section 1.6 – Response Strategies* for a more complete description of these countermeasures).

ITB personnel will make every effort to protect sensitive resources at risk in the immediate area of a spill using on board equipment until additional equipment and personnel more suited to this purpose have arrived. The Master is responsible for determining the most effective combination of countermeasures given the requirements of the situation.

MOST ENVIRONMENTALLY-SENSITIVE AREAS (MESA'S)

The Alaska Dept. of Fish and Game (ADFG) has identified "biological hotspots" throughout Alaska. These "Most Environmentally Sensitive Areas" are called MESAs. A full listing of MESAs is attached at the end of this section. The Sub-area Contingency Plans contain detailed descriptions and maps of the MESA's. These can be found at:

http://www.asgdc.state.ak.us/maps/cplans/subareas.html

The MESA's near ITB vessel routes that could possibly impacted by a spill from an ITB vessel are:

MESA #1 – Stefansson Sound Boulder Patch
MESA #2 – Howe/Duck Islands / Sagavanirktok River Delta
MESA #3 – Colville River Delta
MESA #4 – Peard Bay / Franklin Spit
MESA #5 – Kasegaluk Lagoon
MESA #6 – Cape Lisburne / Cape Lewis
MESA #7 – Cape Thompson
MESA #9 – Little Diomede Island
MESA #10 – King Island
MESA #11 – St. Lawrence Island
MESA #28 – Unimak Pass / Krenitzin Islands
MESA #40 – Perenosa Bay / Seal Bay (Afognak Island)
MESA #41 – Marmot Island
MESA #42 – Barren Islands
MESA #43 – Chenik Head to Silver Beach (Kamishak Bay)
MESA #44 – Redoubt Bay
MESA #45 – Katgin Island
MESA #46 – Trading Bay
MESA #47 – Susitna Flats
MESA #48 – Anchorage Flats
MESA #49 – Goose Bay
MESA #50 – Palmer Hay Flats
MESA #51 – Mouth of the Kenai River
MESA #52 – Clam Gulch
MESA #53 – Kachemak Bay
MESA #61 – Mendenhall Wetlands
MESA #63 – Stikine River Flats

The countermeasures for protecting areas of this nature are described generally *in Section 1.6 – Response Strategies* (e.g., exclusion booming, deflection booming). The specific response tactics that might be employed to protect MESAs is provided in *Section 3.10 – Protection of Environmentally-Sensitive Areas.*

1.5.3 CONTRACTOR NOTIFICATION AND MOBILIZATION

The vessel Master is responsible for activating the initial notification and alerting process following a spill occurrence as outlined in *Section 1.2 – Reporting and Notification*. This initial notification and alerting process includes reporting the spill to:

- The proper federal (USCG, CCG), state (ADEC, WDOE, OEM), and provincial authorities (BC MOE);
- ITB management in Vancouver;
- The designated OSRO depending on the location of the spill.

The designated OSRO for ITB's sailing routes are listed in the applicable COTP Zone specific Appendix. ITB management will contact the appropriate OSRO upon being notified by the Master that a spill has occurred. If ITB management cannot be immediately notified, the Master will notify the appropriate OSRO

1.5.4 TRANSPORTATION AND DEPLOYMENT OF RESOURCES

When notifying the OSRO, ITB management will provide as much accurate information as possible regarding:

- the type of product and estimated quantity spilled;
- the exact location of the spill;
- spill status (i.e., discharge stopped, continuing, worsening);
- condition and stability of the vessel;
- conditions at the scene of the spill (i.e., wind, weather, tides, currents);
- actions taken by ITB personnel;
- estimate of the type and level of assistance required.

ITB will rely on the expertise and local knowledge of the OSRO to determine:

- exact type and amount of equipment to be mobilized given the circumstances;
- number of personnel required;
- best located centre(s) for staging personnel and equipment;
- fastest transportation mode and route to the spill site.

SEAPRO DEPLOYMENT – SE ALASKA

Part 1 – Section 5– Deployment Strategies of SEAPRO's *Technical Manual* describes the SEAPRO and member-owned equipment systems by response Zone as determined by SEAPRO management.

Given ITB's typical sailing route to Skagway (see *Section 3.1.3 – Vessel Routes* of this Plan), ITB is most likely to call on equipment from one or more the following Zones or centres where SEAPRO-owned equipment is presently stored:

SEAPRO-Owned Equipment Zones (Centres)	
Zone 1	Ketchikan
Zone 3	Wrangell / Petersburg
Zone 4	Kake
Zone 7	Juneau
Zone 8	Haines / Skagway

The SEAPRO *Technical Manual* contains a detailed listing of all the SEAPRO-owned equipment systems by Zone (see *Part 1. Section 5 (Deployment Strategies) – Table 1*) and Member equipment systems by Zone (see *Part 1. Section 5 (Deployment Strategies) – Table 2*). Depending on the location of a potential spill, it is assumed that SEAPRO will mobilize and deploy personnel and equipment from the nearest appropriate centre by the fastest mode of available transport.
The SEAPRO plan also describes the transportation modes available in each Zone and the estimated transportation times in hours by mode between Zones for larger scale deployments (see *Part 1. Section 5 (Deployment Strategies) – Table 3*).

See *SEAPRO Technical Manual Part 1, Section 1.5 – Mobilization/Deplyment Strategies* which includes Tables 1, 2, & 3 as mentioned above.

(NOTE: ITB will rely on SEAPRO's knowledge of its own equipment and the area in which a spill might occur to determine the best and quickest means of transporting personnel and equipment to the site. Under the terms of its *Response Action Contract (RAC)* with SEAPRO, ITB may draw on SEAPRO-owned equipment listed in SEAPRO's *Technical Manual* as required.)

ALASKA CHADUX DEPLOYMENT – ALASKA (Except S.E. Alaska)

Part 1 – Section 5– Deployment Strategies of Chadux's *Response Manual* describes the mobilization /deployment strategies for Chadux owned and contracted equipment as well as its personnel. Depending on the location of a potential spill, Chadux will mobilize and deploy personnel and equipment from the nearest appropriate centre by the fastest mode of available transport.

See Chadux's *Response Manual Section 1.5* provides guidelines for developing equipment deployment strategies and contains matrices for Chadux and member owned equipment mobilization.

(NOTE: ITB will rely on Chadux's knowledge of its own equipment and the area in which a spill might occur to determine the best and quickest means of transporting personnel and equipment to the site.

1.5.5 ERT MOBILIZATION AND DEPLOYMENT

In the event of a serious or major spill, some or all members of the ITB ERT will proceed from Vancouver, B.C. to the nearest suitable centre to the spill site to establish a field Command Centre for managing and directing the response effort.

ITB will charter a suitable aircraft to fly its ERT to any centre in BC, Washington, Oregon and Alaska with suitable landing facilities for jet and/or prop-driven aircraft.

Estimated flying times from Vancouver to communities in Alaska are shown below. Approximately 2-3 hours should be added to these times to account for travel to and from the airports at both ends of the trip, boarding, and clearing U.S. Customs.

Estimated Flying Times from Vancouver to Centres in Alaska	
LOCATION	**EST. FLYING TIME**
Juneau	2 hours
Ketchikan	1 hr 15 min
Petersburg	1 hr 55 min
Klawock	2 hrs 5 min
Skagway	2 hrs 55 min
Kake	2 hrs 5 min
Wrangell	1 hr 45 min
Anchorage	3 hrs 15 min
Barrow	5 hr 15 min

The number of ITB personnel dispatched to the spill site from Vancouver will depend on the requirements and severity of the situation. As noted, ERT members will carry critical communications equipment along with their personal effects including:

- cellular telephones;
- portable VHF radios;
- laptop computer for E-Mail.

1.6 RESPONSE STRATEGIES

This section provides a general overview of the tactical priorities and countermeasure techniques that may be employed to contain, recover, and clean up a marine oil spill resulting from a spill from an ITB barge. The actual tactics that will be used to respond to a particular incident will depend on the unique circumstances and requirements of each spill (e.g., time of day, weather conditions, tidal flow, product(s) involved).

TACTICAL PRIORITIES

Once the safety of all personnel has been ensured, the source of discharge is secured and initial notification has been activated, the overall tactical priorities are:

- identification and protection of biological, physical, and economic resources,
- containment and recovery of spilled oil, and
- site and shoreline clean-up.

Response tactics will be determined by the Person-In-Charge or by the ITB management organization Incident Commander. Critical advice will be provided by representatives of key government agencies (e.g., U.S. / Canadian Coast Guards, Provincial Emergency Program, Environment Canada, Alaska Department of Environmental Conservation (ADEC), Washington State Emergency Management Branch (WEMD)).

Response operations will be physically conducted by the barge Vessel Response Team (VRT) personnel and equipment in conjunction with the personnel and resources of various response contractors. Contractors will provide the majority of necessary response equipment and trained personnel for all spills beyond the capability of Barge response personnel.

FUEL CHARACTERISTICS

The volatility and flammability of petroleum products creates a safety hazard in the event of a spill. Volatility is a measure of a liquid's tendency to vaporize. Flammability refers to the ease with which vapours will ignite and is measured by its flash point. All gasolines readily give off vapours that can form ignitable mixtures at ambient temperatures. Diesel fuel and stove oil do not normally give off these vapours, but may do so under certain

temperature and air pressure conditions. Given the presence of air and a source of ignition, gasoline will ignite more easily than diesel fuel and stove oil. Middle distillate fuels (i.e., diesel, stove oil) and gasoline are classified as 'non persistent' oils.

When spilled on water, non-persistent oils display the following general characteristics.

- **gasoline is highly flammable due to vapour formation**
- **spread quickly across the surface of the water in a thin film or sheen**
- **may cover a wide area if uncontained**
- **fairly strong odour may be present, at non-toxic levels**
- **toxic to fish, wildlife, and marine plants in concentrated form**
- **evaporate fairly rapidly compared to thicker or more viscous products**
- **evaporation and wave action will dissipate spilled oil usually within 12-24 hours after the spill**
- **does not lead to extensive or heavy shoreline oiling or clean-up**[1]

On the other hand, bunker fuel oil is defined as a 'persistent' oil. On entering the water it tends to float on the surface in a fairly uniform mass. Unlike gasoline or diesel fuel, it does not evaporate rapidly or spread out in a thin film or 'sheen'. During this stage, it can be recovered fairly easily with skimmers or sorbent material. After about 3-4 hours, it begins to form an emulsion in the water (AKA 'mousse') that is much more difficult, time consuming, and costly to recover. Oiling of shorelines is more of a concern than with non-persistent oils.

The behaviour of these products on water determines the most appropriate and effective response tactics to be taken by responders to contain and recover the spilled oil, to protect sensitive environmental resources, and to clean up the spill site and other affected areas.

[1] Diesel fuel or heating oil may leave a light residue of heavier fractions on the surface of the water after the lighter components have evaporated. It may emulsify to a yellowish 'mousse' if mixed with fine sand in a sheltered area.

NEARSHORE PROTECTION TECHNIQUES

Open water containment booming and recovery is the first line of defence for distillate and bunker spills from ITB barges. Oil which cannot be contained using other containment booming techniques, should be boomed using shoreline booming techniques if feasible. Shoreline booming techniques can be used to protect sensitive shoreline resources. The three main shoreline boom deployment patterns are:

- Exclusion Booming
- Deflection Booming
- Diversion Booming

Containment booming and shoreline booming are briefly described on the following pages and are summarized in *Figure 1.6.6*. A more detailed description of shoreline protection techniques is contained in the BC Environment *Marine Oil Spill Shoreline Protection and Clean-up Manual*.[2]

CONTAINMENT BOOMING (Distillates and Bunkers Only)

The goals of containment are to:

- contain as much as possible near the source of discharge,
- limit the spread of the oil across the water, and
- maximize the thickness of the spilled oil on water to facilitate recovery efforts.

NOTE: Containment should only be attempted with bunker fuels, distillates, and similar high flash products. Gasoline and similar low flash products should NOT be contained or boomed under any circumstances due to the risk of fire or explosion.

[2] BC Environment, *BC Marine Oil Spill Shoreline Protection and Clean-up Manual*, January 1992.

Product can be boomed using one or more boats. The objective is to create and maintain a holding position until contractor skimming equipment is on site. *Figure 1.6.1* illustrates containment booming using one work boat. A pile cluster, a corner of the barge, a buoy with anchor, etc. can be used to secure boom ends.

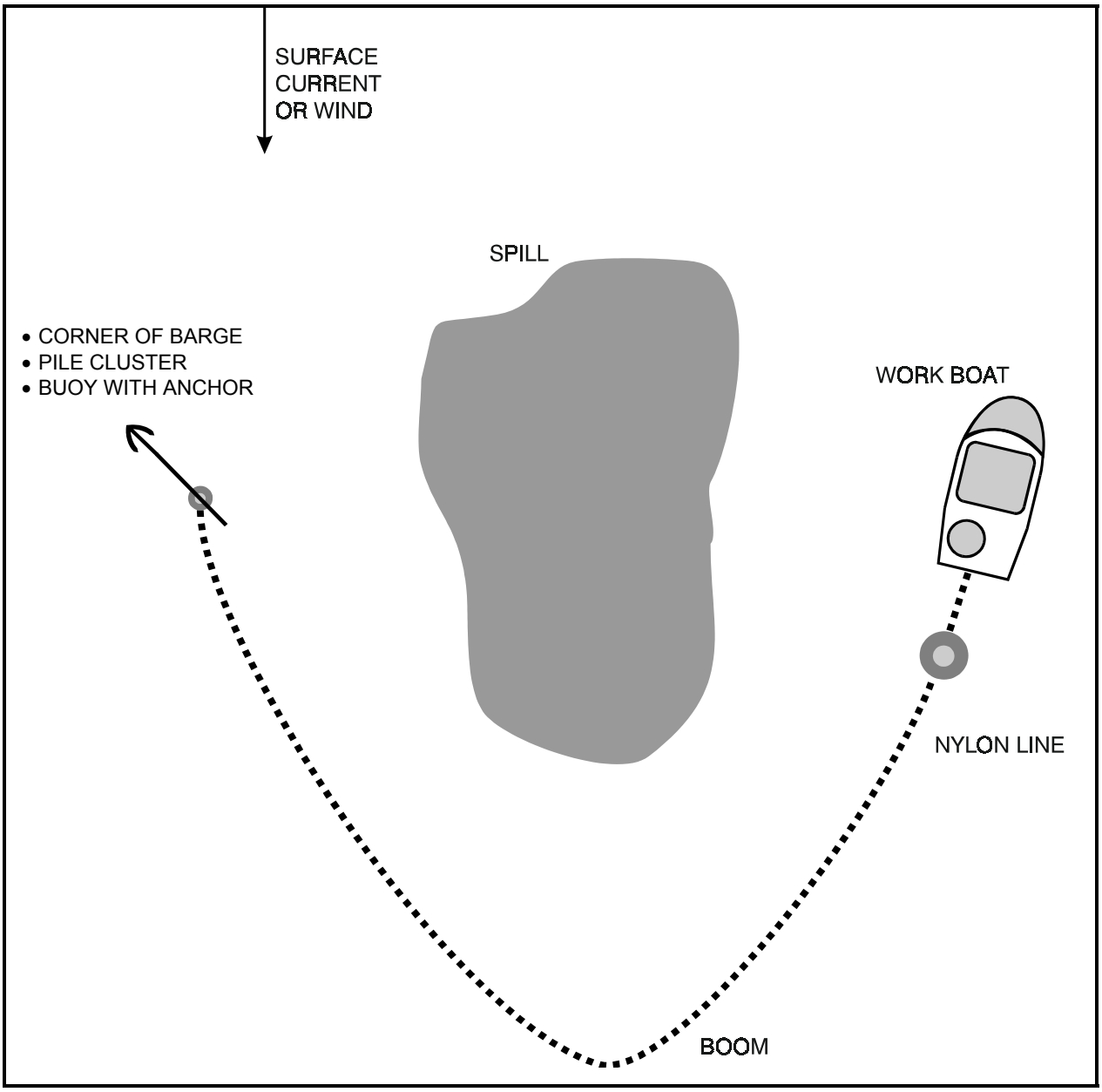


Figure 1.6.1 - Initial Containment Booming Using One Boat

In the event of a slow, continuous discharge from a barge (i.e., hull leakage), responders may consider deploying boom in a pattern similar to that shown in *Figure 1.6.2.*

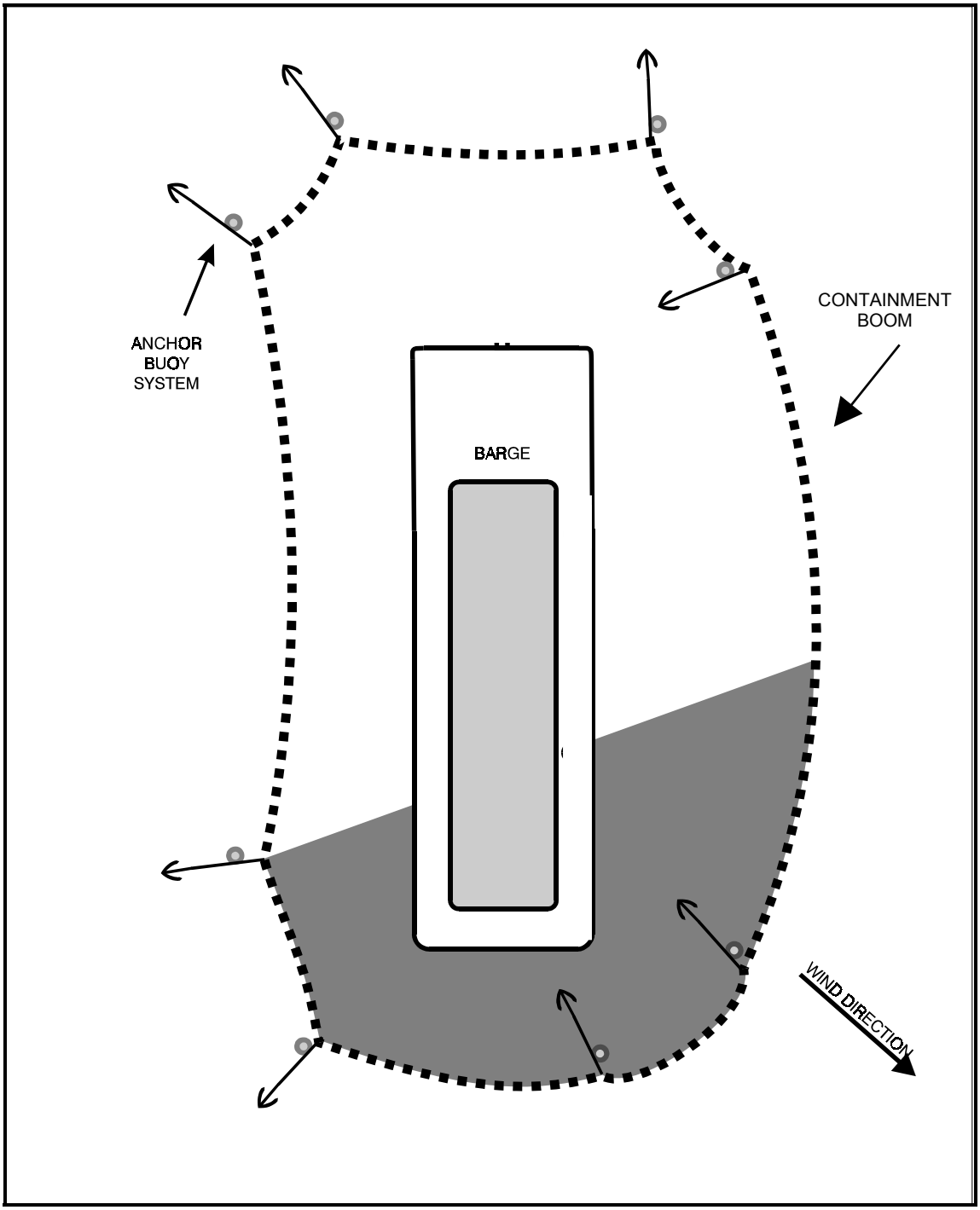


Figure 1.6.2 - Booming of a Barge

Mechanical Recovery Tactics (Skimming)

To be effective, skimmers must be deployed as soon as possible after the spill is detected before the oil spreads into a thin sheen. Weir skimmers are effective at recovering lower viscosity oils such as bunker fuels while disc skimmers, drum skimmers, and brush skimmers are effective on a wider range of products including diesel fuel and bunker fuel. Surface skimming is not recommended for gasolines and similar low flash products due to the extreme fire/explosion hazard.

Mobile disc skimmers can be deployed within a primary containment area such as that shown in *Figure 1.6.1* and *Figure 1.6.2*.

Manual Recovery Tactics (Sorbent Pads)

Manual recovery involves spreading sorbent pads onto the surface of the water to soak up spilled oil. Sorbent pads are effective on thin sheens of oil or for small amounts of oil escaping from the containment boom. Sorbent pads can be used when the oil film is too thin to permit effective skimming.

Mechanical and manual sorbent recovery techniques are not mutually exclusive. An effective response can involve both sorbent material and mechanical skimming. Good commercial pads will selectively absorb oil rather than water and are very effective when used properly. For a fast response, sorbent pads should be applied generously.

NOTE: Oiled sorbent pads are classified as Special Waste under the BC *Waste Management Act* and must be treated accordingly.

EXCLUSION BOOMING (Distillates and Gasolines)

Exclusion booming can be used to protect marinas and other sensitive areas such as river estuaries. An exclusion boom deployment to protect a marina is shown in *Figure 1.6.3*.

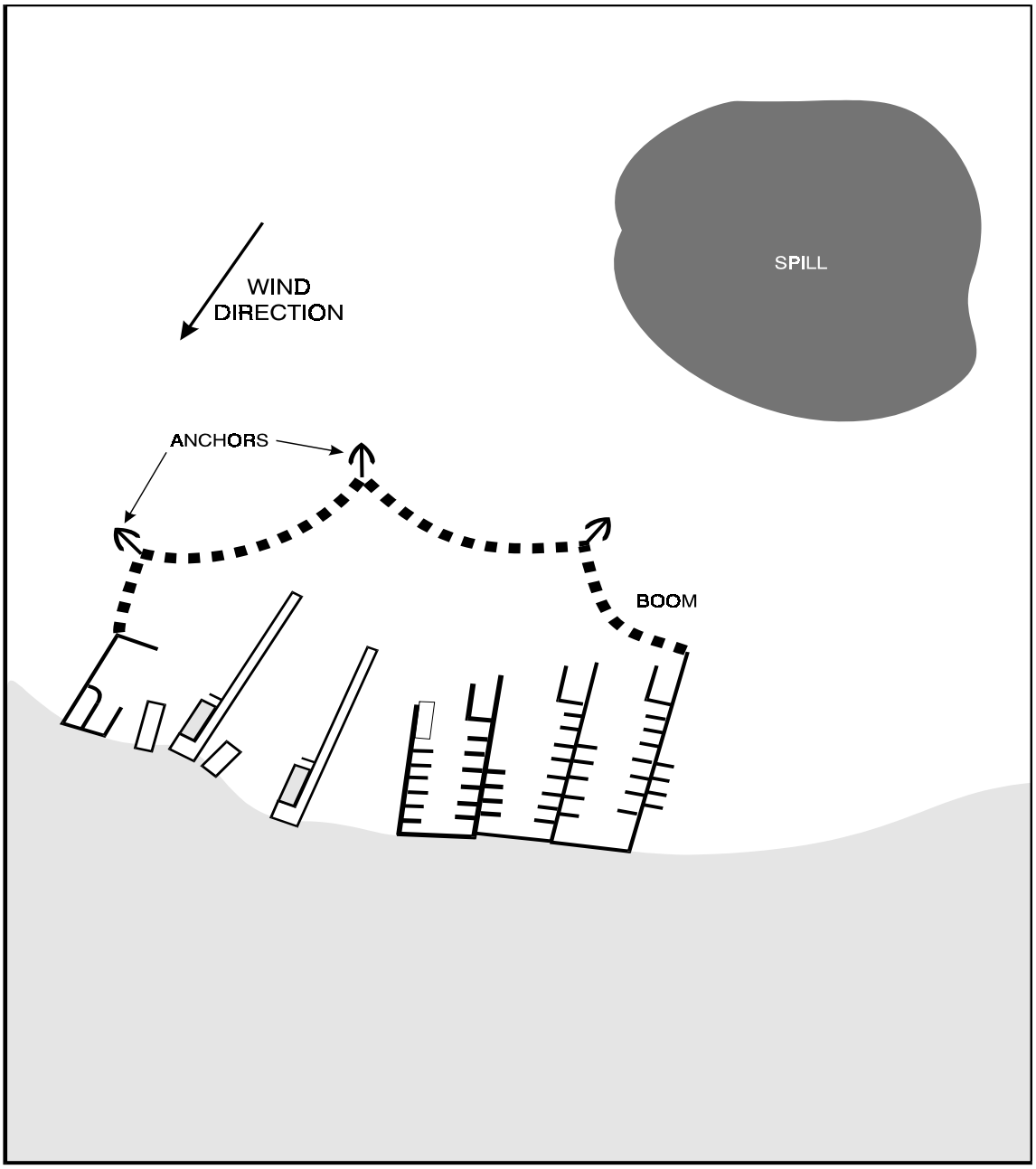


Figure 1.6.3 - Exclusion Booming of a Boat Basin

DEFLECTION BOOMING (Distillates and Gasolines)

Deflection booming is aimed at directing the oil away from the shore to protect a sensitive shoreline area or resource. A typical deflection boom configuration is shown in *Figure 1.6.4*.

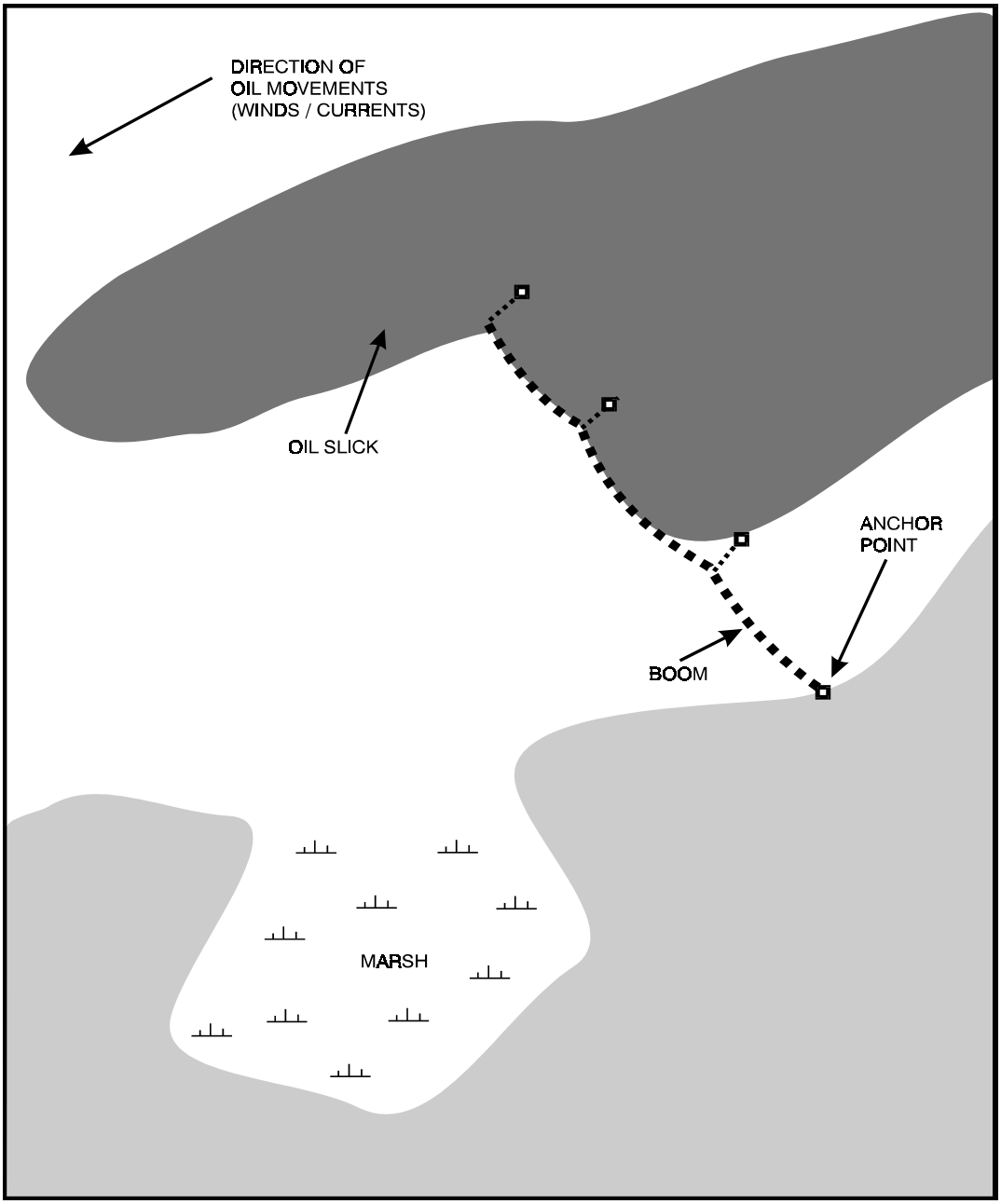


Figure 1.6.4 - Deflection Booming Away from a Marsh

DIVERSION BOOMING (Distillates Only)

Diversion booming is aimed at directing oil towards the shoreline to a pre-selected collection point on the shore (i.e., a 'sacrificial beach). Once the oil has been diverted to the selected collection point, it can be collected using skimmers, vacuum trucks and/or sorbent materials.[3]

Sacrificial beaches should only be chosen in close consultation with key government agencies such as Environment Canada, BC Environment, Alaska Department of Environmental Conservation, and Washington State Emergency Management Branch.

Diversion booming can be accomplished using a single boom as shown in *Figure 1.6.5*.

[3] Although diversion booming requires the oiling of a shoreline area, it does allow more sensitive areas to be protected by directing oil onto a less sensitive sector or 'sacrificial beach'.

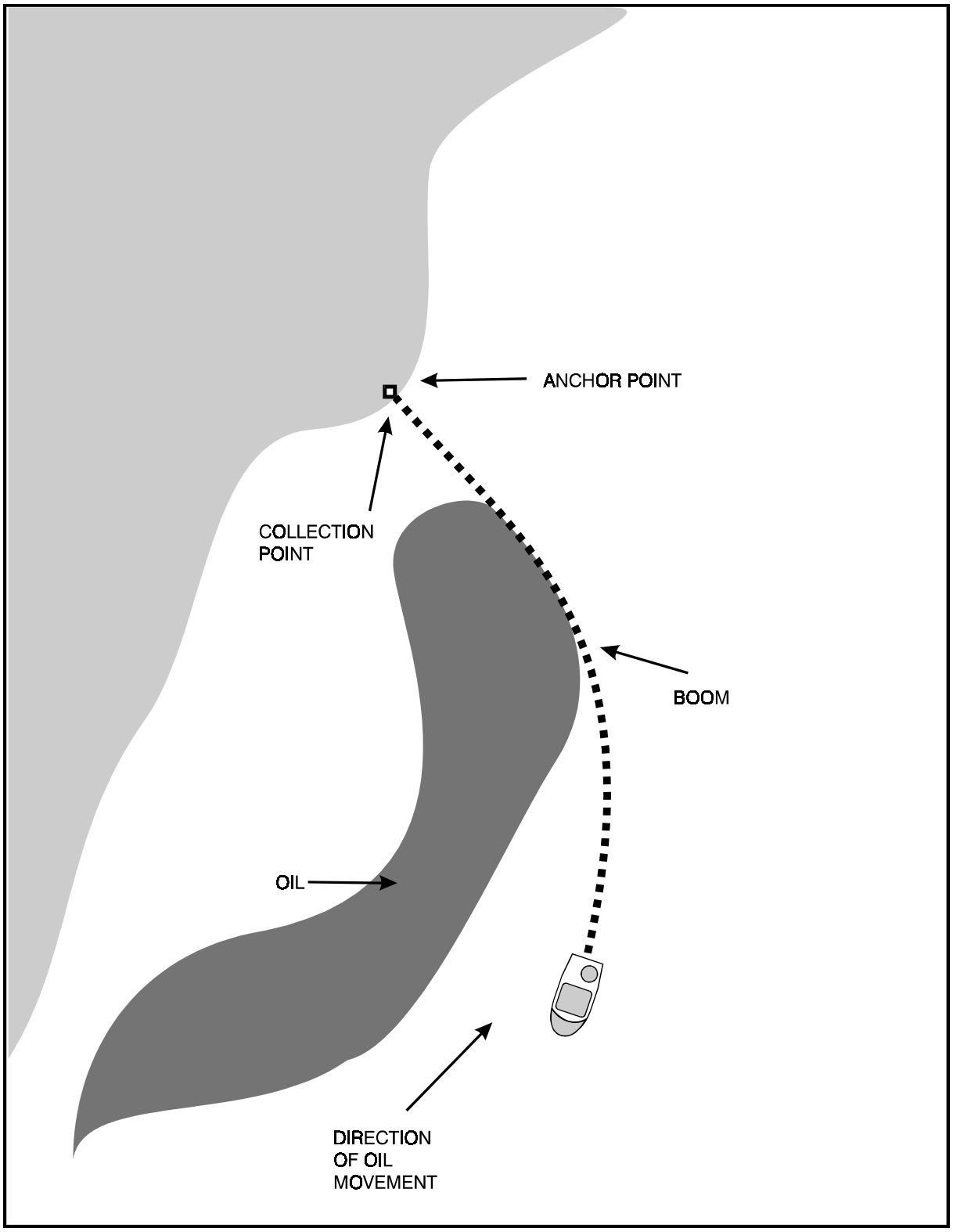


Figure 1.6.5 - Diversion Booming Along a Shoreline

NEARSHORE PROTECTION TECHNIQUE	PRIMARY USE	TECHNIQUE DESCRIPTION	PRIMARY LOGISTICAL REQUIREMENTS	LIMITATIONS
Containment Booming **(Distillates & Bunkers)**	Used in nearshore waters with swells less than 2m to surround and contain portions of an approaching oil slick.	Boom is deployed in a "U" shape in front of the oncoming slick. The ends of the boom are anchored by work boats or droques. The oil is contained within the "U" and prevented from reaching the shore.	For 150m diameter Slick: • 280m of boom • 2 boats and crew • boom tenders • tow lines, drogues, connectors, etc.	• high winds • swells > 2m • breaking waves > 50 cm • currents > 1m/s
Exclusion Booming **(Distillates, Bunkers & Gasolines)**	Used across small bays, harbour entrances, inlets rivers, or creek mouths where currents are less than 0.5m/s and breaking waves are less than 50cm in height	Boom is deployed across or around sensitive areas and anchored in place. Approaching oil is deflected or contained by boom.	Per 300m of boom: • 1 boat and crew • 3 boom tenders • anchors, anchor line, buoys, etc.	• current > 0.5m/s • breaking waves > 50cm • water depth > 20m
Deflection Booming **(Distillates, Bunkers & Gasolines)**	Used to deflect oil away from relatively small sensitive areas where alongshore currents exceed 0.5m/s, breaking waves are less than 50cm, or available boom is insufficient to exclude oil from the area.	Boom is deployed from the shoreline away from the approaching slick and anchored or held in place with a work boat. Oil is deflected away from the shoreline.	Single Boom, 1.5m/s current • 60m boom • 1 boat and crew • 3 additional personnel • 3 anchors, line, buoys, recovery unit	• currents > 1m/s • breaking waves > 50cm
Diversion Booming **(Distillates & Bunkers)**	Used across small bays, harbour entrances, inlets, river, or creek mouths where currents exceed 0.5m/s and breaking waves are less than 50cm, and on straight coastline areas to protect specific sites, where breaking waves are less than 50cm.	Boom is deployed from the shoreline at an angle towards the approaching slick and anchored or held in place with a work boat. Oil is diverted toward the shoreline for recovery.	Single boom, 0.75m/s • 60m boo m • 1 boat and crew • 3 additional personnel • 3 anchors, line, buoys, recovery unit	• currents > 1m/s • breaking waves > 50cm

Figure 1.6.6 - Summary of Nearshore Protection Techniques

SHORELINE CLEANUP ASSESSMENT TEAM (SCAT)

The Shoreline Cleanup Assessment Team (SCAT) program is a systematic, orderly and comprehensive approach that can be used following an oil spill to provide a real time evaluation of shoreline oil conditions and to provide data and advice to the spill response organization and cleanup operations personnel. The SCAT process could be to identify sensitive shoreline resources which are potentially threatened and to develop appropriate nearshore protection plans as outlined in the preceding section.

The specific goals of the SCAT process are to:

- identify the shoreline areas that may be oiled as a result of the spill through aerial surveys,
- conduct ground surveys of these areas if necessary to establish clean-up locations and priorities,
- determine the most environmentally-suitable methods of clean-up based on shoreline type and characteristics, and
- conduct and monitor shoreline clean-up operations.

ITB will make reference to the following documents in planning its approach to shoreline protection and clean-up:

- *Oilspill SCAT Manual for the Coastlines of BC*, Environment Canada, May 1992;
- *Marine Oil Spill Shoreline Protection and Clean-up Manual*, BC Environment, January 1992.

Both manuals provide concise, generic descriptions of the SCAT process, priorities, and procedures as they might be applied to any threatened or contaminated shoreline in Canada or the U.S.. Copies of both manuals are located at the ITB Command Centre.

ITB will also work closely with ADEC, and SEAPRO in developing and implementing appropriate shoreline assessment, protection, and/or clean-up action plans as required by the circumstances and location of a spill – see *Section 3.10 – Protection of Environmentally Sensitive Areas* in the *SEAPRO Technical Manual*.

In the event of a spill that results in potential or real contamination of

shoreline areas, ITB will request SEAPRO to muster, and deploy sufficient trained personnel from its predesignated responder workforce to form SCAT teams and to conduct shoreline protection and/or clean-up operations as required.

The number of personnel required for SCAT operations, and the location(s) from which they will be staged will be determined by the requirements of the situation, and the exact location of the spill. SEAPRO trained responders are located at various member terminals throughout SE Alaska (see *Section 1.5 – Deployment (Mobilization) Strategies* of the *SEAPRO Technical Manual*).

CRITICAL AREAS

Section 3.1.3 contains three charts showing ITB routes while in Alaska State waters. *Section 3.10* shows the most critical or most at risk resources within 12 miles of the route.

- fish hatcheries and associated ocean net pens.
- mariculture sites.
- land management designations.
- subsistence and personal use harvest.

OIL SPILL SCENARIOS

This plan focuses on identifying the most probable type and size of incident by definition 18 AAC 75.425(e)(1)(F) and 33 CFR Part 155 that could occur within Island Tug and Barge operations and developing the necessary response capabilities to respond to these incidents.

These scenarios do not represent a prescribed procedure for a spill event. The intent is to provide a description of a possible response to these hypothetical spills, based on this spill contingency plan. Actual response in a spill emergency would be dependent on weather and other environmental conditions, personnel safety considerations, agency permits, operational priorities and other factors.

The three scenarios are:

A. "Most Probable" Case Scenario

B. Maximum "Most Probable Discharge" Scenario

C. "Worst Case Discharge" Scenario (not required by 18AAC75)

A. "MOST PROBABLE" CASE SCENARIO

ADEC Recommended Format

The following is the most probable case discharge scenario, in ADEC's recommended scenario format. Following this scenario in ADEC's recommended format is the same scenario in a detailed chronological format.

SCENARIO A - Operational Spill – Transfer Hose/Fitting Fails

This hypothetical scenario illustrates the response actions to an operational spill originating from the ITB 38 tank barge with the Island Monarch tug. It is designed to demonstrate the ability to respond to an event of this size.

KEY CROSS-REFERENCES

- SEAPRO Technical Manual.
- SE Alaska Subarea: AK Unified Oil Spill Contingency Plan

RESPONSE TYPE:	TYPE / AMOUNT:
Operational Spill at the Petrol Marine Skagway Terminal	#2 Diesel Estimated amount discharged: - 20 bbls on deck, - 6 bbls into water

SOURCE

The ITB 38 with the Island Monarch tug suffers a diesel fuel spill during product transfer while offloading at the Petro Marine Terminal in Skagway. The spill occurs when a cargo hose separates from its camlock fitting. The result is 20 Bbls spilled on deck (largely contained by the spill coaming) and 6 Bbls into the water, between the barge and dock face.

TIME:	0500	**WIND:**	N.E. at <5 knots
SEASON:	June	**TEMPERATURE:**	50°F
CURRENT:	Negligible	**VISIBIILTY:**	Unlimited
TIDE:	Turning to ebb	**LOCATION:**	**Skagway Petro Marine MTR facility**

ASSUMPTIONS:

- Safe to commence limited response operations.
- The cause of the spill has no impact on the size or duration of the spill event.
- No injuries are associated with the hose failure.

SAFETY:

- The captain musters the crew for an oil spill and assures safety, proper PPE and commencement of response equipment. All personnel accounted for and no injuries. All avoidable sources of ignition are eliminated and accommodation ventilation systems are shut down. The #1 priority is the protection of LIFE, including responders, nearby residents, the general public, and human use facilities near the spill site. Petro Marine have notified the Skagway Fire Dept. who are responsible for:
  - Notifying and/or evacuating nearby residents;
  - Monitoring vapour concentration levels around the spill;
  - Staging fire fighting equipment near the scene as required by the circumstances;
  - Warning small boat traffic away from the spill.

INITIAL OBJECTIVES:

- Establish safety requirements for spill response actions.
- Deploy onboard boom to contain spill at barge.
- Mobilize spill response contractor.
- Coordinate response actions with Unified Command.

PROCEDURES TO STOP A DISCHARGE:

The bargeman stops cargo unloading operations by activating the emergency stop and by closing all valves. He checks the scupper plugs to ensure they are securely plugged to contain the spill on the barge deck and to prevent oil from entering the water.

NOTIFICATIONS:

The tug Master activates the spill reporting procedures outlined in Section 1.2 – Reporting and Notification to ensure notification of:

- ITB management (including ITB's Qualified Individual and ITB's Emergency Response Team – ERT)
- USCG National Response Centre
- Alaska Department of Environmental Conservation
- SEAPRO
- Local emergency agencies including the fire department as a precaution and state troopers for security of spill area

FIRE PREVENTION AND CONTROL:

All avoidable sources of ignition are eliminated. No fire is associated with this release. In the event of fire at this location, the Master would coordinate with the local fire department, the facility, the USCG, and with ITB's salvage and marine firefighting contractor. The vessel and its crew would also assist with any fire fighting efforts, movement of the barge, etc.

DISCHARGE TRACKING:

Initial visual assessment is maintained by crew on tug. Petro Marine personnel assist with tracking the movement of oil using their knowledge of local tides and currents around the terminal site. Visual spill surveillance takes place from land and by small boats. Not much oil makes it past the ITB spill containment boom. When SEAPRO arrives on scene they will also be tasked with discharge tracking. Aerial surveillance is not considered necessary due to the spill size.

PROTECTION OF ENVIRONMENTALLY SENSITIVE AREAS:

ITB and SEAPRO personnel refer to the SE Alaska Subarea Plan and SEAPRO Technical Manual, Section 3.10, for sensitive information and identify sensitive areas in the area. SEAPRO has a listing of anadromous streams from ADF&G. There are no ADF&G designated MESAs (most environmentally sensitive areas) in the immediate area of the spill, but possible sensitive areas are identified as:

- Mouth of Burro Creek and Burro Creek Fish Hatchery located SW of the Skagway facility on the west side of the Taiya Inlet – see attached Coastal Habitat map from Skagway Facility plan;
- Tidal grass flats and mud flats at the mouth of the Taiya and Skagway Rivers, and at the head of the Nakhu Bay – see attached Coastal Habitat map from the Skagway Facility Plan.
- See Section 1.6.5 – Protection of Environmentally-Sensitive Areas from the Skagway Facility Plan. The measures taken to protect these resources are described in Section 1.6.6 – Containment and Control Strategies.

ITB consults with ADEC, NMFS, USF&W, and ADF&G on other sensitive areas.

CONTAINMENT AND CONTROL STRATEGIES

- Using the 16' Polaris, the tug crew deploy 700 ' of 18" Versatech containment boom from the barge in an exclusion configuration around the barge to contain the spill, to prevent it from escaping into the Skagway harbour, and from contaminating the shoreline areas near the dock.
- As a precautionary measure, 500' of the 1000' of the SEAPRO harbour boom is deployed across the entrance to the small boat harbour immediately to the east of the Skagway dock in an exclusion configuration.
- 300' (3 sections) of the Versatech 18" containment boom from the ITB 38 is deployed by SEAPRO at the Burro Fish Hatchery in a deflective mode to prevent stray oil from approaching the hatchery.
- The other 500' of the SEAPRO 1000' of harbour boom is deployed by SEAPRO off Yakutania Point to be used in protecting the tidal grass flats and mud flats at the Taiya River mouth, the head of Nahku Bay, or the mouth of the Skagway River as required depending on the movement of stray oil which has escaped the primary containment area around the barge.

TACTICS:	EQUIPMENT:
WATER: • Containment boom • Contained oil recovery	**ITB Equipment** • Boom: 1000' • Storage: As available in slack tanks, spill tanks, and empty open top barrels • Vessels: - 1 x response boats – 1 x tug • ITB Vessel Responders: 6 total on tug **SEAPRO Zone 8 Equipment in Skagway** • Boom: 1000' • Skimmer: – 1 x Crucial C-13e Rope Mop Skimmer • Storage: – 1 x Canflex Portable Tank CF 1000 (1000 Gal) • SEAPRO Responders: 5 • BPA Vessels: - 2 x tugs - 1 x skiffs
BEACH: • Protection / exclusion booming • Debris removal • Berms / Trenches • Sorbent sweep	**ITB and SEAPRO Equipment** • Containment boom • Containment barrels, garbage cans, hand tools, Sorbent material • Response boats, tugs, and skiffs • Proper PPE • Small skimmer, sorbent wringer and recovered oil storage
OTHER: • Solid waste storage • Bird hazing and wildlife monitoring • Surveillance	• Contracted vessels (vessels of opportunity) • Temp Storage Construction • Wildlife Hazing Equipment • Wildlife teams

RECOVERY STRATEGIES:

- ITB initial response to focus on containment of oil around.
- Sorbent sheets and pads are spread over the oil inside and outside the boomed area to absorb the oil from the surface of the water.
- The Bargeman continues to clean up the spilled oil on the deck of the barge draining oil through the 2" drains to the slop tanks (4800 and 2800 IG) and absorbing with sorbent material. Oiled sorbents are wrung out or stored in empty drums.
- The tugboat crew continues to spread sorbent sheets and pads over the oil in the containment area around the barge. Oiled sorbents are recovered using pike poles and wrung out to be reused or transferred to steel drums on board the barge for safe storage.
- The SEAPRO rope mop skimmer located in Skagway harbour is used by SEAPRO personnel for recovery of oil in the barge containment area.
- Because of the light nature of the product, and the relatively small quantity spilled (4 bbls), any oiled shorelines will probably be cleaned using sorbent pads or sheets (i.e., passive recovery) or limited manual removal of oiled sediments and/or debris (e.g., branches, seaweed, small logs).
- SEAPRO continues shoreline clean up operations and searches for any remaining slicks on the water which escaped the primary containment boom.

RECOVERED OIL TRANSFER AND STORAGE:

- All spill response wastes are segregated into oiled vs. non-oiled and liquid vs. solid.
- Oily solids are handled in specified drums.
- Recovered oil and oil/water mixture is stored in open top drums and the ITB 38's slop tanks. A 1000 gallon Canflex CF-1000 portable tank is also available from SEAPRO's cache in Skagway harbour (Connex #85).

TEMPORARY STORAGE AND ULTIMATE DISPOSAL:

- Oiled waste materials including sorbents, clothing, and other protective gear is stored either on the ITB 38 in sealable steel drums (NOTE: The ITB 38 carries several empty drums – others are available from Petro Marine) or in SEAPRO temporary storage containers.
- ITB's policy is to accept full responsibility and ownership for all waste materials generated from a spill for which it is responsible in U.S. waters. Waste materials are either stored on board the barge and transported back to Vancouver for final disposal and/or handled and disposed of according to SEAPRO's approved waste management plan.

WILDLIFE PROTECTION:

- SEAPRO wildlife hazing kit at the Petro Marine Facility is used as necessary.
- Bird capture/rehabilitation unit placed on standby in the event any oiled birds are captured.
- Appropriate Capture / Hazing permits will be completed and submitted to ADF&G through Unified Command.
- Response activities in the area should reduce the likelihood of wildlife congregation in area.

RESPONSE ACTIVITIES

UNIFIED COMMAND ACTIVITIES			
COMMAND	**OPERATIONS SECTION**	**PLANNING SECTION**	**LOGISTICS SECTION**

Incident Commander
• Establish
  – Command Post
  – Unified Command
  – Goals & Objectives
 	
Liaison
• Complete Agency Notification
• Establish Community notification & identify contacts
 	
Public Affairs
• Prepare initial news release
• Set up Media Conference
 	
Safety
• Provide initial Site Safety Plan
• Commence preparation of Safety plan
 	
Security
• Establish security at Spill Site
	Conduct:
	• Containment booming
	• Skimming & recovery operations
	
	Prepare
	• ICS (Field Assignments)
	
	Supervise
	• Recovery Operations
	• Staging Areas
	• Wildlife recovery and stabilization (if required)
	• Waste segregation and storage
		Planning Section Chief:
		• Establish
		  – Documentation Unit
		  – Resources Unit
		  – Situation Status Unit
		  – Environmental Unit
		• Prepare Meeting Schedule
		• Prepare Incident Action Plan
		
		Environmental Unit
		• Identify/Prioritize sensitive areas
		• Prepare hazing & capture permits
		• Prepare Wildlife Plan
		• Prepare Waste Management Plan
		
		Resources Unit
		• Display response equip/personnel
		• Establish short term plan
		
		Documentation Unit
		• Ensure key personnel maintain activity logs
		• Document all spill activities
			• Establish Command Post
			• Coordinate staging
			• Provide meals and services
			• Establish Communications Plan
			• Secure emergency medical team support if required

MAJOR SPILL RESPONSE RESOURCE ASSIGNMENTS AND SUMMARY

RESOURCES	TF# 1 Cont. & Recovery	TF #2 Shore Protection & Recovery	WILDLIFE	SAFETY	OTHER
Island Tug and Barge Ltd. (minimum response equipment)					
1000' boom stored on hydraulic reel,	X	X			
1 response boat	X	X			
Boom Towing Bridles (2)	X	X			
Absorbent Pads – 100 per Bale (11)	X	X			
Absorbent Boom 4" x 10' (10)	X	X			
Empty Open Headed Barrels (4)	X	X			
Pad/Barrel Ringer (1)	X	X			
Aluminum Shovels (3)	X	X			
Aluminum Pitch Fork (2)	X	X			
Heavy Duty Plastic Bags (200)	X	X			
Anchor Assemblies (4)	X	X			
Garbage Pails 100 ltr. (4)	X	X			
PPE for ITB responders				x	
SEAPRO Zone 8 - Skagway					
1000' 8x12 containment boom		X			
40 lb anchor systems (7)		X			
Crucial C-13e Rope Mop Skimmer (1)	X				
BPA boat (1)		X			
Canflex 1000 gal. portable tank (1)		X			
PPE safety module (1)				X	
Misc. equipment module (1)					X
Wildlife hazing kit (1)			X		
PPE- 20 sets / Air monitoring				X	
Communications- Handheld radios / Repeaters					X

Summary

Boom	2,000 feet total
Recovery Systems	1 skimmer used as well as sorbent material and wringers
Storage	ITB 38 spill tanks: 217 bbls
	ITB 38 portable storage: 4 bbls
	SEAPRO 1000 gal. portable tank
Personnel	approx. 15 (Seapro Team #29, 6 ITB personnel, 4 Petro-Marine)
Vessels	5 (ITB vessels, BPA vessels, vessels of opportunity)

UNIFIED COMMAND DECISIONS:
• UC satisfied that source is secured and threat of spreading oil has been eliminated. • ITB's PRAC (SEAPRO) will maintain bird capture/rehabilitation unit on standby in the event any oiled birds are captured. • Appropriate Bird Capture / Hazing permits will be maintained. • Liaison with the agencies shall be maintained. • Site will be monitored over a couple days to oversee any contaminated soil removal actions. • Waste Disposal will be in accordance with ITB/SEAPRO waste management plan. • ITB will supervise activities.

FIRST 24 HOURS – EXAMPLE SPILL RESPONSE TIMELINE

24 HOUR TIMELINE	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	0100	0200	0300	0400
INCIDENT CLOCK	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24

CONTAINMENT / RECOVERY TASK FORCE # 1

MOB — RESPONSE ACTIVITIES

- Incident Occurs
- Initial notification
- ITB QI, Gov. Agencies notified
- SEAPRO activated
- ITB response boat deployed
- Barge boom deployment completed
- SEAPRO rope mop skimmer deployed at site
- Activated ITB-ICS
- Tactics Mtg
- Planning Mtg
- Transfer operations resume

SHORE PROTECTION TASK FORCE #2

MOB — RESPONSE ACTIVITIES

- SEAPRO boom deployed
- Response boats begin shoreline protection using boom
- SCAT teams monitor beaches

WILDLIFE

MOB — RESPONSE ACTIVITIES

- Wildlife hazing equipment arrives
- Assess bird capture/rehabilitation unit needs
- Monitor and surveillance

SAFETY

RESPONSE ACTIVITIES

- Master conducts initial safety assessment and briefs crew
- SEAPRO drafts site safety plan for spill response
- Decon established at Petro-Marine Terminal

OTHER

- Regular surveillance begins
- Meal services coordinated

Detailed Chronological Format

Operational Spill - Transfer Hose/Fitting Fails

The ITB 38 with the Island Monarch tug suffers a diesel fuel spill during product transfer while offloading at the Petro Marine Terminal in Skagway. The spill occurs when a cargo hose separates from its camlock fitting. The result is 20 Bbls spills on deck (largely contained by the spill coaming) and 6 Bbls into the water, between the barge and dock face. *Figure 1.6.7(I) – Initial Spill Incident Drawing* shows a schematic overview of the spill occurrence.

Time:	0500 Hours
Time of Year:	June
Current:	Negligible
Weather:	Clear, 50°F
Tide:	Turning to ebb
Wind:	From N.E. at < 5 Knots

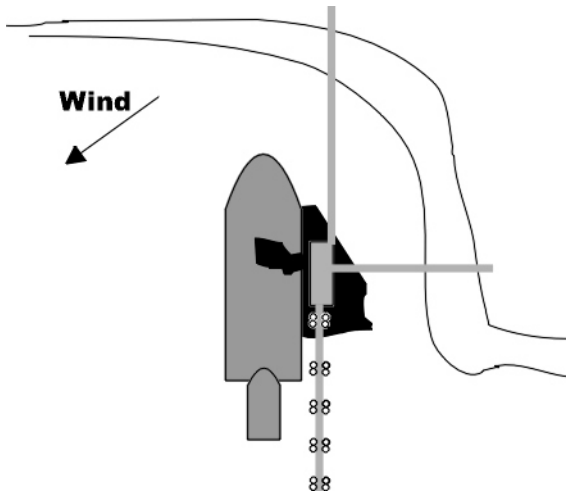
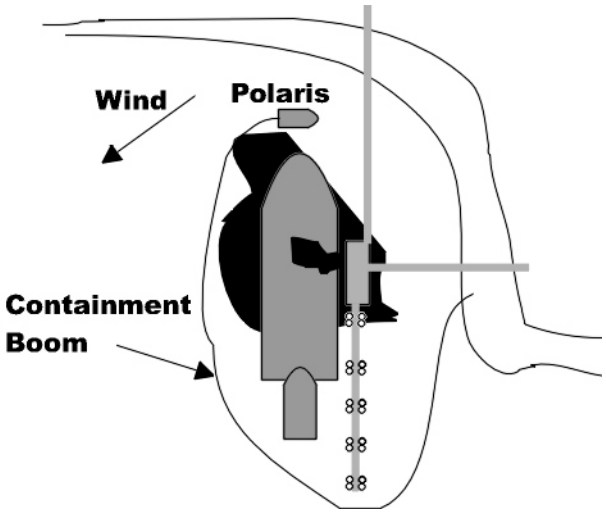


Figure 1.6.7(I) – Initial Spill Incident Drawing

Time	Actions	On-Water Oil Recovered
0500 - 0530	• The Bargeman stops cargo unloading operations by activating the emergency stop and by closing all valves. • He checks the scupper plugs to ensure they are securely plugged to contain the spill on the barge deck and to prevent oil from entering the water. • He takes appropriate action to eliminate the risk of fire or explosion aboard the vessel by eliminating all sources of ignition on the barge. • The tug crew close doors and portholes leading to engine room spaces and accommodation areas to prevent potentially flammable vapours from entering confined spaces. • He notifies the Tug Master who is the designated ITB Vessel Response Team Leader (*see Section 3.3 – Incident Command Organization*). • The Tug Master immediately activates the spill reporting procedures outlined *in Section 1.2 – Reporting and Notification* by notifying the ITB on-call manager who reports the spill to the US Coast Guard National Response Centre, Alaska Dept. of Environmental Conservation (ADEC), SEAPRO (requesting personnel and materials). • The Bargeman notifies Petro Marine terminal shore personnel to advise that a spill has occurred and to enable Petro Marine to activate its own spill response plan and procedures. • The Bargeman begins spreading sorbent material from the forecastle storage container to contain and absorb product spilled on the deck of the barge outside the spill coaming thus preventing further oil from entering the water. • The Master briefs his crew on, and ensures his crew are following, standard ITB safety procedures for responding to an oil spill. When SEAPRO personnel arrive on site, they will be tasked with preparing a site safety plan and providing a Site Safety Officer whose duties will include responsibility for monitoring safe entry into the spill zone. • The Master directs the tug crew to break out the Versatech containment boom and anchoring kits located on the barge, and to prepare the emergency boat located on the Island Monarch (16' Polaris rigid hull boat c/w 50 HP outboard motor) for launching.	**@ 0500: Nil**

0530 - 0600	• Using the 16′ Polaris, the tug crew begin to deploy 700 ′ of 18″ Versatech containment boom from the barge in an exclusion configuration around the barge to contain the spill, to prevent it from escaping into the Skagway harbour, and from contaminating the shoreline areas near the dock. Booming is complete before 0600 (i.e., 1 hour after incident occurs). • Sorbent sheets and pads are spread over the oil inside and outside the boomed area to absorb the oil from the surface of the water.  **Figure 1.6.7(II) – ½ Hour Overview**	**@ 0515: Nil**
0600 - 0630	• The following containment and control equipment is being deployed or is available for deployment: ➢ 1000′ of Versatech inshore containment boom (ITB 38); ➢ 1000′ of 8 X 12 boom (SEAPRO – Connex #85 Skagway Harbour); ➢ Boom anchoring kits and hardware (ITB 38 and SEAPRO – Connex #85 Skagway Harbour); ➢ Rope mop skimmer (SEAPRO – Connex #85 Skagway Harbour); ➢ Wildlife hazing kit (SEAPRO – Petro Marine office) ➢ Substantial quantities of various sorbent materials (available on the ITB 38, from SEAPRO, and from Petro Marine's cache available under the BPA) NOTE: Both Petro Marine and ITB are members of SEAPRO. Under the terms of ITB's *Blanket Purchase Agreement (BPA),* ITB can draw on Petro Marine's response resources as required by the situation. ITB's first recourse will be to utilize its own and SEAPRO-owned equipment in Skagway Harbour. ITB will retain overall command and control of the response to any spill for which it is responsible regardless of location.	**@ 0530: 0.5 bbls**

	• The ITB Master requests the assistance of Petro Marine personnel to assist with tracking the movement of any oil which has escaped the containment boom around the barge, using their knowledge of local tides and currents around the terminal site – see *Section 1.6.4 – Discharge Tracking* from the Petro Marine Skagway *Facility Oil Discharge Prevention and Contingency Plan.* • According to the Petro Marine Plan, currents in the Lynn Canal are fairly uniform and average 0.3 knots on the flood, and 0.7 knots on the ebb – see *Section 3.4.2 – Sea States, Tides and Currents* from Petro Marine Plan. The likely area that oil could move up to 6 hours after the spill is shown on the area map at the back of this Section taken from Petro Marine's plan (i.e., *Figure 1.6.8*). • SEAPRO Response Team #29, stationed in Skagway, begin arriving at the spill scene. • Visual spill surveillance will take place from land, and by small boats launched from the dock by SEAPRO personnel (Petro Marine Personnel would likely be available to assist as well). For a spill of this size (i.e., most of which has been contained by the containment boom encircling the barge), aerial surveillance is not considered necessary. • ITB's management team in Vancouver have as a resource, the *Automated Data Inquiry for Oil Spills (ADIOS)* software program developed by the National Oceanographic and Atmospheric Administration (NOAA). ADIOS can be used to determine a preliminary fate and effects projection of the oil spilled after being provided from the Master, wind, wave, and water temperature estimates.	
0630 - 0730	• The ITB Master confers with the Skagway Facility Supervisor (i.e., Petro Marine's designated Incident Commander) and SEAPRO to identify and prioritize shoreline resources that might be put at risk by the spill. • The #1 priority is the protection of LIFE, including responders, nearby residents, the general public, and human use facilities near the spill site. Petro Marine have notified the Skagway Fire Dept. who are responsible for: ➢ Notifying and/or evacuating nearby residents; ➢ Monitoring vapour concentration levels around the spill; ➢ Staging fire fighting equipment near the scene as required by the circumstances; ➢ Warning small boat traffic away from the spill.	**@ 0600: 1.5 bbls**

	• As a precautionary measure, 500′ of the 1000′ of the SEAPRO harbour boom is deployed across the entrance to the small boat harbour immediately to the east of the Skagway dock in an exclusion configuration (see *Figure 1.6.3 – Exclusion Booming of a Boat Basin*). A copy of the *Skagway Facility Site Plan* from the Petro Marine plan is located at the back of this Section. • The SEAPRO rope mop skimmer arrives on-site within 2 hours after the spill occurred and is readied for immediate deployment within the barge containment area. • The environmentally-sensitive resources that may require protection measures are: ➢ Mouth of Burro Creek and Burro Creek Fish Hatchery located SW of the Skagway facility on the west side of the Taiya Inlet – see attached Coastal Habitat map from Skagway Facility plan; ➢ Tidal grass flats and mud flats at the mouth of the Taiya and Skagway Rivers, and at the head of the Nakhu Bay – see attached Coastal Habitat map from the Skagway Facility Plan. ➢ See *Section 1.6.5 – Protection of Environmentally-Sensitive Areas* from the Skagway Facility Plan. The measures taken to protect these resources are described in *Section 1.6.6 – Containment and Control Strategies*. • Due to the relatively small size of this spill, and the non-persistent nature of the product (i.e., Diesel Fuel), passive hazing is considered the most practical wildlife protection measure. • SEAPRO's wildlife hazing kit at the Petro Marine facility is readied for use as required. • ITB vessel personnel continue to focus their efforts and equipment on containing the spill around the barge and cleaning up the oil in the water, and cleaning up the oil on the barge deck. • SEAPRO personnel monitor the movement of the oil on the water, and protect the sensitive resources identified above.	
0730-0900	• The Bargeman continues to clean up the spilled oil on the deck of the barge draining oil through the 2″ drains to the slop tanks (4800 and 2800 IG) and absorbing with sorbent material. Oiled sorbents are wrung out with ITB's sorbent wringer or stored in empty drums. • The tugboat crew continues to spread sorbent sheets and pads over the oil in the containment area around the barge. Oiled sorbents are recovered using pike poles and wrung out to be reused or transferred to steel drums on board the barge for safe storage.	**@ 0730: 2.5 Bbls**

- SEAPRO personnel continue operating the rope mop skimmer within the barge containment area.

- The ITB 38's response boat is positioned so that its prop wash forces the oil in the water away from the shoreline and concentrates it between the side of the barge and the boom to facilitate recovery efforts. See *Figure 1.6.7(III)* – 3 Hour Overview.

- Recovered oil and oil/water mixture is stored in open top drums and the ITB 38's slop tanks. A 1000 gallon Canflex CF-1000 portable tank is also available from SEAPRO's cache in Skagway harbour (Connex #85).

- 300' (3 sections) of the Versatech 18" containment boom from the ITB 38 is deployed by SEAPRO at the Burro Fish Hatchery in a deflective mode (see *Figure 1.6.4 – Deflection Booming away from a Marsh*) to prevent stray oil from approaching the hatchery.

- The other 500' of the SEAPRO 1000' of harbour boom is deployed by SEAPRO off Yakutania Point to be used in protecting the tidal grass flats and mud flats at the Taiya River mouth, the head of Nahku Bay, or the mouth of the Skagway River as required depending on the movement of stray oil which has escaped the primary containment area around the barge.

- SEAPRO are requested to prepare applications for authorization to undertake active hazing, capture, treatment, stabilization, and treatment of oiled wildlife from the appropriate state and federal government agencies.

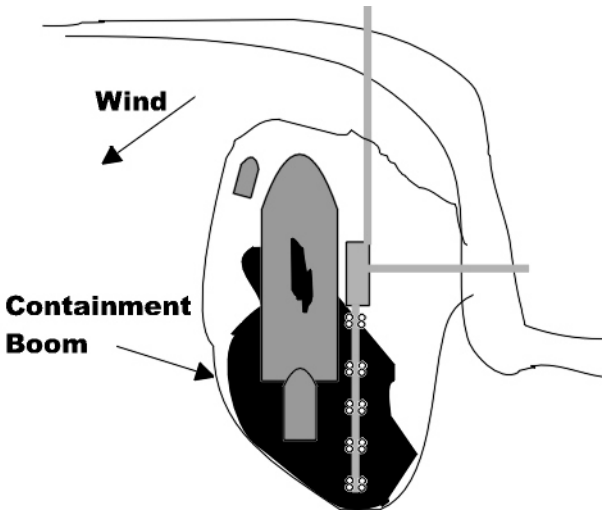


Figure 1.6.7(III) – 3 Hour Overview

0900 – 1100	• SEAPRO are asked to form a Shoreline Clean-up and Assessment Team (SCAT) to inspect shorelines around the facility that may have been contacted by oil from the spill. • Oiled waste materials including sorbents, clothing, and other protective gear is stored in sealable steel drums, heavy duty plastic bags, garbage cans, and if required lined dumpsters (NOTE: The ITB 38 carries several empty drums and garbage cans – others are available from Petro Marine and SEAPRO). • ITB's policy is to accept full responsibility and ownership for all waste materials generated from a spill for which it is responsible in U.S. waters. Waste materials are either stored on board the barge and transported back to Vancouver for final disposal and/or are handled and disposed of according to SEAPRO's approved waste management plan.	**@ 0900:** **3.0 bbls**
1100 +	• Because of the light nature of the product, and the relatively small quantity spilled, any oiled shorelines will probably be cleaned using sorbent pads or sheets (i.e., passive recovery) or limited manual removal of oiled sediments and/or debris (e.g., branches, seaweed, small logs). • Once all the oil contained within the primary containment area around the barge has been absorbed, ITB 38 crew recover and clean the 700' of boom. • SEAPRO continues shoreline clean up operations and search for any remaining slicks on the water which escaped the primary containment boom. • The Bargeman has completed cleanup on the deck of the barge and replaced the ruptured hose. • The Unified Command jointly agree that transfer operations may restart as they will not interfere with the remaining clean up operations being conducted by SEAPRO. • ITB management and Petro Marine Management undertake an investigation of the incident.	**@ 1100:** Total on water recovered: **3.5 bbls** Total lost to environment (evaporation, oiling of dock pilings, shoreline, etc.): **2.5 bbls**

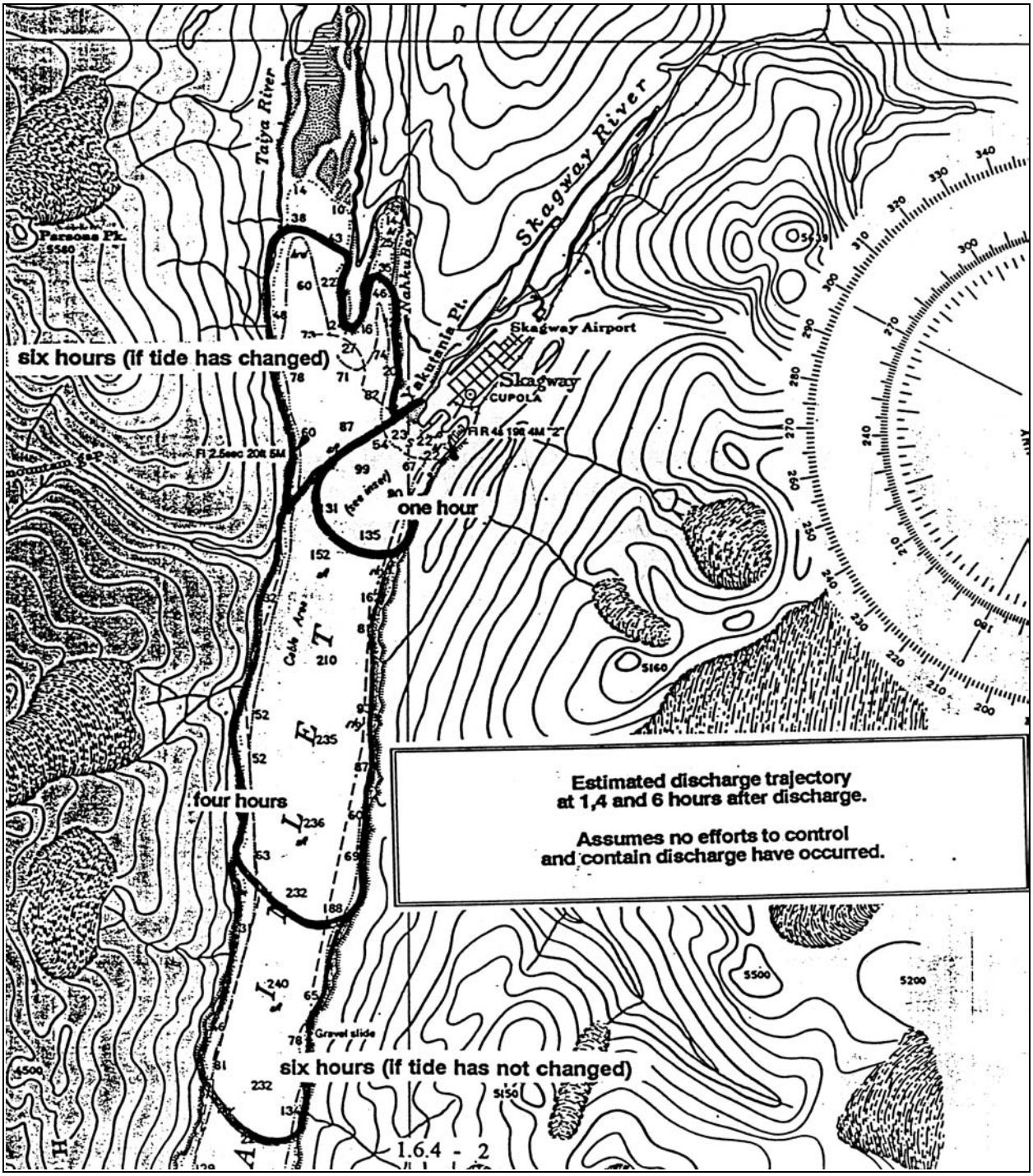


Figure 1.6.8 – Estimated Discharge Trajectory

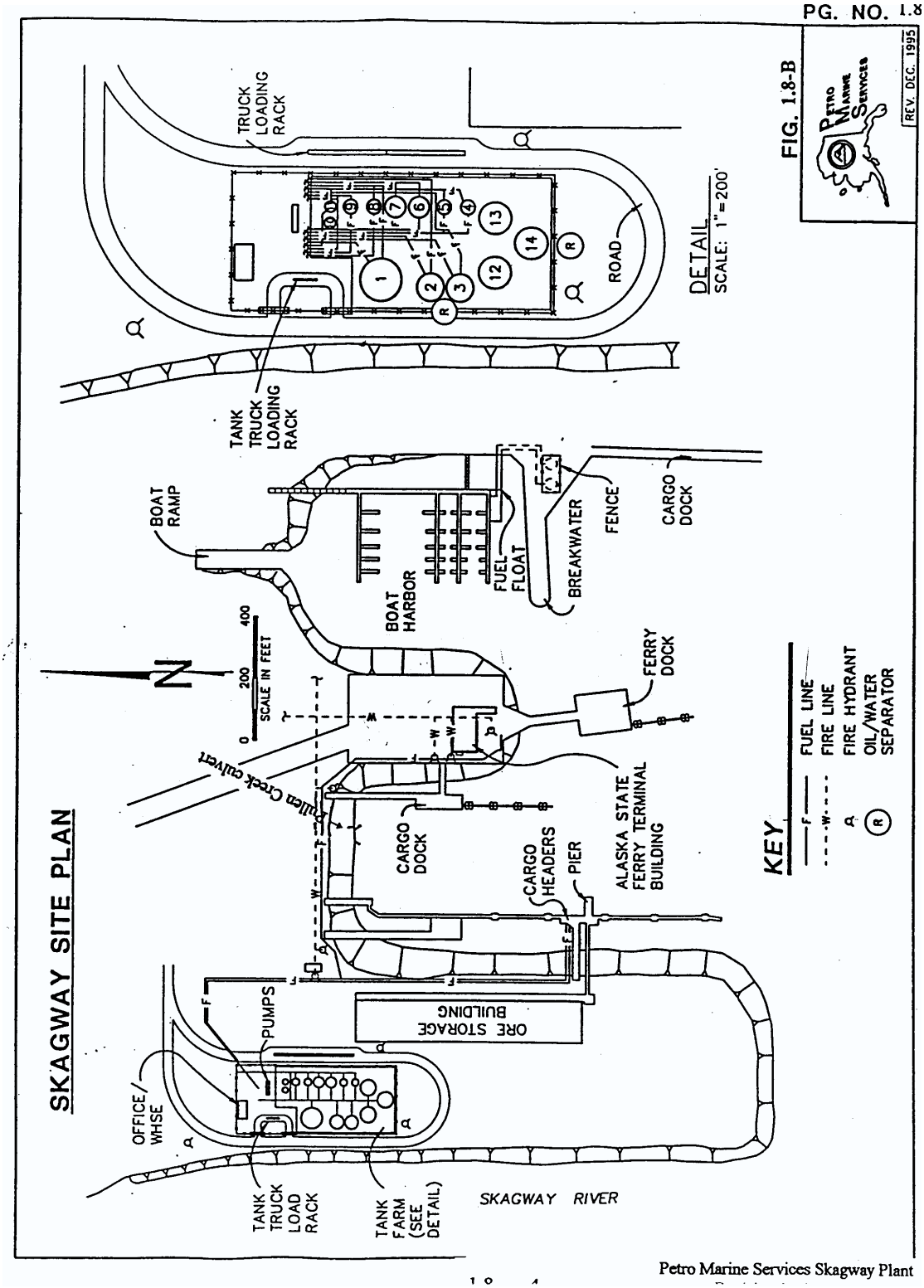


Figure 1.6.9 – Skagway Site Plan

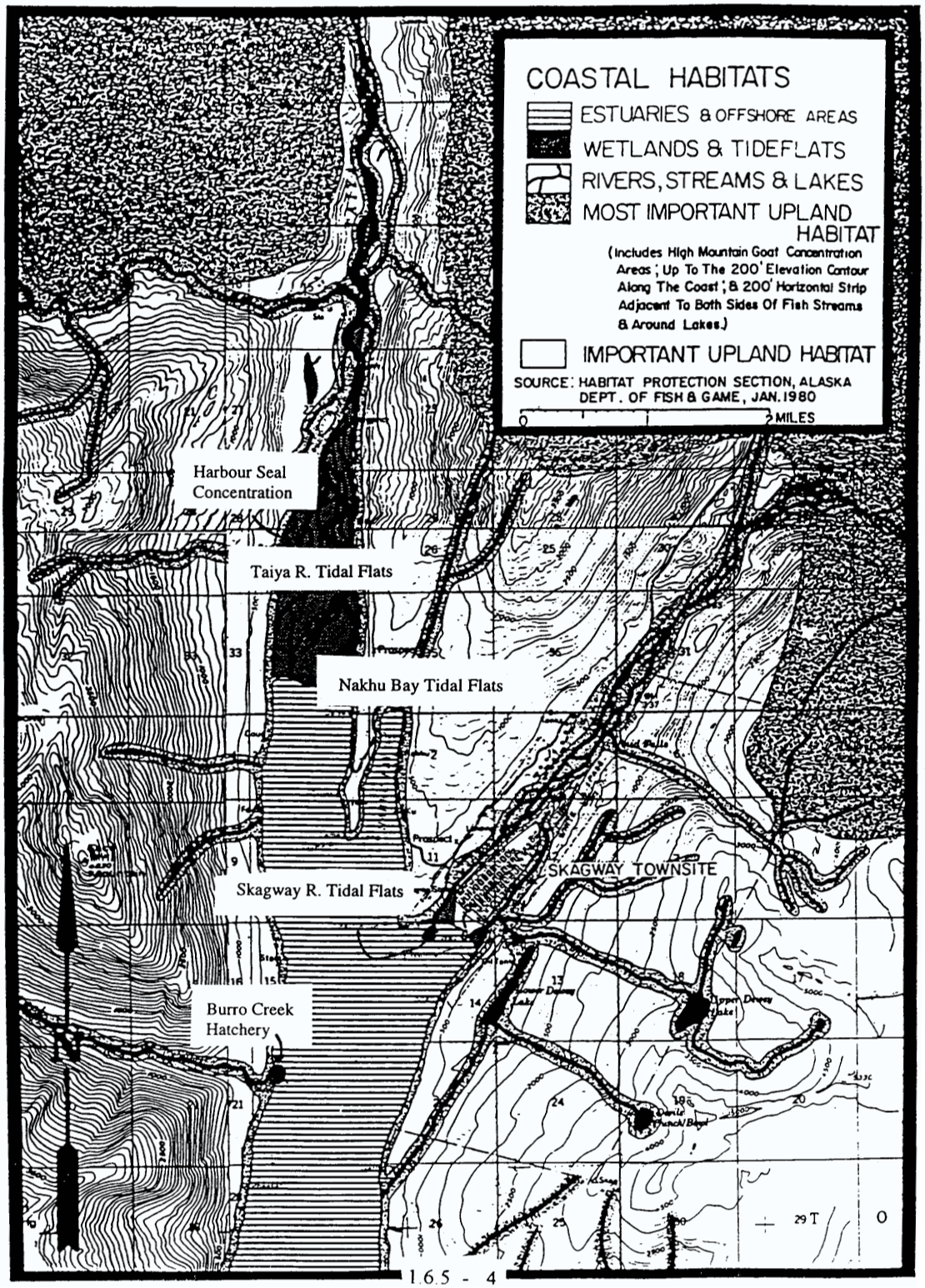


Figure 1.6.10 – Coastal Habitats

B. MAXIMUM 'MOST PROBABLE DISCHARGE' SCENARIO

ADEC Recommended Format

The following is the maximum most probable discharge scenario, or Response Planning Standard Scenario (RPS), in ADEC's recommended scenario format. Following this scenario in ADEC's recommended format is the same scenario in a detailed chronological format.

SCENARIO B - Island Trader Casualty at Pt. Sherman in S.E. Alaska

This hypothetical scenario illustrates the response actions to an RPS discharge from a tank barge in SE Alaska. The scenario is designed to demonstrate how Island Tug and Barge Ltd. (ITB) and its PRACs (primarily SEAPRO) would respond to a significant oil discharge in the SE Alaska subarea.

KEY CROSS-REFERENCES

- SEAPRO Technical Manual (including 1.6.3: Scenario 3)
- SE Alaska Subarea: AK Unified Oil Spill Contingency Plan

RESPONSE TYPE:	TYPE / AMOUNT:
Barge grounding and hull breach.	#2 Diesel – 65,000 bbl (maximum ITB barge capacity) RPS – 9,750 bbl (15% of maximum ITB capacity) Estimated amount discharged: 18,000 bbl

SOURCE

ITB's *Island Monarch* tug and the loaded barge *Island Trader* are proceeding from an oil terminal in Vancouver, BC. The barge is loaded with refined non-persistent petroleum, diesel fuel and gasoline, destined for a terminal in Skagway. In Lynn Canal at Pt. Sherman the barge hits and grounds over an uncharted object (rock ledge or reef).

TIME:	1300	**WIND:**	N.E. at 8 knots
SEASON:	March 18	**TEMPERATURE:**	35°F
VISIBILITY:	10 miles	**LOCATION:**	**Pt. Sherman – Lynn Canal; SE Alaska**

ASSUMPTIONS:

- Safe to commence limited response operations.
- The cause of the spill has no impact on the size or duration of the spill event.
- No injuries are associated with the grounding.

SAFETY:

The captain musters the crew for an oil spill and assures safety, proper PPE and commencement of response equipment. All personnel accounted for and no injuries. All avoidable sources of ignition are eliminated and accommodation ventilation systems are shut down.

INITIAL OBJECTIVES:

- Establish safety requirements for operational and spill response actions.
- Assess barge stability and damage.
- Assess spill source and secure, if feasible and safe.
- Mobilize salvage, stability, and spill response teams and contractors.
- Coordinate response actions with Unified Command.

PROCEDURES TO STOP A DISCHARGE:

ITB crew board barge wearing SCBA for assessment of hull damage and leaking tanks. Tank sounding and visual assessment reveal product loss from multiple diesel fuel tanks. It is verified that no gasoline tanks are damaged. As no gasoline has been released it is safe for the crew to initiate deployment of on-board boom. ITB's contracted naval architect, is notified of the incident and provided with barge stability and loss data. The naval architect will advise on barge stability and emergency transfer of cargo to slack tanks, spill tanks, and possibly void tanks as feasible. Emergency lightering arrangements are secured through notification to ITB management.

NOTIFICATIONS:

The tug Master activates the spill reporting procedures outlined in Section 1.2 – Reporting and Notification to ensure notification of:

- ITB management (including ITB's Qualified Individual and ITB's Emergency Response Team – ERT)
- USCG National Response Centre
- Alaska Department of Environmental Conservation
- SEAPRO
- ITB's salvage and marine firefighting contractor

The full extent of the damage to the double-hulled barge is unknown at this time.

ITB requests mobilization of all available SEAPRO resources from nearby zones. The estimated initial response time for the first SEAPRO equipment and responders to arrive on site is to the site is 3-4 hours.

FIRE PREVENTION AND CONTROL:

All avoidable sources of ignition are eliminated. No fire is associated with this release. In the event of fire, the Master would coordinate with the USCG and with ITB's salvage and marine firefighting contractor for fire, emergency lightering, and salvage. The vessel and its crew would also assist with agency coordination in any fire fighting efforts on the water.

DISCHARGE TRACKING:

Initial visual assessment is maintained by crew on tug. Subsequent discharge tracking and spill trajectory modeling are coordinated through Unified Command with field teams, SEAPRO, NOAA, and USCG. ITB and SEAPRO use helicopters to provide air support for surveillance. Oil spill trajectory forecasts are obtained from NOAA and/or from the SEAPRO.

PROTECTION OF ENVIRONMENTALLY SENSITIVE AREAS:

ITB and SEAPRO personnel refer to the SE Alaska Subarea Plan and SEAPRO Technical Manual, Section 3.10, for sensitive information and identify sensitive areas in the area. SEAPRO has a listing of cataloged anadromous streams for ADF&G. There are no ADF&G designated MESAs (most environmentally sensitive areas) in the immediate area of the spill, but possible sensitive areas are identified as:

- Tanner crab fishing areas along the east shore of Lynn Canal
- Salmon run off Pt. Sherman (not in session at time of scenario)
- A number of eagle nests along the east shore of Lynn Canal
- Two anadromous fish streams on the east shore slightly to the north of Pt. Sherman which may require proteciton when the tide turns to flood (roughly 6 – 8 hours later).

ITB consults with ADEC, NMFS, USF&W, and ADF&G on other sensitive areas.

CONTAINMENT AND CONTROL STRATEGIES

- Boom from aboard the barge is deployed to contain oil escaping the barge.
- Response teams (SEAPRO, ITB, and ITB's Salvage and Marine Firefighting Contractors) are mobilized to the spill site to perform emergency lightering and vessel stability, add additional containment boom, and to help with oil recovery operations.
- ITB, SEAPRO, and ITB's salvage contractor(s) mobilize barges, vessels, response equipment, and personnel to scene.
- Response teams will focus on containment and recovery at spill source, open-water sweep recovery operations, and shoreline protection.

TACTICS:

WATER:
- Emergency lightering
- Containment boom
- Open-water sweep and skimming
- Contained oil recovery

EQUIPMENT:

ITB Equipment
- Boom: 1400' x 18"
- Skimmer: RBS-5:
  - 75 bbls/hr nameplate
  – (EDRC: 360bbls).
- Storage:
  - spill tanks: 115 bbls
  – Void tanks: approx. 4000 bbls (according to plan worked out by ITB's Naval Architect to minimize risk of further hull damage)
- Vessels:
  - 1 x response boats
  – 1 x tug
- • ITB Vessel Responders: 6 total on tug

SEAPRO Zone 7 Equipment
- Boom: 7020'
- Skimmers:
  – 3 x LORI Brush (2 on OSRV 1 on barge ORB)
  – 1 x Vikoma 12 K
- Storage:
  – 2 x 249 bbl on barges
  – 1 x 55 bbls on OSRV
  – 1 x Vikoma (3300 Gal.)
  – 1 x Canflex Sea Slug FCB-6 Bladder (6000Gal)
  – 1 x Canflex Portable Tank CF 1000 (1000 Gal)
- Vessels:
  – 1 x 48' Bay Class OSRV
  – 2 x 21' Alumaweld Work boat
- SEAPRO Responders: 20
- BPA Vessels: - 2 x skiffs - 2 x tugs

SEAPRO Zone 8 Equipment
- Boom: 3000'
- Skimmers:
  – 1 x LORI Brush
  – 1 x Action Petroleum Multi Skimmer 24
  – 1 x Crucial C-13e Rope Mop Skimmer
- Storage:
  – 2 x 249 bbl barges
  – 1 x Canflex Sea Slug FCB-42e (4300 Gal)
  – 2 x Canflex Portable Tank CF 1000 (1000 Gal)
- Vessels: 2 x 21' Alumaweld Work boat
- SEAPRO Responders: 15
- BPA Vessels: - 2 x tugs - 2 x skiffs

SEAPRO Zone 6 Equipment
- Boom: 3000'
- Skimmers:
  – 1 x LORI Brush
  – 1 x Crucial C-13e Rope Mop Skimmer
- Storage:
  – 2 x 249 bbl barges
  – 1 x Canflex Sea Slug FCB-42e (4300 Gal)
  – 2 x Canflex Portable Tank CF 1000 (1000 Gal)
- Vessels: 2 x 21' Alumaweld Work boat
- SEAPRO Responders: 10
- BPA Vessels: – 1 x work boat – 1 x tug – 1 x skiff

TACTICS:	EQUIPMENT:
WATER (Continued):	**SEAPRO Zone 5 Equipment** • Boom: 8,120' • Skimmers: – Aquaguard RBS – 10/2 Skimming System – Marco Sidewinder Skimmer (994 EDRC) • Storage: – 1 x 1000 m^3 (6,290bbl) Unitor storage bladder – 1 x 100 m^3 (629bbl) Unitor storage bladder – 1 x Vikoma (3300 Gal.) • SEAPRO Responders: 15 • BPA Vessels: - 1 x tug **ITB's Salvage and Marine Firefighting Contractor** • Lightering vessel and associated equipment • Tugs and response boats • Temporary patching equipment • Necessary personel
BEACH: • Protection / exclusion / deflection booming • Debris removal • Berms / Trenches • Sorbent sweep	**ITB and SEAPRO Equipment** • Shore and curtain boom • Containment barrels, hand tools, Sorbent material • Response boats, landing craft and skiffs • Proper PPE • Small skimmers and recovered oil storage
OTHER: • Floating liquid waste storage • Transportation offshore and to shore • Solid waste storage • Bird hazing and wildlife monitoring • Aerial surveillance	• ITB barge or barge of opportunity • Contracted vessels (vessels of opportunity) • Temp Storage Construction • Bird Hazing Equipment • Wildlife teams • Contracted aircraft

RECOVERY STRATEGIES:

- ITB initial response to focus on containment of oil around barge.
- ITB deploys its onboard brush skimmer immediately after barge has been boomed. Recovered product is pumped to spill tanks, slack tanks, and possibly void tanks.
- SEAPRO skimmers recover oil from containment boom and to conduct sweep and recovery operations.
- Minimize oil from reaching shorelines by directing sweep and recovery operations from overflights.
- Skim and sweep for oil recovery as needed at protection boom locations (divert and collect).
- Secure ADNR and US Forest Service approvals for beach operations.

RECOVERED OIL TRANSFER AND STORAGE:

- All spill response wastes are segregated into oiled vs. non-oiled and liquid vs. solid.
- Recovered oily water mixture is pumped to tanks on SEAPRO barges, bladders, and emergency lightering barge.
- Approval for decanting recovered water back into boomed, contained oil area is requested of ADEC.
- Shoreside recovery is pumped to portable tanks and drums.
- Oily solids are handled in specified drums.

TEMPORARY STORAGE AND ULTIMATE DISPOSAL:

- All recovered oils will be transported to Juneau for accounting, processing and eventual reprocessing/disposal.
- Waste will be managed according to SEAPRO's approved waste management plan.
- Every attempt is made to recycle and reuse as much product as possible. SEAPRO contractor will handle and transport all other waste for final treatment or disposal.

WILDLIFE PROTECTION:
• SEAPRO's wildlife contractor, USFWS, NMFS, and ADF&G will coordinate wildlife surveillance efforts. • Bird capture/rehabilitation unit will be placed on standby in the event any oiled birds are captured. • Pre-emptive capture cages are staged in area for sea otters, if needed. • Appropriate Capture / Hazing permits will be completed and submitted to ADF&G through Unified Command. • Response activities in the area should reduce the likelihood of wildlife congregation in area.

RESPONSE ACTIVITIES
FIRST 24 HOURS

UNIFIED COMMAND ACTIVITIES			
COMMAND	**OPERATIONS SECTION**	**PLANNING SECTION**	**LOGISTICS SECTION**

Incident Commander
• Establish
  – Command Post
  – Unified Command
  – Goals & Objectives
 	
Liaison
• Complete Agency Notification
• Establish Community notification & identify contacts
 	
Public Affairs
• Prepare initial news release
• Set up Media Conference
 	
Safety
• Provide initial Site Safety Plan
• Commence preparation of Safety plan
 	
Security
• Establish security at Spill Site
	Conduct
	• Containment booming
	• Skimming & recovery operations
	• Air support operations
	
	Prepare
	• ICS (Field Assignments)
	
	Supervise
	• Recovery Operations
	• Stability and oil transfers
	• Staging Areas
	• Wildlife recovery and stabilization
	• Waste segregation and storage
	
	Plan
	• Emergency lightering of barge
		Planning Section Chief
		• Establish
		  – Documentation Unit
		  – Resources Unit
		  – Situation Status Unit
		  – Environmental Unit
		• Prepare Meeting Schedule
		• Prepare Incident Action Plans
		
		Environmental Unit
		• Identify/Prioritize sensitive areas
		• Prepare hazing & capture permits
		• Prepare Wildlife Plan
		• Prepare Waste Management Plan
		
		Resources Unit
		• Display response equip/personnel
		• Establish short term plan
		
		Documentation Unit
		• Ensure key personnel maintain activity logs
		• Document all spill activities
			• Establish Command Post
			• Arrange air support for overflights and transport
			• Coordinate staging
			• Mobilize on-water transportation for spill teams
			• Provide meals and services
			• Establish Communications Plan
			• Order portable lights
			• Secure emergency medical team support

MAJOR SPILL RESPONSE RESOURCE ASSIGNMENTS AND SUMMARY- FIRST 24 HOURS

RESOURCES	Barge Emergency Lightering & Stability	TF# 1 Cont. & Recovery	TF #2 Shore Protection & Recovery	WILDLIFE	SAFETY	OTHER
Island Tug and Barge Ltd.						
Lightering: On board cargo pumps (tank to tank transfer)	x					
Boom: 1400' of 18 inch containment boom on hydraulic reel		x				
Skimmer: Aguaguard RBS-5 (EDRC: 360 bbls)		x				
Storage: Spill tanks and Void Tanks		x				
1 response boat and 1 tug		x				
Sorbent wringer		x				
Safety equipment for tug/barge personnel					x	
Wide variety of communications equipment						x
Various sorbent material		x				
SEAPRO Zone 7						
48' OSRV / (2) LORI brush skimmers / 55 bbl storage		x				
LORI skimmer / (2) 249 bbl Barges / (2) 21' work skiffs / 2000' of 20" boom, BPA tug		x				
Vikoma 12K Skimmer / 820' boom / 3,300 gal. Bladder / 6,000gal. bbl bladder / ITB response boat or BPA boat		x				
Additional 4,200' boom		x	x			
Wildlife responder teams / hazing kit / and SEAPRO vessels (1)				x		
PPE- 23 sets / Air monitoring					x	
Communications- Handheld radios / Repeaters						x
SEAPRO Zone 8						
LORI skimmer / (2) 249 bbl Barges/ (2) 21' work skiffs / 2000' of 20" boom, BPA tug		x				
Action Petroleum Multi Skimmer 24 / BPA boat / 4,200 gal. bladder		x				
Crucial C-13e Rope Mop Skimmer / BPA boat / 2 portable 1000 gal. tanks			x			
Additional 1,000boom		x	x			
Wildlife responders / hazing kit / and BPA skiffs (2)				x		
PPE- 20 sets / Air monitoring					x	
Communications- Handheld radios / Repeaters						x
SEAPRO Zone 6						
LORI skimmer / (2) 249 bbl Barges/ (2) 21' work skiffs / 2000' of 20" boom, BPA tug		x				
Storage bladder 4,200 gal.		x				
Crucial C-13e Rope Mop Skimmer / BPA boat / portable 1000 gal. tank			x			
1000' containment boom		x	x			x

Summary

Boom	approx. 14,020 feet total
Skimming Systems	8
On-water Storage	approx. 1,880 bbls plus Island Trader storage
Personnel	approx. 82 (see Scenario 3, Page 224, SEAPRO Plan)
Vessels	approx. 12

RESPONSE ACTIVITIES
SECOND 24 HOURS

UNIFIED COMMAND ACTIVITIES			
COMMAND	**OPERATIONS SECTION**	**PLANNING SECTION**	**LOGISTICS SECTION**
Incident Commander • Maintain Command Post • Set daily and general goals & objectives • Define next operational period **Liaison** • Maintain Agency updates • Maintain Community information flow • Set up community meeting **Public Affairs** • Prepare daily news release • Set up Joint Information Center (JIC) **Safety** • Revise Site Safety Plan (as needed) • Provide daily safety briefings • Review work assignments for special safety messages **Security** • Maintain security at Command Post, spill site, staging area(s)	• Maintain response activities • Establish field organization and divisions **Prepare** • ICS Field Assignments **Supervise** • Emergency lightering of barge • Salvage operations • Recovery operations • Staging Areas • Air recon & support operations • Wildlife recovery and stabilization • Personnel & equipment decon • Waste handling	**Planning Section Chief** • Maintain – Documentation Unit – Resources Unit – Situation Status Unit – Environmental Unit • Prepare Daily Meeting Schedule • Prepare Incident Action Plan for each operational period. **Environmental Unit** • Revise trajectories and prioritize sensitive areas • Prepare required permits (shore ops, decanting, wildlife, burning) • Inventory waste streams with Ops for Waste Management Plan **Resources Unit** • Display response equip/personnel **Documentation Unit** • Ensure key personnel maintain activity logs • Maintain record-keeping of all spill activities	• Maintain Command Post • Arrange for spill area overflights of key unified command persons • Coordinate staging • Maintain on-water transportation for spill teams • Provide meals and services • Maintain and revise (as needed) Communications Plan • Secure housing & lodging for away personnel • Maintain emergency medical team support

SPILL RESPONSE RESOURCE ASSIGNMENTS AND SUMMARY- SECOND 24 HOURS

RESOURCES	Barge Emergency Lightering & Stability	TF# 1 Cont. & Recovery	TF #2 Shore Protection & Recovery	WILDLIFE	SAFETY	OTHER
Island Tug and Barge Ltd.						
Lightering: On board cargo pumps (tank to tank transfer)	x					
Boom: 1400' of 18 inch containment boom on hydraulic reel		x				
Skimmer: Aguaguard RBS-5 (EDRC: 360 bbls)		x				
Storage: Spill tanks and Void Tanks		x				
1 response boat and 1 tug		x				
Sorbent wringer		x				
Safety equipment for tug/barge personnel					x	
Wide variety of communications equipment						x
Various sorbent material		x				
1000' boom, 2 response boats, tug, sorbent wringers, storage		x				
Safety equipment for tug/barge personnel					x	
Wide variety of communications equipment						x
SEAPRO Zone 7						
48' OSRV / (2) LORI brush skimmers / 55 bbl storage		x				
LORI skimmer / (2) 249 bbl Barges / (2) 21' work skiffs / 2000' of 20" boom, BPA tug		x				
Vikoma 12K Skimmer / 820' boom / 3,300 gal. Bladder / 6,000gal. bbl bladder / ITB response boat or BPA boat		x				
Additional 4,200' boom		x	x			
Wildlife responders (ref.: SEAPRO Scenario 3) / hazing kit /and SEAPRO / BPA vessels (2)				x		
PPE- 23 sets / Air monitoring					x	
Communications- Handheld radios / Repeaters						x
SEAPRO Zone 8						
LORI skimmer / (2) 249 bbl Barges/ (2) 21' work skiffs / 2000' of 20" boom, BPA tug		x				
Action Petroleum Multi Skimmer 24 / BPA boat / 4,300 gal. bladder		x				
Crucial C-13e Rope Mop Skimmer / BPA boat / 2 portable 1000 gal. tanks			x			
Additional 6,000boom (including 5000' of Ro-boom)		x	x			
Wildlife responders / hazing kit / and BPA skiffs (2)				x		
PPE- 20 sets / Air monitoring					x	
Communications- Handheld radios / Repeaters						x
SEAPRO Zone 6						
LORI skimmer / (2) 249 bbl Barges/ (2) 21' work skiffs / 2000' of 20" boom, BPA tug		x				
Storage bladder 4,200 gal.		x				
Crucial C-13e Rope Mop Skimmer / BPA boat / portable 1000 gal. tank			x			
1000' containment boom		x	x			x
SEAPRO Zone 5						
Aquaguard RBS – 10/2 Skimming System, 1000' boom, vikoma 3300 gal. storage bladder.			x			
Marco Sidewinder Skimmer, 2000' boom, 100 m3 bladder.		x	x			
Additional Boom: 5,120'		x	x			
Storage bladder - 1 x 1000 m3 (6,290bbl) Unitor storage bladder		x	x			
BPA Vessels: - 1 x tug		x	x			

ITB Salvage and Marine Firefighting Contractor						
Lightering Barge and necessary transfer equipment	x					
Tugs and Work boats	x				x	

OPERATIONS SUMMARY

Boom Deployed	up to 27,140 feet
Skimmers	11 systems
On-water storage	approx. 9,090 bbl. in bladders and response vessel storage plus lightering barge capacity plus Island Trader slack tank / spill tank capacity
Personnel	Approx. 154 (see Scenario 3, Page 224, SEAPRO Plan)
Vessels	20 +

UNIFIED COMMAND DECISIONS:

- UC satisfied that source is secured and threat of spreading oil has been eliminated.
- ITB's PRAC (SEAPRO) will maintain bird capture/rehabilitation unit on standby in the event any oiled birds are captured.
- Appropriate Bird Capture / Hazing permits will be maintained.
- Liaison and daily teleconferences with the agencies shall be maintained.
- Daily site visits will continue to oversee contaminated soil removal actions.
- Waste Disposal will be in accordance with SEAPRO waste management plan.
- ITB will maintain on site supervision of the activities.
- The ITB Command Post will be secured.

RESPONSE ACTIVITIES
THIRD 24 HOURS and to Completion

UNIFIED COMMAND ACTIVITIES

Aerial recon and SCAT surveys show small patches of oil remaining on water Lynn Canal. Non-recoverable sheens are mapped throughout the area. Air operations direct on-water sweep operations to locations of concentrated oil. Beach cleanup crews are deployed to beach operations sites per the approved IAP. Beach crews will remain in area until SCAT survey teams sign-off on any oiled segments. Shoreline operations estimated to be completed within 5 days. Daily Incident Action Plans are prepared and approved by Unified Command. All protection booming, skimmer operations, wildlife recovery and surveillance, and beach cleanup efforts will continue until final sign-off from the Unified Command

All liquid waste products recovered, saturated sorbents, and debris are collected, quantified, and are transported to a licensed fuel recycling facility as per the approved Waste Disposal Plan. After temporary repairs are completed, the *Island Trader* is towed to Vancouver for more permanent repairs per salvage plan approved by the USCG.

All resources are demobilized, cleaned and shipped back to their storage location. Personnel are demobilized and de-briefed. Consumables are ordered and damaged equipment is repaired or replaced. A final report is sent to ADEC and the FOSC within 15 days of completion of the cleanup.

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FIRST 24 HOURS – EXAMPLE SPILL RESPONSE TIMELINE

24 HOUR TIMELINE	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200
INCIDENT CLOCK	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24

CONTAINMENT / RECOVERY TASK FORCE # 1

MOBILIZATION | **RESPONSE ACTIVITIES**

- Incident Occurs
- Initial notification
- ITB QI, Gov. Agencies notified
- SEAPRO and ITB's Salvage Contractor activated
- ITB response boats deployed
- Internal product transfer on barge begins
- Barge boom deployment completed
- Barge skimmer deployed
- Activated ITB-ICS
- Echo Cove selected as Field Ops Centre
- Command Centre established in Juneau
- Tactics Mtg
- Planning Mtg
- IAP Completed and approved
- First SEAPRO boom and skimmer deployed at site
- SEAPRO boom and storage bladders arrive by air
- Recovery from containment boom area at barge (249bbl barges from Haines)
- 249bbl barges arrive from Juneau
- Shuttling of recovered oil to Echo Cove begins
- Unitor 1,000 cubic meter (6,290 bbl) leaves Sitka by water (towed by tug)
- Decant permit application w/ ADEC
- Storage and shuttling operations and backup LORI skimmer (249bbl barges from Gustavus)
- Skimming continues throughout the night using vessel lights and SEAPRO portable lights
- Skimming operations continue
- Containment operations continue at dawn with current tracking information

SHORE PROTECTION TASK FORCE #2

MOBILIZATION | **RESPONSE ACTIVITIES**

- Shoreline protection teams activated
- SEAPRO boom arrives by air for added shoreline protection
- Response boats begin shoreline protection using boom
- Shore seal boom used for the intertidal area of anadromous streams
- Survey for beach pre-cleaning activities
- Beach work permit application with ADNR
- additional SEAPRO boom deployed as it becomes available

WILDLIFE TEAMS

MOBILIZATION | **RESPONSE ACTIVITIES**

- Wildlife teams activated
- Wildlife hazing equipment arrives by air at spill site
- Wildlife teams arrive at Echo Cove via land
- Assess bird capture/rehabilitation unit needs
- Monitor and surveillance
- Assess sea otter pre-emptive capture needs
- Additional wildlife teams and equipment arrive in the a.m.

SAFETY

INITIAL ASSESSMENT – ON-SITE SAFETY PLAN | **RESPONSE ACTIVITIES**

- Master conducts initial safety assessment and briefs crew
- SEAPRO drafts site safety plan for spill response
- EMT and Hosptal identified for medical support
- Decon established on 48' OSRV
- Site safety plan reviewed and revised
- Decon established at Echo Cove Field Ops/Staging area

OTHER (LIGHTERING, SALVAGE, SURVEILLANCE)

- Salvage Contractor activated
- Lightering barge dispatched
- Regular surveillance overflights begin
- Spill trajectory information becomes available
- Lodging and meal services coordinated
- Overflights suspended for the night
- Regular surveillance overflights recommence

SECOND 24 HOURS – EXAMPLE SPILL RESPONSE TIMELINE

24 HOUR TIMELINE	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200
INCIDENT CLOCK	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
CONTAINMENT/RECOVERY TASK FORCE # 1																								
	RESPONSE ACTIVITIES																							
	· 6,290 bbl Unitor storage bladder arrives on scene · Additional SEAPRO small capacity skimmer systems arrive via air							· Sweep & skim operations continue using LORI brush skimmers												· Containment and recovery of loose pockets continues at dawn				
	· Response barges and floating bladders offload to 6,290 bbl Unitor bladder or to tank trucks at Echo Cove																							
			· Unified Command briefing			·Tactics Mtg						·Planning Mtg		· Joint Incident Command Press Briefing							· IAP Review and Approval			
SHORE PROTECTION TASK FORCE #2																								
	RESPONSE ACTIVITIES																							
	· SEAPRO response boats adjust and maintain protection boom																							
								· Additional SEAPRO resources arrive					· Protection boom and skimming per IAP and overflight updates											
														· SCAT teams conduct shoreline surveys- identify priority response sites and methods for IAP beach crews											
WILDLIFE TEAMS																								
	RESPONSE ACTIVITIES																							
	· Additional wildlife teams deploy						· Bird / rehabilitation taking place																	
												· Monitor and surveillance continues												
														· Some pre-emptive capturing of wildlife										
SAFETY																								
	RESPONSE ACTIVITIES																							
							· Safety briefing for all new teams and at the start of each shift																	
			· Site safety plan reviewed and revised																		· Site safety plan reviewed and revised			
OTHER (LIGHTERING, SALVAGE, SURVEILLANCE)																								
	RESPONSE ACTIVITIES																							
														· Lightering barge arrives		· Offloading / Stability assessment				· Lightering commences				
	· Regular surveillance overflights continue · Spill Trajectories revised							· Overflights suspended for the night														· Regular surveillance overflights recommence at dawn		
							Temporary oily waste reception station established at staging.								· Lodging & meal services coordinated									

THIRD 24 HOURS – EXAMPLE SPILL RESPONSE TIMELINE

24 HOUR TIMELINE	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200
INCIDENT CLOCK	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72
CONTAINMENT/RECOVERY TASK FORCE # 1																								
RESPONSE ACTIVITIES																								
· skimming of isolated pockets of oil continue								· Maintain containment and skimming until no longer practicable → → →																
· Response barges and floating bladders continue to offload to 6,290 bbl Unitor bladder or to tank trucks at Echo Cove																								
Unified Command briefing								·Tactics Mtg					·Planning Mtg			·JIC Press Briefing				·Incident Investigation Begins → → →				
SHORE PROTECTION TASK FORCE #2																								
RESPONSE ACTIVITIES																								
· SEAPRO response boats adjust and maintain protection boom																								
· Shoreline inspections and clean up operations continue until all oil beaches have been identified and cleaned up → → →																								
WILDLIFE TEAMS																								
RESPONSE ACTIVITIES																								
· Wildlife teams continue monitoring and capture operations as long as necessary → → →																								
· Wildlife rehabilitation operations continue → → →																								
SAFETY																								
RESPONSE ACTIVITIES																								
· Safety briefing for all new team and at shift changes								·Site safety plan reviewed and revised as required → → →																
OTHER (LIGHTERING, SALVAGE, SURVEILLANCE)																								
RESPONSE ACTIVITIES																								
· Offloading complete								· Barge temporary repairs begin → → →																
· Regular surveillance overflights continue								· Overflights suspended for the night													· Regular surveillance overflights recommence at dawn			
· Spill Trajectories revised																								
· Lodging and meal services coordinated																								

Summary of Coast Guard approved timeframes (provided by SEAPRO):

TO: Zone 8 – Pt Sherman

FROM:	Beaver	Otter	Cessna 206	Cessna 185	Helicopter	Barge	Tug only	Large F/V	Small F/V
Zone 1	2.8	2.8	2.6	2.6	2.8	31	31	31	31
Zone 2	2.1	2.1	2	2	2.1	29	29	29	29
Zone 3	1.7	1.7	1.5	1.5	1.7	24	24	24	24
Zone 4	1.4	1.4	1.3	1.3	1.4	16	16	16	16
Zone 5	1.1	1.1	1	1	1.1	18	18	18	18
Zone 6	0.7	0.7	0.7	0.7	0.7	14	14	14	14
Zone 7	0.7	0.7	0.7	0.7	0.7	10	10	10	10
Haines/Skagway	0.5	0.5	0.5	0.5	0.5	5	5	5	7
Zone 9	1.2	1.2	1.1	1.1	1.2	28	28	28	28

Summary of skimming systems being used in the response along with on-water storage assets:

See Figure 1.6.16 – SEAPRO Skimming Equipment in Nearby Zones

See Figure 1.6.17 – SEAPRO Storage Equipment in Nearby Zones

Detailed Chronological Format

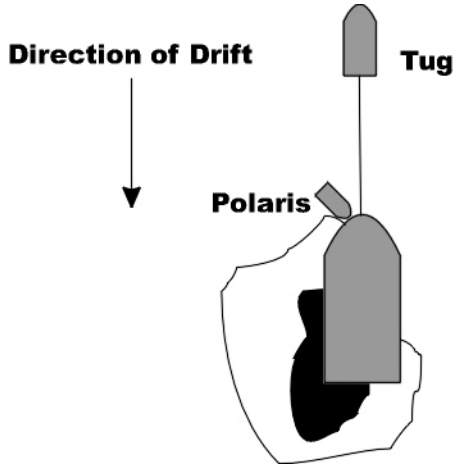
This scenario is a holing of the Island Trader near Pt. Sherman. Estimated loss of product is 18,000 bbls of diesel fuel (No. 2 fuel oil). The Response Planning Standard (RPS) volume for a tank barge carrying non-crude oil as bulk cargo is 15% of the total cargo capacity. For the Island Trader carrying 65,000 bbls, this is 9,750 bbls[1]. NOAA's ADIOS 2.0 oil spill modeling software was used to provide realistic dispersion and evaporation rates (see attached spill parameters and oil budget graph included at the end of this scenario).

The Island Trader being pushed by the Island Monarch strikes a hidden reef off Pt. Sherman in the Lynn Canal on its way to Petro Marine's Bulk Fuel Facility in Skagway. The vessel is carrying 65,000 barrels of refined petroleum products consisting of diesel fuel and gasoline. The barge floats free of the rock, and a significant quantity of fuel is observed floating on the water. 18,000 bbls of diesel fuel is released into the water over a period of 6 hours.

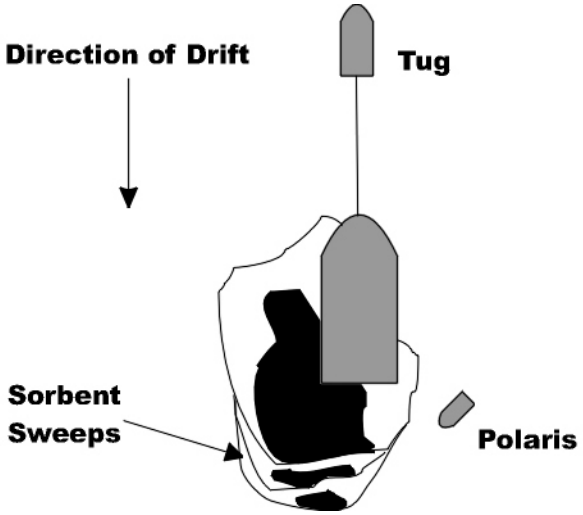
Date:	March 18
Time:	1300 Hours
Current:	< 0.5 Knots
Weather:	Clear, 35°F
Tide:	Slack water, turning to ebb
Wind:	N.E. at 8 knots

[1] The *Oil Discharge Prevention and Contingency Plan Application and Review Guidelines* state that the Response Planning Standard (RPS) volume represents the amount of oil remaining after any evaporation occurs and absent any additional volumetric increase caused by emulsification.

Time	Actions	On-Water Oil Recovered
1ST 24 HRS 1300 - 1330	• The Master immediately calls the crew to emergency stations. The barge appears to be stable, with a slight list to port. • The Bargeman and Mate board the barge (wearing Scott air packs from the Island Monarch in case of high vapour concentrations) to do a thorough damage assessment (i.e., check for flooding in the engine and pump rooms, sound all cargo tanks using the central cargo management computer). They ensure all potential sources of ignition are eliminated, ensure the barge is stabilized, and report the following to the Master: ➢ The force of the grounding is enough to hole both hulls in the forward area of the barge ➢ Diesel Fuel is escaping into the water from the No. 1 P, No.1 S, No.2 P tanks; and No. 2S (see *Section 1.8.1 – Island Trader* for a General Arrangement drawing of the barge); ➢ The barge appears to be stable, has good buoyancy, and is in no danger of sinking or foundering. ➢ No tanks containing gasoline have been damaged. NOTE: The general procedures for dealing with an incident of this type are clearly outlined in Section 1.1.2 – Spills Resulting From Casualties (Grounding). The procedures for each incident will vary with the requirements of the situation. The Master is the designated ITB Incident Commander until relieved by a more qualified senior ITB representative – see Section 3.3 – Incident Command Organization. • All sources of ignition, where a spark will present a hazard, are eliminated, both on the barge and tug. • Doors and port holes, to engine room spaces and accommodation, are closed to prevent flammable vapours from entering. • The Master briefs his crew on, and ensures his crew are following, standard ITB safety procedures for responding to an oil spill. When SEAPRO personnel arrive on site, they will be tasked with preparing a site safety plan and providing a Site Safety Officer whose duties will include responsibility for monitoring safe entry into the spill zone and for vapour monitoring. • The Master instructs the Bargeman to begin transferring product internally from the damaged tanks to the barge's slop tanks or other slack tanks to minimize the loss of product from the damaged tanks.	**@ 1300: Nil**

	• The Master activates the spill reporting procedures outlined in *Section 1.2 – Reporting and Notification* to ensure notification of: ➢ ITB management (Emergency Response Team – ERT) in Vancouver (see *Section 3.3 – Incident Command Organization*). ➢ U.S. Coast Guard National Response Centre; ➢ Alaska Dept. of Environmental Conservation (ADEC); ➢ SEAPRO; ➢ ITB salvage and marine firefighting contractor • The tug crew prepare for deployment the 1400′ of Versatech containment boom stored on a reel on the barge and prepare the 16′ Polaris with 50 HP outboard (located on the Island Monarch) for launching.	
1ST 24 HRS 1330 - 1500	• The two ITB work boat deploys the boom in an arc configuration below the direction of the current to trap the oil near the barge and to minimize its spread. • The tug detaches from its pusher configuration at the stern of the barge and maintains the barge in position using a tow line. This allows for the booming operations at the stern and for the tug to distance itself from the spilled diesel on the water. • Once the initial containment arc is completed, the boom is attached to the stern and bow of the barge to complete a full containment enclosure– see *Figure 1.6.11 (I) – Full Containment Configuration*. By 1430 (i.e., 1.5 hours after the grounding) the boom is deployed in a crescent shape below the direction of the current and wind.  **Figure 1.6.11 (I) – Full Containment Configuration** • The towboat stabilizes the drift of the barge and keeps the bow headed into the current.	**@ 1330: Nil**

	• The two ITB crew deploy the onboard brush skimmer and begin recovery operations approximately 1 hour and 40 minutes after the grounding. Product is pumped to the spill tanks, slack tanks, and void tanks if necessary. • Upon being notified of the spill, the ITB ERT prepare to proceed to Alaska to take charge of the response. They contact Northwest International Jet, and arrange a flight from Vancouver to Juneau as the centre nearest to the spill site – see *Section 1.5.4 – ERT Mobilization and Deployment*. Estimated travel time to Juneau is 4 hours including preparation, travel, flying time and customs clearance. The ERT contacts SEAPRO and arranges for a helicopter to carry them to and over the spill site. The ERT also contacts their naval architect / marine surveyor and request that he accompany the ERT to Alaska. • The ERT Incident Commander requests SEAPRO to begin mobilization and transportation of containment, recovery, and clean-up equipment from its closest centres by the quickest transport mode available. A list of SEAPRO Owned Equipment Systems and Member Equipment Systems is available in *Section 1.5 – Deployment Strategies* of the SEAPRO *Technical Manual*. Estimated deployment times to the spill site will depend primarily on the time required to move the equipment from storage to the staging area, and travel time to the site – see *Section 1.5.2 – Guidelines for Developing Equipment Deployment Strategies* in the SEAPRO *Technical Manual*. • The "Rapid Response System" in Juneau (containing a Vikoma Komara 12 K Skimmer, 820' of 8x12 inflatable boom, and 3,300 gallon floating storage bladder) is readied for deployment by air to the spill scene. Estimated time to begin operations is 3 hours 20 minutes (2 hour mobilization time, 20nm ÷ 110 nm/hr = 20 minutes flying time, and 1 hour deployment time). • Six 249 barrel response barges are readied for deployment to the spill site (2 located in Haines, 2 located in Juneau, and 2 in Gustavus). Each group of two barges has available 498 bbls of storage capacity, a Lori brush skimmer with a derated capacity of 103.1 bbls /hour (see Figure 1.6.16 for calculation), 2000' of 20" boom, and two 21' alumiweld work boats. A completed description of the barges and their contents is located in Section 3.6.2.1.3 of the SEAPRO Technical Manual. Estimated time for the Haines barges to begin operations is 5 hours 30 minutes (2 hours mobilization time, 25 nm ÷ 10 nm/hr = 2.5 hours travel time, and 1 hour deployment time). Estimated time for the Juneau barges to begin operations is 7 hours 30 minutes (2 hours mobilization time, 45 nm ÷ 10 nm/hr = 4.5 hours travel time, and 1 hour deployment time). Estimated time for the Gustavus barges to begin operations is 10 hours (2 hours mobilization time, 70 nm ÷ 10 nm/hr = 7.0 hours travel time, and 1 hour deployment time). SEAPRO Blanket Purchase Agreement (BPA) tugs will transport the barges to the spill scene.	

	• ITB's salvage and marine firefighting contractor dispatches a barge capabable of offloading the Island Trader's remaining cargo. Estimated time of arrival 30 hours.	
1ST 24 HRS 1500 – 1600	• It is estimated that given the weather conditions, the deployed ITB boom will only contain approximately 6,000 bbls of oil and the Island Trader's central cargo management computer system is indicating a steady release of approximately 3,000 bbls per hour. Thus, the immediate priority is to obtain additional boom to contain the oil which will escape the initial ITB containment boom. • Sorbent sweeps are deployed by the ITB workboat at the apex of the boomed area to trap any oil escaping the boom until additional containment boom arrives. The work boat patrols the outer perimeter of the boom to pick up any escaping oil with sorbent pads or sheets – see *Figure 1.6.11 (II) – Full Containment with Sweeps*. Sorbent pads are wrung out using a commercial sorbent wringer into barrels and the barge's slop tanks and reused.  **Figure 1.6.11 (II) – Full Containment with Sweeps** • SEAPRO chooses to mobilize SEAPRO-owned containment and recovery equipment from its available supplies with the primary centres being Zone 7 (Juneau) and Zone 8 (Haines/Skagway)– *see Figure 1.6.15 – SEAPRO-owned Boom* and *Figure 1.6.16 – SEAPRO Skimming and Storage Equipment*. Equipment from other Zones will be mobilized as required. • Echo Cove is chosen by the Unified Command as the field operations and staging area. • Centennial Hall in Juneau is chosen as the Command Centre for the response.	**@ 1500: Nil**

- A total of 15,020 ft of SEAPRO-owned boom is available for deployment from the two closest Zones Centres (Zone 7 - Juneau and Zone 8 - Haines/Skagway). These are deployed by a combination of air, land, and marine transport modes at the discretion of SEAPRO's Command Team, and depending on the availability of suitable aircraft, vessels and trucks. Additional boom from other zones is also available and flown to the spill scene as required (Refer to table 1.6.15 or to SEAPRO Technical Manual Section 3.6).

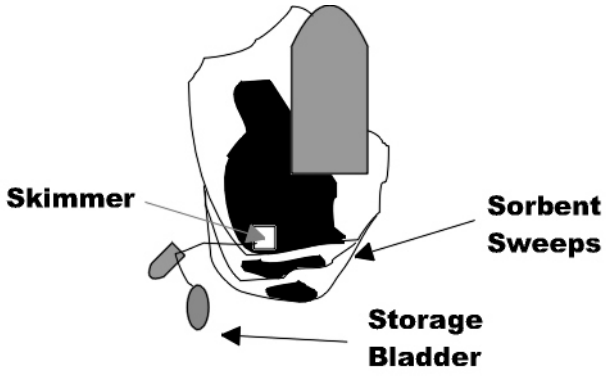
- A total of 8,970 bbls / day of derated skimming capacity is available for deployment to the spill site by air and vessel transport from the two closest zones centres (Zone 7 - Juneau and Zone 8 - Haines/Skagway). Additional skimming capacity is available from other zones (Refer to table 1.6.16 or to SEAPRO Technical Manual Section 3.6).

- A total of 1,444 bbls of temporary storage capacity is available for deployment to the spill site by air and vessel transport from the two closest zone centres (Zone 7 - Juneau and Zone 8 - Haines/Skagway). Additional storage capacity including a 6,290 bbl storage bladder is available from other zones (Refer to table 1.6.17 or to SEAPRO Technical Manual Section 3.6).

- In consultation with the USCG, ADEC, and the ITB Master, SEAPRO establishes a field Operations Centre and equipment staging area near Echo Cove on the south shore of Berners Bay because the site has road access from Juneau, and is in sheltered waters.

- The estimated deployment times to the spill site vary depending on the mode of transport (i.e., land, air or marine), the time required to move the equipment from its storage area to the staging centre, transport time to the spill area, and the transit time from the spill area staging location to the actual spill site – see *Section 1.5.3 – Guidelines for Developing Equipment Deployment Strategies* from SEAPRO's *Technical Manual*. The actual methods of deployment to be used will depend on the availability of suitable transport (i.e., trucks, vessels, aircraft), and will be largely at the discretion of the SEAPRO Logistics Officer. Some equipment will be delivered directly to the spill site by helicopter or float plane, and deployed directly into the water near the Island Trader. Equipment from Juneau and Haines/Skagway will arrive by a combination of vessel and aircraft. In addition, some equipment (e.g., boom, skimmers) from Juneau may be transported by truck to the field operations centre and staging area at Echo Cove, and moved by boat from there to the spill site or deployed near Berners Bay to protect sensitive resources.

- ITB's salvage and marine firefighting contractor arranges for personnel (including divers) and equipment (see *Section 3.5 – Logistical Support* from SEAPRO plan) to proceed to the spill site for possible salvage and lightering operations.

1ST 24 HRS 1600 – 1800	• The barge is stable and being held in position by the tug. She is in no danger of foundering or sinking. The discharge continues at an approximate rate of 3000 bbls/hr. • As SEAPRO containment boom and recovery (skimming) equipment begins to arrive at the spill scene, it is deployed under the direction of SEAPRO's onsite supervisor, in consultation with the ITB towboat Master, the USCG, and ADEC officials as required. • As the spill site is approximately 20 minutes away from Juneau via float plane and given an approximate 2 hour mobilization time and 1 hour deployment time, the "Rapid Response System" from Juneau (along with operating personnel) arrives on site and is operating by 1700 (4 hours after the grounding) : ➢ From Juneau: Vikoma Komara 12K Disc Skimmer (derated capacity: 13.3 bbls / hour) ➢ From Juneau: 3,300 gal. Vikoma Bladder ➢ From Juneau: 820′ inflatable boom ➢ From Juneau: Wildlife Hazing Kit • The immediate priority for containment is to use the additional 820′ of boom to contain oil which has begun to overflow ITB's already deployed 1400′ of boom. • Two vessels of opportunity are available at the site by 1630 hours to help with response operations. • The Vikoma Komara 12K Disc Skimmer is deployed within the ITB containment area around the barge and begins pumping into the Vikoma 3,300 gallon storage bladder – *see Figure 1.6.12 – Skimming Operation around Barge*.  **Figure 1.6.12 – Skimming Operation around Barge**	**@ 1600: Nil**

	• Commercial divers out of Juneau are hired by ITB's salvage and marine firefighting contractor to send a team of divers to the scene to assess the type and extent of damage to the barge. They are dispatched by helicopter and arrive at the barge in roughly 2.5 hours. ITB's salvage and marine firefighting contractor also sends a work tug and crew from Juneau to make temporary repairs to the barge once the cargo has been safely lightered off to another vessel. • SEAPRO's 1000 cubic meter (6,290 bbl) storage bladder leaves Sitka at 17:30 being towed by a BPA tug. Additional equipment from Zone 5 Sitka is also transported with the BPA tug. It is estimate that the vessel will take 20 hours to reach the spill site making 8-11 knots (depending on seas) over the 175 nautical mile voyage. • Additional boom from Juneau arrives by float plane at 17:00 (6 hours after the grounding) and is used in containment operations around the barge. • The Master radios a request to SEAPRO to arrange a helicopter overflight out of Haines or Juneau to observe the potential movement of any uncontained oil from the spill. Estimated arrival time from Juneau is 35-40 minutes and 30-35 minutes from Haines. • SEAPRO are also asked to request any small boats in the area to assist with visual tracking of the oil movement. • SEAPRO has a portable weather station for verification of field weather. The wind is very light from the northeast at 8 knots. The tide is turning to ebb with an estimated current speed of 0.3. Under these conditions, any uncontained oil is initially expected to move slowly south with the tide and wind. *Figure 1.6.13 – Likely Spill Trajectory (Uncontained)* shows the likely movement of the oil over a 12 hour period if the spill was not contained and assuming no change in wind speed or direction over that period of time, and that the oil moves at the same speed as the surface current (ebb and flood speed are assumed to be approximately equal), plus or minus roughly 3% of the wind speed. This trajectory is used for determining the 'worst case' area that might be impacted by the spill, although the actual trajectory is much smaller due to containment measures taken by the towboat crew – see *Figure 1.6.11.*	

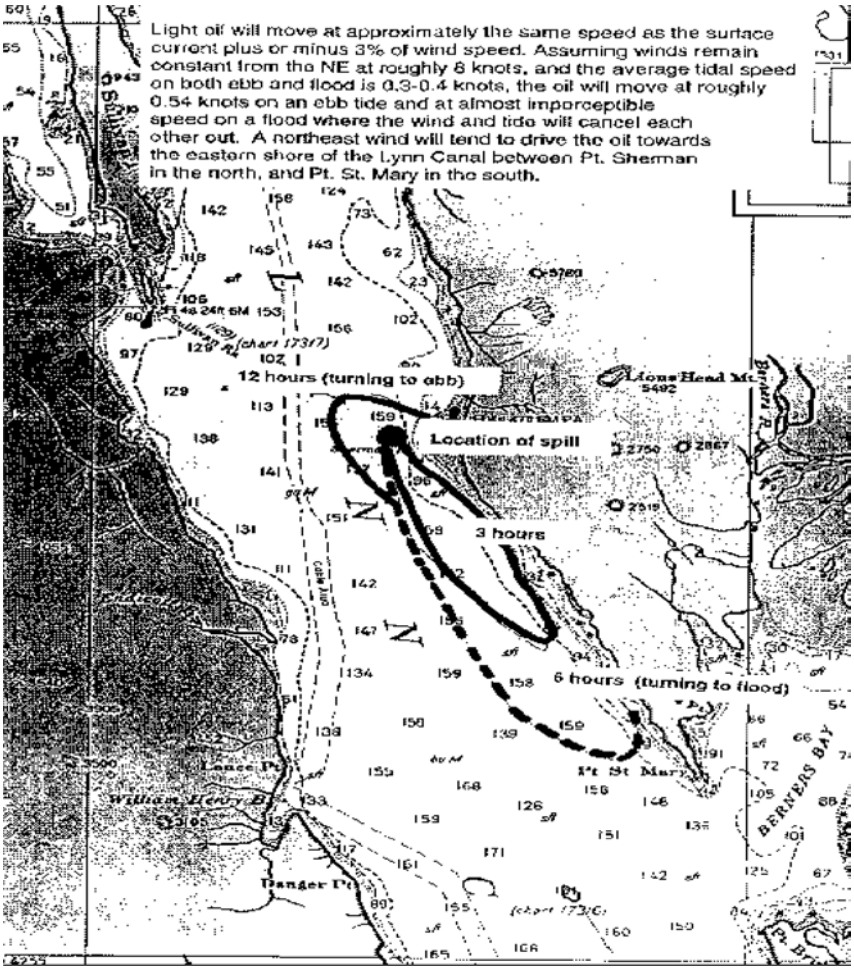


Figure 1.6.13 – Likely 12-Hour Trajectory (Uncontained)

- Examination of the NOAA *Environmental Sensitivity Maps* for the area around the spill site (see Juneau Area Maps for Human Use of Biological Resources, and Sensitive Biological Resources) and consultation with ADEC officials determines that the following sensitive resources are located near the scene of the spill:
  - Tanner crab fishing areas along the east shore of the Lynn Canal;
  - A popular salmon run off Pt. Sherman from May to August (not in season at the time of the scenario);
  - A number of eagle nests along the east shore of the Lynn Canal which should not be endangered by the spill;
  - Two anadromous fish streams on the east shore slightly to the north of Pt. Sherman which may require protection when the tide turns to flood (roughly 6-8 hours later).

- The shoreline along this area of the Lynn Canal is primarily exposed rocky shores, and exposed wave-cut platforms with low sensitivity to spilled oil – see *Shoreline ESI Ranking for* Habitats at the back of *Section 3.10 – Protection of Environmentally Sensitive Areas. Refer to Pt. Sherman ESI map attached at end of this scenario.*

- There are no MESA's likely to be affected by the spill based on reference to ADEC documentation and the *SEAPRO Technical Manual* (see *Section 3.10 – Protection of Environmentally-Sensitive Areas* of the *SEAPRO Technical Manual*).

- The most sensitive resources are located in Berners Bay, approximately 10 nautical miles south of the spill. These include:
  - An anadromous fish stream slightly northeast of Pt. Bridgett;
  - Waterfowl and duck habitat around Pt. Bridgett on the south shore of Berners Bay;
  - Pacific herring spawning grounds at the southern tip of Pt. St. Mary and along the south shore of the bay near Pt. Bridgett which are sensitive in the spring season.

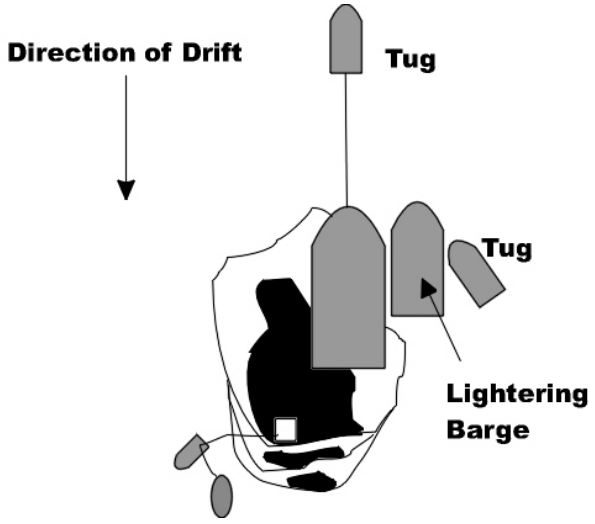
- Approximately 15 nautical miles to the north of the spill site is the entrance to the Chilkat Inlet and the southern tip of the Chilkat Peninsula. This is regarded as an environmentally-sensitive area, particularly the mud flats at the mouth of Chilkat River, but is not likely to be impacted by the spill.

- The ITB Incident Commander authorizes SEAPRO to take whatever measures are necessary to protect wildlife threatened by the spill in consultation with ADEC and other state and federal and government agencies (see above) on the company's behalf – see *Section 3.10 – Protection of Environmentally-Sensitive Areas* of the SEAPRO Technical Manual. Such measures include:
  - Transport of SEAPRO's wildlife hazing kits from Juneau, Haines/Skagway, and other SEAPRO Zones by fastest means available;
  - Transport SEAPRO wildlife response containers including both the washing station in Sitka and the triage station in Ketchikan to a location close to the spill to minimize transit time for oiled wildlife.
  - Alert the Raptor Rehabilitation Centre in Juneau which is under contract to SEAPRO;
  - Obtain proper authorization from the appropriate government agencies including Alaska Dept. of Fish and Game, U.S. Fish and Wildlife Service, and the National Marine Fisheries Service to haze, capture, transport, stabilize, and treat oiled wildlife – see *Figure 1.6.18* at the end of this scenario for a summary of the state and federal permits required.
  - Ensure that all federal regulations and guidelines for wildlife rescue and rehabilitation are complied with by SEAPRO and contractor personnel.

1ST 24 HRS 1800 – 2000	• The following skimmers and equipment (along with operating personnel) arrive on site and are operating by 2000 (7 hours after the grounding) ➢ From Haines: 2 x 249 bbl response barges complete with Lori brush skimmer (103 bbls/hr derated capacity), 2000' containment boom, 2 work boats, and 498 bbls storage capacity ➢ From Juneau: Canflex Sea Slug FCB-60 bladder (6000 gal.) ➢ From Haines: Canflex Sea Slug FCB-42E bladder (4,200 gal.) • There are now the ITB response boat and tug, several SEAPRO vessels, and several vessels of opportunity available at the spill site and staging area. • Upon arrival in Alaska, the ITB Incident Commander proceeds to the Juneau Command Centre, the ITB Operations Officer proceeds to the Echo Cove Staging area, while the naval architect and salvage master proceed to the spill site to inspect the barge and take charge of the casualty response. • Boom is deployed using SEAPRO and/or vessels of opportunity around any patches of oil that have escaped the initial containment boom around the barge. The boom is deployed in the same crescent or arc configuration drifting with the current so that a skimmer or sorbents can be used to recover the oil. • ITB's naval architect and salvage master have arrived at the barge, and discuss possible courses of action for lightering of cargo, trim and stability considerations, safe havens near the scene, and temporary repairs with ITB's salvage and marine fire fighting contractor, and the USCG. • Vessels and containment boom are positioned near the approaches to Berners Bay and Chilkat Inlet upon arrival at the spill site. In the initial stages of the response on the ebb tide, resources south of the spill site along the east shore of the Lynn Canal and at the entrance to Berners Bay will be monitored most closely, and treated as the protection priority. • Any equipment available for shoreline protection is to be positioned off the northern entrance to Berners Bay off Pt. St. Mary for deployment as required by the actual movement of the oil as long as the tide is ebbing. • Divers confirm that 4 tanks have been damaged, the discharge has stopped, and the barge is stable with adequate buoyancy. • Contracted tank trucks and vacuum trucks begin to arrive at the Echo Cove staging area for pumping off recovered product from the 249 bbl response barges and other temporary storage containers.	**@ 1800: 20 bbls**

1ST 24 HRS 2000 – 0500 (Dark-ness)	• The following skimmers and equipment (along with operating personnel) arrive on site and are operating by 2300 (10 hours after the grounding) ➢ From Juneau: 2 x 249 bbl response barges complete with Lori brush skimmer (103 bbls/hr derated capacity), 2000′ containment boom, 2 work boats, and 498 bbls storage capacity ➢ From Haines: 1 x rope mop skimmer (5 bbls / hour derated capacity), and 1000 gal. temporary storage • The following skimmers and equipment (along with operating personnel) arrive on site and are operating by 2330 (10.5 hours after the grounding) ➢ From Gustavus: 2 x 249 bbl response barges complete with Lori brush skimmer (103 bbls/hr derated capacity), 2000′ containment boom, 2 work boats, and 498 bbls storage capacity • Skimming operations at the barge continue throughout the night using the on scene Lori Brush skimmers. Lighting is provided by the flood and search lights on board the Island Trader, the Island Monarch, vessels of opportunity, as well as SEAPRO's portable flood lights. • Recovered oil from the LORI brush skimmers is stored in the tanks of the barge they're on. The on-scene 249 bbl response barges not equipped with skimmers are used to shuttle loads of recovered product from the spill scene to the Echo Cove Staging area and into the waiting tank trucks and vacuum trucks. Floating storage bladders are also used to shuttle loads of recovered oil from skimming operations to the Echo Cove staging area. • Some recovery operations continue throughout the night away from the barge at other locations where oil has been contained using the Vikoma Komara 12k disk skimmer and sorbent material.	**@ 2000: 255**
1ST 24 HRS 0500 – 1100	• Skimming operations continue at the barge. • Discharge tracking recommences at dawn. • On water protection of sensitive resources and containment/recovery of on-water oil away from the barge continue. • The 1000 cubic meter Unitor on water storage bladder arrives, along with additional boom, skimmers, and storage bladders with the BPA tug towing it. The 1000 cubic meter bladder is immediately used to empty 249 bbl response barges and smaller bladders. Portable pumps from various zones are used.	**@ 0500: 1800**

1ST/ 2ND 24 HRS 1100-2000	• In addition to skimming equipment, sorbent sweeps are spread and towed behind smaller vessels in order to recover thinner films or sheens. Sorbent pads and sheets are also spread over smaller areas of fuel and regions too thin for effective skimming. • ITB's management team in Vancouver uses *the Automated Data Inquiry for Oil Spills (ADIOS)* software program developed by the National Oceanagraphic and Atmospheric Administration (NOAA) to determine a preliminary fate and effects projection of the oil spilled. Wind, wave, and water temperature estimates are obtained from the tug Master. Of the 18,000 bbls estimated to have been released and taking into account the recovered oil, and estimated quantity beached, the ITB ERT determines using the ADIOS software that at 1200 hours there is approximately 12,300 bbls remaining on the water. (See attached Oil Budget graph). • Helicopter overflights continue out of Haines and Juneau to ensure that the oil does not approach the identified sensitive areas.	**@ 1100: 2900**
2ND 24 HRS 2000 – 0500 (Dark-ness)	• Skimming operations at the barge continue throughout the night. Lighting is provided by the flood and search lights on board the Island Trader, Island Monarch, BPA vessels, and using the SEAPRO portable lights. • Discharge tracking is suspended until dawn. • Some recovery operations continue throughout the night away from the barge at other locations where oil has been contained. SEAPRO portable lights and vessel searchlights are used for lighting.	**@ 2000: 5300**
2ND 24 HRS 0500 – 1200	• A decision is made to lighter off all of the barge's cargo into the lightering barge when it arrives at the site. The lightering barge will discharge the Island Trader's cargo at the Petro Marine Facility in Skagway (the original destination of the Island Trader's product). The Island Trader will then be towed into Echo Cove on the south shore of Berners Bay where it will be sheltered from winds and weather. ITB's salvage and marine firefighting contractor will make temporary repairs to the damaged tanks so that the barge can be safely towed to a drydock for permanent repairs. • The Island Trader's cargo begins to be offloaded into the lightering tank barge at approximately 0800 hours under the supervision of the ITB salvage master and naval architect, and the USCG – see Figure 1.6.14 – Island Trader Lightering Operation. Extreme caution is taken to ensure the trim and stability of the Island Trader throughout the transfer operation, and to avoid placing undue stress and pressure on the cargo tanks and internal bulkheads.	**@ 0500: 7100**

	 **Figure 1.6.14 – Island Trader Lightering Operation**	
3RD 24 HRS 1200 – 2000	• ITB's management team in Vancouver uses *the Automated Data Inquiry for Oil Spills (ADIOS)* software program developed by the National Oceanographic and Atmospheric Administration (NOAA) to determine a preliminary fate and effects projection of the oil spilled. Of the 18,000 bbls estimated to have been released and taking into account the recovered oil, and estimated quantity beached, the ITB ERT determines using the ADIOS software that at 1200 hours it is estimated that less than 2000 bbls of fuel remain on the water. Over 3400 bbls has evaporated, 3600 has dispersed, and over 9,000 bbls has been recovered. (See attached Oil Budget graph) • SEAPRO's Shoreline Clean-up and Assessment Team (SCAT) studies the shorelines that may have been exposed to spilled oil, to determine the extent of oiling, and appropriate clean-up measures as required. As noted, most of the shorelines along the Lynn Canal are mainly exposed rocky cliffs, and exposed wave-cut platforms. These are classified as LOW SENSITIVITY to spilled oil according to the National Oceanic and Atmospheric Administration's (NOAA) *Environmental Sensitivity Index (ESI).* Since Diesel Fuel is classified as a non-persistent, there is likely to be little feasible shoreline activity for these types of shorelines – see *Alaska Shoreline Countermeasure Matrix* (Light Oils) at the back of this Section. • For sand, gravel, or cobble beaches in the area, manual removal, passive collection (e.g., sorbents), and debris removal operations may be required. ITB will request and authorize SEAPRO to undertake whatever shoreline clean-up activities are required using its own or contractor resources. Oiled shoreline sediment and debris will be stored in suitable, leakproof containers or "Geo-bags" (high mil plastic bags) and transported to the temporary storage area at Echo Cove.	**@ 2000: 8700**

	• Oil and water mixture recovered from skimming operations that is stored in bladders and barges are either transferred to the 1000 cubic meter Unitor bladder or are towed slowly (towing speed < 5 knots) back to the sheltered location in Berners Bay to be offloaded to tank trucks. • A temporary waste storage compound is constructed at the operations and staging area at Echo Bay. The storage area is fully contained using leakproof lined containers which are available through SEAPRO subcontractors. These are filled and then transported for disposal. Oiled sorbent materials (e.g., pads, sheets, rolls) are recovered from the water manually using pike poles and similar equipment and are stored in leakproof steel drums or storage containers on board the recovery vessels. These materials are then transported to the temporary storage area. ITB and SEAPRO consult ADEC officials throughout the entire process to ensure compliance with state regulations governing storage and disposal of oily waste materials generated from a spill. • Other contaminated materials (e.g., oiled clothing, gloves, seaweed, shoreline debris) are stored in heavy duty plastic bags or "Geo-bags (>6 mil thickness which resist deterioration from exposure to oil) and/or lined waste disposal containers. ITB and SEAPRO consult with ADEC officials to determine disposal options in SE Alaska for this material, plus regular garbage and waste (non-oiled) generated by responders at the site. SEAPRO has as an option a "Smart Ash" burner which is an approved method for oily sorbent disposal, however, an air quality permit will have to be obtained prior to its use.	
3RD 24 HRS 2000 – 0500 (Dark-ness)	• By nightfall most of the on-water oil in the primary containment areas has been recovered. Some skimming operations but mainly manual recovery continues throughout the night. Lighting is provided by the flood and search lights on board vessels of opportunity and using the SEAPRO portable lights. • Discharge tracking is suspended until dawn. • The lightering operation of the Island Trader continues throughout the night. • Some recovery operations continue throughout the night away from the barge at other locations where oil has been contained. SEAPRO portable lights and vessel searchlights are used for lighting.	**@ 2000: 9700**

3RD 24 HRS PLUS	• Upon completion of the lightering operation, the Island Trader is towed to a sheltered location in Berners Bay, selected and approved in advance by the USCG and ADEC. • Salvage personnel begin temporary repairs on the vessel to make it seaworthy to be towed to a drydock for permanent repairs. The barge is not towed until approved by USCG and ADEC officials that it will not pose a threat to the marine environment. • SEAPRO continues shoreline inspections and clean up operations until the unified command end points have been met. • A full and thorough incident investigation is undertaken by ITB management.	**@ 1700: 10100**

SEAPRO- owned Boom		
Location	**Type**	**Length (ft)**
Zone 7 - Juneau	Acme 8x12	5,700
	Inflatable 8x12	820
	Ro-Clean Desmi Ro-Boom 800 Beach	500
Zone 8 - Haines & Skagway	Acme 8x12	2,000
	American Marine 8x12	1,000
	Ro-Boom	5,000
Zone 6 – Pelican/Elfin Cove/ Gustavus	Acme 8x12	3,000
Zone 5 – Sitka	CSI 8x12	4,000
	Acme 8x12	3,000
	Vikoma inflatable 8x12	820
	Oil stop ocean boom	300
Total		**19,120**

Section 3.6 – Response Equipment, SEAPRO Technical Manual

Figure 1.6.15 – SEAPRO Boom Resources in Nearby Zones

SEAPRO Owned Skimmers			
Type	**Name Plate Capacity (bbls/hr)**	**Derated Capacity (bbls/hr)** 20% efficiency factor	**Daily Mechanical Recovery Capability (bbls/day)** Including downtime of 4 hours out of each 12 hours for transfer, etc.
Zone 7 – Juneau			
Lori 3.5 Brush Skimmer (249 bbl ORB)	773	154.6	103.1
Lori 2.5 Brush Skimmer (OSRV)	516	103.2	68.8
Lori 2.5 Brush Skimmer (OSRV)	516	103.2	68.8
Vikoma Komara 12K Disc Skimmer System	100	20	13.3
Zone 8 - Haines/Skagway			
Lori Brush Skimmer	773	154.6	103.1
Action Petroleum Multi Skimmer	100	20	13.3
Crucial Rope Mop Skimmer	25	5	3.3
Zone 6 - Pelican/Elfin Cove/Gustavus			
Lori Brush Skimmer	773	154.6	103.1
Crucial Rope Mop Skimmer	25	5	3.3
Zone 5 - Sitka			
Marco Sidewinder	207	41.4	27.6
Aquaguard RBS 10/2	150	30	20
Total			**534.7**

Figure 1.6.16 – SEAPRO Skimming Equipment in Nearby Zones

Storage Asset	SEAPRO Source Zone	Volume in barrels	Location
Neka Bay	7	55	SEAPRO dock
2 x ORB	8	498	"E" float of the Haines small boat harbor
2 x ORB	7	498	SEAPRO dock
2 x ORB	6	498	NPS fuel dock
Vikoma 3.3K	3	79	Connex #31
	7	79	Connex #72
	5	79	Samson Tug and Barge
Unitor 1000m^3	5	6290	Samson Tug and Barge
Unitor 100m^3	5	629	Samson Tug and Barge
Canflex FCB-43E	3	102	Connex #31
	8	102	Connex #81
Canflex FCB-60	7	157	Connex #72
Canflex CF-1000	6	24	Connex #60
Total		**9090**	

Section 3.6 – Response Equipment, SEAPRO Technical Manual

Figure 1.6.17 – SEAPRO Storage Equipment in Nearby Zones

	Alaska Department of Fish and Game		U.S. Fish & Wildlife Service		National Marine Fisheries Service	
	Collect & Hold	Haze	Collect & Hold	Haze	Collect & Hold	Haze
Migratory Birds	No[a]	Yes	Yes	No[c]	No	No
Sea Otters, Walrus and Polar Bears	No	No	Yes	Yes	No	No
Whales, Porpoises, Seals and Sea Lions	No[b]	No[b]	No	No	Yes	Yes
Terrestrial Mammals	Yes	Yes	No	No	No	No

[a] See Appendix 26 for a list of agency personnel to contact for appropriate permits and authorizations.

[b] An Alaska Department of Fish and Game permit is also needed to collect, hold or haze any species on the State of endangered species list. As of February, 1992, the list included the following: Eskimo curlew; Alentian Canada goose; American and Arctic peregrine falcons; Short-tailed albatross; and Humpback, Blue and Right whales.

[c] A U.S. Fish and Wildlife Service (FWS) permit is also needed to haze species managed by FWS which are listed on the Federal endangered species list. As of February, 1992, the list included no Alaskan terrestrial mammals and the following Alaskan migratory birds: Eskimo curlew; Aleutian Canada Goose; and American and Arctic peregrine falcons.

Figure 1.6.18 - State and Federal Permits and/or Authorization Required for Hazing, Collecting or Holding Live Animals[a]

- **Oil Type**

  FUEL OIL NO.2 (HO/DIESEL), EXXON

  Location = none listed

  Synonyms = HO/DIESEL

  Product Type = refined

  API = 31.0

  Pour Point = -32 deg C

  Flash Point = 55 deg C

  Viscosity = 2.0 cSt at 38 deg C

  Adhesion = unknown

  Aromatics = unknown
- **Wind and Wave Conditions**

  Wind Speed = 8 knots from 45 degrees
- **Water Properties**

  Temperature = 45 deg F

  Salinity = 32 ppt

  Sediment Load = 5 g/m3 (ocean)

  Current = 0 mph
- **Release Information**

  · **Continuous Release**

    Time of Release = March 18, 1300 hours

    Spill Rate = 3000 bbl/hr

    Duration of Release = 6 hours
- **Mechanical Cleanup Operations**

  · **Mechanical Cleanup Operation = 1**

    Time of Application = March 18, 2000 hours

    AmountRecovered = 4535 bbl

  · **Mechanical Cleanup Operation = 2**

    Time of Application = March 18, 2300 hours

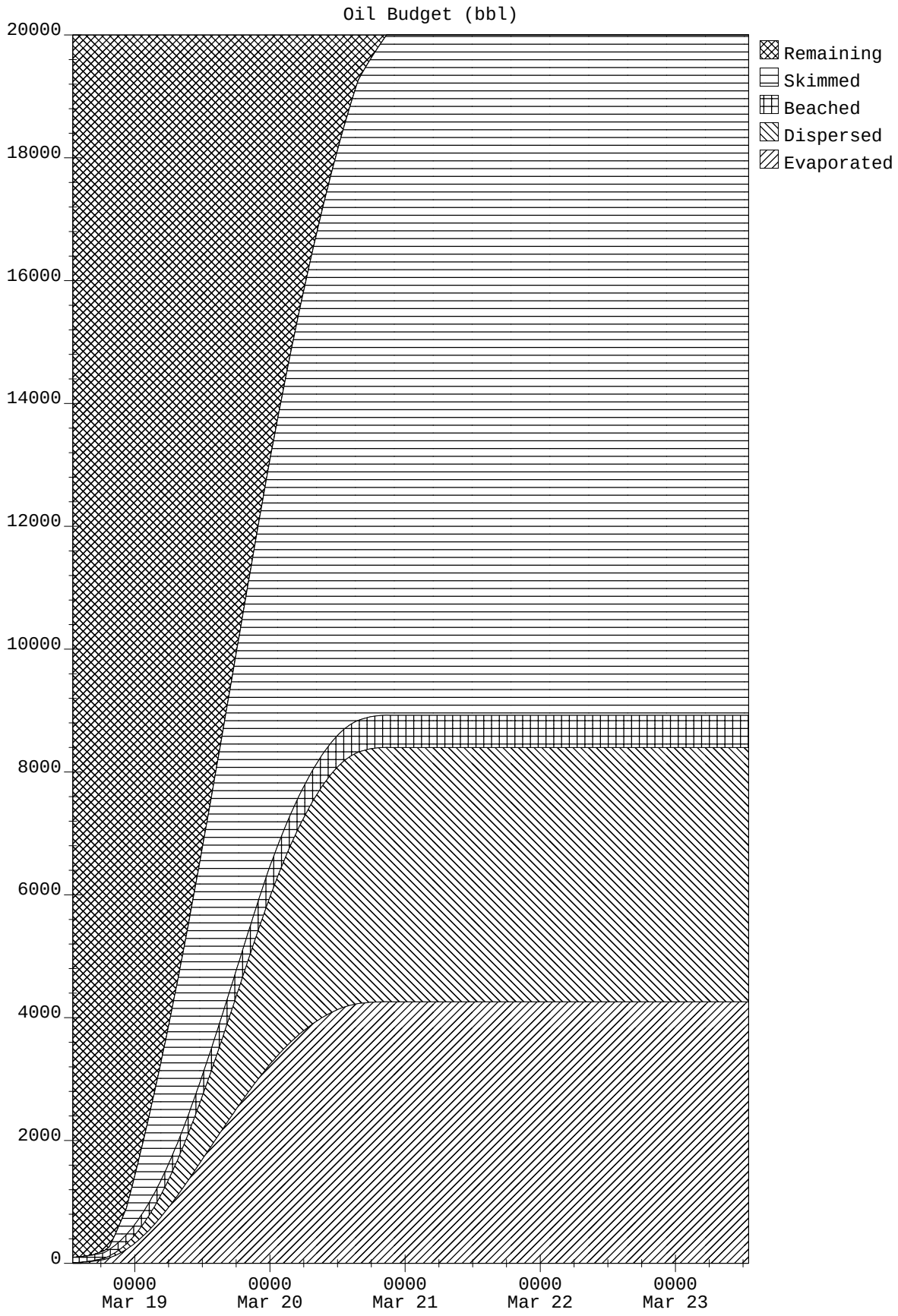
    AmountRecovered = 4947 bbl

  · **Mechanical Cleanup Operation = 3**

    Time of Application = March 18, 1700 hours

    AmountRecovered = 800 bbl
- **Beached Oil**

  Day 1 = 150 bbl


Oil Budget (bbl)
20000
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
0000 Mar 19
0000 Mar 20
0000 Mar 21
0000 Mar 22
0000 Mar 23
Remaining
Skimmed
Beached
Dispersed
Evaporated

Alaska Shoreline Countermeasure Matrix

Light Oils (Diesel, No. 2 Fuel Oils)

* Moderately volatile; will leave residue (up to 1/3 of spilled amount)
* Moderate concentrations of toxic (soluble) compounds
* Will "oil" intertidal resources with long-term contamination potential
* Has potential for subtidal impacts (dissolution, mixing, sorption onto suspended sediments)
* No dispersion necessary
* Cleanup can be very effective

ALASKA MASTER
Compilation of data from NOAA, USCG, CISPRI, Pacific Strike Team, and Alaska Shoreline Workshop (July 1994)

SHORELINE TYPE CODES

1 -	Exposed rocky cliffs	7 -	Exposed tidal flats
2 -	Exposed wave-cut platforms	8a -	Sheltered impermeable rocky shores
3 -	Fine- to medium-grained beaches	8b -	Sheltered permeable rocky shores
4 -	Coarse-grained sand beaches	8c -	Eroding peat scarps
5 -	Mixed sand and gravel beaches	9 -	Sheltered tidal flats
6 -	Gravel beaches	10 -	Marshes

COUNTERMEASURE	SHORELINE TYPES											
	1	2	3	4	5	6	7	8a	8b	8c	9	10
1) No Action	R	R	R	R	R	R	R	R	R	R	R	R
2) Manual Removal			C	C	C	C	C	C	C	R	C	C
3) Passive Collection (Sorbents)			C	C	C	R	C	C	C	C	C	C
4) Debris Removal		R	R	R	R	R	R	R	R	R	C	C
5) Trenching			C	C	C	C						
6) Sediment Removal										C		
7) Cold Water Flooding (Deluge)											C	C
8) Cold Water Washing												
a) Low Pressure (< 50 psi)					C	R		C	C			C
b) High Pressure (< 100 psi)												
9) Warm Water Washing/Mod.-High Pressure												
10) Hot Water/High Pressure Washing												
11) Slurry Sand Blasting												
12) Vacuum			C	C	C	C	C	C		C	C	C
13) Sediment Reworking †			C	C	C	C						
14) Excavation, Cleansing, and Replacement			C	C	C	C						
15) Cutting Vegetation *												
16) Chemical Treatment †												
a) Oil Stabilization with Elastomizers			C	C	C	C		C				
b) Protection of Beaches			C	C	C	C		C				
c) Cleaning of Beaches			C	C	C	C		C				
17) In situ Burning			C	C	C	C	C	C	C	C	C	C
18) Nutrient Enhancement †			C	C	C	C	C	C	C	C	C	C
19) Microbial Addition †			C	C	C	C	C	C	C	C	C	C

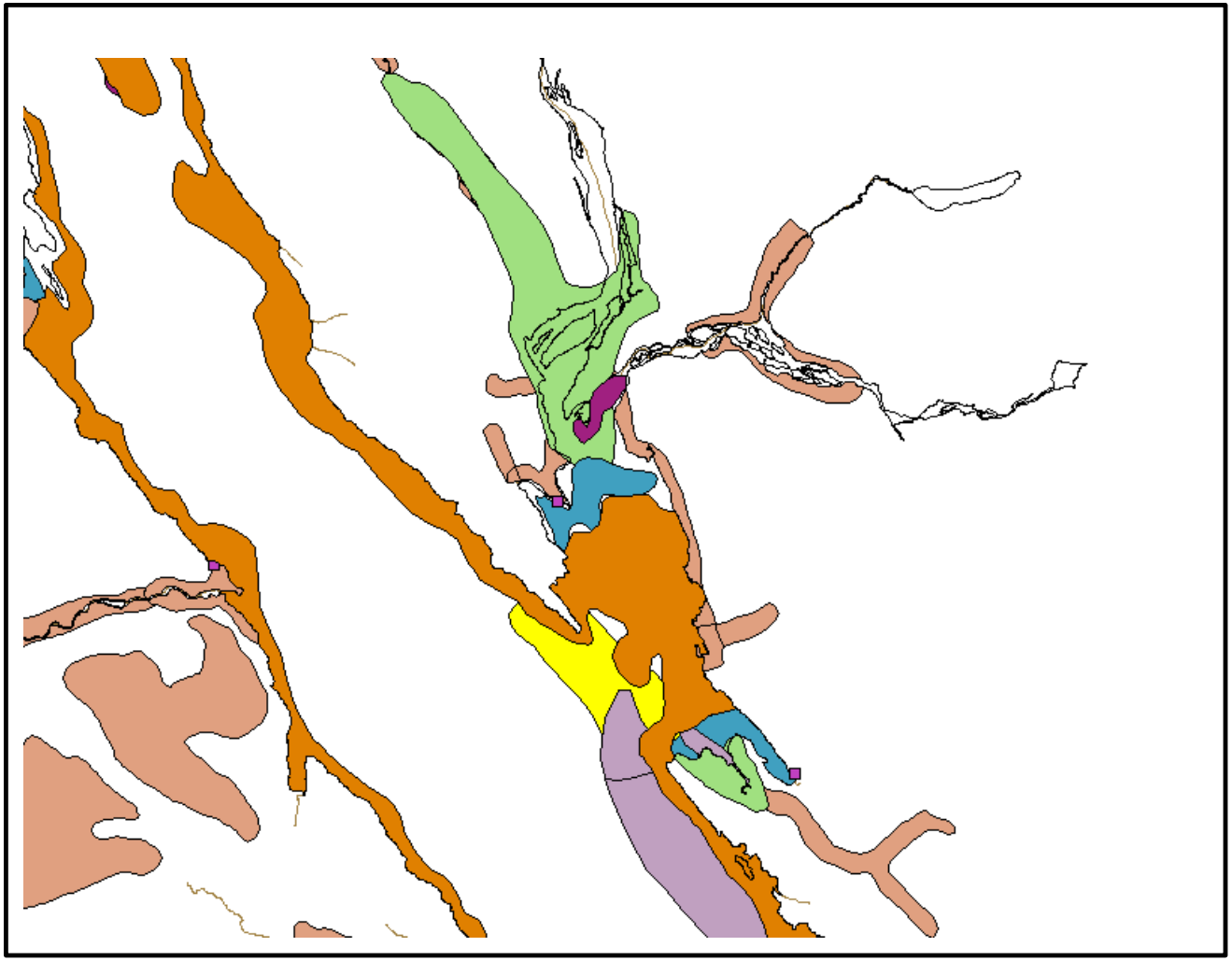
† - Requires RRT approval
R - Recommended - may be preferred alternative
C - Conditional

Not Recommended

This countermeasure advisability matrix is only a general guide for removal of oil from shoreline substrates. It must be used in conjunction with the entire Shoreline Countermeasures Manual plus field observations and scientific advice. The countermeasures listed are not necessarily the best under all circumstances, and any listed technique may need to be used in conjunction with other techniques (including ones not listed herein). The Federal On-Scene Coordinator (FOSC) or the state OSC operating with the FOSC's authorization has the responsibility for and authority to determine which countermeasure(s) are appropriate for the various situations encountered. Selection of countermeasures is based on the degree of oil contamination, the shoreline type, and the presence of sensitive resources. Extremely sensitive areas are limited to manual cleanup countermeasures.

ESRI ArcExplorer 2.0

Point Sherman



- hydro1
- Juneau tcrab
- Juneau sport
- Juneau socecon
- Juneau shrimp
- Juneau seal
- Juneau salf
- Juneau invf
- Juneau Hydro
- Juneau Base Map
- Juneau groun
- Juneau dcrab
- Juneau comm
- Juneau bird
- Juneau bear
- Juneau anad
- Stephens Passage hydro
- Sitka Base Map
- Prince Rupert Base Map
- Petersburg Base Map
- Icy Strait Base Map

N

Tuesday, Jul 22 2003

C. "WORST CASE DISCHARGE" SCENARIO

Summary Format

Introduction

The doubled hulled oil tank barge, Island Trader, has run aground on Bird Rocks in Rosario Straits during an early winter storm. Approximately 8 tanks are holded. The vessel is carrying 65,000 barrels of diesel fuel oil. The barge, destined for the US Oil Refinery, Tacoma, suffered extensive damage to the bottom plating. The Tug Master reports that the barge is hard aground on a falling tide. All crew members are safe.

Time: 0580 Hours
Current: 3 - 3.5 Knots
Weather: Clear, 45°F
Tide: High Tide @ 0725 Hours 17.3 Ft.
Low Tide @ 1345 Hours 3.1 Ft.
Wind: From South at 25 - 30 MPH; Sea State 3
Product: Diesel Fuel Oil

- All actions to this point are identified in the Emergency Action Plan, *Section 1.1* and in the *Section 1.2 - Reporting and Notification*. ITB Management, has initiated a Level III response.

- The Washington State Maritime Cooperative (WSMC), at the request of ITB; has been requested to provide a complete oil spill response, including response vessels, boom equipment, skimmers, qualified personnel, and wildlife care centres.

- A teleconference call has taken place between the U.S.C.G., Commanding Officer for the Captain of the Port in Seattle, the Washington State Department of Ecology, WSMC, Foss Environmental (Primary Contractor) and ITB Management in Vancouver.

- Due to strong winds, currents and nature of the product spilled; the Unified Command Team felt that 60% of the oil spilled would disperse or evaporate during the first 24 hours of the incident. It was projected that the need for a major shoreline clean-up response was unlikely.

Strategy

The incident commander/on-scene coordinators agreed on these priorities:
1. lighter remaining product from the vessel,
2. contain or divert the oil to facilitate recovery, and
3. protect environmentally sensitive areas.

Exclusion/Deflection Booming

The primary response contractor (Foss Environmental Services) has equipment and trained personnel pre-staged throughout Western Washington that can be mobilized within one-hour of notification. Locations include Anacortes, Bellingham, Port Angeles, Sekiu, Everett, Seattle, Tacoma, Grays Harbour and Willapa Bay.

Consequently, 2000' of containment boom can be deployed around or near the stricken vessel within two hours of notification by the 32' fast response vessels (FRVs) and crews from Anacortes and Bellingham.

Within 3-4 hours, the primary response contractor could have another 14,000' of boom and three more FRVs (5 total) on-scene (from Port Angeles, Everett and Seattle).

Contractors and cooperatives could deliver another 37,300' of boom within 6 hours of notification. If necessary, the Coast Guard (Seattle) and Navy (Bremerton) have 21,250' of boom on inventory.

Recovery Operation

Foss has skimming equipment in Bellingham and Port Angeles capable of being on the scene of the spill within a few hours. Foss Environmental meets the skimming requirements of OSRO Classes MM through W3 for the Inland operating environment of the Puget Sound COTP zone. Thus, within 24 hours they can have 12,500 bbl/day of effective daily recovery capacity.

Oil and Oily Waste Disposal

Temporary storage of the lightered and recovered oil is necessary during the cleanup operation. None of the first response skimmers are capable of storing a sufficient quantity of oil and oily water on board. However, for this scenario, it is assumed that oil can be pumped from the stricken vessel

and/or skimmers to a tank barge of opportunity, and that several would be readily available in this area from local tug and barge companies.

Arrangement for an aerial survey of the spill should be made as soon as possible to establish size, appearance, and behaviour of the slick(s). Overflights should be made periodically during the course of the spill response activities to evaluate the effectiveness of containment.

Containment/Diversion/Recovery

Because of the higher winds from the south, the sea is initially too rough for smaller recovery vessels, and efficient recovery using enhanced techniques for larger recovery vessels. However, open water recovery by larger vessels and protected recovery by smaller vessels continue simultaneously. Note: Protected recovery is the deployment of booms and skimmers at the mouth of estuaries and other environmentally sensitive (and quiet water) areas to protect them from the approaching oil.

The currents in the strait vary with the tidal cycle, allowing booming and skimming primarily during the flood tide. It is necessary to set up skimming operations at both the north and south ends of the spill because the currents carry oil in both directions, depending on the tide.

Tidal currents in the passes along the east side of the San-Juan Islands are reported to attain velocities of 3-7 knots. In combination with the winds, these currents should spread oil throughout the islands.

Because of many factors, the use of chemical dispersants in this scenario will not be a viable alternative. At a minimum, it would require pre-approval on a case-by-case basis by federal and state authorities (USCG/WDOE) through Regional Response Team).

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D. "MOST PROBABLE" CASE SCENARIO – Alaska Chadux

ADEC Recommended Format

The following is a most probable case discharge scenario using Alaska Chadux as the oil spill response contractor (OSRO), in ADEC's recommended scenario format.

SCENARIO D - Operational Spill – Transfer Hose/Fitting Fails – OSRO: Alaska Chadux

This hypothetical scenario illustrates the response actions to an operational spill originating from the Island Trader tank barge with the Island Monarch tug. It is designed to demonstrate the ability to respond to an event of this size with Alaska Chadux as the OSRO.

KEY CROSS-REFERENCES

- North Slope Alaska Sub-area: AK Unified Oil Spill Contingency Plan
- Alaska Chadux Response Manual

RESPONSE TYPE:	TYPE / AMOUNT:
Operational spill during lightering operation.	Arctic Diesel Estimated amount discharged: 50 bbls total (20 bbls on deck, 30 bbls into water)

SOURCE

The Island Trader with the Island Monarch tug suffers a diesel fuel spill 12 miles off of Pt. Barrow during a lightering operation to another tank barge. The spill occurs when a cargo hose separates from its camlock fitting. The result is 20 Bbls spilled on deck (largely contained by the spill coaming) and 30 Bbls into the water.

TIME:	0500	**WIND:**	N.E. at <5 knots
SEASON:	August	**TEMPERATURE:**	45°F
CURRENT:	0.3 knots	**VISIBIILTY:**	Unlimited
TIDE:	Flood	**LOCATION:**	12 Miles off Pt. Barrow
SEA STATE:	Slight	**WATER DEPTH:**	200'

ASSUMPTIONS:

- Safe to commence limited response operations.
- The cause of the spill has no impact on the size or duration of the spill event.
- No injuries are associated with the hose failure.

SAFETY:

- The captain musters the crew for an oil spill and assures safety, proper PPE and commencement of response equipment. All personnel accounted for and no injuries. All avoidable sources of ignition are eliminated and accommodation ventilation systems are shut down. The #1 priority is the protection of LIFE.

INITIAL OBJECTIVES:

- Establish safety requirements for spill response actions.
- Deploy onboard boom to contain spill at barge.
- Deploy onboard skimmer to begin recovery.
- Mobilize spill response contractor.
- Coordinate response actions with Unified Command.

PROCEDURES TO STOP A DISCHARGE:

The bargeman stops cargo unloading operations by activating the emergency stop and by closing all valves. He checks the scupper plugs to ensure they are secure to contain the spill on the barge deck and to limit oil entering the water.

NOTIFICATIONS:

The tug Master activates the spill reporting procedures outlined in Section 1.2 – Reporting and Notification to ensure notification of:

- ITB management (including ITB's Qualified Individual and ITB's Emergency Response Team – ERT)
- USCG National Response Centre
- Alaska Department of Environmental Conservation
- Alaska Chadux

FIRE PREVENTION AND CONTROL:

All avoidable sources of ignition are eliminated. No fire is associated with this release. In the event of fire at this location, the Master would coordinate with the USCG and with ITB's salvage and marine firefighting contractor. The vessel and its crew would also assist with any fire fighting efforts, movement of the barge, etc.

DISCHARGE TRACKING:

Initial visual assessment is maintained by the crew of tug/barge. Visual spill surveillance takes place from the upper wheelhouse of the Island Monarch and by ITB's response boat. As the response boom was deployed quickly after the spill, only limited oil makes it past the ITB spill containment boom. When Alaska Chadux arrives on scene they will also be tasked with discharge tracking. Some aerial surveillance is conducted by a helicopter bringing response equipment.

PROTECTION OF ENVIRONMENTALLY SENSITIVE AREAS:

ITB and Chadux personnel refer to the North Slope Sub-area Plan and Chadux Response Manual to identify sensitive areas in the area. There are no ADF&G designated MESAs (most environmentally sensitive areas) in the area of the spill. Nearest land is over 12 miles away and the fuel is expected to disperse before reaching shore. ITB and Alaska Chadux consult with ADEC, NMFS, USF&W, and ADF&G.

CONTAINMENT AND CONTROL STRATEGIES

- Using the workboat on the Island Trader / Island Monarch ATB unit, the tug crew deploy all of the 1400' of 18" containment boom from the barge in a U-shaped configuration to contain the spilled product.
- 1500' of the 3000' of the Chadux harbour boom located in Prudhoe bay is mobilized and flown by helicopter to the spill site. The boom is transported in a sling under the helicopter and is dropped onto the deck of the Island Trader. When the boom arrives, ITB personnel deploy it to act as secondary containment down current from the spill site.

TACTICS:	EQUIPMENT:
WATER: • Containment boom • Contained oil recovery	**ITB Equipment** • Boom: 1400' • Skimmer: RBS-5: - 75 bbls/hr nameplate – Efficiency Factor: 20% (15 bbls / hr recovery capability). • Storage: Slack tanks, spill tanks, open top barrels, garbage pails • Vessels: - 1 ITB response boat, 1 ITB tug, other barge tug • ITB Vessel Responders: 4 ITB responders • Sorbent material **Chadux Equipment** • Boom: 1500' (plus anchor systems) flown in from Prudhoe Bay • 1 Chadux personnel, 1 ITB personnel • ITB response boat used to deploy.
OTHER: • Solid waste storage • Bird hazing and wildlife monitoring • Surveillance	**ITB and Chadux Equipment** • ITB response boat as available • Contracted vessel (vessel of opportunity) • Wildlife Hazing Equipment • 1 ITB responder and 2 Alaska Chadux Personnel

RECOVERY STRATEGIES:

- ITB initial response focuses on containment of oil.
- Immediately after the 1400' of containment boom is deployed, the ITB crew begin to recover the spilled fuel using the on board RBS-5 brush skimmer. As the containment area is downstream of the Island Trader, the lightering barge's tug is used as the skimming platform. Product is pumped to empty open top barrels.
- ITB's response boat works outside the containment area tracking and recovering roque oil slicks using the Island Trader's substantial inventory of sorbent material.
- A Chadux vessel of opportunity from Barrow arrives approximately 4 hour and 30 minutes after the spill with wildlife hazing equipment, sorbent material, PPE, Decon Kit, and 3 Chadux responders.
- The Chadux responders assist in the containment and recovery operations and wildlife hazing. Due to the size, type of fuel, and location of the spill, it is not considered necessary to deploy any additional Chadux resources.
- The Bargeman continues to clean up the spilled oil on the deck of the barge draining oil through the drains to the slop tanks and absorbing with sorbent material. Oiled sorbents are wrung out or stored in empty drums.
- Chadux continues searches for any remaining slicks on the water which escaped the primary and secondary containment booms.

RECOVERED OIL TRANSFER AND STORAGE:

- All spill response wastes are segregated into oiled vs. non-oiled and liquid vs. solid.
- Oily solids are handled in specified drums.
- Recovered oil and oil/water mixture is stored in open top drums which will later be transferred to the Island Trader's slop tank.

TEMPORARY STORAGE AND ULTIMATE DISPOSAL:

- Oiled waste materials including sorbents, clothing, and other protective gear is stored on the Island Trader in heavy duty garbage bags.
- ITB's policy is to accept full responsibility and ownership for all waste materials generated from a spill for which it is responsible in U.S. waters. Waste materials are either stored on board the barge and transported back to Vancouver for final disposal and/or handled and disposed of according to Chadux's approved waste management plan.

WILDLIFE PROTECTION:

- The Chadux wildlife hazing kit at Barrow is used as necessary.
- Bird capture/rehabilitation unit placed on standby in the event any oiled birds are captured.
- Appropriate Capture / Hazing permits will be completed and submitted to ADF&G through Unified Command.
- Response activities in the area should reduce the likelihood of wildlife congregation in area.

RESPONSE ACTIVITIES

UNIFIED COMMAND ACTIVITIES			
COMMAND	**OPERATIONS SECTION**	**PLANNING SECTION**	**LOGISTICS SECTION**

Incident Commander
• Establish
  – Command Post (if necessary)
  – Unified Command
  – Goals & Objectives
 	
Liaison
• Complete Agency Notification
 	
Public Affairs
• Prepare initial news release
• Set up Media Conference
 	
Safety
• Provide initial Site Safety Plan
• Commence preparation of Safety plan
	Conduct:
	• Containment booming
	• Skimming & recovery operations
	
	Prepare
	• ICS (Field Assignments)
	
	Supervise
	• Recovery Operations
	• Staging Areas (if required)
	• Wildlife recovery and stabilization (if required)
	• Waste segregation and storage
		Planning Section Chief:
		• Establish
		  – Documentation Unit
		  – Resources Unit
		  – Situation Status Unit
		  – Environmental Unit
		• Prepare Meeting Schedule
		• Prepare Incident Action Plan
		
		Environmental Unit
		• Identify/Prioritize sensitive areas
		• Prepare Wildlife Plan
		• Prepare Waste Management Plan
		
		Resources Unit
		• Display response equip/personnel
		• Establish short term plan
		
		Documentation Unit
		• Ensure key personnel maintain activity logs
		• Document all spill activities
			• Coordinate staging
			• Provide meals and services
			• Establish Communications Plan
			• Secure emergency medical team support (if required)

MAJOR SPILL RESPONSE RESOURCE ASSIGNMENTS AND SUMMARY

RESOURCES	TF# 1 Cont. & Recovery	TF #2 Shore Protection & Recovery	WILDLIFE	SAFETY	OTHER
Island Tug and Barge Ltd. (minimum response equipment)					
1400' boom stored on hydraulic reel,	X				
Aquaguard RBS-5 Skimmer	X				
1 response boat	X				
Boom Towing Bridles (2)	X				
Absorbent Pads – 100 per Bale (32)	X				
Absorbent Boom 4" x 10' (10)	X				
Empty Open Headed Barrels (4)	X				
Pad/Barrel Ringer (1)	X				
Aluminum Shovels (3)	X				
Aluminum Pitch Fork (2)	X				
Heavy Duty Plastic Bags (200)	X				
Anchor Assemblies (4)	X				
Garbage Pails 100 ltr. (4)	X				
PPE for ITB responders				x	
Alaska Chadux – Barrow / Prudhoe Bay					
3000' of 20" containment boom - Prudhoe Bay (3000 mobilized, 1500 deployed)	X				
40 lb anchor systems (2) - Barrow	X				
PPE kit (1) - Barrow				X	
Decon kit, personnel - Barrow				X	
Wildlife hazing kit (1) - Barrow			X		

Summary

Boom	2,900 feet total on site (additional 1,500' mobilized)
Recovery Systems	1 skimmer used as well as sorbent material and wringers
Storage	Trader spill tank: 115 bbls Trader portable storage: 8 bbls
Personnel	approx. 13 (6 ITB personnel, 4 Other vessel, 3 Chadux personnel)
Vessels	4 (ITB response boat, ITB tug, other barge tug, vessel of opportunity)

UNIFIED COMMAND DECISIONS:

- UC satisfied that source is secured and threat of spreading oil has been eliminated.
- ITB's PRAC (Chadux) will maintain bird capture/rehabilitation unit on standby in the event any oiled birds are captured.
- Appropriate Bird Capture / Hazing permits will be maintained.
- Liaison with the agencies shall be maintained.
- Waste Disposal will be in accordance with a waste management plan developed by ITB/Chadux and as approved by the regulatory authorities.
- ITB will supervise activities.

FIRST 24 HOURS – EXAMPLE SPILL RESPONSE TIMELINE

24 HOUR TIMELINE	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
INCIDENT CLOCK	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
CONTAINMENT / RECOVERY TASK FORCE # 1																
	MOB											RESPONSE ACTIVITIES				
	· Incident Occurs															
	· Initial notification															
	· ITB QI, Gov. Agencies notified															
	· Chadux activated															
	· ITB response boat deployed															
	· Barge boom deployment completed															
	· ITB Brush skimmer deployed at site															
						· Chadux boom deployed as secondary containment										
							· Skimming operations completed									
										· Spill Cleanup and waste disposal completed						
	· Activated ITB-ICS															
		· Tactics Mtg										· Transfer operations resume				
				· Planning Mtg												
WILDLIFE																
	MOB												RESPONSE ACTIVITIES			
						· Wildlife hazing equipment arrives with Chadux vessel of opportunity										
						· Assess bird capture/rehabilitation unit needs										
						· Monitor and surveillance										
SAFETY																
												RESPONSE ACTIVITIES				
	· Master conducts initial safety assessment and briefs crew															
							· Chadux drafts site safety plan for spill response									
								· Decon established on Island Monarch								
OTHER																
					· Regular surveillance begins											

Detailed Chronological Format

Operational Spill - Transfer Hose/Fitting Fails

The Island Trader with the Island Monarch tug suffers a diesel fuel spill 12 miles off of Pt. Barrow during a lightering operation to another tank barge. The spill occurs when a cargo hose separates from its camlock fitting at the Island Trader Riser. The result is 20 bbls of fuel spilled on deck (largely contained by the spill coaming) and 30 bbls into the water.

Time:	0500 Hours
Time of Year:	August
Current:	0.3 knot
Weather:	Clear, 45°F
Tide:	Flood
Wind:	From N.E. at < 5 Knots
Water Depth:	Approximately 200’

Time	Actions	On-Water Oil Recovered
0500 – 0600	• The Bargeman stops cargo unloading operations by activating the emergency stop and by closing all valves. • He checks the scupper plugs to ensure they are securely plugged to contain the spill on the barge deck and to prevent oil from entering the water. • He takes appropriate action to eliminate the risk of fire or explosion aboard the vessel by eliminating all sources of ignition on the barge. • The Bargeman notifies the Tug Master who is the designated ITB Vessel Response Team Leader (*see Section 3.3 – Incident Command Organization*). • The Tug Master immediately activates the spill reporting procedures outlined *in Section 1.2 – Reporting and Notification* by notifying the ITB on-call manager who reports the spill to the US Coast Guard National Response Centre, Alaska Dept. of Environmental Conservation (ADEC), and Alaska Chadux (requesting personnel and materials). • The tug crew close doors and portholes leading to engine room spaces and accommodation areas to prevent potentially flammable vapours from entering confined spaces. • The Bargeman ensures the other barge is aware of the spill and ensures they are activating their spill response plan and procedures. • The Master briefs his crew on, and ensures his crew are following, standard ITB safety procedures for responding to an oil spill. When Chadux personnel arrive on site, they will be tasked with preparing a site safety plan and providing a Site Safety Officer whose duties will include responsibility for monitoring safe entry into the spill zone. • The Bargeman begins spreading sorbent material from the storage container to contain and absorb product spilled on the deck of the barge outside the spill coaming thus preventing further oil from entering the water. • The Master directs the tug crew to deploy the 1400' of Versatech containment boom and anchoring kits located on the barge using the response boat located on the Island Monarch (16' Polaris rigid hull boat c/w 50 HP outboard motor). • Alaska Chadux decides to fly 1500' of 20" containment boom by helicopter from Prudhoe Bay to the spill site. Air Logistics of Alaska in Prudhoe Bay is used. Boom is slung under the helicopter for transportation. • Chadux also secures a vessel of opportunity from Barrow. • Using the 16' Polaris, the tug crew deploy all 1400' of the 18" containment boom in a U-Shaped configuration down current of the slick. Anchors are used to locate the boom. Booming is complete within 35 minutes after the spill.	**@ 0500: Nil**

0600 – 0730	• The Island Monarch/Trader Master and the lightering barge Master jointly decide that the lightering barge tug being smaller than the Island Monarch should assist in the containment and recovery of oil while the Island Monarch will remain with the two barges. • The lightering barge tug takes on board the Island Monarch's onboard skimmer, sorbent materials, portable storage containers, and other spill response supplies, and makes it way over to the containment area. Two ITB crew members accompany the tug to operate the skimmer. • The Island Monarch/Trader crew with the assistance of crew from the lightering barge's tug, deploy the skimmer in the U-shaped containment area. Product is pumped into the 4 open top barrels and 4 garbage pails from the Island Trader. Some empty barrels from the lightering barge's tug are also available.	**@ 0600: Nil**
0730 – 1000	• Sorbent sheets and pads are used in conjunction with the mechanical skimming operations being conducted from the lightering barge tug. • ITB's management team in Vancouver have as a resource, the *Automated Data Inquiry for Oil Spills (ADIOS)* software program developed by the National Oceanographic and Atmospheric Administration (NOAA). ADIOS can be used to determine a preliminary fate and effects projection of the oil spilled after being provided from the Master, wind, wave, and water temperature estimates. • At 0930 hours the helicopter with the 1500' of 20" containment boom arrives on scene. The boom is dropped onto the deck of the Island Trader. • The helicopter makes some aerial observations of the oil slick and relays the information to the Island Monarch Master by radio. • Three (3) Chadux responders from Barrow with the vessel of opportunity, wildlife hazing kit, decon kit, sorbent material, and PPE arrive at the spill site at 0945. • The ITB response boat begins deploying the 1500' of Chadux boom. • 1 Chadux responder remains on the Island Monarch to support the Master as well as to aid in the cleanup operations aboard the Island Trader. The remaining 2 Chadux responders help the containment and recovery operations taking place about 1000' down current of the Island Trader. • The ITB Master confers with the Chadux on-scene person in charge to identify and prioritize the response effort.	**@ 0730: 0.5 bbls**

1000-1130	• Due to the relatively small size of this spill, and the non-persistent nature of the product (i.e., Diesel Fuel), passive hazing is considered the most practical wildlife protection measure. Chadux personnel operate their wildlife hazing kit. • ITB vessel personnel continue to focus their efforts and equipment on containing the spill around the barge and cleaning up the oil in the water, and cleaning up the oil on the barge deck. • Chadux personnel monitor the movement of the oil on the water. • The Bargeman continues to clean up the spilled oil on the deck of the barge draining oil through the drains to the slop tanks and absorbing with sorbent material. Oiled sorbents are wrung out with ITB's sorbent wringer or stored in empty drums. • The responders at the containment area continue skimming operations and continue to spread sorbent sheets and pads over the oil in the containment area. Oiled sorbents are recovered using pike poles and wrung out to be reused or transferred to steel drums on board the tug for safe storage.	**@ 1000: 3.0 bbls**
	• The Island Trader's response boat is positioned so that its prop wash concentrates the oil in the boomed area in order to facilitate recovery efforts. • Recovered oil and oil/water mixture is stored in open top drums. Four from the Island Trader and 3 from the other tug and barge • Chadux are requested to prepare applications for authorization to undertake active hazing, capture, treatment, stabilization, and treatment of oiled wildlife from the appropriate state and federal government agencies.	
1130 – 1300	• Oiled waste materials including sorbents, clothing, and other protective gear is stored in heavy duty plastic bags. • ITB's policy is to accept full responsibility and ownership for all waste materials generated from a spill for which it is responsible in U.S. waters. Waste materials are either stored on board the barge and transported back to Vancouver for final disposal and/or are handled and disposed of according to an approved waste management plan by Chadux's sub-contractor.	**@ 1130: 4.8 bbls**

1300 +	• Because of the light nature of the product, relatively small quantity spilled, no shorelines are oiled. • Once all the oil contained within the primary containment area around the barge has been absorbed, ITB crew recover and clean the 1400'' of boom. • 2 Chadux and 1 ITB crew member continues searching for any remaining slicks on the water using the ITB response boat. • The Bargeman has completed cleanup on the deck of the barge and replaced the ruptured hose. • With the approval of the USCG and ADEC, transfer operations restart as long as they will not interfere with the remaining clean up operations being conducted by Chadux. • ITB management undertake an investigation of the incident.	**@ 1300:** Total on water recovered: **10 bbls** Total lost to environment (evaporation and dispersion): **20 bbls**

E. MAXIMUM 'MOST PROBABLE DISCHARGE' SCENARIO (Alaska Chadux)

ADEC Recommended Format

The following is the maximum most probable discharge scenario, or Response Planning Standard Scenario (RPS), in ADEC's recommended scenario format.

SCENARIO B - Island Trader Casualty in Cook Inlet Alaska

This hypothetical scenario illustrates the response actions to an RPS discharge from a tank barge in SE Alaska. The scenario is designed to demonstrate how Island Tug and Barge Ltd. (ITB) and its PRAC (Alaska Chadux) would respond to a significant oil discharge in Alaskan waters.

KEY CROSS-REFERENCES

- Cook Inlet Alaska Subarea: AK Unified Oil Spill Contingency Plan
- Alaska Chadux Response Manual

RESPONSE TYPE:	TYPE / AMOUNT:
Barge grounding and hull breach.	Jet A – 65,320 bbls RPS – 9,798 bbl (15% of maximum ITB capacity) Estimated amount discharged: 30,000 bbl

SOURCE

ITB's *Island Monarch* tug and the loaded barge *Island Trader* are departing from Tesoro Petroleum's Kenai Refinery on route to Canadian Forces Base Comox with a full load of Jet A. About 15 nautical miles south of Kalgin Island the Island Trader runs aground on a shoal due to the lighted buoy marking the shoal being displaced by ice flows. Cargo tanks 1 through 3 Port and Starboard are damaged. The initial rate of release is approximately 3,000 bbls per hour.

TIME:	1100	**WIND:**	N.E. at 4 knots
SEASON:	April 22	**TEMPERATURE:**	35°F
VISIBILITY:	10 miles	**TIDE:**	1.5 Hours Before Ebb
SEAS:	Slight	**LOCATION:**	**Cook Inlet; Alaska**

ASSUMPTIONS:

- Safe to commence limited response operations.
- The cause of the spill has no impact on the size or duration of the spill event.
- No injuries are associated with the grounding.

SAFETY:

The captain musters the crew for an oil spill and assures safety, proper PPE and commencement of response equipment. All personnel accounted for and no injuries. All avoidable sources of ignition are eliminated and accommodation ventilation systems are shut down.

INITIAL OBJECTIVES:

- Establish safety requirements for operational and spill response actions.
- Assess barge stability and damage.
- Assess spill source and secure, if feasible and safe.
- Mobilize salvage, stability, and spill response teams and contractors.
- Coordinate response actions with Unified Command.

PROCEDURES TO STOP A DISCHARGE:

ITB crew board barge for assessment of hull damage and leaking tanks. Tank sounding and visual assessment reveal product loss from multiple cargo tanks. ITB's contracted naval architect, is notified of the incident and provided with barge stability and loss data. The naval architect will advise on barge stability and emergency transfer of cargo to slack tanks, spill tanks, and possibly void tanks as feasible. Emergency lightering arrangements are secured through notification to ITB management. It is recognized that the tide will begin going out approximately 1.5 hours after the grounding and product release is expected to continue until the tide turns back to flood. ITB personnel make all efforts to transfer product from damaged tanks to the Island Trader's spill tanks and void tanks in consultation with ITB's naval architect.

NOTIFICATIONS:

The tug Master activates the spill reporting procedures outlined in Section 1.2 – Reporting and Notification to ensure notification of:

- ITB management (including ITB's Qualified Individual and ITB's Emergency Response Team – ERT) (ITB response team arrives in Anchorage 6 hours after notification)
- USCG National Response Centre
- Alaska Department of Environmental Conservation
- Alaska Chadux
- ITB's salvage and marine firefighting contractor (the Marine Response Alliance)

The full extent of the damage to the double-hulled barge is unknown at this time.

ITB requests mobilization of all available Chadux resources from nearby caches. The estimated initial response time for the first Chadux equipment and responders to arrive on site is 3.5 hours (out of Kenai approximately 30 nm away).

FIRE PREVENTION AND CONTROL:

All avoidable sources of ignition are eliminated. No fire is associated with this release. In the event of fire, the Master would coordinate with the USCG and with ITB's salvage and marine firefighting contractor for fire. The vessel and its crew would also assist with agency coordination in any fire fighting efforts on the water.

DISCHARGE TRACKING:

Initial visual assessment is maintained by crew on tug. Subsequent discharge tracking and spill trajectory modeling are coordinated through Unified Command with field teams, Chadux, NOAA, and USCG. ITB and Chadux use contracted helicopters (e.g., Era Aviation) to provide air support for surveillance. Oil spill trajectory forecasts are obtained from NOAA and/or from Chadux. Initial oil movement is up inlet with the tail end of the flood tide, but tide turns to ebb 1.5 hours after grounding so most of product will flow down towards the mouth of Cook Inlet.

PROTECTION OF ENVIRONMENTALLY SENSITIVE AREAS:

ITB and Chadux personnel refer to the Cook Inlet Subarea Plan and the Chadux Response Manual, Section 3.10, for sensitive information and identify sensitive areas in the area. Designated MESAs (most environmentally sensitive areas) that have the potential to be affected include:

- #52 – Clam Gulch
- #53 – Kachemak Bay
- #44 – Redoubt Bay
- #45 – Kalgin Island
- #46 – Trading Bay
- #42 – Barren Islands
- #40 – Perenosa Bay/Seal Bay (Afognak Island)
- #41 – Marmot Island
- #43 – Chenik Head to Silver Beach (Kamishak Bay)

Due to the majority of product being released during an ebb tide, the MESAs further up the inlet including Redoubt Bay, Trading Bay, and Clam Gulch are not expected to be very affected by the spill. MESAs #43 and #53 are of primary concern. MESAs #42, #40, and #41 are of secondary concern. ITB consults with ADEC, NMFS, USF&W, and ADF&G on other sensitive areas.

Chadux boom from Anchorage is used to protect MESA #43 and MESA # 53. Deflection and exclusion type tactics are used. Sorbent material is used to recover any oil infiltrating the exclusion/deflection zone.

Chadux boom, vessels, skimmers, and other storage from Kodiak is used to protect MESAs #40 – 42.

CONTAINMENT AND CONTROL STRATEGIES

- ITB's crew immediately deploy and encircle the Island Trader with the 1400' of onboard boom using the onboard response boat. The boom is completely deployed within 45 minutes of the incident. It is expected that the boom will only hold about 5,000 bbls (about 2.5" layer of oil) before product will begin escaping.
- Response teams (Chadux, ITB, and ITB's Salvage and Marine Firefighting Contractors) are mobilized to the spill site to perform emergency lightering and vessel stability, add additional containment boom, and to help with oil recovery operations. Chadux and ITB's salvage contractor(s) mobilize barges, vessels, response equipment, and personnel to scene.
- Response teams will focus on containment and recovery at spill source, open-water sweep recovery operations, and shoreline protection.
- The 6000' of boom from Kenai is transported to the spill site by helicopter. Several trips are required. One Chadux boat and two vessels of opportunity from Kenai are deployed to the spill site. With the assistance of the ITB response boats, the 4 vessels deploy the Chadux boom as secondary containment to the already fully boomed Island Trader. It is imperative to contain the spill as quickly as possible at the source.
- Further boom from Anchorage arrives by land to a staging area set up at Ninilchik. From there boom is transferred to the site by helicopter and by vessels of opportunity.
- Additional Chadux vessels from Anchorage are trailered to Ninilchik and launched.

LIGHTERING

- ITB's contracted salvage, lightering, and marine firefighting contractor, the Marine Response Alliance (MRA), is activated immediately after the incident occurs. Crowley Marine Services is the major partner in the MRA.
- Upon activation of the MRA, one of Crowley's tank barges (barge 255, capacity: 49,508 bbls) tied up in Anchorage is immediately readied for deployment to the spill scene for emergency lightering. Mobilization time is approximately 4 hours. The spill site is 100 nautical miles from anchorage. The light barge makes 7 knots and arrives at the incident site 19 hours after the initial grounding.
- After approximately 4 hours of preparation, and after receiving authorization from the FOSC and Alaska DEC, lightering operations commence.
- The discharge from the Island Trader stops approximately 10 hours after the incident, however, there is concern that if the barge shifts, more product may be released. The plan is to lighter all cargo from the Island Trader after which a salvage plan will be developed by the MRA in consultation with the FOSC, Alaska DEC, and ITB.

TACTICS:

WATER:

- Emergency lightering
- Containment boom
- Open-water sweep and skimming
- Contained oil recovery

EQUIPMENT:

ITB Equipment

- Boom: 1400' x 18"
- Skimmer: RBS-5:
  - 75 bbls/hr nameplate
  – (EDRC: 360bbls).
- Storage:
  - spill tanks: 115 bbls
  – Void tanks: approx. 4000 bbls (according to plan worked out by ITB's Naval Architect to minimize risk of further hull damage)
- Vessels:
  - 1 x response boats
  – 1 x tug
- ITB Vessel Responders: 6 total on tug

Chadux Equipment from Kenai:

- Boom:
  - 6000' (20") with anchor systems
  - 2500' (8") absorbent boom
- Skimmers:
  – 1 x Skim Pak (428 bbls/hr, EDRC: 2054 bbls)
  – 1 x Vikoma 12 K (113 bbls/hr, EDRC: 542 bbls)

- 1 x Rope Mop, C-24-D (20 bbls/hr, EDRC: 96 bbls)
- Storage:
  – 2 x bladder (2500 gal. each, 5000 gal. total)
- Vessels:
  – 1 x 18' work boat
  – 2 vessels of opportunity
- Chadux Responders: 7

Chadux Equipment from Anchorage:

- Boom:
  - 2000' (26")
  - 4320' (30" fast water compactible)
  - 850' (30 compactible)
  - 600' (42" inflatable)
  - 3500' (42")
  - 2320' (8" absorbent)
- Skimmers:
  – 1 x Mini Max 30, Lamor (189 bbls/hr, EDRC: 3175 bbls)
  – 1 x Desmi Mini-Max (220 bbls/hr, EDRC: 1056 bbls)
  - 2 x Komara 12000, Vikoma (113 bbls/hr, EDRC: 542 bbls)
  - 1 x Manta Ray, Slickbar (215 bbls/hr, EDRC: 1032 bbls)
  - 1 x Skim-Pak 18000 (428 bbls/hr, EDRC: 2054 bbls)
- Storage:
  – 1 x Bladder, Kepner, tow (5000 Gal)
  – 1 x Bladder, Unitor, tow (6635 Gal)
  – 3 x Bladder, Canflex, tow (6600 Gal each)
  – 2 x Bladder (2500 Gal each)
  – 3 x Canflex bladder container (987 Gal each)
- Vessels:
  – 2 x 24' landing craft
  – vessels of opportunity: - 2 x skiffs - 2 x tugs
- Chadux Responders: 20

Chadux Equipment from Kodiak:

- Boom:
  - 5000' (20")
  - 1000' (26")
  - 2500' (8" absorbent)
  - 900' (5" skorboom)
- Skimmers:
  - 1 x Komara 12000, Vikoma (113 bbls/hr, EDRC: 542 bbls)
  - 1 x Rope Mop, C-24-D (20 bbls/hr, EDRC: 96 bbls)
  - 1 x Skim-Pak 18000 (428 bbls/hr, EDRC: 2054 bbls)
- Storage:
  – 2 x Bladder (2500 Gal each)
  – 1 x fast tank (2400 Gal each)
- Vessels:
  – 2 x 18' work boat
- Chadux Responders: 8

Chadux Equipment from Seward:

- Boom:
  - 2400' (20")
  - 700' (8" absorbent)
- Skimmers:
  – 1 x Desmi Mini-Max (220 bbls/hr, EDRC: 1056 bbls)
  - 1 x Manta Ray, Slickbar (215 bbls/hr, EDRC: 1032 bbls)
- Chadux Responders: 6

	ITB's Salvage and Marine Firefighting Contractor • Lightering vessel and associated equipment • Barge for storage of recovered oil (10,000 bbl barge BC 151) • Tugs and response boats • Temporary patching equipment • Personnel: 20
BEACH: • Protection / exclusion / deflection booming • Debris removal • Berms / Trenches • Sorbent sweep	**Chadux Equipment from Anchorage:** • Boom: - 5800' (20") - 800' (5" absorbent) • Skimmers: - 1 x Rope Mop, C-24-D (20 bbls/hr, EDRC: 96 bbls) - 2 x Rope Mop MW-41G (10 bbls/hr, EDRC: 48 bbls) - 1 x Rope Mop MW-41E (10 bbls/hr, EDRC: 48 bbls) • Storage: – 1 x fold-a-tank (600 Gal) – 1 x fold-a-tank (3000 Gal) – 5 x fast tank (2400 Gal each) • Vessels: – 2 x 24' landing craft • Other (See Chadux Response Manual for complete listing): – Large quantities of sorbent material – various drums – portable pumps – wildlife capture and hazing equipment – communications equipment – safety equipment – generators – ATVs and trailers – various vehicles and trailers – PPE, decon, etc. – pressure washers • Chadux Responders: 30 **Chadux Equipment from Kodiak:** • Boom: - 5000' (20") - 1000' (26") - 2500' (8" absorbent) - 900' (5" skorboom) • Skimmers: - 1 x Komara 12000, Vikoma (113 bbls/hr, EDRC: 542 bbls) - 1 x Rope Mop, C-24-D (20 bbls/hr, EDRC: 96 bbls) - 1 x Skim-Pak 18000 (428 bbls/hr, EDRC: 2054 bbls) • Storage: – 2 x Bladder (2500 Gal each) – 1 x fast tank (2400 gal each) • Other (See Chadux Response Manual for complete listing): – sorbent material – wildlife hazing equipment – communications equipment – safety equipment – PPE, decon, etc. • Vessels: – 2 x 18' work boat • Chadux Responders: 9
OTHER: • Floating liquid waste storage	• Barge for storage of recovered oil (10,000 bbl barge BC 151) • Contracted vessels (vessels of opportunity)

- Transportation offshore and to shore
- Solid waste storage
- Bird hazing and wildlife monitoring
- Aerial surveillance

- Temp Storage Construction
- Bird Hazing Equipment
- Wildlife teams
- Contracted aircraft

RECOVERY STRATEGIES:

- ITB's onboard skimmer is deployed and operating within 60 minutes from the initial grounding.
- The first Chadux skimmers begin to arrive by boat from Kenai approximately 5 hours after the spill. Chadux personnel use skimmers to recover oil from containment boom and to conduct sweep and recovery operations.
- Additional Chadux skimming systems are transported by land to the staging area at Ninilchik. These skimmers are transported to the spill scene by boat and begin arriving at the spill scene approximately 8 hours after the incident.
- Oil potentially reaching shorelines is minimized using sweep and recovery operations directed from overflights.
- Skim and sweep for oil recovery is used as needed at protection boom locations (divert and collect).
- Ice conditions create some difficulty with skimming.
- Through ITB's membership in the Marine Response Alliance, 2 x 10,000 bbl tank barges are secured for temporary storage of recovered oil. The first barge arrives at approximately 1800 hours.
- ADNR and US Forest Service approvals for beach operations are secured.
- Recovery operations are slowed during the night but continue as best as possible using portable lights and lights from the Island Trader and Island Monarch.

RECOVERED OIL TRANSFER AND STORAGE:

- Two bladders from Anchorage are transported by helicopter to the spill site so that they may arrive in time to support the start-up of the skimmers from Kenai.
- Two bladders from Anchorage arrive by land at Ninilchik and are transported by boat to the Island Trader and arrive approximately 9 hours after the incident.
- All spill response wastes are segregated into oiled vs. non-oiled and liquid vs. solid.
- Recovered oily water mixture is pumped to tanks on Crowley barges, Chadux bladders, void tanks on the Island Trader and Crowley emergency lightering barge.
- Approval for decanting recovered water back into boomed, contained oil area is requested of Alaska DEC.
- Shoreside recovery is pumped to portable tanks and drums.
- Oily solids are handled in specified drums.

TEMPORARY STORAGE AND ULTIMATE DISPOSAL:

- All recovered oils will be transported to the Tesoro Refinery for accounting, processing and eventual reprocessing/disposal.
- Waste will be managed according to Chadux's approved waste management plan.
- Every attempt is made to recycle and reuse as much product as possible. Chadux contractor will handle and transport all other waste for final treatment or disposal.

WILDLIFE PROTECTION:

- Chadux's wildlife contractor (International Bird Research and Rescue – IBRRC), USFWS, NMFS, and ADF&G will coordinate wildlife surveillance efforts.
- Bird capture/rehabilitation unit will be placed on standby in the event any oiled birds are captured.
- Pre-emptive capture cages are staged in area for sea otters, if needed.
- Appropriate Capture / Hazing permits will be completed and submitted to ADF&G through Unified Command.
- Response activities in the area should reduce the likelihood of wildlife congregation in area.

RESPONSE ACTIVITIES
FIRST 24 HOURS

UNIFIED COMMAND ACTIVITIES			
COMMAND	**OPERATIONS SECTION**	**PLANNING SECTION**	**LOGISTICS SECTION**

Incident Commander
• Establish
  – Command Post
  – Unified Command
  – Goals & Objectives
 	
Liaison
• Complete Agency Notification
• Establish Community notification & identify contacts
 	
Public Affairs
• Prepare initial news release
• Set up Media Conference
 	
Safety
• Provide initial Site Safety Plan
• Commence preparation of Safety plan
 	
Security
• Establish security at Spill Site
	Conduct
	• Containment booming
	• Skimming & recovery operations
	• Air support operations
	
	Prepare
	• ICS (Field Assignments)
	
	Supervise
	• Recovery Operations
	• Stability and oil transfers
	• Staging Areas
	• Wildlife recovery and stabilization
	• Waste segregation and storage
	
	Plan
	• Emergency lightering of barge
		Planning Section Chief
		• Establish
		  – Documentation Unit
		  – Resources Unit
		  – Situation Status Unit
		  – Environmental Unit
		• Prepare Meeting Schedule
		• Prepare Incident Action Plans
		
		Environmental Unit
		• Identify/Prioritize sensitive areas
		• Prepare hazing & capture permits
		• Prepare Wildlife Plan
		• Prepare Waste Management Plan
		
		Resources Unit
		• Display response equip/personnel
		• Establish short term plan
		
		Documentation Unit
		• Ensure key personnel maintain activity logs
		• Document all spill activities
			• Establish Command Post
			• Arrange air support for overflights and transport
			• Coordinate staging
			• Mobilize on-water transportation for spill teams
			• Provide meals and services
			• Establish Communications Plan
			• Order portable lights
			• Secure emergency medical team support

MAJOR SPILL RESPONSE RESOURCE ASSIGNMENTS AND SUMMARY- FIRST 24 HOURS

RESOURCES	Barge Emer-gency Lightering & Stability	TF# 1 Cont. & Recovery	TF #2 Shore Protection & Recovery	WILDLIFE	SAFETY	OTHER
Island Tug and Barge Ltd.						
Lightering: On board cargo pumps (tank to tank transfer)	x					
Boom: 1400' of 18 inch containment boom on hydraulic reel		x				
Skimmer: Aguaguard RBS-5 (EDRC: 360 bbls)		x				
Storage: Spill tanks and Void Tanks		x				
1 response boat and 1 tug		x				
Sorbent wringer		x				
Safety equipment for tug/barge personnel					x	
Wide variety of communications equipment						x
Various sorbent material		x				
Chadux - Kenai						
Boom: 6000' of 20 inch		x				
Boom: 2500' of 8 inch Sorbent Boom		x				
Skimmer: Komara 12000, Vikoma (EDRC: 542 bbls)		x				
Skimmer: Rope Mop C-24-D (EDRC: 96 bbls)			x			
Skimmer: Skim-pak 1800 (EDRC: 2054 bbls)		x				
Storage: 2 bladders (Total Capacity: 5000 Gal.)		x				
1 x 18' boat		x				
Wildlife hazing equipment				x		
Chadux - Anchorage						
Boom: 5800' of 20 inch			x			
Boom: 850' of 30 inch, compactible		x				
Boom: 600' of 40 inch, inflatable		x				
Boom: 3500' of 42 inch		x				
Skimmer: Minimax 30 (EDRC: 3175 bbls)		x				
Skimmer: Desmi Mini-Max (EDRC: 1056 bbls)		x				
Skimmer: 2 x Komara 12000, Vikoma (EDRC: 2 x 542 bbls)		x				
Skimmer: Skim-pak 1800 (EDRC: 2054 bbls)		x				
Storage: 7 bladders (Total Capacity: 36,435 Gal.)		x				
Storage: 2 Fold-a-Tanks (Total Capacity: 3600 Gal.)			x			
Storage: 5 Fast Tanks (Total Capacity: 12,000 Gal.)			x			
Storage: 3 Canflex Bladder Containers (Total Capacity: 2961 Gal.)		x				
Wildlife capture and stabilization system (30' trailer)				x		
Mobile Command Post						x
Communications- Handheld radios (28) / Repeaters (1)						x
Boats (Total 3)		x				
PPE Kits (22 personnel, 3 days, 2 shifts per day)					x	
Decon kit (2)					x	
Chadux – Kodiak						
Boom: 5000' of 20 inch		x	x			
Wildlife hazing kit				x		
2 x 18' response boats						x

Chadux - Seward						
Boom: 2400' of 20 inch			x			
Boom700 of 8 inch Sorbent Boom			x			
Skimmer: Manta Ray, Slickbar (EDRC: 1032 bbls)		x				
Skimmer: Desmi Mini-Max (EDRC: 1056 bbls)		x				
Marine Response Alliance (Crowley)						
Lightering: 1 x 49,500 bbl Oil Barge with tug	x					
Storage: 1 x 10,000 bbl Oil/deck Barge with Tug		x				

Summary

Boom Deployed	approx. 25,550 feet total
Skimming Systems	10 (Total EDRC: 12,509 bbls)
On-water Storage	approx. 1,300 bbls plus Island Trader storage plus Crowley tank barge storage (10,000 bbls)
Lightering Equipment:	Crowley tank barge (49,500 bbls) Crowley lightering pumps, hoses, and other equipment
Personnel	approx. 75
Vessels	approx. 11

RESPONSE ACTIVITIES
SECOND 24 HOURS

UNIFIED COMMAND ACTIVITIES

COMMAND	OPERATIONS SECTION	PLANNING SECTION	LOGISTICS SECTION
Incident Commander • Maintain Command Post • Set daily and general goals & objectives • Define next operational period **Liaison** • Maintain Agency updates • Maintain Community information flow • Set up community meeting **Public Affairs** • Prepare daily news release • Set up Joint Information Center (JIC) **Safety** • Revise Site Safety Plan (as needed) • Provide daily safety briefings • Review work assignments for special safety messages **Security** • Maintain security at Command Post, spill site, staging area(s)	• Maintain response activities • Establish field organization and divisions **Prepare** • ICS Field Assignments **Supervise** • Emergency lightering of barge • Salvage operations • Recovery operations • Staging Areas • Air recon & support operations • Wildlife recovery and stabilization • Personnel & equipment decon • Waste handling	**Planning Section Chief** • Maintain – Documentation Unit – Resources Unit – Situation Status Unit – Environmental Unit • Prepare Daily Meeting Schedule • Prepare Incident Action Plan for each operational period. **Environmental Unit** • Revise trajectories and prioritize sensitive areas • Prepare required permits (shore ops, decanting, wildlife, burning) • Inventory waste streams with Ops for Waste Management Plan **Resources Unit** • Display response equip/personnel **Documentation Unit** • Ensure key personnel maintain activity logs • Maintain record-keeping of all spill activities	• Maintain Command Post • Arrange for spill area overflights of key unified command persons • Coordinate staging • Maintain on-water transportation for spill teams • Provide meals and services • Maintain and revise (as needed) Communications Plan • Secure housing & lodging for away personnel • Maintain emergency medical team support

SPILL RESPONSE RESOURCE ASSIGNMENTS AND SUMMARY- SECOND 24 HOURS

RESOURCES	Barge Emer-gency Lightering & Stability	TF# 1 Cont. & Recovery	TF #2 Shore Protection & Recovery	WILDLIFE	SAFETY	OTHER
Island Tug and Barge Ltd.						
Lightering: On board cargo pumps (tank to tank transfer)	x					
Boom: 1400' of 18 inch containment boom on hydraulic reel		x				
Skimmer: Aguaguard RBS-5 (EDRC: 360 bbls)		x				
Storage: Spill tanks and Void Tanks		x				
1 response boat and 1 tug		x				
Sorbent wringer		x				
Safety equipment for tug/barge personnel					x	
Wide variety of communications equipment						x
Various sorbent material		x				
Chadux - Kenai						
Boom: 6000' of 20 inch		x				
Boom: 2500' of 8 inch Sorbent Boom		x				
Skimmer: Komara 12000, Vikoma (EDRC: 542 bbls)		x				
Skimmer: Rope Mop C-24-D (EDRC: 96 bbls)			x			
Skimmer: Skim-pak 1800 (EDRC: 2054 bbls)		x				
Storage: 2 bladders (Total Capacity: 5000 Gal.)		x				
1 x 18' boat		x				
Wildlife hazing equipment				x		
Chadux - Anchorage						
Boom: 5800' of 20 inch			x			
Boom: 2000' of 26 inch		x				
Boom: 4320' of 30 inch, fast water, compact			x			
Boom: 850' of 30 inch, compactible		x				
Boom: 600' of 40 inch, inlfatable		x				
Boom: 3500' of 42 inch		x				
Skimmer: Minimax 30 (EDRC: 3175 bbls)		x				
Skimmer: Desmi Mini-Max (EDRC: 1056 bbls)		x				
Skimmer: 2 x Komara 12000, Vikoma (EDRC: 2 x 542 bbls)		x				
Skimmer: Manta Ray, Slickbar (EDRC: 1032 bbls)			x			
Skimmer: Rope Mop C-24-D (EDRC: 96 bbls)			x			
Skimmer: 2 x Rope Mop MW-41G (EDRC: 2 x 48 bbls)			x			
Skimmer: Rope Mop MW-41E (EDRC: 48 bbls)			x			
Skimmer: Skim-pak 1800 (EDRC: 2054 bbls)		x				
Storage: 7 bladders (Total Capacity: 36,435 Gal.)		x				
Storage: 2 Fold-a-Tanks (Total Capacity: 3600 Gal.)			x			
Storage: 5 Fast Tanks (Total Capacity: 12,000 Gal.)			x			
Storage: 3 Canflex Bladder Containers (Total Capacity: 2961 bbls)		x				
Wildlife capture and stabilization system (30' trailer)				x		
Mobile Command Post						x
Communications- Handheld radios (28) / Repeaters (1)						x
Boats (Total 3)		x	x			
PPE Kits (22 personnel, 3 days, 2 shifts per day)					x	

Decon kit (2)					x	
ATVs, ATV trailers, Generators						x
Miscellaneous (shelters, trucks, pressure washers, burners, etc.)						x
Chadux – Kodiak						
Boom: 5000' of 20 inch			x			
Boom: 1000' of 26 inch		x				
Boom: 900' skorboom			x			
Boom: 2500' absorbent						
Skimmer: Komara 12000, Vikoma (EDRC: 542 bbls)			x			
Skimmer: Rope Mop C-24-D (EDRC: 96 bbls)			x			
Skimmer: Skim-pak 1800 (EDRC: 2054 bbls)		x				
Storage: 2 bladders (Total Capacity: 5000 gallons)		x	x			
Wildlife hazing kit				x		
2 x 18' response boats		x	x			
Chadux - Seward						
Boom: 2400' of 20 inch			x			
Boom700 of 8 inch Sorbent Boom			x			
Skimmer: Manta Ray, Slickbar (EDRC: 1032 bbls)		x				
Skimmer: Desmi Mini-Max (EDRC: 1056 bbls)		x				
Marine Response Alliance (Crowley)						
Lightering: 1 x 49,500 bbl Oil Barge and tug	x					
Storage: 2 x 10,000 Oil/deck Barge and Tug		x				

OPERATIONS SUMMARY

Boom Deployed	up to 29,540 feet
Skimmers	19 systems (16,473 EDRC)
On-water storage	approx. 1,500 bbl. in bladders 2 x 10,000 bbl floating storage barges plus Island Trader slack tank / spill tank capacity
Personnel	Approx. 100
Vessels	20 +

UNIFIED COMMAND DECISIONS:

- Unified Command satisfied that source is secured and threat of spreading oil has been eliminated.
- ITB's OSRO (Chadux) will maintain bird capture/rehabilitation unit on standby in the event any oiled birds are captured.
- Appropriate Bird Capture / Hazing permits will be maintained.
- Liaison and daily teleconferences with the agencies shall be maintained.
- Daily site visits will continue to oversee contaminated soil removal actions.
- Waste Disposal will be in accordance with an approved waste management plan developed by Chadux's sub-contractor.
- ITB will maintain on site supervision of the activities.
- The ITB Command Post will be secured.

RESPONSE ACTIVITIES
THIRD 24 HOURS and to Completion

UNIFIED COMMAND ACTIVITIES

Aerial recon and SCAT surveys show small patches of oil remaining on water. Non-recoverable sheens are mapped throughout the area. Air operations direct on-water sweep operations to locations of concentrated oil. Beach cleanup crews are deployed to beach operations sites per the approved Incident Action Plan. Beach crews will remain in area until SCAT survey teams sign-off on any oiled segments. Shoreline operations estimated to be completed within 5 days. Daily Incident Action Plans are prepared and approved by Unified Command. All protection booming, skimmer operations, wildlife recovery and surveillance, and beach cleanup efforts will continue until final sign-off from the Unified Command

All liquid waste products recovered, saturated sorbents, and debris are collected, quantified, and are transported to a licensed fuel recycling facility as per the approved Waste Disposal Plan.

All resources are demobilized, cleaned and shipped back to their storage location. Personnel are demobilized and de-briefed. Consumables are ordered and damaged equipment is repaired or replaced.

The salvage of the Island Trader from the shoal in Cook Inlet is complete 7 days after the incident. Temporary repairs are completed which allows the *Island Trader* to be towed to Vancouver for more permanent repairs per salvage plan approved by the USCG and ADEC.

A final report is sent to ADEC and the FOSC within 15 days of completion of the cleanup.

.

FIRST 24 HOURS – EXAMPLE SPILL RESPONSE TIMELINE

24 HOUR TIMELINE	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000
INCIDENT CLOCK	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24

CONTAINMENT / RECOVERY TASK FORCE # 1

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<DARKNESS>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

MOBILIZATION | **RESPONSE ACTIVITIES**

- Incident Occurs
- First CHADUX boom deployed at site as secondary containment to ITB boom
- First CHADUX skimmer deployed at site with bladders
- Initial notification
- Additional CHADUX boom and storage bladders arrive
- ITB QI, Gov. Agencies notified
- Recovery from containment boom area at barge continues
- Limited skimming at MESA diversion booms
- CHADUX and ITB's Salvage Contractor activated
- Chadux response boats arrive by land from Anchorage
- Containment operations continue at dawn
- ITB response boats deployed
- Shuttling of boom and resources and personnel from Ninilchik to spill site
- Internal product transfer on barge begins
- Skimming continues throughout the night using vessel lights and CHADUX portable lights
- Barge boom deployment completed
- ITB skimming operations begin
- 1st 10,000 bbl Crowley floating storage barge arrives
- Storage and shuttling operations to Crowley barge
- Vessels of opportunity arrive from Nilichiik
- Activated ITB-ICS
- Ninilchik selected as Field Ops Centre
- Tactics Mtg
- Planning Mtg
- IAP Completed and approved
- Command Centre established in Anchorage
- Decant permit application w/ ADEC
- ITB response team arrives in Anchorage

SHORE PROTECTION TASK FORCE #2

MOBILIZATION | RESPONSE ACTIVITIES

- Shoreline protection teams activated
- Boom from Anchorage deployed to protect primary concern MESAs #43 and 53
- Chadux boom from anchorage arrives by air at Kamishak for shoreline protection
- Response boats begin shoreline protection using boom
- additional Chadux boom deployed as it becomes available
- Shore seal boom used for the intertidal area of anadromous streams
- First boom from Kodiak deployed to protect secondary concern MESAs #40, 41, 42
- Survey for beach pre-cleaning activities
- Beach work permit application with ADNR

WILDLIFE TEAMS

MOBILIZATION | RESPONSE ACTIVITIES

- Wildlife teams activated
- Wildlife hazing equipment arrives by air at spill site
- Wildlife teams arrive at Ninilchik via land
- Additional wildlife teams and equipment arrive in the a.m.
- Assess bird capture/rehabilitation unit needs
- Monitor and surveillance
- Assess sea otter pre-emptive capture needs

SAFETY

INITIAL ASSESSMENT – ON-SITE SAFETY PLAN | RESPONSE ACTIVITIES

- Master conducts initial safety assessment and briefs crew
- CHADUX safety briefing
- CHADUX drafts site safety plan for spill response
- Site safety plan reviewed and revised
- EMT and Hosptal identified for medical support
- Decon established at Ninilchik Field Ops/Staging area

OTHER (LIGHTERING, SALVAGE, SURVEILLANCE)

- Salvage Contractor activated
- Crowley lightering barge leaves Anchorage
- Regular surveillance overflights begin
- Overflights suspended for the night
- Regular surveillance overflights recommence
- Spill trajectory information becomes available
- Lightering barge arrives at scene
- Lodging and meal services coordinated
- Offloading stability assessment

SECOND 24 HOURS – EXAMPLE SPILL RESPONSE TIMELINE

24 HOUR TIMELINE	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000
INCIDENT CLOCK	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48

CONTAINMENT/RECOVERY TASK FORCE # 1

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<DARKNESS>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

RESPONSE ACTIVITIES

- Additional storage bladders arrives on scene
- Sweep & skim operations continue
- Containment/recovery of loose pockets continues at dawn
- Additional CHADUX small capacity skimmer systems arrive
- Skimmiing operations at barge containment are continue at night using lights
- Second Crowley 10,000 bbl oil barge arrives on scene for recovered oil storage
- floating bladders offload to Crowley oil barges
- Unified Command briefing
- Tactics Mtg
- Planning Mtg
- Joint Incident Command Press Briefing
- IAP Review and Approval

SHORE PROTECTION TASK FORCE #2

RESPONSE ACTIVITIES

- CHADUX response boats adjust and maintain protection boom
- Small skimmers (e.g., rope mops) used at diversion and exclusion booming areas
- Additional CHADUX resources arrive
- Protection boom and skimming per IAP and overflight updates
- SCAT teams conduct shoreline surveys- identify priority response sites and methods for IAP beach crews

WILDLIFE TEAMS

RESPONSE ACTIVITIES

- Additional wildlife teams deploy
- Bird / rehabilitation taking place
- Monitor and surveillance continues
- Some pre-emptive capturing of wildlife

SAFETY

RESPONSE ACTIVITIES

- Safety briefing for all new teams and at the start of each shift
- Site safety plan reviewed and revised every 12 hours
- Safety briefing for all new teams and at the start of each shift
- Site safety plan reviewed and revised

OTHER (LIGHTERING, SALVAGE, SURVEILLANCE)

RESPONSE ACTIVITIES

- Lightering commences
- Regular surveillance overflights continue
- Overflights suspended for the night
- Regular surveillance overflights recommence at dawn
- Spill Trajectories revised

Temporary oily waste reception station established at staging.

- Lodging & meal services coordinated

THIRD 24 HOURS – EXAMPLE SPILL RESPONSE TIMELINE

24 HOUR TIMELINE	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000
INCIDENT CLOCK	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72

CONTAINMENT/RECOVERY TASK FORCE # 1

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<DARKNESS>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

RESPONSE ACTIVITIES

- skimming of isolated pockets of oil continue
- Maintain containment and skimming until no longer practicable → → →
- floating bladders continue to offload to Crowley oil barges
- Unified Command briefing
- Tactics Mtg
- Planning Mtg
- JIC Press Briefing
- Incident Investigation Begins → → →

SHORE PROTECTION TASK FORCE #2

RESPONSE ACTIVITIES

- Chadux response boats and vessels of opportunity adjust and maintain protection boom
- Shoreline inspections and clean up operations continue until all oil beaches have been identified and cleaned up → → →

WILDLIFE TEAMS

RESPONSE ACTIVITIES

- Wildlife teams continue monitoring and capture operations as long as necessary → → →
- Wildlife rehabilitation operations continue → → →

SAFETY

RESPONSE ACTIVITIES

- Safety briefing for all new team and at shift changes
- Site safety plan reviewed and revised as required → → →

OTHER (LIGHTERING, SALVAGE, SURVEILLANCE)

RESPONSE ACTIVITIES

- Offloading complete
- Barge temporary repairs begin → → →
- Regular surveillance overflights continue
- Overflights suspended for the night
- Surveillance overflights recommence at dawn
- Spill Trajectories revised
- Lodging and meal services coordinated

Detailed Chronological Format

This scenario is a holing of the Island Trader in Cook Inlet. Estimated loss of product is 30,000 bbls of Jet A. The Response Planning Standard (RPS) volume for a tank barge carrying non-crude oil as bulk cargo is 15% of the total cargo capacity. For the Island Trader carrying 65,320 bbls, this is 9,798 bbls[1]. NOAA's ADIOS 2.0 oil spill modeling software was used to provide realistic dispersion and evaporation rates (see attached spill parameters and oil budget graph included at the end of this scenario).

The Island Trader being pushed by the Island Monarch is departing from Tesoro Petroleum's Kenai Refinery on route to Canadian Forces Base Comox with a full load of Jet A. Draft is 21 feet. About 15 nautical miles south of Kalgin Island the Island Trader runs aground on a shoal due to the lighted buoy marking the shoal being displaced by ice flows. Cargo tanks 1 through 3 Port and Starboard are damaged. The initial rate of releases is approximately 3,000 bbls per hour.

Date:	April 22
Time:	1100 Hours
Current:	< 0.5 Knots
Weather:	Clear, 35°F
Tide:	1.5 hours before ebb
Wind:	N.E. at 4 knots

[1] The *Oil Discharge Prevention and Contingency Plan Application and Review Guidelines* state that the Response Planning Standard (RPS) volume represents the amount of oil remaining after any evaporation occurs and absent any additional volumetric increase caused by emulsification.

Time	Actions	On-Water Oil Recovered
1ST 24 HRS 1100 - 1130	NOTE: The general procedures for dealing with an incident of this type are clearly outlined in Section 1.1.2 – Spills Resulting From Casualties (Grounding). The procedures for each incident will vary with the requirements of the situation. The Master is the designated ITB Incident Commander until relieved by a more qualified senior ITB representative – see Section 3.3 – Incident Command Organization. • The Master immediately calls the crew to emergency stations. The crew follow the emergency procedures for a grounding outlined in Section 1.1.2 of this manual. • All sources of ignition, where a spark will present a hazard, are eliminated, both on the barge and tug. Doors and port holes, to engine room spaces and accommodation, are closed to prevent flammable vapours from entering. • The Master's initial assessment of the situation indicates that the vessel is no immediate danger of sinking or capsizing and appears to be firmly aground on the underwater shoal. • The Master activates the spill reporting procedures outlined in *Section 1.2 – Reporting and Notification* to ensure notification of: ➢ ITB management (Emergency Response Team – ERT) in Vancouver (see *Section 3.3 – Incident Command Organization*). ➢ U.S. Coast Guard National Response Centre; ➢ Alaska Dept. of Environmental Conservation (ADEC); ➢ Alaska Chadux; ➢ ITB salvage and marine firefighting contractor: the Marine Response Alliance (MRA) • The Bargeman and Mate board the barge to do a thorough damage assessment (i.e., check for flooding in the pump rooms, sound all cargo tanks using the central cargo management computer). They report the following to the Master: ➢ The force of the grounding is enough to hole both hulls in the forward area of the barge. Tanks 1 through 3 P&S are suspected to be losing product and product is escaping into the water (see *Section 1.8.1 – Island Trader* for a General Arrangement drawing of the barge); ➢ The barge is stable and for the moment is in no danger of foundering. ➢ Side wing void tanks appear to be intact with the exception of the No.1 Starboard wing void. • Due to the nature of the grounding and the extent of damage to the barge it is decided in consultation with the USCG, ADEC and the	**@ 1100: Nil**

	MRA that the vessel's crew should take measures to keep the Island Trader on the Shoal. The vessel's crew lowers the barge bow anchor remotely from the Island Monarch. The tug connects a towline to the aft end of the barge, they also take on board the Island Monarch the 250' of nylon line that is shackled to the barge's emergency towline. The Island Monarch disconnects from the notch and ensures movement of the barge due to current, tide, and wind is minimized. The Master consults the tide tables which indicate a maximum tidal range at Anchor Point of 18' for the next several days. Currents are expected to be about 3 knots at maximum ebb and flood tides. • The Master briefs his crew on, and ensures his crew are following, standard ITB safety procedures for responding to an oil spill. When Chadux personnel arrive on site, they will be tasked with preparing a site safety plan and providing a Site Safety Officer whose duties will include responsibility for monitoring safe entry into the spill zone and for vapour monitoring. • The tug crew prepare for deployment the 1400' of containment boom stored on a reel on the barge and prepare the 16' Polaris with 50 HP outboard (located on the Island Monarch) for launching. • The Master instructs the Bargeman to begin transferring product internally (using barges cargo pumps) from the damaged tanks to the barge's slop tanks or other slack tanks to minimize the loss of product from the damaged tanks. This will be conducted in consultation with ITB's Naval Architects as well as the USCG and ADEC. • The Island Tug ERT Incident Commander requests Chadux to begin mobilization and transportation of containment, recovery, and clean-up equipment from its closest centres by the quickest transport mode available. A list of Chadux Owned Equipment Systems and Member Equipment Systems is available in *Section 1.5 – Deployment Strategies* of the Chadux *Response Manual*. Estimated deployment times to the spill site will depend primarily on the time required to move the equipment from storage to the staging area, and travel time to the site.	
1ST 24 HRS 1130 - 1300	• The ITB work boat deploys the boom in a complete circle around the barge to trap the oil near the barge and to minimize its spread. By 1145 (i.e., 0.75 hours after the grounding) the boom is deployed. It is expected that the boom will only hold about 5,000 bbls (about 2.5" of oil before oil begins escaping. • The towboat continues to stabilize any barge movement. • The vessel's crew deploys the Island Trader's onboard skimmer (EDRC = 360 bbls) into the containment area. The skimmer is operating approximately 60 minutes from the initial grounding. Product is pumped into intact wing void tanks.	**@ 1130: Nil**

	• Upon being notified of the spill, the ITB ERT prepare to proceed to Alaska to take charge of the response. They contact Northwest International Jet, and arrange a flight from Vancouver to Anchorage as the centre nearest to the spill site – see *Section 1.5.4 – ERT Mobilization and Deployment*. Estimated travel time to Anchorage is 6.0 hours including preparation, travel, flying time and customs clearance. The ERT contact Chadux and arrange for a helicopter to carry them to and over the spill site. The ERT also contacts their naval architects and request a naval architect accompany the ERT to Alaska. • Internal product transfer on the Island Trader begins at approximately 1200. Product is transferred to the wing void tanks through manholes using cargo hoses and barge cargo pumps. Some product is also transferred to the spill tanks. All product transfer operations are discussed with ITB's naval architects, the USCG, and ADEC to ensure the transfer will not further jeopardize the barge. • In consultation with the USCG, ADEC, and the ITB Master, Alaska Chadux selects Ninilchik as the staging area. Ninilchik is approximately 15 nm due east of the spill site with good road access, a boat launch, accommodation, and supplies (fuel, food, etc.). Ninilchik is also a fishing centre with a large number of seaworthy aluminum boats available for charter. • Chadux's mobile command centre is dispatched to the staging area at Ninilchik. • Anchorage is selected as the Command Centre for the response. • The Marine Response Alliance are mobilized for deployment to the spill site to perform emergency lightering and vessel stability, add additional storage capacity (i.e., tank barges), and to help with oil recovery operations. In coordination with Chadux and Island Tug, the MRA mobilize barges, vessels, response equipment, and personnel to the scene. • Chadux mobilizes their response boat in Kenai as well as two vessels of opportunity in Ninilchik and dispatch them to the spill site to aid in boom deployment. Estimated time of arrival is estimated at - 5 hours after the grounding (Kenai boat: 2 hours mobilization plus 30 nm / 10nm per hour = 3 hours.; Ninilchik vessels of opportunity: 3 hours mobilization plus 15 nm / 10 nm per hour = 4.5 hour). • Chadux activates their wildlife protection teams. Appropriate capture/hazing permits are submitted to ADF&G through Unified Command. Chadux hazing equipment from Kenai, Anchorage, and Seward is mobilized for transportation to the staging area. • Chadux activates their shoreline protection teams.	

- ITB and Chadux personnel refer to the Cook Inlet Subarea Plan and the Chadux Response Manual, Section 3.10, for sensitive information and identify sensitive areas in the area. Designated MESAs (most environmentally sensitive areas) that have the potential to be affected include:
  - #52 – Clam Gulch
  - #53 – Kachemak Bay
  - #44 – Redoubt Bay
  - #45 – Kalgin Island
  - #46 – Trading Bay
  - #42 – Barren Islands
  - #40 – Perenosa Bay/Seal Bay (Afognak Island)
  - #41 – Marmot Island
  - #43 – Chenik Head to Silver Beach (Kamishak Bay)

- Due to the majority of product being released during an ebb tide, the MESAs further up the inlet including Redoubt Bay, Trading Bay, and Clam Gulch are not expected to be very affected by the spill. MESAs #43 and #53 are of primary concern. MESAs #42, #40, and #41 are of secondary concern. ITB consults with ADEC, NMFS, USF&W, and ADF&G on other sensitive areas.

- Chadux boom from Anchorage is used to protect MESA #43 and MESA # 53. Deflection and exclusion type tactics are used. Sorbent material is used to recover any oil infiltrating the exclusion/deflection zone.

- Chadux boom, vessels, skimmers, and other storage from Kodiak is used to protect MESAs #40 – 42.

- ITB's contracted salvage, lightering, and marine firefighting contractor, the MRA dispatches one of Crowley's tank barges (barge 255, capacity 49,508 bbls) tied up in Anchorage, for emergency lightering of the Island Trader. Mobilization is approximately 4 hours. The spill site is 100 nautical miles from Anchorage. The light barge makes approximately 7 knots and is expected to arrive at the spill site approximately 19 hours after the initial grounding.

- The MRA also dispatches two of Crowley's10,000 bbl tank / deck cargo barges to be used for temporary storage (barges BC 151 and BC 152). These vessels were selected as they were close to the spill scene and of a size suitable for the intended operation. Barge BC1 is returning from a delivery to Crowley's tank farm in Nome. It is just south of Kodiak Island and is expected to reach the spill scene by 1800 hours (7 hours after the grounding). Barge BC 152 is tied up in Seward. Estimated time of arrival for BC2 is 1400 hours the following day (2 hours mobilization plus 25 hours travel [200nm @ 8 knots]).

1ST 24 HRS 1300 – 1500	• By 1300 hours, oil is beginning to escape from the ITB containment boom. Thus, the immediate priority is to obtain additional boom to contain to act as secondary containment. • Onboard sorbent boom is deployed by the ITB workboat to trap any oil escaping the containment boom. The work boat patrols the outer perimeter of the boom to pick up any escaping oil with sorbent pads or sheets. Sorbent pads are wrung out using a commercial sorbent wringer into barrels and the barge's void tanks and reused. Onboard product transfer as well as skimming operations continue. • Chadux continues to mobilize Chadux-owned containment and recovery equipment from its available supplies with the primary centres being Anchorage, Kodiak Island, Seward, and Kenai. Equipment from other centres will be mobilized as required. • 6000' of boom from Kenai is transported to the spill site by a Bell 212 helicopter. The helicopter is chartered from Era Aviation at the Anchorage airport. The boom is transported using a sling and requires several trips (generally 1500' sections). The boom is transported dropped onto the aft deck of the Island Monarch for deployment by ITB's response boat. Estimated time for the first 3000' of Chadux boom to be deployed at the spill site is 4 hours 30 minutes (3 hours mobilization time, 2 helicopter trips of 1/2 hour each round trip, and 30 minutes deployment time. The Chadux work boat and the two vessel's of opportunity from Ninilchik help to deploy the boom upon their arrival at the scene. The total 6000' is deployed within 6.0 hours of the incident. • Over 29,000 ft of Chadux-owned boom is available for deployment from Anchorage, Kenai, Seward and Kodiak. These are deployed by a combination of air, land, and marine transport modes at the discretion of Chadux's Command Team, and depending on the availability of suitable aircraft, vessels and trucks. Additional boom is available from other caches as required. • Chadux has over 7,500 bbls / day EDRC skimming capacity available for deployment to the spill site by air and vessel transport from the four closest zones centres Additional skimming capacity is available from other caches as required. • A total of 1,500 bbls of temporary storage is available for deployment to the spill site by air and vessel transport from the three closest centres. Additional storage capacity storage capacity is available from other zones. Through Island Tug's membership with the MRA, 2 x 10,000 bbl Crowley barges are dispatched to the scene for storage of recovered product. • Through the use of the MESA and ESI maps, the Cook Inlet Subarea Contingency Plan, and consultation with ADEC officials, Chadux determines the critical protection priorities.	**@ 1300: 2.5 bbls**

	• The estimated deployment times to the spill site vary depending on the mode of transport (i.e., land, air or marine), the time required to move the equipment from its storage area to the staging centre, transport time to the spill area, and the transit time from the spill area staging location to the actual spill site. The actual methods of deployment to be used will depend on the availability of suitable transport (i.e., trucks, vessels, aircraft), and will be largely at the discretion of the Chadux Logistics Officer. Some equipment will be delivered directly to the spill site by helicopter or float plane, and deployed directly into the water near the Island Trader. Equipment from Anchorage, Seward, and Kenai will arrive by a combination of truck, vessel and/or aircraft. Some equipment (e.g., boom, skimmers) from Anchorage, Seward, and Kenai may be transported by truck to the field operations centre and staging area at Ninilchik, and moved by boat or helicopter from there to the spill site or deployed near Kachemak Bay to protect sensitive resources.	
1ST 24 HRS 1500 – 1800	• The wind is light from the northeast at 8 knots. The tide is turning to ebb. The current flow at the peak of the ebb tide is expected to be approximately 3 knots. Under these conditions, any uncontained oil is initially expected to move south with the tide and wind. • The barge is stable and being held in position by the tug. She is in no danger of foundering. The discharge continues at an approximate rate of 3000 bbls/hr. • As Chadux containment boom and recovery (skimming) equipment continues to arrive at the spill scene, it is deployed under the direction of Chadux's onsite supervisor, in consultation with the ITB towboat Master, the USCG, and ADEC officials. • At 1600 hours (5 hours after the grounding), the following major skimming equipment from Kenai is deployed and operating at the primary containment area (2 hours mobilization + 1.5 hour s road transport + 1.0 hours ocean transport, + ½ hour deployment): ➢ From Kenai: Skim Pak Skimmer: Capacity: 428 bbls / hour EDRC: 2054 bbls Average hourly recovery with 33% downtime: 57 bbls/hr (Note: Mechanical Cleanup Operation 1 on Adios Oil Budget) ➢ From Kenai: Vikoma 12 K: Capacity: 113 bbls / hour EDRC: 542 bbls Average hourly recovery with 33% downtime: 15 bbls/hr (Note: Mechanical Cleanup Operation 2 on Adios Oil Budget) • Both the above listed skimmers are deployed within the primary or secondary containment areas. Product recovered from skimming operations is stored in the Island Trader's void tanks and two	**@ 1500:** **7.0 bbls**

	bladders from Anchorage which are transported to the spill scene by helicopter. • Also at 1600 hours (5 hours after the grounding), the following equipment arrives: ➢ From Kenai: 2500' sorbent boom ➢ From Kenai: Wildlife Hazing Kit • By 1700 hours there are a total of six response vessels operating at the spill site (ITB response boat, Chadux boat from Kenai, and 4 vessels of opportunity from Ninilchik. • MRA divers out of Anchorage are dispatched to the spill scene to assess the type and extent of damage to the barge. They arrive by helicopter at the barge at roughly 1500 hours. The MRA also sends a work tug and crew from Anchorage for the purposes of making temporary repairs to the barge once the cargo has been safely lightered off to another vessel. • Three (3) of Chadux's 6600 gallon towable storage bladders arrive at Ninilchik by truck approximately 5 hours after the spill incident. These are subsequently transported out to the spill site on the decks of vessels of opportunity. On-water transportation takes approximately 2 hours. The bladders are in use at the spill site within 9 hours after the grounding. • The Master radios a request to Chadux to arrange a helicopter overflight to observe the potential movement of any uncontained oil from the spill. • Chadux are also asked to request any small boats in the area to assist with visual tracking of the oil movement. • 3000' of 20" containment boom from Anchorage is used to protect MESA #43 – Chenik Head to Silver Beach (Kamishak Bay). Due to the distance this boom is transported by helicopter to a suitable shoreline area. Vessels of opportunity along with trained Chadux Responders deploy the boom. The boom is deployed by 1830 hours. Protection techniques outlined on the Geographic Response Strategy (GRS) maps are used to guide responders. • 2400' of 20" containment boom from Seward (transported by land to Homer Spit) is used to protect MESA #53 Kachemak Bay. A Chadux boat from Anchorage (transported by land to Homer Spit) is used to deploy it. Protection techniques outlined on the GRS maps are used to guide responders. Boom is deployed by 1700 hours. • The 5000' of 20" containment boom from Kodiak is deployed using the two Chadux 18' response boats (also from Kodiak) to protect secondary priority MESA's #42 – Barren Islands, # 41 – Marmot Island, and #40 – Perenosa Bay / Seal Bay (Afognak Island)..	

	Protection techniques outlined on the GRS maps are used to guide responders. The crews monitor any approaching slick and adjust their booms as required. Aerial surveillance is used for slick monitoring as much as possible. • The ITB Incident Commander authorizes Chadux to take whatever measures are necessary to protect wildlife threatened by the spill in consultation with ADEC and other state and federal and government agencies (see above) on the company's behalf – see *Section 3.10 – Protection of Environmentally-Sensitive Areas* of the Chadux Technical Manual. Such measures include: ➢ Obtain proper authorization from the appropriate government agencies including Alaska Dept. of Fish and Game, U.S. Fish and Wildlife Service, and the National Marine Fisheries Service to haze, capture, transport, stabilize, and treat oiled wildlife ➢ Transport of Chadux's wildlife hazing kits from Anchorage, Kenai, Kodiak and other Chadux caches by fastest means available; ➢ Transport Chadux wildlife response equipment including Chadux's 30' wildlife capture and stabilization trailer at a location close to the spill to minimize transit time for oiled wildlife. ➢ Alert the Chadux wildlife rehabilitation teams/contractors. ➢ Ensure that all federal regulations and guidelines for wildlife rescue and rehabilitation are complied with by Chadux and contractor personnel. • Upon arrival in Alaska, the ITB Incident Commander proceeds to the Anchorage Command Centre, the ITB Operations Officer proceeds to the Ninilchik Staging area, while the naval architect and salvage master proceed to the spill site to inspect the barge and take charge of the casualty response.	
1ST 24 HRS 1800 – 2100	• At approximately 1800 hours, the tide turns to flood. Oil has migrated approximately 16 nm down Cook Inlet. As the Island Trader grounded in the middle of Cook Inlet, for the moment, only very minimal shoreline oiling has occurred. • At 1900 hours (8 hours after the grounding), the following major skimming equipment from Seward is deployed and operating at the spill scene (2 hours mobilization + 4 hour s road transport + 1.5 hours ocean transport, + ½ hour deployment): ➢ From Seward: Desmi Mini-Max Skimmer Capacity: 220 bbls / hour EDRC: 1056 bbls Average hourly recovery with 33% downtime: 29 bbls/hr ➢ From Seward: Manta Ray, Slickbar Skimmer Capacity: 215 bbls / hour EDRC: 1032 bbls	**@ 1800: 150 bbls**

	Average hourly recovery with 33% downtime: 29 bbls/hr (Note: These two skimmers form Mechanical Cleanup Operation 3 on Adios Oil Budget) • ITB's naval architect and the MRA salvage master have arrived at the barge, and discuss possible courses of action for lightering of cargo, trim and stability considerations, safe havens near the scene, and temporary repairs in consultation with the USCG. • Divers confirm that 6 cargo tanks have been damaged. • At 2000 hours (9 hours after the grounding), the following major skimming equipment from Anchorage is deployed /operating at the spill scene (2 hours mobilization + 5 hours road transport + 1.5 hours ocean transport, + ½ hour deployment): ➢ From Anchorage: Skim Pak 18000 Capacity: 428 bbls / hour EDRC: 2054 bbls Average hourly recovery with 33% downtime: 57 bbls/hr ➢ From Anchorage: Manta Ray, Slickbar Skimmer Capacity: 215 bbls / hour EDRC: 1032 bbls Average hourly recovery with 33% downtime: 29 bbls/hr (Note: These two skimmers form Mechanical Cleanup Operation 4 on Adios Oil Budget) • At 2100 hours (10 hours after the grounding), the following major skimming equipment from Anchorage is deployed /operating at the spill scene (2.5 hours mobilization + 5 hours road transport + 1.5 hours ocean transport, + 1.0 hour deployment): ➢ From Anchorage: Mini Max 30, Lamor, Skimmer: Capacity: 189 bbls / hour EDRC: 907 bbls Average hourly recovery with 33% downtime: 25 bbls/hr ➢ From Anchorage: Desmi Mini-Max Skimmer Capacity: 220 bbls / hour EDRC: 1056 bbls Average hourly recovery with 33% downtime: 29 bbls/hr (Note: These two skimmers form Mechanical Cleanup Operation 5 on Adios Oil Budget) • Contracted tank trucks and vacuum trucks begin to arrive at the Ninilchik staging area for pumping off recovered product from temporary storage containers.	

1ST 24 HRS 210 – 0600 (Dark-ness)	• The discharge from the Island Trader stops at approximately 2100 hours (10 hours after the incident), however, there is a concern that if the barge shifts, more product may be released • Skimming operations at the barge continue throughout the night. Lighting is provided by the flood and search lights on board the Island Trader, the Island Monarch, vessels of opportunity, as well as Chadux's portable flood lights. • Recovered oil from the skimmers continues to be stored in floating storage bladders and on the Crowley 10,000 bbl barge BC 151. • Some recovery operations continue throughout the night away from the barge at other locations where oil has been contained using Vikoma Komara 12k disk skimmers and sorbent material.	**@ 2100: 616 bbls**
1ST 24 HRS 0600 – 1100	• Skimming operations continue at the barge. • Discharge tracking recommences at dawn. • On water protection of sensitive resources and containment/recovery of on-water oil away from the barge continue. • Shoreline protection booms are adjusted as surveillance information on slicks is received. • Crowley lightering barge arrives on scene.	**@ 0600: 3,046bbls**
1ST/ 2ND 24 HRS 1100-2100	• After approximately 4 hours of preparation, and after receiving authorization from the FOSC and ADEC, lightering operations commence at approximately 1100 hours. Extreme caution is taken to ensure the stability of the Island Trader throughout the transfer operation, and to avoid placing undue stress on the hull. • In addition to skimming equipment, sorbent sweeps are spread and towed behind smaller vessels in order to recover thinner films or sheens. Sorbent pads and sheets are also spread over smaller areas of fuel and regions too thin for effective skimming. • ITB's management team in Vancouver uses *the Automated Data Inquiry for Oil Spills (ADIOS)* software program developed by the National Oceanographic and Atmospheric Administration (NOAA) to determine a preliminary fate and effects projection of the oil spilled. Wind, wave, and water temperature estimates are obtained from the tug Master. Of the 30,000 bbls estimated to have been released and taking into account the recovered oil, and estimated quantity beached, the ITB ERT determines using the ADIOS software that at 1200 hours there is approximately 15,000 bbls remaining on the water. (See attached Oil Budget graph). • Helicopter overflights continue out of Anchorage monitoring oil slicks that have the potential to approach the identified sensitive areas.	**@ 1100: 4,396 bbls**

2ND 24 HRS 2100 – 0600 (Dark-ness)	• Skimming operations at the barge continue throughout the night. Lighting is provided by the flood and search lights on board the Island Trader, Island Monarch, vessels of opportunity, and using the Chadux portable lights. • Discharge tracking is suspended until dawn. • Some recovery operations continue throughout the night away from the barge at other locations where oil has been contained. Chadux portable lights and vessel searchlights are used for lighting.	**@ 2100: 7,096 bbls**
2ND 24 HRS 0600 – 1100	• All product will be lightered of the Island Trader. The lightering barge will discharge the Island Trader's cargo at the Tesoro refinery (the origin of the Island Trader's cargo). The Island Trader will remain on the shoal until temporary repairs can be made and the vessel safely refloated. Repairs will be made by ITB's salvage and marine firefighting contractor. • A temporary waste storage compound is constructed at the operations and staging area at Ninilchik. The storage area is fully contained using leakproof lined containers which are available through Chadux subcontractors. These are filled and then transported for disposal. Oiled sorbent materials (e.g., pads, sheets, rolls) are recovered from the water manually using pike poles and similar equipment and are stored in leakproof steel drums or storage containers on board the recovery vessels. These materials are then transported to the temporary storage area. ITB ,Chadux, and Chadux's waste management sub-contractor consult ADEC officials throughout the entire process to ensure compliance with state regulations governing storage and disposal of oily waste materials generated from a spill.	**@ 0600: 9,526 bbls**
3RD 24 HRS 1100 – 2100	• ITB's management team in Vancouver uses *the Automated Data Inquiry for Oil Spills (ADIOS)* software program developed by the National Oceanographic and Atmospheric Administration (NOAA) to determine a preliminary fate and effects projection of the oil spilled. Of the 30,000 bbls estimated to have been released and taking into account the recovered oil, and estimated quantity beached, the ITB ERT determines using the ADIOS software that at 1200 hours it is estimated that less than 2000 bbls of fuel remain on the water. Over 16000 bbls has evaporated and over 10,000 bbls has been recovered. (See attached Oil Budget graph) • Chadux's Shoreline Clean-up and Assessment Team (SCAT) studies the shorelines that may have been exposed to spilled oil, to determine the extent of oiling, and appropriate clean-up measures as required. The shorelines are prioritized according to the National Oceanic and Atmospheric Administration's (NOAA) *Environmental Sensitivity Index (ESI).* Beach cleaning operations are commenced. • For sand, gravel, or cobble beaches in the area, manual removal, passive collection (e.g., sorbents), and debris removal operations may be required. ITB will request and authorize Chadux to undertake whatever shoreline clean-up activities are required using its own or contractor resources. Oiled shoreline sediment and debris will be stored in suitable, leakproof containers or "Geo-bags" (high mil plastic bags) and transported to the temporary storage area at Ninilchik.	**@ 1100: 10,822 bbls**

	• Oil and water mixture recovered from skimming operations that is stored in bladders and are either transferred to the 10,000 bbl Crowley barges or are towed slowly (towing speed < 5 knots) back to Ninilchik to be offloaded to tank trucks. • Other contaminated materials (e.g., oiled clothing, gloves, seaweed, shoreline debris) are stored in heavy duty plastic bags or "Geo-bags (>6 mil thickness which resist deterioration from exposure to oil) and/or lined waste disposal containers. ITB and Chadux consult with ADEC officials to determine disposal options for this material, plus regular garbage and waste (non-oiled) generated by responders at the site. Chadux has as an option a "Smart Ash" burner which is an approved method for oily sorbent disposal, however, an air quality permit will have to be obtained prior to its use.	
3RD 24 HRS 2100 – 0600 (Dark-ness)	• By nightfall most of the on-water oil in the primary containment areas has been recovered. Some skimming operations but mainly manual recovery continues throughout the night. Lighting is provided by the flood and search lights on board vessels of opportunity, the Island Trader, Island Monarch, and using the Chadux portable lights. • Discharge tracking is suspended until dawn. • The lightering operation of the Island Trader continues throughout the night. • Some recovery operations continue throughout the night away from the barge at other locations where oil has been contained. Chadux portable lights and vessel searchlights are used for lighting.	**@ 2100: 11,101 bbls**
3RD 24 HRS 0600-1100	• Limited skimming operations continue within the containment area at the barge. • Containment boom around the area of the barge begins to be recovered and cleaned. • Numerous vessels conduct search and sweep operations throughout the area.	**@ 0600: 11,300 bbls**
3RD 24 HRS PLUS	• Upon completion of the lightering operation, temporary repairs to the Island Trader commence. The temporary repairs are expected to last 4 – 5 days. • The barge is not towed until approved by USCG and ADEC officials that it will not pose a threat to the marine environment. • Chadux continues shoreline inspections and clean up operations until the unified command end points have been met. • A full and thorough incident investigation is undertaken by ITB management.	**@ 1100: 11,636**

Oil Name = JET A (DFA), TESORO
API = 43.0 Pour Point = -51 deg C
Wind Speed = constant at 7 mphWave Height = computed from winds
Water temperature = 45 deg F
Time of Initial Release = April 22, 1100 hours

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3. Spill Status (Estimated, in Barrels)

	This Operational Period (Since Last Report)	Total
Volume Spilled	30,000	30,000
Mass Balance / Oil Budget		
Recovered Oil	4,342	4,342
Evaporation	10,198	10,198
Natural Dispersion	186	186
Chemical Dispersion	0	0
Burned	0	0
Floating, Contained	not estimated	not estimated
Floating, Uncontained	15,241	15,241
Onshore	33	33
Total spilled product accounted for:		30,000

Oil Name = JET A (DFA), TESORO
API = 43.0 Pour Point = -51 deg C
Wind Speed = constant at 7 mphWave Height = computed from winds
Water temperature = 45 deg F
Time of Initial Release = April 22, 1100 hours

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3. Spill Status (Estimated, in Barrels)

	This Operational Period (Since Last Report)	Total
Volume Spilled	0	30,000
Mass Balance / Oil Budget		
Recovered Oil	6,480	10,822
Evaporation	7,468	17,666
Natural Dispersion	319	505
Chemical Dispersion	0	0
Burned	0	0
Floating, Contained	not estimated	not estimated
Floating, Uncontained	901	901
Onshore	73	106
Total spilled product accounted for:		30,000

Oil Name = JET A (DFA), TESORO
API = 43.0 Pour Point = -51 deg C
Wind Speed = constant at 7 mphWave Height = computed from winds
Water temperature = 45 deg F
Time of Initial Release = April 22, 1100 hours

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3. Spill Status (Estimated, in Barrels)

	This Operational Period (Since Last Report)	Total
Volume Spilled	0	30,000
Mass Balance / Oil Budget		
Recovered Oil	814	11,636
Evaporation	69	17,735
Natural Dispersion	5	510
Chemical Dispersion	0	0
Burned	0	0
Floating, Contained	not estimated	not estimated
Floating, Uncontained	0	0
Onshore	13	118
Total spilled product accounted for:		30,000

- **Oil Type**
  - **JET A (DFA), TESORO**
  - **Location = KENAI, AK**
  - **Synonyms = none listed**
  - **Product Type = refined**
  - **API = 43.0**
  - **Pour Point = -51 deg C**
  - **Flash Point = 40 deg C**
  - **Viscosity = 1.2 cSt at 40 deg C**
  - **Adhesion = unknown**
  - **Aromatics = unknown**
- **Wind and Wave Conditions**
  - **Wind Speed = 7 mph from 30 degrees**
- **Water Properties**
  - **Temperature = 45 deg F**
  - **Salinity = 15 ppt**
  - **Sediment Load = 5 g/m3 (ocean)**
  - **Current = 2.0 mph towards 30 degrees**
- **Release Information**
  - **Continuous Release**
    - **Time of Release = April 22, 1100 hours**
    - **Spill Rate = 3000 bbl/hr**
    - **Duration of Release = 10 hours**
- **Mechanical Cleanup Operations**
  - **Mechanical Cleanup Operation = 1**
    - **Time of Application = April 22, 1600 hours**
    - **Recovery Rate = 57 bbl/hr**
  - **Mechanical Cleanup Operation = 2**
    - **Time of Application = April 22, 1600 hours**
    - **Recovery Rate = 15 bbl/hr**
  - **Mechanical Cleanup Operation = 3**
    - **Time of Application = April 22, 1900 hours**
    - **Recovery Rate = 58 bbl/hr**
  - **Mechanical Cleanup Operation = 4**
    - **Time of Application = April 22, 2000 hours**

Recovery Rate = 86 bbl/hr

· **Mechanical Cleanup Operation = 5**

Time of Application = April 22, 2000 hours

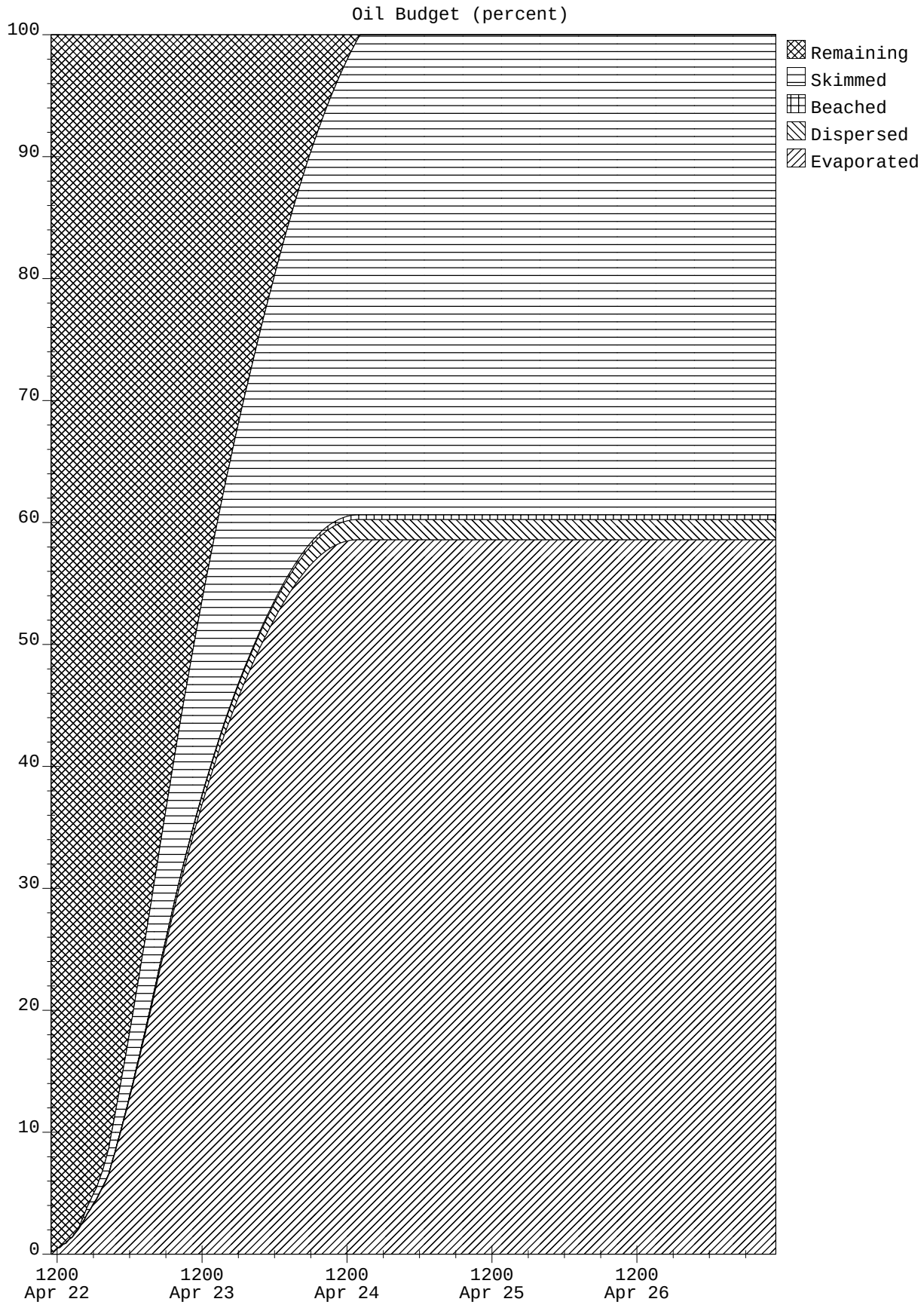
Recovery Rate = 54 bbl/hr

• **Beached Oil**

Day 1 = 10 bbl

Day 2 = 50 bbl

Day 3 = 100 bbl


Oil Budget (percent)
100
90
80
70
60
50
40
30
20
10
0
1200 Apr 22
1200 Apr 23
1200 Apr 24
1200 Apr 25
1200 Apr 26
Remaining
Skimmed
Beached
Dispersed
Evaporated

1.7 NON-MECHANICAL RESPONSE OPTIONS

Non-mechanical response options such as in-situ burning, and the use of chemical dispersants are not considered to feasible or permissible marine oil spill countermeasures for the purposes of this plan.

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1.8.1 ISLAND TRADER

DESCRIPTION AND KEY SPECIFICATIONS

See attached "Vessel Information Card".

DRAWINGS AND CARGO TANK CAPACITIES

The following drawings for the Island Trader are located at the back of this Section:

- General Arrangement
- Cargo Piping and Stripping System Arrangement
- Service Fuel Oil Arrangement
- Tank Capacity Plan

SERVICE FUEL OIL, HYDRAULIC OIL, LUBE OIL, DRAIN/SPILL TANK CAPACITIES

In addition to cargo tanks, the Island Trader has the following tanks:

- Ship's service fuel: 19,650 L
- Hydraulic oil: 10,540 L
- Hydraulic oil reservoir: 9,120 L
- Lube oil: 660 L
- Spill tank: 18,360 L
- Bilge dirty oil tank: 1,100 L
- Engine dirty oil tank: 1,100 L

KEY SPILL PREVENTION FEATURES

- Double hulled, IMO compliant, Class A OPA 90 oil tank barge.
- Designed and constructed to ice strengthened Arctic Class A1.
- Designed as a dedicated Articulated Tug Barge Unit and capable of pushing in sea conditions up to 12 metres.
- Equipped with a very powerful, omni-directional bow thruster for aiding in docking and maneuvering. With a full output thrust of 16,000 kg entry into the most difficult of berths is achieved.
- Equipped for closed loading and vapour recovery with a common vent/overfill system that connects to shore side vapour systems ensures that all of the latest environmental considerations are taken in account.
- Duplex overfill alarms and protection systems are equipped on each cargo tank.
- An independent Tank Gauging Radar System fitted to each cargo tank and connected into a central cargo management computer system.
- Rising stick fill indicators.
- All compartment hatches, vents, and loading and discharge manifolds are contained within an 6" high continuous coaming. Coaming containment area leads to dedicated spill tank.
- All cargo hoses are continuous lengths with camlock fittings at both ends. Camlocks are secured by wire during use. Hoses are tested annually to 1.5 times their rated working pressure by a qualified outside contractor. Hoses are stowed in elevated containment boxes located inside the containment coaming, and have individual slop tank drains and scupper plugs.
- There are several remote shutdowns locations to stop all cargo transfer operations (see Fire and Safety Plan) in addition to a remote cable sent ashore.
- The barge anchor can be deployed using a hydraulically operated anchor windlass with onboard controls, or by radio remote from the towboat.
- For lost barge recovery purposes, the barge carries 150' of 2" trailing stern line with an 18" buoy at the trailing end. This line is attached to 250' of 4" nylon rope stored in a breakaway box on the port aft corner. The rope is shackled to a 280' 2" steel wire stored on a reel below decks in the port aft corner. When the barge is being

pushed, the tug's tow wire is shackled to a wire pennant which runs the length of the barge, and is shackled in turn to the main tow bridles.

- Both the barge and tug carry emergency response boats .

- NO SMOKING, NO OPEN LIGHTS, and NO VISITOR signs are clearly visible from both sides of the barge. A red dangerous cargo light and flag are located on the mast.

OIL SPILL RESPONSE EQUIPMENT

#	EQUIPMENT DESCRIPTION	QUANTITY	LOCATION
1	Containment Boom	1400'	Hydraulic Reel – on Bow
2	Boom Towing Bridles	2	Aft Port Compartment
3	Absorbent Boom 4" x 10'	10	Aft Port Compartment
4	Absorbent Pads (100 per Bale)	20	Aft Port Compartment
5	Absorbent Pads (Bales)	2	Port Deck Locker
6	Absorbent Pads (Bales)	6	Engine Room
7	Absorbent Pads (Bales)	2	Pump Room
8	Absorbent Pads (Bales)	2	Bow Thruster Room
9	Open Headed Barrels (empty)	4	Aft Port Compartment
10	Pad/Barrel Ringer	1	Aft Port Compartment
11	Aluminum Shovels	3	Aft Port Compartment
12	Aluminum Pitch Fork	2	Aft Port Compartment
13	Heavy Duty Plastic Bags	200 (4 rolls)	Aft Port Compartment
14	Anchor Assemblies	4	Aft Port Compartment
15	Garbage Pails 100 ltr.	4	Aft Port Compartment
16	Oil Skimmer and Accessories Aquaguard RBS-5 (Nameplate: 75 bbls / hour)	1	Skimmer = CO2 room Accessories = Aft Port Compartment
17	Sea Anchors	4	Bow Thruster Room
18	Long non-permeable gloves	10	Aft Port Compartment
19	Aluminum Work Boat (on barge) – 12' Lifetimer, 20 bhp engine	1	Port Deck - Midships
20	Response Boat (on tug)	1	On Tug – See Section 1.8.6 – Towboats for Description
21	Aqua-Weir Skimmer – EDRC 1800 bbls/day. (Nameplate 375 bbls/hr)	1	TBD
22	Submersible lightering pump. (562 bbls/hr)	1	TBD

FIRE FIGHTING EQUIPMENT

The following fire fighting equipment is carried on board the Island Trader:

- Fixed carbon dioxide fire suppression system for the engine room complete with six 100# carbon dioxide cylinders
- Refer to attached Fire and Safety drawing showing locations of ABC and CO_2 portable fire extinguishers.

OIL DISCHARGE INFORMATION

OSRO - Average Most Probable Discharge (AMPD):

The AMPD of the Island Trader is 50 barrels of refined petroleum products. Island Tug and Barge transfers oil only at marine transportation-related (MTR) facilities.

OSRO - Maximum Most Probable Discharge (MMPD):

The MMPD of the Island Trader is 6,532 barrels of refined petroleum products (10% of total cargo capacity).

OSRO - Worst Case Probable Discharge (WCPD):

The WCPD for the Island Trader is 65,320 barrels of diesel fuel, equal to the barge's total cargo capacity.

VESSEL STABILITY DATA

Stability data for the Island Trader is available on a 24 hour basis through the ITB Office and through BMT Fleet Technology - Hatfield Division (Naval Architects).

Island Tug

www.islandtug.com

Island Trader

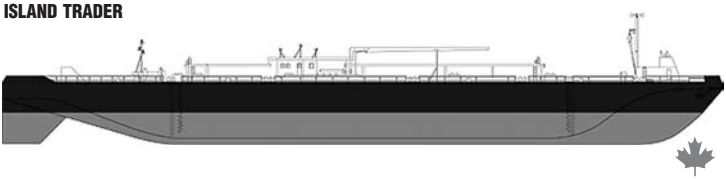
The Island Trader is a double hulled, IMO compliant, Class A OPA 90 oil tank barge having an aggregate capacity of 65,000 barrels at 90% carried in twelve separate cargo tanks. Designed as a dedicated Articulated Tug Barge Unit, the barge achieves speeds of 11 knots fully loaded and is capable of pushing in sea conditions up to 12 metres.

Island Tug and Barge Ltd.

55 Rogers Street
Vancouver, BC Canada V6A 3X8
Tel: 604 873-4312 • Fax: 604 873-4318
Email: info@islandtug.com

Island Tug

ISLAND TRADER



Registration:
Built: Jinling Shipyard, PRC
Flag: Canada built 2003
Owner: Island Tug and Barge Ltd.
Official Number:TBA
Port of Registry: Vancouver, BC

Classification:
American Bureau of Shipping
A1 Oil Tank Barge
Arctic Class D0
Transport Canada Class A Oil Barge
Cargos with flash point below 60E C

Dimensions:

Length, overall:	112.4 m
Breadth, moulded:	21.0 m
Depth, moulded:	9.6 m
Design draft:	6.4 m
GRT:	5320
NRT:	2910

Main Machinery:
Port and Stb. Hydraulic Power Units - Caterpillar Model 3412 E
Ship Set Generator - 99 KW Caterpillar Model 3306 TA
Electronic Controllable Flow and Pressure Hydraulic Control System
Bow Thruster - 700 Horsepower Schottel SPJ 132
Fully automated Alarms, Controls and Monitoring Systems

Deck Machinery:
Hydraulic Hose Handling Crane with 23 m reach - Alaska Marine Crane
Hydraulic Line Handling Winches -Burrard Iron
Located - Port Stern, Stb Stern, Port Bow, Stb Bow and Midship
Remote Release Hydraulic Anchor windless - Burrard Iron
Hydraulic Pollution Boom Reel
Aluminum Work/Boom boat

Capacities:
12 Cargo Tanks
65,320 Bbls @ 95%
4 independent load and discharge systems
Independent spill/retain tanks
Segregated fresh water ballast tanks

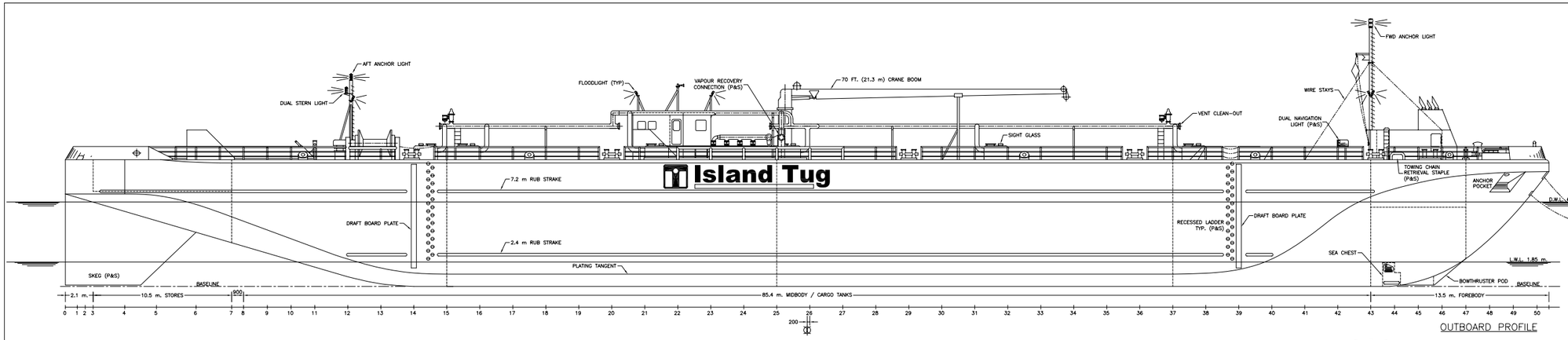
Pumps:
Main:
4 Goulds Model 3410 Centrifugal Pumps
16,800 Bbls per hour total at 135 PSI
4200 Bbls per hour each
Hydraulically Driven
Stripping:
4 Blackmere Model HFG vane pumps
4000 Bbls per hour total at 130 PSI
1000 Bbls per hour each
Hydraulically Driven

Special Features:
Double Hulled OPA 90 compliant
Tank Radar remote monitoring and ullaging system connected to central cargo management computer - EMS
Centralized control and monitoring with all barge functions remote operated
Rising Stick fill indicators
Alarmed overfill protection - EMS
Alarmed over-pressure protection - EMS
Closed Loading
Vapour Recovery Vent System
700 hp, 360 degree Bow Thruster
Quality Control Lab
Articulated Pin Style Pushing System by Intercon
Ice Classed and strengthened for use in Arctic Class A1
Lock and canal compliant
Coated cargo tanks for chemical carriage

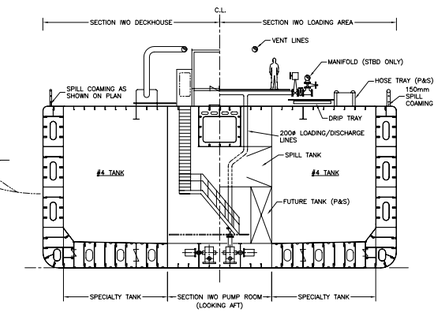
Our Goal:

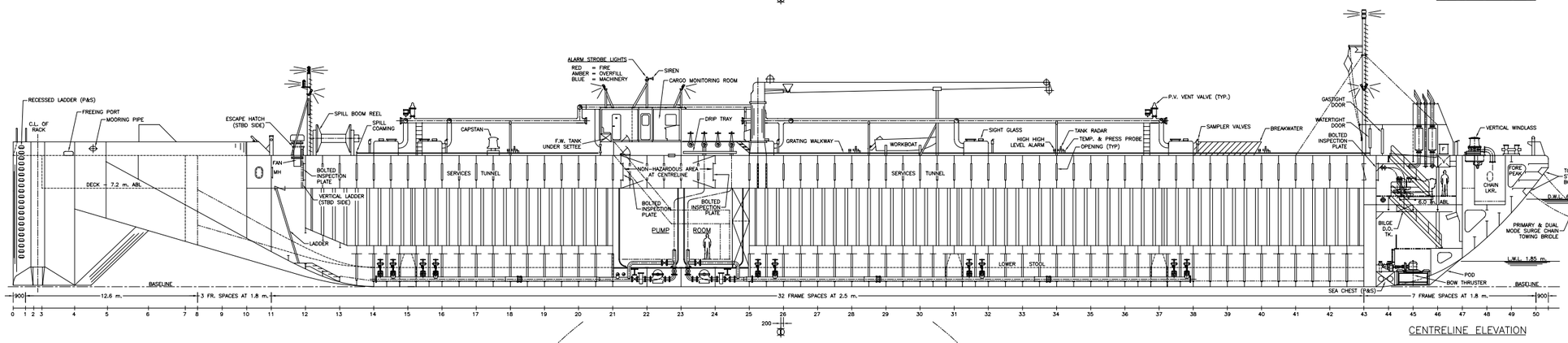
"Operational Excellence and Enthusiastic Achievement"

www.islandtug.com

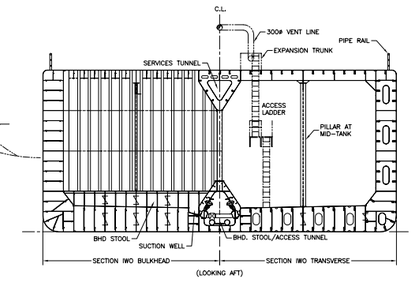


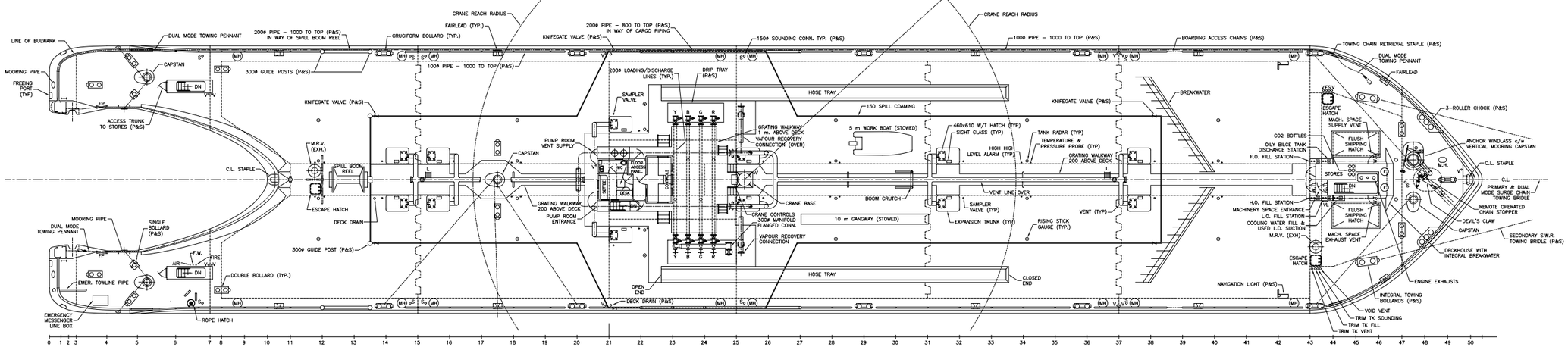
OUTBOARD PROFILE





CENTRELINE ELEVATION





MAIN DECK PLAN

PRINCIPAL PARTICULARS

LENGTH OVERALL	112.4 M
BREADTH MLD	21.0 M
DEPTH MLD	9.6 M
DESIGN DRAFT	6.4 M (DIESEL CARGO)
CAPACITY @ 95%	65,320 Bbls.

No.	REVISION	DATE
D	GENERAL UPDATE TO REFLECT CHANGES IN OTHER DRAWINGS	5/11/02
C	AFT STORES ACCESS MODIFIED, PUMP ROOM STAIRS MODIFIED, MINOR REVISIONS	02/07/02
B	TC-MS APPROVAL ADDED; FWD DKHOUSE ARRGT MODIFIED; MASTS MODIFIED; MINOR REVISIONS AND ADDITIONS.	10/06/02
A	GENERAL UPDATES FROM OWNER'S COMMENTS	13/05/02

APPROVED	DATE	APPROVED	DATE
TRANSPORT CANADA – MARINE SAFETY	06/06/02		

PROJECT: 65,000 BBL. D.H. OIL BARGE

OWNER: ISLAND TUG & BARGE LTD.

TITLE: GENERAL ARRANGEMENT (Sht. 1 of 2)

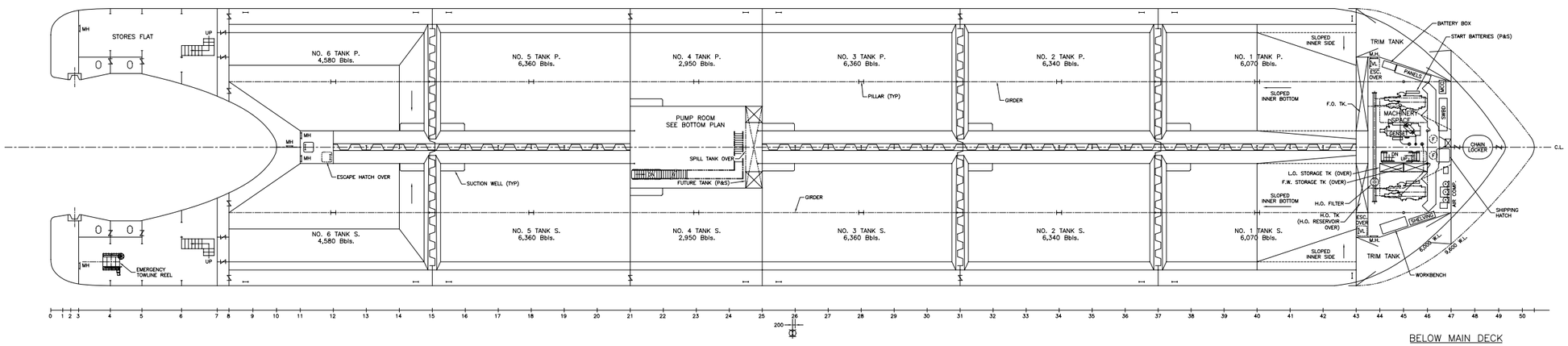
DIXON NAVAL ARCHITECTS — NAVAL ARCHITECTS LTD. WEST VANCOUVER, B.C., CANADA

REFERENCE No.: 021000–1 Sht.1

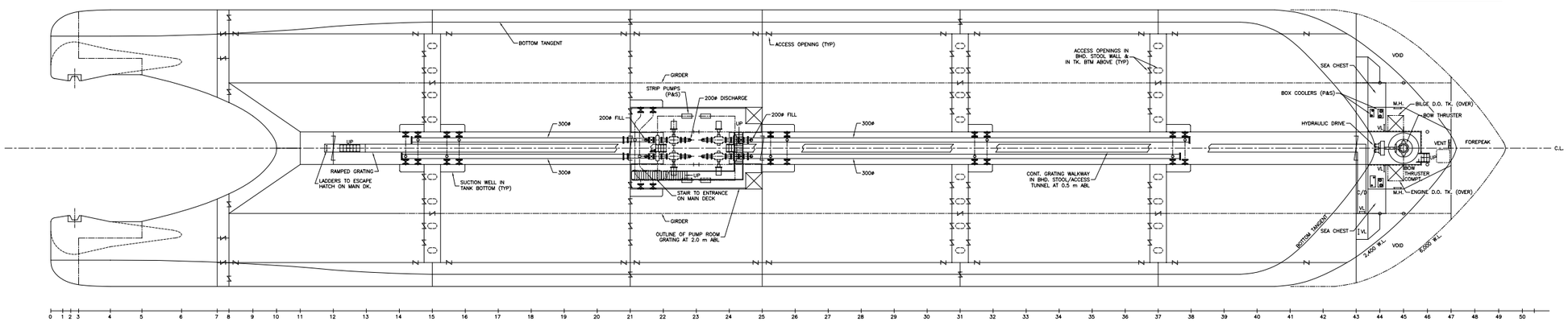
DRAWN : GC
SCALE : 1:100
DATE : APRIL 2002
DRAWING No.: 958–1
REV.: D

PETER S. HATFELD LTD.
NAVAL ARCHITECTS, MARINE ENGINEERS AND MARINE CONSULTANTS
VANCOUVER, B.C. CANADA

FILENAME: 9581_D



BELOW MAIN DECK



BOTTOM PLAN

No.	REVISION	DATE
D	GENERAL UPDATE TO REFLECT CHANGES IN OTHER DRAWINGS	5/11/02
C	AFT STORES ACCESS MODIFIED, PUMP ROOM STAIRS MODIFIED, MINOR REVISIONS	02/07/02
B	TC-MS APPROVAL ADDED; FWD DKHOUSE ARRGT MODIFIED; MASTS MODIFIED; MINOR REVISIONS AND ADDITIONS.	10/06/02
A	GENERAL UPDATES FROM OWNER'S COMMENTS	13/05/02

APPROVED	DATE	APPROVED	DATE
TRANSPORT CANADA – MARINE SAFETY	06/06/02		

PROJECT
65,000 BBL. D.H. OIL BARGE

OWNER
ISLAND TUG & BARGE LTD.

TITLE
GENERAL ARRANGEMENT (Sht. 2 of 2)

DIXON NAVAL ARCHITECTS
NAVAL ARCHITECTS LTD.
WEST VANCOUVER, B.C., CANADA

REFERENCE No.
021000-1 Sht.2

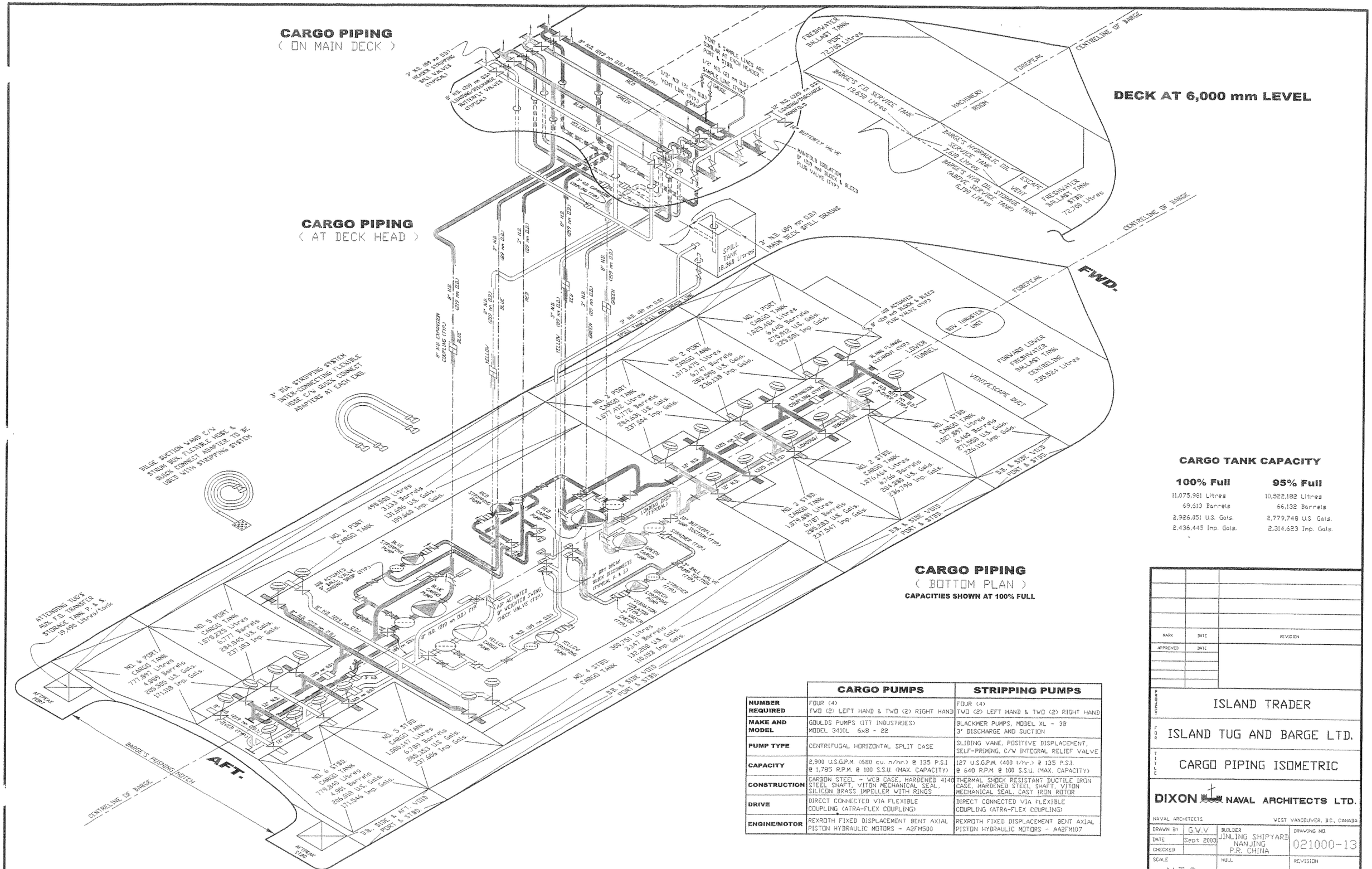
DRAWN : GIC
SCALE : 1:100
DATE : APRIL 2002

DRAWING No.
958-1

REV.
D

PETER S. HATFIELD LTD.
NAVAL ARCHITECTS, MARINE ENGINEERS AND MARINE CONSULTANTS
VANCOUVER, B.C. CANADA

FILENAME: 9581_D



CARGO TANK CAPACITY

100% Full	95% Full
11,075,981 Litres	10,522,182 Litres
69,613 Barrels	66,132 Barrels
2,926,051 U.S. Gals.	2,779,748 U.S. Gals.
2,436,445 Imp. Gals.	2,314,623 Imp. Gals

CARGO PIPING
(BOTTOM PLAN)
CAPACITIES SHOWN AT 100% FULL

	CARGO PUMPS	STRIPPING PUMPS
NUMBER REQUIRED	FOUR (4) TWO (2) LEFT HAND & TWO (2) RIGHT HAND	FOUR (4) TWO (2) LEFT HAND & TWO (2) RIGHT HAND
MAKE AND MODEL	GOULDS PUMPS (ITT INDUSTRIES) MODEL 3410L 6x8 - 22	BLACKMER PUMPS, MODEL XL - 3B 3' DISCHARGE AND SUCTION
PUMP TYPE	CENTRIFUGAL HORIZONTAL SPLIT CASE	SLIDING VANE, POSITIVE DISPLACEMENT, SELF-PRIMING, C/W INTEGRAL RELIEF VALVE
CAPACITY	2,900 U.S.G.P.M. (680 cu. m/hr.) @ 135 P.S.I @ 1,785 R.P.M. @ 100 S.S.U. (MAX. CAPACITY)	127 U.S.G.P.M. (400 l/hr.) @ 135 P.S.I. @ 640 R.P.M. @ 100 S.S.U. (MAX. CAPACITY)
CONSTRUCTION	CARBON STEEL - WCB CASE, HARDENED 4140 STEEL SHAFT, VITON MECHANICAL SEAL, SILICON BRASS IMPELLER WITH RINGS	THERMAL SHOCK RESISTANT DUCTILE IRON CASE, HARDENED STEEL SHAFT, VITON MECHANICAL SEAL, CAST IRON ROTOR
DRIVE	DIRECT CONNECTED VIA FLEXIBLE COUPLING (ATRA-FLEX COUPLING)	DIRECT CONNECTED VIA FLEXIBLE COUPLING (ATRA-FLEX COUPLING)
ENGINE/MOTOR	REXROTH FIXED DISPLACEMENT BENT AXIAL PISTON HYDRAULIC MOTORS - A2FM500	REXROTH FIXED DISPLACEMENT BENT AXIAL PISTON HYDRAULIC MOTORS - AA2FM107

MARK	DATE	REVISION
APPROVED	DATE	

PROJECT: ISLAND TRADER

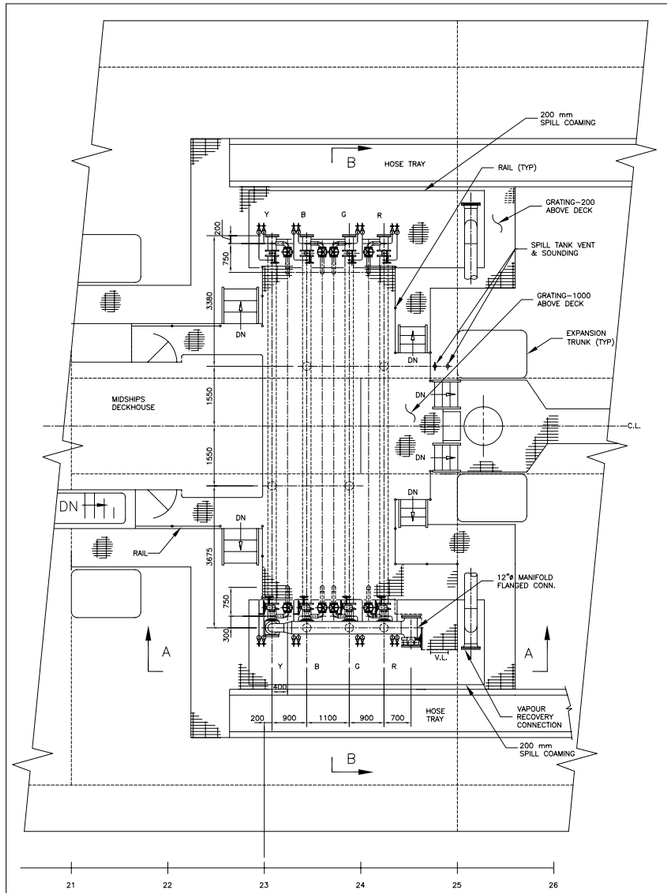
FOR: ISLAND TUG AND BARGE LTD.

TITLE: CARGO PIPING ISOMETRIC

DIXON NAVAL ARCHITECTS LTD.

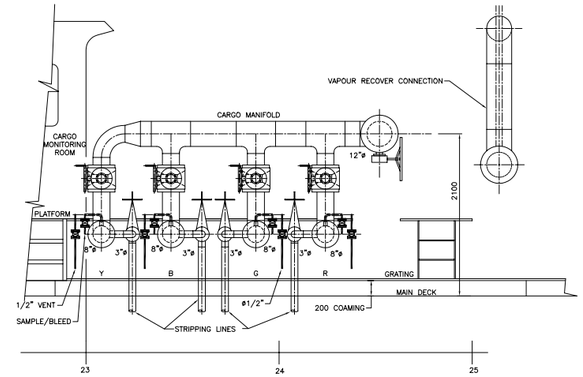
NAVAL ARCHITECTS — WEST VANCOUVER, B.C., CANADA

DRAWN BY	G.W.V	BUILDER JINLING SHIPYARD NANJING P.R. CHINA	DRAWING NO 021000-13
DATE	Sept 2003		
CHECKED			
SCALE N.T.S		HULL JLZ 020702	REVISION 0



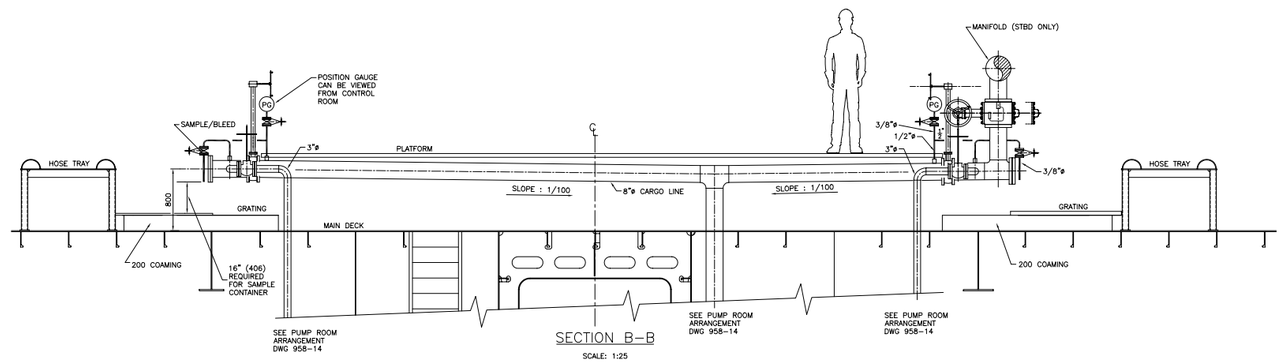
MAIN DECK PLAN

SCALE: 1:50



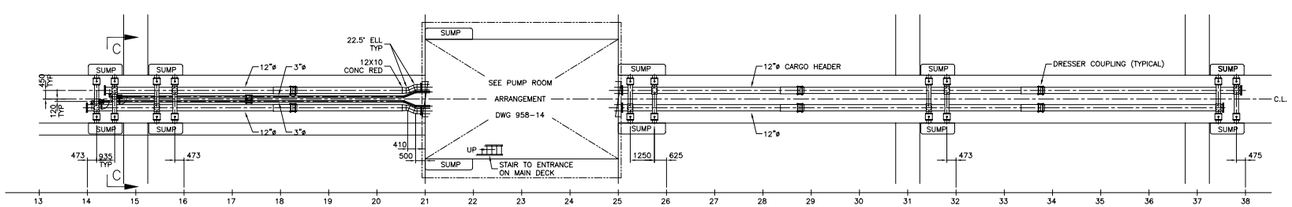
ELEVATION A-A

SCALE: 1:25



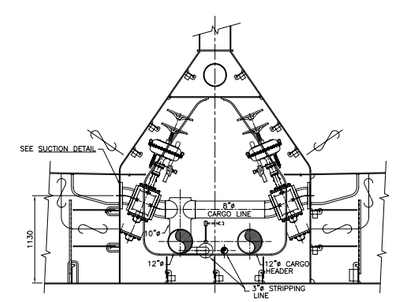
SECTION B-B

SCALE: 1:25



BOTTOM PLAN

SCALE: 1:100

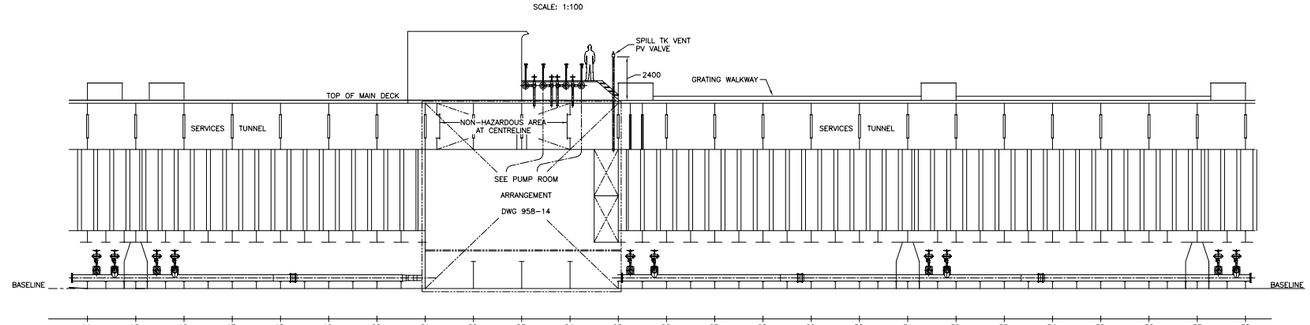


TYPICAL SECTION "C-C"

SCALE: 1:25

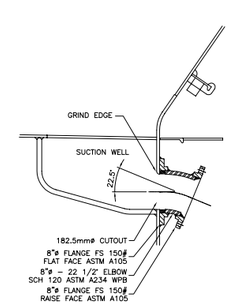
REFERENCE

958-10	CARGO PIPING DIAGRAM
958-14	PUMP ROOM ARRANGEMENT
958-12	STRIPPING SYSTEM DIAGRAM
958-17	CARGO TANK VENT ARRANGEMENT
958-41	SPILL COAMINGS



CENTRELINE ELEVATION

SCALE: 1:100



SUCTION DETAIL

SCALE: 1:10

No.	REVISION	DATE
A	REVISED TO REFLECT DNA COMMENTS	15/11/02

APPROVED	DATE	APPROVED	DATE

PROJECT: 65,000 BBL. D.H. OIL BARGE

OWNER: ISLAND TUG & BARGE LTD.

TITLE: CARGO PIPING & STRIPPING SYSTEM ARRANGEMENT

DIXON NAVAL ARCHITECTS — NAVAL ARCHITECTS LTD. WEST VANCOUVER, B.C., CANADA

REFERENCE No.: 021000-11

DRAWN : M. WONG

SCALE : AS NOTED

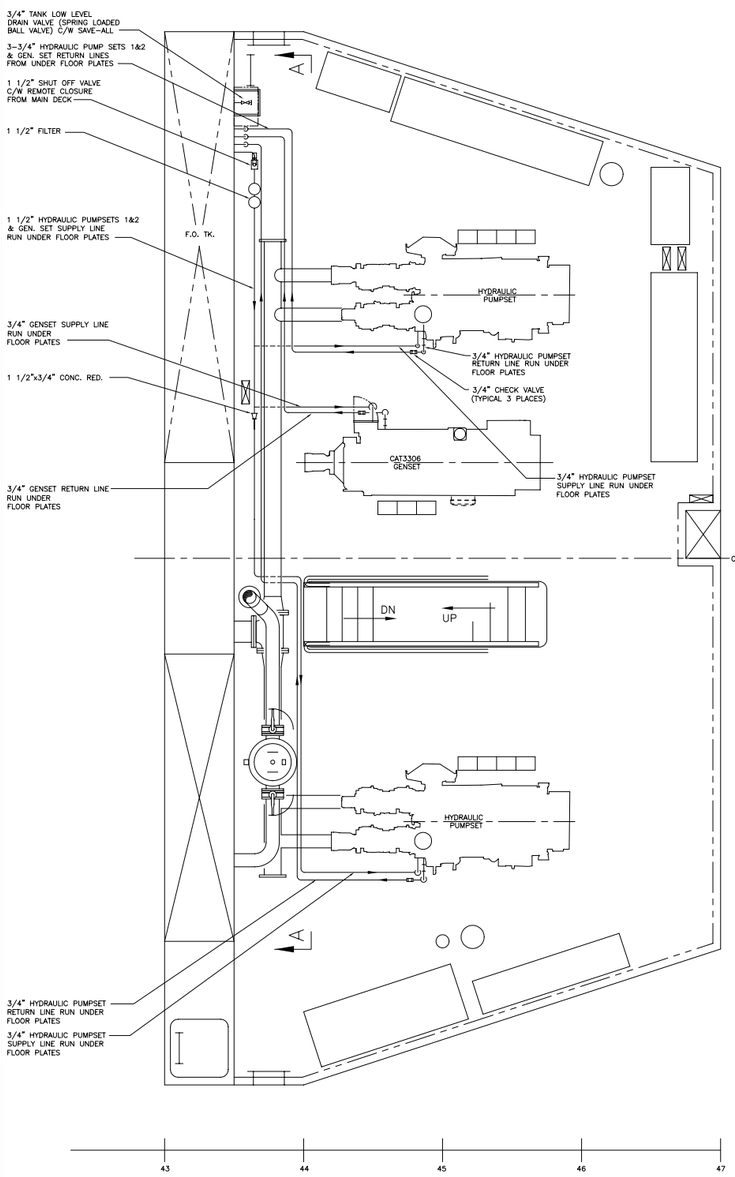
DATE : SEPT 2002

DRAWING No.: 958-11

REV.: A

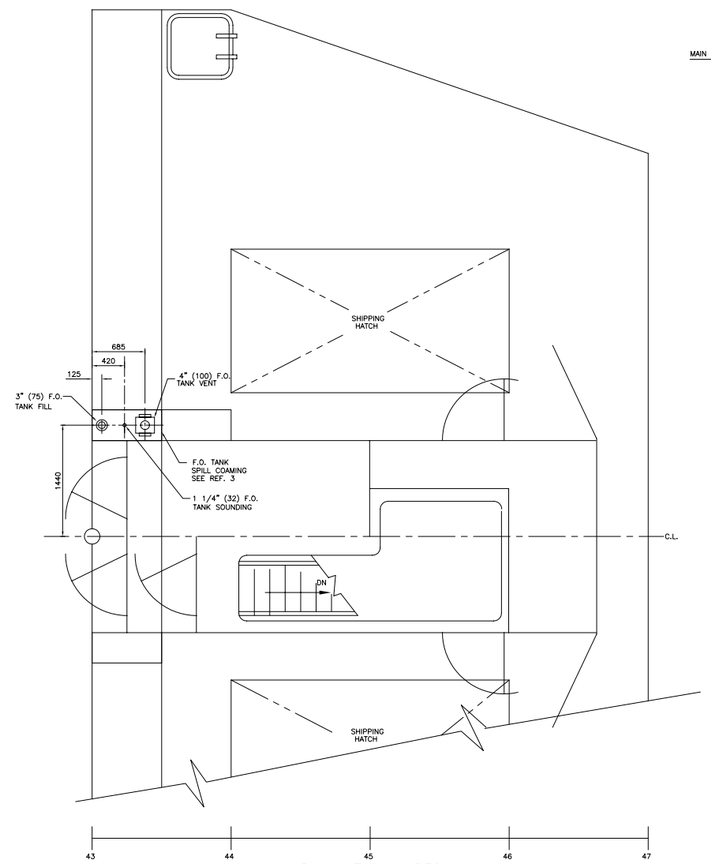
PETER S. HATFIELD LTD.
NAVAL ARCHITECTS, MARINE ENGINEERS AND MARINE CONSULTANTS
VANCOUVER, B.C. CANADA

FILENAME: 95811_A



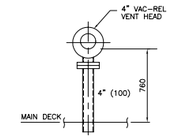
PLAN AT FLOOR PLATE LEVEL 6650 ABOVE B.L.

SCALE 1:25



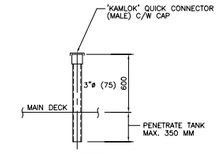
PLAN AT MAIN DECK

SCALE 1:25



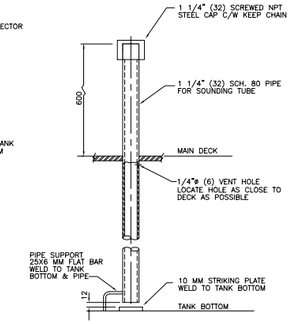
F.O. TANK VENT

SCALE 1:20



F.O. TANK FILL PIPE

SCALE 1:20



F.O. TANK SOUNDING PIPE

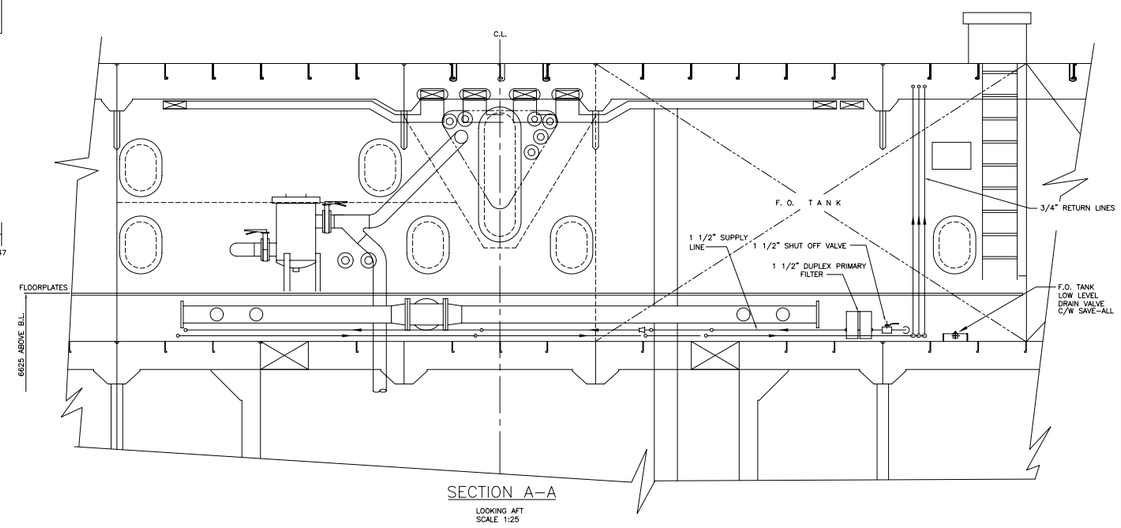
SCALE 1:5

REFERENCE DRAWINGS:

1. 958-1 GENERAL ARRANGEMENT SHT. 1 & 2
2. 958-18 FORWARD MACHINERY ARRANGEMENT
3. 958-41 SPILL COAMING

NOTES:

1) ALL PIPING TO BE ASTM A53 E.R.W. BLACK STEEL, SCH. 40, EXCEPT SCH. 80 AT EXPOSED LOCATIONS AND SOUNDING PIPES.
2) FUEL LINE SIZES BASED ON CATERPILLAR CATALOGUE INFORMATION.
3) FUEL LINES ARE NOT TO RUN ADJACENT TO EXHAUST PIPING, SILENCERS, OR ELECTRICAL EQUIPMENT.
4) PIPE FLANGES TO BE ANSI B16.5, CLASS 150, SLIP-ON TYPE WITH RAISED FACE.



SECTION A-A

LOOKING AFT
SCALE 1:25

No.	REVISION		DATE
	APPROVED	DATE	APPROVED	DATE

PROJECT: 65,000 BBL. D.H. OIL BARGE

OWNER: ISLAND TUG & BARGE LTD.

TITLE: SERVICE FUEL OIL ARRANGEMENT

DIXON NAVAL ARCHITECTS — NAVAL ARCHITECTS LTD. WEST VANCOUVER, B.C., CANADA

REFERENCE No.: 021000-47

DRAWN : AL

SCALE : AS NOTED

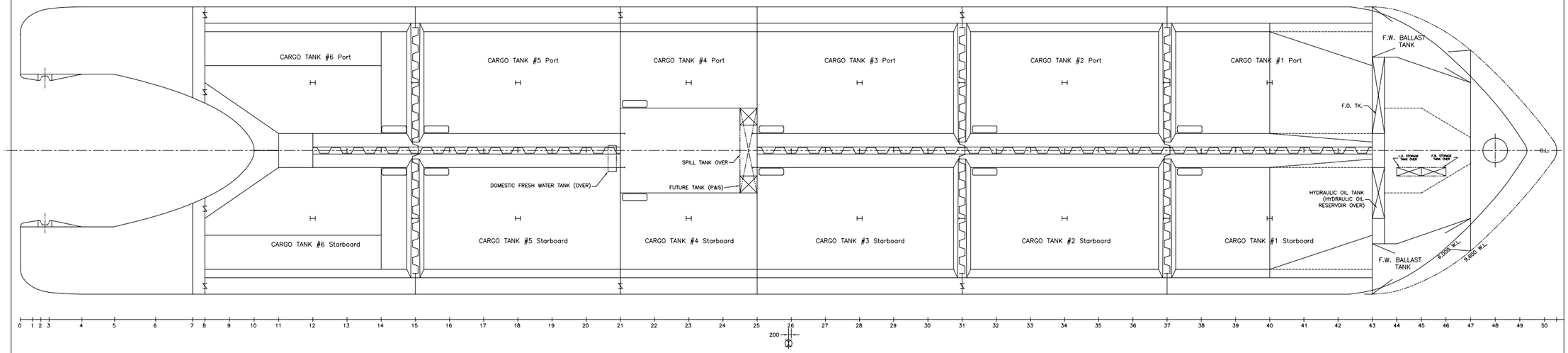
DATE : SEPTEMBER 2002

DRAWING No.: 958-47

REV.: 0

PETER S. HATFIELD LTD.
NAVAL ARCHITECTS, MARINE ENGINEERS AND MARINE CONSULTANTS
VANCOUVER, B.C. CANADA

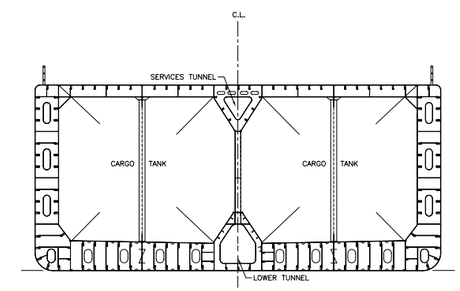
FILENAME: 95847_0



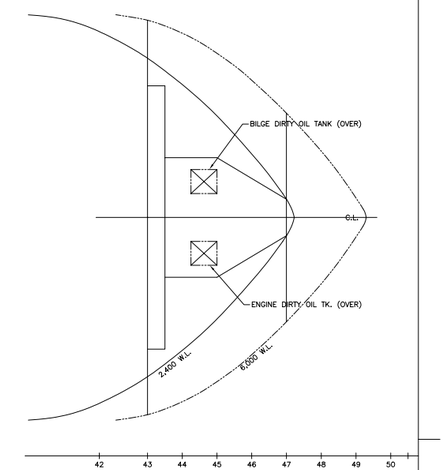
PLAN BELOW MAIN DECK

TANK CAPACITIES

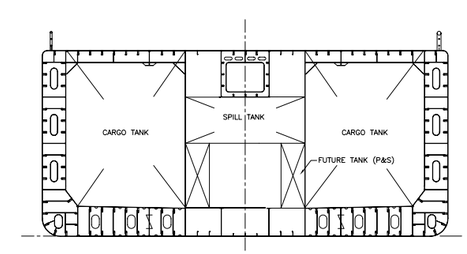
TANK	PRODUCT	FRAMES	CAPACITY (100%) m^3	CAPACITY (95%) m^3	WEIGHT (TONNES) 100%	WEIGHT (TONNES) 95%	VCG m ABOVE BASELINE	LCG FROM AMIDSHIPS m (+ve FWD)	TCG FROM CENTRELINE m (+ve STBD)	MAX. F.S. MOMENT (TONNE-METRES)	AIR TEST	HYDROSTATIC TEST
CARGO TANK #1 (Port)	CARGO DIESEL OIL SG: 0.850	37 – 43	1013.64	962.96		818.52	5.687	34.971	−4.725	851.9		2.44m ABOVE TOP OF TANK
CARGO TANK #1 (Starboard)		37 – 43	1013.64	962.96		818.52	5.687	34.971	4.725	851.9		2.44m ABOVE TOP OF TANK
CARGO TANK #2 (Port)		31 – 37	1062.20	1009.09		857.73	5.543	20.200	−4.807	854.6		2.44m ABOVE TOP OF TANK
CARGO TANK #2 (Starboard)		31 – 37	1062.20	1009.09		857.73	5.543	20.200	4.807	854.6		2.44m ABOVE TOP OF TANK
CARGO TANK #3 (Port)		25 – 31	1065.62	1012.34		860.49	5.532	5.177	−4.807	854.6		2.44m ABOVE TOP OF TANK
CARGO TANK #3 (Starboard)		25 – 31	1065.62	1012.34		860.49	5.532	5.177	4.807	854.6		2.44m ABOVE TOP OF TANK
CARGO TANK #4 (Port)		21 – 25	494.27	469.56		399.13	5.572	−7.300	−6.177	168.8		2.44m ABOVE TOP OF TANK
CARGO TANK #4 (Starboard)		21 – 25	494.27	469.56		399.13	5.572	−7.300	6.177	168.8		2.44m ABOVE TOP OF TANK
CARGO TANK #5 (Port)		15 – 21	1065.62	1012.34		860.49	5.532	−19.777	−4.807	854.6		2.44m ABOVE TOP OF TANK
CARGO TANK #5 (Starboard)		15 – 21	1065.62	1012.34		860.49	5.532	−19.777	4.807	854.6		2.44m ABOVE TOP OF TANK
CARGO TANK #6 (Port)		8 – 15	768.82	730.38		620.82	6.203	−33.484	−5.239	671.0		2.44m ABOVE TOP OF TANK
CARGO TANK #6 (Starboard)		8 – 15	768.82	730.38		620.82	6.203	−33.484	5.239	671.0		2.44m ABOVE TOP OF TANK
FRESH WATER BALLAST TANK (Port)	FRESH WATER SG: 1.000	43 – 47	72.70		72.70		7.917	45.920	−7.791	33.2		TO TOP OF VENT
FRESH WATER BALLAST TANK (Starboard)		43 – 47	72.70		72.70		7.917	45.920	7.791	33.2		TO TOP OF VENT
SHIP'S SERVICE FUEL TANK (Port)	DIESEL OIL SG: 0.850	43 – 43½	19.65	18.67		15.87	7.719	43.150	−3.680	20.2		TO TOP OF VENT
HYDRAULIC OIL TANK (Starboard)	HYDRAULIC OIL SG: 0.900	43 – 43½	10.54	10.01		9.01	6.888	43.150	3.469	21.4	0.137 BAR	
HYDRAULIC OIL RESERVOIR (Starboard)	HYDRAULIC OIL SG: 0.900	43 – 43½	9.12	8.66		7.80	8.681	43.150	3.921	16.3	0.137 BAR	
FRESH WATER STORAGE TANK (Starboard)	FRESH WATER SG: 1.000	45 – 46	0.66		0.66		9.293	47.200	1.550	0.0		TO TOP OF VENT
DOMESTIC FRESH WATER TANK (Starboard)	FRESH WATER SG: 1.000	20½ – 21	0.51		0.51		10.850	−12.900	0.587	0.3		TO TOP OF VENT
LUBE OIL STORAGE TANK (Starboard)	LUBE OIL SG: 0.900	44 – 45	0.66	0.63		0.56	9.293	45.400	1.550	0.0		TO TOP OF VENT
SPILL TANK (Centre)	SPILLS SG: 1.000	24½ – 25	18.36	17.44		17.44	6.000	−2.925	0.000	24.8		TO TOP OF VENT
BILGE DIRTY OIL TANK (Port)	LUBE OIL SG: 0.900	44 – 45	1.10	1.05		0.94	5.743	45.400	−1.860	0.3		TO TOP OF VENT
ENGINE DIRTY OIL TANK (Starboard)	LUBE OIL SG: 0.900	44 – 45	1.10	1.05		0.94	5.743	45.400	1.860	0.3		TO TOP OF VENT
FUTURE TANK (Port)		24½ – 25	5.16	4.90			3.118	−2.925	−2.479	0.2		
FUTURE TANK (Starboard)		24½ – 25	5.16	4.90			3.118	−2.925	2.479	0.2		



TYPICAL SECTION iwo CARGO TANKS



BOTTOM PLAN



SECTION iwo PUMP ROOM

No.	REVISION		DATE
	APPROVED	DATE	APPROVED	DATE

PROJECT: 65,000 BBL. D.H. OIL BARGE

OWNER: ISLAND TUG & BARGE LTD.

TITLE: TANK CAPACITY PLAN

DIXON NAVAL ARCHITECTS — NAVAL ARCHITECTS LTD. WEST VANCOUVER, B.C., CANADA

REFERENCE No.: 021000-4

DRAWN : WAB
SCALE : AS NOTED
DATE : JAN 2003

DRAWING No.: 958-4
REV.: 0

PETER S. HATFIELD LTD.
NAVAL ARCHITECTS, MARINE ENGINEERS AND MARINE CONSULTANTS
VANCOUVER, B.C. CANADA

FILENAME: 9584_0

TANK CAPACITIES

TANK	PRODUCT	FRAMES	CAPACITY (100%) m^3	CAPACITY (95%) m^3	WEIGHT (TONNES) 100%	WEIGHT (TONNES) 95%	VCG m ABOVE BASELINE	LCG FROM AMIDSHIPS m (+ve FWD)	TCG FROM CENTRELINE m (+ve STBD)	MAX. F.S. MOMENT (TONNE-METRES)	AIR TEST	HYDROSTATIC TEST
CARGO TANK #1 (Port)	CARGO DIESEL OIL SG: 0.850	37 – 43	1013.64	962.96		818.52	5.687	34.971	−4.725	851.9		2.44m ABOVE TOP OF TANK
CARGO TANK #1 (Starboard)		37 – 43	1013.64	962.96		818.52	5.687	34.971	4.725	851.9		2.44m ABOVE TOP OF TANK
CARGO TANK #2 (Port)		31 – 37	1062.20	1009.09		857.73	5.543	20.200	−4.807	854.6		2.44m ABOVE TOP OF TANK
CARGO TANK #2 (Starboard)		31 – 37	1062.20	1009.09		857.73	5.543	20.200	4.807	854.6		2.44m ABOVE TOP OF TANK
CARGO TANK #3 (Port)		25 – 31	1065.62	1012.34		860.49	5.532	5.177	−4.807	854.6		2.44m ABOVE TOP OF TANK
CARGO TANK #3 (Starboard)		25 – 31	1065.62	1012.34		860.49	5.532	5.177	4.807	854.6		2.44m ABOVE TOP OF TANK
CARGO TANK #4 (Port)		21 – 25	494.27	469.56		399.13	5.572	−7.300	−6.177	168.8		2.44m ABOVE TOP OF TANK
CARGO TANK #4 (Starboard)		21 – 25	494.27	469.56		399.13	5.572	−7.300	6.177	168.8		2.44m ABOVE TOP OF TANK
CARGO TANK #5 (Port)		15 – 21	1065.62	1012.34		860.49	5.532	−19.777	−4.807	854.6		2.44m ABOVE TOP OF TANK
CARGO TANK #5 (Starboard)		15 – 21	1065.62	1012.34		860.49	5.532	−19.777	4.807	854.6		2.44m ABOVE TOP OF TANK
CARGO TANK #6 (Port)		8 – 15	768.82	730.38		620.82	6.203	−33.484	−5.239	671.0		2.44m ABOVE TOP OF TANK
CARGO TANK #6 (Starboard)		8 – 15	768.82	730.38		620.82	6.203	−33.484	5.239	671.0		2.44m ABOVE TOP OF TANK
FRESH WATER BALLAST TANK (Port)	FRESH WATER SG: 1.000	43 – 47	72.70		72.70		7.917	45.920	−7.791	33.2		TO TOP OF VENT
FRESH WATER BALLAST TANK (Starboard)		43 – 47	72.70		72.70		7.917	45.920	7.791	33.2		TO TOP OF VENT
SHIP'S SERVICE FUEL TANK (Port)	DIESEL OIL SG: 0.850	43 – 43½	19.65	18.67		15.87	7.719	43.150	−3.680	20.2		TO TOP OF VENT
HYDRAULIC OIL TANK (Starboard)	HYDRAULIC OIL SG: 0.900	43 – 43½	10.54	10.01		9.01	6.888	43.150	3.469	21.4	0.137 BAR	
HYDRAULIC OIL RESERVOIR (Starboard)	HYDRAULIC OIL SG: 0.900	43 – 43½	9.12	8.66		7.80	8.681	43.150	3.921	16.3	0.137 BAR	
FRESH WATER STORAGE TANK (Starboard)	FRESH WATER SG: 1.000	45 – 46	0.66		0.66		9.293	47.200	1.550	0.0		TO TOP OF VENT
DOMESTIC FRESH WATER TANK (Starboard)	FRESH WATER SG: 1.000	20½ – 21	0.51		0.51		10.850	−12.900	0.587	0.3		TO TOP OF VENT
LUBE OIL STORAGE TANK (Starboard)	LUBE OIL SG: 0.900	44 – 45	0.66	0.63		0.56	9.293	45.400	1.550	0.0		TO TOP OF VENT
SPILL TANK (Centre)	SPILLS SG: 1.000	24½ – 25	18.36	17.44		17.44	6.000	−2.925	0.000	24.8		TO TOP OF VENT
BILGE DIRTY OIL TANK (Port)	LUBE OIL SG: 0.900	44 – 45	1.10	1.05		0.94	5.743	45.400	−1.860	0.3		TO TOP OF VENT
ENGINE DIRTY OIL TANK (Starboard)	LUBE OIL SG: 0.900	44 – 45	1.10	1.05		0.94	5.743	45.400	1.860	0.3		TO TOP OF VENT
FUTURE TANK (Port)		24½ – 25	5.16	4.90			3.118	−2.925	−2.479	0.2		
FUTURE TANK (Starboard)		24½ – 25	5.16	4.90			3.118	−2.925	2.479	0.2		

1.8.2 ITB 38

DESCRIPTION AND KEY SPECIFICATIONS

See attached "Vessel Information Card".

DRAWINGS AND CARGO TANK CAPACITIES

The following drawings for the ITB 38 are located at the back of this Section:

- General Arrangement drawing
- 'As fitted' Cargo Piping Isometric drawing
- ITB 38 Fire Fighting Plan (schematic drawing)

The following drawing for the ITB 38 is maintained separately at the Island Tug and Barge Head Office at 55 Rogers Street in Vancouver, BC, Canada:

- Midship Section drawing

SERVICE FUEL OIL, HYDRAULIC OIL, LUBE OIL, DRAIN/SPILL TANK CAPACITIES

In addition to cargo tanks, the ITB 38 has the following tanks:

- Drain tank (stbd): 21,821 L
- Drain tank (port): 12,729 L
- Ship's fuel oil: 9,092 L
- Hydraulic oil: 4,000 L
- Lube oil: NIL

KEY SPILL PREVENTION FEATURES

- All compartment hatches, vents, and loading and discharge manifolds are contained within an 18" high continuous coaming with 4" threaded stainless steel scupper drains forward and aft. Inside the aft corners of the containment coaming, 2" drains lead to to a 22,000 litre slop tank on the starboard side, and a 13,000 litre slop tank on the port side.

- All cargo hoses are continuous lengths with camlock fittings at both ends. Camlocks are secured by wire during use. Hoses are tested annually to 1.5 times their rated working pressure by a qualified outside contractor. Hoses are stowed in elevated containment boxes located inside the containment coaming, and have individual slop tank drains and scupper plugs.

- There are two remote shutdowns locations to stop all cargo transfer operations (control room, engine room) and four emergency shutdown switches located as follows (see General Arrangement drawing):
  - One on the port forward corner of the starboard deck house (outside);
  - One on the starboard crane tower;
  - One each on the centre lamposts (2).

- The barge anchor can be deployed using a hydraulically operated anchor windlass with onboard controls, or by radio remote from the towboat.

- A hyraulically operated Omnithruster bow thruster can be operated using onboard controls or by radio remote control from the towboat.

- For lost barge recovery purposes, the barge carries 150' of 2" trailing stern line with an 18" buoy at the trailing end. This line is attached to 250' of 4" nylong rope stored in a breakaway box on the port aft corner. The rope is shackled to a 280' 1.5" steel wire rope which is secured along the length of the barge with breakaway steel tabs. When the barge is being pushed, the emergency tow wire is shackled to a wire pennant at the bow of the tug which runs the length of the tug, and is shackled in turn to the main tow wire.

- The barge does not carry an emergency boat, however the tug carries a suitable emergency craft .

- NO SMOKING, NO OPEN LIGHTS, and NO VISITOR signs are clearly visible from both sides of the barge. A red dangerous cargo light and flag are located on the mast.

OIL SPILL RESPONSE EQUIPMENT

#	EQUIPMENT DESCRIPTION	QUANTITY	LOCATION
1	Containment Boom	1000’	Hydraulic Reel – on Bow
2	Boom Towing Bridles	2	Bow Compartment
3	Absorbent Boom 4” x 10’	10	Bow Compartment
4	Absorbent Pads (100 per Bale)	6	Bow Compartment
5	Absorbent Pads (Bales)	4	Control Room
6	Absorbent Pads (Bales)	1	Engine Room
7	Open Headed Barrels (empty)	4	Bow Compartment
8	Pad/Barrel Ringer	1	Bow Compartment
9	Aluminum Shovels	3	Bow Compartment
10	Aluminum Pitch Fork	2	Bow Compartment
11	Heavy Duty Plastic Bags	200	Bow Compartment
12	Anchor Assemblies	4	Bow Compartment
13	Garbage Pails 100 ltr.	4	Bow Compartment
14	Response Boat (on tug)	1	On Tug – See Section 1.8.6 – Towboats for Description
15	Oil Skimmer and Accessories Aquaguard RBS-5 (Nameplate: 75 bbls / hour)	1	
16	Portable Framo Hydraulic Pump – 70 m3/hr (water)	1	

FIRE FIGHTING EQUIPMENT

The following fire fighting equipment is carried on board the ITB 38:

- Fixed 88 lb. Halon 1301 system in the machinery space;
- 1 – fire and bilge 2” paragon hydraulically-driven pump feeding on deck monitors;
- 1 – fire and cooling water 25 HP electrically-driven pump with 4” suction and 2.4” discharge feeding on deck monitors;
- 8 – 20 lb. Dry chemical, A.B.C. type portable fire extinguishers – see *ITB 38 – Fire Fighting Plan* at back of section;
- 2- 15 lb. CO2 extinguishers located in machinery space;
- 5 – 20 litre pails of foam with nozzle;
- 2 – firefighting suits with Scott air packs (SCBA) and reserve bottles stored aboard the towboat.

OIL DISCHARGE INFORMATION

OSRO - Average Most Probable Discharge (AMPD):

The AMPD of the ITB 38 is 50 barrels of refined petroleum products. Island Tug and Barge transfers oil only at marine transportation-related (MTR) facilities.

OSRO - Maximum Most Probable Discharge (MMPD):

The MMPD of the ITB 38 is 3,800 barrels of refined petroleum products (10% of total cargo capacity).

OSRO - Worst Case Probable Discharge (WCPD):

The WCPD for the ITB 38 is 38,000 barrels of diesel fuel, equal to the barge's total cargo capacity.

VESSEL STABILITY DATA

Stability data for the ITB 38 is available on a 24 hour basis through the ITB Office and through BMT Fleet Technology - Hatfield Division (Naval Architects).

Island Tug

www.islandtug.com

ITB 38

The ITB 38 is a modern and sophisticated oil tank barge having an aggregate capacity of 38,000 barrels carried in sixteen separate tanks.

Island Tug and Barge Ltd.

55 Rogers Street
Vancouver, BC Canada V6A 3X8
Tel: 604 873-4312 • Fax: 604 873-4318
Email: info@islandtug.com

Island Tug

ITB 38
Ex: Chevron Haida

The **ITB 38** is a modern and sophisticated oil tank barge having an aggregate capacity of 38,000 barrels carried in sixteen separate tanks.

Designed with a deep notch pushing system, the ITB 38 is normally pushed with average speeds of 10.5 knots. Equipped with a Framo pumping system, the ITB 38 has sixteen individual deep well cargo pumps that deliver products into one of four separate discharge systems. The ITB 38 is equipped for closed loading and vapour recovery, with a common vent/overfill system that connects to shore side vapour systems.

In the unlikely event of a tank overfill, the vent system will drain into overfill tanks located separately from the main cargo tanks. Overfill alarms and protection systems are equipped on each cargo tank. Deck machinery, anchors, and a powerful bow thruster may be operated either locally or remotely from the tug.

The ITB 38 normally trades between Vancouver, Portland, Southeast Alaska, Puget Sound and Vancouver Island.

Registration:
Built: Mckenzie Barge and Marine Ltd.
North Vancouver, BC
Flag: Canada built 1982
Owner: Island Tug and Barge Ltd.
Official Number: 802744
Port of Registry: Vancouver, BC

Classification:
Transport Canada Class A Oil Barge
Cargos with flash point below 60 C

Dimensions:

Length, overall:	82.3 m
Breadth, moulded:	18.3 m
Depth, moulded:	6.1 m
Design draft:	5.08 m
GRT:	2580 t
NRT:	2578 t

Deck Machinery:
Bow Capstan: 1 x Burrard
Port and Stb. Stern Capstans: Burrard
Port and Stb. Stern Winches: Burrard
Anchor Windless: Burrard
Bow Thruster: Omni Thruster
Port and Stb. Deck Cranes: Articulated
Hydraulic Pollution Boom Reel

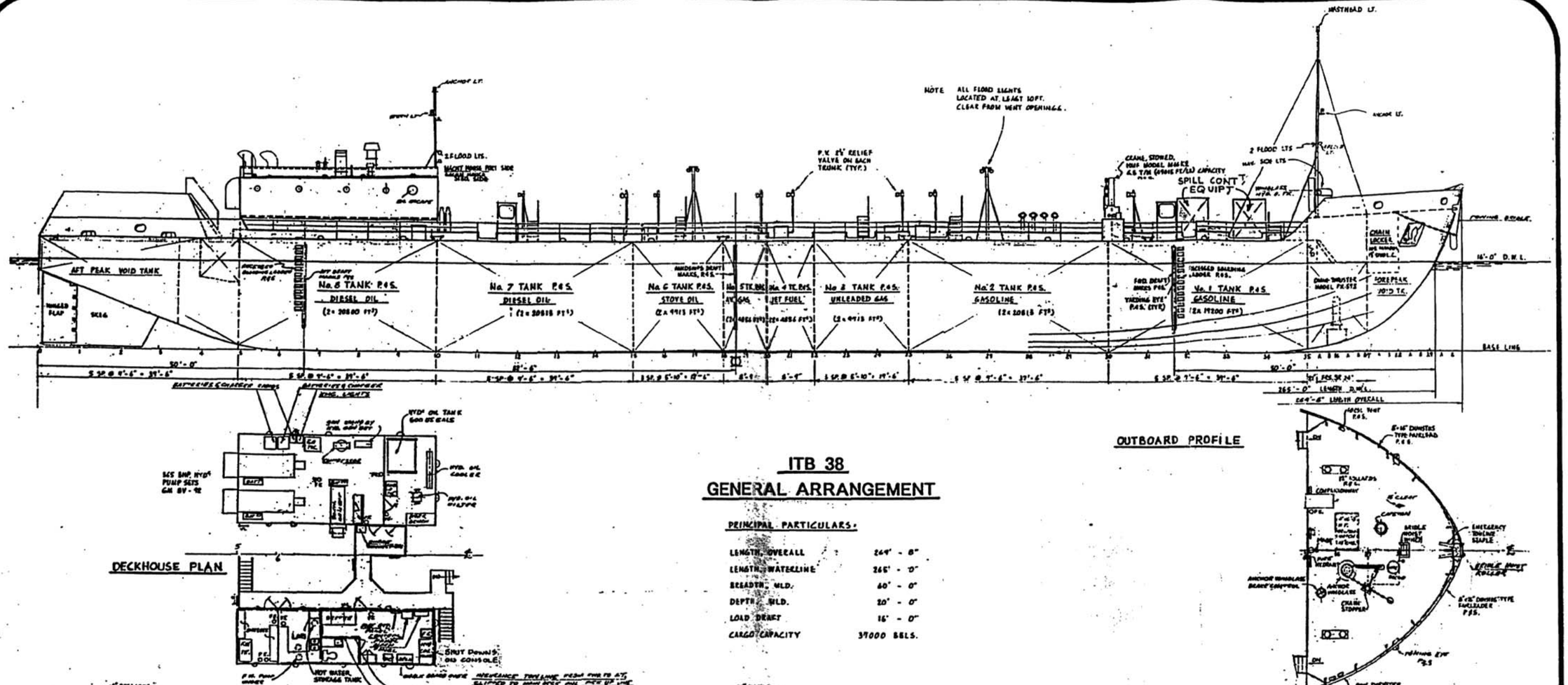
Capacities:
16 Cargo Tanks
38,000 Bbls
4 independent discharge systems

Pumps:
16 Framo Deep Well
950 Bbls per hour each

Special Features:
Two Point Overfill Alarms
Rising Stick fill indicators
Remote Ullage System
Closed Loading
Vapour Recovery Vent System
Overfill Protection System
Bow Thruster
Remote Control Bow Thruster and Anchor
Quality Control Lab
Deep pushing notch

Our Goal:

"Operational Excellence and Enthusiastic Achievement"



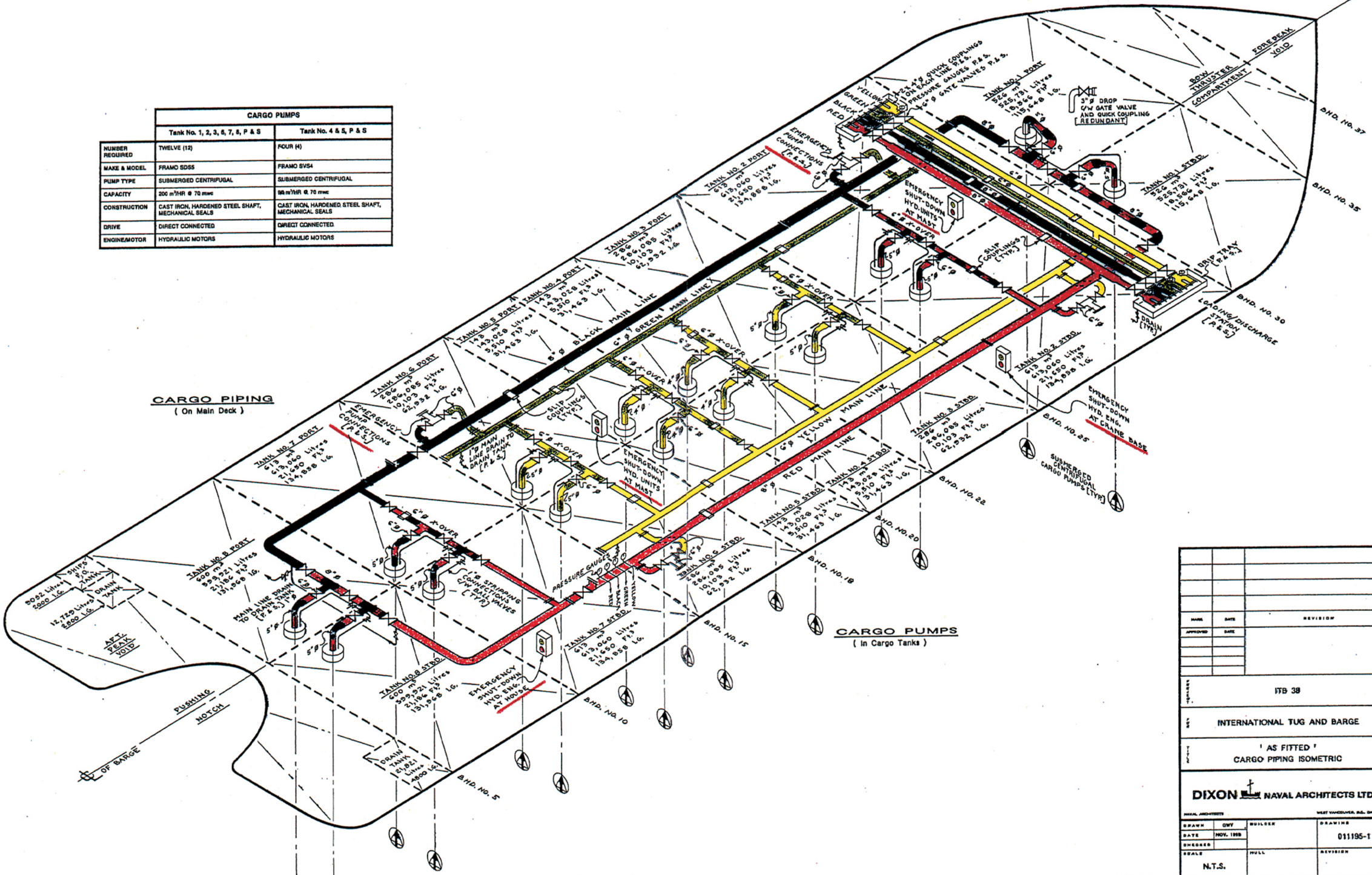
ITB 38
GENERAL ARRANGEMENT

PRINCIPAL PARTICULARS:

LENGTH OVERALL	264' - 8"
LENGTH WATERLINE	265' - 0"
BREADTH MLD.	60' - 0"
DEPTH MLD.	20' - 0"
LOAD DRAFT	16' - 0"
CARGO CAPACITY	37000 BBLS.

PREPARED BY DIXON & NAVAL ARCHITECTS LTD

	CARGO PUMPS	
	Tank No. 1, 2, 3, 6, 7, 8, P & S	Tank No. 4 & 5, P & S
NUMBER REQUIRED	TWELVE (12)	FOUR (4)
MAKE & MODEL	FRAMO SDS5	FRAMO SVS4
PUMP TYPE	SUBMERGED CENTRIFUGAL	SUBMERGED CENTRIFUGAL
CAPACITY	200 m^3/HR @ 70 mwc	96 m^3/HR @ 70 mwc
CONSTRUCTION	CAST IRON, HARDENED STEEL SHAFT, MECHANICAL SEALS	CAST IRON, HARDENED STEEL SHAFT, MECHANICAL SEALS
DRIVE	DIRECT CONNECTED	DIRECT CONNECTED
ENGINE/MOTOR	HYDRAULIC MOTORS	HYDRAULIC MOTORS



MARK	DATE	REVISION
APPROVED	DATE	

TITLE: ITB 38

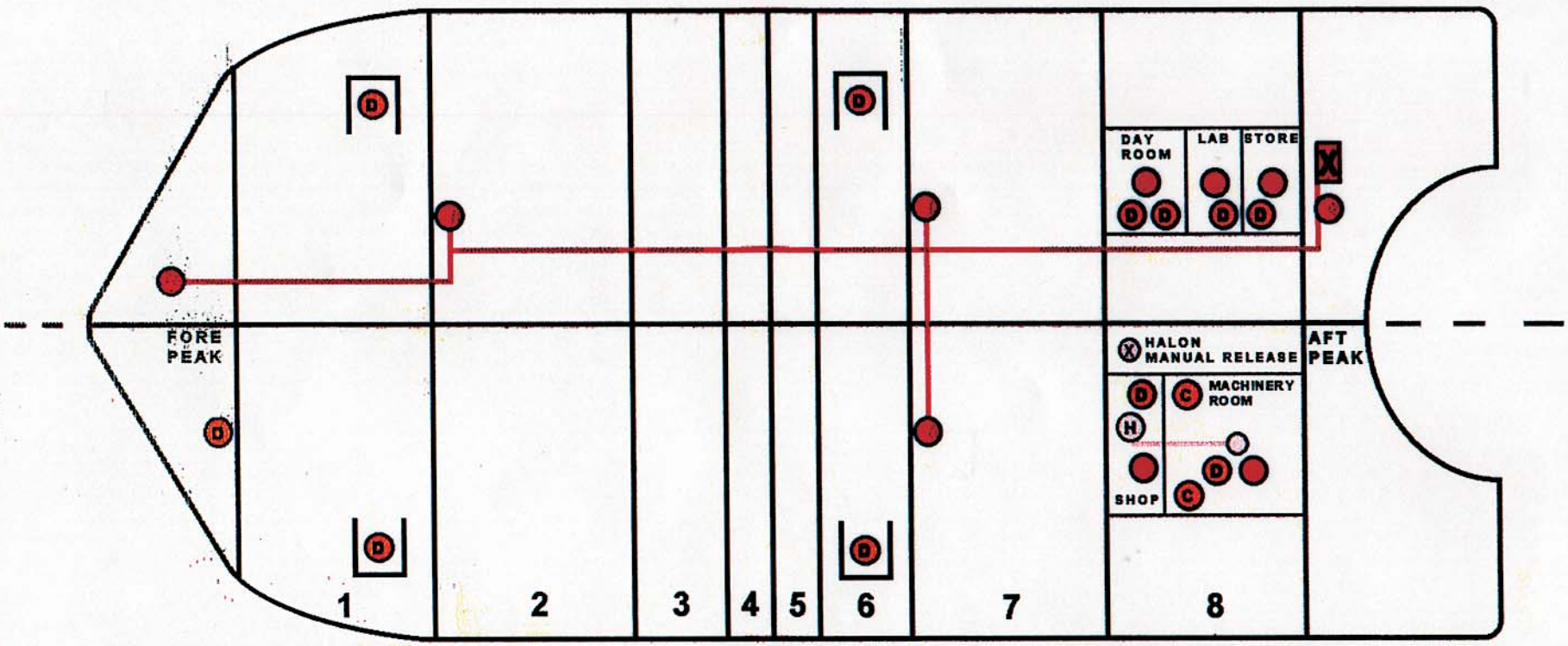
INTERNATIONAL TUG AND BARGE

' AS FITTED '
CARGO PIPING ISOMETRIC

DIXON NAVAL ARCHITECTS LTD.
NAVAL ARCHITECTS — WEST VANCOUVER, B.C., CANADA

DRAWN	GWV	BUILDER	DRAWING
DATE	NOV. 1998		011195-1
CHECKED			
SCALE		HULL	REVISION
N.T.S.			

ITB - 38 Fire Fighting Plan



FIRE PUMP

FIRE HYDRANT AND HOSE

WEATHER SHELTER

HEAT SENSOR

CO_2 EXTINGUISHER

DRY CHEMICAL EXTINGUISHER

HALON BOTTLE

HALON MANUAL RELEASE

HALON NOZZLE

Tony

1.8.3 ITB VANCOUVER

DESCRIPTION AND KEY SPECIFICATIONS

See attached "Vessel Information Card".

DRAWINGS AND CARGO TANK CAPACITIES

The following drawings for the ITB Vancouver are located at the back of this sub-Section:

- General Arrangement drawing
- 'As Fitted' Cargo Piping Isometric
- Pump Room Piping Arrangement

SERVICE FUEL OIL, HYDRAULIC OIL, LUBE OIL, DRAIN/SPILL TANK CAPACITIES

In addition to cargo tanks, the ITB Vancouver has the following tanks:

- Spill tank (stbd): 122,150 L
- Spill tank (port): 122,150 L
- Ship's fuel oil: 69,540 L
- Hydraulic oil: 4,000 L
- Lube oil: NIL

KEY SPILL PREVENTION FEATURES

- Double hulled to IMO specifications.
- All compartment hatches, vents, and loading and discharge manifolds are contained within a continuous coaming. Two emergency spill tanks are located near the stern.
- All cargo hoses are continuous lengths with camlock fittings at both ends. Camlocks are secured by wire during use. Hoses are tested annually to 1.5 times their rated working pressure by a qualified outside contractor.
- A bow thruster which is operated from the towboat.
- Three emergency shutdown buttons:
  - Control Room
  - Forward end of Control House
  - Mid-Mast
- Rising stick fill indicators and two point overfill alarms.
- Remote ullage system.
- Closed loading and vapour recovery vent system.
- Overfill protection.
- Remote control anchor.
- For lost barge recovery purposes, the barge carries an emergency towline consisting of 88m of 44.5mm wire shackled to 60m of equivalent strength fibre rope shackled to 50m floating trail line with fluorescent floating buoy. When the barge is being pushed, the emergency tow wire is shackled to a wire pennant at the bow of the tug which runs the length of the tug, and is shackled in turn to the main tow wire.
- The barge does not carry an emergency boat, however the tug carries a suitable emergency craft.
- NO SMOKING, NO OPEN LIGHTS, and NO VISITOR signs are clearly visible from both sides of the barge. A red dangerous cargo light and flag are located on the mast.
- A gas sensor is located in the barge's pumproom.

OIL SPILL RESPONSE EQUIPMENT

#	EQUIPMENT DESCRIPTION	QUANTITY	LOCATION
1	Containment Boom	1000’	Hydraulic Reel – Starboard aft
2	Boom Towing Bridles	2	Pollution Container
3	Absorbent Boom 4” x 10’	10	Pollution Container
4	Absorbent Pads (100 per Bale)	6	Pollution Container
5	Absorbent Pads (Bales)	4	Engine Room
6	Absorbent Pads (Bales)	1	Control Room
7	Open Headed Barrels (empty)	4	Pollution Container
8	Pad/Barrel Ringer	1	Pollution Container
9	Aluminum Shovels	3	Pollution Container
10	Aluminum Pitch Fork	2	Pollution Container
11	Heavy Duty Plastic Bags	200	Pollution Container
12	Anchor Assemblies	4	Pollution Container
13	Garbage Pails 100 ltr.	4	Pollution Container
14	Response Boat (on tug)	1	On Tug – See Section 1.8.6 – Towboats for Description
15	Oil Skimmer and Accessories Aquaguard RBS-5 (Nameplate: 75 bbls / hour)	1	

FIRE FIGHTING EQUIPMENT

The following fire fighting equipment is carried on board the ITB Vancouver:

- Fixed carbon dioxide fire suppression system for the engine room complete with two 250# carbon dioxide cylinders
- Refer to attached General Arrangement drawing showing locations of ABC and CO_2 portable fire extinguishers

DISCHARGE INFORMATION

OSRO - Average Most Probable Discharge (AMPD):

The AMPD of the ITB Vancouver is 50 barrels of refined petroleum products. Island Tug and Barge transfers oil only at marine transportation-related (MTR) facilities.

OSRO - Maximum Most Probable Discharge (MMPD):

The MMPD of the ITB Vancouver, is 2,500 barrels of diesel fuel or motor gasoline (10% of total cargo capacity).

OSRO - Worst Case Probable Discharge (WCPD):

The WCPD for the ITB Vancouver is 25,000 barrels of diesel fuel or motor gasoline, equal to the barge's total cargo capacity.

VESSEL STABILITY DATA

Stability data for the ITB Vancouver is available on a 24 hour basis through the ITB Office and through BMT Fleet Technology - Hatfield Division (Naval Architects).

Island Tug

www.islandtug.com

ITB Vancouver

The ITB Vancouver is a double hulled, IMO compliant, OPA 90 oil tank barge having an aggregate capacity of 25,000 barrels carried in twelve separate cargo tanks.

Island Tug and Barge Ltd.

55 Rogers Street
Vancouver, BC Canada V6A 3X8
Tel: 604 873-4312 • Fax: 604 873-4318
Email: info@islandtug.com

Island Tug

ITB Vancouver

The **ITB Vancouver** is a double hulled, IMO compliant, OPA 90 oil tank barge having an aggregate capacity of 25,000 barrels carried in twelve separate cargo tanks.

Designed primarily for pushing, the ITB Vancouver is equipped with a very powerful, omi-directional bow thruster for aiding in docking and maneuvering. Equipped with four independent pumping systems, the Vancouver can deliver a variety of products quickly and efficiently . The ITB Vancouver is equipped for closed loading and vapour recovery, with a common vent/overfill system that connects to shore side vapour systems.

In the unlikely event of a tank overfill, a separate overfill protection system will drain to one of two overfill tanks located separately from the main cargo tanks. Overfill alarms and protection systems are equipped on each cargo tank.

The ITB Vancouver normally trades between Vancouver, Southeast Alaska, Puget Sound and Vancouver Island.

Registration:

Built: Jinling Shipyard, PRC
Flag: Canada built 1999
Owner: Island Tug and Barge Ltd.
Official Number: 820184
Port of Registry: Vancouver, BC

Classification:

Transport Canada Class A Oil Barge
Cargos with flash point below 60 C

Dimensions:

Length, overall:	76.2 m
Breadth, moulded:	18.3 m
Depth, moulded:	5.9 m
Design draft:	4.2 m
GRT:	2051 t
NRT:	1112 t

Deck Machinery:

Port and Stb. Hydraulic Stern Capstans
Port and Stb. Stern Hand Winches
Port and Stb. Stern Tow/Push Hooks
Bow Thruster: 450 Horsepower Schottel
Hydraulic Pollution Boom Reel

Capacities:

12 Cargo Tanks
25,000 Bbls
4 independent discharge systems

Pumps:

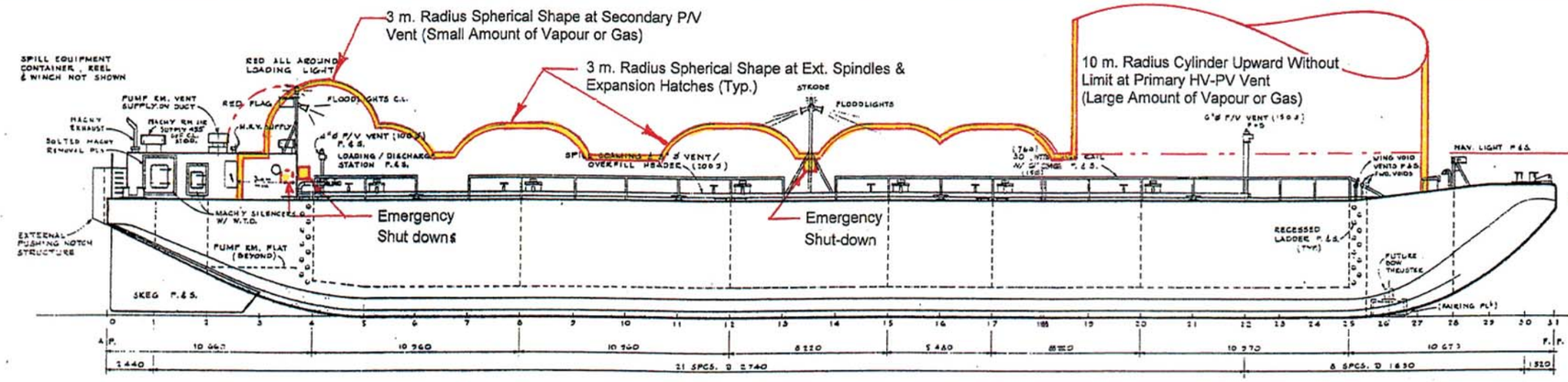
4 Blackmere sliding vane
1250 Bbls per hour each

Special Features:

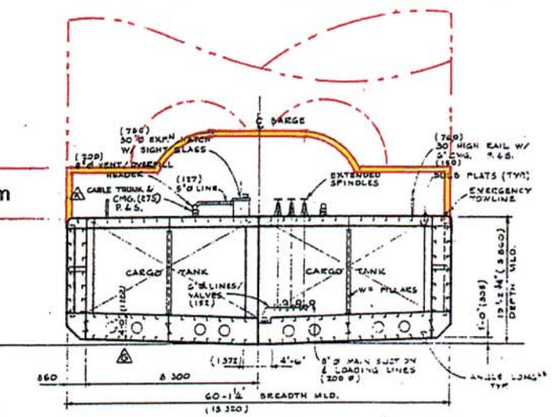
EMS remote monitoring and ullaging system
Rising Stick fill indicators
Alarmed overfill protection
Alarmed over-pressure protection
Closed Loading
Vapour Recovery Vent System
Duplex Overfill Protection System
450 hp , 360 degree Bow Thruster
Remote Control Bow Thruster
Quality Control Lab
Pushing notch

Our Goal:

"Operational Excellence and Enthusiastic Achievement"



OUTBOARD PROFILE



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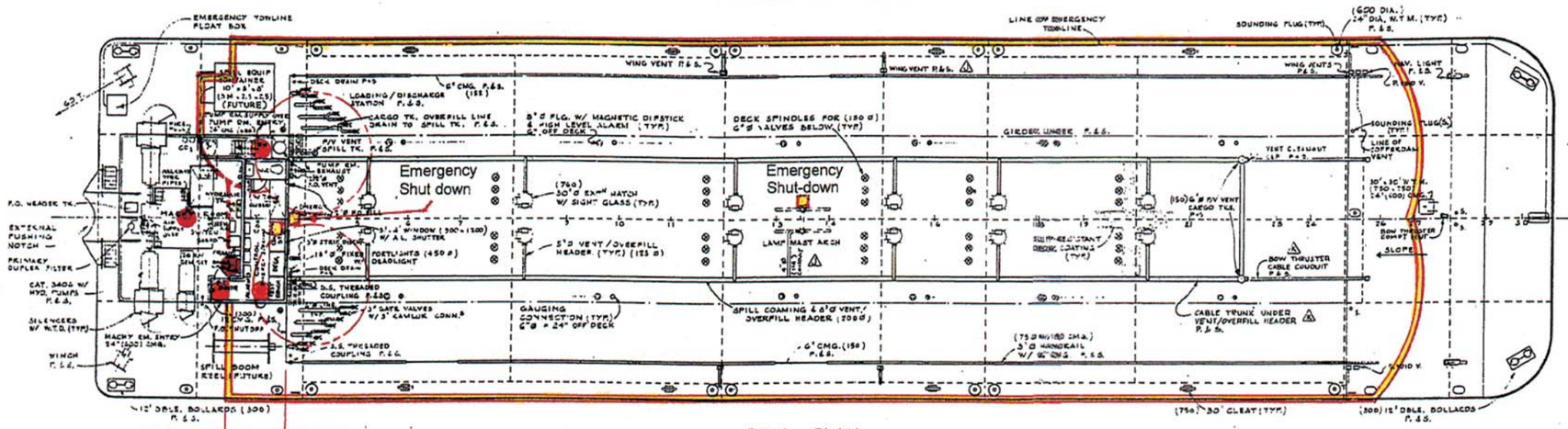
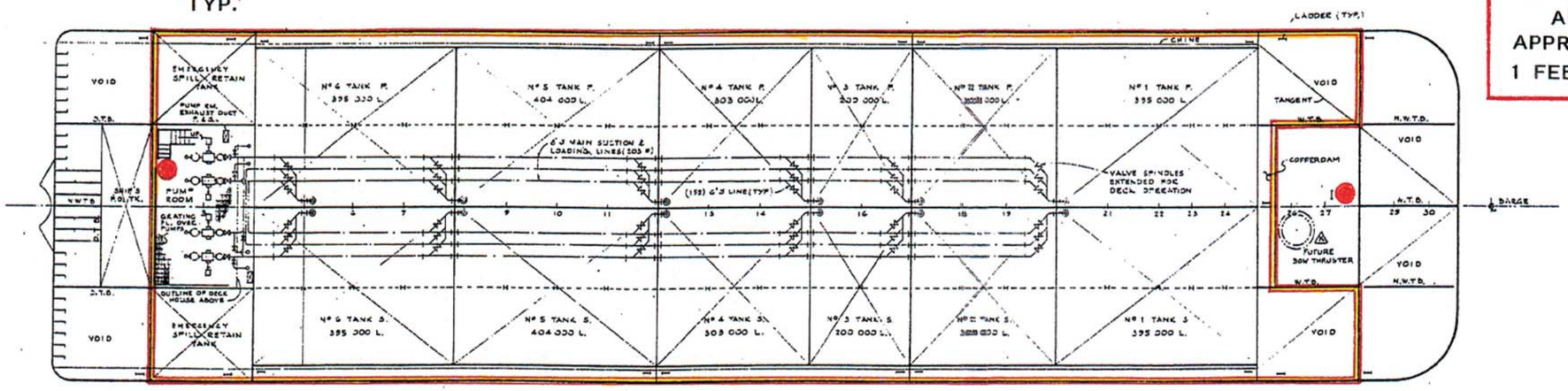


DECK PLAN



HOLD PLAN

PRINCIPAL PARTICULARS

LENGTH O.A.	249'-9 5/8" (76 143)
BREADTH MLD.	60'-1 1/2" (18 320)
DEPTH MLD.	19'-2 3/4" (5 860)
CAPACITY (98 %)	4000.000 LITRES

● 2.25 kg abc DRY CHEMICAL
● 4.5 kg CO_2

■ EMERGENCY SHUTDOWNS

ORIGINAL ABS APPROVAL 1 FEB. 1999

MARK	DATE	REVISION
K	31 DEC 1998	RELOCATE CABLE CONDUITS TO TRUNKS UNDER VENT/OVER FILL, MOVE BOW THRUSTER TO STBD., MOVE MT. VENT TO FR. 12
J	16 DEC 1998	RELOCATED GAUGING & DIPSTICK/HI-LEVEL ALARM STANDPIPES, MOVED @ MAIN TANK VOID VENT, MOVED MAST SAMPLE TO STBD, ADDED #3 SAMPLE P.
I	11 DEC 1998	REVISED LOUTER, BM, & ELECTRICAL PANELS, MOVED DIPSTICK & HI-LEVEL ALARM STAND PIPES, ADDED CABLE CONDUITS AN MAIN DK., P.S.D.
H	9 NOV. 98	GENERAL REVISION
G	2 SEPT. 98	WING TANK VOID ACCESS P&S CHANGED TO 600 ø, ABS APPROVAL D.B. HEIGHT 1225
F	24 AUG '98	PARTICULARS, DECK HOUSE & FND. CAP. REVISED.
E	30 JUL '98	METRIC EQUIVALENTS SHOWN WHEN USED (" IS.)
D	13 AUG 97	DECK HOUSE LAYOUT REVISED IN WAT. OFFICE & PUMP RM. VENTS, EXTERNAL PUSHING NOTCH INSULATED IN SAME AS MAIN.
C	20 JUN '97	MACHINERY EM., LOADING/DISCHARGE STATIONS, & SPILL COAMING REVISED, SHIP'S F.O. TANK ADDED, 10'-0" P/V VENT RELOCATED.
B	30 MAY 97	GENERAL REVISION
A	10 MAR. '97	GENERAL REVISION

APPROVED	DATE	
ABS	Sept. 1-2/98	FINAL CLASSIFICATION SOCIETY APPROVED DRAWINGS

DESCRIPTION: 25000 BI. D.H. OIL BARGE

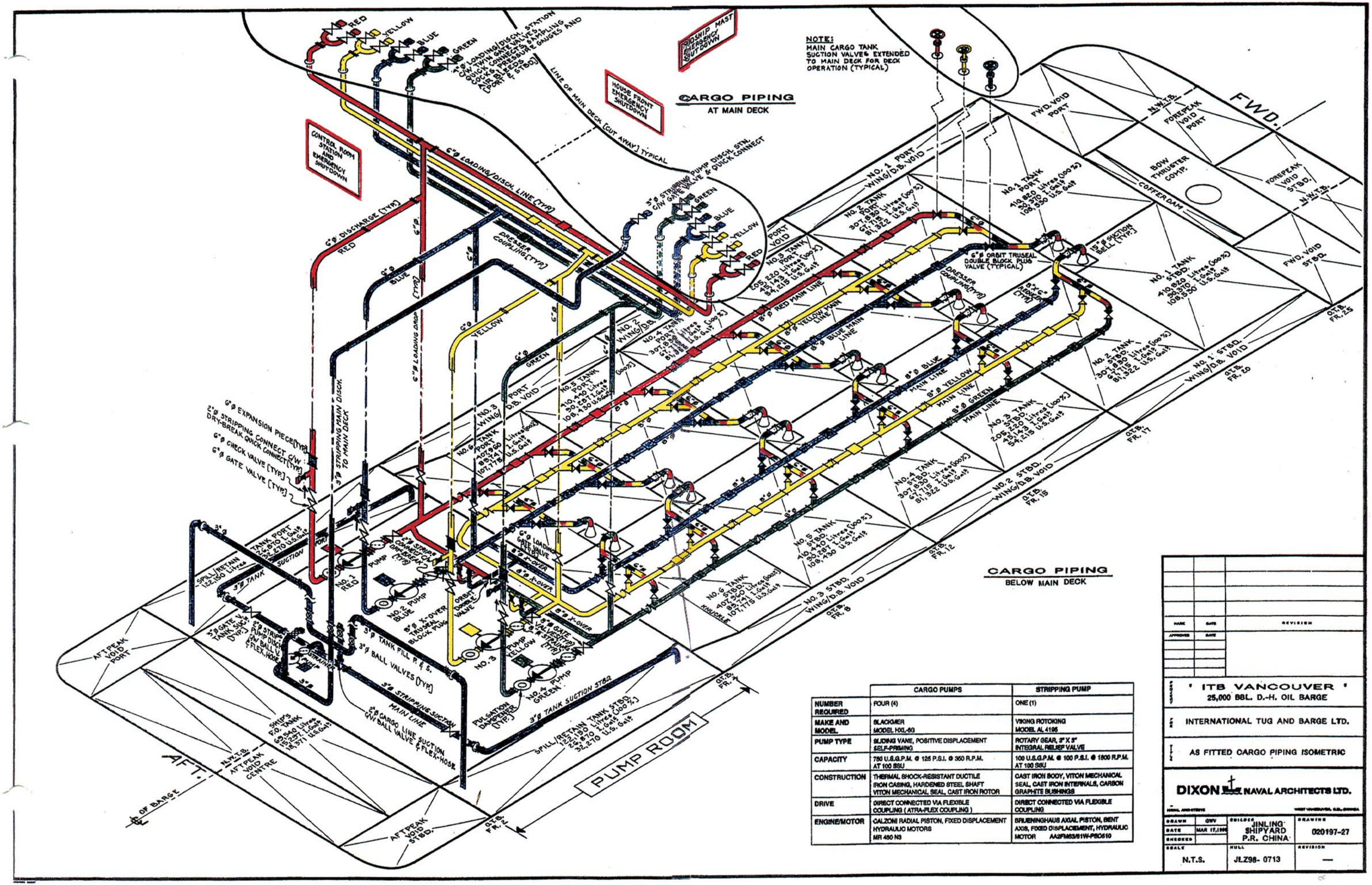
OWNER: INTERNATIONAL TUG & BARGE LTD.

DESCRIPTION: GENERAL ARRANGEMENT

DIXON NAVAL ARCHITECTS LTD.
NAVAL ARCHITECTS — WEST VANCOUVER, B.C., CANADA

DRAWN	R. DARWIN	BUILDER	DRAWING
DATE	FEB '97	JINLING SHIPYARD	020197-1
CHECKED			
SCALE	1/8" = 1'-0"	HULL JLZ98-0713	REVISION K

HAZARDOUS AREA BOUNDARIES



	CARGO PUMPS	STRIPPING PUMP
NUMBER REQUIRED	FOUR (4)	ONE (1)
MAKE AND MODEL	BLACKMER MODEL HXL-6G	VIKING ROTOKING MODEL AL 4195
PUMP TYPE	SLIDING VANE, POSITIVE DISPLACEMENT SELF-PRIMING	ROTARY GEAR, 3" X 3" INTEGRAL RELIEF VALVE
CAPACITY	750 U.S.G.P.M. @ 125 P.S.I. @ 350 R.P.M. AT 100 SSU	100 U.S.G.P.M. @ 100 P.S.I. @ 1800 R.P.M. AT 100 SSU
CONSTRUCTION	THERMAL SHOCK-RESISTANT DUCTILE IRON CASING, HARDENED STEEL SHAFT VITON MECHANICAL SEAL, CAST IRON ROTOR	CAST IRON BODY, VITON MECHANICAL SEAL, CAST IRON INTERNALS, CARBON GRAPHITE BUSHINGS
DRIVE	DIRECT CONNECTED VIA FLEXIBLE COUPLING (ATRA-FLEX COUPLING)	DIRECT CONNECTED VIA FLEXIBLE COUPLING
ENGINE/MOTOR	CALZONI RADIAL PISTON, FIXED DISPLACEMENT HYDRAULIC MOTORS MR 450 N3	BRUENINGHAUS AXIAL PISTON, BENT AXIS, FIXED DISPLACEMENT, HYDRAULIC MOTOR AA2FM63/61W-PBC610

MARK	DATE	REVISION
APPROVED	DATE	

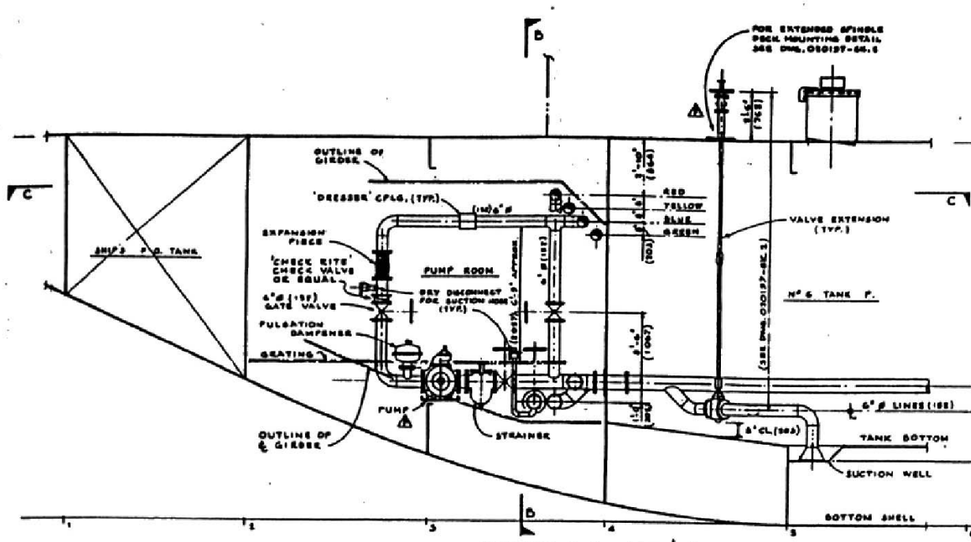
' ITB VANCOUVER '
25,000 BBL. D.-H. OIL BARGE

INTERNATIONAL TUG AND BARGE LTD.

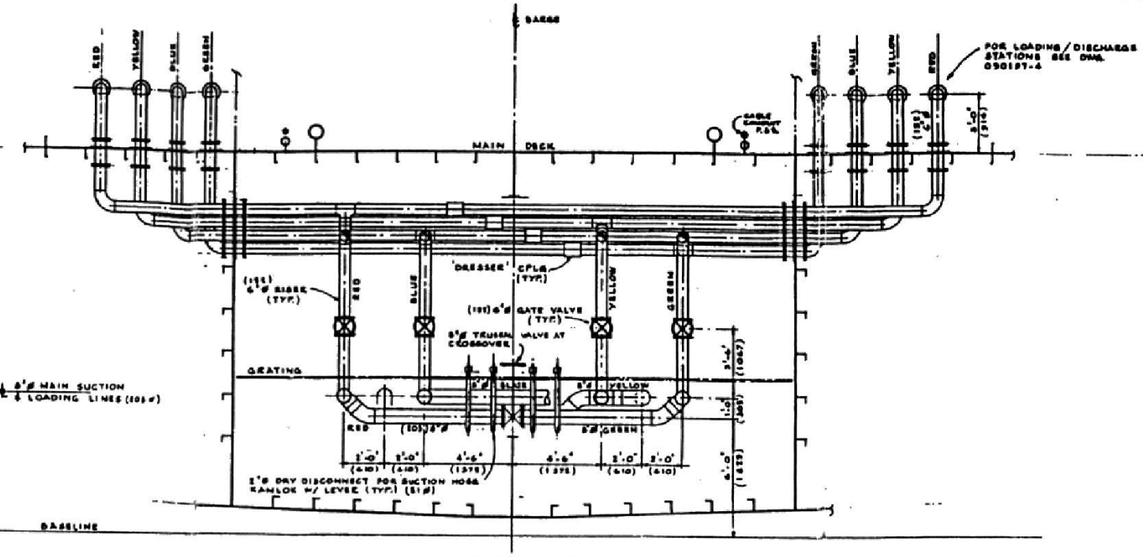
AS FITTED CARGO PIPING ISOMETRIC

DIXON NAVAL ARCHITECTS LTD.

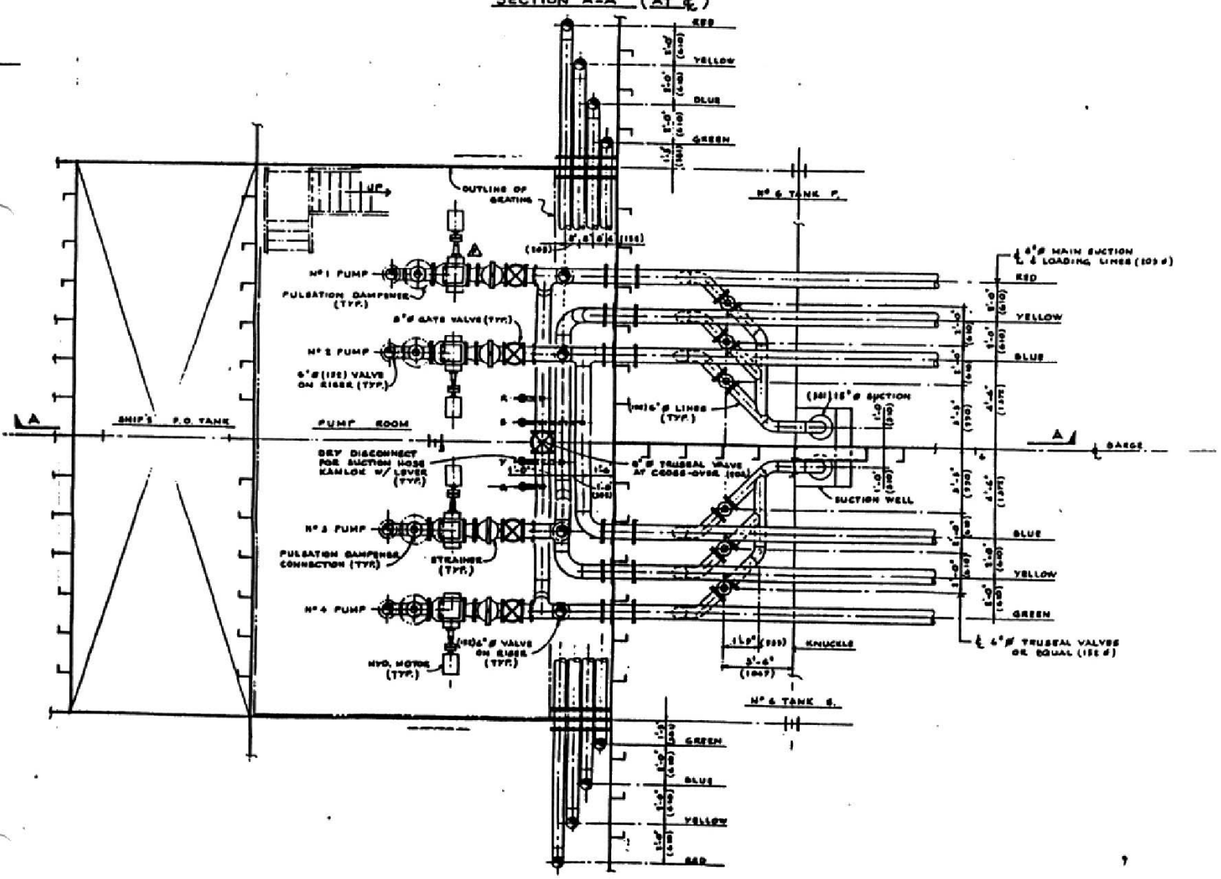
DRAWN	GWV	BUILDER JINLING SHIPYARD P.R. CHINA	DRAWING 020197-27
DATE	MAR 17,1998		
CHECKED			
SCALE N.T.S.		HULL JLZ98- 0713	REVISION —



SECTION A-A (AT ℄)



SECTION D-D
(LOOKING FWD.)



SECTION C-C
(PLAN VIEW BELOW MAIN DECK)

F	10 NOV. 1978	MODIFIED CARGO PUMP, MODIFIED EXTENSION SPINDLE
E	18 OCT '06	PULSATION DAMPENER RELOCATED. 4"Ø REVISED TO SUIT, STRIPPING PIPING REV
D	5 OCT 98	ADD APPROVED SUBJECT TO MODIFYING WITH REMAINING METRIC PIPE SIZES.
C	24 AUG '98	LOADING/DISCHARGE PIPING & STRIPPING SYSTEM REVISED. ACCUMULATED ERRO
B	30 JUL '98	METRIC EQUIVALENTS SHOWN.
A	18 AUG '97	LOADING/DISCHARGE PIPING REVISED TO MATCH COLOURS TO CARGO OIL VALVES.
NAME	DATE	REVISION
APPROVED	DATE	
LRS	15 SEP 96	

NOTE: PIPE SIZES SHOWN ARE NOMINAL DIAMETERS. OUTSIDE DIAMETERS ARE GREATER. METRIC EQUIVALENTS (CAMA SIZES) SHALL MATCH OUTSIDE DIAS.

25000 BI. D.H. OIL BARGE

I.T.B. LTD.

PUMP ROOM PIPING ARRANGEMENT

DIXON NAVAL ARCHITECTS LTD

DRAWN	R. DARWIN	BUILDER	DRAWING
DATE	JUL '97	JINLING SHIPYARD	020197-5
CHECKED			
SCALE	3/8" = 1'-0"	HULL JLZ96-7013	REVISION F

1.8.4 ITB 45

DESCRIPTION AND KEY SPECIFICATIONS

See attached "Vessel Information Card".

DRAWINGS AND CARGO TANK CAPACITIES

The following drawings for the ITB 45 are located at the back of this sub-Section:

- 'As fitted' General Arrangement drawing;
- 'As fitted' Cargo Piping Isometric drawing;

SERVICE FUEL OIL, HYDRAULIC OIL, LUBE OIL, DRAIN/SPILL TANK CAPACITIES

In addition to cargo tanks, the ITB 45 has the following tanks:

- Spill tank: 210,000 L
- Ship fuel oil: 3,100 L
- Ship's fuel oil: 9,092 L
- Hydraulic oil: 4,000 L
- Lube oil: NIL

KEY SPILL PREVENTION FEATURES

- All compartment hatches, vents, and loading and discharge manifolds are contained within a 30" high steel coaming with wooden scupper plugs towards the stern. A 2" drain leads to a 23,000 litre slop tank.
- The auxiliary fuel tank on the outside starboard wall of the engine compartment is surrounded by a 7" high steel coaming with a wooden scupper plug.
- Air quality in the pipe tunnel is monitored by three gas sensors from a Bacharach combustible Gas Detector with LEL percentage indicators and warning alarms located in the engine compartment.
- All cargo hoses are 3" continuous with camlock fittings and string ties for securing the camlock ears during loading and discharge. Hoses are tested annually to 1.5 times their rated working pressure by a qualified outside contractor.
- All piping, hydraulic pumps, and electrical equipment in pipe tunnel are intrinsically safe. All tunnel piping has expansion joints to dissipate line shock.
- All 3 cargo pumps are tied into one emergency shutdown switch located on the outside wall of the pumphouse.
- The barge does not carry an emergency boat, however the tug carries a suitable emergency craft .
- All deck valves have steel lock-bars and rope tie-downs.
- NO SMOKING, NO OPEN LIGHTS, and NO VISITOR signs are clearly visible from both sides of the barge. A red dangerous cargo light and flag are located on the mast.
- For lost barge recovery purposes, the barge carries 100' of 2" trailing stern line with an 18" buoy at the trailing end, attached to a break-away box containing 250' of 4" poly rope on the port side aft deck. This rope is shackled to a 1.5" steel emergency towing bridle secured by breakaway tabs along the entire port beam and connected to the bow at one point in the centre. A galvanized steel chain ladder is coiled near this bow shackle for access from the tug.
- Gas sensor in pump room.

OIL SPILL RESPONSE EQUIPMENT

#	EQUIPMENT DESCRIPTION	QUANTITY	LOCATION
1	Containment Boom	1000’	Hydraulic Reel – on Stern
2	Boom Towing Bridles	2	Aft Storage Compartment
3	Absorbent Boom 4” x 10’	10	Aft Storage Compartment
4	Absorbent Pads (100 per Bale)	6	Aft Storage Compartment
5	Absorbent Pads (Bales)	4	Engine Room
6	Absorbent Pads (Bales)	1	Control Room
7	Open Headed Barrels (empty)	4	Aft Storage Compartment
8	Pad/Barrel Ringer	1	Aft Storage Compartment
9	Aluminum Shovels	3	Aft Storage Compartment
10	Aluminum Pitch Fork	2	Aft Storage Compartment
11	Heavy Duty Plastic Bags	200	Aft Storage Compartment
12	Anchor Assemblies	4	Aft Storage Compartment
13	Garbage Pails 100 ltr.	4	Aft Storage Compartment
14	Response Boat (on tug)	1	On Tug – See Section 1.8.6 – Towboats for Description
15	Oil Skimmer and Accessories Aquaguard RBS-5 (Nameplate: 75 bbls / hour)	1	

FIRE FIGHTING EQUIPMENT

For fire fighting purposes, the barge carries 4 – 20 lb. dry chemical ABC type portable fire extinguishers. Two are located in the office, and one each inside the entrance doors to the engine compartment and pipe tunnel. A complete
Scott air pack (SCBA) plus extra cylinders are stored in the engine compartment. Two fire fighting suits with Scott air packs and reserve bottles are also located aboard the towboat.

DISCHARGE INFORMATION

OSRO - Average Most Probable Discharge (AMPD):

The AMPD of the ITB 45 is 50 barrels of refined petroleum products. Island Tug and Barge transfers oil only at marine transportation-related (MTR) facilities.

OSRO - Maximum Most Probable Discharge (MMPD)

The MMPD of the ITB 45, is 2,260 barrels of diesel fuel or motor gasoline (10% of total cargo capacity).

OSRO - Worst Case Probable Discharge (WCPD)

The WCPD for the ITB 45 is 22,600 barrels of diesel fuel or motor gasoline, equal to the barge's total cargo capacity.

VESSEL STABILITY DATA

Stability data for the ITB 45 is available on a 24 hour basis through the ITB Office and through BMT Fleet Technology - Hatfield Division (Naval Architects).

Island Tug

www.islandtug.com

ITB 45

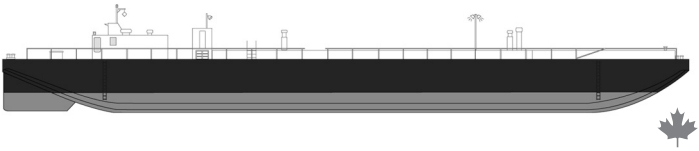
The ITB 45 is a modern oil tank barge having an aggregate capacity of 22,000 barrels carried in 11 separate tanks.

Island Tug and Barge Ltd.

55 Rogers Street
Vancouver, BC Canada V6A 3X8
Tel: 604 873-4312 • Fax: 604 873-4318
Email: info@islandtug.com

Island Tug

ITB 45



The **ITB 45** is a modern oil tank barge having an aggregate capacity of 22,000 barrels carried in 11 separate tanks. Fitted with a pushing notch, the ITB 45 may be either pushed or towed.

Equipped with three separate pumping and discharge systems, the ITB 45 can carry a variety of light petroleum products. The barge is equipped for closed loading and vapour recovery. A series of portable overfill alarms and protection systems are utilized for gauging and loading.

The ITB 45 normally trades between Vancouver, Southeast Alaska, Puget Sound and Vancouver Island.

Registration:

Built: Mckenzie Barge and Marine Ltd.
North Vancouver, BC
Flag: Canada built 1979
Owner: Island Tug and Barge Ltd.
Official Number: 392787
Port of Registry: Vancouver, BC

Classification:

Transport Canada Class A Oil Barge
Cargos with flash point below 60 C

Dimensions:

Length, overall:	67.1 m
Breadth, moulded:	17.7 m
Depth, moulded:	5.19 m
Design draft:	4.27 m
GRT:	1757 t
NRT:	1757 t

Deck Machinery:

Port and Stb. Stern Winches
Hydraulic Pollution Boom Reel

Capacities:

11 Cargo Tanks
22,000 Bbls
3 independent discharge systems

Pumps:

2 - Blackmere sliding vane
1350 Bbls per hour each
1 - Paramount centrifugal
750 Bbls per hour

Special Features:

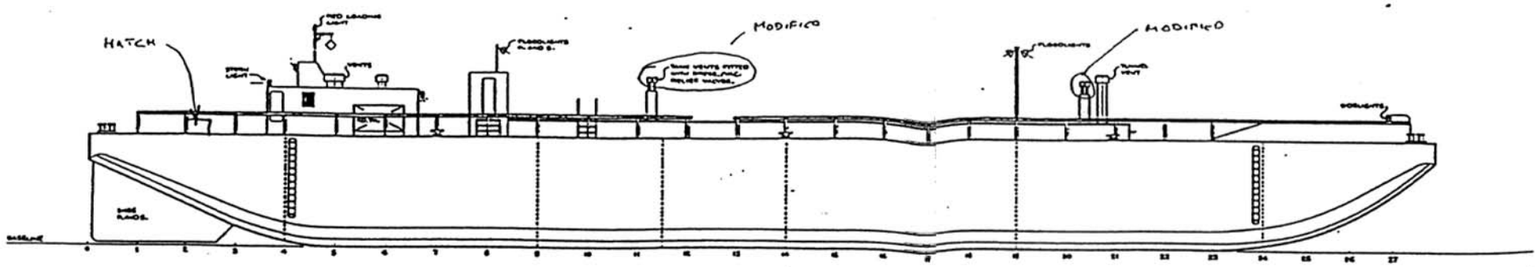
Overfill Alarms
Rising Stick fill indicators
Electronic Ullage System
Closed Loading
Quality Control Lab
Pushing notch

Our Goal:

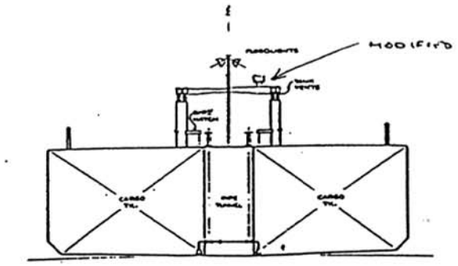
OPERATIONAL EXCELLENCE AND ENTHUSIASTIC ACHIEVEMENT

"Operational Excellence and Enthusiastic Achievement"

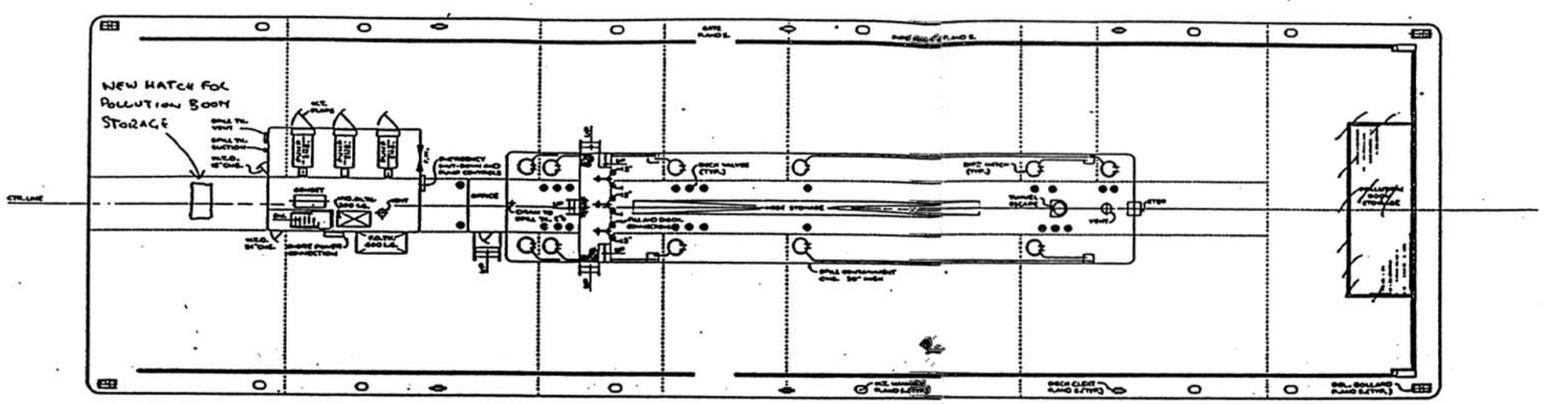
www.islandtug.com



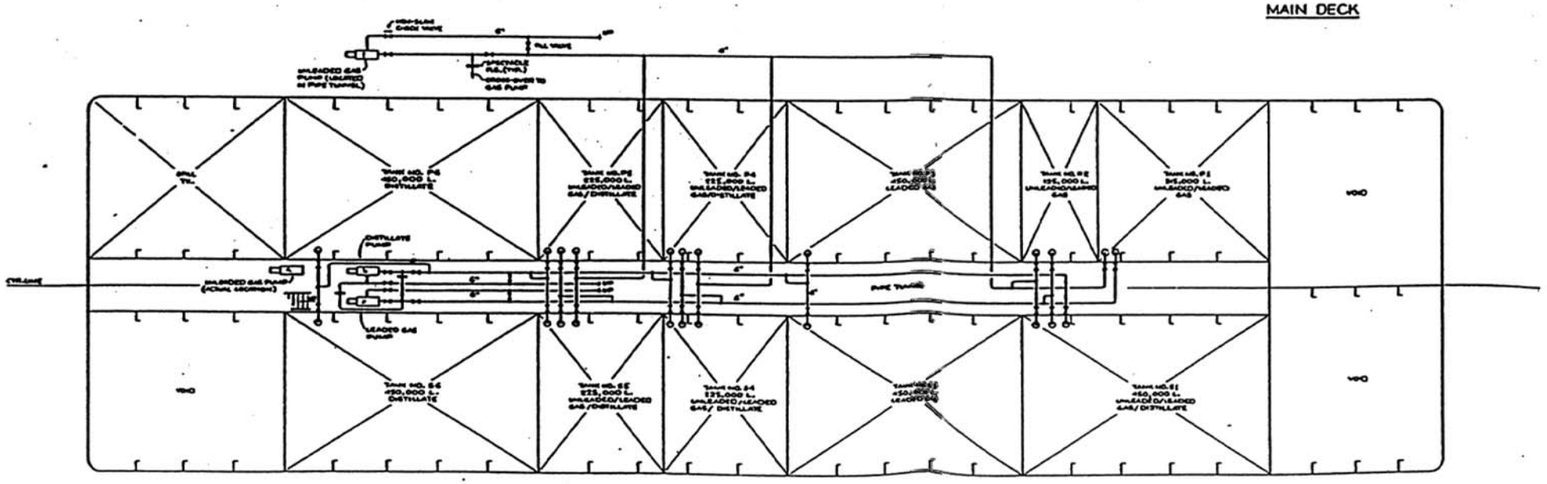
OUTBD. PROFILE



SECTION



MAIN DECK



TANK PLAN

PRINCIPAL PARTICULARS

LENGTH O.A.	220'-0"
BREADTH MLD.	58'-0"
DEPTH MLD.	17'-0"
TANK CAPACITY	3,600,000 L.

PIPING COLOUR CODE

DISTILLATE	BROWN
LEADED GAS	RED
UNLEADED GAS	WHITE

NAME	DATE	REVISION
APPROVED	DATE	

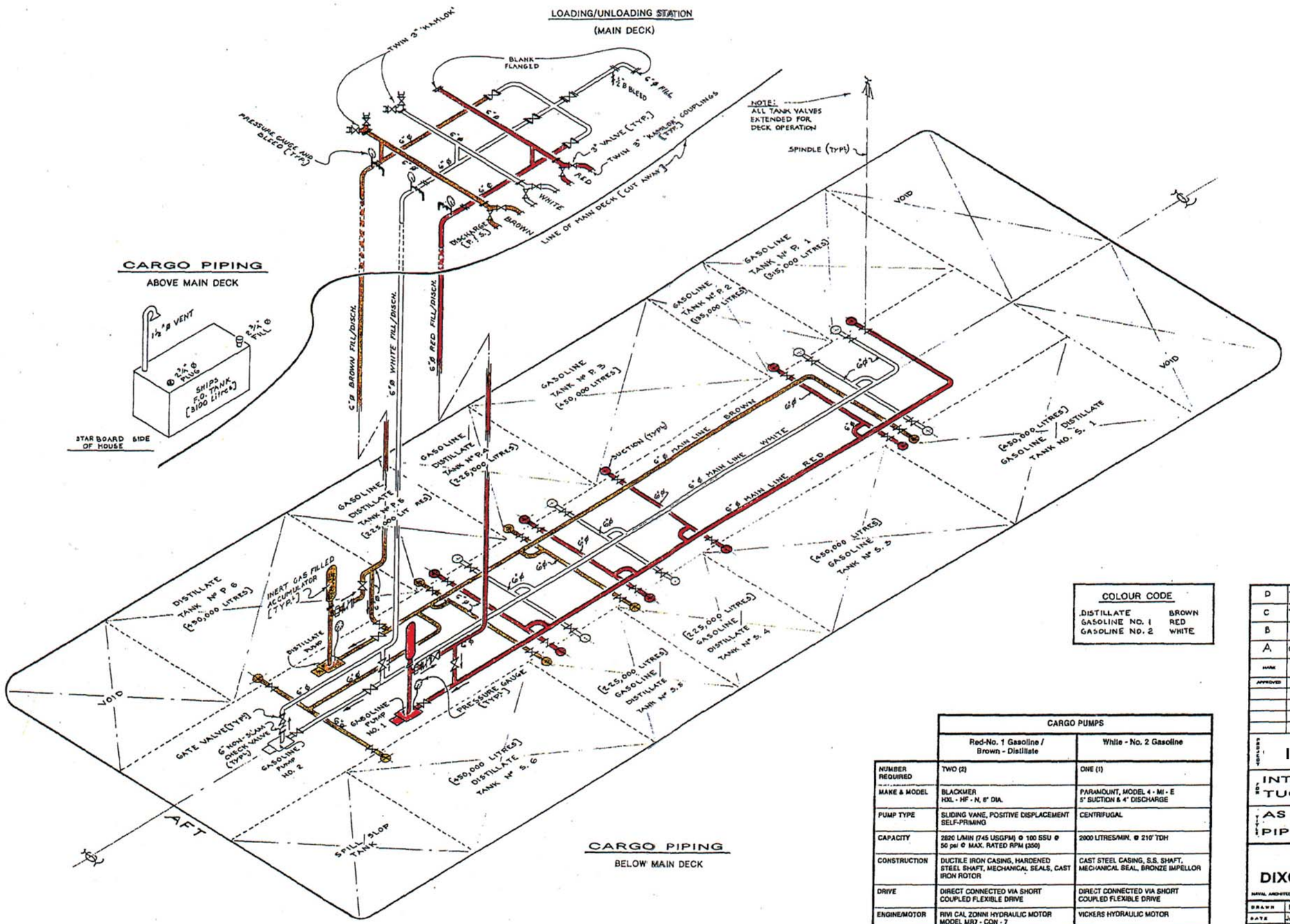
ITB 45
(Ex. Empire 45)

GULF OIL CANADA

"AS FITTED"
GENERAL ARRANGEMENT

COVE-DIXON
AND COMPANY LIMITED

DRAWING 382-1



COLOUR CODE	
DISTILLATE	BROWN
GASOLINE NO. 1	RED
GASOLINE NO. 2	WHITE

CARGO PUMPS		
	Red-No. 1 Gasoline / Brown - Distillate	White - No. 2 Gasoline
NUMBER REQUIRED	TWO (2)	ONE (1)
MAKE & MODEL	BLACKMER HXL - HF - N, 6" DIA.	PARAMOUNT, MODEL 4 - MI - E 5" SUCTION & 4" DISCHARGE
PUMP TYPE	SLIDING VANE, POSITIVE DISPLACEMENT SELF-PRIMING	CENTRIFUGAL
CAPACITY	2820 L/MIN (745 USGPM) @ 100 SSU @ 50 psi @ MAX. RATED RPM (350)	2000 LITRES/MIN. @ 210' TDH
CONSTRUCTION	DUCTILE IRON CASING, HARDENED STEEL SHAFT, MECHANICAL SEALS, CAST IRON ROTOR	CAST STEEL CASING, S.S. SHAFT, MECHANICAL SEAL, BRONZE IMPELLOR
DRIVE	DIRECT CONNECTED VIA SHORT COUPLED FLEXIBLE DRIVE	DIRECT CONNECTED VIA SHORT COUPLED FLEXIBLE DRIVE
ENGINE/MOTOR	RIVI CAL ZONNI HYDRAULIC MOTOR MODEL MR7 - CON - 7	VICKERS HYDRAULIC MOTOR

MARK	DATE	REVISION
D	JUNE 10/06 GWV	DELK PIPING UPDATED, PUMP ROOM PIPING UPDATED, CARGO PUMP TABLE UPDATED, SHIPS F.O. TK. ADDED, GENERAL AS FITTED
C	JAN 27/92 GWV	INITIALED/LEADED PUMP & TANK DESIGNATIONS CHANGED TO GASOLINE, DELK PIPING UPDATE PLUS MISC. REVISIONS. AS FITTED.
B	OCT 14/83	PUMPS ELEVATED to ORIGINAL DESIGNATIONS
A	OCT 3/83	PHASE III MODS.

APPROVED	DATE

SUBJECT: **ITB 45** (Ex. Empire 45)

OWNER: INTERNATIONAL TUG & BARGE LTD.

TITLE: AS FITTED PIPING ISOMETRIC

DIXON NAVAL ARCHITECTS LTD.
NAVAL ARCHITECTS — WEST VANCOUVER, B.C., CANADA

DRAWN	R.S.	BUILDER	DRAWING 382 - 3
DATE	JULY 29/82		
CHECKED			
SCALE NONE		HULL	REVISION D

1.8.5 ITB PROVIDER

DESCRIPTION AND KEY SPECIFICATIONS

See attached "Vessel Information Card".

DRAWINGS AND CARGO TANK CAPACITIES

The following drawings for the ITB Provider are located at the back of this sub-Section:

- General Arrangement drawing with fire fighting equipment and shutdowns shown
- 'As Fitted' Cargo Piping Isometric drawing

SERVICE FUEL OIL, HYDRAULIC OIL, LUBE OIL, DRAIN/SPILL TANK CAPACITIES

In addition to cargo tanks, the ITB Provider has the following tanks:

- Spill tank (stbd): 45,920 L
- Spill tank (port): 45,920 L
- Ship's fuel oil: 15,150 L
- Hydraulic oil: 4,000 L
- Lube oil: NIL

KEY SPILL PREVENTION FEATURES

- Double hulled to IMO specifications.
- All compartment hatches, vents, and loading and discharge manifolds are contained within a continuous coaming draining to 2 emergency spill tanks.
- All cargo hoses are continuous lengths with camlock fittings at both ends. Camlocks are secured by wire during use. Hoses are tested annually to 1.5 times their rated working pressure by a qualified outside contractor.
- Rising stick and overfill indicators.
- Closed loading capability.
- Overfill protection system with common vent system drawing to one of tow spill retention tanks.
- For lost barge recovery purposes, the barge carries an emergency towline including a floating trail line with fluorescent floating buoy. When the barge is being pushed, the emergency tow wire is shackled to a wire pennant at the bow of the tug which runs the length of the tug, and is shackled in turn to the main tow wire.
- Tug carries emergency response boat.
- NO SMOKING, NO OPEN LIGHTS, and NO VISITOR signs are clearly visible from both sides of the barge. A red dangerous cargo light and flag are located on the mast.

OIL SPILL RESPONSE EQUIPMENT

#	EQUIPMENT DESCRIPTION	QUANTITY	LOCATION
1	Containment Boom	1000’	Spill Container
2	Boom Towing Bridles	2	Spill Container
3	Absorbent Boom 4” x 10’	10	Spill Container
4	Absorbent Pads (100 per Bale)	6	Spill Container
5	Absorbent Pads (Bales)	4	Engine Room
6	Absorbent Pads (Bales)	1	Control House Mid Deck
7	Open Headed Barrels (empty)	4	Spill Container
8	Pad/Barrel Ringer	1	Spill Container
9	Aluminum Shovels	3	Spill Container
10	Aluminum Pitch Fork	2	Spill Container
11	Heavy Duty Plastic Bags	200	Spill Container
12	Anchor Assemblies	4	Spill Container
13	Garbage Pails 100 ltr.	4	Spill Container
14	Response Boat (on tug)	1	On Tug – See Section 1.8.6 – Towboats for Description
15	Oil Skimmer and Accessories Aquaguard RBS-5 (Nameplate: 75 bbls / hour)	1	

FIRE FIGHTING EQUIPMENT

Refer to attached General Arrangement drawing showing locations of ABC and CO_2 portable fire extinguishers

DISCHARGE INFORMATION

OSRO - Average Most Probable Discharge (AMPD):

The AMPD of the ITB Provider is 50 barrels of Group III Persistent Oil. Island Tug and Barge transfers oil only at marine transportation-related (MTR) facilities.

OSRO - Maximum Most Probable Discharge (MMPD):

The MMPD of the ITB Provider, is 1,474 barrels of Group III Persistent Oil.

OSRO - Worst Case Probable Discharge (WCPD):

The WCPD for the ITB Provider is 14,736 barrels of Group III Persistent Oil, equal to the barge's total cargo capacity.

VESSEL STABILITY DATA

Stability data for the ITB Provider is available on a 24 hour basis through the ITB Office and through BMT Fleet Technology - Hatfield Division (Marine Architect).

Island Tug

www.islandtug.com

ITB Provider

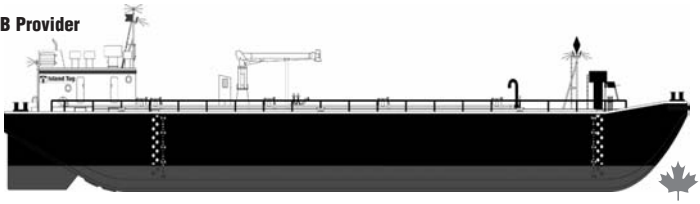
The ITB Provider is a double hulled, IMO compliant, Class B OPA 90 oil tank barge having an aggregate capacity of 14,800 barrels at 95% carried in ten separate cargo tanks.

Island Tug and Barge Ltd.

55 Rogers Street
Vancouver, BC Canada V6A 3X8
Tel: 604 873-4312 • Fax: 604 873-4318
Email: info@islandtug.com

Island Tug

ITB Provider



The **ITB Provider** is a Double Hulled, IMO compliant, Class B OPA 90 oil tank barge having an aggregate capacity of 14,800 barrels at 95% carried in ten separate cargo tanks.

Designed and constructed for use in ship bunkering in the Port of Vancouver, the ITB Provider is the only double hulled barge servicing this market.

Equipped with state of the art Mass Flow metering and cargo management systems, the ITB Provider will provide ship-side approved meter tickets showing delivered cargo volumes in tonnes and litres, average product density and temperatures, and other product quality specifications will be provided from an on board quality lab.

With two independent pumping systems having an aggregate capability of 422 tonnes per hour, both MGO and HFO can be handled simultaneously, quickly and efficiently.

Registration:

Built: Jinling Shipyard, PRC
Flag: Canada built 2001
Owner: Island Tug and Barge Ltd.
Official Number: 820184
Port of Registry: Vancouver, BC

Classification:

Transport Canada Class B Oil Barge
Cargos with flash point above 60 C

Dimensions:

Length, overall:	55.9 m
Breadth, moulded:	16.4 m
Depth, moulded:	5.5 m
Design draft:	4.5 m
GRT:	2051 t
NRT:	663 t

Deck Machinery:

Hydraulic hose handling crane - National Marine 400 series; 456A- .48 tonnes at 16.7 meters.

Capacities:

10 Cargo Tanks
15,000 Bbls
2 independent discharge systems
Independent spill retention tanks with common overfill vent system

Pumps:

2 - Blackmere HXG sliding vane
2854 Bbls per hour total
422 Tonnes per hour total at .93 SpG
1427 Bbls per hour each at 1000 SSU

Cargo Management:

2 - LC Mass Meters RHM80N0
Computer interfaced digital readout of tonnes, temperature and density. Custody transfer by printed meter ticket.

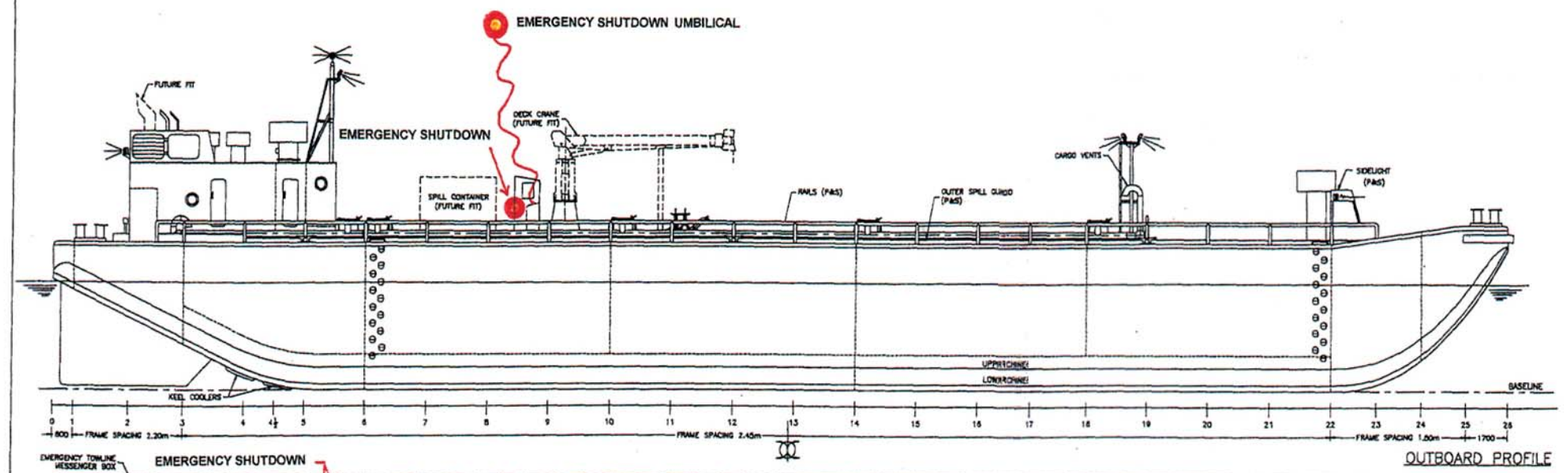
Special Features:

Double Hulled meeting OPA 90 and Marpol requirements
Rising Stick fill and overfill indicators
Closed Loading Capability
Overfill Protection System with common vent system draining to one of two spill retention tanks.
Quality Control Lab
Mass flow metering and cargo management system
Simultaneous discharge of bunker Fuel and Diesel with on board blending capability.

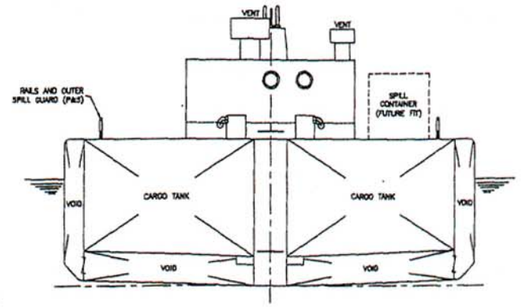
Our Goal:

"Operational Excellence and Enthusiastic Achievement"

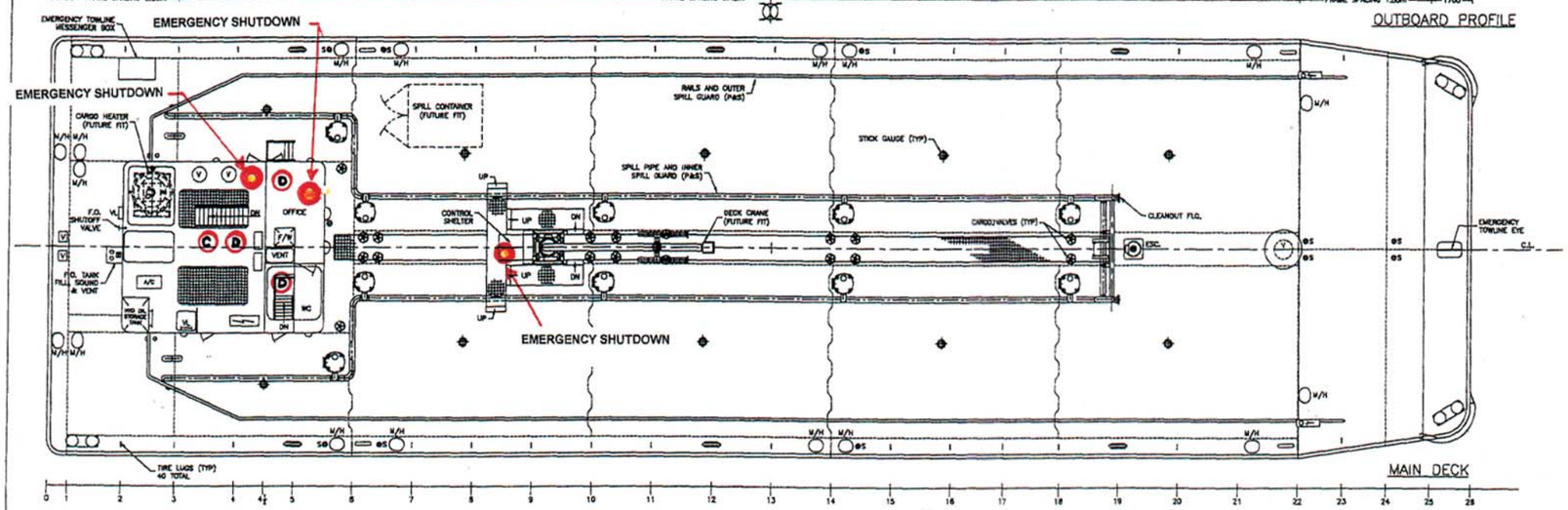
www.islandtug.com



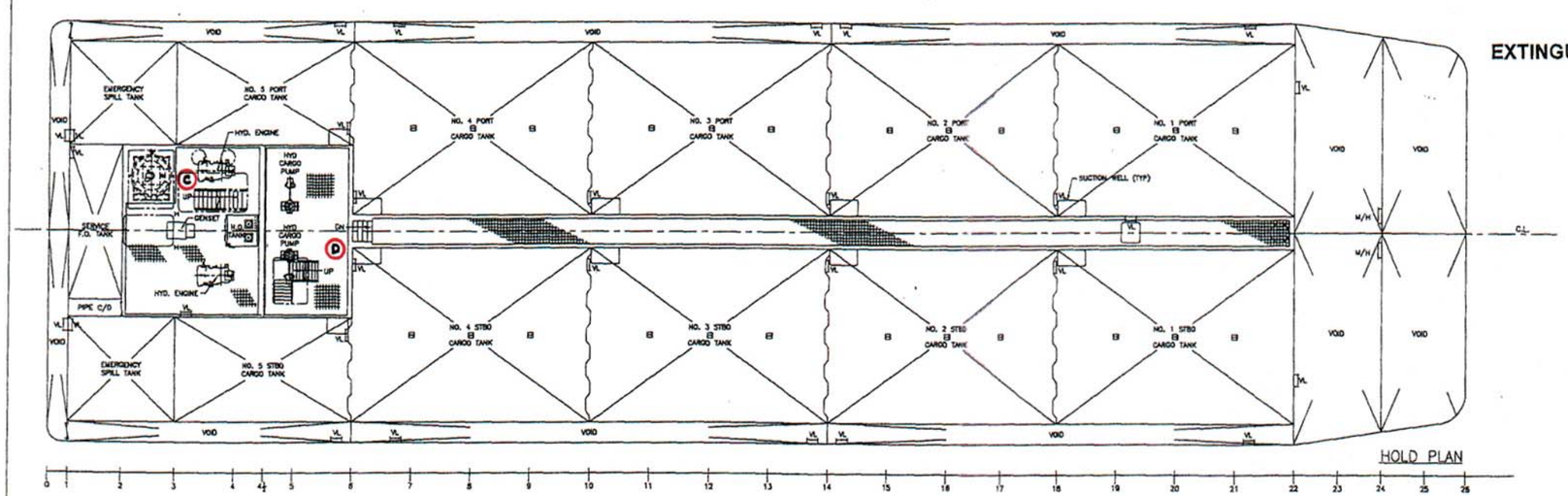
OUTBOARD PROFILE



SECTION



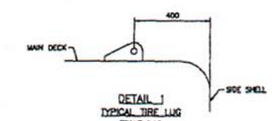
MAIN DECK



HOLD PLAN

PRINCIPAL PARTICULARS

LENGTH OVERALL	58.850 M
BREADTH MOULDED	16.400 M
DEPTH MOULDED	5.500 M



DETAIL 1
TYPICAL TIRE LUG
SCALE 1:10

EMERGENCY SHUTDOWNS

EXTINGUISHERS

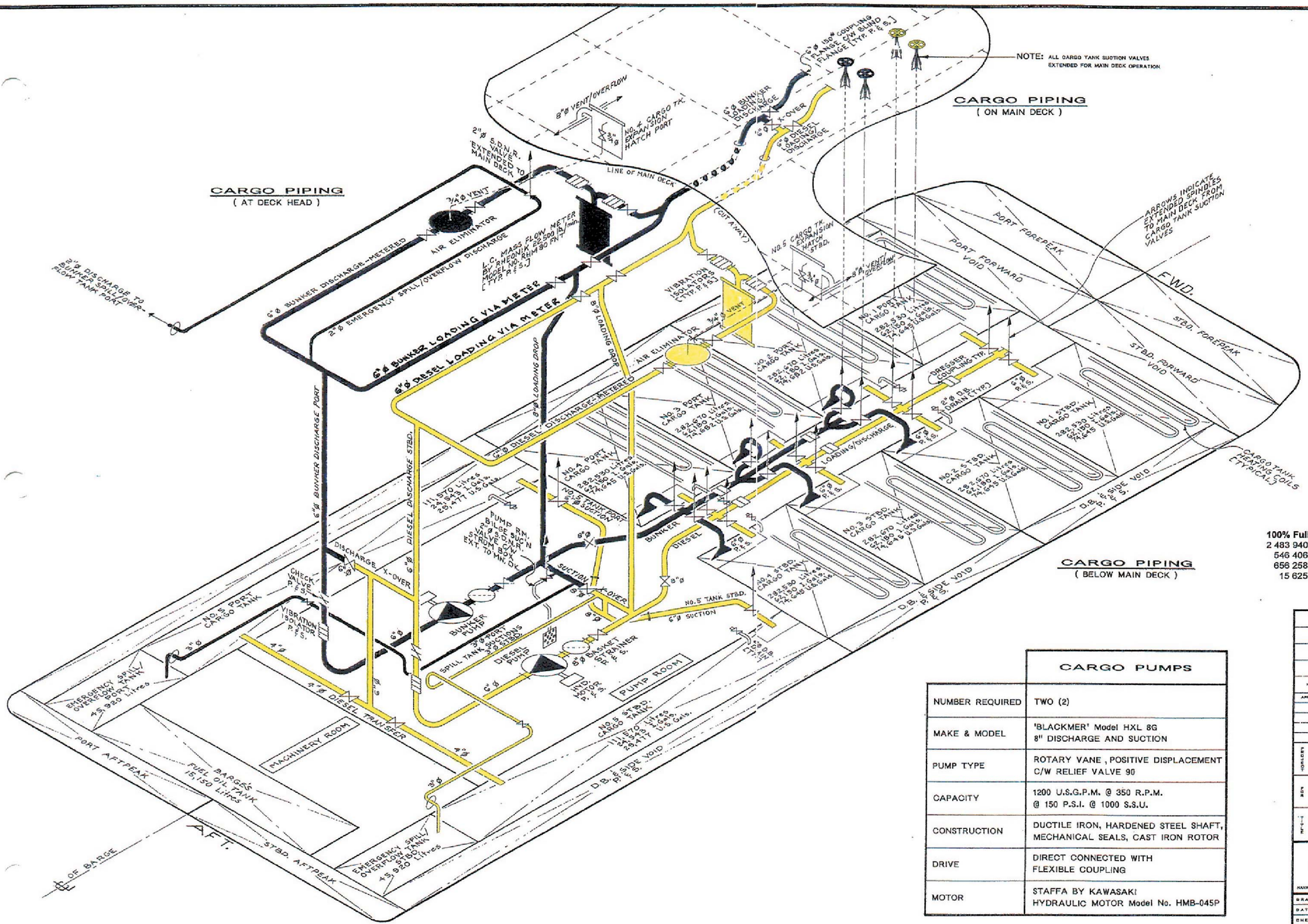
D 2.2kg. ABC DRY CHEMICAL

C 4.5kg. CO_2

OWNER	TC-MS
OWNER	
PROJECT	15,000 BBL. BUNKERING BARGE
OWNER	ISLAND TUG AND BARGE
TITLE	FIRE & SHUTDOWNS
SCALE : 1:75	926 -FIRE

PETER S. HATFIELD LTD.
NAVAL ARCHITECTS, MARINE ENGINEERS AND MARINE CONSULTANTS
VANCOUVER, B.C. CANADA

DIXON NAVAL ARCHITECTS LTD.



Cargo Tank Capacity

100% Full	95% Full	90% Full
2 483 940 litres	2 359 743 litres	2 235 546 litres
546 406 I.gals	519 085 I.gals	491 765 I.gals
656 258 u.s.gals	623 445 u.s.gals	590 623 u.s.gals
15 625 barrels	14 843 barrels	14 062 barrels

	CARGO PUMPS
NUMBER REQUIRED	TWO (2)
MAKE & MODEL	'BLACKMER' Model HXL 8G 8" DISCHARGE AND SUCTION
PUMP TYPE	ROTARY VANE , POSITIVE DISPLACEMENT C/W RELIEF VALVE 90
CAPACITY	1200 U.S.G.P.M. @ 350 R.P.M. @ 150 P.S.I. @ 1000 S.S.U.
CONSTRUCTION	DUCTILE IRON, HARDENED STEEL SHAFT, MECHANICAL SEALS, CAST IRON ROTOR
DRIVE	DIRECT CONNECTED WITH FLEXIBLE COUPLING
MOTOR	STAFFA BY KAWASAKI HYDRAULIC MOTOR Model No. HMB-045P

MARK	DATE	REVISION
APPROVED	DATE	

HOLDER: ITB PROVIDER

SHIP: ISLAND TUG AND BARGE LTD.

TITLE: AS FITTED CARGO PIPING ISOMETRIC

DIXON NAVAL ARCHITECTS LTD.
NAVAL ARCHITECTS — WEST VANCOUVER, B.C., CANADA

DRAWN	G.W.Y.	BUILDER	DRAWING 011000-10
DATE	20SEPT01		
CHECKED			
SCALE N.T.S.		HULL	REVISION

1.8.6 TOWBOATS

The following towboats are used to push/tow ITB barges in US Waters:

- Island Monarch
- Island Tugger
- Island Crown

The attached "Vessel Information Cards" contain key specifications and information about the towboats.

Response Boats, Pumping Equipment, Skimmers

Tug	Response Boat	Pumping Equipment	Skimming Equipment
Island Monarch	Polaris 16.5' – 50 HP Honda 4 stroke outboard	Scow Pump: 5 HP – 3" Honda Centrifugal Pump	Aquaguard RBS-1
Island Tugger	Polaris 16.5' – 50 HP Honda 4 stroke outboard	Scow Pump: 5 HP – 3" Honda Centrifugal Pump, 120 GPM.	Aquaguard RBS-1
Island Crown	Polaris 12' – 25 HP Mercury outboard	Scow Pump: Yanmar Diesel – 2" pump, 47 m3/hr	-

Alaska Non-Tank Vessel Information

Island Monarch

Vessel Fuel Classification	
Maximum fuel capacity	95,100 US Gallons
Maximum fuel volume carried in Alaska waters	95,100 US Gallons
Predominant fuel type (see 18 AAC 75.990)	Non-persistent
Response Planning Standard Volume/Vessel Fuel Classification based on the Maximum fuel capacity of the vessel (see 18 AAC 75.441)	14,265 US Gallons

An 11x17 General Arrangement drawing and Fuel Oil Piping drawing for the Island Monarch are included at the end of this section.

Island Tugger

Vessel Fuel Classification	
Maximum fuel capacity (95%)	55,500 US Gallons
Maximum fuel volume carried in Alaska waters (95%)	55,500 US Gallons
Predominant fuel type (see 18 AAC 75.990)	Non-persistent
Response Planning Standard Volume/Vessel Fuel Classification based on the Maximum fuel capacity of the vessel (see 18 AAC 75.441)	8,321 US Gallons

An 11x17 General Arrangement drawing and Fuel Oil Piping drawing for the Island Tugger are included at the end of this section.

Island Tug

www.islandtug.com

Island Monarch

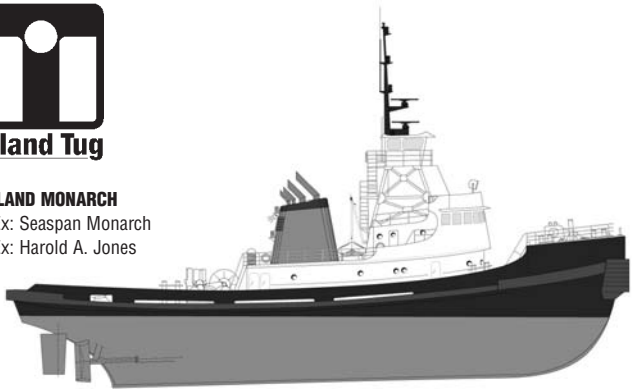
The Island Monarch is a proven off shore tug of 3000 horsepower completely rebuilt by Island Tug in 1995. The Monarch is primarily engaged in pushing and towing of Island Tug's large oil barge fleet. With a 10,000 mile range and large capable towing gear, the Monarch has proven her capabilities in many ocean tows.

Island Tug and Barge Ltd.

55 Rogers Street
Vancouver, BC Canada V6A 3X8
Tel: 604 873-4312 • Fax: 604 873-4318
Email: info@islandtug.com

Island Tug

ISLAND MONARCH
Ex: Seaspan Monarch
Ex: Harold A. Jones



Registration:
Built: Star Shipyards Ltd.,
New Westminster, BC
Flag: Canada built 1966
Re-built: 1995
Owner: Island Tug and Barge Ltd.
Official Number: 326548
Radio Call Sign: CFL4938
MMSI: 316001223
Port of Registry: Vancouver, BC

Classification:
Transport Canada

Dimensions:

Length, overall:	41.45 m
Breadth, moulded:	9.75 m
Depth, moulded:	5.65 m
Design draft:	5.18 m
GRT:	453.91 t
NRT:	136 t

Propulsion:
Engines: 2 x EMD, 8-645 E7
Propulsion: Twin screw, kort nozzle
BHP: 3000
Bollard Pull: 41 t
Generators: 2 x GM 471 - 100 kw
1 x GM 871 Hyd.
Speed: 13 knots
Fuel Consumption: 10.8 t/day

Deck Machinery:
Towing Winch: 1 x Burrard type HID double drum, 790 m of 50.8 mm wire on each drum 120 ton capacity, towing pins c/w hold down hooks
Deck Crane: 3.25 t at 6 ft, 0.5 t at 27 ft.
Tugger winch: 1 x 10 ton stern deck
Stern Roller: 8 ft long by 4.3-ft diameter
Tow pins & grab hooks

Capacities:
Clear Deck Space: 75 m2
Galley freezer: 1
Galley cooler: 1
Potable Water: 40 m3
Fuel: 360 m3

Search lights: 1 at aft station
1 at Port side fwd
1 at Stb side fwd
1 at upper W/H c/w remote control

Electronics:
Control Stations: 3 with winch controls located at aft station
Auto Pilot: 1 x Comdev 2001 with repeater
Magnetic Compass: 2
Gyro Compass: 1 x Sperry SR 120
Radar: 1 x Furruno FR 2110
Radar: 1 x Furruno FR 7041
Radar: 1 x Furruno FR 1941
Watch Keeping Navtex Receiver: 1 x Furruno
DSC VHF: 1x SEA 7157
VHF: 2 x Collins MR-201
VHF: 2 x SEA 156
HF SSB: 1 x Furruno FS1502
GMDSS: Area A2
SART
EPIRB: 1 x NAT 406
Cellular phone
Satellite Comm.: 1 x Qualcomm
DGPS: 1 x Trimble NT 200D
ECDIS: PC based charts integrated DGPS with repeater
Depth Sounders: 1 x Datamarine,
1 x Simarad Recorder
Searchlights: 4

Special Features:
Equipped with high speed RIB rescue craft
Additional Elevated Wheelhouse with 30 ft. height

Accommodation:
10 total

Our Goal:

"Operational Excellence and Enthusiastic Achievement"

www.islandtug.com

Island Tug

www.islandtug.com

Island Tugger

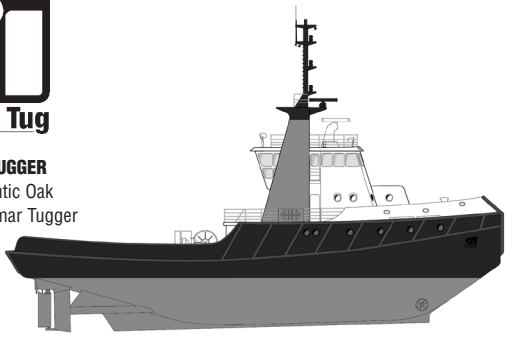
The Island Tugger is an ice strengthened off shore anchor handling tug of 3000 horsepower. This vessel has performed many long range towing assignments such as a complete transit of the Nortwest Passage and a trip from Vancouver to Shanghai to return with the newest of Island Tug's double hulled oil barges.

Island Tug and Barge Ltd.

55 Rogers Street
Vancouver, BC Canada V6A 3X8
Tel: 604 873-4312 • Fax: 604 873-4318
Email: info@islandtug.com

Island Tug

ISLAND TUGGER
Ex: Atlantic Oak
Ex: Canmar Tugger



Registration:
Built: Allied Shipbuilders Ltd., Vancouver BC
Flag: Canada built 1981
Charterer: Island Tug and Barge Ltd.
Owner: Atlantic Towing Limited
Official Number: 395515
Radio Call Sign: VG9866
MMSI: 316003100
Inmarsat: C 431600350 / 431600360
Port of Registry: Saint John, NB

Classification:
Llyods +100A1 Tug Ice Class I

Dimensions:

Length, overall:	35.9 m
Breadth, moulded:	10.36 m
Depth, moulded:	4.81 m
Design draft:	4.28 m
GRT:	479 t
NRT:	143 t

Propulsion:
Engines: 2 x EMD, 8-645 E7
Propulsion: Twin screw, CP, kort nozzle
BHP: 3050
Bollard Pull: 41 t
Thruster: 200 BHP tunnel type bow thruster
Generators: 2 x CAT 3306, 150 kw
1 x Lister 29 kw emergency
Speed: 12.8 knots
Fuel Consumption: 10.8 t/day

Deck Machinery:
Towing Winch: 1 x Burrard type HF-D double drum, 823 m of 45 mm wire on each drum 80 ton capacity, towing pins c/w hold down hooks
Deck Crane: 3.25 t at 6 ft, 0.5 t at 27 ft.
Tugger winch: 2 x 5.4 ton capstans
Stern Roller: 8 ft long by 4.3-ft diameter
Tow pins & grab hooks
Bow Winches: 2 x 60 T barge winches

Capacities:
Clear Deck Space: 97.85 m2
Deck Cargo: 80 t
Walk in Freezer: 1
Walk in cooler: 1
Galley freezer: 1
Galley cooler: 1
Potable Water: 15.23 m3
Balast Water: 100 m3
Fresh water maker: 220 gal per day
Fuel: 210 m3 @ 95%
Deep-Freeze: 4.8 m3
Cooler: 1.9 m3
Search lights: 1 at aft station
1 at Port side fwd
1 at STB side ice light c/w remote control

Electronics:
Control Stations: 4 with winch controls located at aft station and at deck level
Auto Pilot: 1 x Wagner MK4
Magnetic Compass: 2 x J.C. Krohn & Sons
Gyro Compass: 1 x Sperry MK37
Radar: 1 x Furuno 2115/8 with ARPA
Radar: 1 x Furuno 8100 DS S Band
Watch Keeping Receivers: 2 x Marconi
DSC VHF: 2 x Sailor
HF SSB: 2 x Sailor
Inmarsat C: 1 x Sailor/Atlas
1 x Thrane/Thrane
GMDSS: Area A 3 - 1 x Sailor Duplex
SART
EPIRB: 3 x Alden 406
Cellular phone with fax
Satellite Comm.: 1 x Qualcomm
DGPS: 1 Leica MX412B
GPS: 1 Trimble
ECDIS: PC based charts integrated DGPS
Depth Sounder: 1 Paper Recorder
Searchlights: 3

Special Features:
Equipped with high speed RIB rescue craft
Fresh water maker 500 gal per day
Anchor handling tuggers and winches

Accommodation:
15 total

Our Goal:

OPERATIONAL EXCELLENCE AND ENTHUSIASTIC ACHIEVEMENT

"Operational Excellence and Enthusiastic Achievement"

www.islandtug.com

Island Tug

www.islandtug.com

Island Crown

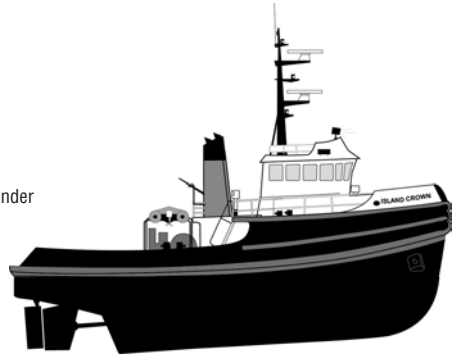
The Island Crown is primarily involved in coastal towing and pushing of Island Tug's oil barge fleet. At 1500 horsepower and designed for maneuverability, the Island Crown is kept busy on a wide variety of assignments.

Island Tug and Barge Ltd.

55 Rogers Street
Vancouver, BC Canada V6A 3X8
Tel: 604 873-4312 • Fax: 604 873-4318
Email: info@islandtug.com

Island Tug

ISLAND CROWN
Ex: Seaspan Defender
Ex: Gulf Julia



Registration:
Built: Vito Steel Boat & Barge Ltd. Delta, BC
Flag: Canada built 1974
Owner: Island Tug and Barge Ltd.
Official Number: 368711
Radio Call Sign: CZ 5425
MMSI: 316001221
Port of Registry: Vancouver, BC

Classification:
Transport Canada

Dimensions:

Length, overall:	23.7 m
Breadth, moulded:	7.32 m
Depth, moulded:	3.89 m
Design draft:	2.9 m
GRT:	148.71 t
NRT:	21.64 t

Propulsion:
Engines: 2 x CAT D348
Propulsion: Twin screw, kort nozzle
BHP: 1450
Bollard Pull: 22 t
Generators: 1 x Cat 3304 - 50 kw
1 x Cat D333 - 50 kw +Hyd.
Speed: 10 knots
Fuel Consumption: 4.9 t/day

Deck Machinery:
Towing Winch: 1 x Burrard type HE single drum, 747 m of 44.5 mm wire 80 ton capacity, towing pins c/w hold down hook
Tugger winch: 1x winch mounted
Stern Roller, tow pins & grab hooks

Capacities:
Clear Deck Space: 49 m2
Galley freezer: 1
Galley cooler: 1
Deep Freeze: 1
Potable Water: 8.5 m3
Fuel: 78 m3
Search lights: 1 at aft station
1 at Port side fwd
1 at Stb side fwd

Electronics:
Control Stations: 3 with winch controls located at aft station and upper station
Auto Pilot: 1 x Sperry Mk IV
Magnetic Compass
Gyro Compass: 1 x Sperry SR 120
Radar: 2 x Furruno FR 7041
DSC VHF: 1 x SEA 7157
VHF: 1 x Collins MR-201
VHF: 1 x Ratheon Ray 78
HF SSB: 1 x Motorola Triton 40
GMDSS: Area A1
EPIRB: 1 x 406
Cellular phone
Satellite Comm.: 1 x Qualcomm
DGPS: 1 x Furruno FR 70 with GR80 differential
ECDIS - PC based charts integrated DGPS
Depth Sounders: 1 x Datamarine
Searchlights 3

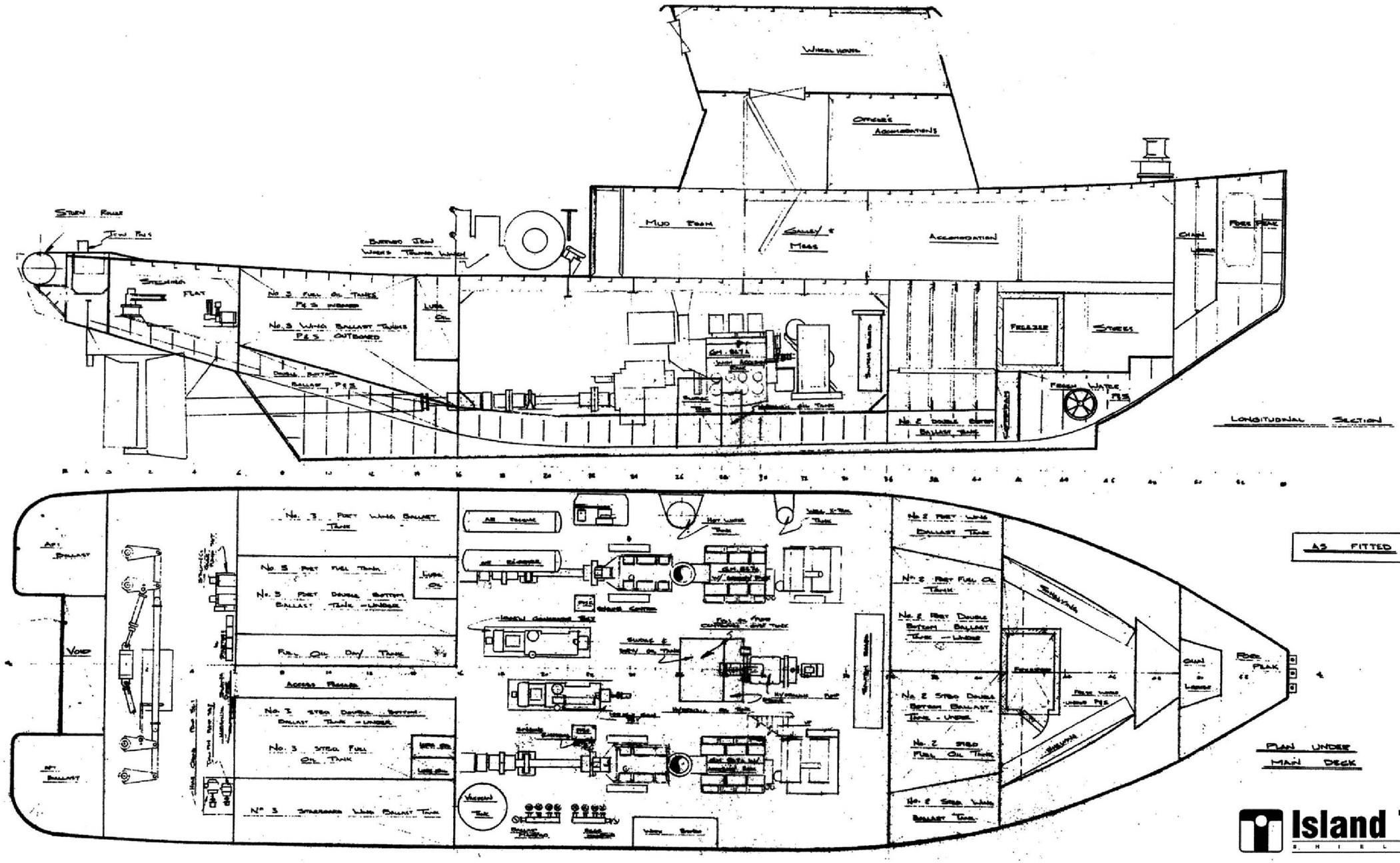
Special Features:
Equipped with high speed RIB rescue craft

Accommodation:
8 total

Our Goal:

"Operational Excellence and Enthusiastic Achievement"

www.islandtug.com

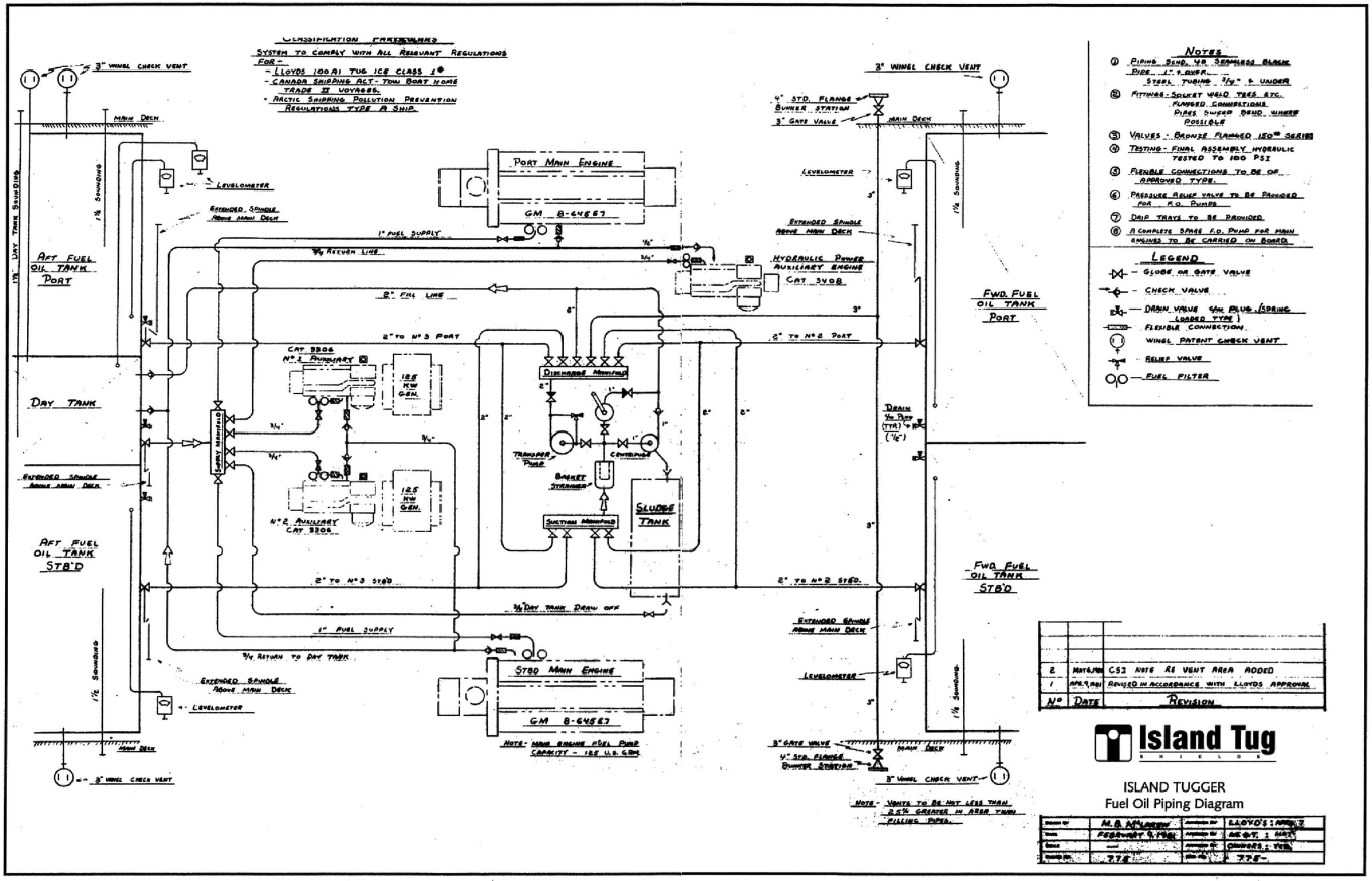


AS FITTED

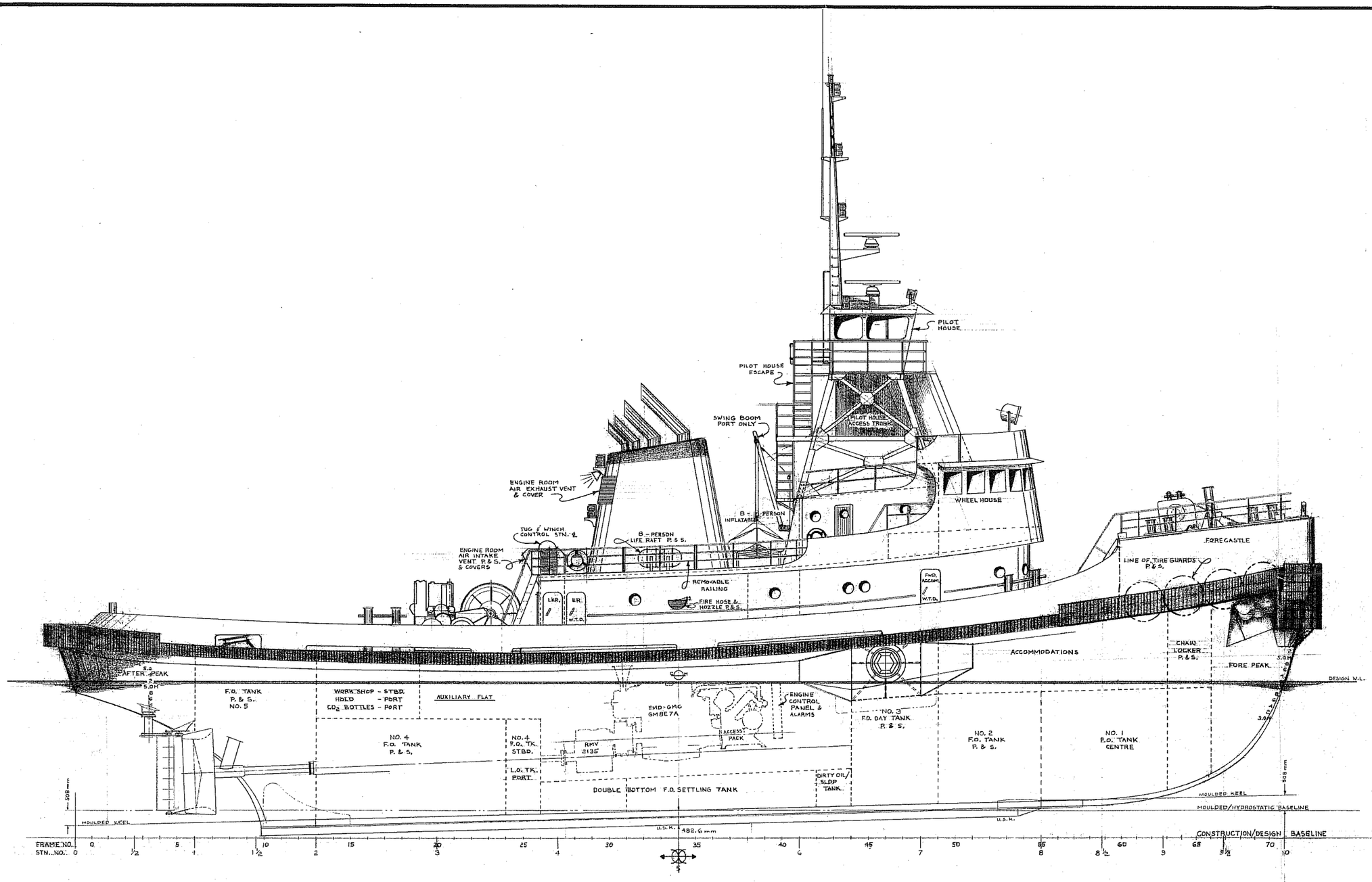
Island Tug
SHIELDS

ISLAND TUGGER
General Arrangement

Drawn By	C. S. Ko	Approved By	
Date	June 18, 1991	Approved By	
Scale	1/4" = 1FT	Approved By	
Drawing No.	776	Sheet No.	776 - 3



CLASSIFICATION PARTICULARS
SYSTEM TO COMPLY WITH ALL RELEVANT REGULATIONS FOR -
- LLOYDS 100A1 TUG ICE CLASS 1#
- CANADA SHIPPING ACT - TOW BOAT HOME TRADE II VOYAGES.
- ARCTIC SHIPPING POLLUTION PREVENTION REGULATIONS TYPE A SHIP.
3" WINEL CHECK VENT
MAIN DECK
LEVELOMETER
EXTENDED SPINDLE ABOVE MAIN DECK
1½ SOUNDING
1½" DAY TANK SOUNDING
AFT FUEL OIL TANK PORT
DAY TANK
AFT FUEL OIL TANK STB'D
PORT MAIN ENGINE
GM 8-645E7
1" FUEL SUPPLY
¾ RETURN LINE
2" FILL LINE
2" TO Nº 3 PORT
2" TO Nº 2 PORT
CAT 3306 Nº 1 AUXILIARY
125 KW GEN.
Nº 2 AUXILIARY CAT 3306
SUPPLY MANIFOLD
DISCHARGE MANIFOLD
TRANSFER PUMP
CENTRIFUGE
BASKET STRAINER
SUCTION MANIFOLD
SLUDGE TANK
2" TO Nº 3 STB'D
2" TO Nº 2 STB'D.
¾" DAY TANK DRAW OFF
1" FUEL SUPPLY
¾ RETURN TO DAY TANK
STBD MAIN ENGINE
GM 8-645E7
NOTE - MAIN ENGINE FUEL PUMP CAPACITY - 125 U.S. GPM
4" STD. FLANGE BUNKER STATION
3" GATE VALVE
HYDRAULIC POWER AUXILIARY ENGINE CAT 3408
FWD. FUEL OIL TANK PORT
FWD. FUEL OIL TANK STB'D
DRAIN ¼" PLUG (TYP.) (½")
3" GATE VALVE
4" STD. FLANGE BUNKER STATION
NOTE - VENTS TO BE NOT LESS THAN 25% GREATER IN AREA THAN FILLING PIPES.
NOTES
① PIPING SCHD. 40 SEAMLESS BLACK PIPE 1" + OVER. STEEL TUBING ¾" + UNDER
② FITTINGS - SOCKET WELD TEES ETC. FLANGED CONNECTIONS PIPES SWEEP BEND WHERE POSSIBLE
③ VALVES - BRONZE FLANGED 150# SERIES
④ TESTING - FINAL ASSEMBLY HYDRAULIC TESTED TO 100 PSI
⑤ FLEXIBLE CONNECTIONS TO BE OF APPROVED TYPE.
⑥ PRESSURE RELIEF VALVE TO BE PROVIDED FOR F.O. PUMPS
⑦ DRIP TRAYS TO BE PROVIDED
⑧ A COMPLETE SPARE F.O. PUMP FOR MAIN ENGINES TO BE CARRIED ON BOARD.
LEGEND
GLOBE OR GATE VALVE
CHECK VALVE
DRAIN VALVE c/w PLUG (SPRING LOADED TYPE)
FLEXIBLE CONNECTION
WINEL PATENT CHECK VENT
RELIEF VALVE
FUEL FILTER
2 MAY 6, 1981 CSI NOTE RE VENT AREA ADDED
1 APR. 9, 1981 REVISED IN ACCORDANCE WITH LLOYDS APPROVAL
Nº DATE REVISION
Island Tug SHIELDS
ISLAND TUGGER
Fuel Oil Piping Diagram
M.B. McLAREN
FEBRUARY 9, 1981
LLOYD'S : APRIL 7
OWNERS : YES
775
775-



PRINCIPAL PARTICULARS

Length Overall	136' - 1"
Registered Length	126' - 0"
Breadth MLD.	31' - 11"
Depth MLD.	17' - 6"
Gross Tonnage (I.M.O. Convention)	453.91
Voyage Class	Foreign
Power	2 x 1,450 B.H.P. (2,162 kw. total)
Manning	7

MARK	DATE	REVISION
E	Aug 11,2003	'AS FITTED' Moved bar keel aft. and added fairing plate line. Modified Pin fairing plate lines. Moved fwd. bhd. to fr. 55. Modified tank designations and Principal Particulars. Added reference lines.
D	May 5, 2003	Articulated Tug/Barge (A.T.B.) Conversion, Triple Rudders & Extra Heavy Bar Keel added
C	Feb. 28, 1996	CO2 Bottles charged to Port Side
B	FEB. 16,1996	'AS FITTED'
A	MAY 11,1994	MODIFY PILOT HOUSE, FWD. FENDERING AND BOAT DAVITS, ADD ENG./GEARBOX OUTLINE

APPROVED	DATE

VESSEL: ISLAND MONARCH

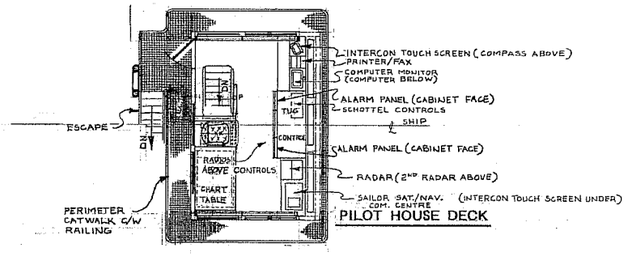
OWNER: ISLAND TUG AND BARGE LTD.

TITLE: OUTBOARD PROFILE

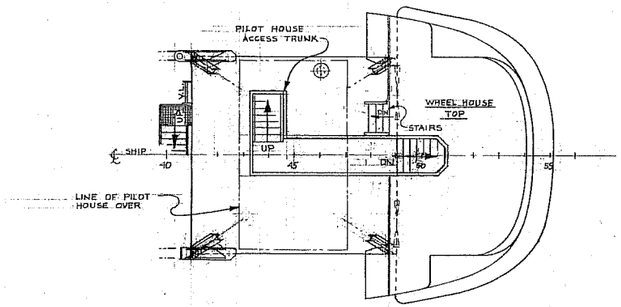
DIXON NAVAL ARCHITECTS LTD.

NAVAL ARCHITECTS — WEST VANCOUVER, B.C., CANADA

DRAWN	G.W.V.	BUILDER: STAR SHIPYARD (MERCER'S) LTD. NEW WESTMINSTER 1966	DRAWING: 0893-3
DATE	APR. 25/94		
CHECKED			
SCALE: 1/4" = 1'-0"		HULL: 379	REVISION: E

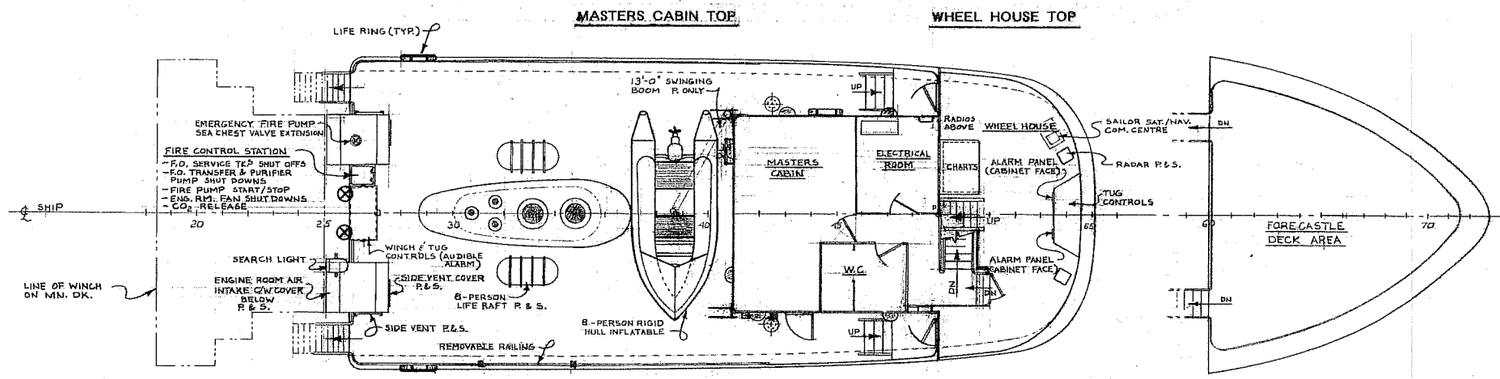


PILOT HOUSE DECK



MASTERS CABIN TOP

WHEEL HOUSE TOP

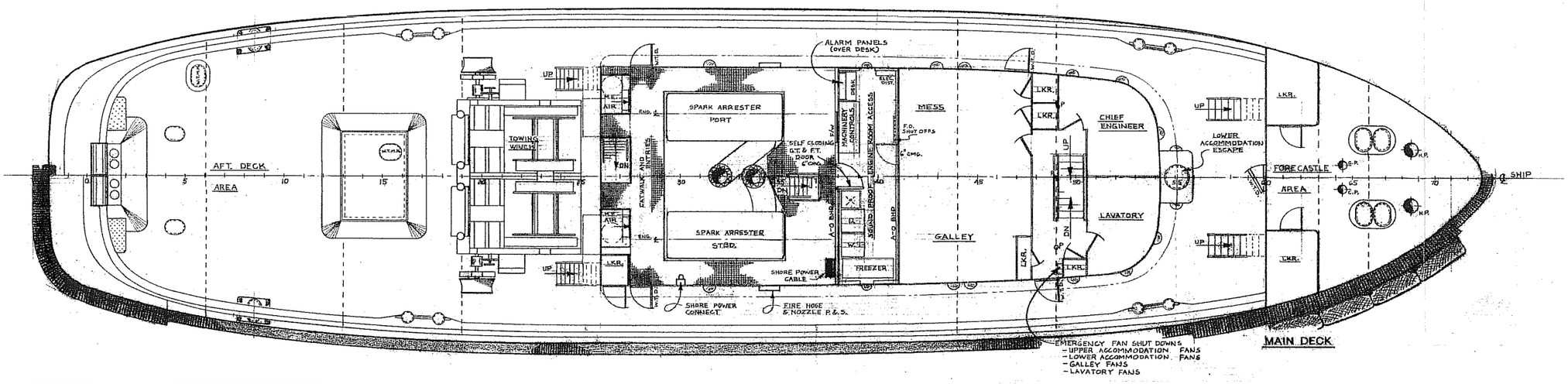


BOAT DECK

FORECASTLE DECK

REFERENCE DRAWINGS:
ROBERT ALLAN LTD.
DWG. NO. 42-64-1 REV. 2 DEC. 8, 1964 G.A.
17-81-170 REV. 0 APR. 2, 1981 PILOT HSE. ARRANG.
12-81-240 REV. 2 MAR. 17, 1981 PILOT TOWER STRUC.
NOTE: PILOT HOUSE FROM M.V. 'SEASPAN PROTECTOR'

SHIP HISTORY: ISLAND MONARCH EX. SEASPAN MONARCH
EX. HAROLD A. JONES
BUILT: STAR SHIPYARD (MERCERS) LTD., NEW WESTMINSTER
HULL NO. 375



MAIN DECK

MARK	DATE	REVISION
C	Aug 11,2003	'AS FITTED' Modified Pilot House outfit arrangement. Added Liferaft and F.O. Shutoffs. Misc. notes added.
B	May 5, 2003	Pilot House Beam increased
A	FEB.20/1996	'AS FITTED'

APPROVED	DATE

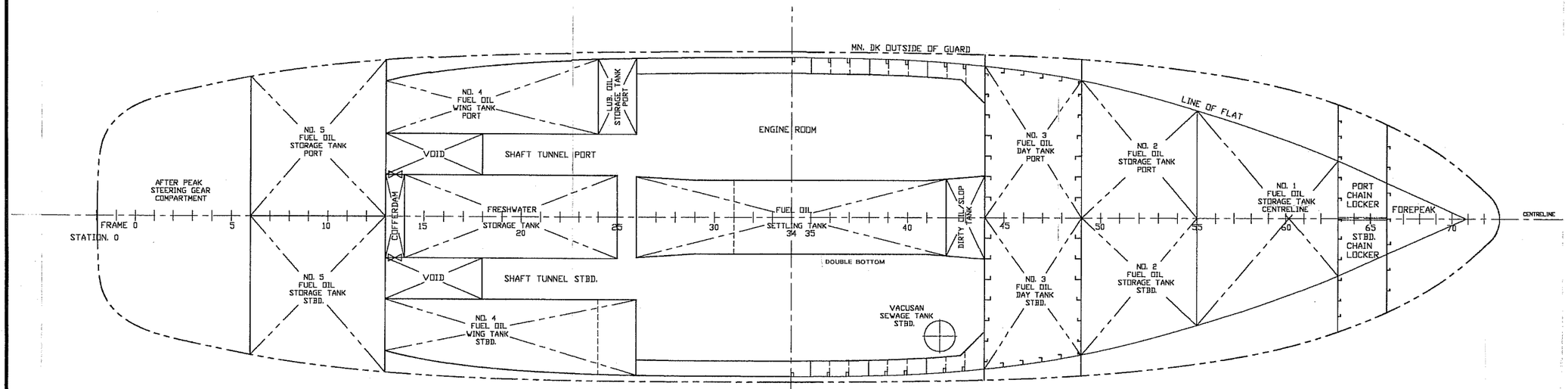
PROJECT: ISLAND MONARCH

OWNER: ISLAND TUG AND BARGE LTD.

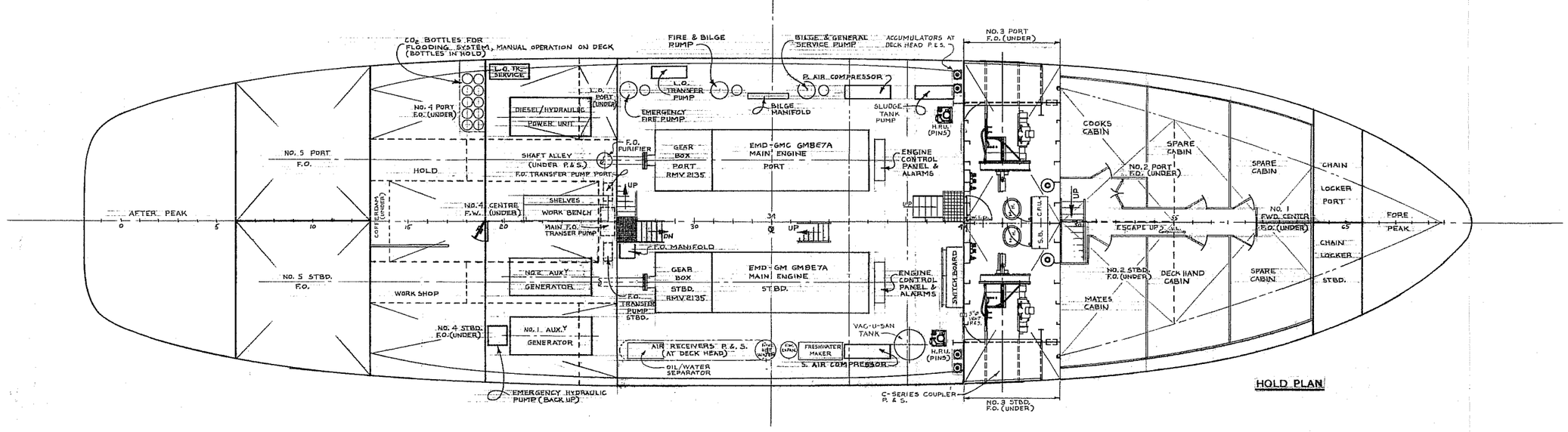
TITLE: DECK ARRANGEMENTS

DIXON NAVAL ARCHITECTS LTD.
NAVAL ARCHITECTS — WEST VANCOUVER, B.C., CANADA

DRAWN	G.W.V.	BUILDER	DRAWING
DATE	MAY 16, 19[illegible]		0893-4
CHECKED			
SCALE		HULL	REVISION
1/4" = 1'-0"			C



TANK PLAN



HOLD PLAN

MARK	DATE	REVISION
B	Aug. 9, 2003	Fwd. Bhd. moved to frame 55.Tank Plan, F.O. Purifier, Watermaker, Shaft alley voids added.
A	May 5, 2003	Articulated Tug/Barge (A.T.B.) Conversion, Tank Numbers Changed Vac-U-San Tk. & C.D. added, Oil/Water Separator moved

APPROVED	DATE

PROJECT: ISLAND MONARCH

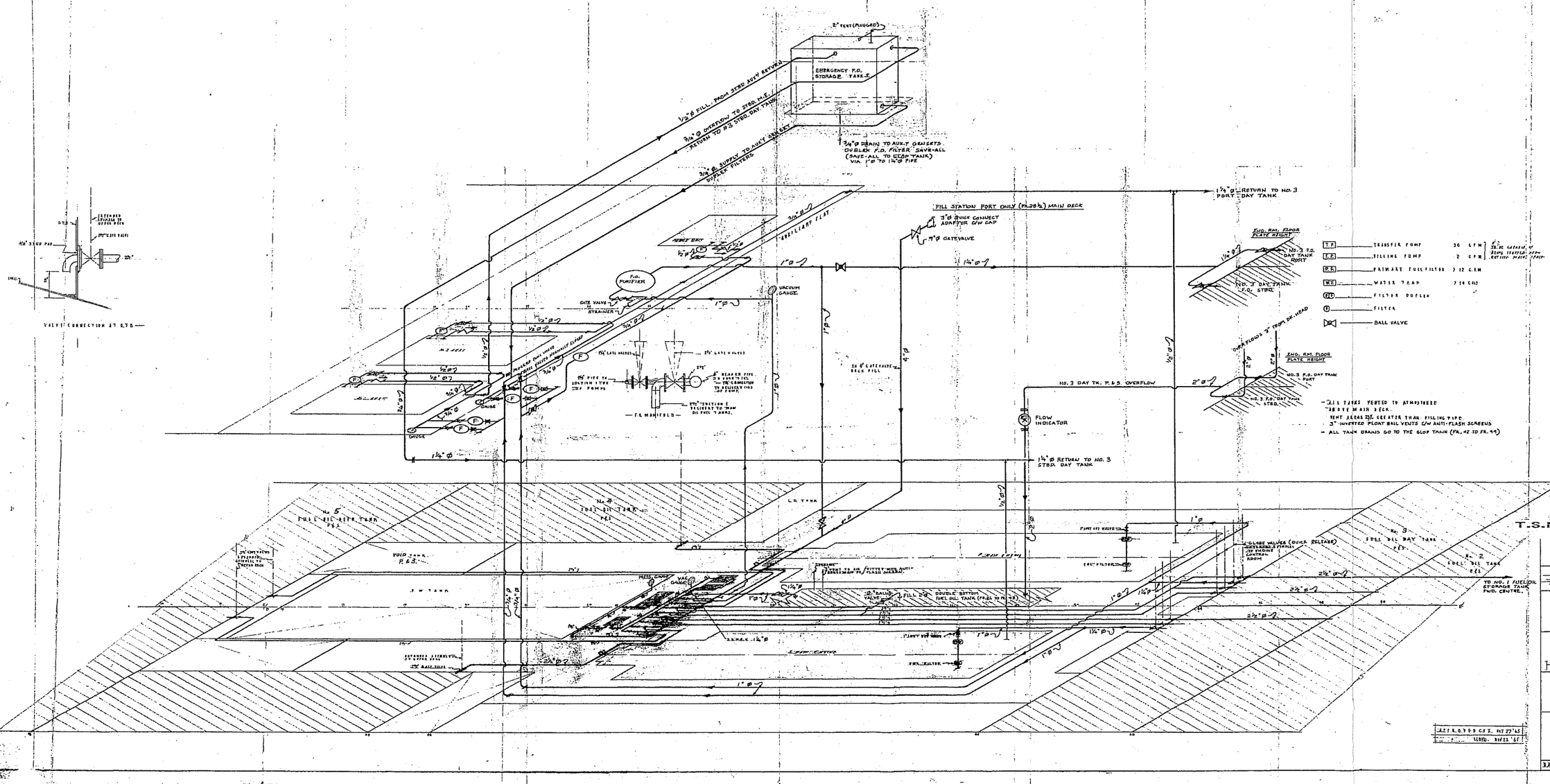
FOR: ISLAND TUG AND BARGE LTD.

TITLE: HOLD PLAN
'AS FITTED'

DIXON NAVAL ARCHITECTS LTD.

NAVAL ARCHITECTS — WEST VANCOUVER, B.C., CANADA

DRAWN	G.W.Y.	BUILDER	DRAWING
DATE	FEB 22,1995		0893-6
CHECKED			
SCALE		HULL	REVISION
1/4" = 1'-0"			B



T.P.	TRANSFER PUMP	30 GPM	
F.P.	FILLING PUMP	2 GPM	
P.F.	PRIMARY FUEL FILTER	12 GPM	
W.T.	WATER TRAP	14 GPM	
F.F.	FILTER DUPLEX		
F	FILTER		
	BALL VALVE		

- ALL TANKS VENTED TO ATMOSPHERE ABOVE MAIN DECK.
- VENT AREAS 25% GREATER THAN FILLING PIPE.
- 3" INVERTED PLOAT BALL VENTS C/W ANTI-FLASH SCREENS
- ALL TANK DRAINS GO TO THE SLOP TANK (FR. 42 TO FR. 44)

T.S.M.V. ISLAND MONARCH

ISLAND TUG AND BARGE LTD.

REVISED DEC. 2003 D.N.A. G.W.V.

2	A.T.B. REFIT REVISIONS AND MODIFICATIONS	DEC. 2, 2003
0	LLOYDS REVISIONS	DATE 1-66
REV.	REVISION	DATE

STAR SHIPYARD (MERCERS) LTD

NEW WESTMINSTER, B.C.

TWIN SCREW TUG

VANCOUVER TUGBOAT CO.

HULL 379

FUEL OIL SYSTEM

"AS FITTED"

ROBERT ALLAN LTD

NAVAL ARCHITECTS

VANCOUVER, B.C.

DATE OCT. 5 1965 REV. 2 DWG. 47-66-32

Southeast Alaska Petroleum Resource Organization, Inc.
540 Water Street, Suite 201 • Ketchikan, Alaska 99901
(907) 225-7002 • Fax (907) 247-1117
www.seapro.org

April 25, 2003

Bob Shields
Island Tug & Barge, Ltd.
55 Rogers Street
Vancouver, BC V6A 3X8
Canada

Dear Bob,

Please find enclosed 2 signed copies of the Statement of Contractual Terms for your non-tank vessels. This document is the original Statement of Contractual Terms with the inclusion of a sentence acknowledging that SEAPRO will respond to an incident involving one of your non-tank vessels. Mr. Bob Flint of ADEC has given me verbal approval on the language. If this meets with your approval, please sign both copies and return one to SEAPRO.

Best regards,

David Owings
General Manager

Southeast Alaska Petroleum Resource Organization, Inc.
540 Water Street, Suite 201 • Ketchikan, Alaska 99901
(907) 225-7002 • Fax (907) 247-1117
www.seapro.org

STATEMENT OF CONTRACTUAL TERMS

As required by Alaska Statute and Regulations in fulfillment of a requirement for registration as a Primary Response Action Contractor and for approval of an Oil Discharge and Contingency Plan. This Statement of Contractual Terms also applies to Non-Tank Vessels listed in the Island Tug and Barge Plan.

PLAN TITLE: U.S. Shipboard Oil Pollution Emergency Plan
PLAN HOLDER: Island Tug and Barge, Ltd.

This statement is a certification to Alaska Department of Environmental Conservation summarizing the contract between Island Tug and Barge, Ltd., the oil discharge and contingency plan holder, (hereinafter "PLAN HOLDER"), and Southeast Alaska Petroleum Resource Organization, Inc., (SEAPRO), the Primary Response Action Contractor, (hereinafter "CONTRACTOR"), executed on April 30, 2000, the original of which is located at 540 Water Street, Ketchikan, Alaska, as evidence of the PLAN HOLDER's access to the containment, control and /or cleanup resources required under standards at AS 46.04.030 and 18 AAC 75.400 - 18 AAC 75.495. PLAN HOLDER and CONTRACTOR attest to the Department that the provisions of this written contract clearly obligate CONTRACTOR to:

(A) provide the response services and equipment listed for the CONTRACTOR in the contingency plan;

(B) respond if a discharge occurs;

(C) notify the PLAN HOLDER immediately if the CONTRACTOR cannot carry out the response actions specified in this contract or the contingency plan;

(D) given written notice at least 30 days before terminating this contract with the PLAN HOLDER;

(E) respond to a Department conducted discharge exercise required of the PLAN HOLDER;

(F) continuously maintain in a state of readiness, in accordance with industry standards, the equipment and other spill response resources to be provided by the CONTRACTOR under the contingency plan.

I hereby certify that, as the representative of the PLAN HOLDER, I have the legal authority to bind the PLAN HOLDER in this matter. I am aware that false statements, representations, or certifications may be punishable as civil or criminal violations of law.

c:main\manager\soct97.doc

Date May 8, 2003

Print Name Robert Shields

Title President

Signature

Island Tug and Barge Ltd.

For:

Plan Holder

I hereby certify that, as the representative of the CONTRACTOR, I have the legal authority to bind the CONTRACTOR in this matter. I am aware that false statements, representations, or certifications may be punishable as civil or criminal violations of law.

Date April 25, 2003

Print Name David Owings

Title General Manager

Signature

For: Southeast Alaska Petroleum Resource Organization, Inc.
CONTRACTOR

1.8.7 ITB SUPPLIER

DESCRIPTION AND KEY SPECIFICATIONS

See attached "Vessel Information Card".

DRAWINGS AND CARGO TANK CAPACITIES

The following drawings for the ITB Supplier are located at the back of this sub-Section:

- General Arrangement drawing
- Cargo Piping Diagram

The following drawing for the ITB Supplier is maintained separately at the Island Tug and Barge Head Office at 55 Rogers Street in Vancouver, BC, Canada:

• Midship Section drawing

CARGO TANK, SERVICE FUEL OIL, HYDRAULIC OIL, LUBE OIL, DRAIN/SPILL TANK CAPACITIES

Cargo tank capacities and the capacity of the spill tank are shown on the General Arrangement draiwng.

In addition to cargo tanks, the ITB Supplier has the following tanks:

- Spill Tank 44,000 L
- Ship's fuel oil: 10,000 L
- Hydraulic Oil Reservoir 2,500 L (approx.)
- Lube Oil NIL

KEY SPILL PREVENTION FEATURES

- Double hulled to IMO specifications.
- All compartment hatches, vents, and loading and discharge manifolds are contained within a continuous coaming draining to an emergency spill tank.
- All cargo hoses are continuous lengths with camlock fittings at both ends. Camlocks are secured by wire during use. Hoses are tested annually to 1.5 times their rated working pressure by a qualified outside contractor.
- Rising stick and overfill indicators.
- Closed loading capability.
- Overfill protection system with common vent system drawing to the spill retention tank.
- For lost barge recovery purposes, the barge carries an emergency towline including a floating trail line with fluorescent floating buoy. When the barge is being pushed, the emergency tow wire is shackled to a wire pennant at the bow of the tug which runs the length of the tug, and is shackled in turn to the main tow wire.
- The attending tug boat carries emergency response boat.
- NO SMOKING, NO OPEN LIGHTS, and NO VISITOR signs are clearly visible from both sides of the barge. A red dangerous cargo light and flag are located on the mast.

OIL SPILL RESPONSE EQUIPMENT

#	EQUIPMENT DESCRIPTION	QUANTITY	LOCATION
1	Containment Boom	1000’	Hydraulic Reel – Fwd
2	Boom Towing Bridles	2	Spill Container
3	Absorbent Boom 4” x 10’	10	Spill Container
4	Absorbent Pads (100 per Bale)	6	Spill Container
5	Absorbent Pads (Bales)	4	Engine Room
6	Absorbent Pads (Bales)	1	Control House
7	Open Headed Barrels (empty)	4	Spill Container
8	Pad/Barrel Ringer	1	Spill Container
9	Aluminum Shovels	3	Spill Container
10	Aluminum Pitch Fork	2	Spill Container
11	Heavy Duty Plastic Bags	200	Spill Container
12	Anchor Assemblies	4	Spill Container
13	Garbage Pails 100 ltr.	4	Spill Container
14	Response Boat (on tug)	1	On Tug – See Section 1.8.6 – Towboats for Description
15	Oil Skimmer and Accessories Aquaguard RBS-5 (Nameplate: 75 bbls / hour)	1	Spill Container

FIRE FIGHTING EQUIPMENT

The ITB Supplier has a fixed fire suppression system in the machinery space as well as portable ABC and portable CO_2 fire extinguishers throughout the vessel.

DISCHARGE INFORMATION

OSRO - Average Most Probable Discharge (AMPD):

The AMPD of the ITB Supplier is 50 barrels of Group I Non-Persistent Oil. Island Tug and Barge transfers oil only at marine transportation-related (MTR) facilities.

OSRO - Maximum Most Probable Discharge (MMPD):

The MMPD of the ITB Supplier, is 2,500 barrels of Group I Non-Persistent Oil.

OSRO - Worst Case Discharge (WCD):

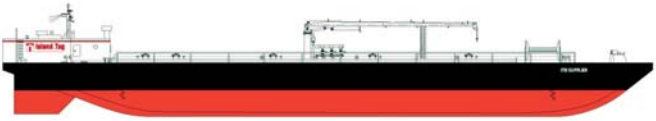
The WCD for the ITB Supplier is 25,000 barrels of Group I Non-Persistent Oil, equal to the barge's total cargo capacity.

VESSEL STABILITY DATA

Stability data for the ITB Supplier is available on a 24 hour basis through the ITB Office and through ITB's Naval Architect.

Island Tug

ITB Supplier



Registration:
Built: Tacoma
Rebuilt: Van Ship, 2007
Flag: Canada
Owner: Island Tug and Barge
Official Number: 828529
Port of Registry: Vancouver

Classification
Transport Canada Class A Oil Barge
Cargos with flash point below 60 degrees C

Dimensions

Length Overall:	74.68m
Breadth, moulded:	18.29m
Depth, mouded:	6.25m
GRT:	2129m
NRT	1104m

Main Machinery
2 Diesel Hydraulic Power Units
2 Ship Service Generators
Electronic Controllable Flow and Pressure Hydraulic Control System

Deck Machinery
Hydraulic Hose Handling Crane
Hydraulic Pollution Boom Reel
2 Barge Winches

Capacities
10 Cargo Tanks
25,000 bbls @ 95%
Spill retain tank

Pumping system
3 independent load and discharge systems
Hydraulically driven pumps
Stripping system

Special Features
Double Hull OPA 90 compliant
Tank Radar remote monitoring and ullaging system connected to central cargo management computer
Rising Stick Fill Indicators
Alarmed Overfill Protection
Closed Loading Vapour Recovery Capable
Quality Control Lab

Our Goal

OPERATIONAL EXCELLENCE AND ENTHUSIASTIC ACHIEVEMENT

Operational Excellence and Enthusiastic Achievement

www.islandtug.com

REV.	REVISIONS	BY	DATE
10	UPDATED TO INCORPORATE OWNERS DECISIONS	ID	JAN 29/07
9	UPDATED TO INCORPORATE OWNERS DECISIONS	ID	JAN 19/07
8	UPDATED TO INCORPORATE OWNERS DECISIONS	ID	JAN 11/07
7	UPDATED TO INCORPORATE OWNERS DECISIONS	ID	DEC 20/06
6	UPDATED TO INCORPORATE OWNERS DECISIONS	ID	DEC 11/06
5	UPDATED TO INCORPORATE OWNERS DECISIONS	ID	NOV 08/06
4	UPDATED TO INCORPORATE OWNERS DECISIONS	ID	OCT 16/06
3	UPDATED TO INCORPORATE OWNERS COMMENTS	SYQ	OCT 03/06
2	UPDATED TO INCORPORATE OWNERS COMMENTS	DLG	SEP 30/06
1	FIRST ISSUE	SYQ	SEP 29/06

APPROVAL STATUS

REVISION	APPROVAL AGENCY	DATE	INITIALS

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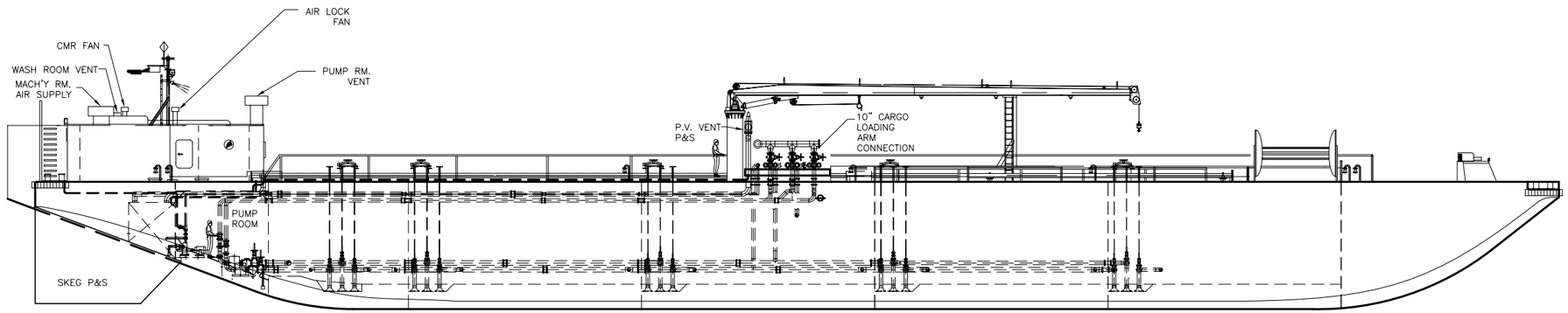
NAVAL ARCHITECTS AND MARINE ENGINEERS
230–1639 WEST 2nd AVE. VANCOUVER, B.C.

VESSEL
ITB SUPPLIER

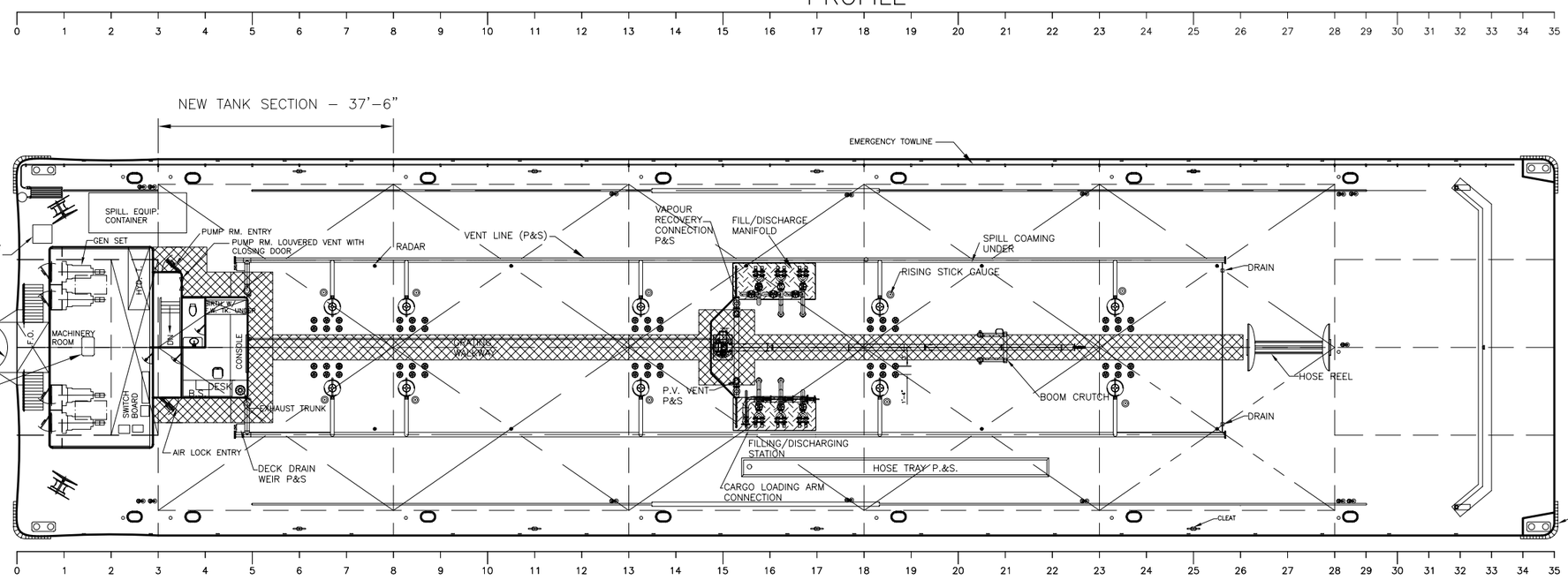
CLIENT
ISLAND TUG AND BARGE

TITLE
GENERAL ARRANGEMENT

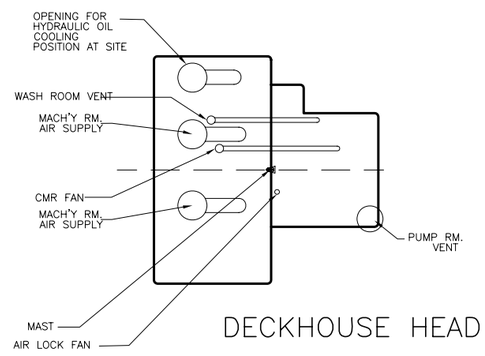
DRAWN BY	CHECKED	PROJECT No.	
SYQ	MM	205–179	
DATE	SHEET	DWG. No.	REV.
SEP 29/06	1 OF 3	30000	10



PROFILE



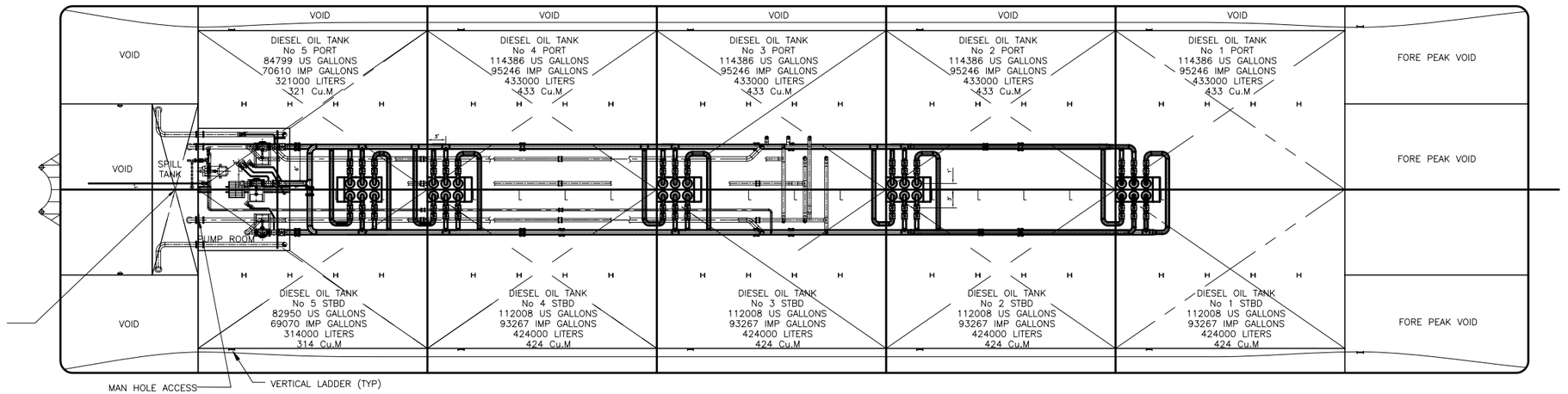
DECK PLAN



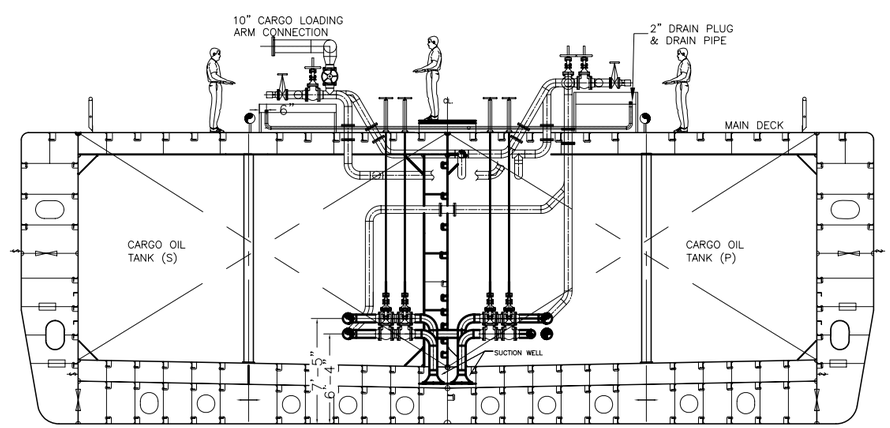
DECKHOUSE HEAD

LENGTH	245'
BREATH	60'
DEPTH	20' 6"
CAPACITY	4.06 MILLION LITRES 1,073,000 US GALLONS

TITLE			
GENERAL ARRANGEMENT PROFILE AND MAIN DECK PLAN			
SCALE 3/64": 1'	PROJECT No. 205–179	DWG. No. 30000	SHEET 2 OF 3
ROBERT ALLAN LTD.			REV. 10



BELOW DECK



TYPICAL SECTION
SCALE: 3/32":1'

TITLE			
GENERAL ARRANGEMENT TYPICAL SECTION AND TANK PLAN			
SCALE 3/64": 1'	PROJECT No. 205–179	DWG. No. 30000	SHEET 3 OF 3
ROBERT ALLAN LTD.			REV. 10

SYMBOLS

- EXPANSION JOINT
- GATE VALVE
- CHECK VALVE
- BASKET STRAINER
- CENTRIFUGE PUMP
- BALL VALVE
- DECK/BHD PENETRATION
- BELL MOUTH
- GLOBE VALVE
- REDUCER
- SHORE CONNECTION
- FLEX HOSE

NOTES:

1. PROVIDE CARGO OIL SYSTEM IN ACCORDANCE WITH CLASS REGULATION , TO THE SATISFACTION OF THE ATTENDING SURVEYOR.
2. USE VALVES AND EQUIPMENT INTENDED FOR OIL USING.
3. ROUTE ALL PIPING CLEAR OF HOT SURFACES AND ELECTRICAL EQUIPMENT.
4. PROVIDE 2" DRAIN VALVE AND PIPE UNDER THE DRIP TRAYS ON PORT SIDE AND STBD SIDE.
5. AFTER INSTALLATION, CLEAN AND FLUSH SYSTEM IN ACCORDANCE WITH VESSEL SPECIFICATION. PRESSURE TEST SYSTEM IN ACCORDANCE WITH VESSEL SPECIFICATION.
6. CLEARLY LABEL FUNCTION AND POSITION OF ALL VALVE OPERATORS.
7. ADEQUATELY SUPPORT AND SECURE ALL FUEL LINES.

MATERIAL:

SERVICE: FUEL OIL				CLASS 150			MATERIAL: CARBON STEEL						
RATED TEMPERATURE	100 ^{0}F (38 ^{0}C)												
PRESSURE	CLASS 150 - MAXIMUM WORKING PRESSURE IS 275 PSI (19 bar) AT RATED TEMPERATURE												
SIZE	1 1/2 DN40	2 DN50	2 1/2 DN65	3 DN80	4 DN100	6 DN150	8 DN200	10 DN250					
PIPE	SCH. 40												
	ASTM A-106 GR.B SMLS												
FITTINGS	ASTM A105, ASME B16.11 CL 3000 SW						ASTM A234 WPB SMLS, ASME B16.9 BUTT WELDED, BORE TO MATCH PIPE						
FLANGES	ASTM A105, ASME B16.5 CL 150 RF SW						ASTM A105, ASME B16.5 CL 150 RF SO OR WN, BORE TO MATCH PIPE						

REV.	REVISIONS	BY	DATE
2	ADDED EXPANSION BELLOWS BETWEEN PUMPS AND STRAINERS	JZ	27 MAR. 07
1	FIRST ISSUE	RAL	19 MAR. 07

APPROVAL STATUS

REVISION	APPROVAL AGENCY	DATE	INITIALS

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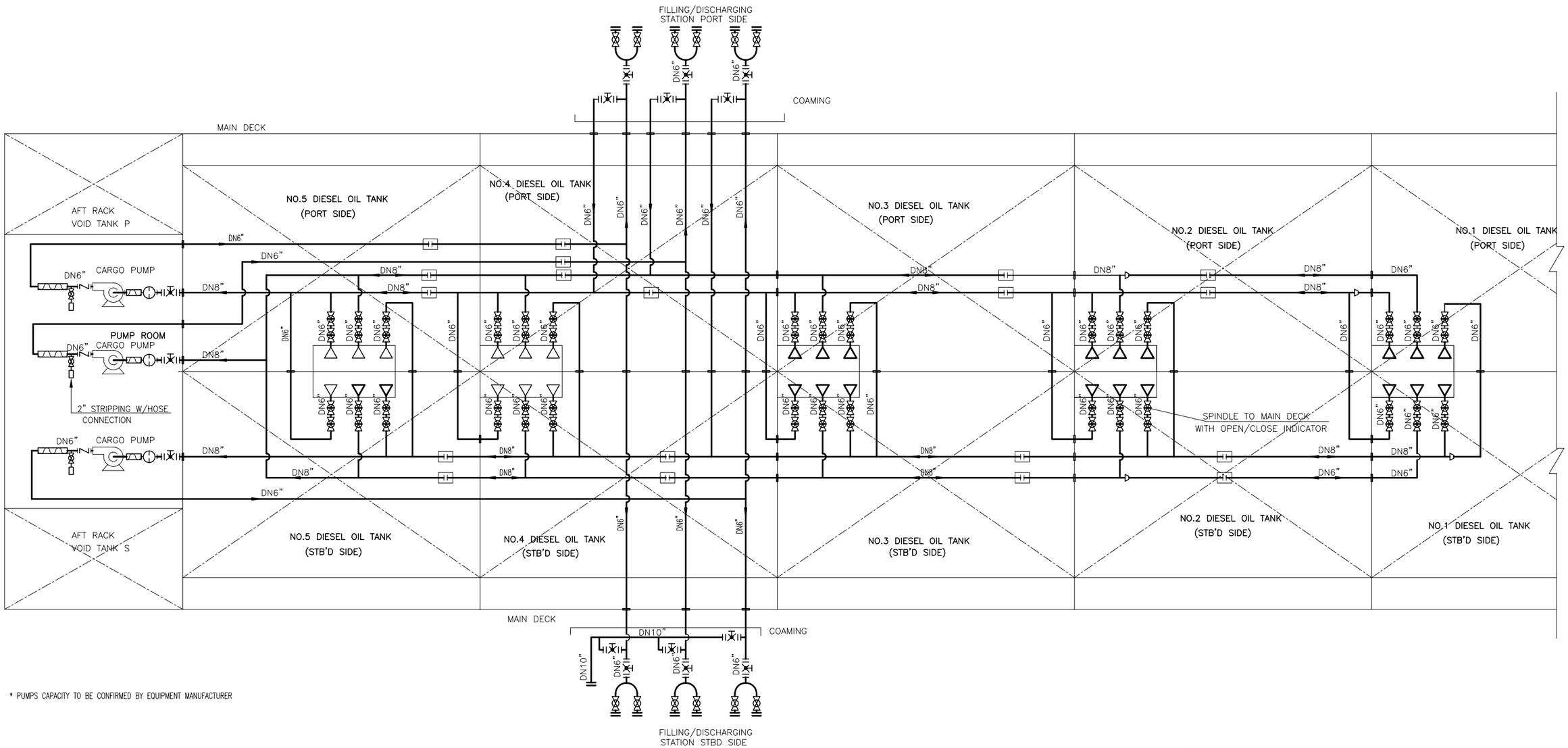
230–1639 WEST 2nd AVE. VANCOUVER, B.C.

VESSEL
ITB SUPPLIER

CLIENT
ISLAND TUG AND BARGE

TITLE
CARGO OIL SYSTEM–ONE LINE DIAGRAM

DRAWN BY	CHECKED	PROJECT No.	
J. ZHANG	MM	205–179	
DATE 19 MAR. 07	SHEET 1 OF 2	DWG. No. 78010	REV. 2



* PUMPS CAPACITY TO BE CONFIRMED BY EQUIPMENT MANUFACTURER

TITLE	SYSTEM–ONE LINE DIAGRAM CARGO OIL		
SCALE N.T.S.	PROJECT No. 205–179	DWG. No. 78010	SHEET 2 OF 2
ROBERT ALLAN LTD.			REV. 2

1.8.8 ITB Reliant and ITB Resolution

DESCRIPTION AND KEY SPECIFICATIONS

The ITB Reliant and ITB Resolution are identical sister vessels. The attached "Vessel Information Card" contains the particulars for these two barges.

DRAWINGS AND CARGO TANK CAPACITIES

The following drawings for the ITB Reliant and ITB Resolution are located at the back of this sub-Section:

- General Arrangement drawing
- Cargo Piping Schematic
- Capacity Plan

The following drawing is maintained separately at the Island Tug and Barge Head Office at 55 Rogers Street in Vancouver, BC, Canada:

• Midship Section drawing

CARGO OIL, SERVICE FUEL OIL, HYDRAULIC OIL, LUBE OIL, DRAIN/SPILLTANK CAPACITIES

All tank cargo oil tank capacities as well as miscellaneous tank capacities are shown on the attached Capacity Plan.

KEY SPILL PREVENTION FEATURES

- Double hulled to IMO specifications.
- All compartment hatches, vents, and loading and discharge manifolds are contained within a continuous coaming. An emergency spill tank is located near the stern.
- All cargo hoses are continuous lengths with camlock fittings at both ends. Camlocks are secured by wire during use. Hoses are tested annually to 1.5 times their rated working pressure by a qualified outside contractor.
- A bow thruster which is operated from the towboat.
- Five emergency shutdowns:
  - Cargo Monitoring Room
  - Forward end Spill Coaming
  - Aft End of Spill Coaming
  - At cargo manifold
  - remote umbilical shut down for shore side
- Rising stick fill indicators and two point overfill alarms.
- Remote ullage system.
- Closed loading and vapour recovery vent system.
- Overfill protection.
- For lost barge recovery purposes, the barge carries an emergency towline consisting of approximately 90m of 32 mm wire, shackled to 46m of equivalent strength nylon messenger line, and 15m of 38mm polyprop trailing line via a spliced eye and an 450mm plastic orange float with through-centre galvanised rod and eye. Galvanised flat bar clips are welded one end to deck and formed over the emergency towline at each transverse frame in staggered directions. A messenger line box is fitted at the port aft end of the barge. The box accommodates the messenger line and float.. When the barge is being pushed, the emergency tow wire is shackled to a wire pennant at the bow of the tug which runs the length of the tug, and is shackled in turn to the main tow wire.
- The barge does not carry an emergency boat, however the tug carries a suitable emergency craft.
- NO SMOKING, NO OPEN LIGHTS, and NO VISITOR signs are clearly visible from both sides of the barge. A red dangerous cargo light and flag are located on the mast.
- A gas sensor is located in the barge's pumproom.

OIL SPILL RESPONSE EQUIPMENT

#	EQUIPMENT DESCRIPTION	QUANTITY	LOCATION
1	Containment Boom	1000’	Hydraulic Reel – Fwd
2	Boom Towing Bridles	2	Pollution Container
3	Absorbent Boom 4” x 10’	10	Pollution Container
4	Absorbent Pads (100 per Bale)	6	Pollution Container
5	Absorbent Pads (Bales)	4	Engine Room
6	Absorbent Pads (Bales)	1	Control Room
7	Open Headed Barrels (empty)	4	Pollution Container
8	Pad/Barrel Ringer	1	Pollution Container
9	Aluminum Shovels	3	Pollution Container
10	Aluminum Pitch Fork	2	Pollution Container
11	Heavy Duty Plastic Bags	200	Pollution Container
12	Anchor Assemblies	4	Pollution Container
13	Garbage Pails 100 ltr.	4	Pollution Container
14	Response Boat (on tug)	1	On Tug – See Section 1.8.6 – Towboats for Description
15	Oil Skimmer and Accessories Aquaguard RBS-5 (Nameplate: 75 bbls / hour)	1	Pollution Container

FIRE FIGHTING EQUIPMENT

The following fire fighting equipment is carried on board the ITB Reliant and Resolution:

- Machinery Room:
  - Fixed CO_2 fire suppression system
  - One 2.25 kg, portable ABC dry chemical extinguisher.
  - Two 4.5 kg, portable CO_2 fire extinguishers
- CMR:
  - One 2.25 kg, portable ABC dry chemical extinguisher
- Pump Room:
  - Two 2.25 kg, portable ABC dry chemical extinguishers

DISCHARGE INFORMATION

OSRO - Average Most Probable Discharge (AMPD):

The AMPD of the ITB Reliant and ITB Resolution is 50 barrels of refined petroleum products. Island Tug and Barge transfers oil only at marine transportation-related (MTR) facilities.

OSRO - Maximum Most Probable Discharge (MMPD):

The MMPD of the ITB Reliant and ITB Resolution, is 2,650 barrels of diesel fuel or motor gasoline (10% of total cargo capacity).

OSRO - Worst Case Probable Discharge (WCPD):

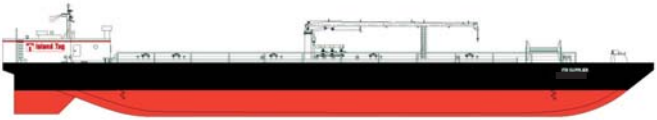
The WCPD for the ITB Reliant and ITB Resolution is 26,650 barrels of diesel fuel or motor gasoline, equal to the barge's total cargo capacity.

VESSEL STABILITY DATA

Stability data for the ITB Reliant and ITB Resolution is available on a 24 hour basis through the ITB Office and through ITB's Naval Architect.

Island Tug

ITB Reliant and ITB Resolution



The **ITB Reliant and ITB Resolution** are double hulled, IMO compliant, OPA 90 oil tank barges having an aggregate capacity of 26,500 bbls carried in 12 cargo tanks.

Designed for both pushing and towing, the barges are equipped with a 320 kW, omni-directional, pump jet bow thruster for aiding in docking and maneuvering. Equipped with 4 independent pumping systems, the barges can deliver a variety of products quickly and efficiently. The barges are equipped for closed loading vapour recovery, with a common vent/overfill system that connects to shore side vapour systems.

The barges normal area of operations include British Columbia, Southeast Alaska, and Puget Sound.

Registration:

Built: Penglai Bohai Shipyard, 2007
Flag: Canada
Owner: Island Tug and Barge
Official Number: 830999 (Reliant)
831000 (Resolution)
Port of Registry: Vancouver

Classification

Transport Canada Class A Oil Barge
Cargos with flash point below 60 C

Dimensions

Length Overall:	77.96m
Breadth, moulded:	20.15m
Depth, mouded:	6.00m
GRT:	2398
NRT	1217

Capacities

12 Cargo Tanks
26,500 bbls @ 95%
Spill retain tank

Main Machinery

2 Diesel Hydraulic Power Units
1 Ship Service Generator
Electronic Controllable Flow and Pressure Hydraulic Control System

Deck Machinery

Hydraulic Hose Handling Crane
Hydraulic Pollution Boom Reel
2 Barge Winches

Pumping system

4 independent load and discharge systems
Hydraulically driven pumps
Stripping system

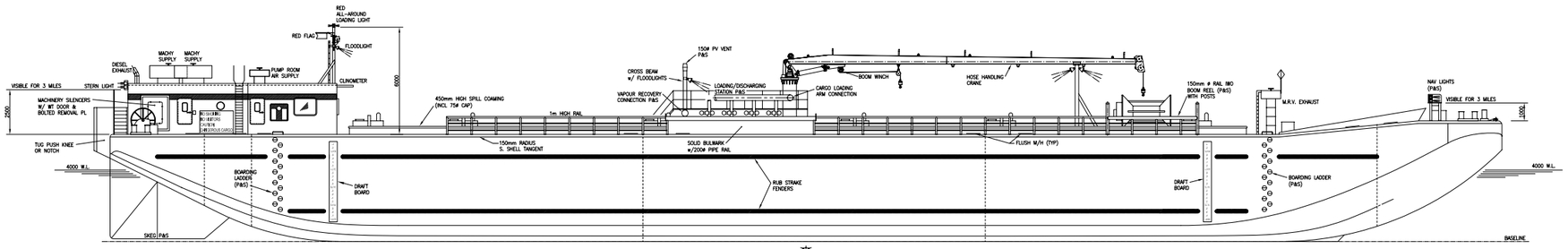
Special Features

Double Hull OPA 90 compliant
Pushing notch
320kW pump jet bow thruster (remote controlled from Tug)
Tank Radar remote monitoring and ullaging system connected to central cargo management computer
Rising Stick Fill Indicators
Alarmed high level and Overfill Protection
Closed Loading Vapour Recovery
Quality Control Lab
Fire detection and alarm system
Machinery Room Fixed Fire protection system
Pump room hazardous vapour detection system
International Loadline for unrestricted ocean service.
Onboard containment boom , skimmer, and other oil spil lcontainment equipment.and

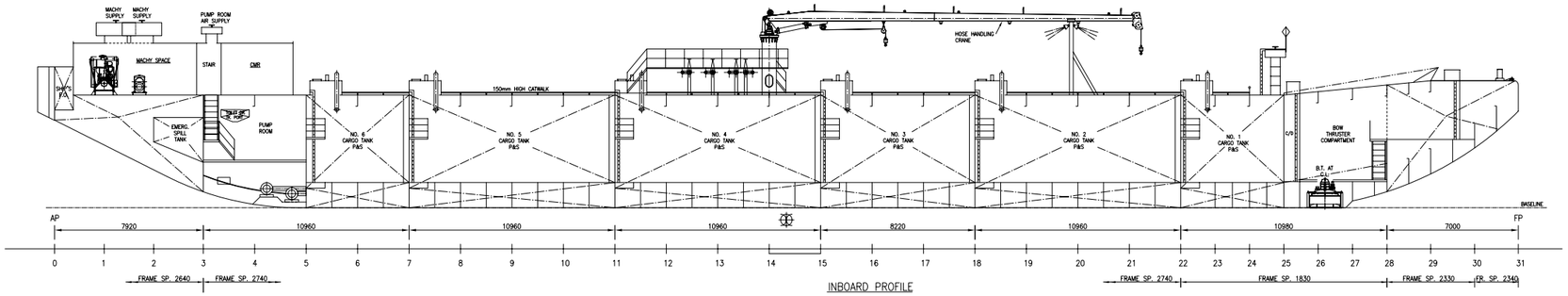
Our Goal

Operational Excellence and Enthusiastic Achievement

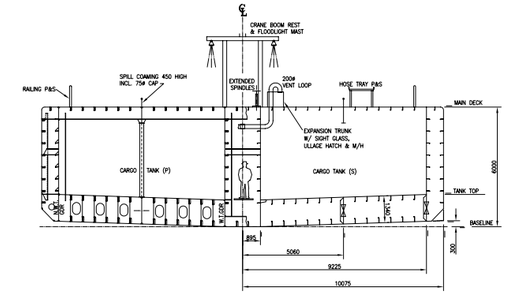
www.islandtug.com



OUTBOARD PROFILE



INBOARD PROFILE



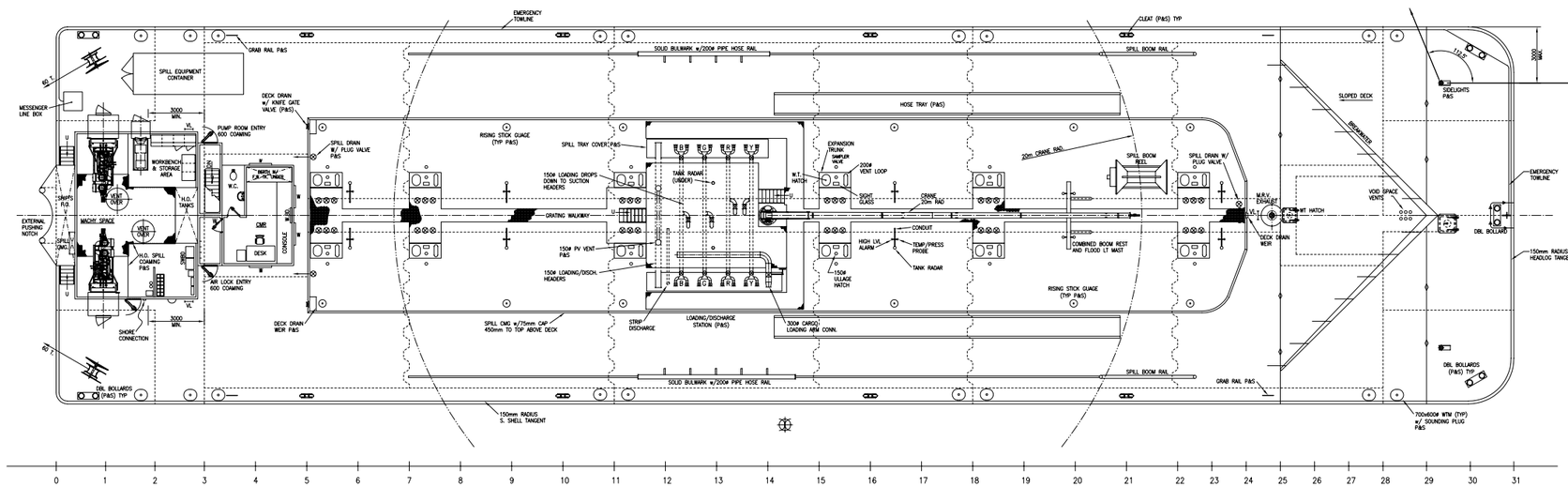
SECTION
VIEW LOOKING FORWARD

REGULATION FOR VESSELS BEING PUSHED OR TOWED	CANADA SHIPPING ACT COLLISION REGULATIONS C1416 LIST OF LIGHTS				
	(1) PORT SIDELIGHT	112.5°	RED	3 MILES	DOUBLE
	(1) STBD SIDELIGHT	112.5°	GREEN	3 MILES	DOUBLE
	(1) STERN LIGHT	135°	WHITE	3 MILES	DOUBLE
	(1) LOADING LIGHT	360°	RED	TBD	

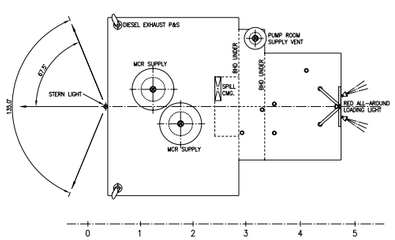
NOTE

1. LIGHTS TO COMPLY WITH COLLISION REGULATIONS, AND A DECKHOUSE AIR LOCK TO COMPLY WITH THE APPLICABLE ABS REGULATIONS AS TO PROVIDE AN EQUIVALENT PROTECTION IN SEGREGATION OF THE DECKHOUSE FROM THE CARGO AREA.

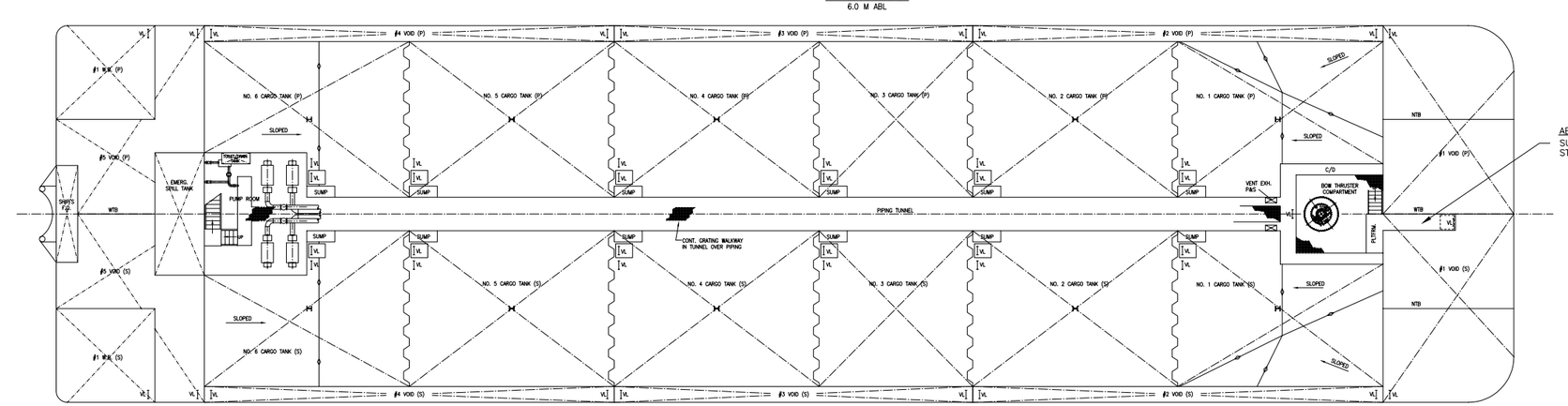
PRINCIPAL PARTICULARS	
LENGTH O.A.	77.96m
BREADTH MLD.	20.15m
DEPTH MLD.	6.00m



MAIN DECK PLAN
6.0 M ABL



DECKHOUSE TOP
2.75M ABV. M.DK.



HOLD PLAN

ABS COMMENT:
SUBJECT TO DAMAGE STABILITY CALCULATIONS

NO.	REVISION	BY	CHKD	DATE
8	DRAWING REVIEWED BY ABS.	MH	GR	21/12/2006
7	DRAWING APPROVED BY TC-MS AND MODIFIED IN ACCORDANCE WITH COMMENTS	RW	GR	05/10/2006
6	BOW THRUSTER SPACE HATCH RELOCATED. NAV LIGHTS MOVED FWD	RW	GR	15/09/2006
5	MODIFIED TO SUIT MECHANICAL DWGS.	RW	GR	15/09/2006
4	ISSUED	RW	GR	11/08/2006
3	MODIFIED TO SUIT STRUCTURAL DRAWINGS	RW	GR	04/08/2006
2	MODIFIED IN ACCORDANCE WITH OWNER'S REQUIREMENTS.	KS	GR	28/07/2006
1	MODIFIED IN ACCORDANCE TO OWNER'S COMMENTS.	RW	GR	14/07/2006

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Drawing approved by: ABS (RIVER ONLY) 12.12.06
Date: 2.2.06

Preferred for Innovation

Aker Yards Marine Inc.
Aker Yards Marine (US) Inc.

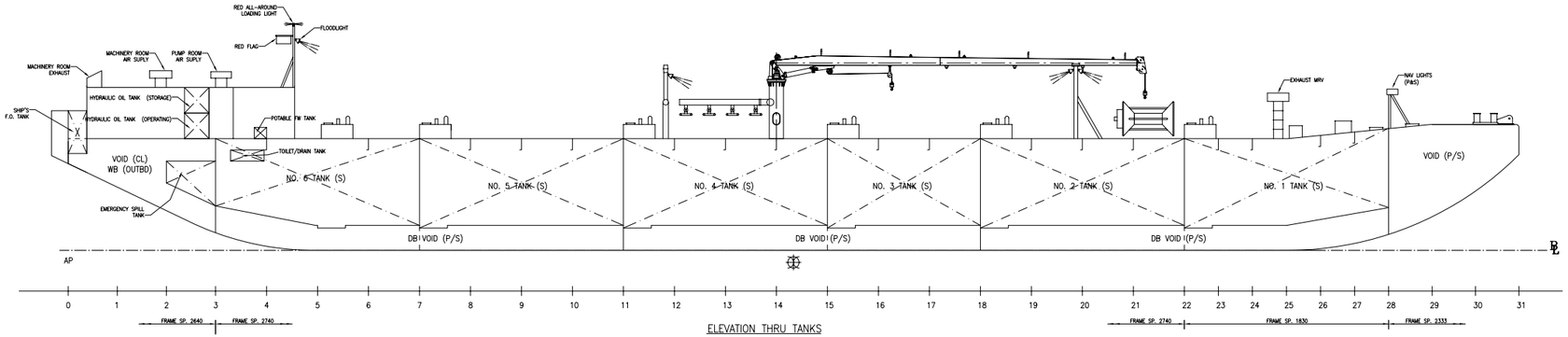
CLIENT: ISLAND TUG & BARGE

PROJECT: 25,000 Bbl. D.H. BARGE

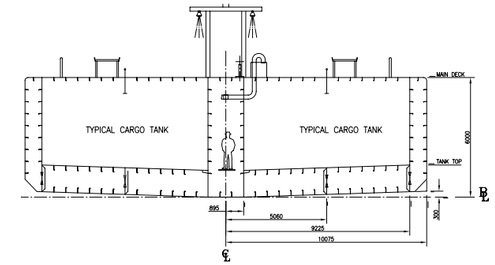
DRAWN BY: AR/RW DATE: 20.6.06
CHECKED BY: GR DATE: 10.6.06
SCALE: 1:100

DWG. NO. 832-601-01 SHT. 1 OF 1
REV. NO. 8

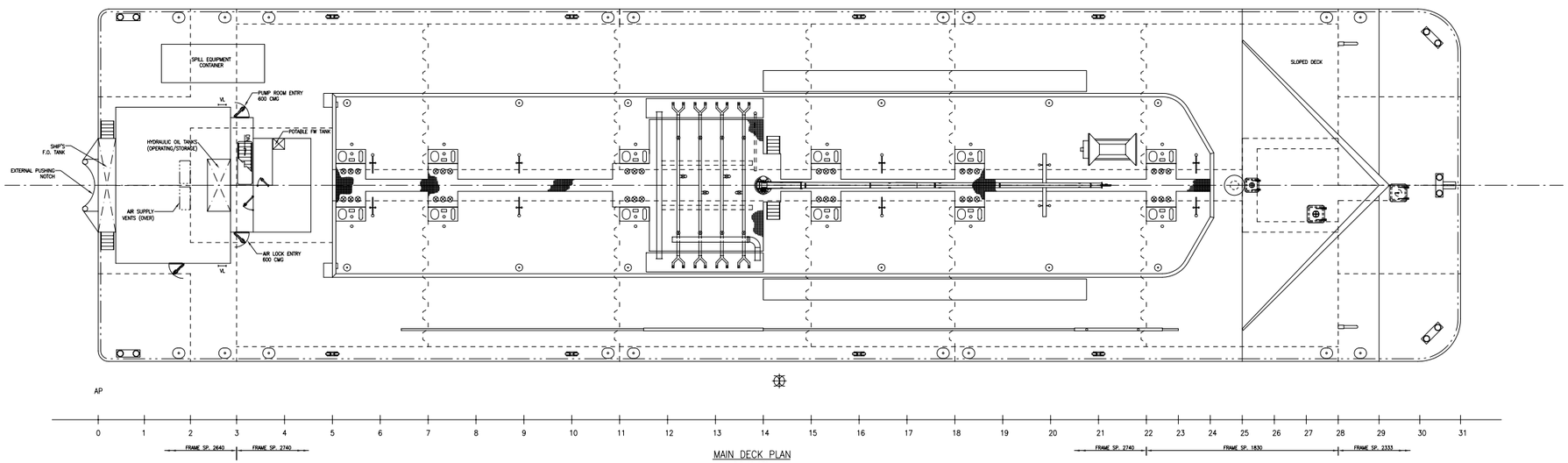
TITLE: GENERAL ARRANGEMENT



ELEVATION THRU TANKS



SECTION
VIEW LOOKING FORWARD



MAIN DECK PLAN
6.0 M ABL

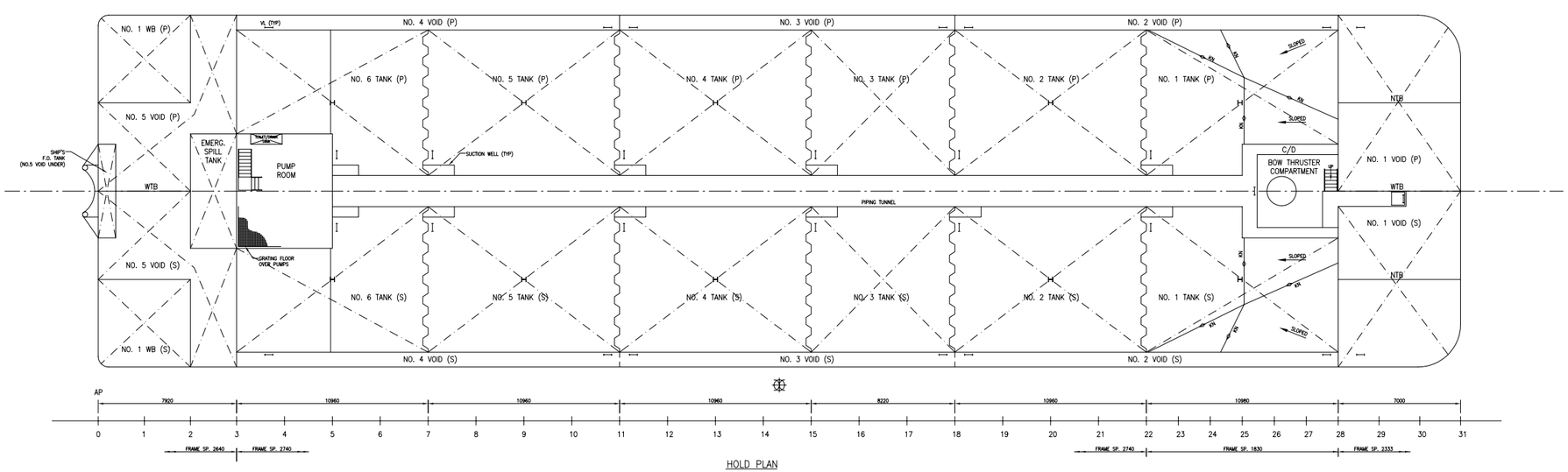
CARGO FUEL TANK CAPACITIES						
TANK NAME	LOCATION FR – FR	VOLUME@98% (BBL)	VOLUME@98% (LITRES)	LCG (M)	TCG (M)	VCG (M)
No.1 Tank (P)	22–28	2158.7	343206	13.189A	5.312 P	3.918
No.1 Tank.(S)	22–28	2158.7	343206	13.189A	5.312 S	3.918
No.2 Tank (P)	18–22	2527.2	401793	23.585A	5.018 P	3.703
No.2 Tank.(S)	18–22	2527.2	401793	23.585A	5.018 S	3.703
No.3 Tank (P)	15–18	1897.8	301727	33.175A	5.018 P	3.705
No.3 Tank.(S)	15–18	1897.8	301727	33.175A	5.018 S	3.705
No.4 Tank (P)	11–15	2527.2	401793	42.765A	5.018 P	3.703
No.4 Tank.(S)	11–15	2527.2	401793	42.765A	5.018 S	3.703
No.5 Tank (P)	7–11	2527.2	401793	53.725A	5.018 P	3.703
No.5 Tank.(S)	7–11	2527.2	401793	53.725A	5.018 S	3.703
No.6 Tank (P)	3–7	2031.0	322904	63.960A	5.490 P	3.809
No.6 Tank.(S)	3–7	2031.0	322904	63.960A	5.490 S	3.809
TOTAL		27338.2	4346434			

NOTE: Expansion tank volumes included in cargo FO capacities.

MISC. TANK CAPACITIES					
TANK NAME	LOCATION FR – FR	VOLUME@98% (Litres)	LCG (M)	TCG (M)	VCG (M)
Ship's Service FO Tank(C)	0–0.4	11785.0	77.458A	0.000	6.329
Hyd. Oil Tank – Low (C)	2.4–2.9	5195.3	71.050A	0.000	6.674
Hyd. Oil Tank – Upper (C)	2.4–2.9	5195.3	71.050A	0.000	8.049
Potable Fresh Water Tk (P)	3.8–4	235.9	67.630A	2.370 P	6.294
Emergency Spill Tank (C)	2–3	30102.0	71.206A	0.000	3.839
Toilet /Drain Tank (P)	3.3–3.6	612.6	68.336A	2.977 P	5.092
No.1 WB Tank (P)	0–2	59870.0	74.838A	7.507 P	4.677
No.1 WB Tank (S)	0–2	59870.0	74.838A	7.507 S	4.677
TOTAL		172866.1			

TOTAL CARGO VOLUME (AT 98%) – 27,338 BBLS /4,346,434 LITRES

TOTAL CARGO VOLUME (AT 94%) – 26,222 BBLS / 4,169,029 LITRES



HOLD PLAN

NO.	REVISION	BY	CHKD	DATE
4	DRAWING REVIEWED BY ABS WITHOUT COMMENT. BACKGROUND UPDATED.	MH	GR	21/12/06
3	DRAWING APPROVED BY TC–MS WITHOUT COMMENT	RW	GR	05/10/06
2	CAPACITY OF FO NO.1 (P & S) UPDATED, TOILET/DRAIN TANK RELOCATED.	MLW	GR	4 AUG 06
1	FO TANK CAPACITIES UPDATED TO REFLECT CHANGES TO BOW LINES AND CHANGES TO AFT BHD GEOMETRY. CARGO FO CAPACITIES NOW INCLUDE EXPANSION TANK VOLUMES. MINOR CHANGES TO SERVICE TANKS. AFT WB TANKS ADDED P & S, VOID NO. 5 RE–ARRANGED TO SUIT.	MLW	GR	28 JULY 06

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Drawing approved for: ABS (RULES ONLY) 21/12/06; Lloyd's 21/12/06

CLIENT: ISLAND TUG & BARGE

PROJECT: 25 K Bbl. DOUBLE HULL BARGE

DRAWN BY: MLW DATE: 30.6.06 SCALE: 1:100
CHECKED BY: GR DATE: 30.6.06

Preferred for Innovation

Aker Yards Marine Inc. 4000 Cornwall Avenue Vancouver, BC V6J 1C7 Tel: (604) 732-2400

Aker Yards Marine (US) Inc. 2000 East Main Street Galveston, Texas 77550-1097 Tel: (713) 90-4000

DWG. NO. 832–620–01 SHT. 1 OF 1 REV. NO. 4

TITLE: CAPACITY PLAN

EQUIPMENT LIST

TAG NO.	ITEM	QTY.	CAPACITY (EA)	SPECIFICATION	COMMENTS
1	CARGO PUMP	4	200 m³/HR @ 112m TDH	CENTRIFUGAL PUMP GOULDS 4x6x19 MODEL 3180	HYDRAULIC DRIVEN
2	STRIPPING PUMP	1	29 m³/HR @ 95m TDH	SLIDING VANE PUMP c/w INTEGRAL RELIEF VALVE BLACKMER MODEL XLSB	HYDRAULIC DRIVEN

REFERENCE DRAWINGS

1. 832-601-01 GENERAL ARRANGEMENT
2. 832-117-01 MIDSHIP STRUCTURE SECTIONS
3. 832-116-01 MIDSHIP STRUCTURE (ELEVATIONS)
4. 832-131-01 MIDSHIP STRUCTURE (PLAN VIEWS)

NOTES

1. DOUBLE BLOCK AND BLEED PLUG VALVE LOCATED ON MAIN DECK SHALL BE GEAR OPERATED. DOUBLE BLOCK AND BLEED PLUG VALVES LOCATED IN PIPE TUNNEL SHALL BE HANDWHEEL OPERATED (LOCALLY) AND REMOTELY OPERATED BY EXTENDED SPINDLE LOCATED ON THE MAIN DECK
2. VENT/SAMPLE VALVE C/W SS TUBE LED OVER SPILL TRAY. (ALLOW SPACE FOR SAMPLE TO BE TAKEN).
3. REFER TO GENERAL DESIGN SPECIFICATION FOR OTHER DETAILS.

CALCULATIONS

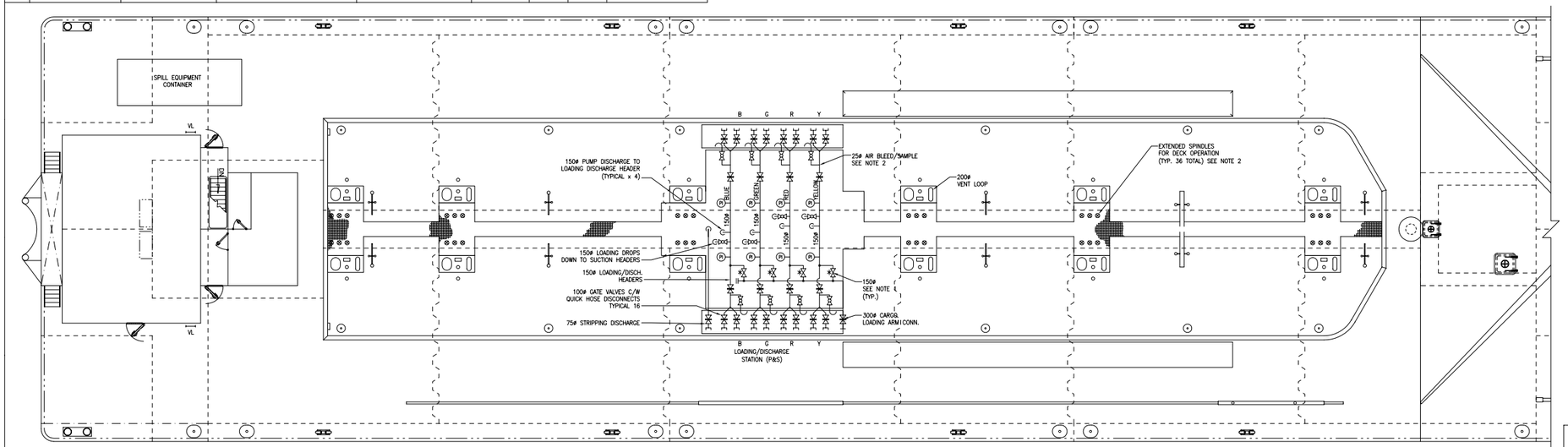
SYSTEM TEST PRESSURE

15.3 BAR

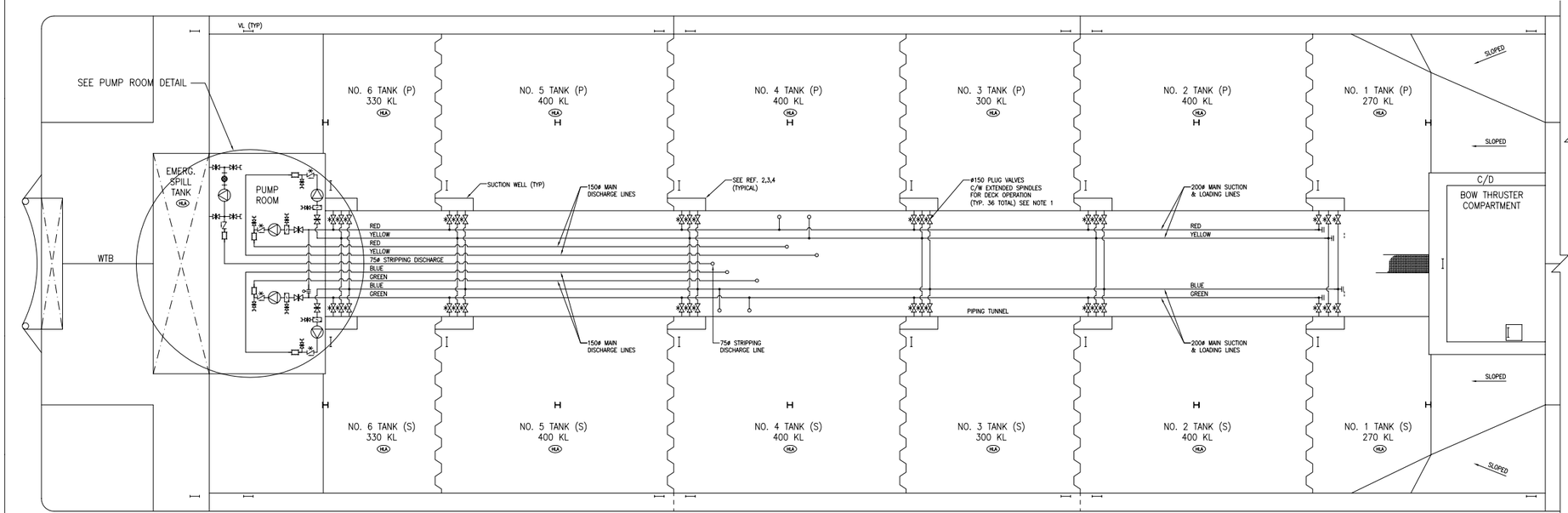
SYMBOL	DESCRIPTION
	PUMP
	DOUBLE BLOCK & BLEED PLUG VALVE c/w AUTOMATIC THERMAL RELIEF SEE NOTE 1
	WEIGHTED SWING CHECK VALVE c/w EXTERNAL LEVER FOR OPENING/CLOSING
	GATE VALVE
	BALL VALVE
	BASKET STRAINER
	PLATE STRAINER c/w ø65mm STRIPPING CONNECTION
	EXPANSION BELLOWS FLEXIBLE
	SPECTACLE FLANGE (BLIND IN LINE)
PI	PRESSURE INDICATOR
DPI	COMPOUND PRESSURE INDICATOR
PT	PRESSURE TRANSMITTER
HLA	HIGH LEVEL ALARM
	BLIND FLANGE

PIPING SCHEDULE

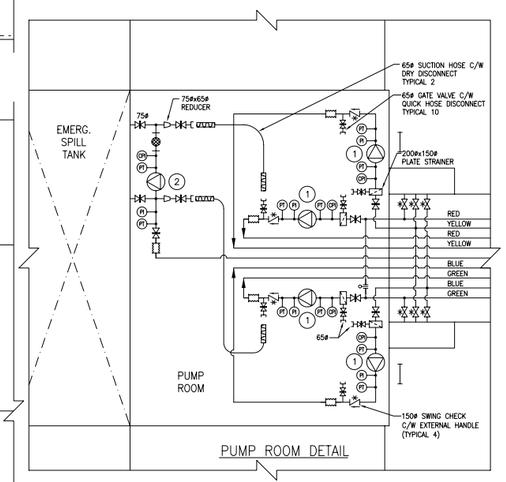
SIZE	PIPE	TAKE DOWN JOINTS	VALVES DESCRIPTION	VALVES MATERIAL	FITTINGS	GASKETS	BOLTING	REMARKS
50mm 150mm DIA.	STAINLESS STEEL ASTM A-312 GR 316 SCH 40S SEAMLESS OR ERW	FLANGE (SLIP ON or WELD NECK) STAINLESS STEEL ASTM A-182 GR 316 ANSI B16.5 150# or APPROVED "DRESSER" COUPLINGS	ANSI 150# DOUBLE BLOCK & BLEED PLUG VALVES ORBIT TRUSEAL C/W AUTOMATIC THERMAL RELIEF	CAST STEEL VITON SEALS & INORGANIC ZINC COATING	STAINLESS STEEL (BUTT WELD) ASTM A-182 ANSI B16.9 SCH 40S	NON ASBESTOS c/w NITRILE BINDER GARLOK 8400 or EQUAL	STAINLESS STEEL ASTM A193 GR B7	SEE DIAGRAM FOR LOCATION
			ANSI 150# BALL VALVE (FULL PORT) FLANGED ASA 150#	CAST STEEL, VITON SEALS & INORGANIC ZINC COATING				SEE DIAGRAM FOR LOCATION
			ANSI 150# GATE VALVE FLANGED ASA 150#	CAST STEEL, VITON SEALS & INORGANIC ZINC COATING				SEE DIAGRAM FOR LOCATION
300mm DIA.			ANSI 150# GATE VALVE FLANGED ASA 150#	CAST STEEL BODY, BRONZE TRIM, VITON SEALS & INORGANIC ZINC COATING				SEE DIAGRAM FOR LOCATION



MAIN DECK PLAN
6.0 M ABL



PLAN



PUMP ROOM DETAIL

NO.	REVISION	BY	CHKD	DATE
3	DRAWING APPROVED BY ABS WITHOUT COMMENTS	MH	GR	12.01.07
2	DRAWING APPROVED BY TC-MS AND MODIFIED IN ACCORDANCE WITH COMMENTS. PIPING MATERIAL SPECIFICATION REVISED.	RW	GR	05.10.06
1	LOADING/DISCHARGE STATION – AIR BLEED/SAMPLE VALVES RELOCATED HOLD REMOVED FROM VALVE MATERIAL NOTE 2 MODIFIED, NOTE 3 DELETED	KS		04.08.06

CLIENT: ISLAND TUG & BARGE	PROJECT: 25,000 Bbl. D.H. BARGE	
DRAWN BY: RPL DATE: 04.07.06 / CHECKED BY: SMcC DATE: 10.07.06	SCALE: NONE	DWG. NO. 832-544-02 SHT. 1 OF 1	REV. NO. 3
Preferred for Innovation — Aker Yards Marine Inc. 4010 Airport Road Seattle, WA 98108 USA Tel: (206) 723-5220 / Aker Yards Marine (US) Inc. 4400 Biscayne Blvd Miami, FL 33137 U.S.A. 33127 Tel: (1-305) 830-4202	TITLE: CARGO PUMP AND PIPING DIAGRAM	

ABS Drawing approved by: TC-MS 20.11.06 Date: 07.12.06

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2.0 PREVENTION PLAN

The commitment of Island Tug and Barge Ltd. to prevention and safety is evidenced by their dedication to voluntarily follow the ISM Code, the ISO 9002 Quality Management System, and to participate in the Best Achievable Protection Program of the Washington State Department of Ecology.

The ISM Code is a safety management program established by the International Maritime Organization. It is required by all shipping where vessels exceed 500 gross tons. The Code is not required by law for ITB operations however, they have taken it on because it sets a high standard for seamanship and management practices that puts ITB in line with the best practices of the sea-going industry.

The code requires that a series of management practices be in place that enable:

- A safe working environment
- The prevention of pollution
- Maintenance of a seaworthy vessel
- Safe sea-going practices
- Control of operation critical information

The Document of Compliance for Island Tug's ISM System is attached at the end of this appendix.

Island Tug and Barge is an ISO 9002 compliant company thus ensuring full environmental compliance. Island Tug and Barge's Quality Management System has been approved by Lloyd's Register Quality Assurance to the ISO 9002: 1994 Quality Management Standards including the requirements of the ISM Code. The Certificate of Approval from Lloyd's Register Quality Assurance is attached at the end of this Section.

Island Tug and Barge participates in the Washington State Department of Ecology's Voluntary BAP Program. Washington State's standards for the safe and pollution-free operation of tank vessels, called the Best Achievable Protection (BAP) standards, represent the best practices found on tank vessels throughout the world. Companies are able to highlight their efforts to improve safety and protect the environment by enlisting in the state's voluntary BAP program for tank vessels. Attached at the end of this section is a copy of the Submittal Agreement Letter certifying that Island Tug agrees to comply with BAP standards and agrees to permit periodic vessel inspections to verify compliance.

The following table cross-references the State of Alaska Requirements with the information contained in this document and the ITB ISM/ISO Management System documents. This table is intended to demonstrate compliance with the applicable requirements of 18 AAC 75, Article I (18 AAC 75.005 – 18 AAC 75.085).

18AAC75 Require-ment	Description	Cross Reference or Additional Information
18 AAC 75.005	**RESPONSIBILITY**	
	The owner or operator of a oil tank vessel, oil barge, pipeline, oil terminal, exploration facility, or production facility subject to the requirements of AS 46.04.030 is responsible for meeting the applicable requirements of this chapter and for preventing the discharge of oil into waters or onto land of the state.	No cross reference necessary
18AAC 75.007	**GENERAL OIL POLLUTION PREVENTION RQUIREMENTS**	
(a)	Except where application of the requirements of 18 AAC 75.005 - 18 AAC 75.085 would be preempted by federal law, those requirements apply to each facility or operation for which an approved oil discharge prevention and contingency plan is required under AS 46.04.030 or AS 46.04.055(j).	No cross reference necessary
(b)	A vessel, barge, pipeline, or other facility subject to the applicable requirements of this chapter must be equipped and operated in accordance with this chapter and other state and federal law applicable to the prevention of an oil discharge.	No cross reference necessary
(c)	If a requirement of 18 AAC 75.005 - 18 AAC 75.085 and a corresponding requirement of federal law differ and application of the requirement of 18 AAC 75.005 - 18 AAC 75.085 would not be preempted by federal law, the more stringent requirement applies.	No cross reference necessary
(d)	The owner or operator shall ensure that all personnel are appropriately and regularly trained regarding company and state pollution prevention measures that are applicable to each person's duties. After completing a training course or program, each participant shall sign and date a statement that lists the course content.	ITB maintains a record of training in each employee's file at the ITB office. On the tugs, a log of training conducted and crew members attending is kept for all training carried out on board the particular tug. The Master signs and dates the log. Refer to the **ITB ISM/ISO System**: Manual: **Company Procedures Manual** Section: **5.0** Manual: **Emergency Plans and Drill Record Book**
(e)	The owner or operator shall have in place programs designed to ensure that each drill operator, each person who has navigational, towline, security, or maintenance duties, and any other person directly responsible for an activity that might result in a violation of this chapter is free of substance-abuse or	ITB has in policies, procedures, and practices in place to ensure the requirements of 18AAC 75.007(e) are met. Refer to the **ITB ISM/ISO System**: Manual: all **Vessel Operations Manuals**

	medical conditions that would impair that person's ability to do that person's job. The requirements of this section may be met (1) for a railroad, by a program in accordance with 49 C.F.R. Part 219, as revised as of October 1, 2005 and adopted by reference; (2) for a pipeline, by a program in accordance with 49 C.F.R. Part 199, revised as of October 1, 2005 and adopted by reference; or (3) for a vessel, by a program in accordance with 49 C.F.R. Part 16, as amended through October 1, 2005 and adopted by reference.	Section: **Appendix 1.0: ITB Drug and Alcohol Policy**
(f)	The owner or operator shall provide security measures and surveillance appropriate to each component of the operation to minimize the risk of vandalism, sabotage, and unauthorized entry.	Regular security rounds are conducted appropriate to the each component of the operation while underway, at anchor, or moored. A checklist is used to ensure inspection of key areas. Records of rounds are logged by the Officer on watch. Refer to the **ITB ISM/ISO System**: Manual: **Tug Operations Manual** Section: **7.1, 7.3, 9.1**
(g)	Repealed 12/30/2006.	
(h)	Repealed 12/30/2006.	
18AAC 75.015	**WAIVER**	No cross reference necessary.
18AAC 75.020	**OIL DISCHARGE PREVENTION TRAINING AND RECORDKEEPING**	
(a)	The owner or operator shall have in place personnel training programs designed to ensure that all personnel with job duties directly involving inspection, maintenance, or operation of oil storage and transfer equipment regulated under 18 AAC 75.005 - 18 AAC 75.085 are appropriately and regularly trained regarding company and state oil pollution prevention measures that are applicable to each position's duties.	ITB's record keeping policies and procedures ensure the requirements of 18 AAC 75.020(a) are met. Refer to the **ITB ISM/ISO System**: Manual: **Company Procedures Manual** Section: **5.0**
(B)	Personnel training programs must include (1) a listing of each position with job duties described in (a) of this section, and the training and level of knowledge appropriate to that position; (2) a listing of any licenses, certifications, or other prerequisites needed to hold each position listed in (1) of this subsection; and (3) a listing of training objectives and the means of achieving them, including training subjects, training schedules, frequency, and type.	ITB's record keeping policies and procedures ensure the requirements of 18 AAC 75.020(b) are met. Refer to the **ITB ISM/ISO System**: Manual: **Company Procedures Manual** Section: **5.0**

(c)	Completion of training required by this subsection shall be verified by (1) a statement, signed and dated by each participant, listing the course or program content; (2) shipboard records verified by the vessel master; or (3) computerized records verified by the owner or operator.	ITB's record keeping policies and procedures ensure the requirements of 18 AAC 75.020(c) are met. Refer to the **ITB ISM/ISO System**: Manual: **Company Procedures Manual** Section: **5.0** Manual: **Emergency Plans and Drill Record Book**
(d)	The owner or operator shall maintain for the life of the facility or operation, a history of all known oil discharges over 55 gallons within the state, including the source, cause, amount, and corrective action taken. Copies of records shall be provided to the department upon request.	ITB maintains records of all incidents and incident investigations, including spills, for a minimum of 5 years. Refer to the **ITB ISM/ISO System**: Manual: **Company Procedures Manual** Section: **12.0**
(E)	The owner or operator shall prepare and maintain records in retrievable form to document training, inspections, tests, maintenance, and repairs required by 18 AAC 75.005 - 18 AAC 75.085. Unless specified otherwise in this chapter, records must be kept for at least five years and copies shall be provided to the department upon request.	ITB's record keeping policies and procedures ensure the requirements of 18 AAC 75.020(e) are met. Refer to the **ITB ISM/ISO System**: Manual: **Company Procedures Manual** Section: **5.0, 8.0, 10.0, 11.0, 17.0** Manual: **Vessel Specific Operations Manual**
18AAC 75.025	**TRANSFER REQUIREMENTS**	
(a)	The owner or operator of a terminal facility, oil tank vessel, or oil barge shall take all appropriate measures to prevent spills or overfilling during a transfer of oil, including reduced loading rates at the beginning and end of a transfer.	ITB utilizes the latest technology, stringent transfer procedures, and ensures the highest level of bargeman training to prevent spills during product transfer. Refer to the **ITB ISM/ISO System**: **Training:** Manual: **Company Procedures Manual** Section: **5.2.1, 5.3.6, 5.4.1** Manual: **Safety, Quality, and Pollution Prevention Manual** Section: **2.1, 6.3** **Technology:** Manual: **Safety, Quality, and Pollution Prevention Manual** Section: 2.0 **Transfer Procedures:** Manual: **Barge Operation Manual** Section: **sec 3.0 to 5.0, 7.0 to 9.0**
(b)	Unless it is technically unfeasible to do so, an oil containment boom appropriate for local conditions must be deployed in an effective manner around a tank vessel or oil	Not Applicable.

	barge during the transfer of (1) crude oil; (2) other persistent products; and (3) oily ballast water.	
(c)	Except for crude oil washing, tank cleaning operations may not be conducted during cargo offloading.	ITB does not perform, nor are they capable of performing, tank cleaning operations during cargo offloading.
(d)	The owner or operator shall ensure that each person involved in a transfer is capable of clearly communicating orders to stop a transfer at any time during the transfer.	ITB has stringent transfer procedures to ensure all persons involved in the transfer are capable of communicating orders to stop the transfer at any time. Refer to the **ITB ISM/ISO System**: Manual: **Barge Operations Manual** Section: **3.0 to 5.0, 7.0 to 9.0**
(e)	A positive means must be provided to stop a transfer in the shortest possible time consistent with the best commercially available technology.	All ITB barges are equipped with emergency shutdown switches which stop all cargo pumps on the respective barge. See **Section 1.8 - Vessel Descriptions** of this Plan.
(f)	Before beginning a transfer to or from an area not protected by secondary containment, the owner or operator shall ensure that all valves in the transfer system have been checked to ensure that they are in the correct position, and that all manifolds not in use are blank flanged or capped. Where feasible, the owner or operator shall also inspect for damage or defects all piping and hoses in the transfer before and at least once during each transfer.	ITB has stringent transfer procedures to ensure: - correct valve positioning - not in use lines are blanked off - piping and hoses are inspected before and during transfer Refer to the **ITB ISM/ISO System**: Manual: **Barge Operations Manual** Section: **3.0 to 5.0, 7.0 to 9.0**
(g)	The lowermost drain and all outlets of any tank car or tank truck must be visually examined for leakage before filling and before departure. All tank car or tank truck manifolds must be black flanged or capped, and valves must be secured before leaving the transfer area.	Not Applicable.
(j)	All aboveground transfer piping that is used to transfer oil to or from docks or vessels must be visually checked before and during each transfer or monthly, whichever is less frequent.	Not applicable to vessels.
(i)	For purposes of (b) of this section, deployment of an oil containment boom is technically unfeasible if (1) expected tidal currents and other local environmental conditions preclude the effective configuration and operation of the oil containment boom due to entrainment or splash over; or (2) the physical facility layout precludes the effective configuration of the oil containment boom around the tank vessel or oil barge.	Not Applicable.

(j)	In this section, "transfer" means any movement of oil within an oil terminal facility or between an oil terminal facility and a railroad tank car, tank truck, tank vessel, or oil barge by means of pumping, gravity, or displacement.	No cross reference necessary.
18AAC 75.027	**REQUIREMENTS FOR LADEN TANK VESSELS**	Not Applicable
18AAC 75.037	**REQUIREMENTS FOR LADEN OIL BARGES**	
(a)	In addition to meeting the applicable requirements of 18 AAC 75.007 - 18 AAC 75.025, a laden oil barge must carry or have ready access to sufficient oil transfer equipment to facilitate lightering to and from other vessels. The oil transfer equipment must be sufficient to lighter the volume of the largest cargo tank within 24 hours.	See **Section 3.6.6 - Pumping, Transfer, Temporary Storage and Lightering Equipment** in this Plan.
(b)	The owner or operator of a laden oil barge shall ensure that each barge or vessel towing a barge has on board a person who is designated as an oil spill prevention and response officer and is responsible for training and drilling the crew on state and federal oil pollution prevention and response requirements.	It is the responsibility of the towboat Master to perform these duties. Refer to the **ITB ISM/ISO System**: Manual: **Emergency Plans & Drill Record Book** Section: **1.0**
(c)	If the master is not fluent in English, a person fluent in English and in the master's lanquage must be immediately available to any vessel towing an oil laden barge.	Not Applicable, all crew members speak fluent English.
(d)	The owner or operator shall ensure that measures are in place that allow the prompt detection of an oil discharge, including visual inspections of the barge and the area around the barge, and the sounding of all cargo tanks to check cargo and water levels in the tanks after an intentional or unintentional grounding, collision, or allision	See **Section 1.1.2 - Spills Resulting From Casualties** sub heading **Grounding** on Page 1.1-10 of this plan and subheading Collision on Page 1.1-16.
(e)	The owner or operator shall inspect towing equipment every two months and shall record the results of each inspection and any actions taken to resolve problems discovered during an inspection.	Part of ITB's pre-departure checklist includes a visual inspection of the towing equipment. The towline is also inspected every time it is retrieved. In addition, each year, the towlines are completely removed and inspected. Connection equipment is sent out for non-destructive testing annually. Records of the inspections are maintained in accordance with 18 AAC 75.007 (h). Refer to the **ITB ISM/ISO System**: Manual: **Tug Operations Manual** Section: **10.2.2, Section 10-Appendix A,**

		and Section 4.0 – Appendices B and C
(f)	The owner or operator shall provide an adequate means of recovering a barge that breaks free of its towing vessel. The recovery means must be capable of being used by other vessels if the towing vessel is lost or incapacitated.	**Section 1.8 - Vessel Descriptions** of this Plan describes the emergency towing equipment installed on each ITB vessel for lost barge recovery purposes. The equipment is capable of being used by other towing vessels.
18AAC 75.045	**OPERATING REQUIREMENTS FOR EXPLORATION AND PRODUCTION FACILITIES**	Not Applicable
18AAC 75.055	**LEAK DETECTION, MONITORING, AND OPERATING REQUIREMENTS FOR CRUDE OIL TRANSMISSION PIPELINES**	Not Applicable
18AAC 75.065	**OIL STORAGE TANK REQUIREMENTS**	Not Applicable
18AAC 75.075	**SECONDARY CONTAINMENT REQUIREMENTS FOR ABOVE GROUND OIL STORAGE AND SURGE TANKS**	Not Applicable
18AAC 75.080	**FACILITY PIPING REQUIREMENTS FOR OIL TERMINAL, CRUDE OIL TRANSMISSION PIPELINE, AND PRODUCTION FACILTIES**	Not Applicable
18AAC 75.090	**RECOMMENDED PRACTICES**	
	Repealed.	
18AAC 75.425(e)(2)	**Part 2 - Prevention Plan**	
	The prevention plan must include a detailed description of all oil discharge prevention measures and policies employed at the facility, vessel, or operation, with reference to the specific oil discharge risks involved. The prevention plan must describe how the applicant meets all the applicable requirements of 18 AAC 75.005-18 AAC 75.085. The prevention plan may be submitted as a separate volume, and must include, at a minimum, the following information:	The Island Tug ISM and ISO 9001 management system manuals provide a detailed description of all Island Tug's oil discharge prevention measures and policies with reference to the specific oil discharge risks involved.
(A)	discharge prevention programs - a description and schedule of regular oil discharge prevention, inspection, and maintenance programs in place at the facility or operation, including (i) oil discharge prevention training programs required by 18 AAC 75.020(a); (ii) substance abuse and medical monitoring programs required by 18 AAC 75.007(e); (iii) security and surveillance programs required by 18 AAC 75.007(f).	Refer to this Cross Reference Table under 18 AAC 75.007 (d – f).
(B)	discharge history -a history of all known oil discharges greater than 55 gallons that have occurred at the facility within the state; the	No applicable discharges have occurred.

	history must include (i) the source, cause, amount of each discharge; (ii) corrective action taken; (iii) an analysis of the relationship, if any, between the frequency, cause, and size of the discharges;, and (iv) a description of actions to be taken to prevent or mitigate similar discharges in the future;	
(C)	potential discharge analysis - an analysis of potential oil discharges, including size, frequency, cause, duration, and location, and a description of actions taken to prevent a potential discharge;	No near miss incidents have occured while in Alaskan waters.
(D)	specific conditions - a description of (i) any conditions specific to the facility or operation that might increase the risk of a discharge, including physical or navigation hazards, traffic patterns, and other site-specific factors; and (ii) any measures that have been taken to reduce the risk of a discharge attributable to these conditions, including a summary of operating procedures designed to mitigate the risk of a discharge;	There are no unusual conditions specific to Island Tug vessel's or operations that might increase the risk of a discharge.
(E)	discharge detection - a description of the existing and proposed means of discharge detection, including surveillance schedules, leak detection, observation wells, monitoring systems, and spill-detection instrumentation; if electronic or mechanical instrumentation is employed, detailed specifications, including threshold detection, sensitivities, and limitations of equipment must be provided;	See **Section 1.1.1 – Operational Spills** of this plan. See **Section 1.1.2 - Spills Resulting From Casualties** of this plan. See **Section 1.8- Vessel Descriptions** of this plan for a description of tank monitoring systems, alarms, and instrumentation employed on the barges. See **Section 4.0 – Best Available Technology** of this plan, for a detailed analysis of discharge detection equipment and procedures employed on ITB vessels. Refer to the **ITB ISM/ISO System**: Manual: **Barge Operations Manual**
(F)	waivers - for an operation subject to a waiver, alternate compliance schedule, or existing condition of plan approval under 18 AAC 75.005 - 18 AAC 75.085 or 18 AAC 75.400 – 18 AAC 75.496, documentation of (i) each waiver, alternate compliance schedule, or existing condition of plan approval; and (ii) the approval of each waiver, alternate compliance schedule, or existing condition of plan approval;	Not applicable.

Lloyd's Register

Document of Compliance

Issued under the provisions of the INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE AT SEA 1974, as amended.

Name and address of the Company[1]

Island Tug and Barge Ltd
Vancouver, BC
Canada

This is to certify that the Safety Management System of the Company has been audited and that it complies with the requirements of the International Management Code for the Safe Operation of Ships and for Pollution Prevention (ISM Code) adopted by the Organisation by Res. A.741(18) as amended, for the types of Ships listed below:

~~**Passenger ship**~~
~~**Passenger high speed craft**~~
~~**Cargo high speed craft**~~
~~**Bulk carrier**~~
~~**Oil tanker**~~
~~**Chemical tanker**~~
~~**Gas carrier**~~
~~**Mobile offshore drilling unit**~~
Other cargo ship

This Document of Compliance is valid until **26 March 2006**, subject to periodical verification.

Issued at **Vancouver** on **27 March 2001**.

The undersigned declares that Lloyd's Register North America, Inc., is duly authorised by the said Government to issue this certificate.

LLOYD'S REGISTER NORTH AMERICA INC.
Lloyd's Register
VANCOUVER
LLOYD'S REGISTER NORTH AMERICA INC.

M. J. Calvard
Lloyd's Register North America Inc.
For Lloyd's Register of Shipping

1. See paragraph 1.1.2 of the ISM Code

APER (07/2000) LRNA Inc.

CERTIFICATE OF APPROVAL

This is to certify that the Quality Management System of:

Island Tug and Barge Ltd.
Vancouver, Canada

has been approved by Lloyd's Register Quality Assurance to the following Quality Management System Standards:

ISO 9002:1994

The Quality Management System is applicable to:

Commercial and Technical Operation of a Fleet of Coastal Tugs and Oil and Deck Cargo Barges, including the Requirements of the ISM Code

This certificate is valid only in association with the certificate schedule bearing the same number on which the locations applicable to this approval are listed.

Approval
Certificate No: 112487

Original Approval: *March 29, 2001*

Current Certificate: *March 29, 2001*

Certificate Expiry: *December 14, 2003*

on behalf of LRQA Houston

ANSI-RAB QMS ACCREDITED

Standards Council of Canada Accredited Registrar
Conseil canadien des normes Registraire accrédité

This approval is carried out in accordance with the LRQA assessment and certification procedures and monitored by LRQA.
Macro rev 4.0

Island Tug

February 20, 2002

Washington State Department of Ecology
Spill Prevention, Preparedness, and Response Program
PO Box 47600
Olympia, Washington 98504-7600

Attn: Voluntary BAP Program

Re: Participation in Washington State's Voluntary BAP Program for Tank Vessels

To Whom It May Concern:

Island Tug and Barge Ltd. wishes to participate in Washington State's Voluntary Best Achievable Protection (BAP) Program for Tank Vessels. Enclosed is our Oil Spill Prevention Plan which we submit for your review. The vessels covered by this prevention plan are described by name, official number, and gross tonnage in Attachment 1 of this letter.

We acknowledge that participation in the BAP program is voluntary. If at any time we wish to discontinue our participation, we may do so by letter under the signature of Island Tug and Barge Ltd.'s President, or designee.

We understand that under the Voluntary BAP Program for Tank Vessels, Island Tug and Barge Ltd. and its employees, agents, vessels, and crew must comply with the policies, procedures, and practices described in the submitted Plan while operating in Washington waters. We agree to comply with these standards in order to remain on the BAP List or the Exceptional Compliance Program (ECOPRO) List maintained by the Department of Ecology.

In addition, we agree to allow our vessel(s) to be boarded and inspected by Department of Ecology inspectors without prior notice but at reasonable times and places. We also agree to cooperate with the Department of Ecology in investigating and mitigating any risk posed, or that may be posed, by a vessel that we own or operate on Washington waters.

Finally, we agree to timely notify the Department if one of our vessels experiences a malfunction of its propulsion, navigation or safety systems, or breach of structural or watertight integrity of a bulkhead, hull or scantling, prior to entering, or while operating in, Washington waters.

Island Tug and Barge Ltd.

55 Rogers Street Vancouver BC Canada V6A 3X8 Tel 604 873.4312 Fax 604 873.4318 www.islandtug.com

Questions and further information concerning the Plan submitted and vessels covered may be addressed to:

Bob Shields

Island Tug and Barge Ltd.
55 Rogers Street
Vancouver BC V6A 3X8 CANADA

Phone: (604) 873-4312
Fax: (604) 873-4318
Email: bob@islandtug.com

Island Tug & Barge Ltd. requests that all correspondence regarding the plan be copied to:

Todd Barber

Barber Consulting Co.
1355 Palmerston Avenue
West Vancouver BC V7T 2H8 CANADA

Phone: (604) 221-2373
Fax: (604) 926-4854
Email: toddbarber@shaw.ca

On behalf of Island Tug and Barge Ltd. and its employees, vessel, and crew:

R.L. (BOB) Shields - President
ISLAND TUG AND BARGE LTD.

Attachment 1

Vessels covered by this Oil Spill Prevention Plan:

ITB 38
ON 802744
2580 gross tons

Empire 45
ON 392787
1740 gross tons

ITB Vancouver
ON 820184
2051 gross tons

ITB Provider
ON 822652
1251 gross tons

3.0 SUPPLEMENTAL INFORMATION

3.1 VESSEL DESCRIPTION / OPERATIONAL OVERVIEW

3.1.1 VESSEL DESCRIPTION

A complete description of the ITB vessels which sail in U.S. waters is provided in *Section 1.8 – Vessel Descriptions* of this Plan.

Detailed vessel plans and drawings are available at the ITB head office in Vancouver, at the offices of ITB's Naval Architects in Vancouver, and on board the vessels themselves.

Vessel *Operations Manuals*, *Trim and Stability Booklets*, and *Cargo Tank Tables* are carried on board ITB barges and are available at the offices of ITB in Vancouver.

3.1.2 VESSEL ROUTES

Barge routing is plotted on the following reduced nautical charts:

Nautical Chart	Chart Number
Puget Sound	18440
Strait of Georgia	18400
Dixon Entrance to Cape St. Elias	16016
Capt St. Elias to Shumagin Islands	16013
Alaska Peninsula and Aleutian Islands	16011
North Pacific Ocean (Eastern Part)	00050
San Diego Bay to San Francisco Bay	18022
San Francisco and Vancouver Island to to Mendocino Fracture Zone	4806

No variations in the routes based on seasonal or weather related phenomena are anticipated.

A comprehensive selection of full size and electronic charts are available at the ITB office in Vancouver.

3.1.3 PORTS OF CALL

3.1.3.1 SE ALASKA COTP Zone

ITB's most frequent port of call in SE Alaska is Petro Marine's Bulk Fuel Plant in Skagway. The average frequency of trips is 1.5 per month or 18 trips per year. The estimated annual volume is 540,000 bbls (22.7M USG), split roughly 60% diesel and 40% gasoline. A copy of the *Oil Discharge Prevention and Contingency Plan* for the facility has been given to ITB to assist in coordinating the efforts of ITB and Petro Marine in the event of a spill during unloading of product. ITB also calls regulary at Ketchikan. Infrequent trips are made to Sitka, Petersburg, and Juneau.

3.1.3.2 PUGET SOUND COTP ZONE

ITB may visit the following locations in the Puget Sound:

- Ferndale - TOSCO
- Anacortes - Shell Oil

The average annual frequency of trips to the Puget Sound is 4-6 times per year. All cargoes received or delivered in Puget Sound are transported direct between Canadian and Puget Sound Ports.

3.1.3.3 PORTLAND OREGON COTP ZONE

Potential Marine Transportation related facilities in where ITB may trade in the Portland, OR COTP zone include:

- Mobile Oil - Portland
- Tosco - Portland
- GATX - Portland
- Time Oil - Portland

All cargoes received or delivered in Oregon are transported direct between Canadian and Oregon Ports.

3.1.3.4 SAN FRANCISCO COTP ZONE

ITB only trades at Marine Transportation related facilities in the San Francisco COTP Zone. All cargoes received or delivered in San Francisco are transported direct between Canadian and California Ports.

3.1.3.5 LOS ANGELES – LONG BEACH COTP ZONE

ITB only trades at Marine Transportation related facilities in the Los Angeles – Long Beach COTP Zone. All cargoes received or delivered in the Los Angeles – Long Beach COTP Zone are transported direct between Canadian and California Ports.

3.1.3.6 WESTERN ALASKA COTP Zone

ITB transits the Western Alaska COTP Zone during voyages to the Canadian Arctic. The route is normally direct between Canada to Unimak Pass and then from Unimak Pass to the Canadian Arctic. Sometimes the route to Unimak Pass will be from S.E. Alaska or from Cook Inlet. This route is expected to take place 1 to 2 times per year in the summer. ITB may stop in Dutch harbour for fuel. ITB may stop at Barrow for supplies.

Should future opportunities arise, ITB may call at other locations in the Western Alaska COTP Zone. As routes to other locations in the Western Alaska COTP Zone arise, Island Tug and Barge Ltd. Will notify Alaska DEC and provide vessel route information as required.

3.1.4 TYPE AND AMOUNT OF OIL

ITB mainly carries only light and medium fuels as cargo in U.S. waters. These include:

- Aviation Gasoline 100;
- Unleaded Gasolines (Regular and Premium grades);
- Jet Fuel A;
- No. 1 and No. 2 Heating Fuel;
- No. 2 Diesel Fuel;

ITB may on occasion load heavy fuel oil in the Puget Sound COTP Zone only:

- Heavy fuel oil with a specific gravity between .90 - .95.

The volumes of Island Tug and Barge Ltd. barges are:

- **Island Trader**: 65,320 bbls of non-persistent in 12 tanks
- **ITB 38**: 38,000 bbls of non-persistent fuels in 16 tanks.
- **Empire 45**: 22,600 bbls of non-persistent in 11 tanks.
- **ITB Vancouver**: 25,000 bbls of non-persistent in 12 tanks.
- **ITB Supplier**: 25,000 bbls of non-persistent in 10 tanks.
- **ITB Reliant**: 26,500 bbls of non-persistent in 12 tanks.
- **ITB Resolution**: 26,500 bbls of non-persistent in 12 tanks.
- **ITB Provider**: 14,736 bbls in 10 tanks (Puget Sound COTP zone only).

See *Section 1.8 – Vessel Descriptions* for additional information and drawings.

3.1.5 OIL STORAGE CONTAINER INFORMATION - *N/A*

3.1.6 TRANSFER PROCEDURES

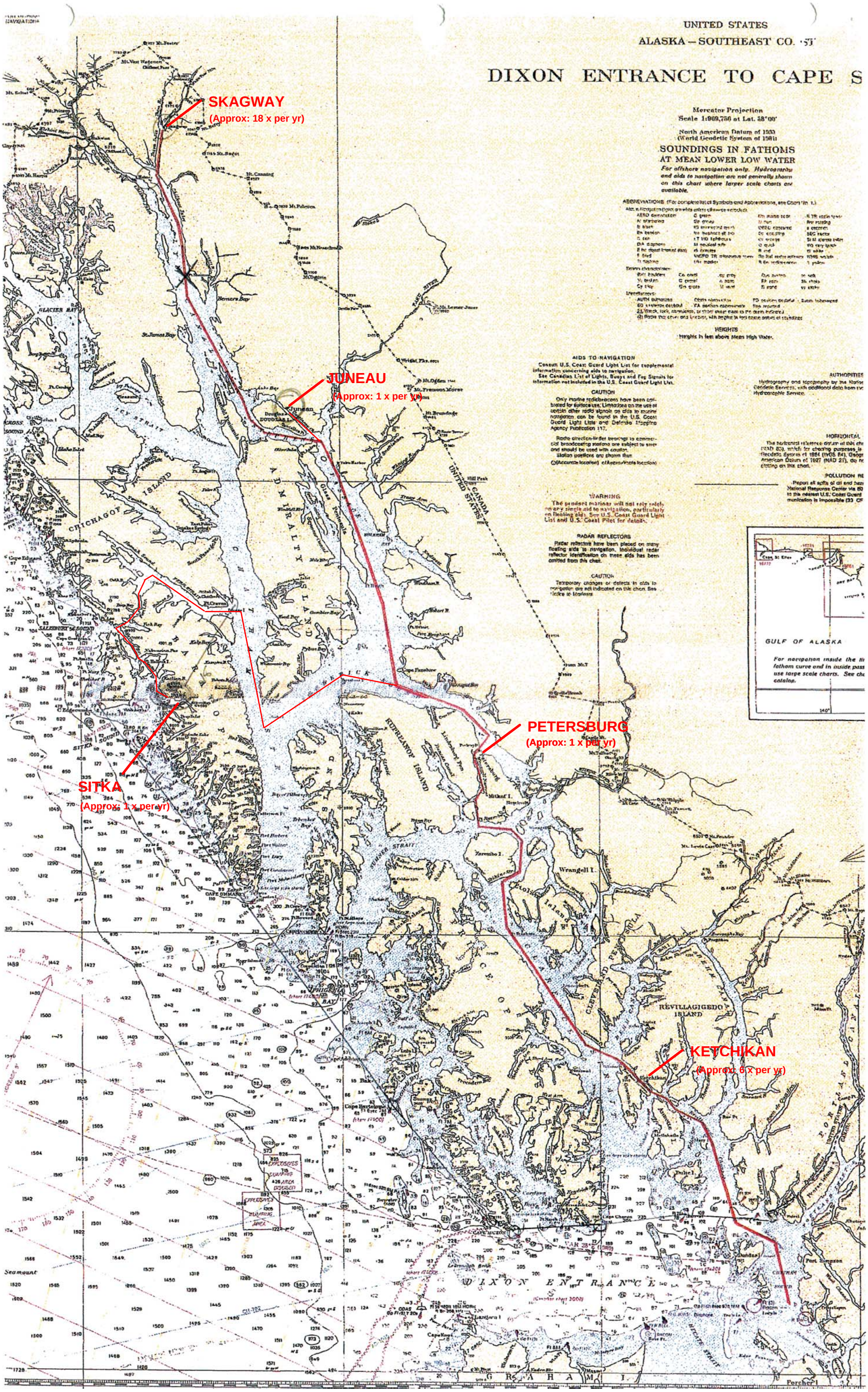
Procedures for transferring product to and from the barges are clearly laid out in the vessel specific *Operations Manuals* which are maintained on board the vessels.

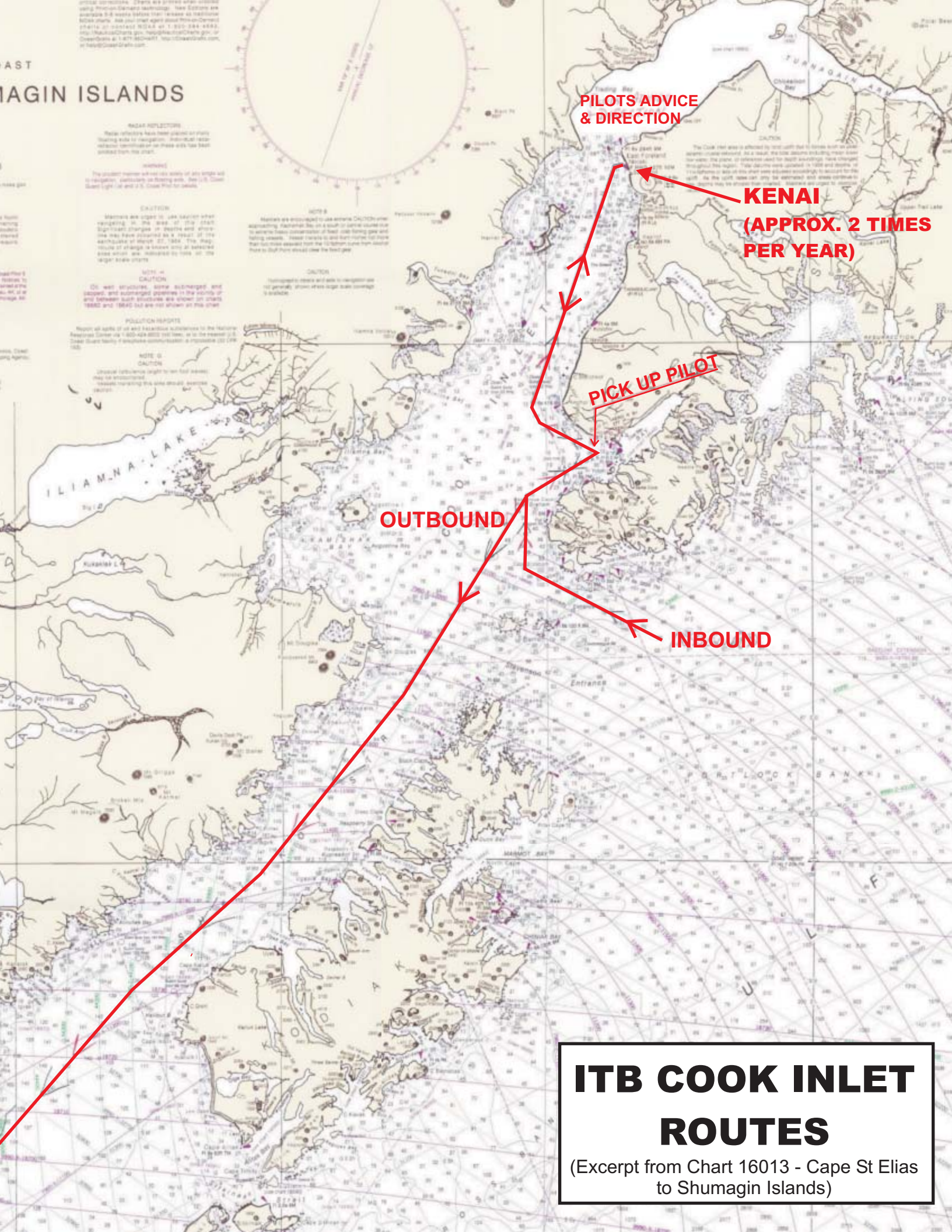
3.1.7 PRODUCTION FACILITY DESCRIPTION - *N/A*

3.1.8 DISPOSAL OF OILY WASTE

All oily waste, and oil soaked sorbents from small housekeeping spills contained on the barge will be returned to Vancouver, B.C. for disposal. ITB barges are equipped with drip trays and tanks to contain spills from disconnection of hoses after loading and unloading has been completed and to store hoses. ITB barges have emergency spill tanks which can be used to store any liquid oily waste generated on the barge. Small spills on the deck of the barges are cleaned up using on board sorbent materials. Used sorbents are stored in dedicated metal drums with re-sealable tops. Drums containing used sorbents and other oiled items are stored in a contained area on board the barge.

For a larger oil spill involving oil spill contractors, ITB will authorize their OSRO to develop a waste management plan and to make the appropriate arrangements for the safe containment, transport, storage, and ultimate disposal of oily waste. ITB will ensure its contractor follows the waste management requirements of the state (e.g., Alaska DEC requirements outlined in 18 AAC 75 Article 3.).


UNITED STATES
ALASKA – SOUTHEAST CO. 53
DIXON ENTRANCE TO CAPE S
Mercator Projection
Scale 1:969,756 at Lat. 58°00'
North American Datum of 1983
(World Geodetic System of 1984)
SOUNDINGS IN FATHOMS
AT MEAN LOWER LOW WATER
For offshore navigation only. Hydrography and aids to navigation are not generally shown on this chart where larger scale charts are available.
HEIGHTS
Heights in feet above Mean High Water.
AIDS TO NAVIGATION
CAUTION
WARNING
RADAR REFLECTORS
GULF OF ALASKA
SKAGWAY
(Approx: 18 x per yr)
JUNEAU
(Approx: 1 x per yr)
SITKA
(Approx: 1 x per yr)
PETERSBURG
(Approx: 1 x per yr)
KETCHIKAN
(Approx: 6 x per yr)
CHICHAGOF ISLAND
ADMIRALTY ISLAND
KUPREANOF ISLAND
REVILLAGIGEDO ISLAND
Wrangell I.
Zarembo I.
Dundas I.
Duke I.
Port Simpson
Porcher I.
DIXON ENTRANCE
GLACIER BAY
St. James Bay
Berners Bay
Tracy Arm
Frederick Sound
Sumner Strait
Clarence Strait
Cape Edward
Cape Bartolome
Cape Muzon
Cape Chacon
Cape Addington
Seamount

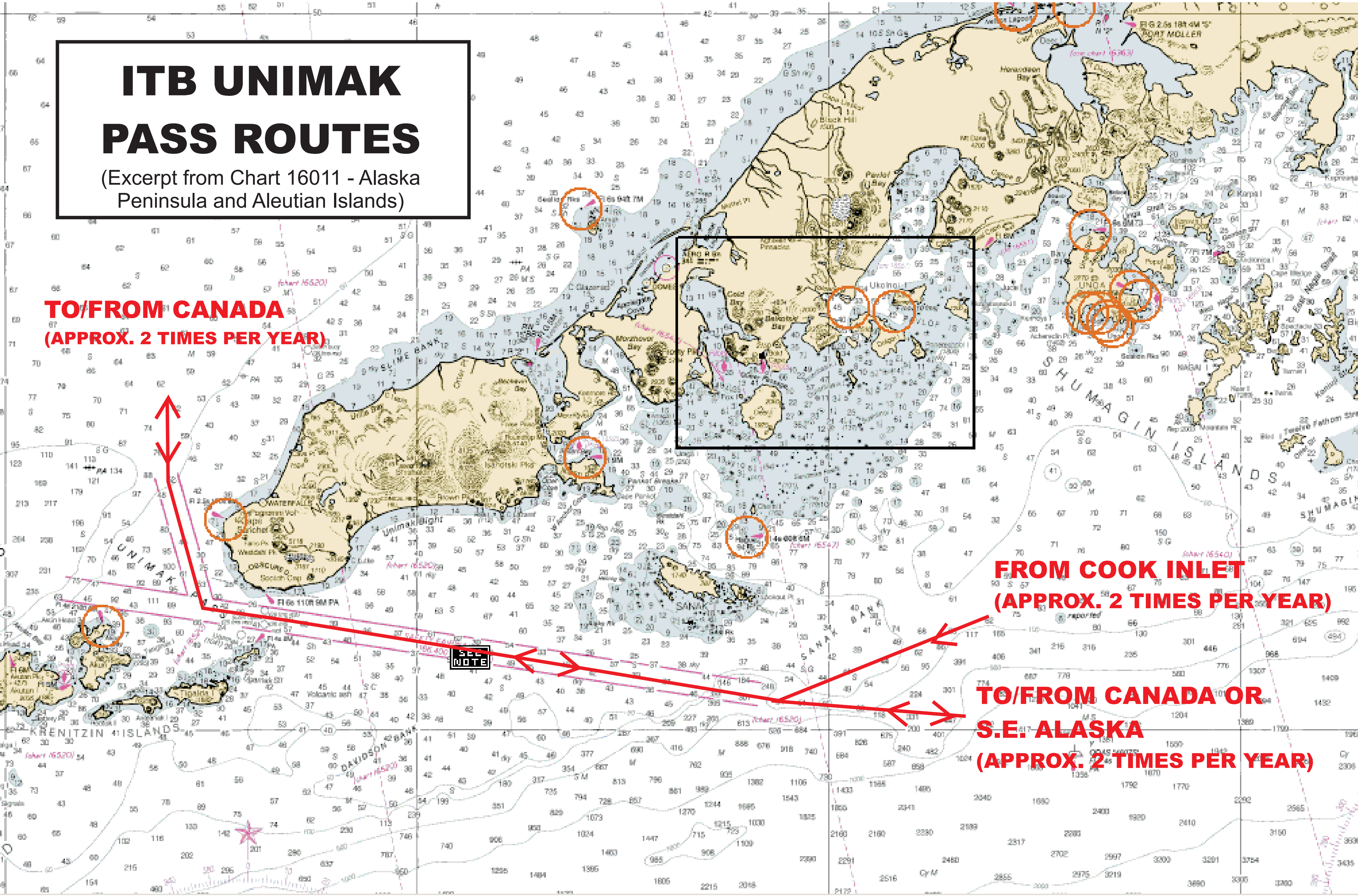


ITB COOK INLET ROUTES

(Excerpt from Chart 16013 - Cape St Elias to Shumagin Islands)

ITB UNIMAK PASS ROUTES

(Excerpt from Chart 16011 - Alaska Peninsula and Aleutian Islands)



END SCAN

START SCAN

INT 50

50

This nautical chart has been designed to promote safe navigation. The National Ocean Service encourages users to submit corrections, additions, or comments for improving this chart to the Chief, Marine Chart Division (N/CS2), National Ocean Service, NOAA, Silver Spring, Maryland 20910-3282.

PRINT-ON-DEMAND CHARTS

NOAA and its partner, OceanGrafix, offer this chart updated weekly by NOAA for Notices to Mariners and critical corrections. Charts are printed when ordered using Print-on-Demand technology. New Editions are available 5-8 weeks before their release as traditional NOAA charts. Ask your chart agent about Print-on-Demand charts or contact NOAA at 1-800-584-4683, http://NauticalCharts.gov, help@NauticalCharts.gov, or OceanGrafix at 1-877-56CHART, http://OceanGrafix.com, or help@OceanGrafix.com.

1st Ed., Mar. 1977 KAPP 2400

EMAIL PDF

END SCAN

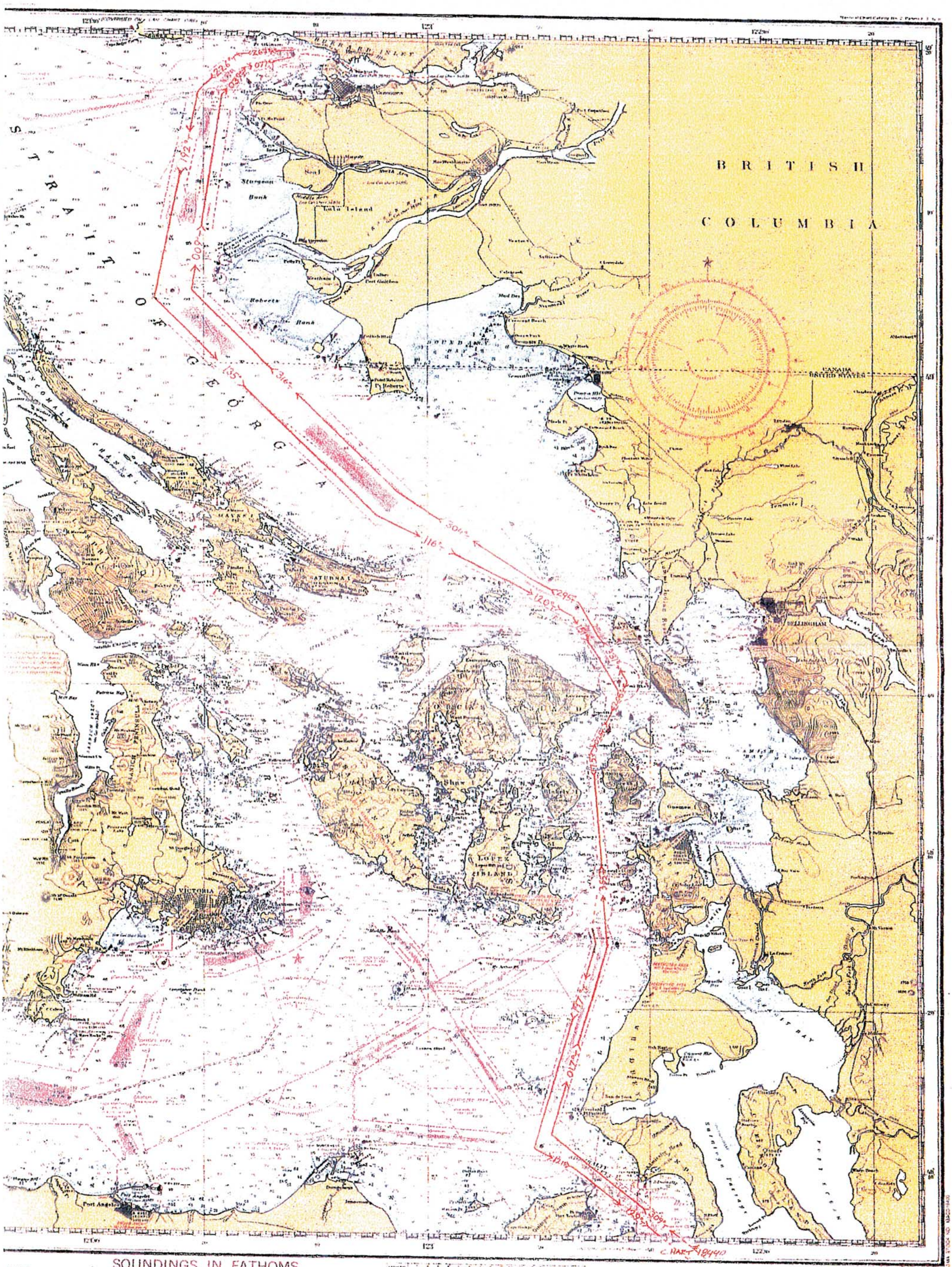
SOUNDINGS IN FATHOMS

18440

18440

SOUNDINGS IN FATHOMS (Puget Sound)

18440


STRAIT OF GEORGIA
BRITISH COLUMBIA
Sturgeon Bank
Roberts Bank
Lulu Island
VICTORIA
Port Angeles
BELLINGHAM
LOPEZ ISLAND
SOUNDINGS IN FATHOMS
(Strait of Georgia and Strait of Juan De Fuca)
18400

OCEAN

ANCOUVER ISLAND ACTURE ZONE

MAGNETIC VARIATION CURVES ARE FOR 2000

The magnetic variation is shown in degrees, followed by the letter E or W, as appropriate, at certain positions on the curves. The annual change is expressed in minutes with the letter E or W and is given in brackets, immediately following the variation.

LOCAL MAGNETIC ANOMALY

A local magnetic anomaly is reported to exist in the vicinity of 49°55'N, 129°30'W. For further details, see Admiralty Sailing Directions.

USE OF CHARTS IN UNITED STATES WATERS

For information about United States Regulations relating to Navigation, Charts and Publications, see Annual Notice to Mariners No 22.

USE OF CHARTS IN CANADIAN WATERS

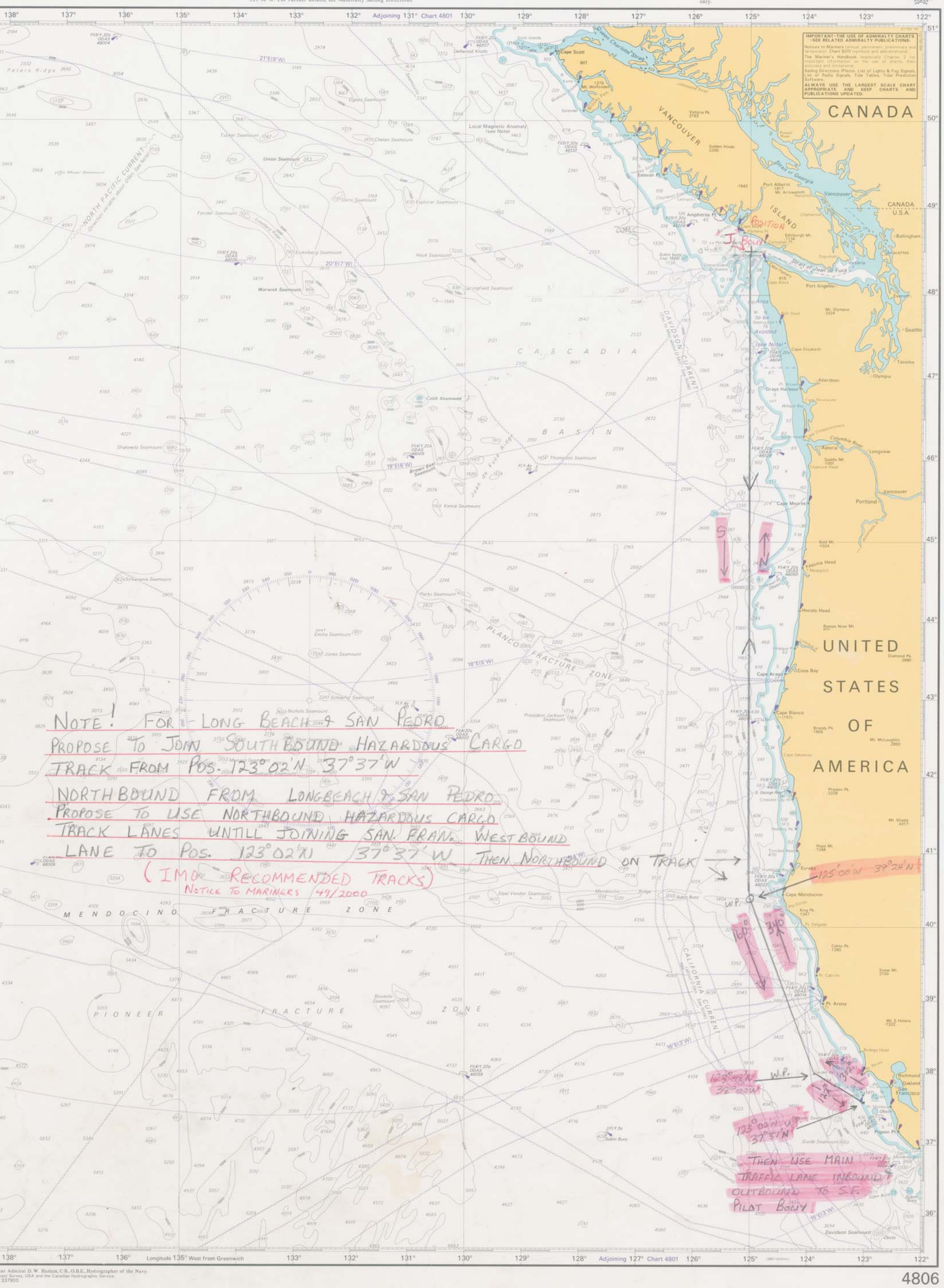
For information about Canadian Regulations relating to Navigation Charts and Publications see Annual Notice to Mariners No 21.

CURRENTS

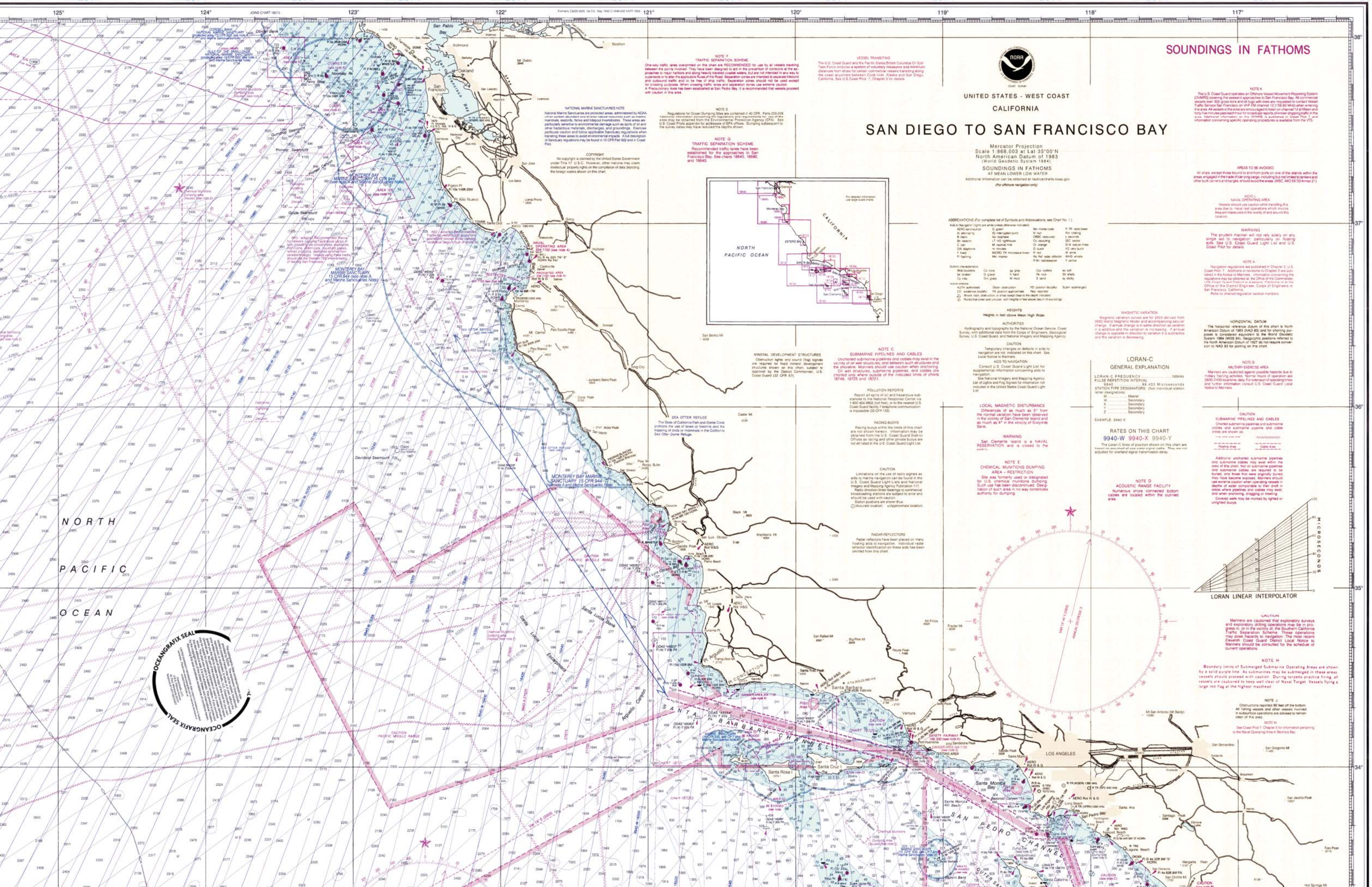
For further information on ocean currents in the area of this chart, see Admiralty Sailing Directions and Routeing Charts. Throughout the majority of the area of this chart currents of about 0·5kn, predominantly easterly but seasonally varying in direction, may be expected.

BOUNDARIES

The International Boundaries shown on this chart are approximate only.



ar Admiral D.W. Haslam, C.B., O.B.E., Hydrographer of the Navy.
oast Survey, USA and the Canadian Hydrographic Service.
337900



SOUNDINGS IN FATHOMS
UNITED STATES - WEST COAST
CALIFORNIA
SAN DIEGO TO SAN FRANCISCO BAY
Mercator Projection
Scale 1:868,003 at Lat 35°00'N
North American Datum of 1983
(World Geodetic System 1984)
SOUNDINGS IN FATHOMS
AT MEAN LOWER LOW WATER
NORTH PACIFIC OCEAN
LORAN-C
GENERAL EXPLANATION
RATES ON THIS CHART
9940-W 9940-X 9940-Y
LORAN LINEAR INTERPOLATOR
MICROSECONDS
OCEANGRAFIX SEAL
SANTA BARBARA CHANNEL
SAN PEDRO CHANNEL
LOS ANGELES
San Francisco
Oakland
San Jose
Santa Barbara
Ventura
Santa Monica

3.2 RECEIVING ENVIRONMENT - *N/A*

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3.3 INCIDENT COMMAND ORGANIZATION

3.3.1 INTRODUCTION

Island Tug and Barge's (ITB) response organization (see *Figure 3.3.1*) is designed to meet three objectives:

1. Ensure all critical response functions are covered by an Island Tug employee or by Island Tug's contracted response management resources.

2. Utilize ITB's limited personnel and contracted response management resources as effectively and efficiently as possible.

3. Integrate effectively with other response organizations in the event of a multiteam response calling for a joint or unified command structure.

The Incident Command System (ICS) model has been used as the design basis for ITB's response organization.

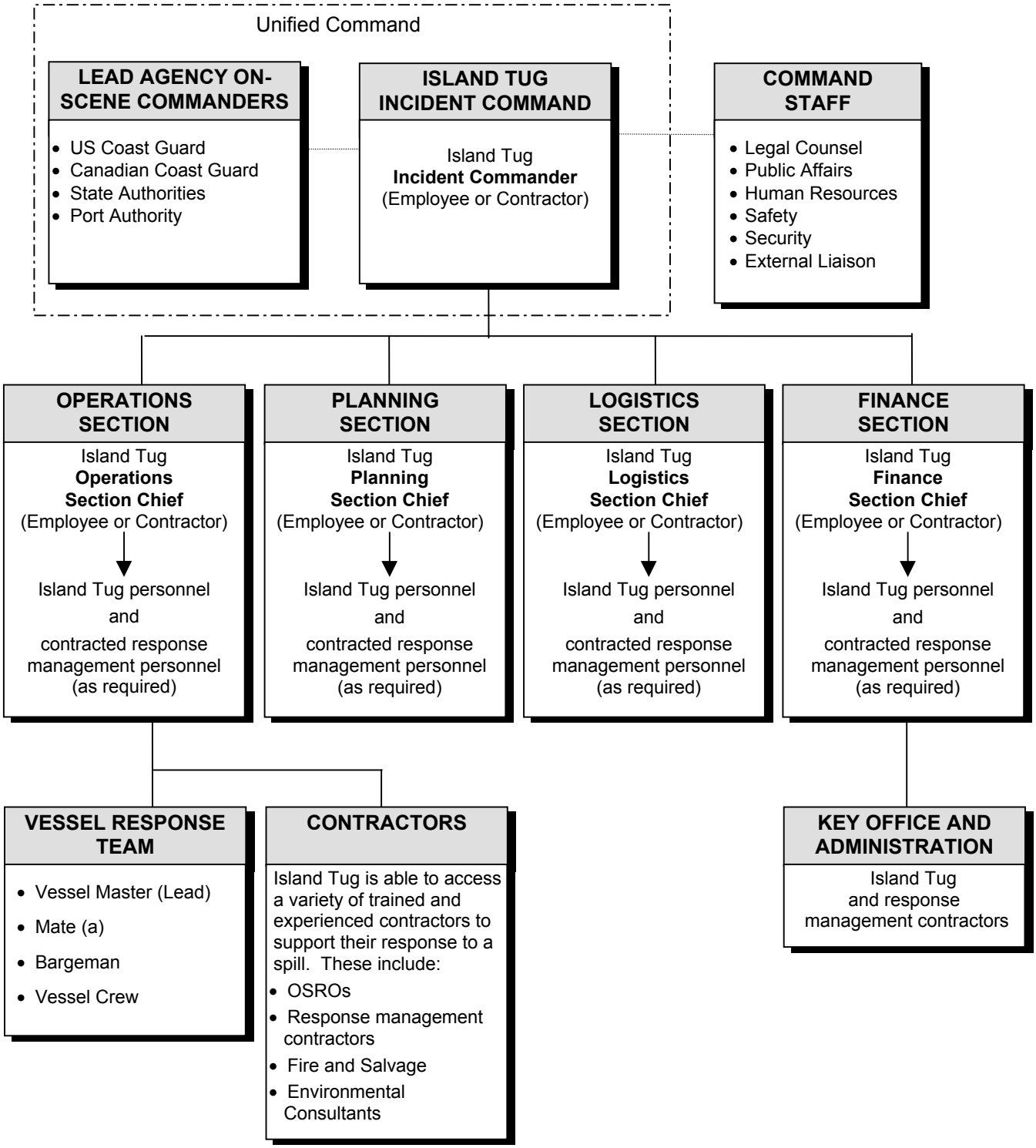


Figure 3.3.1 - Island Tug and Barge Incident Command Organization

3.3.2 ROLES AND RESPONSIBILITIES

Roles and responsibilities for response team members are outlined below.

Position	Key Responsibilities
ISLAND TUG EMERGENCY RESPONSE TEAM	
Incident Commander	• Responsible for overall management and command & control of all aspects of the response related to the protection of LIFE, ENVIRONMENT and COMMUNITY / PROPERTY. Works with the Unified Command to set priorities and objectives, strategies and countermeasures and major expenditures. Primary link with Island Tug Senior company management, senior government officials and key outside stakeholders.
Safety Officer	Responsible for ensuring that the response to a major emergency incident is conducted with utmost regard for the safety of responders, employees and the public at all times throughout the response. Identifies response activities or plans that are deemed to be unsafe or unusually hazardous to the health and safety of response personnel.
Security Officer	The Security Advisor assesses the types of problems likely to be encountered, establishes a Security Plan and works with Logistics and Operations to ensure the security efforts are sufficient and coordinated with the overall response. The Security Advisor works through regular lines of authority, but has the authority to stop or prevent unsafe acts of trespass, etc. in an emergency. Is responsible for the ISPS aspects of the response operations.
HR Officer	Responsible for ensuring that the response to a major emergency incident is conducted in accordance with applicable labour regulations, contractual obligations to employees and corporate human resources policies. For incidents involving serious injuries or fatalities, ensures that family members are notified in a caring and responsive fashion and receive access to necessary counseling and other services if required. Co-ordinates the implementation of Critical Incident Stress Debriefings (CISD) for victims, others involved in the incident and emergency responders.
Public Affairs	Responsible for ensuring that the Company's contact/dealings with the media and other public audiences are seen as positive, constructive, credible and responsive following an emergency incident. Develops and implements an emergency communications plan for providing accurate, up-to-date information about an incident and the related response on a timely basis in conjunction with other responding agencies or organizations. Ensures internal communications to employees.
Legal Officer	Responsible for ensuring that the response to an emergency incident is planned and conducted in compliance with applicable federal, regional, and local/municipal laws and regulations. Advises the Incident Commander on potential legal and/or liability issues related to an incident; and works to reduce or minimize the company's exposure to prosecution and liability claims.
External	Responsible for ensuring that the questions, issues and concerns of key

Liaison Officer	(nonmedia) external stakeholders (such as residents, government agency representatives, elected officials, and community groups) resulting from an emergency incident are identified and handled in a timely and responsive manner.
Operations Section Chief	Responsible for planning and supporting the safe, timely & effective physical response to an emergency incident by the on-scene responders (other than those on-board the vessel under the direct control of the Vessel Response Team). Manages Contractors, service companies, technical team activities and special projects.
Planning Section Chief	Responsible for overall planning of short, medium and long term response operations in accordance with the Prioritized Objectives identified by the Incident Commander and the Unified Command. Responsible for gathering, organizing, analyzing and disseminating critical information about the incident, identifying the immediate and projected impacts, and preparing a strategic response plan covering the anticipated duration of the response.
Logistics Section Chief	Responsible for the timely and cost-effective procurement, delivery and staging of essential personnel, equipment, supplies, materials and outside services (i.e., contractors) to conduct and support/sustain response operations for the duration of the incident. Includes provisioning of company and noncompany on-site responders and VRT personnel.
Finance Section Chief	• Responsible for protecting the company's financial interests during the response by ensuring that appropriate accounting, cost control and documentation systems and procedures are in place and followed during the response. Also has responsibility for handling potential third party damage and other claims that may be received while the response is still underway.
Administrative Support	Screens all calls coming into the Command Centre and provides administrative support as needed

ISLAND TUG VESSEL RESPONSE TEAM	
Tug Master/Mate	Provides initial notification of incident to ITB ERT in Vancouver and provides regular updates. Initiates and directs spill response plan action until relieved by Operations/Planning Manger as outlined in *Section 1.1*. Documents all response actions undertaken completion.
Bargeman	Executes Spill Response Plan action as outlined in *Section 1.1*. Coordinates ITB Team activities with those of site/terminal personnel.
Crew	Executes response actions as directed by the Tug Master/Team Leader.
ISLAND TUG ADDITIONAL RESOURCES	
Legal Council	Provides advice and guidance as required on legal matters pertaining to liability, waivers, legislative and regulatory obligations and responsibilities. Prepares and handles damage or other claims arising from the incident.
Spill Response Advisors	Provides advice and guidance on spill response organization and management. Assists in determining/identifying protection priorities and carrying out of overall response.
O'Brien's Group	The O'Brien's Group are contracted to provide qualified emergency management experts for all of the company's US and Canadian operations.
Burrard Clean Operations	Burrard Clean Operations are contracted to provide qualified emergency management experts for all of the company's Canadian operations.

3.3.3 CRISIS AND SPILL MANAGEMENT TEAM

Because of its size and limited number of management personnel, Island Tug and Barge Ltd. relies on contracted response management resources to provide many of their response organization positions. Support is provided by the O'Brien's Group and Burrard Clean Operations.

These contracted response management personnel along with available Island Tug Emergency Response Team (ERT) personnel will respond and form a spill management team working within a standard ICS organization with federal, state, and other responders.

Depending on the size and nature of the incident, at some point after the establishment of the spill management team and the incident command centre, Island Tug's President may form a Crisis Management Team using senior company officials and outside contractors as required. A crisis is defined as an event or series of events which can severely damage the reputation of the organization and its ability to conduct business. The Crisis Management Team protects the company's overall business/financial interests, its reputation as a responsible corporate citizen, while supporting the spill management team and the response operation.

3.3.4 QUALIFIED INDIVIDUAL DUTIES AND COORDINATION WITH THE FEDERAL AND STATE ON-SCENE COORDINATORS

ITB's Qualified Individual (QI) will immediately activate response resources in the event of an oil discharge from one of its vessels while in US waters.

ITB's Qualified Individual (QI) authority is contracted to the O'Brien's Group- spill management services. The QI is authorized to immediately activate response resources in the event of an oil discharge from one of its vessels while in US waters For spills in US waters, ITB's QI acts as the company's primary contact or liaison with the US coast Guard's designated Federal On-Scene Coordinator (FOSC) and the State On-Scene Coordinator (SOSC) throughout the response effort.

To ensure successful coordination, the QI will:

- contact the FOSC and SOSC by phone or in person as soon as possible after being notified of the spill
- invite the FOSC and SOSC to set up a consultation schedule so regular communication takes place
- invite the FOSC and SOSC to participate in all meetings of ITB's response team or ensure the FOSC and SOSC is fully apprised of results from the meetings
- consult the FOSC and SOSC on all key decisions relating to the response strategy, including priorities, tactics, countermeasures, information releases and interactions with the media or other government agencies.

3.3.5 VESSEL RESPONSE TEAM

The Tug Master/Bargeman, as Vessel Response Team Leader, initiates and directs the initial response action at the incident site until relieved by the Operations/Planning Manager.

Critical actions include:

1. **Initiating the initial response action plan by ITB and available site personnel.**

   Stabilize all fire and other safety hazards.
   Secure the source of discharge.
   Start containment and recovery actions.

2. **Completing a thorough and accurate assessment of the incident.**

   Fill in an Incident Data Sheet (see *Section 1.2*)

3. **Notifying ITB Management in Vancouver.**

   Provide regular, timely and accurate status reports.

4. **Directing Vessel Response Team's activities.**

   In the event of a potentially prolonged or large response effort, a back-up Vessel Response Team will be sent to the incident site. The back-up team will be made up from available operating personnel selected on the basis of training and experience in spill response.

3.3.6 EXTERNAL RESOURCES

In the event of a significant spill, ITB will secure additional personnel, equipment and expertise from external sources (e.g., Maritime Fire and Safety Association, the Washington State Maritime Cooperative, Island Tug's OSRO, and Island Tug's Fire and Salvage Contractor, response management contractors).

Contact names and telephone numbers for first response resources needs (e.g., personnel, Spill Response Equipment, Vessel Casualty Equipment, Transport and Response Expertise) are listed in the *Contact Listing* section.

3.3.7 JOINT OR UNIFIED COMMAND STRUCTURE

ITB's response team will work closely with the appropriate government agencies, response contractors and other response organizations under a `unified' command structure as warranted by the size and severity of the incident.

External Command Resources could include:

- United States Coast Guard (Government lead agency for all marine oil spills.)
- During the first 24 hours of the spill, Washington State Maritime Cooperative
- Oil spill response contractors
- Response management contractors
- Port Authorities
- State Authorities (e.g., Alaska Department of Environmental Conservation)
- Oil Company Site-Specific Response Teams (e.g, Refinery/Terminal response teams for Chevron, Imperial Oil, Petro Canada and Petro Marine)

3.3.8 INCIDENT CLASSIFICATION AND MANAGEMENT RESPONSE

Incident classification and management response is based on a tiered response that depends on the magnitude of the incident. *Figure 3.3.4* defines the incident levels 1, 2, and 3--and the appropriate response to be taken by ITB Management. The incident classification is consistent with BC Ministry of Water, Land, and Air Protection Marine Oil Spill Contingency Plans and some industry plans.

3.3.9 COMMAND CENTRE (C.C.)

The initial Command Centre for any incident will be at ITB's Vancouver office.

Upon being notified of an incident, members of the Emergency Response Team will assemble at the office as soon as possible unless otherwise directed by the Incident Commander.

A field Command Centre may be established in a centre at or closer to the scene of the spill depending on the requirements of the situation, and the location of the spill. In that case, ITB personnel will proceed by the fastest transportation available to the best location from which to manage the response and to interface with the OSRO and local government agencies at the scene.

For spills in SE Alaska, ITB will charter a jet aircraft to fly from Vancouver to the nearest centre with suitable landing facilities (i.e., Juneau, Ketchikan, Petersburg, Sitka, Wrangell, Skagway).

As noted, ERT personnel will carry cellular telephones, portable VHF radios, and laptop computers with them. Once on the ground, a suitable facility (e.g., hotel room(s)) will be located to house the field Command Centre and ERT personnel.

Incident Severity	ITB Response Actions
Level 1	
• Small, minor operational spill. • Can be handled by on-site personnel. • Little or no environmental damage or safety hazard. • No public concern or media interest.	• Notify regulatory authorities immediately. Notify terminal and customer as soon as possible. • Monitor site response closely for potential change in status (i.e. shift to Level 2)
Level 2	
• Larger operational spill or cargo tank leak while vessel is in transit. • Additional response personnel and equipment requested by Tug Master/Bargeman. • Moderate to serious actual or potential environmental damage. • Potential for public or media interest.	• See Level 1. • Alert/mobilize ITB Response Team. • Request assistance from appropriate sources (e.g., Washington State Maritime Cooperative, Burrard Clean, SEAPRO and key government agencies). • Operations/planning manager relocate to incident site as soon as possible.
Level 3	
• Catastrophic spill or potential spill resulting from a major vessel casualty (e.g., grounding, collision, loss of power/steering). • Uncontrolled discharge of product threatening significant percent of cargo. • Major safety hazard and actual or potential environmental damage (short and long term). • High level of public, media and political attention and concern.	• See levels 1 and 2. • Escalate request for assistance from all available sources. • Establish joint command with key government agencies and oil company as soon as possible. • Alert legal and insurance representatives.

Figure 3.3.2 - Incident Classification and Management Response Actions

3.4 REALISTIC MAXIMUM RESPONSE OPERATING LIMITATIONS (RMOL)

Section 3.4 – Realistic Maximum Response Operating Limitations of the SEAPRO Technical Manual and the Alaska Chadux *Response Manual* describe the following RMOL's for the areas the contractors operate in:

- General Adverse Weather Conditions;
- Sea States, Tides and Currents;
- Ice Conditions;
- Hours of Light.

Section 3.4 – RMOL of the *Oil Discharge and Prevention Plan* for Petro Marine's Skagway facility describes the same conditions for the area around the plant. ITB has been given a copy of this plan for its use. In general, response operations will not be significantly hampered by any of the conditions noted above. As stated in the Petro Marine plan:

"It is estimated that some type of response could be mounted year-round in regards to the wind, sea state and other weather conditions (at the Skagway facility)."

ITB's sailing route in SE Alaska from Dixon Entrance to Skagway transits mainly sheltered waters for its entire length – see *Section 3.1.2 – Vessel Routes*. As a result RMOL conditions are considerably moderated vs. open ocean or exposed coastal sailing environments.

ITB's sailing routes in Central and Northern Alaska can experience more adverse conditions.

3.4.1 GENERAL ADVERSE WEATHER CONDITIONS

In Southeast Alaska, ITB's Masters who sail this route regularly, report that weather conditions along the route are generally favourable for safe navigation year-round. Visibility is occasionally hampered by snow or fog, especially around the entrance to Wrangell Narows.

ITB's operations in Northern Alaska and Central Alaska are subject to more unfavourable conditions.

The Master has the full authority to alter course, seek shelter, or take whatever action he deems necessary to protect his crew and vessel. Under extremely adverse conditions, the vessel will take shelter in the nearest protected moorage, and wait until conditions have improved sufficiently to continue the trip safely.

The Coast Pilot publications are extremely valuable sources of information for mariners. Topics in the Coast Pilot include channel descriptions, anchorages, bridge and cable clearances, currents, tide and water levels, prominent features, pilotage, towage, weather, ice conditions, wharf descriptions, dangers, routes, traffic separation schemes, small-craft facilities, and Federal regulations applicable to navigation. Coast Pilot 8 covers the panhandle section of Alaska between the south boundary and Cape Spencer and Coast Pilot 9 deals with the Pacific and Arctic coasts of Alaska from Cape Spencer to the Beaufort Sea. These are available for download at:

http://nauticalcharts.noaa.gov/nsd/cpdownload.htm

A valuable source of information on current and historical weather conditions in SE Alaska is:

The Alaska State Climate Center
The University of Alaska Anchorage
Environment and Natural Resources Institute
Suite 205 707 "A" Street Anchorage AK 99501
Phone: (907) 257-2737
Fax: (907) 276-6847
E-Mail: auclima@uaa.alaska.edu

WIND

Winds in Southeast Alaska are almost constant, ranging from light in protected valleys to strong along the coast and at high elevations. Wind speeds may at times increase dramatically as the air currents are funnelled through narrow valleys/channels. Most inside routes experience southerly or southeasterly winds with an average speed of 14-15 knots. Stronger gusting winds may occur in narrow inlet locations.

In Central Alaska, a normal storm track along the Aleutian Island chain, the Alaska Peninsula, and all of the coastal area of the Gulf of Alaska exposes these parts of the state to a large majority of the storms crossing the North Pacific, resulting in a variety of wind problems. Direct exposure results in the frequent occurrence of winds in excess of 50 mph during all but the summer months.

Wind velocities approaching 100 mph are not common but do occur, usually associated with mountainous terrain and narrow passes.

In Northern Alaska, an occasional storm will either develop in or move into the Bering Sea then move north or northeastward, creating strong winds along the western coastal area. Because of the low flat ground in many places along the coast, these winds will cause flooding during the time the winds are blowing onshore. Winter storms moving eastward across the southern Arctic Ocean cause winds of 50 mph or higher along the arctic coast. At Barrow the prevailing winds are easterly.

Strong winds, or in fact any wind occurring in the areas of extreme winter cold, create a definite hazard to personnel exposed for even brief periods of time. For example, (using a wind chill chart developed by the U.S. Army) a temperature of a -13°F and an accompanying wind of 15 mph equals conditions that would be experienced with a temperature of –49 °F and no wind. If the temperature is a -49° F and the winds 10 mph, the resulting equivalent temperature is -81° F.

Strong winds will hamper the effectiveness of ITB's onboard boom. It is likely ITB's crew will be able to deploy the boom except in high wind and seas circumstances but the boom may not be very effective in strong winds. Containment boom is generally effective in winds up to 20 knots, although more oil is likely to escape the containment area as the wind approaches this speed. Strong winds will also hamper aircraft operations engaged in discharge tracking and transportation of response equipment and personnel.

For information on the effect of wind on the operations of ITBs OSROs, refer to the OSRO's plans (e.g., Section 3.4 of the SEAPRO *Technical Manual*, Section 3.4 of the Alaska Chadux *Response Manual*).

PRECIPITATION

Average annual precipitation for Southeast Alaska varies from 80" to more than 200". The percentage of days with measurable precipitation is highest along the inside coast, from Juneau to Ketchikan, less along the outside coastline, and lowest within the inner northern channels. September, October, and November generally tend to be the wettest months in most locations, with May, June, and July the driest.

In Central Alaska, precipitation measured at Anchorage averages approximately 15.91 inches and snowfall averages approximately 69.5 inches.

Northern Alaska has an average precipitation rate of less than 8 inches.

Barrow receives an average of 29 inches of snow annually and a total annual precipitation of slightly more than 4 inches

Rain or snow should not seriously hamper response operations, except to the extent that visibility is limited, or high winds are present.

For information on the effect of precipitation on the operations of ITBs OSROs, refer to the OSRO's plans (e.g., Section 3.4 of the SEAPRO *Technical Manual*, Section 3.4 of the Alaska Chadux *Response Manual*).

VISIBILITY

In Southeast Alaska, long periods of overcast skies are common and fog occurs year-round. Fog is heaviest in late summer and early winter. In general, visibility of 5 miles or less occurs 80-85% of the time.

In Central Alaska, Cook Inlet experiences an average number of 26 days of heavy fog per year. Heavy fog is defined as an observation with 1/4 mile visibility or less sometime during the day.

In Northern Alaska, Barrow experiences an average number of 61 days of heavy fog per year.

For deployment of ITB's onboard boom and skimmers, low visibility should not be a serious problem. Low visibility may inhibit shoreline operations and discharge tracking and surveillance.

For information on the effect of low visibility on the operations of ITBs OSROs, refer to the OSRO's plans (e.g., Section 3.4 of the SEAPRO *Technical Manual*, Section 3.4 of the Alaska Chadux *Response Manual*).

TEMPERATURE

In Southeast Alaska the maritime climate creates cool summers and mild winters. In summer, temperatures are generally warmer inland than at the same time on the coast. The opposite is true in the winter months. Average temperatures range from 50°-60° F in July to 20°-40° F in January.

In the central area, Anchorage has an average low temperature in January of approximately 5° F and the average high temperature in July is approximately 65 ^{o} F.

Northern Arctic Region of Alaska is the coldest with fewer than 110 days having temperatures above freezing. Summer begins in early July and continues through mid-September each year. Snow only covers the ground for eight months of the year. However, snowfall is expected during every month of the year. At Barrow the temperature ranges from –56 º F to 78 º F.

For most of the time, low temperatures should not pose any serious problems as long as responders are properly clothed. However, during extreme low temperature periods, the amount of time that responders can remain outdoors will be limited.

For information on the effect of temperature on the operations of ITBs OSROs, refer to the OSRO's plans (e.g., Section 3.4 of the SEAPRO *Technical Manual*, Section 3.4 of the Alaska Chadux *Response Manual*).

3.4.2 SEA STATES, TIDES AND CURRENTS

In Southeast Alaska, tides and currents vary in range and speed along the ITB route to Skagway. Current tide tables and current information are carried on board the towboat for ready reference by the Master in the event of an actual or potential spill incident. Sea states are generally low as ITB travels in the protected waters of S.E. Alaska.

ITB's routes to Central and Northern Alaska will have a significant portion of the voyage in the open ocean. Seas in the open ocean can vary greatly but will be highest during winter storms and periods of sustained winds which combined with the large fetch of the open ocean can create strong seas. For example winter storms in the Gulf of Alaska can have wind speeds in excess of 50 knots which in the open water can create waves as high as Sea State 8 (waves 45' or more). The Island Trader is capable of staying in the pusher configuration in seas up to 40'. ITB vessel's only trade in Northern and Central Alaska during favourable weather conditions. No voyages are presently planned to these areas of Alaska during the winter.

Tides and currents can be strong particularly in Cook Inlet. The diurnal range of tide in Cook Inlet varies from 14.3 feet at Port Chatham to 28.8 feet at Anchorage. Tidal currents in Cook Inlet are strong. At the entrance to Cook Inlet the tidal currents have an estimated speed of 2 to 3 knots, and in general increase up the inlet, with very large speeds in the vicinities of Harriet Point, East and West Forelands, and the entrances to Knik and Turnagain Arms. In general, the direction of the current is approximately parallel to the trend of the nearest shore and/or parallel to the 10 fathom curve.

Most types of boom designed for protected waters or nearshore protection will begin to lose their effectiveness at current speeds greater than 0.5 knots. As the current speed increases, the boom must be deployed at increasing angles to the direction of flow, whether in a containment, exclusion, deflection, or diversion configuration – see *Figure 1.6.6 – Summary of Nearshore Protection Techniques* in *Section 1.6 – Response Strategies* of this Plan for a description of the operating limitations of boom equipment in various configurations. ITB's onboard boom may not be effective in strong currents and/or rough seas, however, every attempt will be made by ITB to contain spilled oil as long as crew safety is not compromised.

For information on the effect of sea states, tides and currents on the operations of ITBs OSROs, refer to the OSRO's plans (e.g., Section 3.4 of the SEAPRO *Technical Manual*, Section 3.4 of the Alaska Chadux *Response Manual*).

3.4.3 ICE CONDITIONS

Ice rarely occurs along ITB's main route in Southeast Alaska because of mild winter conditions along the sheltered coastal areas. On very rare occasions, ice along ITB's routes in S.E. Alaska can occur during periods of extreme cold accompanied by light winds. On these occasions, ice formation is typically limited to thin soft scum which poses no threat to the structural integrity of tank barges and little threat to the operation of towing vessels or ships.

ITB's route north of the Aleutian islands through Northern Alaska's high arctic on route to Arctic Canada is only conducted during the summer season when ice conditions are optimal.

ITB's voyages to locations in Central Alaska such as Cook Inlet would only be conducted when ice conditions were favourable.

The National Weather Service, Anchorage, provides current ice information reports. Updated charts are published every Monday, Wednesday and Friday during the ice season. See attached information sheet for the Alaska Weather Line.

Ice does not pose a significant threat to spill response operations along ITB's normal sailing routes due to the majority of voyages being in S.E. Alaska and other voyages conducted in summer months when ice conditions are light.

Ice may provide some difficulty with containment and recovery operations. Given the fact that ITB only travels in times and areas of Alaska when ice is negligible or light, it is not anticipated that there would be any significant problems encountered with deploying boom. Thin ice may reduce the effectiveness of ITB's onboard brush skimmers.

For information on the effect of ice on the operations of ITBs OSROs, refer to the OSRO's plans (e.g., Section 3.4 of the SEAPRO *Technical Manual*, Section 3.4 of the Alaska Chadux *Response Manual*).

3.4.4 HOURS OF LIGHT

In Southeast Alaska, Skagway's daylight hours vary from 6.5 hours in December to 18 hours in June. It is expected that this would be similar of conditions throughout the rest of SE Alaska along ITB's route.

In Central Alaska, the summer months bring 20 hours of sunlight to central Alaska. In winter daylight hours are on the order of 4 hours.

For Northern Alaska hours of daylight can be extremely limited or non-existent at certain times of the year. For example, the most northern part of Alaska, Barrow, has no daylight from November 18 through to January 24. However, in the summer, namely May 19 to August 2, there is continuous sunlight.

Therefore hours of light should not be a significant operating limitation during the summer. However, ITB's route to Southeast Alaska which is conducted in the winter will be effected by the limited daylight hours (as little as 6.5). During these times, discharge tracking and surveillance will be difficult. Portable lighting will be essential.

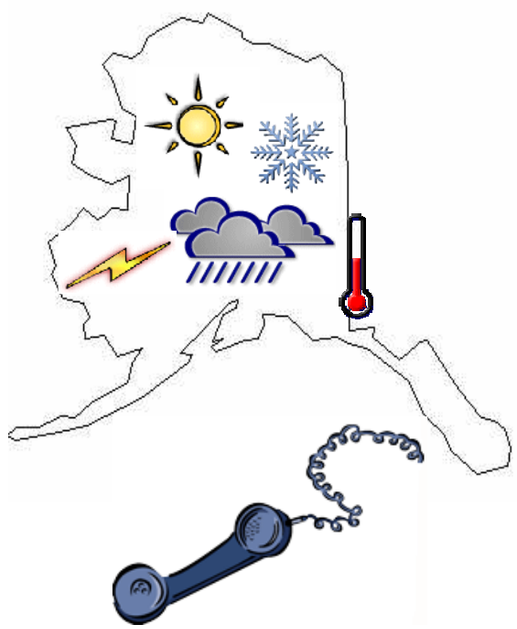
For deployment of ITB vessels onboard resources (boom and skimmers) the ship's onboard search lights would be used. ITB's contractors would bring in portable lights for their response efforts.

For information on the effect of darkness on the operations of ITBs OSROs, refer to the OSRO's plans (e.g., Section 3.4 of the SEAPRO *Technical Manual*, Section 3.4 of the Alaska Chadux *Response Manual*).

National Weather Service
222 West Seventh Avenue, #23
Anchorage, Alaska 99513-7575

U.S. Department of Commerce
National Oceanic and Atmospheric Administration
National Weather Service

Alaska Weather Line



In Anchorage, call: 266-5145
In Fairbanks, call: 458-3745
In Juneau, call: 790-6850
Anywhere else in Alaska: 1-800-472-0391
Outside of Alaska: 1-907-266-5145

03/02

Alaska Weather Line

The National Weather Service Alaska Region established the Alaska Weather Line as a service to all Alaskans, providing toll-free telephone access to weather information throughout the state. This service is available outside of Alaska, but it is not toll-free.

Weather Forecasts are issued on a regular basis, updated when required and either recorded by National Weather Service staff or automated by an NWS text-to-speech system providing accurate and timely weather information.

- **Public Forecasts** include area (zone) 7-day forecasts with information for major cities in Alaska.
- **Marine Forecasts** are available for all coastal marine areas with outlooks to 5 days.
- **Observations** from certain land stations and marine buoys are available. This information is updated once per hour.

The menu system is organized according to **geographical area**: Northern, Southwestern, South Central, and Southeastern.

Complete and comprehensive weather information, including forecasts, warnings, statements, climatological data, and observations are available on-line at

www.arh.noaa.gov.

General Instructions:

- Dial the Alaska Weather Line.
- Listen to the menu options and make your selection for the area you want.
- Forecast areas are listed inside this leaflet.

Once you are familiar with the menu options you can enter the numbers at any time without listening to the entire message.

Example: The forecast for Shelikof Strait can be obtained by pressing 3 3 2 4.

3 - South Central Alaska Menu
3 - Kodiak Menu
2 - Marine Menu
4 - Shelikof Strait

Press the pound sign at any time to return to the previous menu.

Questions/Comments Contact:
Public Program Manager
National Weather Service
Anchorage, Alaska
907-271-3507
aimee.devaris@noaa.gov

1 Northern Alaska Menu

1 1 **Fairbanks and Interior Alaska Menu**
1 1 1 **Fairbanks Area Menu**
1 1 1 1 Middle Tanana Valley Incl. Fairbanks
1 1 1 2 Fairbanks Climate Data
1 1 2 **Tanana Valley and Nearby Areas**
1 1 2 1 Western Tanana and Central Yukon Valleys Incl. Nenana and Tanana
1 1 2 2 Deltana - Tanana Flats Incl. Delta Junction
1 1 2 3 Upper Tanana Valley and the Fortymile Country Incl. Tok and Eagle
1 1 2 4 Northern Slopes of the Eastern Alaska Range Incl. Mentasta Lake
1 1 2 5 Denali Incl. Denali Park and Healy
1 1 3 **Koyukuk and Yukon Valleys**
1 1 3 1 Upper Koyukuk Valley Incl. Allakaket
1 1 3 2 Lower Koyukuk and Middle Yukon Valleys Incl. Galena
1 1 3 3 Lower Yukon Valley Incl. Marshall
1 1 3 4 Yukon Flats and Surrounding Uplands Incl. Fort Yukon
1 1 3 5 Upper Kobuk and Noatak Valley Incl. Ambler
1 1 3 6 Southern Slopes of the Eastern Brooks Range Incl. Arctic Village
1 1 4 River Summaries
1 2 **Nome Menu**
1 2 1 Southern Seward Peninsula Coast Incl. Nome
1 2 2 Eastern Norton Sound and the Nulato Hills Incl. Unalakleet
1 2 3 St. Lawrence Is. and the Bering Strait Coast Incl. Gambell
1 2 4 Yukon Delta Incl. Emmonak
1 2 5 Marine Area 9A - Norton Sound/Sledge Is. to Nunaktuk Is
1 2 6 Marine Area 9B - Dall Point to Wales Incl. St. Lawrence Is
1 2 7 Area 14 - St. Matthew Is.
1 2 8 Statements & Warnings
1 3 **Kotzebue Menu**
1 3 1 Baldwin Peninsula and Selawik Valley Incl. Kotzebue
1 3 2 Northern and Interior Seward Peninsula Incl. Buckland
1 3 3 Chukchi Sea Coast Incl. Point Hope
1 3 4 Lower Kobuk and Noatak Valleys Incl. Noatak
1 3 5 Marine Area 10A - Kotzebue Sound
1 3 6 Marine Area 10B - Wales to Cape Lisburne
1 3 7 Statements & Warnings
1 4 **Barrow Menu**
1 4 1 Northern Arctic Coast Incl. Barrow
1 4 2 Western Arctic Coast Incl. Wainwright
1 4 3 Northern Slopes of the Brooks Range From the Colville River Westward Incl. Umiat
1 4 4 Marine Area 11A - Cape Lisburne to Cape Halkett
1 4 5 Marine Area 11B - Cape Halkett to Demarcation Point
1 4 6 Statements & Warnings
1 5 **Prudhoe Bay Menu**
1 5 1 Central Beaufort Sea Coast Incl. Prudhoe Bay
1 5 2 Eastern Beaufort Sea Coast Incl. Kaktovik
1 5 3 Northern Slopes of the Brooks Range East of the Colville River Incl. Anaktuvuk Pass
1 5 4 Statements & Warnings

EXAMPLE: Press phone keys 1 1 4 for Fairbanks River Summaries.

2 Southwestern Alaska Menu

2 1 **King Salmon Menu**
2 1 1 Bristol Bay Incl. King Salmon, Naknek, and Dillingham
2 1 2 Short Term Forecast for Bristol Bay Incl. King Salmon, Naknek, and Dillingham
2 1 3 Marine Area 6A - Bristol Bay
2 1 4 Marine Area 6B - Port Heiden to Cape Sarichef
2 1 5 Statements & Warnings
2 2 **Bethel Menu**
2 2 1 Kuskokwim Delta Incl. Bethel
2 2 2 Marine Area 8 - Cape Newenham to Dall Point
2 2 3 Bethel Tides
2 2 4 Statements & Warnings
2 3 **McGrath Menu**
2 3 1 Kuskokwim Valley Incl. McGrath
2 3 2 Local Climatic Data
2 4 **St. Paul Menu**
2 4 1 Pribilof Islands Incl. St. Paul
2 4 2 Marine Area 15 - Pribilof Islands
2 4 3 St. Paul Short Term Marine
2 4 4 Bering Sea Marine Observations
2 4 5 Statements & Warnings
2 5 **Cold Bay Menu**
2 5 1 Alaska Peninsula Incl. Cold Bay and Sand Point
2 5 2 Eastern Aleutians Incl. Unalaska
2 5 3 Western Aleutians Incl. Adak
2 5 4 **Marine Menu**
2 5 4 1 Area 5B - Castle Cape to Cape Sarichef
2 5 4 2 Area 6B - Port Heiden to Cape Sarichef
2 5 4 3 Area 12A - Cape Sarichef to Nikolski
2 5 4 4 Area 12B - Nikolski to Adak
2 5 4 5 Area 13 - Adak to Attu
2 5 4 6 Unalaska Bay
2 5 4 7 Aleutian & Gulf of Alaska Marine Observations
2 5 4 8 Bering Sea Marine Observations

EXAMPLE: Press phone keys 2 5 4 2 for the Marine Area 6B Forecast.

3 South Central Alaska Menu

3 1 **Valdez Menu**
3 1 1 Northeast Prince William Sound Incl. Valdez-Richardson Highway North Through Thompson Pass
3 1 2 Southeast Prince William Sound Incl. Cordova
3 1 3 Copper River Basin Incl. Glennallen-Glenn Highway Chickaloon to Glennallen-Tok Cutoff Gakona Junction to Mentasta Pass-Richardson Highway Thompson Pass to the North End of Summit Lake
3 1 4 **Marine Menu**
3 1 4 1 Area 2C1 - Valdez Port
3 1 4 2 Areas 2C2, 2C3 - Valdez Narrows and Arm
3 1 4 3 Area 2B - Cape Suckling to Gore Point
3 1 4 4 Area 2C - Prince William Sound
3 1 4 5 Area 2C4 - Passage Canal
3 1 4 6 Cook Inlet & Prince William Sound Observations
3 2 **Anchorage/Kenai/MatSu Valley/West Prince William Sound**
3 2 1 **Regional Zones and Cities Menu**
3 2 1 1 Anchorage Municipality to Bird Creek Incl. Glenn Highway North to the First Knik River Bridge-Seward Highway South to Bird Point
3 2 1 2 Matanuska Valley Incl. Palmer-Wasilla-Glenn Highway 1st Knik River Bridge to Chickaloon-Parks Highway North to Houston
3 2 1 3 Susitna Valley Incl Talkeetna-Willow-Parks Highway Houston to Denali Park Entrance
3 2 1 4 Kenai Peninsula Incl. Kenai-Soldotna-Homer-Sterling Highway
3 2 1 5 Western Prince William Sound and Kenai Mountains Incl. Whittier-Girdwood-Seward-Seward Highway Bird Point to Seward
3 2 1 6 Anchorage Climate Information
3 2 2 **Marine Menu**
3 2 2 1 Area 4 - Cook Inlet
3 2 2 2 Area 4A - Kachemak Bay
3 2 2 3 Area 2C4 - Passage Canal
3 2 2 4 Area 2C - Prince William Sound
3 2 2 5 Area 2B1 - Resurrection Bay
3 2 2 6 Area 3A - Barren Island/Kamishak Bay
3 2 2 7 Whittier to Anchorage Pressure Difference
3 2 2 8 Cook Inlet & Prince William Sound Observations
3 2 4 Sea Ice Advisory
3 3 **Kodiak Menu**
3 3 1 Kodiak Island Incl. Kodiak City
3 3 2 **Marine Menu**
3 3 2 1 Area 3B1, 3B2 - Chiniak & Marmot Bays
3 3 2 2 Area 3A - Barren Island/Kamishak Bay
3 3 2 3 Area 3B - Shuyak Island to Sitkinak
3 3 2 4 Area 3C - Shelikof Strait
3 3 2 5 Area 5A - Sitkinak to Castle Cape
3 3 2 6 Area 2B - Cape Suckling to Gore Point
3 3 2 7 Aleutian & Gulf of Alaska Marine Observations
3 3 2 8 Cook Inlet & Prince William Sound Observations

EXAMPLE: Press phone keys 3 3 1 for the Kodiak Forecast.

4 Southeastern Alaska Menu

4 1 **Public Forecast Menu**
4 1 1 **Northern Inner Channels Menu**
4 1 1 1 Northern Lynn Canal Incl. Skagway and Haines
4 1 1 2 Glacier Bay Incl. Gustavus
4 1 1 3 Travelers' Forecast – Haines and Skagway Roads
4 1 2 **Central Inner Channels Menu**
4 1 2 1 Juneau Borough/Western Chichagof/Admiralty Island Incl. Juneau, Hoonah, and Angoon
4 1 2 2 Inner Channels from Kupreanof Island to Etolin Island Incl. Petersburg, Wrangell, and Kake
4 1 2 3 Juneau Climate Data
4 1 3 **Outer Coast Menu**
4 1 3 1 Cape Decision to Cape Fairweather Coastal Area Incl. Pelican, Sitka, and Port Alexander
4 1 3 2 Cape Fairweather to Cape Suckling Coastal Area Incl. Yakutat
4 1 4 **Southern Panhandle Menu**
4 1 4 1 Southern Inner Channels Incl. Ketchikan and Metlakatla
4 1 4 2 Dixon Entrance to Cape Decision Coastal Area Incl. Craig and Klawock
4 1 4 3 Misty Fjords Incl. Hyder
4 2 **Marine Menu**
4 2 1 Area 1A1 - Lynn Canal/Glacier Bay
4 2 2 Area 1A2 - Icy Strait/Cross Sound
4 2 3 Area 1A3 - Stephens Passage/Chatham Strait/ Frederick Sound/Sumner Strait/Clarence Strait
4 2 4 Area 1B - Dixon Entrance to Cape Fairweather
4 2 5 Extended Marine
4 2 6 Area 2A - Cape Fairweather to Cape Suckling
4 2 7 Area 2A1 - Yakutat Bay
4 2 8 Southeast Alaska Marine Observations
4 2 9 Dixon Entrance & Queen Charlottes Marine Observations

EXAMPLE: Press phone keys 4 2 7 for the Yakutat Bay Forecast.

3.5 LOGISTICAL SUPPORT

ITB will rely on the resources of its OSROs and their affiliated contractors to provide primary equipment and logistical support to transport personnel and response equipment to any spill site.

For operations in Alaska – refer to *Section 3.5* of the OSRO's manual *(e.g.,* SEAPRO *Technical Manual* or *Alaska Chadux Response Manual).* This Section provides a comprehensive listing of contractors and outside companies that can provide transport and logistical equipment and services to support a spill response operation Alaska.

These equipment inventories include the following categories of equipment.

- aircraft
- airfields
- marine vessels
- ground transportation
- marine salvage companies

Upon arrival in Alaska from Vancouver, ITB ERT members will make their own arrangements with a local aircraft company for transportation to the designated field Command Centre location. A listing of these companies is included in *Section 3.5* of the OSRO's plan (**Note:** the aircraft listed in this section are neither owned nor controlled by the OSRO).

In the ITB Incident Command Organization a primary and alternate Finance/Logistics Officer has been identified (see *Figure 3.3.1 – ITB Incident Command Organization*). The Finance/Logistics Officer role is clearly spelled out in *Figure 3.3.2 – ITB Response Team Roles and Responsibilities*. This individual will work closely with and support the OSRO Logistics contact as required, either from the company's Vancouver office or from the field Command Centre when the ERT arrives in Alaska.

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3.6 RESPONSE EQUIPMENT

SEAPRO EQUIPMENT

Pollution response resources which are owned by SEAPRO or it's member companies, along with all other response resources which exist within the SEAPRO area of interest, or which can reasonably be deployed into the region in mandated time periods, are listed in an automated data base maintained at the SEAPRO headquarters office. This data base is continuously monitored to ensure that it accurately portrays the level of response capability of the membership. The *SEAPRO Technical Manual* has provided the following information based on the contents of State Regulations and ADEC guidelines regarding Response Equipment.

- Recovery Capabilities for SEAPRO Owned Recovery Equipment
- Storage Capabilities for SEAPRO Owned Storage Equipment
- Containment Capabilities for SEAPRO Owned Containment Boom

SEAPRO owned and SEAPRO member owned equipment is made available through two different contractual arrangements: Blanket Purchase Agreements (BPA) and Response Action Contracts (RAC). These documents represent contracts made between SEAPRO and SEAPRO member companies. Member owned response equipment is made available to SEAPRO for use by other member companies through a BPA. SEAPRO owned response equipment is made available to member companies through the RAC.

Recovery equipment owned by SEAPRO is listed by zone in tables in *Section 3.6* of the SEAPRO *Technical Manual*. Each table describes the equipment according to kind, type, quantity and recovery rates. Recovery rates are provided for individual pieces of equipment in terms of nameplate hourly rates.

Storage equipment owned by SEAPRO is listed by zone in tables in *Section 3.6* of the SEAPRO *Technical Manual*. Each table describes the equipment according to kind, quantity and storage capacity.

Containment capabilities for SEAPRO owned equipment and containment boom is listed by zone, in table format in *Section 3.6* of the SEAPRO *Technical Manual*. Each table describes the boom location, type and length.

ALASKA CHADUX EQUIPMENT

Refer to *Section 3.6 – Response Equipment* of the Alaska Chadux *Response Manual.*

3.6.1 LOCATION, INVENTORY, & OWNERSHIP OF THE EQUIPMENT

A listing of response equipment on ITB's barges is provided in *Section 1.8 – Vessel Description*. This list includes:

- Personal safety and protective equipment;
- Oil spill response equipment (i.e., containment & recovery);
- Cargo transfer equipment (i.e., pumps, hoses).

Refer to ITB's OSRO's plan (e.g., SEAPRO Technical Manual, Section 3.6.1 or Alaska Chadux, *Response Manual Section 3.6.1*) for details of OSRO's equipment.

3.6.2 TIME FRAME FOR DELIVERY AND START-UP

For operations in Alaska, see *Section 3.5 – Logistical Support* and *Section 3.6 – Response Equipment* in the SEAPRO *Technical Manual* or Alaska Chadux *Response Manual* for contact names, 24-hour telephone numbers and fax numbers for equipment.

3.6.3 MANUFACTURER'S RATED CAPACITIES

See *Section 3.6 – Response Equipment* of SEAPRO *Technical Manual* or Alaska Chadux *Response Manual* for equipment name, identifying numbers, nameplate capacities and specifications.

3.6.4 EACH VESSEL DESIGNATED FOR OIL RECOVERY OPERATIONS

For Southeast Alaska refer to *Section 3.5 – Logistical Support* of the SEAPRO *Technical Manual* for a listing of vessels designated to transport SEAPRO's response equipment systems and personnel within each SEAPRO designated zone. For Central and Northern Alaska refer to *Section 3.5 – Logistics Support* of the Alaska Chadux *Response Manual.*

3.6.5 INFORMATION ON ADDITIONAL VESSELS

For Southeast Alaska refer to *Section 3.5 – Logistical Support* of the SEAPRO *Technical Manual* for a listing of other companies and/or vessels potentially available to transport response equipment and personnel within each SEAPRO designated zone. For Central and Northern Alaska refer to *Section 3.5 – Logistics Support* of the Alaska Chadux *Response Manual.*

3.6.6 PUMPING, TRANSFER, TEMPORARY STORAGE AND LIGHTERING EQUIPMENT

Section 1.1.2 – Spills Resulting from Casualties describes the possible scenarios under which cargo transfer or lightering might be required (e.g., grounding, collision, hull failure), and the procedures for assessing this option. As noted, the Master has the necessary qualifications and final authority to decide the best course of action to stabilize the vessel, stop the discharge, and to execute transfer or lightering operations, until relieved by a senior ITB manager arriving at the scene.

In the event that it became necessary to lighter product from an ITB barge, ITB would utilize the onboard cargo pumps, hoses, portable lightering pumps, and other equipment to perform the ship to ship transfer. If the cargo pumps on the barge were not operational, ITB could use the onboard lightering pump. This pump is carried on all ITB barges operating in Alaska and is capable of lightering the volume of the largest cargo tank in 24 hours. ITB also has access to the lightering equipment supplied by their Salvage and Marine Firefighting Contractor and/or by their OSRO. For major lightering and/or salvage operations ITB will utilize the equipment and resources available through its Contractors.

See the following Section of the SEAPRO *Technical Manual* or the Alaska Chadux *Response Manual*:

- *Section 3.6 – Response Equipment* (list of pumping, transfer, and temporary storage equipment).

ITB has detailed procedures for the guidance of its Masters and crew members, and ITB management in executing a safe, timely, and effective cargo transfer or lightering operations from a damaged vessel. These procedures are contained in the vessel specific *Operations Manual* which are maintained on board the vessels.

3.6.7 EQUIPMENT STORAGE AND MAINTENANCE

Island Tug's first response equipment is stored in strategic areas on the barges. Monthly checks of pollution gear inventory is conducted.

The containment boom on ITB vessels is stored on deck on hydraulic reels for rapid deployment and easy recovery. The hydraulic reel winch is checked monthly. The containment boom is inspected during boom deployment exercises (quarterly or more frequently).

Onboard brush skimmers are air driven (either off of the barge's air system or the tug's). Barge air system maintenance includes daily checks of air compressor oil levels, draining water from air receivers, checking indicators on air driers, ensuring the air compressors are in auto. Skimmers are inspected for proper operation and serviced as required annually.

For ITB's OSROs, refer to *Section 3.6 – Response Equipment* from SEAPRO's *Technical Manual* or Alaska Chadux's *Response Manual* for a description of their equipment maintenance procedures and schedules.

3.7 NON-MECHANICAL RESPONSE INFORMATION - N/A

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3.8 PRIMARY RESPONSE CONTRACTORS

This section contains information on response contractors in ITB's areas of operation in US and Canadian waters:

Area	RO/OSRO	Main Office
Canada	Burrard Clean	Vancouver
Puget Sound COTP Zone	NRC Env. Services	Seattle, WA
	NRC	Great River, NY
Portland COTP Zone	MFSA	Portland, OR
	NRC	Great River, NY
SE Alaska COTP Zone	SEAPRO	Ketchikan, AK
San Francisco COTP Zone	NRC	Great River, NY
LA Long Beach COTP Zone	NRC	Great River, NY
Western AK COTP Zone	Alaska Chadux	Anchorage, AK

3.8.1 BURRARD CLEAN OPERATIONS

PO Box 82070
Burnaby, BC V5C 5P2

Telephone: (604) 294-9116 (Emergency, 24 hours) (604) 294-6001 (Office)
Fax: (604) 294-6003
Contact: Kevin Gardiner

DESCRIPTION

Burrard Clean Operations, a division of the Western Canada Marine Response Corporation, is certified by the Canadian Coast Guard as a Response Organization. Its mandate is to provide oil spill containment and clean-up services for the entire west coast of Canada. The company maintains a large inventory of marine spill response equipment in southwestern BC and at 15 strategically placed locations along the coast. It has a trained workforce of both employees and contractor personnel for responding to marine oil spills. Also, Burrard Clean, provides a wide range of hands-on spill response training to potential spill responders from the private and public sectors. This training is coordinated with the Canadian and U.S. Coast Guards, Environment Canada, the Department of Fisheries and Oceans, and BC Environment.

3.8.2 NATIONAL RESPONSE CORPORATION (NRC)

National Response Corporation
3500 Sunrise Hwy Ste. T103
Great River NY 11739 USA

Telephone:	**Emergency: 800 889-4672 (4NRC)** **Non-Emergency: 631 224-9141**
Fax:	631 224-9086 (IOC) 631 224-9082 (Main)
Email:	iocdo@nrcc.com
Contact:	Steven Candito - President

DESCRIPTION

The NRC, a wholly owned subsidiary of SEACOR SMIT, Inc., has approximately 500 worldwide clients, including contracts with several state administrative entities and the USCG. NRC provides pre-contracted oil spill removal coverage to more than 6,800 vessels of all types, and an additional 1,600 tank barges. NRC also covers approximately 500 assorted terminals, refineries, utilities, offshore exploration and production platforms, pipelines and airports.

NRC holds the highest classification offered by the USCG, and operates in all the noted environments: rivers and canals, inland, nearshore, open ocean and offshore. These services are provided within the continental US, Hawaii and the Caribbean in every U.S. Captain-of-the-Port Zones as defined by OPA 90 and the OSRO Guidelines.

Island Tug is a member of the NRC and will ensure its vessels are covered by the NRC as required, while operating in the United States. In the event of an incident ITB will contract the NRC as required until the cessation of the response.

3.8.3 MARITIME FIRE AND SAFETY ASSOCIATION AND CLEAN RIVERS COOPERATIVE, INC.

200 SW Market, Suite 190
Portland, OR 98119

Telephone: (503) 220-2055 (24 hours)
Fax: (503) 295-3660
Contact: Brent Way, Manager

DESCRIPTION

ITB's Shipping Agent for voyages to Portland Oregon is Merit Steamship Agency, who are a member of the Maritime Fire and Safety Association (MFSA). Under the terms of this membership, the MFSA will provide during the initial 24 hours after the spill, a complete spill response capability to ITB for the Columbia River (Rivers/Canal operating environment). This capability will include response vessels, boom equipment, skimmers, trained personnel and other specialized services. It is provided through a predetermined network of response contractors and organizations, including Clean Rivers Co-operative Inc. and Foss Environmental Services. Within the first 24 hours after the spill occurs, Island Tug and Barge will assume full responsibility to direct the recovery/cleanup operation per the contingency plan adopted by MFSA, subject to USCG approval and the approval of other key government agencies.

3.8.4 NRC ENVIRONMENTAL SERVICES CO.

Seattle Office:
20500 Richmond Beach Drive NW
Seattle, WA 98177

Telephone:	Main Line	(206) 767-0441
	Toll Free in U.S. 24 hour emergency	1-800-337-7455

Contact: Jim Peschel, Project Manager Marine Contracts

DESCRIPTION

NRC Environmental Services, a division of the National Response Corporation, has been contracted by the Washington State Maritime Cooperative (WSMC) as its primary response contractor to provide an oil spill first response system.

Island Tug and Barge Ltd. is a member of the Washington State Maritime Cooperative. In the event of an actual or potential spill, ITB looks to the WSMC during the first 24 hours of the incident. WSMC is expected to assist ITB by providing a 24-hour emergency notification network, and an oil spill response contingency plan and response organization with pre-positioned equipment and personnel dedicated to immediate response within the navigable waters of the State of Washington.

Beyond the initial 24 hours, ITB will contract the NRC Environmental Services as required to continue recovery and clean-up operations, under the contingency plan adopted by the WSMC, and subject to federal (USCG) and/or state (WDOE) approval.

Island Tug is also a member of the NRC Environmental Services parent company the National Response Corporation.

3.8.5 SOUTHEAST ALASKA PETROLEUM RESOURCE ORGANIZATION, INC. (SEAPRO)

540 Water Street, Suite 201
Ketchikan, Alaska 99901

Telephone: (907) 225-7002 (24 hours)
1-888-225-7676 (in Alaska)
Fax: (907) 247-1117

Contact: Dave Owings, General Manager

DESCRIPTION

SEAPRO is an approved Oil Spill Response Organization (OSRO) covering the area of Southeast Alaska from Dixon Entrance to Icy Cape. It is organized as a sharing network or cooperative allowing its members to draw on SEAPRO-owned equipment and trained personnel to assist in responding to a marine oil pollution incident.

Upon being notified by one of its members that an oil spill has occurred, and at the member's request, SEAPRO will:

- Provide response equipment and personnel to the scene of the spill;
- Participate in the member's Incident Command System;
- Provide various response services and support;
- Contract with outside suppliers for additional resources on the members' behalf.

All SEAPRO equipment and personnel are to act under the member's overall direction during a response effort or drill.

ITB is a member in good standing of SEAPRO, and has entered into a Response Action Contract (RAC) with SEAPRO to act as its primary OSRO in SE Alaskan waters. The SEAPRO *Technical Manual* is cross-referenced extensively in this Plan. The RAC entitles ITB to call on SEAPRO to provide SEAPRO-owned or controlled equipment and trained response personnel in the event of a marine oil spill incident.

The Blanket Purchase Arrangement (BPA) entitles ITB to gain access to SEAPRO member-owned equipment and resources, and the services of outside contractors under contract with SEAPRO.

3.8.6 ALASKA CHADUX CORPORATION

Alaska Chadux Corporation
2347 Azurite Court
Anchorage Alaska 99507 USA

Telephone:	**Emergency:**	**907 348-2365**
		888 831-3438
	Non-Emergency:	**907 348-2365**
Fax:	907 348-2330	
Contact:	Robert E. Heavilin – General Manager	

DESCRIPTION

Alaska Chadux Corporation (Chadux) is an industry funded non-profit oil spill response corporation, headquartered in Anchorage, Alaska. The staff comes from a variety of professional backgrounds including the oil industry, Coast Guard, wildland fire management and emergency management. Chadux uses a variety of equipment, with an emphasis on logistics to provide spill response, planning and training services to our members throughout Alaska. Chadux can quickly coordinate a response to an incident anywhere in Alaska. The main response hub, located in Anchorage, Alaska, has resources pre-packaged for rapid transport via land, water or air. Chadux has additional response hubs in strategic locations, including:

- Barrow
- Bethel
- Cordova
- Kenai
- Kodiak
- Naknek
- Nome
- Seward
- Unalaska
- Valdez

In addition to equipment, Chadux is prepared to provide incident management personnel, emergency response labor, oiled wildlife response, as well as training and planning services.

Island Tug is a member of Chaudux and will ensure its vessels are covered as required. In the event of an incident ITB will contract Alaska Chadux as required until the cessation of the response.

3.8.7 THE O'BRIEN'S GROUP

Western Region Office
2929 E. Imperial Hwy.
Suite 290
Brea, California 92821 USA

Telephone:	**Emergency:**	**985 781-0804**
	Non-Emergency:	**714 577 2100**
Fax:	714 577 2118	

DESCRIPTION

Following the enactment of the U.S. Oil Pollution Act of 1990 (OPA '90) and federal and state regulations, ship owners and managers, and facilities are now required to meet numerous spill prevention, planning, and response requirements.

The O'Brien's Group assists its clients in understanding and meeting these obligations in the most cost-effective manner, including the ability to respond at the time of an oil spill with a Qualified Individual (QI) and Spill Management Team (SMT).

During a response, The O'Brien's Group employs the National Incident Management System (NIMS) - to provide required response functions, consistent with the U.S. National Response Plan and Area Contingency Plans.

The client may elect to use any or all of these services as dictated by the circumstances of a particular incident. Additionally, O'Brien's can provide a range of resources to assist in managing any response.

3.9 TRAINING

All ITB vessel, management, and other employees are required to complete the training necessary to perform their assigned duties during an emergency incident SAFELY and EFFECTIVELY. This includes both position-specific training required to fulfill their assigned duties as well as optional spill and emergency response training.

Emergency response training is reinforced by a program of regular emergency response exercises or drills, both on the vessels and ashore in addition to standard shipboard drills. ITB's policy is to complete all exercises specified in the *U.S. Coast Guard's National Preparedness for Response Exercise Program (PREP)* including notification, operational deployment, and management exercises according to the timetable outlined in the program.

3.9.1 TYPES OF RESPONSE TRAINING

SAFETY AND BASIC EMERGENCY TRAINING

All ITB seagoing employees are required to complete the appropriate level of *Marine Emergency Duties (MED)* training, usually at the Pacific Marine Training Campus of BCIT in North Vancouver, B.C.. *Figure 3.9.1 – Marine Emergency Duty (MED) Training* summarizes the content of each MED level by seagoing position.

All seagoing personnel must complete MED 1A. Mates and Engineers must complete up to MED C, while Masters are required to complete up to MED D training and certification, in addition to their normal 'tickets' or certifications. All ITB Bargemen have completed the requirements the Canadian Coast Guard's training and certification for *Supervisor of Oil Transfer Operations (SOTO)*.

All seagoing ITB employees have or will be required to complete the Canadian Coast Guard's *Marine Oil Spill Shoreline Workers' Safety Training Program*. This training is in the form of a self-administered VCR tape, handbook, and safety quiz.

CONTINGENCY PLAN FAMILIARIZATION

All ITB employees including both shore and vessel personnel receive basic training to familiarize them with the goals, policies, and procedures contained in this *Shipboard Oil Pollution Emergency Plan* and other ITB emergency response documentation (e.g., *Vessel Operations Manuals*). This training includes how and when to use the plan and how to find critical information quickly.

MARINE EMERGENCY DUTIES (MED) TRAINING	SEAGOING EMPLOYEES BY POSITION		
	Masters	**Mates/Engineers**	**Deckhands**
MED 1A – Basic Safety of Life at Sea (SOLAS), Marine Firefighting, Lifeboat (3 days)	✔	✔	✔
MED 1B – Lifeboat and SOLAS (5 days)	✔	✔	Optional
MED 2B – Marine Firefighting (5 days)	✔	✔	Optional
MED C – Officers' Emergency Training (3 days)	✔	✔	
MED D – Masters' Training (1.5 days)	✔		

Figure 3.9.1 – Marine Emergency Duties (MED) Training Requirements

BASIC SPILL RESPONSE TRAINING

All seagoing and vessel management employees receive basic oil spill response training, typically through the company's designated Response Organization (RO) in Canada, Burrard Clean Operations.

RESPONSE MANAGEMENT TRAINING

ITB management and vessel officers (i.e., Masters, Mates, Engineers, Bargemen) receive additional training to improve their ability to take charge of and direct the response to a marine oil spill QUICKLY, SAFELY, and EFFECTIVELY.

This training can be company-specific. For instance, all key ITB managers and vessel officers have completed a two-day training program on response management priorities, procedures, and techniques.

In addition, selected ITB managers receive additional training in advanced oil spill response management.

RESPONSE TRAINING SUMMARY

Figure 3.9.2 outlines the specific response skills that training should address for employees by position and according to their likely duties during an emergency

	EMPLOYEES BY POSITION		
RESPONSE SKILLS	**Management**	**Masters, Mates, Engineers**	**Seamen, Bargemen**
Contingency Plan Familiarization			
• Reporting	✔	✔	✔
• Vessel Casualty Procedures	✔	✔	✔
• Operational Spill Procedures	✔	✔	✔
• Safety	✔	✔	✔
Operational Training			
• Use of PPE / SCBA		✔	✔
• TDG / WHMIS		✔	✔
• Basic Firefighting		✔	✔
• First Aid (MED)		✔	✔
• Basics of Oil Spill Response		✔	✔
Response Management Training			
• Advanced Response Mgt.	✔	✔	
• Situation Assessment	✔	✔	
• Strategy Development	✔	✔	

Figure 3.9.2 - ITB Emergency Response Training Matrix

3.9.2 PLANNING AND FREQUENCY OF EXERCISES

Company policy on response exercises is to participate in, support, and promote oil spill response exercises both in Canada and the United States.

Island Tug complies with the exercise standards and frequency laid out in the US Coast Guard's *National Preparedness for Response Exercise Program (PREP)* in order to sail in US waters.

The Security/Environmental Response Manager is responsible for planning and coordinating response training and exercising.

The Master is responsible for ensuring that appropriate training and exercises are conducted as per company and regulatory standards.

3.10 PROTECTION OF ENVIRONMENTALLY SENSITIVE AREAS

In the event of a marine oil spill involving one of its vessels, ITB personnel will take immediate action to protect environmentally-sensitive resources at risk using onboard response equipment – see *Section 1.5.2 – Protection of Sensitive Resources*. Specific countermeasures that may be used to protect shoreline sensitivities are outlined in greater detail in *Section 1.6 – Response Strategies* (e.g., exclusion booming, deflection booming).

For all Alaskan Sub-areas, a complete set of:

- Environmental Sensitivity Index (ESI) Maps
- General Maps
- Landuse and Management Maps
- Most Environmentally Sensitive Area (MESA) maps
- Geographic Response Strategies (GRS) Maps
- Bilogically Sensitive Area Maps
- Sub-area contingency plan links

can be found at:

http://www.asgdc.state.ak.us/maps/cplans/subareas.html

ITB will also utilize the equipment and resources of its OSROs to protect environmentally-sensitive resources, once they have arrived at the spill site.

Section 3.10 – Protection of Environmentally-Sensitive Areas in SEAPRO's *Technical Manual* identifies environmentally-sensitive resources in each of SEAPRO's designated response Zones in SE Alaska. SEAPRO has provided the following information based on the contents of the State Regulations and ADEC guidelines regarding Protection of Environmentally Sensitive Areas:

- Species Included in State Guidelines for the Southeast Planning Area
- Response Strategies for Protection of Wildlife
- Critical Life Periods for Wildlife in Southeast Alaska
- Zone Specific Information for Development of Oil Spill Planning and Response

Section 3.10 – Protection of Environmentally-Sensitive Areas in Alaska Chadux's *Response Manual* identifies environmentally-sensitive resources in Northern and Central Alaska and strategies to protect them.

3.10.1 MOST ENVIRONMENTALLY SENSITIVE AREAS

The Alaska Dept. of Fish and Game (ADFG) has identified "biological hotspots" throughout Alaska. These "Most Environmentally Sensitive Areas" are called MESAs. A full listing of MESAs is attached at the end of this section. The Sub-area Contingency Plans contain detailed descriptions and maps of the MESA's. These can be found at:

http://www.asgdc.state.ak.us/maps/cplans/subareas.html

In Southeast Alaska, of the eleven identified MESAs from Dixon Entrance to Cape Suckling, ITB's planned routing passes within twenty nautical miles of two MESAs.

- Mesa #63 - Mendenhall Wetlands (Near Juneau)
  The SEAPRO Zone for the Mendenhall Wetlands is Zone 7 - Juneau

- Mesa #61 - Stikine River Flats
  The SEAPRO Zone for the Stikine River Flats is Zone 3 - Wrangell / Petersburg

Operational summaries for both these MESA's, entitled Protection of Most Environmentally-Sensitive Areas (MESA's) are attached at the back of this Section.

The MESA's near potential ITB vessel routes in Central and Northern Alaska that could possibly impacted by a spill from an ITB vessel are:

MESA #1 – Stefansson Sound Boulder Patch

MESA #2 – Howe/Duck Islands / Sagavanirktok River Delta

MESA #3 – Colville River Delta

MESA #4 – Peard Bay / Franklin Spit

MESA #5 – Kasegaluk Lagoon

MESA #6 – Cape Lisburne / Cape Lewis

MESA #7 – Cape Thompson

MESA #9 – Little Diomede Island

MESA #10 – King Island

MESA #11 – St. Lawrence Island
MESA #28 – Unimak Pass / Krenitzin Islands
MESA #40 – Perenosa Bay / Seal Bay (Afognak Island)
MESA #41 – Marmot Island
MESA #42 – Barren Islands
MESA #43 – Chenik Head to Silver Beach (Kamishak Bay)
MESA #44 – Redoubt Bay
MESA #45 – Katgin Island
MESA #46 – Trading Bay
MESA #47 – Susitna Flats
MESA #48 – Anchorage Flats
MESA #49 – Goose Bay
MESA #50 – Palmer Hay Flats
MESA #51 – Mouth of the Kenai River
MESA #52 – Clam Gulch
MESA #53 – Kachemak Bay

3.10.2 ENVIRONMENTALLY-SENSITIVE AREAS (ESA)

The countermeasures to protect ESA's are described in *Section 1.6 – Response Strategies* in this Plan.

Because of the sheer number of ESA's along ITB's sailing routes, the individual locations are not listed in this Plan. See *Section 3.10* of SEAPRO's *Technical Manual* and Alaska Chadux's *Response manual* for more information.

For additional reference purposes, selected information about the Sensitivity Index from the *SE Alaska Sub-area Plan* of the *Alaska Federal/State Unified Plan* is located at the back of this Section. The Sensitivity Index was developed by the Southeast Sensitive Areas Work Group with representatives from State and Federal agencies and the private sector. The Index identifies priorities for resources by designations of major, moderate, and lesser concern, and the times of year that the resources would be most vulnerable. Also included is a Figure showing the critical life periods for fish and wildlife species common to SE Alaska.

For a complete set of Environmental Sensitivity Index (ESI) Maps for all Alaskan Sub-areas, refer to:

http://www.asgdc.state.ak.us/maps/cplans/subareas.html

These maps are also kept by ITB's OSROs in Alaska as applicable. An example map for Skagway is attached at the end of this section.

In the event of a spill, these maps will be cross-referenced against the Sensitivity Index data (see example attached to this section) by the ITB Unified Command Team to identify and prioritize environmentally sensitive areas for protection purposes. These maps were prepared for the National Oceanographic and Atmospheric Administration (NOAA) by Research Planning Inc. of Columbia, South Carolina.

3.10.3 GEORGRAPHIC RESPONSE STRATEGIES (GRS)

Geographic Response Strategies (GRS) were developed to protect sensitive coastal environments along the Alaska coastline. GRS are oil spill response plans tailored to protect a specific sensitive area from impacts following a spill. These response plans are map-based strategies that can save time during the critical first few hours of an oil spill response. They show responders where sensitive areas are located and where to place oil spill protection resources.

The following subarea plans are applicable to ITB's current operations or potential operations in Alaska:

1. Southeast Alaska
2. Prince William Sound
3. Cook Inlet
4. Kodiak
5. Aleutians
6. Bristol Bay
7. Western Alaska
8. Northwest Arctic
9. North Slope

For each of the GRS sites selected in any Subarea, a response strategy will be created, describing the Geographic Response Strategy for that site. Each document, is available for download from the Subarea home page, and can be printed on 11" x 17" paper. The GRS documents are all similar in format and contain the following parts:

- Table of Contents
- Part 1. Introduction
- Part 2. General Protection/Collection Tactics
- Part 3. Site-specific Geographic Response Strategies
- Part 4. References

GRS are developed by area-specific workgroups. Workgroup members include natural resource agency representatives, oil spill response professionals, and tribal organization representatives.

Geographic response strategies and other useful map documents are available at the Alaska Department of Natural Resources Geospacial Data Center, Prevention and Emergency Response Subarea Plan Maps.:

http://www.asgdc.state.ak.us/maps/cplans/subareas.html

An example of a site specific Geographic Response Strategy for Bridget Point / Echo Cove is included at the end of this section.

3.10.4 TIDELAND AND LAND USE PERMITTING

In the event that shoreline areas are oiled or likely to be oiled by a spill, ITB will employ the SCAT process for assessing threatened areas, and for developing appropriate protective and/or clean-up measures – see *Section 1.6 – Response Strategies, Shoreline Clean-up and Assessment Technique (SCAT)*. Special permits may be required to conduct SCAT-related activities on affected shorelines. Most of the tidelands in Alaska are owned and managed by Alaska Dept. of Natural Resources which can be reached at the following numbers:

- Land Division:
  - Southeast Region Office (907) 465-3400
  - Southcentral Region Office (907) 269-8552
  - Northern Region Office (907) 451-2740

The following permits may need to be completed in the event of a marine oil spill response and clean-up operation:

- Land Use Permit Application;
- Application for Temporary Water Use;
- Field Archaeology Permit Application.

Copies of these forms are available in the OSRO's manuals.

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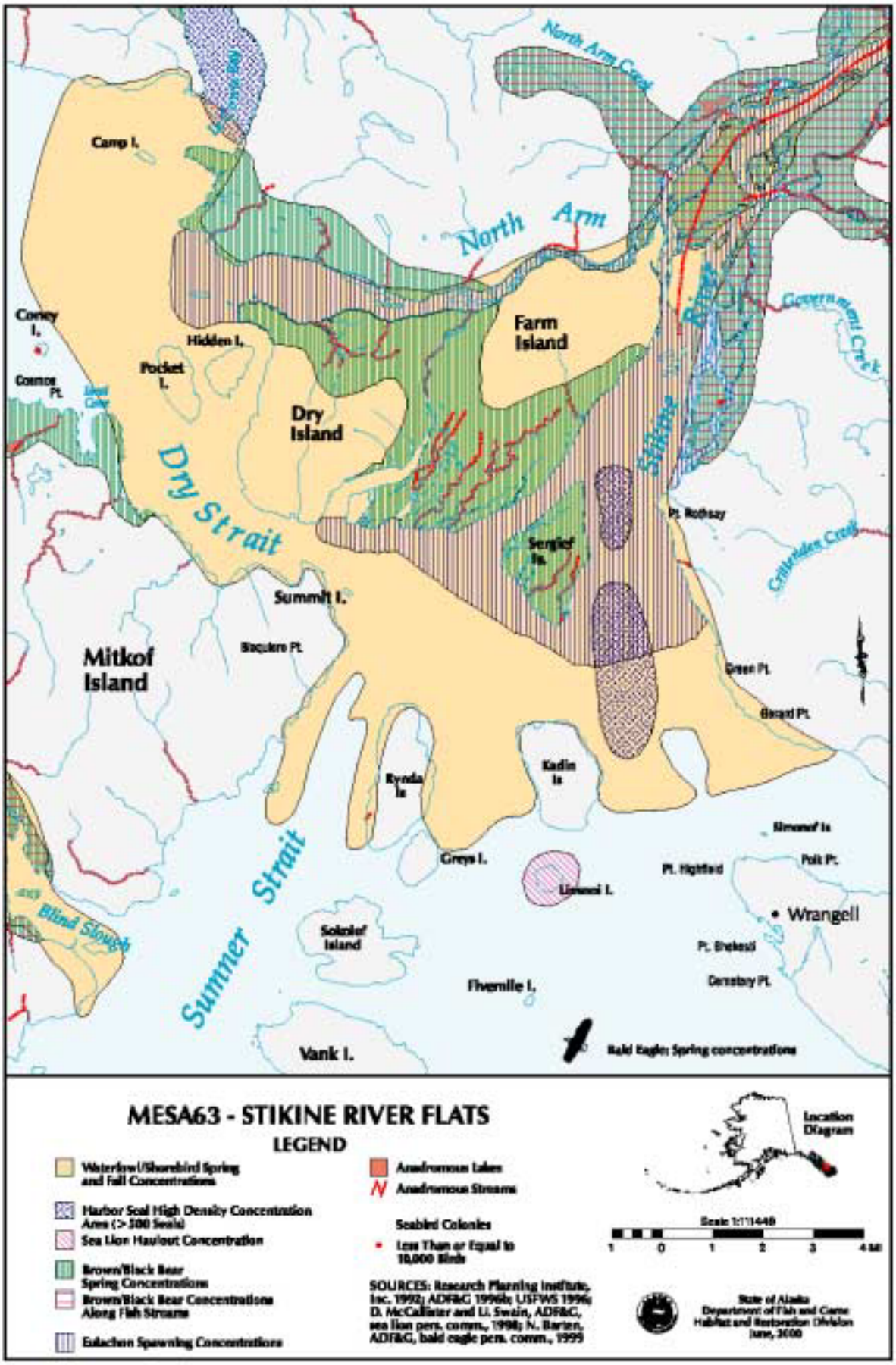

North Arm Creek
Camp I.
North Arm
Farm Island
Coney I.
Hidden I.
Pocket I.
Coemos Pt.
Dry Island
Dry Strait
Stikine River
Government Creek
Pt. Rothsay
Sergief Is.
Crittenden Creek
Summit I.
Mitkof Island
Bisquiere Pt.
Green Pt.
Gerard Pt.
Kadin Is
Rynda Is
Simonof Is
Polk Pt.
Greys I.
Pt. Highfield
Limonoi I.
Wrangell
Blind Slough
Sokolof Island
Pt. Bhekesti
Cemetery Pt.
Summer Strait
Fivemile I.
Vank I.
Bald Eagle: Spring concentrations
MESA63 - STIKINE RIVER FLATS
LEGEND
Waterfowl/Shorebird Spring and Fall Concentrations
Harbor Seal High Density Concentration Area (> 300 Seals)
Sea Lion Haulout Concentration
Brown/Black Bear Spring Concentrations
Brown/Black Bear Concentrations Along Fish Streams
Eulachon Spawning Concentrations
Anadromous Lakes
Anadromous Streams
Seabird Colonies
Less Than or Equal to 10,000 Birds
SOURCES: Research Planning Institute, Inc. 1992; ADF&G 1996b; USFWS 1996; D. McCallister and U. Swain, ADF&G, sea lion pers. comm., 1998; N. Barten, ADF&G, bald eagle pers. comm., 1999
Location Diagram
Scale 1:111448
1 0 1 2 3 4 Mi
State of Alaska
Department of Fish and Game
Habitat and Restoration Division
June, 2000

Protection of Most Environmentally Sensitive Areas (MESA's)

Region: Southeast Region
Subregion: Cape Suckling to Dixon Entrance
Designated Area: Stikine River Flats

MESA Number: 63 **(East of Wrangell)**
Latitude, Longitude: 56°40N, 132°20W
Type: Tidal Flats

Minimize Oil Contact With Resources Identified Below:

Critical Resources:	Critical Periods:
salmon: adults nearshore	early May to late November
salmon: spawning	early August to late December
salmon: juvenile outmigration/nearshore rearing	early March to late September
waterfowl and shorebirds: spring staging	late March to late June
waterfowl and shorebirds: fall staging	early August to late November
harbor seals (>100 animals): on haulouts	year round
harbor seals (>100 animals): pupping	late March to mid July
harbor seals (>100 animals): molting	late July to mid October
brown/black bears: feeding concentrations	early May to mid July

Contact: ADF&G Douglas **Telephone:** (907)465-4289

Methods:

Contain and control spill at spill site - recovery on water	Divert away from shoreline
Conduct sweeping operations with sorbent materials	Divert toward shoreline for containment/recovery
Wildlife response as specified in permit	

Operational Considerations:

Area under freshwater runoff, with peak in late spring and summer	Hovercraft available from Wrangell
Boom may need to be repositioned for flood and ebb tide	High recreational traffic area
Shallow water, flat bottom skiffs	Bear potential

Comments: Vauk Island: maximum flood current 2.0 knots; maximum ebb current 2.0 knots

Weather:

Tides: 4 to 22 feet **Wind:** 9.2 knots from SSE **Current:**

Operational Strategies:

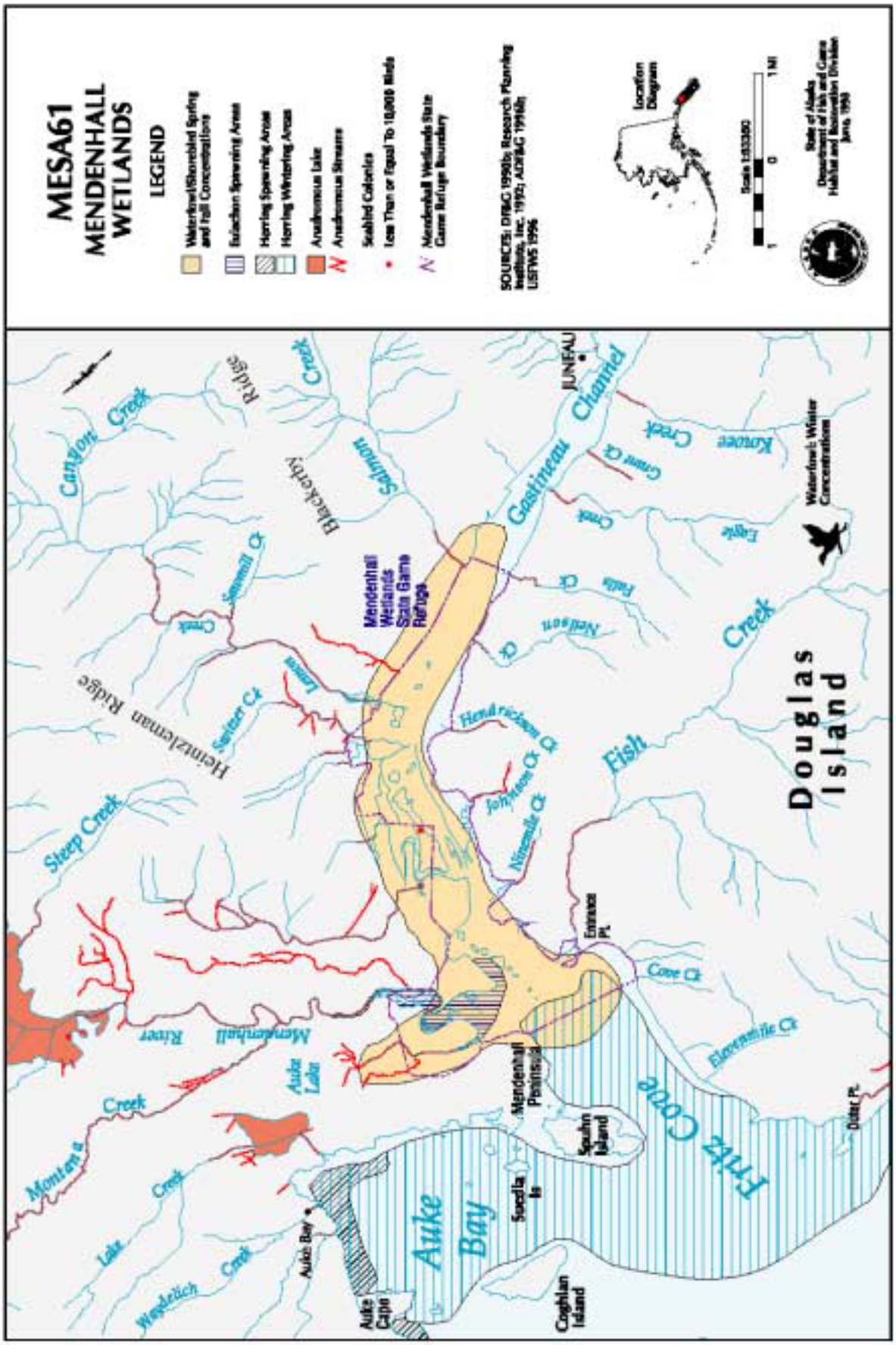
Equipment Location: Wrangell, Ketchikan, Sitka

Mobilization: plane

Staging Area	Latitude	Longitude	Runway Length
Wrangell			6000
Petersburg	56°48.10N	132°56.72W	6000
Wrangell Seaplane	56°27.98N	132°22.80W	
Petersburg Seaplane	56°48.68N	132°57.60W	

Comments:

SEAPRO equipment for all


MESA61
MENDENHALL WETLANDS
LEGEND
Waterfowl/Shorebird Spring and Fall Concentrations
Eulachon Spawning Areas
Herring Spawning Areas
Herring Wintering Areas
Anadromous Lake
Anadromous Streams
Seabird Colonies
Less Than or Equal To 10,000 Birds
Mendenhall Wetlands State Game Refuge Boundary
SOURCES: DFBG 1990b; Research Planning Institute, Inc. 1992; ADFBG 1996b; USFWS 1996
Location Diagram
Scale 1:63360
State of Alaska Department of Fish and Game Habitat and Restoration Division June, 1998
Douglas Island
Waterfowl Winter Concentrations
Mendenhall Wetlands State Game Refuge
Canyon Creek
Ridge
Creek
Blackerby
Salmon
Gastineau Channel
JUNEAU
Kowee Creek
Grave Ck
Eagle Creek
Falls Ck
Nelson Ck
Fish Creek
Hendrickson Ck
Johnson Ck
Ninemile Ck
Heintzleman Ridge
Switzer Ck
Lemon Creek
Steep Creek
Mendenhall River
Auke Lake
Montana Creek
Lake Creek
Waydelich Creek
Auke Bay
Auke Cape
Coghlan Island
Auke Bay
Mendenhall Peninsula
Spuhn Island
Sucdia Is
Fritz Cove
Entrance Pt.
Cove Ck
Elevenmile Ck
Outer Pt.

Protection of Most Environmentally Sensitive Areas (MESA's)

Region: Southeast Region
Subregion: Cape Suckling to Dixon Entrance
Designated Area: Mendenhall Wetlands

MESA Number: 61 **(In Juneau))**
Latitude, Longitude: 58°21N, 134°30W
Type: Tidal Flats

Minimize Oil Contact With Resources Identified Below:

Critical Resources:	Critical Periods:
salmon: adults nearshore	early May to late November
salmon: spawning	early August to late December
salmon: juvenile outmigration/nearshore rearing	early March to late September
eulachon: spawning/egg incubation	mid March to late June
waterfowl and shorebirds: spring staging	late March to late September
waterfowl and shorebirds: fall staging	early August to late November
waterfowl and shorebirds: winter concentrations	early November to mid March
seabirds (>1000 birds): feeding nearshore	year round
seabirds (>1000 birds): on colonies Mendenhall State Game Refuge	early April to late September

Contact: ADF&G Douglas **Telephone:** (907)465-4289

Methods:

Contain and control spill at spill site - recover on water	Divert towards shoreline for containment/recovery
Conduct sweeping operations with sorbent materials	Wildlife response as specified in permit
Divert away from shoreline	Exclusion boom (potential)

Operational Considerations:

Area under freshwater runoff	Strong tidal influence will determine response methods
Boom may need to be repositioned for flood/ebb tide	High recreational traffic area, sport fishing and hunting
Large passenger vessel traffic area	

Comments: Flood tide - prevailing current towards Salmon Creek; ebb tide prevailingcurrent towards Fritz cove
Weather:
Tides: 14.9 feet **Wind:** 9.2 knots from SSE **Current:**

Operational Strategies:

Equipment Location: Ketchikan, Sitka, Juneau
Mobilization: by boat from Juneau

Staging Area	Latitude	Longitude	Runway Length
Juneau			8400
Funter Bay Seaplane	58°15.26N	134°53.87W	
Angoon Seaplane	57°30.21N	134°35.44W	
Haines			4000
Haines Seaplane	59°14.10N	135°26.44W	

SENSITIVE AREAS: PART TWO - AREAS OF ENVIRONMENTAL CONCERN

1. BACKGROUND/CRITERIA

The following Sensitivity Index was developed by the Southeast Sensitive Areas Work Group, with representatives from State and federal agencies and the private sector. The index identifies priorities for resources by designations of major, moderate, and lesser concern. It also shows the time of year that resources would be most vulnerable. Resources are not listed by priority within each designation. These designations are for consideration in initial spill response activities, they are not applicable to extended clean-up activities. This prioritization scheme must be used in conjunction with spill-specific information (e.g., size and location of spill, type of product, trajectory) to determine the actual protection priorities for that discharge. Where references are available they are noted in the table. Information on cultural resources are not available for public review due to the susceptibility of sites to vandalism. Cultural resource experts should be contacted for site-specific information. Specific guidance to On-Scene Coordinators for protecting cultural resources is contained in Annex M of the Unified Plan. Data gaps in the index are discussed in Part Four, Significant Data Gaps and Information Needs.

This index also includes potential sites which could be used to hold collected oil if none of the resources in the index are present--these sites are Environmental Sensitivity Index (ESI) shoreline types that are among the least susceptible to long-term damage from oil.

The following criteria were developed by the Southeast Sensitive Areas Work Group as a tool to develop the Sensitivity Index (Tables 1-4). These criteria are not listed in a priority order.

CRITERIA FOR RELATIVE PRIORITY RANKINGS

- human economic disruption -- economic/social value; human food source disruption
- mortality -- wildlife, fish, other organisms (how many potentially killed in relation to abundance)
- animal displacement and sensitivity to displacement
- aesthetic degradation
- habitat availability and rarity
- sublethal effects, including sensitivity to physical or toxic effects of oil or hazardous substances and long-term affects to habitat, species, or both
- threatened and endangered species, and/or other legal designation
- persistent concentration of oil or hazardous substances
- reproduction rate or recolonizing potential
- relative importance to ecosystem
- potential for physical contact with spill--pathway of oil or hazardous substances

- resource sensitivity to response countermeasures

2. AREAS OF CONCERN AND RESOURCE SENSITIVITY INDEX

See also the Environmental Sensitivity Index maps produced for the Alaska Regional Response Team Scientific Support Coordinator.

TABLE 1: AREAS OF MAJOR CONCERN

Types of Resources	Ref.	Yr-rd	Spr	Sum	Fall	Wtr	No Data
Sea lion concentrations (200+) (rookery/haulout)	1,8	X					
Harbor seal concentrations	1,8	X					unknown
Seabird colonies (>1000 birds; especially murres, murrelets, pigeon guillemots, cormorants, terns, puffins)	2,8		X	X	X		
Marbled murrelet nearshore feeding concentrations	3		X	X	X		X
Waterfowl/shorebird migratory, molting and winter concentrations (especially 1,000 + scoters, goldeneyes, oystercatchers, grebes, and any number of harlequins, loons, swans)	1,8		X Apr-May		X late Aug-Sept	X	X
Threatened and endangered species/habitat (legally protected priority)	19	X					
High use commercial wildlife viewing (marine mammals, eagles, bears on coast)	3b			X May-Sept			
Fish processing plant shore-based (when operating)	4	X					
Intensive commercial fishing by season	5,8		X	X	X	X	X
Cultural/historic - coastal area surveyed and important sites identified	15,17	X					
Cultural/historic - National Historic Landmark or on/eligble for National Register of Historic Places	15,17	X					
Recreation land - National Parks, State Parks, National Wildlife Refuges, State Critical Habitat and Game Refuges	4	X					
Waterfront buildings on pilings & marine areas, harbors (health & safety concerns)		X					
Estuaries	8	X					
Salmon hatchery & ocean pens	4		X	X	X		
Large anadromous fish stream (>10,000 peak escapement)	6,4,16	X					
High subsistence salmon harvest area (>10% of local households)	8,7			X	X		

Types of Resources	Ref.	Yr-rd	Spr	Sum	Fall	Wtr	No Data
Eulachon spawning concentrations (including seal, seal lion & eagle feeding concentrations)	1,8		X				
Commercial set-net fisheries (Yakutat forelands)	5			X			
Marsh/supratidal wet meadows (ESI 10) (bear spring concentrations & hunting, geese winter concentrations, waterfowl & shorebird migration concentrations, deer spring & winter, marine mammals)	8	X					
Sheltered tidal flats (ESI 9), (goat, deer feeding on algae)	8	X					
High subsistence marine invertebrate harvest area (> 10% of local households)	7,8	X					
Kelp beds	9	X					
Sheltered rocky shores (ESI 8, 8a) (goat, deer feeding - algae)	8	X					
Sea otter concentrations	1,8,14	X					

TABLE 2: AREAS OF MODERATE CONCERN

Types of Resources	Ref.	Yr-rd	Spr	Sum	Fall	Wtr	No Data
Cutthroat, Dolly Varden, or steelhead streams & estuaries		X					
Intensive commercial crabbing (crab concentrations)	1,5,8	X					
Humpback whale winter concentrations						X	X
Humpback whale summer/fall concentrations				X	X		
Sea otter established populations (low density)	1,11,14	X					
Sea lion haulout (<200)							
Seabird colony (100-1000)	1,2,18		X	X	X		
Intensive personal use clamming	5	X					
Abalone harvest (commercial)							
Anadromous fish stream (500-10,000 total escapement or 100-500 pink/chum)	4,6,16	X					
Moderate commercial wildlife viewing (marine mammals, eagle, bears along coast)	3b		X May-Sept	X May-Sept			
Osprey feeding concentrations (Wrangell Narrows)	8,11		X	X	X		
Exposed wave-cut bedrock platform (ESI 2; including nearshore juvenile marine fishrearing habitat in kelp and reefs)	8	X					
Exposed tidal flat (ESI 7)	8	X					
Cultural/historic - unsurveyed area, but high probability of sites	17	X					
Cultural/historic - shipwreck in tidal or beach and over 50 years old	18	X					
Recreation land - designated wilderness	4	X					
Non-estuarine sportfish streams			X	X	X		
Marine mammal subsistence use		X					
Cetacean concentrations areas (non-humpback)		X					

TABLE 3: AREAS OF LESSER CONCERN

Types of Resources	Ref.	Yr-rd	Spr	Sum	Fall	Wtr	No Data
Relatively sheltered gravel beach (ESI 6c, 6d)	8	X					
Relatively sheltered sand/gravel beach (ESI 5b)	8	X					
Peregrine nesting cliffs	4		X	X	X		
Waterfowl nearshore molting (concentrations less than 1,000)	11			X	X		X
Houseboats		X					
Log Transfer Facility (dependent on permeability of oil)	11	X					
Log storage	11	X					
Floating (movable) fish processor				X	X		
Private mariculture farm	4	X					
Low use subsistence invertebrates	7	X					
Bald eagle nests	8,11,1 ,2		X	X	X		
Seabird colonies (<100)	1,2,8		X	X	X thru Sept		
Anadromous fish streams (<500 total escapement or <100 pink/chum)	4,6,16		X	X	X	X	
Herring winter concentrations	1					X	X
Cultural/historic - unsurveyed area, but low probability of sites	15,17	X					
Cultural/historic - surveyed area with no important sites	15,17	X					
Cultural/historic - inland and over 300 feet in elevation	15,17	X					
Cultural/historic - shipwreck not tidal or beach area and/or less than 50 years old	18	X					
Intensive sport fishing by season	5,8,13		X	X	X		
Recreation lands - facilities (cabin, campground, tent platform, public/private dock mooring & boat launch)	4,11	X					
Recreation lands - undeveloped area				X	X		

Table 2. ESI shoreline classification for the three types of environmental settings.

ESI NO.	ESTUARINE	LACUSTRINE	RIVERINE
1A	Exposed rocky shores	Exposed rocky shores	Exposed rocky banks
1B	Exposed, solid man-made structures	Exposed, solid man-made structures	Exposed, solid man-made structures
1C	Exposed rocky cliffs with boulder talus base	Exposed rocky cliffs with boulder talus base	Exposed rocky cliffs with boulder talus base
2A	Exposed wave-cut platforms in bedrock, mud, or clay	Shelving bedrock shores	Rocky shoals; bedrock ledges
2B	Exposed scarps and steep slopes in clay		
3A	Fine- to medium-grained sand beaches		
3B	Scarps and steep slopes in sand	Eroding scarps in unconsolidated sediments	Exposed, eroding banks in unconsolidated sediments
3C	Tundra cliffs		
4	Coarse-grained sand beaches	Sand beaches	Sandy bars and gently sloping banks
5	Mixed sand and gravel beaches	Mixed sand and gravel beaches	Mixed sand and gravel bars and gently sloping banks
6A	Gravel beaches Gravel Beaches (granules and pebbles)*	Gravel beaches	Gravel bars and gently sloping banks
6B	Riprap Gravel Beaches (cobbles and boulders)*	Riprap	Riprap
6C*	Riprap		
7	Exposed tidal flats	Exposed tidal flats	
8A	Sheltered scarps in bedrock, mud, or clay Sheltered rocky shores (impermeable)*	Sheltered scarps in bedrock, mud, or clay	
8B	Sheltered, solid man-made structures Sheltered rocky shores (permeable)*	Sheltered, solid man-made structures	Sheltered, solid man-made structures
8C	Sheltered riprap	Sheltered riprap	Sheltered riprap
8D	Sheltered rocky rubble shores		

Table 2. ESI shoreline classification, cont.

ESI NO.	ESTUARINE	LACUSTRINE	RIVERINE
8E	Peat shorelines		
8F			Vegetated, steeply-sloping bluffs
9A	Sheltered tidal flats	Sheltered sand/mud flats	
9B	Vegetated low banks	Vegetated low banks	Vegetated low banks
9C	Hypersaline tidal flats		
10A	Salt- and brackish-water marshes		
10B	Freshwater marshes	Freshwater marshes	Freshwater marshes
10C	Swamps	Swamps	Swamps
10D	Scrub-shrub wetlands; Mangroves†	Scrub-shrub wetlands	Scrub-shrub wetlands
10E	Inundated low-lying tundra		

* Denotes that a category or definition applies only in Southeast Alaska.
† In tropical climates 10D indicates areas of dominant mangrove vegetation

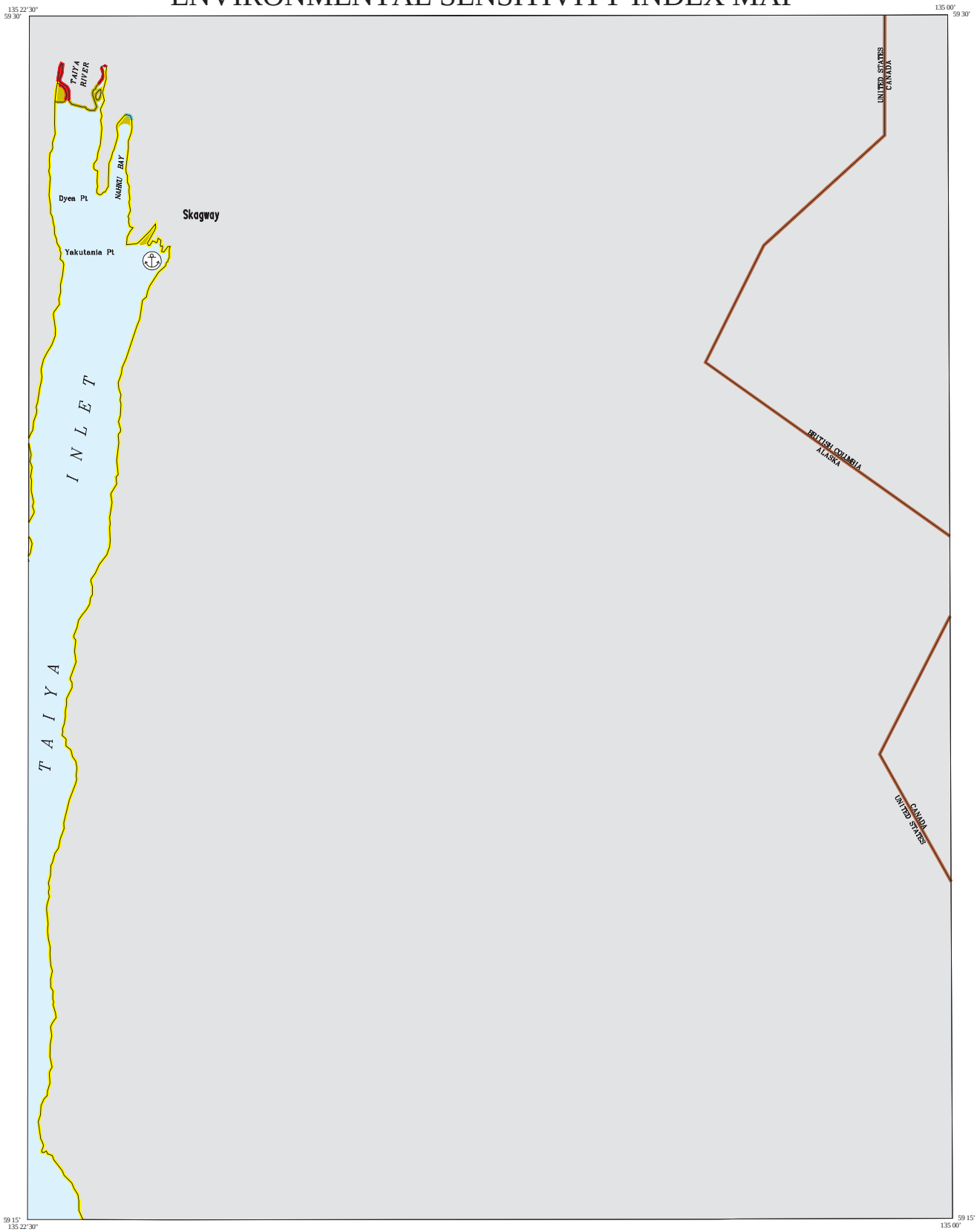
ESI NO.	PALUSTRINE**
10B	Freshwater marshes
10C	Swamps
10D	Scrub-shrub wetlands

**Palustrine environment ESI codes are assigned based on the National Wetland Inventory (NWI) habitat classification system.

The classification scheme is based on an understanding of the physical and biological character of the shoreline environment, not just the substrate type and grain size. Relationships among physical processes, substrate type, and associated biota produce specific geomorphic/ecologic shoreline types, sediment transport patterns, and predictable patterns in oil behavior and biological impact. The concepts relating natural factors to the relative sensitivity of coastline, mostly developed in the estuarine setting, were slightly modified for lakes and rivers. The sensitivity ranking is controlled by the following factors:

1. Relative exposure to wave and tidal energy
2. Shoreline slope
3. Substrate type (grain size, mobility, penetration and/or burial, and trafficability)
4. Biological productivity and sensitivity

ENVIRONMENTAL SENSITIVITY INDEX MAP



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1 .5 0 1 2 3 4 KILOMETERS

1 .5 0 1 2 3 4 MILES

SKAGWAY
B—1

PUBLISHED: DECEMBER 1992

SHORELINE HABITATS DESCRIPTIONS

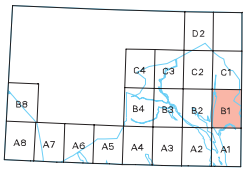
1. EXPOSED ROCKY SHORE
2. EXPOSED WAVE-CUT PLATFORMS
4. SAND BEACHES
5. MIXED SAND AND GRAVEL BEACHES
6A. GRAVEL BEACHES (GRANULES TO COBBLES)
6B. GRAVEL BEACHES (COBBLES TO BOULDERS)
7. EXPOSED TIDAL FLATS
8A. SHELTERED, IMPERMEABLE ROCKY SHORES
8B. SHELTERED, PERMEABLE ROCKY SHORES
9. SHELTERED TIDAL FLATS
10. INTERTIDAL MARSHES

HUMAN USE FEATURES

MARINA
BOAT RAMP
AQUACULTURE
AIRPORT
LOG STORAGE AREA

N
W E
S

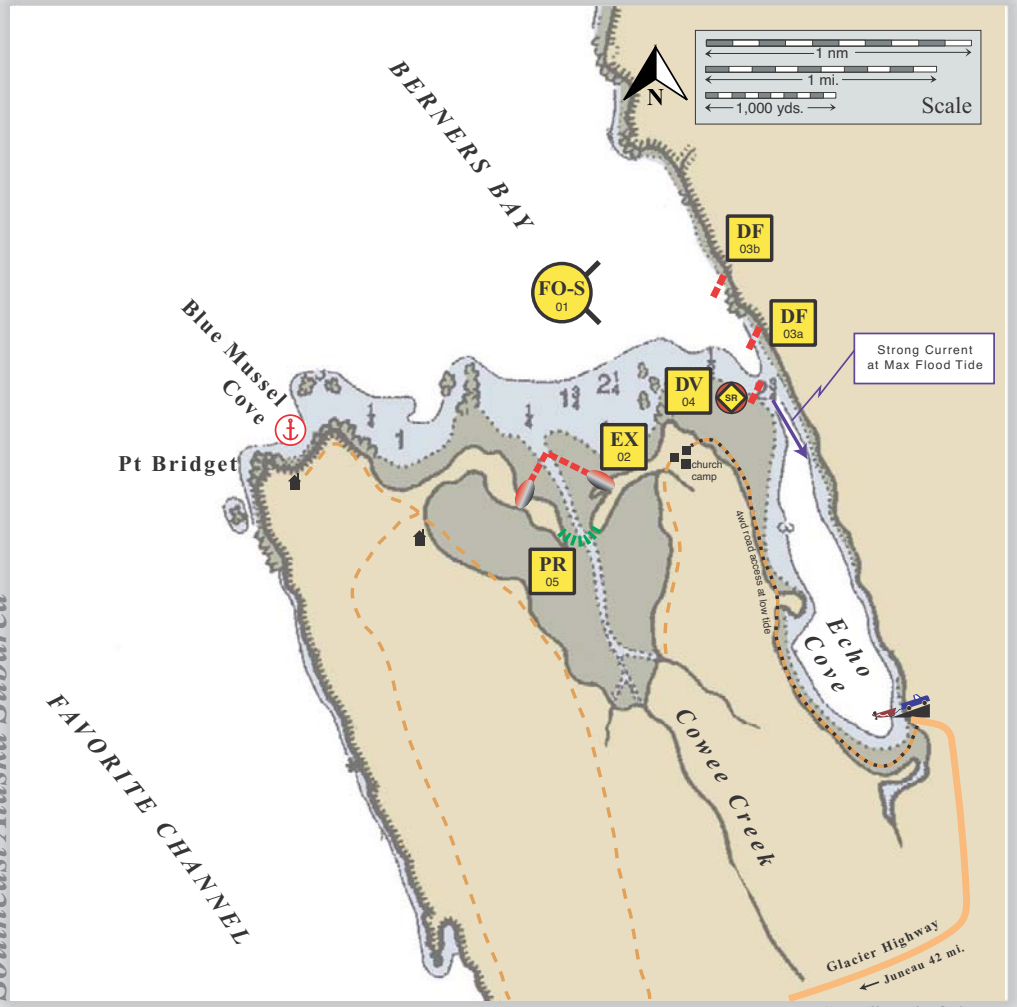
SKAGWAY



Point Bridget/Echo Cove, SE07-04

Geographic Response Strategies for
Southeast Alaska Subarea

Center of map at 58˚ 40.9' N Lat., 134˚ 57.4' W Lon.



This is not intended for navigational use.

Soundings in fathoms

Legend

SE07-04-02 & 05 Point Bridget looking south towards Cowee Creek.

- FO-S — Free-oil Containment and Recovery, Shallow Water
- EX — Exclusion Booming
- DF — Deflection Booming, Fixed
- PR — Passive Recovery and Debris Removal
- Protected-water Boom
- Tidal-seal Boom
- Snare Line
- Public Use Cabin
- Mooring
- ATV Trail
- Road
- Boat Ramp

SE07-04-03a,b & 04 Looking south into Echo Cove.

June 26, 2003

Tim L. Robertson

ID	Location and Description	Response Strategy	Implementation	Response Resources	Staging Area	Site Access	Resources Protected (months)	Special Considerations
SE07-04-01	**Point Bridget, Echo Cove** Nearshore waters in the general area of: Lat. 58º 41.1 N Lon. 134º 58.4 W	**Free-oil Recovery-Shallow Water** Maximize free-oil recovery in the offshore & nearshore environment of Point Bridget and Echo Cove depending on spill source and trajectory.	Deploy free-oil recovery strike teams upwind and up-current of Bridget Cove. Use aerial surveillance to locate incoming slicks.	Multiple free-oil recovery strike teams as required to maximize interception of oil before it impacts sensitive areas.	Juneau Echo Cove Vessel platform	Via marine waters Chart 17316	Same as SE04-07-02	Vessel master should have local knowledge.
SE07-04-02	**Cowee Creek Lagoon** Lat. 58º 40.9 N Lon. 134º 57.3 W	**Exclusion** Exclude oil from entering tidal lagoon between Point Bridget and Echo Cove.	Deploy tidal-seal boom and protected-water boom with fishing vessels and skiffs across the entrance to Cowee Creek and adjacent tidal marsh. Establish apex to maximize deflection of oil. Tend throughout the tide.	**Deployment** **Equipment** 1800 ft. protected water boom 2 ea. ≤ 50 ft. sections tidal-seal boom 18 ea. anchor systems (~20 lbs.) 4 ea. anchor stakes **Vessels** 2 ea. class 3/4 2 ea. class 6 **Personnel/Shift** 10 ea. vessel crew **Tending** **Vessels** 1 ea. class 3/4 1 ea. class 6 **Personnel/Shift** 3 ea. vessel crew	See SE07-04-01	Via marine waters Chart 17316 2 public use cabins.	Marine mammals- harbor seals, sea lions Fish-intertidal salmon/trout spawning (pink, chum, coho, steelhead, Dolly Varden, cutthroat), eulachon spawning Birds-waterfowl concentrations Habitat-marsh, sheltered rocky shore, kelp and eelgrass beds, high intertidal diversity Human use-high recreational use, commercial fishing Land management –State Park Terrestrial mammals-bears	Vessel master should have local knowledge. The church camp at Echo Cove has a landing craft that might be available for response efforts. The area is a natural collection spot during north winds. See Figure G-3-14 for equipment locations. FOSC Historic Properties Specialist should INSPECT site prior to operations. Tested: not yet Surveyed: 4/28/03 TLR
SE07-04-03	**Entrance to Echo Cove** a. Lat. 58º 41.45 N Lon. 134º 55.83W b. Lat. 58º 41.21N Lon. 134º 55.61W	**Deflection-Fixed** Deflect oil entering Echo Cove towards the shoreside recovery.	Transport equipment to site by marine vessel (class 2/3/4). Place boom and anchors with fishing vessels and skiffs (class 3/4/6). Position boom at appropriate angle to deflect oil from Echo Cove and set up for shore side recovery. Boom Array a. 600 ft. b. 600 ft.	**Deployment** **Equipment** 1200 ft. protected-water boom 4 ea. anchor stakes 10 ea. anchor systems (~40 lbs.) **Vessel, Personnel/Shift, Tending** Same as SE07-04-02	See SE07-04-01	Via marine waters Chart 17316 State Park lands	See SE07-07-02	Vessel master should have local knowledge. Echo Cove launch may be restricted by low tide and winter road conditions. Uncharted submerged rocks are present in the immediate area. Bears in area. Title 41 permit may be necessary. Contact ADNR. Tested: not yet Surveyed: 4/28/03 TLR
SE07-04-04	**Entrance to Echo Cove** Lat. 58º 40.93N Lon. 134º 55.68 W	**Diversion/Recovery** Divert oil entering Echo Cove to shoreside recovery.	Use class 6 skiffs to deploy boom and set anchors. Place 600 ft. of boom to divert oil to shoreside for recovery. Establish recovery site on the sandbar extending into the mouth of the cove.	**Deployment** **Equipment** 600 ft. protected water boom. 6 ea. ~40 lbs anchor systems 2 ea. Anchor stakes. 1 ea. shore side recovery unit **Vessel, Personnel/Shift, Tending** Same as SE07-04-02 plus 2 ea. response techs	See SE07-04-01	See SE07-07-01 Chart 17316	See SE07-07-02	See SE03-09-01 Prevailing SE winds. Tested: not yet Surveyed: 4/28/02 TLR
SE07-04-05	**Cowee Creek Lagoon** Lat. 58º 40.4 N Lon. 134º 57.0 W	**Passive Recovery** Minimize impact to designated area through passive recovery using snare line or sorbent boom.	Place 1000 ft. of snare line or sorbent boom across the tidal flats and stream mouth, in the entrance to the lagoon.	**Deployment** **Equipment** 1000 ft. snare line or sorbent boom 10 ea. anchor stakes **Vessels, Personnel, Tending** Same as SE07-04-02	See SE07-04-01	Via marine waters Chart 17316	See SE07-07-02	Use snare line for persistent oils and sorbent boom for non-persistent oils. Surveyed: 4/28/02 TLR

3.11 MEDIA AND PUBLIC RELATIONS GUIDELINES

INTRODUCTION

During the response to a serious spill or incident (i.e., potential spill, serious vessel casualty), there will be considerable public concern particularly from residents and organizations in affected or threatened areas/communities, as well as significant media interest.

Effective handling of inquiries and informational needs from the public and media will serve to:

1. Protect the safety and welfare of the general public in the area(s) affected by the spill.

2. Improve the effectiveness of the overall response effort.

3. Protect or even enhance the company's reputation as an environmentally responsible corporate citizen.

Responsibility (Spokesperson)

The official spokesperson for Island Tug and Barge (ITB) public inquiries is the Incident Commander.

All inquiries or requests for information received by ITB response personnel should be referred directly to the Incident Commander.

Key Principles and Guidelines

The following principles and guidelines should be followed by all ITB spokesmen responding to public or media inquiries:

1. Information Priority

   All public statements, update reports and responses to questions should recognize this hierarchy of vital information. The priority of information requested by the media or general public will usually be the same as the overall priorities in the response effort.

These are:

- Saving of human life and endangerment to public safety
- Protection of property
- Environmental impacts and damage assessments
- Progress of response operations

2. Information Consistency

One of the most common problems during a major spill response is when inconsistent, conflicting or contradictory information is communicated to the media, public or government officials by spokesmen or response personnel.

To avoid this problem, both the ITB Incident Commander and the Operations Manager, in their capacities as official spokespeople for the company, must ensure that:

- They maintain regular, ongoing communication with each other on response operations and progress.

- Information is consistent with that of other agencies or teams participating in the response such as Coast Guard, Government Agencies, oil company or delivery customer. This can be achieved through regular consultation with the designated spokesmen of these groups, planning of joint statements, press releases and conferences.

3. One-on-one Interviews

ITB's position regarding media is to avoid one-on-one interviews. Rather, ITB prefers to participate in joint interviews where, if possible, the government agencies (CCG/Port Authority), industry (refinery) and the customer (vessel) take the lead role in communicating vital information to the media.

4. Public Relations Tips

Figure 3.11.1 provides a concise summary of tips for the effectively handling media and public relations.

PUBLIC RELATIONS TIPS

Think outward, not inward

Concentrate on how media or the public receive your statement rather than on how you're presenting it.

Be positive

Speak in positive terms, act confidently and show empathy and concern.

Think before answering

Take time to think before responding to questions.

Stick to the facts

Do your research and state only the facts. Do not express opinions, make promises or speculate about the cause of the incident

Be concise

Keep to short statements and avoid jargon.

Be positive

Stress the positive actions taken, not things that ought to be done.

Pursue unified information to combined audiences

Seek consensus with spokespeople from government agencies and industry. Avoid one-on-one interviews or statements.

Figure 3.11.1

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3.12 KEY GOVERNMENT AGENCIES - ROLES AND RESPONSIBILITIES

CANADA

Canadian Coast Guard (CCG)

Lead federal government agency (outside the Ports of Vancouver) for ensuring that appropriate response measure are taken and the environment is protected when there's a spill from a ship or vessel into Canadian waters.

The CCG's primary functions are to:

1. Notify/alert other federal government agencies (e.g., Environment Canada, Fisheries and Oceans) following initial notification of the spill through MCTS (Vancouver).

2. Monitor the spill response and take command if the spiller is unknown or fails to respond effectively.

3. Provide access to the CCG equipment stock piles strategically located along the coast.

Vancouver Port Corporation

Lead federal government agency for oil spill occurring within the Port of Vancouver. They may call on the Coast Guard for assistance or to coordinate response.

Within the Port, their primary responsibilities are the same as the Coast Guard's.

Limited equipment and personnel resources. They rely mainly on Burrard Clean, Coast Guard and the oil companies.

Environment Canada (REET)

Lead federal government agency for spills originating on land to water (may call on CCG to coordinate spill response). Heads and coordinates Regional Environmental Emergency Team (REET) composed of various federal, provincial and municipal agencies and industry that facilitates joint spill response planning in B.C.

During a spill, provides response expertise and support to the Spill Response Team or CCG as required in areas such as:

- Priorities for shoreline protection and clean-up
- Containment, control, clean-up techniques and technology
- Use of dispersants
- Up-to-date weather forecasts
- Current, wind, tide information for spill tracking and surveillance.

B.C. Ministry of Water, Land and Air Protection

Lead Provincial government agency for responding to spills affecting B.C. coastal waters and shoreline (inter-tidal zone). Responsible for ensuring that all possible measures are taken to respond effectively to a spill and to protect sensitive coastal areas and resources in cooperation with the Coast Guard and/or Spill Response Team.

Provides expertise, personnel and equipment upon request or as deemed necessary by its On Scene Commander.

Key internal resource groups are:

- Environmental Emergency Services Branch (EESB), which:
    - Maintains and updates the B.C. Marine Oil Spill Contingency Plan
    - Develops B.C. spill response capability
- Regional Marine Oil Spill Response Teams. Three teams are located along the coast as follows:

North Coast (Smithers)	Portland Inlet to Smith Sound (Cape Caution)
Vancouver Island (Nanaimo)	Coast of Vancouver Island and mainland section from Surge Narrows to Smith Sound (including Gulf Islands and west coast of Texada Island)
South Coast (Surrey)	Boundary Bay to Surge Narrows (including Harwood, Savary and Hermando Islands and east coast of Texada Island)

UNITED STATES

Washington State Maritime Cooperative (WSMC)

The Washington State Maritime Cooperative was created in March 1990 as an oil spill first response system to provide:

- a mandatory emergency response communication network for vessels involved in commerce in Washington waters
- an immediate response to vessels that, for whatever reason, discharge oil into the state's waters
- a complete response for the first 24 hours after the initial report which may include but is not limited to, response vessels, boom equipment, skimmers, qualified personnel and wildlife care centres

Once notified on an oil spill or potential spill from WSMC covered vessel, the WSMC will initiate the following action for the responsible party during the initial 24 hours of the spill:

1. Activate the WSMC Oil Spill Response Contingency Plan (a copy of the plan is maintained in ITB's office).
2. Notify all responsible entities (federal, state, local) if the vessel requests them to do so.

3. Activate WSMC response management organization team.

4. Dispatch/direct qualified response contractor (Foss Environmental) with appropriate vessels, equipment and personnel.

5. Manage complete spill response, following the Oil Spill Response Contingency Plan. However, within the first 24 hours, the WSMC will pass spill management responsibilities to the responsible party.

Washington State Department of Ecology (WDOE)

The Department of Ecology is the lead response agency regarding environmental pollution within the State of Washington. As such, it has pre-designated the state On-Scene Coordinator (SOSC) and Incident Commanders for spills occurring in state jurisdiction. In this role, WDOE represents all state agencies and the interests of the state and its citizens.

Key WDOE responsibilities include:

1. Provide emergency response to reported oil and hazardous spill incidents (24 hours/day).

2. Determine the source, cause and responsible party.

3. Carry out responsibilities of responsible party if spill cannot be located or is unresponsive and, if the Federal On-Scene Coordinator (FOSC) does not assume direction.

4. Ensure that containment, clean up and disposal are carried out in a timely and adequate manner.

5. Initiate enforcement action as appropriate.

6. Coordinate spill response efforts with other state, federal and local agencies.

7. Establish joint information management system with federal, state and local agencies, and the responsible part.

8. Activate and coordinate Marine Resource Damage Assessment Team (MRDA).

9. Participate in the Washington Wildlife Rescue Coalition.

United States Coast Guard (USCG)

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) provides for the nation wide coordinated response to oil and hazardous substance pollution.

In general, the US Coast Guard (USCG) provides a Federal On-Scene Coordinator (FOSC) for spills in the coastal zone. The Environment Protection Agency (EPA) provides a FOSC for the inland zone.

Basically, the duty of the FOSC is to ensure a safe and adequate response. Consequently, the FOSC will monitor or direct clean-up activities at the scene of a discharge or potential discharge. This includes:

1. Evaluate magnitude of discharge or potential.
2. Make appropriate notifications.
3. Ensure safety of public responders.
4. Evaluate threat to environmental resources.
5. Determine feasibility of removal.
6. Initiate containment efforts when discharge is either unknown or unavailable.
7. Monitor removal operations.
8. Assume control of all or part of removal operations when removal efforts of a spiller are not adequate.
9. Determine when removal is complete.
10. Initiate enforcement action.

The general philosophy of the Coast Guard and EPA is to allow the spiller to clean-up the spill, provided there is adequate progress. The FOSC will give advice and directions concerning methods of handling the spill and the thoroughness of the clean-up.

Federal On-Scene Coordinators are usually familiar with the spill area and will have access to a variety of information, including current charts, tide data, environmental sensitivity atlas, spill trajectory models, and weather information.

Alaska State Department of Environmental Conservation (ADEC)

The Department of Environmental Conservation (ADEC) is the lead agency for environmental pollution response within the State of Alaska. As such, it has pre-designated the State On-Scene Coordinator, (SOSC), and Incident Commander, (IC), for spills occurring within the state's jurisdiction. In this role, ADEC represents all state agencies and the interests of the state and its citizens.

Subject to the statutes and regulations pertaining to its responsibilities as a state resource agency, key ADEC responsibilities include:

- Provide emergency response to reported oil and hazardous substance spill incidents (24 hours a day).
- Determine the source, cause and responsible party.
- Assume responsibilities of responsible party if spiller cannot be located or is unresponsive and, if the Federal On-Scene (FOSC) coordinator does not assume responsibility.
- Ensure that containment, cleanup, and disposal are carried out in a timely and adequate manner.
- Initiate enforcement action as appropriate.
- Effectively coordinate spill response efforts with other state, federal and local agencies.
- Establish joint information management system with federal, state, and local agencies, and the responsible party.

Oregon Emergency Response System

The Department of Environmental Conservation (ADEC) is the lead agency for environmental pollution response within the State of Alaska. As such, it has pre-designated the State On-Scene Coordinator, (SOSC), and Incident Commander, (IC), for spills occurring within the state's jurisdiction. In this role, ADEC represents all state agencies and the interests of the state and its citizens.

3.13 REFERENCE MATERIALS

Island Tug and Barge Offices

1. Island Tug and Barge - Vessel Specific *Shipboard Oil Pollution Emergency Plans*, prepared in compliance with the requirements of Section 45.2 of the Canadian Oil Pollution Prevention Regulations and approved by Transport Canada Marine Safety;

2. Island Tug and Barge – Vessel Specific *Operations Manuals;*

3. Island Tug and Barge – *Safety, Quality, and Pollution Prevention Manual;*

4. Island Tug and Barge – Vessel Specific *Emergency Plans and Drill Record Book;*

5. Island Tug and Barge – *Company Procedures Manual;*

6. Island Tug and Barge – *Vessel Maintenance Logs (Procedures);*

7. Island Tug and Barge – *Vessel Audit Books;*

8. *Washington State Maritime Cooperative Oil Spill Response Contingency Plan*, Washington State Maritime Cooperative, Nov. 1992;

9. *SEAPRO Technical Manual*, Southeast Alaska Petroleum Resource Organization;

10. *SEAPRO Responder Handbook*, Southeast Alaska Petroleum Resource Organization, April 1997;

11. Alaska Chadux - *Response Manual*;

12. *Southeast Alaska Sub-Area Contingency Plan for Oil and Hazardous Substance Spills and Releases*. July 1997.

13. *Field Guide to the Documentation and Description of Oiled Shorelines.* Environment Canada. March 1994.

14. *Oil Spill Response Field Guide.* Canadian Coast Guard. 1995.

15. *B.C. Marine Oil Spill Shoreline Protection and Clean-up Manual*, BC Environment, January 1992.

SEAPRO Offices

The SEAPRO office in Ketchikan has an extensive library of environmental sensitivity information and maps specifically for the SEAPRO area of interest in Southeast Alaska. These are updated continually, and new additions are currently being added. This resource is immediately available to all members during a pollution response action.

The most significant publications, charts and maps for the State of Alaska include, but are not limited to:

1. Island Tug and Barge Ltd. - Contingency Plan

2. Southeast Alaska Sub-Area Contingency Plan for Oil and Hazardous Substance Spills and Releases. July 1997.

3. Environmental Sensitive Areas Southeast Alaska Contingency Plan Index of Plates (January 1993)
   Published by Randolph Bayliss, P.E.

4. Southeast Alaska Current Atlas Grenville Channel to Skagway (1989)
   Published by Randel Washburne

5. Prince of Wales Island Area Plan Fish and Wildlife Element (1990)
   Published by the Alaska Department of Natural Resources, Land & Resource Section

6. Southwest Prince of Wales Island Area Plan (June 1990)
   Fish and Wildlife Element
   Published by the Alaska Department of Natural Resources, Division of Land and Water Lands and Resources Section

7. Environmental Sensitivity Index Maps
   Fisheries and Biological Resources
   John Whitney - SSC/NOAA (see 7.5.1 for address and phone numbers)

8. Tide Tables West Coast of North and South America Including the Hawaiian Islands
   U.S. Department of Commerce National Oceanic and Atmospheric Administration

9. Tidal Current Tables Pacific Coast of North America and Asia
   U.S. Department of Commerce
   National Oceanic and Atmospheric Administration

10. Tongass National Forest Land Management Plan Maps (1991)
U.S. Department of Agriculture
Forest Service

11. Southeast Alaska Tidelands Plan For Shellfish, Fish, Birds, and Mammals
Alaska Department of Fish & Game

12. Southeast Alaska Aquatic Fish Farms Site Plans
Alaska Department of Fish & Game

13. Navigation Charts for Southeast Alaska
U.S. Department of Commerce National Oceanic Atmospheric Administration

14. Anadromous Fish Streams Catalog for Southeast Alaska
Alaska Department of Fish & Game

15. Catalog of Waters Important for Spawning, Rearing, or Migration of Anadromous Fishes Southeast Region
Alaska Department of Fish & Game

Alaska Chadux Offices

Alaska Chadux maintains an extensive library of environmental sensitivity information and maps. These are updated continually. This resource is immediately available to all members during a pollution response action.

Significant publications include but are not limited to:

1. Island Tug and Barge Ltd. - Contingency Plan

2. Alaska Unified Plan and sub-area contingency plans for:
   - Prince William Sound
   - Cook Inlet
   - Kodiak Island
   - Aleutians
   - Bristol Bay
   - Western Alaska
   - Northwest Arctic
   - North Slope

3. Environmental Sensitivity Index Maps Fisheries and Biological Resources
   John Whitney - SSC/NOAA

4. Tide Tables

5. Navigation Charts
   U.S. Department of Commerce National Oceanic Atmospheric Administration

6. Exxon Field Guide
   Exxon

7. Arctic Waters Field Guide

8. WDOE Guidelines for Determining Oil Spill Volume in the Field

9. ACC Response Preparedness Guide

10. AIMS Guide

4.0 BEST AVAILABLE TECHNOLOGY

4.1 TECHNOLOGY SUBJECT TO A BAT REVIEW

Contingency Plan Components Requiring BAT Review for Refined Product Shippers (Laden Oil Barges):

1.	18 AAC 75.037(f): Laden Oil Barges …. Provide an adequate means of recovering a barge that breaks free of its towing vessel. The recovery means must be capable of being used by other vessels if the towing vessel is lost or incapacitated.
2.	18 AAC 75.037(d): Laden Oil Barges. The owner or operator shall ensure that measures are in place that allow the prompt detection of an oil discharge, including visual inspections of the barge and the area around the barge, and the sounding of all cargo tanks to check cargo and water levels in the tanks after an intentional or unintentional grounding.
3.	18 AAC 75.425 (e)(1)(D): Contingency Plan Contents. Communication--a description of field communications procedures…
4.	18 AAC 75.425(e)(1)(F)(i): Contingency Plan Contents. Procedures to stop the discharge at its source and prevent its further spread.
5.	18 AAC 75.425(e)(1)(F)(iv): Contingency Plan Contents. Procedures and methods for real time surveillance and tracking of discharge oil on open water…
6.	18 AAC 75.425(e)(1)(F)(xi): Contingency Plan Contents. Plans for the protection, recovery, disposal, rehabilitation, and release of potentially affected wildlife, including; minimizing wildlife contamination through hazing or other means, when appropriate; the recovery of oiled carcasses to preclude secondary contamination of scavengers; and the capture, cleaning, rehabilitation, and release of oiled wildlife, when appropriate; and ….

4.2 ALTERNATIVE TECHNOLOGIES

Alternative technologies being considered are discussed below for the six Contingency Plan Components Requiring BAT Review for Refined Product Shippers (Laden Oil Barges):

Requirement 1: 18 AAC 75.037(f): Laden Oil Barges …. Provide an adequate means of recovering a barge that breaks free of its towing vessel. The recovery means must be capable of being used by other vessels if the towing vessel is lost or incapacitated.
Alternative Technologies: An alternative technology to ITB's existing technology is the Orville Hook. This technology is inferior to the technology already in place, there would be a substantial cost to implement it, and technology is kept on the tug versus the barge so it is not capable of being used by other towing vessels. Therefore, no alternative technologies are being considered for implementation as ITB believes to already have achieved BAT for this requirement.

Requirement 2: 18 AAC 75.037(d): Laden Oil Barges. The owner or operator shall ensure that measures are in place that allow the prompt detection of an oil discharge, including visual inspections of the barge and the area around the barge, and the sounding of all cargo tanks to check cargo and water levels in the tanks after an intentional or unintentional grounding.
Alternative Technologies: Alternative technologies for gauging tanks include: resistance tape, ultrasonic devices, float gauges, and dipsticks. None of these alternatives offer any additional benefits to the systems already in place on ITB barges. Thus, no alternative technologies are being considered as ITB believes to already have achieved BAT for this requirement.

Requirement 3:

18 AAC 75.425 (e)(1)(D): Contingency Plan Contents. Communication--a description of field communications procedures…

Alternative Technologies:

An alternative technology for ITB's tugboat satellite communications would be Inmarsat F (Fleet) instead of Inmarsat C. Inmarsat F is not considered to provide any further benefit to ITB's existing system. Thus, ITB believes it's vessels already use the Best Available Technology for their operation.

An alternative technology to using Oil Spill Response Contractors for their field communication system would be for ITB to purchase their own system. This alternative technology would not provide any increased value and is therefore not being considered as ITB believes to already have achieved BAT for this requirement by using Contractors.

Requirement 4:

18 AAC 75.425(e)(1)(F)(i): Contingency Plan Contents. Procedures to stop the discharge at its source and prevent its further spread.

Alternative Technologies:

An alternative technology to reduce the magnitude of a hose rupture spill during cargo transfer is the use of "Smart Hoses". Smart Hoses are not for marine use (do not comply with 46 CFR Part 153), and are not electrically discontinuous. Thus, this alternative technology is not being considered as ITB believes to already have achieved BAT for this requirement with its existing hoses and cargo transfer procedures.

An alternative procedure for underwater hull patching would be to carry an onboard team of divers to attempt to patch a hull breach rather than waiting for a dive team to arrive on scene from shore. This, technology is not reasonable due to the substantial cost associated with this and would only offer a slight increase in the vessels ability to stop a discharge. Thus, ITB believes its current technology of using shore based dive teams is BAT.

Requirement 5:

18 AAC 75.425(e)(1)(F)(iv): Contingency Plan Contents. Procedures and methods for real time surveillance and tracking of discharge oil on open water…

Alternative Technologies:

An alternative technology would be for ITB to purchase its own separate, mobile spill tracking and surveillance system of computers, programs, personnel, planes and small vessels instead of using Contractors for their system. This alternative would not provide any additional value and is therefore not being considered as ITB believes to have achieved BAT for this requirement.

Requirement 6:

18 AAC 75.425(e)(1)(F)(xi): Contingency Plan Contents. Plans for the protection, recovery, disposal, rehabilitation, and release of potentially affected wildlife, including; minimizing wildlife contamination through hazing or other means, when appropriate; the recovery of oiled carcasses to preclude secondary contamination of scavengers; and the capture, cleaning, rehabilitation, and release of oiled wildlife, when appropriate; and ….

Alternative Technologies:

An alternative technology would be for ITB to purchase its own separate, equipment, develop separate procedures, and train and maintain adequate personnel to perform the above tasks instead of using Contractors for their systems. This alternative would not provide any additional value to ITB's current technologies and is therefore not being considered as ITB believes to have already achieved BAT for this requirement.

4.3 EVALUATION

Requirement 1:
18 AAC 75.037(f): Laden Oil Barges. Provide an adequate means of recovering a barge that breaks free of its towing vessel. The recovery means must be capable of being used by other vessels if the towing vessel is lost or incapacitated.

Evaluation Criteria	Existing	Alternative Technology
TECHNOLOGY	ITB barges normally operate in the "pusher" configuration using either an Articulated Tug Barge (ATB) unit capable of pushing in most sea conditions or by using a system of securing the tug in the barge's notch using lines. There are two ways that ITB is capable of recovering lost barges: i) Barges can be recovered by the tug re-securing itself in the pusher configuration. ii) Barges are equipped with an emergency towline which is attached with breakaway tabs along the length of the barge and attached to a trailing stern line with a large highly visible buoy for easy recovery. This trailing sternline is lightweight and easily brought on-board by a single person. When the barge is being pushed, the emergency tow wire is shackled to a wire pennant at the bow of the tug which is shackled to the main tow wire. This emergency towing system is easily used by other vessels.	Orville Hook. A flat hook dragged behind the tug to snag the chain bridals on the barge. System is not capable of being used by other vessels. Hook is difficult and heavy to handle. Only effective for chain bridal towing systems. Most of ITB's barges do not have chain bridals. System requires tug to get very close to barge in order to recover it, this greatly increases the risk of a collision with the barge and potential hull breach.
(A) AVAILABILITY i) Is the technology the best in use in other similar situations? ii) Is the technology available for use by the applicant?	i) Technology is the best in use in similar situations. ii) Technology already in use on ITB barges.	i) Inferior technology ii) Technology is available for use on ITB's barges but not without a significant investment.

(B) TRANSFERABILITY Can the technology be applied to the applicant's operation?	Already in use.	Yew, technology can be applied to ITB's vessels, but not without a substantial investment.
(C) EFFECTIVENESS Is there a reasonable expectation that the technology will provide increased spill prevention or other Environmental Benefits?	Yes	No.
(D) COST i) Cost of achieving BAT; ii)Consideration of cost in relation to remaining years of services of current technology in use by applicant.	BAT achieved.	BAT already achieved with existing technology. Cost to implement the Orville Hook system on ITB barges would be substantial. The Orville hook is a patented device which would have to be installed on all of ITB's tugs, and most of ITB's barges would have to be refitted with chain towing bridles that are required to work with the hook. A very rough estimate to achieve this would be $75,000 USD per tug/barge pair.
(E) AGE AND CONDITION Age and condition of existing technology. Consider: Relative to similar equipment in current or past use under similar circumstances.	All equipment maintained in sound operating condition in accordance with regular towline maintenance. Inspected annually. Changed every 5 years or sooner if required.	Existing technology regularly maintained, inspected, and replaced as required.
(F) COMPATIBILITY Is the technology compatible with existing operations?	Yes	Technology is not compatible with ITB operations and in general is not compatible with tug/barge operations on the coast as few vessels carry the Orville Hook and thus, would not be able to recover a lost barge that requires this system.
(G) FEASIBILITY Feasibility of this technology from and engineering and operational view.	Yes	Technology generally feasible from an engineering point of view but not from an operational point of view. Technology would require a substantial investment to implement. Technology has a greater risk of spill during recapture of barge. Technology cannot be used by other vessels. Technology difficult to handle (requires several persons).
(H) ENVIRONMENTAL IMPACTS Does the use of this technology impact the environment in a manner that offsets the technology's benefits?	No	No

Requirement 2:
18 AAC 75.037(d): Laden Oil Barges. The owner or operator shall ensure that measures are in place that allow the prompt detection of an oil discharge, including visual inspections of the barge and the area around the barge, and the sounding of all cargo tanks to check cargo and water levels in the tanks after an intentional or unintentional grounding.

Evaluation Criteria	Existing	Alternative Technology 1	Alternative Technology 2	Alternative Technology 3	Alternative Technology 4
TECHNOLOGY	ITB uses the following measures to meet Requirement 2: i) Detailed emergency procedures for grounding incidents are in place which recommend the vessel crew conduct a visual inspection of the barge and the area around the barge, checking pump / engine room for damage and flooding, and sound all cargo tanks and compartments to ascertain damage. ii) Barges are equipped with closed system (i.e., no hatches have to be opened to obtain a reading), automatic tank gauging systems which displays tank levels of each tank remotely in the barge houseworks. System equipped with alarms. Vessels have the capability to measure hydrocarbon and water levels in the tank using an electrodieletic device that maintains the closed system of the tanks. The ITB 38 does not yet have this system installed, but this upgrade is planned for the future.	Resistance Tape	Dipsticks	Float gauges	Ultrasonic sensors

	iii) Barges all have overfill alarms. iv) Barges have overfill protection. v) Tug and barge inspection including detection of oil spills are conducted at the required intervals.				
(I) AVAILABILITY i) Is the technology the best in use in other similar situations? ii) Is the technology available for use by the applicant?	Technology is the best in use in similar situations and is already in use on barge.	i) No, not very sensitive. Doesn't provide water level in addition to hydrocarbon. ii) Yes.	i) No, open system, doesn't provide water level in addition to hydrocarbon.. ii) Yes.	i) No, doesn't provide water level in addition to hydrocarbon level. Can get stuck. ii) Yes.	i) No, doesn't provide water level in addition to hydrocarbon level. ii) Yes.
(J) TRANSFERABILITY Can the technology be applied to the applicant's operation?	Already in use.	Yes	Yes	Yes	Yes
(K) EFFECTIVENESS Is there a reasonable expectation that the technology will provide increased spill prevention or other Environmental Benefits?	Yes	No	No	No	No
(L) COST i) Cost of achieving BAT; ii) Consideration of cost in relation to remaining years of services of current technology in use by applicant.	BAT achieved.	i) Purchasing this system would result in inferior system. ii) Current technology is relatively new and has many remaining years of service life.	i) Purchasing this system would result in inferior system. ii) Current technology is relatively new and has many remaining years of service life.	i) Purchasing this system would result in inferior system. ii) Current technology is relatively new and has many remaining years of service life.	i) Purchasing this system would result in inferior system. ii) Current technology is relatively new and has many remaining years of service life.

(M) AGE AND CONDITION Age and condition of existing technology. Consider: Relative to similar equipment in current or past use under similar circumstances.	Existing equipment relatively new and maintained in sound operating condition.	Existing equipment relatively new and maintained in sound operating condition.	Existing equipment relatively new and maintained in sound operating condition.	Existing equipment relatively new and maintained in sound operating condition.	Existing equipment relatively new and maintained in sound operating condition.
(N) COMPATIBILITY Is the technology compatible with existing operations?	Yes	Yes	Yes	Yes	Yes
(O) FEASIBILITY Feasibility of this technology from and engineering and operational view.	Yes	Yes for engineering. No for operational as does not provide water levels in tank.	Yes for engineering. No for operational as does not provide water levels in tank and does not remotely display in control room, and is open system.	Yes for engineering. No for operational as does not provide water levels in tank and is mechanical system.	Yes for engineering. No for operational as does not provide water levels in tank.
(P) ENVIRONMENTAL IMPACTS Does the use of this technology impact the environment in a manner that offsets the technology's benefits?	No	No	No	No	No

Requirement 3:
18 AAC 75.425 (e)(1)(D): Contingency Plan Contents. Communication--a description of field communications procedures…

Evaluation Criteria	Existing	Alternative Technology Option 1:	Alternative Technology Option 2:
TECHNOLOGY	ITB: ITB tugs in AK equipped with: • Qualcomm Satellite Communications • Cellular Phone • Fax • VHF radio • DSC VHF radio • HF SSB radio • Boatracks satellite communications • GMDSS • Inmarsat C • EPIRB • SART • Navtex Receiver • Portable radios • Email • Loudhailer • Search lights ITB barges in AK equipped with: • Cellular • Fax • Portable VHF radios ITB maintains a private radio frequency for company operations. Continued following page……..	An alternative technology for ITB's onboard communication equipment would be the new Inmarsat F communication platform.	An alternative technology to the use of Contractor communication technologies would be for the company to purchase its own separate, mobile communication system of portable repeaters, radios, and phones.

	SEAPRO: SEAPRO has a complete communications suite, capable of establishing communications from remote field locations to a command post. This system is comprised of hand held radios, portable repeaters, and a base station. The system is located in Ketchikan, and is portable to allow for rapid deployment in the event of a spill. SEAPRO equipment includes: • VHF Radios (33) with SEAPRO responder frequencies programmed. • Global star satellite phone with data/fax capabilities (1) • Cellular phones (5) • Portable repeaters (3) • Communications command console (1) • GPS/VHF radio (1) ALASKA CHADUX: Chadux has a complete communications suite, capable of establishing communications from remote field locations to a command post. This system is comprised of hand held radios, portable repeater, and a base stations. The system is located in Anchorage, and is portable to allow for rapid deployment in the event of a spill. Continued following page……..		

	Chadux equipment includes: • VHF Radios (34) • VHF radio base stations (3) • Globalstar satellite phone with data/fax capabilities (1) • Mitsubishi ST 150A satellite phone (1) • Cellular phones • Portable VHF repeaters (1) • Communications command console (1) • GPS/VHF radio (1) • Digital cameras (2) • Laptop computers – email (2)		
(A) AVAILABILITY i) Is the technology the best in use in other similar situations? ii) Is the technology available for use by the applicant?	i) Yes ii) Technology already in use	i) Technology best in use for ISDN high speed sattelite connections, MPDS for always on-line satellite connections, and offers 2 way GMDSS functionality for voice calls. ii) Yes.	i) Yes ii) Yes
(B) TRANSFERABILITY Can the technology be applied to the applicant's operation?	Already in use.	Yes	Yes
(C) EFFECTIVENESS Is there a reasonable expectation that the technology will provide increased spill prevention or other Environmental Benefits?	Yes	No. Technology will largely benefit larger operations needing high speed, continuous, data links with shore for fleet management purposes.	No, system would not increase spill prevention and would be unneeded due to existing contract with Oil Spill Response Contractors for other spill response resources.
(D) COST i) Cost of achieving BAT; ii) Consideration of cost in relation to remaining years of services of current technology in use by applicant.	BAT achieved.	i) Cost would be significant to for no added value in relation to existing technology. ii) Current technology is relatively new and has many remaining years of service life.	i) Cost would be extremely significant to create system. ii) Upkeep costs would be significant for no added value in relation to the existing technology.

(E) AGE AND CONDITION Age and condition of existing technology. Consider: Relative to similar equipment in current or past use under similar circumstances.	ITB: ITB equipment is maintained in sound operating condition. ITB regularly upgrades equipment to maintain the best available technologies for their fleet. SEAPRO: SEAPRO equipment is maintained in sound operating condition. Radios were 1998 purchases, Repeaters 1998 (2), 2001 (1). Cell phones (3). All in good working condition. ALASKA CHADUX: Chadux equipment is maintained in sound operating condition and updated as required and as technology changes. All equipment in good working condition.	Same, communication equipment would be of equal quality.	Same, communication equipment would be of equal quality.
(F) COMPATIBILITY Is the technology compatible with existing operations?	Yes	Yes	Yes
(G) FEASIBILITY Feasibility of this technology from and engineering and operational view.	Yes	Feasible from an engineering point of view but not practical from an operational. Such a system would provide no additional value to ITB with regard to oil spill prevention, preparedness, and response.	No, the set-up and then upkeep of the system would take money, time and manpower away from vessel operations for no need when the Technology is already contracted for other response resources.
(H) ENVIRONMENTAL IMPACTS Does the use of this technology impact the environment in a manner that offsets the technology's benefits?	No	No	No

Requirement 4:
18 AAC 75.425(e)(1)(F)(i): Contingency Plan Contents. Procedures to stop the discharge at its source and prevent its further spread.

Evaluation Criteria	Existing	Alternative Technology Option 1:	Alternative Technology Option 2:
TECHNOLOGY	i) Emergency cargo transfer shut down devices for both shore and barge. ii) Duplex overfill alarms overfill protection systems are equipped on each cargo tank. iii) Vapour recovery closed loading. iv) Manual floating sticks for tank topping (ERL). v) Emergency spill tanks. vi) Spill coaming around all cargo tank hatches, manifolds, valves, vents, etc. with scupper plugs in place during cargo transfer operations. vii) 1000′ of 18″ harbour boom stored on barge on quick deploy hydraulic reels with minimum of 1 response boat on attending tug and/or barge. viii) Section 1.1 of this manual and the vessel specific Shipboard Oil Pollution Emergency Plan contain comprehensive procedures for responding to various discharge scenarios in order to stop the discharge at its source and prevent its further spread. ix) Comprehensive vessel specific lightering procedures are contained in the vessel specific operations manual maintained on the barge. x) Comprehensive cargo transfer procedures are contained in the vessel specific operations manual maintained on the barge. xi) Attended cargo transfer. xii) Cargo transfer hoses constructed, tested, and maintained to government/industry standards. xiii) Temporary hull patching equipment available through contractors.	Carry onboard salvage dive team and equipment with underwater hull patching capabilities instead of bringing divers and hull patching equipment to the spill scene from shore.	"Smart Hoses" for cargo transfer operations.

(A) AVAILABILITY i) Is the technology the best in use in other similar situations? ii) Is the technology available for use by the applicant?	Technology is the best in use in similar situations and is already in use on barge.	i) Technology is good. ii) Technology is available to applicant at substantial cost.	i) No technology not used in similar situations. ii) No. Hoses are not for marine use.
(B) TRANSFERABILITY Can the technology be applied to the applicant's operation?	Already in use.	Yes.	No. Hoses are not electrically discontinuous and are therefore not compatible.
(C) EFFECTIVENESS Is there a reasonable expectation that the technology will provide increased spill prevention or other Environmental Benefits?	Yes	Possibly. However, only for minor hull breaches and only if the barge is stable enough and it is safe for divers to enter the water to attempt hull patching below the waterline.	No.
(D) COST i) Cost of achieving BAT; ii) Consideration of cost in relation to remaining years of services of current technology in use by applicant.	BAT achieved.	The cost of having a properly equipped salvage dive team in S.E. Alaska on standby on the tugs would put the company at a competitive disadvantage and would likely make all routes in Alaska unprofitable for the company forcing ITB to cease trading in Alaskan waters.	Not applicable.
(E) AGE AND CONDITION Age and condition of existing technology. Consider: Relative to similar equipment in current or past use under similar circumstances.	All equipment maintained in sound operating condition.	Not applicable.	Existing barge hoses are subject to rigorous inspection procedures and annual hydrostatic testing to 1.5 times the working pressure. Hoses are regulary replaced.

(F) COMPATIBILITY Is the technology compatible with existing operations?	Yes	Yes.	No. Hoses are not electrically discontinous and are not designed for marine use.
(G) FEASIBILITY Feasibility of this technology from and engineering and operational view.	Yes	Feasible from an engineering point of view but not from an operational, economic, practical, or realistic of view.	No. Not feasible from both and engineering and operational point of view.
(H) ENVIRONMENTAL IMPACTS Does the use of this technology impact the environment in a manner that offsets the technology's benefits?	No	No.	No.

Requirement 5:
18 AAC 75.425(e)(1)(F)(iv): Contingency Plan Contents. Procedures and methods for real time surveillance and tracking of discharged oil on open water.

Evaluation Criteria	Existing	Alternative Technology Option 1:
TECHNOLOGY	ITB contracts Oil Spill Response Contractors for this requirement. ITB's contractors use: • vessels for visual observations • contracted fixed wing and rotary wing aircraft for visual observations • NOAA SSC for trajectory analysis • GPS technology to map spills If considered necessary ITB could contract equipment and personnel for infrared observations.	Alternative technologies would be for company to purchase its own separate, mobile spill tracking and surveillance system of computers, programs, personnel, planes and small vessels instead of using contractors.
(A) AVAILABILITY i) Is the technology the best in use in other similar situations? ii) Is the technology available for use by the applicant?	i) Yes ii) Yes, already in use.	i) Yes. ii) Yes.
(B) TRANSFERABILITY Can the technology be applied to the applicant's operation?	Yes	Yes
(C) EFFECTIVENESS Is there a reasonable expectation that the technology will provide increased spill prevention or other Environmental Benefits?	Yes	No, system would not increase spill prevention and would be unneeded due to existing contracts in place for other spill response resources.

(D) COST i) Cost of achieving BAT; ii) Consideration of cost in relation to remaining years of services of current technology in use by applicant.	Yes	i) Cost would extremely significant to create system. ii) Upkeep costs would be significant for no added value in relation to the existing technology.
(E) AGE AND CONDITION Age and condition of existing technology. Consider: Relative to similar equipment in current or past use under similar circumstances.	Oil Spill Response Contractor equipment is maintained in sound operating condition and upgraded as new technology becomes available.	Same, equipment would be of equal quality.
(F) COMPATIBILITY Is the technology compatible with existing operations?	Yes	Yes
(G) FEASIBILITY Feasibility of this technology from and engineering and operational view.	Yes	No, the set-up and then upkeep of the system would take money, time and manpower away from vessel operations for no need when Contractors are already in place for other response resources.
(H) ENVIRONMENTAL IMPACTS Does the use of this technology impact the environment in a manner that offsets the technology's benefits?	No	No

Requirement 6:
18 AAC 75.425(e)(1)(F)(xi): Contingency Plan Contents. Plans for the protection, recovery, disposal, rehabilitation, and release of potentially affected wildlife, including; minimizing wildlife contamination through hazing or other means, when appropriate; the recovery of oiled carcasses to preclude secondary contamination of scavengers; and the capture, cleaning, rehabilitation, and release of oiled wildlife, when appropriate; and …..

Evaluation Criteria	Existing	Alternative Technology Option 1:
TECHNOLOGY	ITB relies on its Oil Spill Response Contractors to provide the services of Requirement 6. SEAPRO's Technical manual details the equipment and procedures that SEAPRO would use to meet the above requirement with respect to wildlife. Refer in particular to *Section 3.10.5 – Response Strategies for the Protection of Wildlife.* Alaska Chadux's Response Manual details the equipment and procedures that Chadux would use to meet the above requirement with respect to wildlife. Refer in particular to *Section 3.10.6 – Response Strategies for Protection of Wildlife.*	Alternative technology would be for company to purchase its own separate, equipment, train personnel, and develop procedures to meet the above requirement instead of using contractors for their equipment, personnel, procedures, subcontractors, etc..
(A) AVAILABILITY i) Is the technology the best in use in other similar situations? ii) Is the technology available for use by the applicant?	i) Yes ii) Already in use.	i) Yes. ii) Yes.
(B) TRANSFERABILITY Can the technology be applied to the applicant's operation?	Already applied.	Yes
(C) EFFECTIVENESS Is there a reasonable expectation that the technology will provide increased spill prevention or other Environmental Benefits?	Yes.	No, system would not increase spill prevention and would be unneeded due to existing contracts in place for other spill response resources.

(D) COST i) Cost of achieving BAT; ii) Consideration of cost in relation to remaining years of services of current technology in use by applicant.	BAT already achieved.	i) Cost would extremely significant to create system. ii) Upkeep costs would be significant for no added value in relation to the existing technology.
(E) AGE AND CONDITION Age and condition of existing technology. Consider: Relative to similar equipment in current or past use under similar circumstances.	Contractors maintain equipment in good working order and ensure their procedures are current.	Same, equipment and procedures would be of equal quality.
(F) COMPATIBILITY Is the technology compatible with existing operations?	Yes	Yes
(G) FEASIBILITY Feasibility of this technology from an engineering and operational view.	Yes	No, the set-up and then upkeep of the equipment, personnel, and procedures would take money, time and manpower away from vessel operations for no need when Contractors are already in place for other response resources.
(H) ENVIRONMENTAL IMPACTS Does the use of this technology impact the environment in a manner that offsets the technology's benefits?	No	No

4.4 BA T DETERMINATION AND JUSTIFICATION

Island Tug and Barge Ltd.'s process for considering new technologies involves:

- Looking at the rest of the industry.
- Looking at the appropriateness of applying the technology to their operations and the expected benefits from the new technology.
- Finding out what is available from supplier's sources.
- Evaluating the new technology.
- Deciding from an operating, environmental, and economical standpoint whether or not the new technology is practical.

At present, for the technologies listed in Section 4.1, no alternative technologies are being considered. ITB believes any alternative technologies to the existing technologies outlined in Section 4.3 do not offer any additional spill prevention, spill preparedness, or spill response benefits to ITB's existing technologies or are extremely cost prohibitive. Thus, ITB believes it has already achieved BAT for these requirements.

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APPENDIX A

GEOGRAPHIC-SPECIFIC INFORMATION PUGET SOUND COTP ZONE

PURPOSE AND SCOPE

This Appendix has been prepared in accordance with the guidelines for Vessel Response Plans described in *33 CFR 155* of the *Federal Register* (Vessel Response Plans; Final Rule).

It covers the Puget Sound Captain of the Port Zone (COTP).

Figure A-1 illustrates the Washington State notification/alerting process.

ITB OPERATIONS IN THE PUGET SOUND COTP

The following ITB vessels are approved for operations in the Puget Sound COTP Zone:

Vessel Name	Capacity (bbls)	Oil Type	Operating Environments
Island Trader	65,320	Group I	River, Inland, Nearshore, Offshore, Open Ocean
ITB Vancouver	25,000	Group I	River, Inland, Nearshore, Offshore, Open Ocean
ITB 38	38,000	Group I	River, Inland, Nearshore, Offshore, Open Ocean
ITB Provider	14,736	Group III	Inland
ITB 45	22,600	Group I	River, Inland, Nearshore, Offshore, Open Ocean
ITB Reliant	26,500	Group I	River, Inland, Nearshore, Offshore, Open Ocean
ITB Resolution	26,500	Group I	River, Inland, Nearshore, Offshore, Open Ocean
ITB Supplier	25,000	Group I	River, Inland, Nearshore, Offshore, Open Ocean
Island Monarch	2,264	Group I	River, Inland, Nearshore, Offshore, Open Ocean
Island Tugger	1,321	Group I	River, Inland, Nearshore, Offshore, Open Ocean

ITB vessels operating in the U.S. are normally used to transport refined petroleum products in bulk between British Columbia, Canada to/from marine transportation-related (MTR) facilities located in the west coast states of the U.S.

All cargoes received or delivered in the U.S. are transported direct between Canadian and U.S. ports.

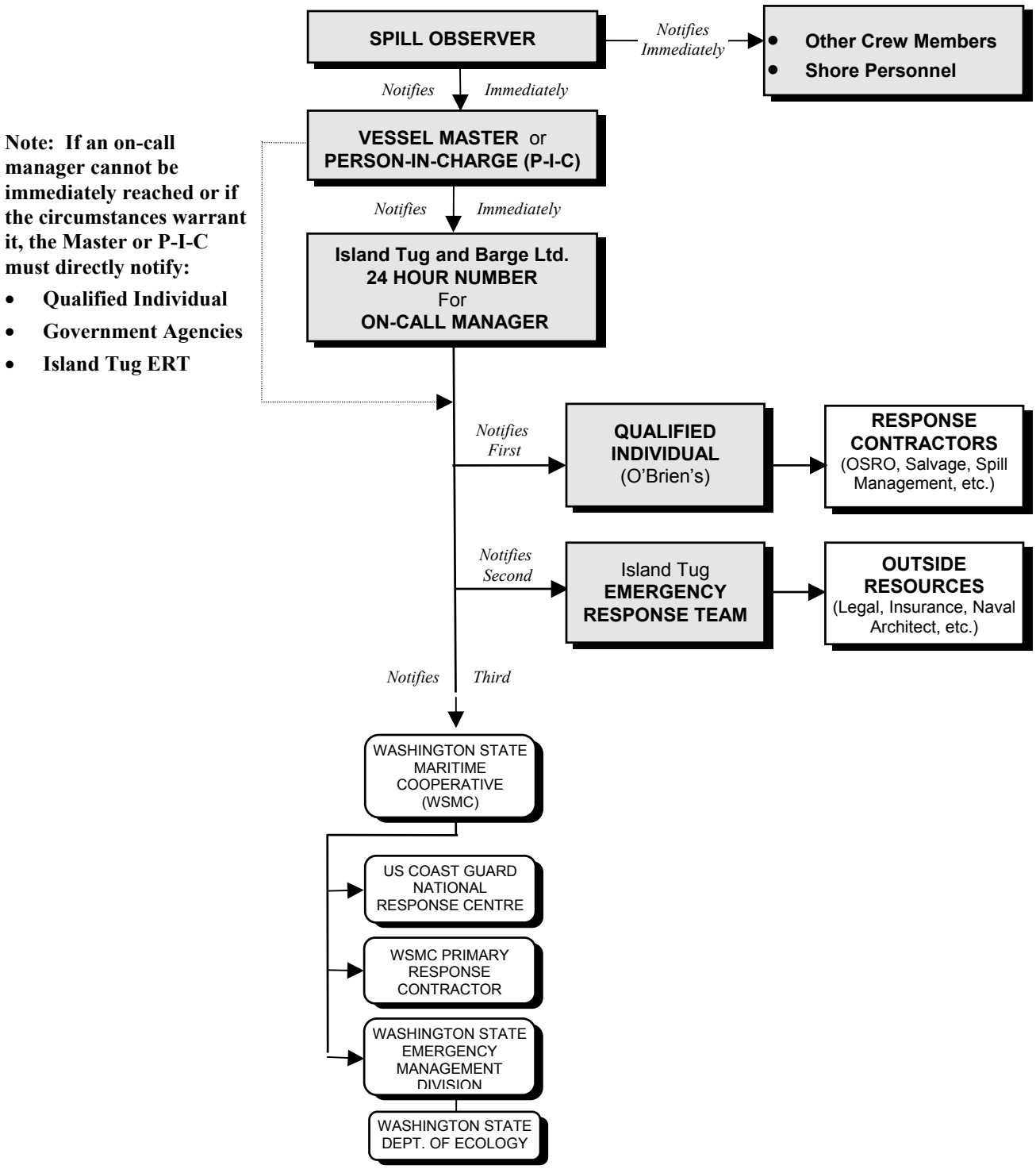

Figure A-1 - Washington State Spill Notification/Alerting Process

NOTIFICATION OF KEY GOVERNMENT AGENCIES

In the event of an oil spill or potential spill in the Puget Sound COTP, ITB personnel will immediately notify the following government agencies:

Key U.S. Government Agencies	24-Hour Contact
NATIONAL RESPONSE CENTRE (NRC), Washington, D.C.	**1-800-424-8802**
Marine Safety Office - Puget Sound	**(206) 217-6231**
Washington State Emergency Management Division (EMD)	**1-800-258-5990**
Department of Ecology	
Northwest Office, Bellevue	**(425) 649-7000**
Southwest Office, Olympia	**(360) 407-6300**

These notification procedures and the essential information required to report a spill are outlined in the body of this Plan:

For Information on:	See:
Notification procedures and Incident Information reporting	*Section 1.2 - Reporting & Notification*

ITB QUALIFIED INDIVIDUALS (QI)

Qualified Individuals(s)		24-Hour Contact
Qualified Individual	Name: James L. O'Brien Company: The O'Brien's Group	Phone: 985 781-0804 Fax: 985 781-0580
Alternate QIs	Names: Ben Benson, Sanjiv Beri, Tim Perkins, Gary Stankovich Company: The O'Brien's Group	Phone: 985 781-0804 Fax: 985 781-0580

OIL SPILL REMOVAL ORGANIZATIONS (OSRO'S)

Island Tug and Barge is a full member of the Washington State Maritime Cooperative (WSMC). Under the terms of this membership, the WSMC will provide a complete spill response capability to Island Tug and Barge for the first 24-hours following the initial spill report. This capability will include response vessels, boom equipment, skimmers, trained personnel and other specialized services. It is provided throughout a predetermined network of response contractors and organizations.

A complete list of contractors and equipment available to the WSMC is provided in Appendix A of the WASHINGTON STATE MARITIME COOPERATIVE OIL SPILL RESPONSE CONTINGENCY PLAN. A copy of this Plan is made available to all members. ITB's copy is kept at the company's Vancouver office.

The primary response contractor for the WSMC is:

NRC ENVIRONMENTAL SERVICES **(wholly owned subsidiary of the National Response Corporation)**	
Telephone:	**1-800-337-7455** (24 hr spill response) **(206) 546-7150**
Address:	20500 Richmond Beach Drive, NW Seattle, WA 98177
Fax:	(206) 546-7170
Contact:	Mr. Jim Riedel

NRC Environmental Services is USCG classified for the Inland and River/Canal operating environments for MM, W1, W2, and W3 classifications in the Puget Sound COTP zone.

Island Tug and Barge is also a member of the National Response Corporation (NRC) and will ensure its vessels are appropriately covered by the NRC while operating in the Puget Sound COTP Zone. The NRC is USCG classified MM, W1, W2, and W3 for the River/Canal, Inland, Open Ocean, Offshore, and Nearshore operating environments.

NATIONAL RESPONSE CORPORATION (NRC)	
National Response Corporation 3500 Sunrise Hwy Ste. T103 Great River NY 11739 USA	
Telephone:	**Emergency: 800 889-4672 (4NRC)** **Non-Emergency: 631 224-9141**
Fax:	631 224-9086 (IOC) 631 224-9082 (Main)
Email:	iocdo@nrcc.com
Contact:	Steven Candito - President

Island Tug and Barge will contract NRC as required until the cessation of the response.

OSRO-AVERAGE MOST PROBABLE DISCHARGE (AMPD)

ITB transfers fuel only at marine transportation-related (MTR) facilities in Washington State waters. Prior to sailing to a specific MTR facility in Puget Sound, ITB will ensure it is able to meet the AMPD planning requirements through the use of its OSROs, by agreement with the MTR facility, and/or by using onboard resources.

Resources currently onboard each tug/barge unit covered by this plan include:
- Commercial inshore containment boom greater than twice the length of the vessel
- Response boat adequately equipped to deploy the boom
- Personnel highly trained in oil spill response techniques
- mechanical skimming device meeting the AMPD daily recovery requirements
- Ample storage capacity both in dedicated barge spill tanks as well as portable storage containers

PLANNING VOLUME CALCULATIONS

Planning Volumes for Onshore Recovery

The total cargo capacity of ITB's largest Group I is barge (the Island Trader) is 65,320 barrels of Group I non-persistent oil (e.g., Diesel Fuel, Motor Gasolines).

	Island Trader (ITB's largest Group I barge trading in the Puget Sound COTP)
Rivers	65,320 bbls X .1 x 1.0 = 6,532 bbls
Inland	65,320 bbls X .1 x 1.0 = 6,532 bbls
Nearshore	65,320 bbls X .1 x 1.0 = 6,532 bbls
Offshore	65,320 bbls X 0.0 x 1.0 = 0 bbls
Open Ocean	65,320 bbls X 0.0 x 1.0 = 0 bbls

The total cargo capacity of ITB's largest Group III is barge (the ITB Provider) is 14,736 bbls barrels of Group III oil. It only operates in the Inland operating environment.

	ITB Provider (ITB's largest Group III barge trading in the Puget Sound COTP)
Inland	14,736 bbls X .5 x 2.0 = 14,736 bbls

Based on these calculations, ITB should contract an oil spill response organization that can manage a shoreline clean-up of 14,736 bbls for the Inland Operating Environment and 6,532 for the Nearshore.

Planning Volumes for On-Water Recovery

The total cargo capacity of ITB's largest Group I is barge (the Island Trader) is 65,320 barrels of Group I non-persistent oil (e.g., Diesel Fuel, Motor Gasolines).

	Island Trader (ITB's largest Group I barge trading in the Puget Sound COTP)
Rivers	65,320 bbls X .1 x 1.0 = 6,532 bbls
Inland	65,320 bbls X .2 x 1.0 = 13,064 bbls
Nearshore	65,320 bbls X .2 x 1.0 = 13,064 bbls
Offshore	65,320 bbls X 0.0 x 1.0 = 0 bbls
Open Ocean	65,320 bbls X 0.0 x 1.0 = 0 bbls

The total cargo capacity of ITB's largest Group III is barge (the ITB Provider) is 14,736 bbls barrels of Group III oil. It only operates in the Inland operating environment.

	ITB Provider (ITB's largest Group III barge trading in the Puget Sound COTP)
Inland	14,736 bbls X .5 x 2.0 = 14,736 bbls

The required resources for on-water recovery for each incident tier using the predetermined mobilization factors are:

	Tier 1	**Tier 2**	**Tier 3**
Rivers	1960	2613	3919
Inland	2210	3684	5894
Nearshore	1960	3266	5226
Offshore	0	0	0
Open Ocean	0	0	0
	Figures are shown in barrels per day.		

The *Planning Volume Calculation* program on the VRP/SOPEP web site identifies the minimum OSRO Classification for a Group I Oil, Tier 3 response as W3 for Rivers and W1 for Inland, Nearshore, and Oceans.

Capability of Primary Oil Spill Response Organization

ITB's primary oil spill response organizations in the Puget Sound COTP zone are the NRC and their wholly owned subsidiary, the NRC Environmental Services. These organizations have the personnel, equipment and other resources to more that adequately handle ITB's worst case discharge planning volumes for both onshore and on-water recovery.

SALVAGE AND MARINE FIREFIGHTING CONTRACTOR

ITB's salvage and marine firefighting resource for the Puget Sound COTP zone is the Marine Response Alliance (MRA).

MARINE RESPONSE ALLIANCE
Telephone: **206 332-8200 (24 hour emergency)** Fax: 206 332-8500 Marine Response Alliance LLC P.O. Box 2287 Seattle WA 98111 USA Contact: Jeff Taylor – General Manager Phone: 206 332-8076 Fax: 206 332-8376 e-mail: MRALLC@crowley.com web: www.marineresponsealliance.com

EMERGENCY LIGHTERING CONTRACTOR

ITB's emergency lightering resource for the Puget Sound COTP zone is the Marine Response Alliance. Contact information is as above.

SPILL MANAGEMENT TEAM ORGANIZATION

Island Tug and Barge's spill management team is outlined in *Section 3.3, Incident Command System.*

The contracted Qualified Individuals acting on behalf of the company may also fill the role of the Incident Commander. However, Island Tug and Barge may elect to replace the contracted Qualified Individual with the Company President (or his delegate) as the Incident Commander. The Incident Commander will be responsible for working with the pre-designated Federal On-scene Coordinator (FOSC) to ensure that Island Tug and Barge's actions are consistent with those of various government agencies and resources.

These responsibilities may include but are not limited to the following: establishing open, continuous communications with the FOSC after the initial notification; identifying types of information that will be relayed to the FOSC (i.e., projected plans, accomplishments, complications); soliciting comments and recommendations from the FOSC as well as working out differences; and, having the FOSC attend and participate in spill management team meetings.

Island Tug and Barge and their contracted spill managers will manage the response to all spills the company is involved in, including:

- Average Most Probable Discharge (AMPD)
- Maximum Probable Discharge (MPD)
- Worst Case Probable Discharge (SCPD)

RESPONSE OPERATION RESOURCES

The following companies or agencies will be called upon to provide specialized services or assistance in the event of an incident as required by the situation.

Salvage and Lightering Companies:	
Marine Response Alliance (MRA) (ITB has response contract in place)	**206 332-8200** (24 Hours) 206 332-8500 (Fax)
Crowley Maritime Salvage, Seattle (available through ITB's contract with the MRA)	**1 800 248-8632** (24 Hours) **or 206 332-8000** 206 332-8300 (Fax)
Foss Maritime - Seattle	**206 281-3800** (24 Hours)
Fred Devine Diving & Salvage, Portland	**503 283-5285** (24 Hours) 503 286-2871 (Fax)
Global Diving and Salvage	**206 623-0621** (24 Hours) 206 932-9036 (Fax)

Fire Departments:
In the event of a fire or explosion during cargo transfer operations at a marine transportation-related (MTR) facility - e.g. U.S. Oil/Tacoma, BP America/Ferndale, BP America/Port Angeles - the facility Fire Contingency Plan and response team will be called upon. **Local Fire Departments: 911 within local calling area**

Marine Fire-Fighting	
Marine Response Alliance (MRA) (ITB has response contract in place)	**206 332-8200** (24 Hours) 206 332-8500 (Fax)
Crowley Maritime Salvage, Seattle (available through ITB's contract with the MRA)	**1 800 248-8632** (24 Hours) **or 206 332-8000** 206 332-8300 (Fax)

Marine Surveyors / Naval Architects	
Peter S. Hatfield Ltd. 412-611 Alexander, Vancouver	**604 253-0955** 604 253-5023 (Fax)
Robert Allan Ltd. 230-1639 W.2nd, Vancouver	**604 736-9466** 604 736-9483 (Fax) 604 738-2809 (R. Allan Res)

VESSEL ROUTES

Refer to *Section 3.1 - ITB Operating Overview*.

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APPENDIX B

GEOGRAPHIC-SPECIFIC INFORMATION SOUTHEAST ALASKA COTP ZONE

PURPOSE AND SCOPE

This Appendix has been prepared in accordance with the guidelines for Vessel Response Plans described in *33 CFR 155* of the *Federal Register* (Vessel Response Plans; Final Rule). It covers the Southeast Alaska, 17th District Captain of the Port Zone (COTP).

Figure B-1 illustrates the Alaska State notification /alerting process.

ITB OPERATIONS IN THE SOUTHEAST ALASKA COTP

The following ITB vessels are approved for operations in the SE Alaska COTP Zone:

Vessel Name	Capacity (bbls)	Oil Type	Operating Environments
Island Trader	65,320	Group I	River, Inland, Nearshore, Offshore, Open Ocean
ITB Vancouver	25,000	Group I	River, Inland, Nearshore, Offshore, Open Ocean
ITB 38	38,000	Group I	River, Inland, Nearshore, Offshore, Open Ocean
ITB 45	22,600	Group I	River, Inland, Nearshore, Offshore, Open Ocean
ITB Reliant	26,500	Group I	River, Inland, Nearshore, Offshore, Open Ocean
ITB Resolution	26,500	Group I	River, Inland, Nearshore, Offshore, Open Ocean
ITB Supplier	25,000	Group I	River, Inland, Nearshore, Offshore, Open Ocean
Island Monarch	2,264	Group I	River, Inland, Nearshore, Offshore, Open Ocean
Island Tugger	1,321	Group I	River, Inland, Nearshore, Offshore, Open Ocean

ITB vessels operate on the west coast of North America and are used to transport refined petroleum products in bulk to marine transportation-related delivery and (MTR) facilities along the coastal waters of British Columbia, Alaska and Washington States.

All cargoes received or delivered in Alaska State are transported direct between Canadian and Southeast Alaska ports.

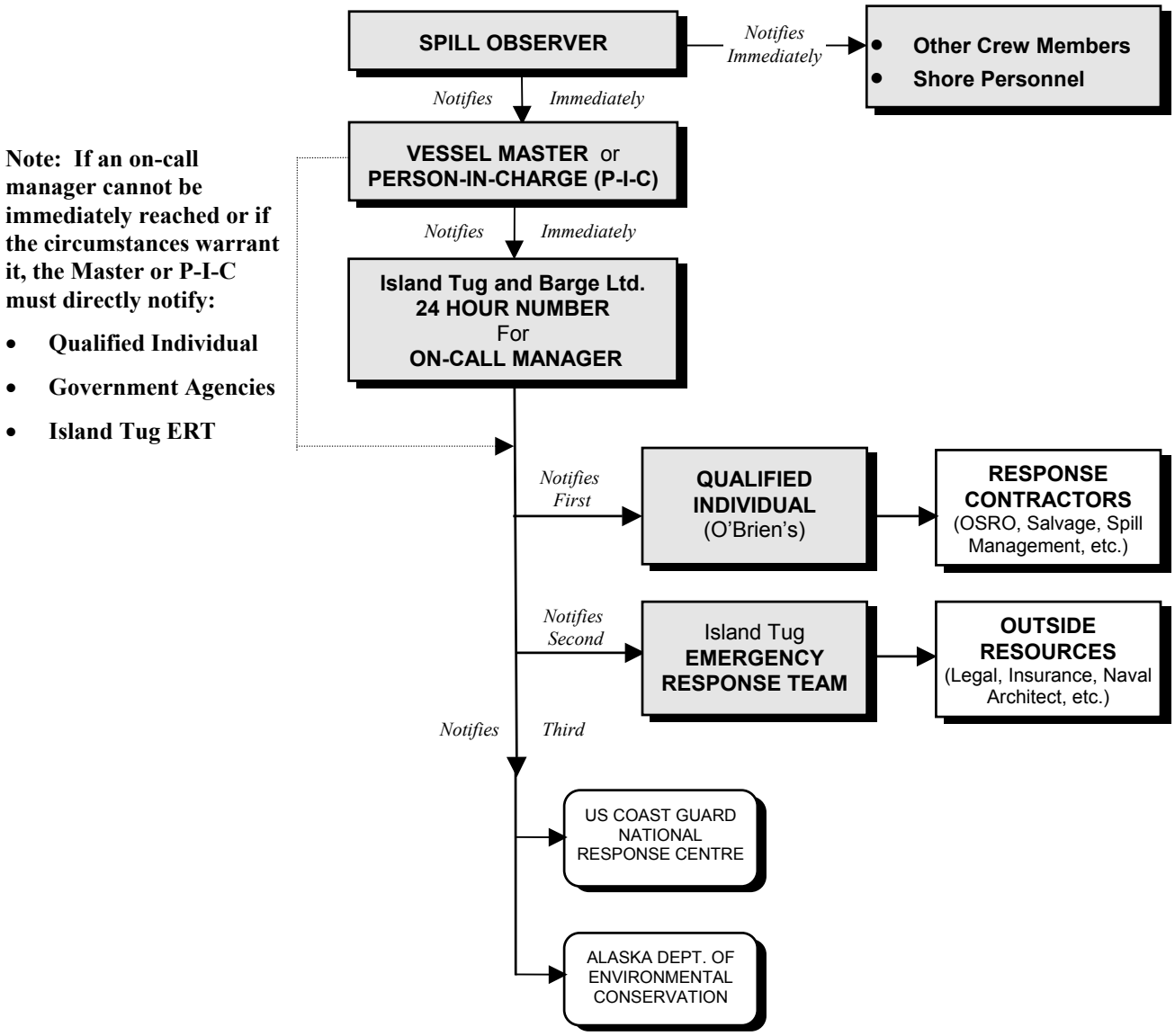

Figure B.1 - Alaska Spill Notification/Alerting Process

NOTIFICATION OF KEY GOVERNMENT AGENCIES

In the event of an oil spill or potential spill, Island Tug and Barge personnel will immediately notify the following government agencies:

Key U.S. Government Agencies	24-Hour Contact
NATIONAL RESPONSE CENTRE (NRC), Washington, D.C.	**1 800-424-8802**
USCG District Command Centre (24 hours)	**907 463-2000**
USCG - MSO, Juneau	**907 463-2457**
Alaska Dept. of Environmental Conservation (ADEC) In state toll free Via Juneau State troopers	**907 465-5340** **1 800 478-9300** **907 465-4000**

These notification procedures and the essential information required to report a spill are outlined in the body of this Plan:

For Information on:	See:
Notification procedures and Incident Information reporting	*Section 1.2 - Reporting & Notification*

ISLAND TUG AND BARGE QUALIFIED INDIVIDUALS

Qualified Individuals(s)		24-Hour Contact
Qualified Individual	Name: James L. O'Brien Company: The O'Brien's Group	Phone: 985 781-0804 Fax: 985 781-0580
Alternate QIs	Names: Ben Benson, Sanjiv Beri, Tim Perkins, Gary Stankovich Company: The O'Brien's Group	Phone: 985 781-0804 Fax: 985 781-0580

OIL SPILL REMOVAL ORGANIZATIONS (OSRO'S)

Island Tug and Barge is a full member of the Southeast Alaska Petroleum Resource Organization, Inc. (SEAPRO). Under the terms of this membership, the SEAPRO members will provide spill response capability to Island Tug and Barge following the initial spill report. This capability will include response vessels, boom equipment, skimmers, trained personnel and other specialized services.

SOUTHEAST ALASKA PETROLEUM RESOURCE ORGANIZATION, INC.		
540 Water Street, Suite 201 Ketchikan, Alaska 99901		
Telephone:	**907 225-7002**	**(24 hours)**
	1 888- 25-7676	(in Alaska)
Fax:	907 247-1117	
Contact:	Dave Owings, General Manager	

As noted, Island Tug and Barge will utilize the services of SEAPRO to provide ongoing response services until the cessation of the response effort. For a summary description of resources available to each member of the SEAPRO network, refer to *Section 3.8* of the ITB plan and to Section 3.6 of the SEAPRO plan.

In the event that additional capability is required beyond that which can be provided by SEAPRO, Island Tug & Barge will call on the services of other companies or organizations under contract to SEAPRO.

AGREEMENT FOR ALTERNATE COMPLIANCE TO 33 CFR PART 155

In order that Island Tug and Barge Ltd. tank barges may transit the Nearshore Operating Environment, Island Tug is a signatory to the *Agreement for Compliance for Tank Barge Transport of Non-persistent Oil in Alaska* as well as the *Memorandum of Understanding Regarding the Use of Tank Barges of Opportunity to Provide Temporary Storage in Support of an Oil Spill Response in Alaska*. Under this agreement, any Island Tug and Barge tank barges transiting the nearshore operating environment will have increased immediate onboard response cabability including:

- sufficient equipment to meet, to the maximum extent practicable, the response-planning standard for the Maximum Most Probable Discharge.
- As a minimum, boom approximately three times the length of the barge sufficient to allow for skimming operations.
- Skimmers capable of recovering the Maximum Most Probable Discharge.
- Self-contained, portable lightering pumps for moving product from damaged tanks.
- Training of all tow vessel crews to deploy all onboard response equipment.

OSRO-AVERAGE MOST PROBABLE DISCHARGE (AMPD)

ITB transfers fuel only at marine transportation-related (MTR) facilities in Alaska State waters. Prior to sailing to a specific MTR facility in Southeast Alaska, ITB will ensure it is able to meet the AMPD planning requirements through the use of its OSROs, by agreement with the MTR facility, and/or by using onboard resources.

Resources currently onboard each tug/barge unit covered by this plan include:
- Commercial inshore containment boom greater than twice the length of the vessel
- Response boat adequately equipped to deploy the boom
- Personnel highly trained in oil spill response techniques
- mechanical skimming device meeting the AMPD daily recovery requirements
- Ample storage capacity both in dedicated barge spill tanks as well as portable storage containers

PLANNING VOLUME CALCULATIONS

The planning volumes for the worst case cargo discharge is presented below. For planning purposes, the total cargo capacity of ITB's largest barge (the Island Trader) is 65,320 barrels of Group I non-persistent oil (e.g., Diesel Fuel, Motor Gasolines).

Planning Volumes for Onshore Recovery

	Island Trader
Rivers	65,320 bbls X .1 x 1.0 = 6,532 bbls
Inland	65,320 bbls X .1 x 1.0 = 6,532 bbls
Nearshore	65,320 bbls X .1 x 1.0 = 6,532 bbls
Offshore	65,320 bbls X 0.0 x 1.0 = 0 bbls
Open Ocean	65,320 bbls X 0.0 x 1.0 = 0 bbls

Planning Volumes for On-Water Recovery

	Island Trader
Rivers	65,320 bbls X .1 x 1.0 = 6,532 bbls
Inland	65,320 bbls X .2 x 1.0 = 13,064 bbls
Nearshore	65,320 bbls X .2 x 1.0 = 13,064 bbls
Offshore	65,320 bbls X 0.0 x 1.0 = 0 bbls
Open Ocean	65,320 bbls X 0.0 x 1.0 = 0 bbls

The required resources for on-water recovery for each incident tier using the predetermined mobilization factors are:

	Tier 1	Tier 2	Tier 3
Rivers	1960	2613	3919
Inland	1960	3266	5226
Nearshore	1960	3266	5226
Offshore	0	0	0
Open Ocean	0	0	0
	Figures are shown in barrels per day.		

The *Planning Volume Calculation* program on the VRP/SOPEP web site identifies the minimum OSRO Classification for a Group I Oil, Tier 3 response as W3 for Rivers and W1 for Inland and Nearshore.

Capability of Primary Oil Spill Response Organization

ITB's primary oil spill response organization (OSRO) in the Inland operating environment of the Southeast Alaska COTP zone is the Southeast Alaska Petroleum Resource Organization Inc. (SEAPRO). SEAPRO has the personnel, equipment and other resources to more than adequately handle ITB's worst case discharge planning volumes for both onshore and on-water recovery.

SALVAGE AND MARINE FIREFIGHTING CONTRACTOR

ITB's salvage and marine firefighting resource for the Southeast Alaska COTP zone is the Marine Response Alliance (MRA).

MARINE RESPONSE ALLIANCE
Telephone: **206 332-8200 (24 hour emergency)** Fax: 206 332-8500 Marine Response Alliance LLC P.O. Box 2287 Seattle WA 98111 USA Contact: Jeff Taylor – General Manager Phone: 206 332-8076 Fax: 206 332-8376 e-mail: MRALLC@crowley.com web: www.marineresponsealliance.com

EMERGENCY LIGHTERING CONTRACTOR

ITB's emergency lightering resource for the Southeast Alaska COTP zone is the Marine Response Alliance. Contact information is as above.

SPILL MANAGEMENT TEAM ORGANIZATION

Island Tug and Barge's spill management team is outlined in *Section 3.3, Incident Command System.*

The contracted Qualified Individuals acting on behalf of the company may also fill the role of the Incident Commander. However, Island Tug and Barge may elect to replace the contracted Qualified Individual with the Company President (or his delegate) as the Incident Commander. The Incident Commander will be responsible for working with the pre-designated Federal On-scene Coordinator (FOSC) to ensure that Island Tug and Barge's actions are consistent with those of various government agencies and resources.

These responsibilities may include but are not limited to the following: establishing open, continuous communications with the FOSC after the initial notification; identifying types of information that will be relayed to the FOSC (i.e., projected plans, accomplishments, complications); soliciting comments and recommendations from the FOSC as well as working out differences; and, having the FOSC attend and participate in spill management team meetings.

Island Tug and Barge and their contracted spill managers will manage the response to all spills the company is involved in, including:

- Average Most Probable Discharge (AMPD)
- Maximum Probable Discharge (MPD)
- Worst Case Probable Discharge (SCPD)

RESPONSE OPERATION RESOURCES

The following companies or agencies will be called upon to provide specialized services or assistance in the event of an incident as required by the situation.

Salvage / Lightering Companies:	
Marine Response Alliance (MRA) (ITB has response contract in place)	**206 332-8200** (24 Hours) 206 332-8500 (Fax)
Crowley Maritime Salvage, Seattle (available through ITB's contract with the MRA)	**1 800 248-8632** (24 Hours) **or 206 332-8000** 206 332-8300 (Fax)
Foss Maritime - Seattle	**206 281-3800** (24 Hours)
Fred Devine Diving & Salvage, Portland	**503 283-5285** (24 Hours) 503 286-2871 (Fax)
Global Diving and Salvage	**206 623-0621** (24 Hours) 206 932-9036 (Fax)
Delta Western, Anchorage, AK	**907 276-2688** (Office) 907 244-0532 (Cell.)
Petro Marine Services	**907 983-2259** (Skagway) 907 790-4400 (Juneau)
Amak Towing, Ketchikan, AK	**907 225-8847**
Revilla Tug Co., Ketchikan AK	**907 225-2730**

Fire Departments:

In the event of a fire or explosion during cargo transfer operations at a marine transportation related (MTR) facility; the facility Fire Contingency Plan and response team will be called upon. Local Fire Departments (9-1-1 within local calling area if available):

Ketchikan	**907 225-9616**
Skagway	**907 983-2450**
Juneau	**907 586-5323**

Marine Fire-Fighting	
Marine Response Alliance (MRA) (ITB has response contract in place)	**206 332-8200** (24 Hours) 206 332-8500 (Fax)
Crowley Maritime Salvage, Seattle (available through ITB's contract with the MRA)	**1 800 248-8632** (24 Hours) **or 206 332-8000** 206 332-8300 (Fax)

Marine Surveyors:	
Peter S. Hatfield Ltd. 412-611 Alexander, Vancouver	**604 253-0955** 604 253-5023 (Fax)
Robert Allan Ltd. 230-1639 W.2nd, Vancouver	**604 736-9466** 604 736-9483 (Fax) 604 738-2809 (R. Allan Res.)

VESSEL ROUTES

Refer to *Section 3.1 - ITB Operating Overview*.

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APPENDIX C

GEOGRAPHIC-SPECIFIC INFORMATION PORTLAND COTP ZONE

PURPOSE AND SCOPE

This Appendix has been prepared in accordance with the guidelines for Vessel Response Plans described in *33 CFR 155* of the *Federal Register* (Vessel Response Plans; Final Rule). It covers the Portland Captain of the Port (COTP). The Portland COTP zone is essentially all of the Oregon coast, the Columbia and Willamette River shores and the Washington State coastline south of Queets River. *Figure C-1* illustrates the Oregon State notification/alerting process.

ITB OPERATIONS IN THE PORTLAND COTP

The following ITB vessels are approved for operations in the Portland COTP Zone:

Vessel Name	Capacity (bbls)	Type	Operating Environments
Island Trader	65,320	Group I	River, Inland, Nearshore, Offshore, Open Ocean
ITB Vancouver	25,000	Group I	River, Inland, Nearshore, Offshore, Open Ocean
ITB 38	38,000	Group I	River, Inland, Nearshore, Offshore, Open Ocean
ITB 45	22,600	Group I	River, Inland, Nearshore, Offshore, Open Ocean
ITB Reliant	26,500	Group I	River, Inland, Nearshore, Offshore, Open Ocean
ITB Resolution	26,500	Group I	River, Inland, Nearshore, Offshore, Open Ocean
ITB Supplier	25,000	Group I	River, Inland, Nearshore, Offshore, Open Ocean
Island Monarch	2,264	Group I	River, Inland, Nearshore, Offshore, Open Ocean
Island Tugger	1,321	Group I	River, Inland, Nearshore, Offshore, Open Ocean

ITB vessels operating in the U.S. are used to transport refined petroleum products in bulk between British Columbia, Canada to/from marine transportation-related (MTR) facilities located in the west coast states of the U.S.

All cargoes received or delivered in the U.S. are transported direct between Canadian and U.S. ports.

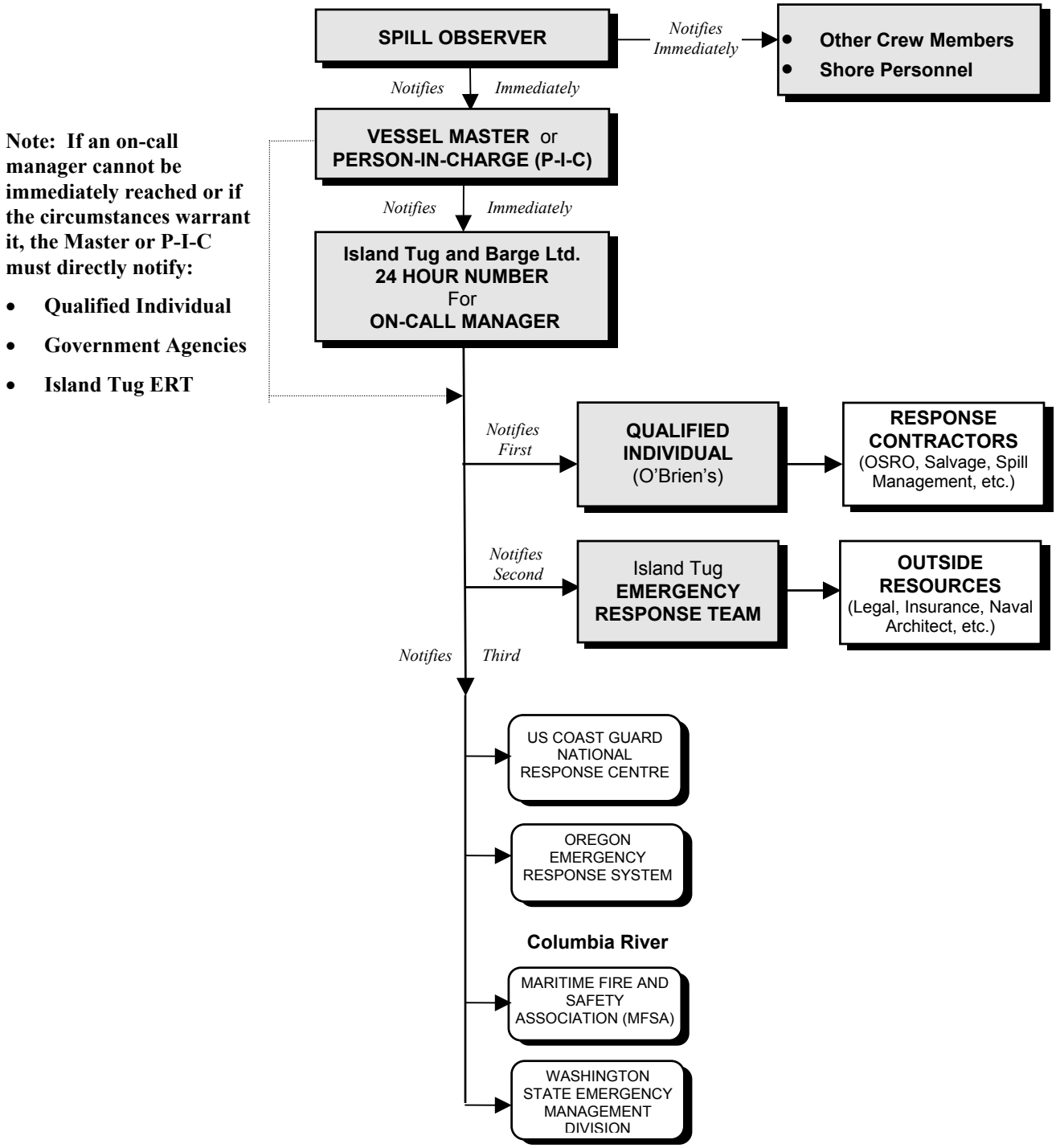

Figure C-1 - Oregon State Spill Notification/Alerting Process

NOTIFICATION OF KEY GOVERNMENT AGENCIES

In the event of an oil spill or potential spill in the Portland COTP, ITB personnel will immediately notify the following government agencies:

Key U.S. Government Agencies	24-Hour Contact
NATIONAL RESPONSE CENTRE (NRC), Washington, D.C.	**1 800 424-8802**
U.S. Coast Guard MSO - Portland, Oregon (for spills occurring in Columbia Rv., Oregon Coast, and Washington Coast south of Queets River)	**1 800 410-9549**
U.S. Coast Guard MSO - Puget Sound (for spills occurring in Puget Sound, Straight of Juan de Fuca, and Washington Coast north of Queets River)	**(206) 217-6231**
Oregon Emergency Response System (OERS) Management **Note:** OERS will notify the Oregon Dept. of Env. Quality.	**503 378-6377** **or 1 800 452-0311 (In US)**
Washington State Emergency Management Division (EMD)	**1 800 258-5990**
Washington Department of Ecology (notify nearest office) Northwest Office, Bellevue Southwest Office, Olympia	 **425 649-7000** **360 407-6300**

These notification procedures and the essential information required to report a spill are outlined in the body of this Plan:

For Information on:	See:
Notification procedures and Incident Information reporting	*Section 1.2 - Reporting & Notification*

ITB QUALIFIED INDIVIDUALS (QI)

Qualified Individuals(s)		24-Hour Contact
Qualified Individual	Name: James L. O'Brien Company: The O'Brien's Group	Phone: 985 781-0804 Fax: 985 781-0580
Alternate QIs	Names: Ben Benson, Sanjiv Beri, Tim Perkins, Gary Stankovich Company: The O'Brien's Group	Phone: 985 781-0804 Fax: 985 781-0580

OIL SPILL REMOVAL ORGANIZATIONS (OSROs)

Island Tug and Barge's OSRO for the entire Portland COTP Zone is the National Response Corporation (NRC). Island Tug is a member of the NRC and will ensure its vessels are covered by the NRC while operating in the San Francisco COTP Zone

NATIONAL RESPONSE CORPORATION (NRC)	
National Response Corporation 3500 Sunrise Hwy Ste. T103 Great River NY 11739 USA	
Telephone:	**Emergency: 800 889-4672 (4NRC)** **Non-Emergency: 631 224-9141**
Fax:	631 224-9086 (IOC) 631 224-9082 (Main)
Email:	iocdo@nrcc.com
Contact:	Steven Candito - President

Island Tug and Barge will contract NRC as required until the cessation of the response.

Island Tug and Barge also has access the response services of the Maritime Fire and Safety Association and Clean Rivers Cooperative. ITB's Shipping Agent for voyages to Portland Oregon is the Merit Steamship Agency, who are a member of the Maritime Fire and Safety Association (MFSA). Under the terms of this membership, the Maritime Fire and Safety Association will provide during the initial 24 hours after the spill, a complete spill response capability to Island Tug and Barge for the Columbia River (Rivers/Canal operating environment). This capability will include response vessels, boom equipment, skimmers, trained personnel and other specialized services. It is provided through a predetermined network of response contractors and organizations, including Clean Rivers Co-operative Inc. and NRC Environmental Services. Within the first 24 hours after the spill occurs, Island Tug and Barge will assume full responsibility to direct the recovery/cleanup operation per the contingency plan adopted by MFSA, subject to USCG approval and the approval of other key government agencies. Key agencies can include the Washington State Department of Ecology (WDOE), and the Oregon State Department of Environmental Quality.

MARITIME FIRE AND SAFETY ASSOCIATION **and** **CLEAN RIVERS COOPERATIVE, INC.**
Telephone: **503 220-2055** (24 hours) Or **Channels 16 VHF (156.8) and 18A VHF (156.9)** **MFSA Call Sign (WHW656)** Address: 200 S.W. Market, Suite 190 Portland, OR 98119 Fax: (503) 295-3660 Telex: 4742099 Contact: Mr. Brent Way, Manager

OSRO-AVERAGE MOST PROBABLE DISCHARGE (AMPD)

ITB transfers fuel only at marine transportation-related (MTR) facilities in the Portland COTP Zone. Prior to sailing to a specific MTR facility in the Portland COTP Zone, ITB will ensure it is able to meet the AMPD planning requirements through the use of its OSROs, by agreement with the MTR facility, and/or by using onboard resources.

Resources currently onboard each tug/barge unit covered by this plan include:
- Commercial inshore containment boom greater than twice the length of the vessel
- Response boat adequately equipped to deploy the boom
- Personnel highly trained in oil spill response techniques
- mechanical skimming device meeting the AMPD daily recovery requirements
- Ample storage capacity both in dedicated barge spill tanks as well as portable storage containers

PLANNING VOLUME CALCULATIONS

The planning volumes for the worst case cargo discharge is presented below. For planning purposes, the total cargo capacity of ITB's largest barge (the Island Trader) is 65,320 barrels of Group I non-persistent oil (e.g., Diesel Fuel, Motor Gasolines).

Planning Volumes for Onshore Recovery

	Island Trader
Rivers	65,320 bbls X .1 x 1.0 = 6,532 bbls
Inland	65,320 bbls X .1 x 1.0 = 6,532 bbls
Nearshore	65,320 bbls X .1 x 1.0 = 6,532 bbls
Offshore	65,320 bbls X 0.0 x 1.0 = 0 bbls
Open Ocean	65,320 bbls X 0.0 x 1.0 = 0 bbls

Planning Volumes for On-Water Recovery

	Island Trader
Rivers	65,320 bbls X .1 x 1.0 = 6,532 bbls
Inland	65,320 bbls X .2 x 1.0 = 13,064 bbls
Nearshore	65,320 bbls X .2 x 1.0 = 13,064 bbls
Offshore	65,320 bbls X 0.0 x 1.0 = 0 bbls
Open Ocean	65,320 bbls X 0.0 x 1.0 = 0 bbls

The required resources for on-water recovery for each incident tier using the predetermined mobilization factors are:

	Tier 1	Tier 2	Tier 3
Rivers	1960	2613	3919
Inland	1960	3266	5226
Nearshore	1960	3266	5226
Offshore	0	0	0
Open Ocean	0	0	0
	Figures are shown in barrels per day.		

The *Planning Volume Calculation* program on the VRP/SOPEP web site identifies the minimum OSRO Classification for a Group I Oil, Tier 3 response as W3 for Rivers and W1 for Inland, Nearshore, and Oceans.

Capability of Primary Oil Spill Response Organization

ITB's OSROs have the personnel, equipment and other resources to more that adequately handle ITB's worst case discharge planning volumes for both onshore and on-water recover.

SALVAGE AND MARINE FIREFIGHTING CONTRACTOR

ITB's salvage and marine firefighting resource for the Portland COTP zone is the Marine Response Alliance (MRA).

MARINE RESPONSE ALLIANCE
Telephone: **206 332-8200 (24 hour emergency)** Fax: 206 332-8500 Marine Response Alliance LLC P.O. Box 2287 Seattle WA 98111 USA Contact: Jeff Taylor – General Manager Phone: 206 332-8076 Fax: 206 332-8376 e-mail: MRALLC@crowley.com web: www.marineresponsealliance.com

EMERGENCY LIGHTERING CONTRACTOR

ITB's emergency lightering resource for the Portland COTP zone is the Marine Response Alliance. Contact information is as above.

SPILL MANAGEMENT TEAM ORGANIZATION

Island Tug and Barge's spill management team is outlined in *Section 3.3, Incident Command System.*

The contracted Qualified Individuals acting on behalf of the company may also fill the role of the Incident Commander. However, Island Tug and Barge may elect to replace the contracted Qualified Individual with the Company President (or his delegate) as the Incident Commander. The Incident Commander will be responsible for working with the pre-designated Federal On-scene Coordinator (FOSC) to ensure that Island Tug and Barge's actions are consistent with those of various government agencies and resources.

These responsibilities may include but are not limited to the following: establishing open, continuous communications with the FOSC after the initial notification; identifying types of information that will be relayed to the FOSC (i.e., projected plans, accomplishments, complications); soliciting comments and recommendations from the FOSC as well as working out differences; and, having the FOSC attend and participate in spill management team meetings.

Island Tug and Barge and their contracted spill managers will manage the response to all spills the company is involved in, including:

- Average Most Probable Discharge (AMPD)
- Maximum Probable Discharge (MPD)
- Worst Case Probable Discharge (SCPD)

RESPONSE OPERATION RESOURCES

The following companies or agencies will be called upon to provide specialized services or assistance in the event of an incident as required by the situation.

Salvage and Lightering Companies:	
Marine Response Alliance (MRA) (ITB has response contract in place)	**206 332-8200** (24 Hours) 206 332-8500 (Fax)
Crowley Maritime Salvage, Seattle (available through ITB's contract with the MRA)	**1 800 248-8632** (24 Hours) **or 206 332-8000** 206 332-8300 (Fax)
Foss Maritime - Seattle - Portland	**206 281-3800** (24 Hours) 503 286-0631
Fred Devine Diving & Salvage, Portland	**503 283-5285** (24 Hours) 503 286-2871 (Fax)
Global Diving and Salvage	**206 623-0621** (24 Hours) 206 932-9036 (Fax)

Fire Departments:

In the event of a fire or explosion during cargo transfer operations at a marine transportation related (MTR) facility, the facility Fire Contingency Plan and response team will be called upon.

Local Fire Departments: **9-1-1 within local calling area**

Marine Fire-Fighting	
Marine Response Alliance (MRA) (ITB has response contract in place)	**206 332-8200** (24 Hours) 206 332-8500 (Fax)
Crowley Maritime Salvage, Seattle (available through ITB's contract with the MRA)	**1 800 248-8632** (24 Hours) **or 206 332-8000** 206 332-8300 (Fax)
Maritime Fire and Safety Association	**503 220-2055** (24 hours)

Marine Surveyors / Naval Architects:	
Peter S. Hatfield Ltd. 412-611 Alexander, Vancouver	**604 253-0955** 604 253-5023 (Fax)
Robert Allan Ltd. 230-1639 W.2nd, Vancouver	**604 736-9466** 604 736-9483 (Fax) 604 738-2809 (R. Allan Res)

Shipping Agent(s):	
Merit Steamship Agency Incorporated 101 SW Main St, Portland, Or 97204	503 227-1621

VESSEL ROUTES

Refer to *Section 3.1 - ITB Operating Overview*.

APPENDIX D

GEOGRAPHIC-SPECIFIC INFORMATION SAN FRANCISCO COTP ZONE

PURPOSE AND SCOPE

This Appendix has been prepared in accordance with the guidelines for Vessel Response Plans described in *33 CFR 155* of the *Federal Register* (Vessel Response Plans; Final Rule). It covers the San Francisco Captain of the Port (COTP). *Figure D-1* illustrates Island Tug's notification process for the state of California.

ITB OPERATIONS IN THE SAN FRANCISCO COTP

The following ITB vessels are approved for operations in the San Francisco COTP Zone:

Vessel Name	Capacity (bbls)	Oil Type	Operating Environments
Island Trader	65,320	Group I	River, Inland, Nearshore, Offshore, Open Ocean
Island Monarch	2,264	Group I	River, Inland, Nearshore, Offshore, Open Ocean
Island Tugger	1,321	Group I	River, Inland, Nearshore, Offshore, Open Ocean

ITB vessels operating in the U.S. are normally used to transport refined petroleum products in bulk between British Columbia, Canada to/from marine transportation-related (MTR) facilities located in the west coast states of the U.S.

All cargoes received or delivered in the U.S. are transported direct between Canadian and U.S. ports.

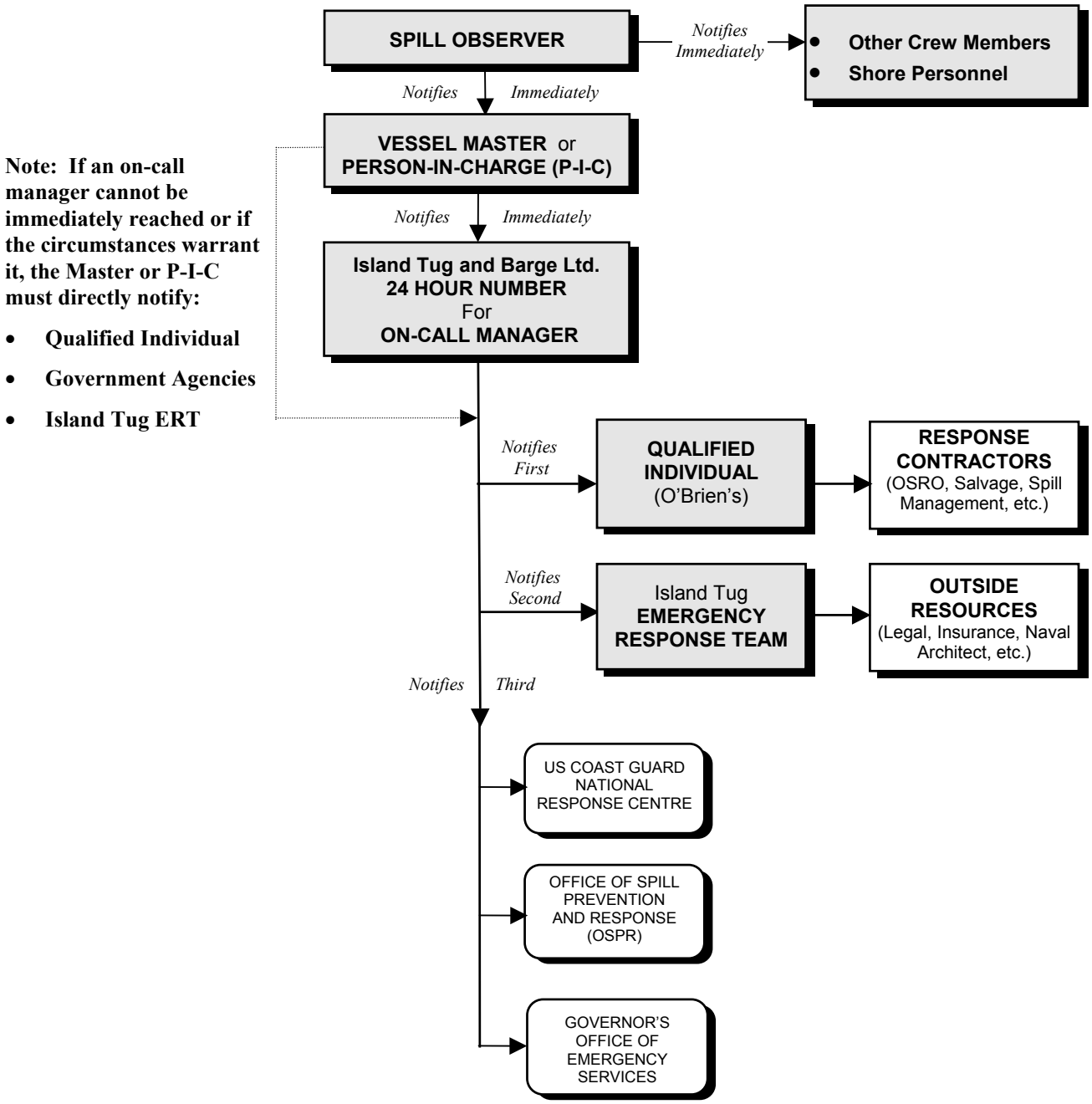

Figure D-1 - California State Spill Notification/Alerting Process

NOTIFICATION OF KEY GOVERNMENT AGENCIES

In the event of an oil spill or potential spill in the San Francisco COTP, ITB personnel will immediately notify the following government agencies:

Key U.S. Government Agencies	24-Hour Contact
NATIONAL RESPONSE CENTRE (NRC), Washington, D.C.	**1 800 424-8802**
U.S. Coast Guard MSO - San Francisco (24 hr Command Centre)	**415 399-3547**
California Department of Fish and Game -	
Office of Spill Prevention and Response (OSPR)	**1 888 334-2258**
OSPR Communications Centre	**916 445-0045**
California Governor's Office of Emergency Services (OES)	
In State Waters	**1 800 852-7550**
Outside State	**916 845-8911**
U.S. Environmental Protection Agency	
Region 9 Duty Officer for Oil or Chemical Spills in California	**1 800 300-2193**

These notification procedures and the essential information required to report a spill are outlined in the body of this Plan:

For Information on:	See:
Notification procedures and Incident reporting	*Section 1.2 - Reporting & Notification*

ITB QUALIFIED INDIVIDUALS (QI)

Qualified Individuals(s)		24-Hour Contact
Qualified Individual	Name: James L. O'Brien Company: The O'Brien's Group	Phone: 985 781-0804 Fax: 985 781-0580
Alternate QIs	Names: Ben Benson, Sanjiv Beri, Tim Perkins, Gary Stankovich Company: The O'Brien's Group	Phone: 985 781-0804 Fax: 985 781-0580

OIL SPILL REMOVAL ORGANIZATIONS (OSROs)

Island Tug and Barge's OSRO for the San Francisco COTP Zone is the National Response Corporation (NRC). Island Tug is a member of the NRC and will ensure its vessels are covered by the NRC while operating in the San Francisco COTP Zone

NATIONAL RESPONSE CORPORATION (NRC)	
National Response Corporation 3500 Sunrise Hwy Ste. T103 Great River NY 11739 USA	
Telephone:	**Emergency: 800 889-4672 (4NRC)** **Non-Emergency: 631 224-9141**
Fax:	631 224-9086 (IOC) 631 224-9082 (Main)
Email:	iocdo@nrcc.com
Contact:	Steven Candito - President

Island Tug and Barge will contract NRC as required until the cessation of the response.

OSRO-AVERAGE MOST PROBABLE DISCHARGE (AMPD)

ITB transfers fuel only at marine transportation-related (MTR) facilities in the San Francisco COTP Zone. Prior to sailing to a specific MTR facility in the San Francisco COTP Zone, ITB will ensure it is able to meet the AMPD planning requirements through the use of its OSROs, by agreement with the MTR facility, and/or by using onboard resources.

Resources currently onboard each tug/barge unit covered by this plan include:
- Commercial inshore containment boom greater than twice the length of the vessel
- Response boat adequately equipped to deploy the boom
- Personnel highly trained in oil spill response techniques
- mechanical skimming device meeting the AMPD daily recovery requirements
- Ample storage capacity both in dedicated barge spill tanks as well as portable storage containers

PLANNING VOLUME CALCULATIONS

The planning volumes for the worst case cargo discharge is presented below. For planning purposes, the total cargo capacity of ITB's largest barge (the Island Trader) is 65,320 barrels of Group I non-persistent oil (e.g., Diesel Fuel, Motor Gasolines).

Planning Volumes for Onshore Recovery

	Island Trader
Rivers	65,320 bbls X .1 x 1.0 = 6,532 bbls
Inland	65,320 bbls X .1 x 1.0 = 6,532 bbls
Nearshore	65,320 bbls X .1 x 1.0 = 6,532 bbls
Offshore	65,320 bbls X 0.0 x 1.0 = 0 bbls
Open Ocean	65,320 bbls X 0.0 x 1.0 = 0 bbls

Planning Volumes for On-Water Recovery

	Island Trader
Rivers	65,320 bbls X .1 x 1.0 = 6,532 bbls
Inland	65,320 bbls X .2 x 1.0 = 13,064 bbls
Nearshore	65,320 bbls X .2 x 1.0 = 13,064 bbls
Offshore	65,320 bbls X 0.0 x 1.0 = 0 bbls
Open Ocean	65,320 bbls X 0.0 x 1.0 = 0 bbls

The required resources for on-water recovery for each incident tier using the predetermined mobilization factors are:

	Tier 1	Tier 2	Tier 3
Rivers	1960	2613	3919
Inland	1960	3266	5226
Nearshore	1960	3266	5226
Offshore	0	0	0
Open Ocean	0	0	0
	Figures are shown in barrels per day.		

The *Planning Volume Calculation* program on the VRP/SOPEP web site identifies the minimum OSRO Classification for a Group I Oil, Tier 3 response as W3 for Rivers and W1 for Inland, Nearshore, and Oceans.

Capability of Primary Oil Spill Response Organization

ITB's primary OSRO for the San Francisco COTP zone is the National Response Corporation (NRC). The NRC is capable of responding to spills of MM, W1, W2, and W3 in the River/Canals, Inland, Open Ocean, Offshore, and Nearshore operating environments.

SALVAGE AND MARINE FIREFIGHTING CONTRACTOR

ITB's salvage and marine firefighting resource for the San Francisco COTP zone is the Marine Response Alliance (MRA).

MARINE RESPONSE ALLIANCE
Telephone: **206 332-8200 (24 hour emergency)** Fax: 206 332-8500 Marine Response Alliance LLC P.O. Box 2287 Seattle WA 98111 USA Contact: Jeff Taylor – General Manager Phone: 206 332-8076 Fax: 206 332-8376 e-mail: MRALLC@crowley.com web: www.marineresponsealliance.com

EMERGENCY LIGHTERING CONTRACTOR

ITB's emergency lightering resource for the San Francisco COTP zone is the Marine Response Alliance. Contact information is as above.

SPILL MANAGEMENT TEAM ORGANIZATION

Island Tug and Barge's spill management team is outlined in *Section 3.3, Incident Command System.*

The contracted Qualified Individuals acting on behalf of the company may also fill the role of the Incident Commander. However, Island Tug and Barge may elect to replace the contracted Qualified Individual with the Company President (or his delegate) as the Incident Commander. The Incident Commander will be responsible for working with the pre-designated Federal On-scene Coordinator (FOSC) to ensure that Island Tug and Barge's actions are consistent with those of various government agencies and resources.

These responsibilities may include but are not limited to the following: establishing open, continuous communications with the FOSC after the initial notification; identifying types of information that will be relayed to the FOSC (i.e., projected plans, accomplishments, complications); soliciting comments and recommendations from the FOSC as well as working out differences; and, having the FOSC attend and participate in spill management team meetings.

Island Tug and Barge and their contracted spill managers will manage the response to all spills the company is involved in, including:

- Average Most Probable Discharge (AMPD)
- Maximum Probable Discharge (MPD)
- Worst Case Probable Discharge (SCPD)

RESPONSE OPERATION RESOURCES

The following companies or agencies will be called upon to provide specialized services or assistance in the event of an incident as required by the situation.

Salvage Companies / Lightering Companies:	
Marine Response Alliance (MRA) (ITB has response contract in place)	**206 332-8200** (24 Hours) 206 332-8500 (Fax)
Crowley Maritime Salvage, Seattle (available through ITB's contract with the MRA)	**1 800 248-8632** (24 Hours) **or 206 332-8000** 206 332-8300 (Fax)
Foss Maritime - Seattle - San Francisco	**206 281-3800** (24 Hours) 510 307-7820
Fred Devine Diving & Salvage, Portland	**503 283-5285** (24 Hours) 503 286-2871 (Fax)
Global Diving and Salvage	**206 623-0621** (24 Hours) 206 932-9036 (Fax)

Fire Departments:

In the event of a fire or explosion during cargo transfer operations at a marine transportation related (MTR) facility, the facility Fire Contingency Plan and response team will be called upon.

Local Fire Departments: **9-1-1 within local calling area**

Marine Fire-Fighting	
Marine Response Alliance (MRA) (ITB has response contract in place)	**206 332-8200** (24 Hours) 206 332-8500 (Fax)
Crowley Maritime Salvage, Seattle (available through ITB's contract with the MRA)	**1 800 248-8632** (24 Hours) **or 206 332-8000** 206 332-8300 (Fax)

Marine Surveyors / Naval Architects:	
Peter S. Hatfield Ltd. 412-611 Alexander, Vancouver	**604 253-0955** 604 253-5023 (Fax)
Robert Allan Ltd. 230-1639 W.2nd, Vancouver	**604 736-9466** 604 736-9483 (Fax) 604 738-2809 (R. Allan Res)

Shipping Agent(s):	
Merit Steamship Agency	562-437-0871 (Office)

VESSEL ROUTES

Refer to *Section 3.1 - ITB Operating Overview*.

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APPENDIX E

GEOGRAPHIC-SPECIFIC INFORMATION
LOS ANGELES – LONG BEACH COTP ZONE

PURPOSE AND SCOPE

This Appendix has been prepared in accordance with the guidelines for Vessel Response Plans described in *33 CFR 155* of the *Federal Register* (Vessel Response Plans; Final Rule). It covers the Los Angeles – Long Beach Captain of the Port (COTP) Zone. *Figure E-1* illustrates Island Tug's notification process for the state of California.

ITB OPERATIONS IN THE LOS ANGELES - LONG BEACH COTP

The following ITB vessels are approved for operations in the Los Angeles – Long Beach COTP Zone:

Vessel Name	Capacity (bbls)	Oil Type	Operating Environments
Island Trader	65,320	Group I	River, Inland, Nearshore, Offshore, Open Ocean
Island Monarch	2,264	Group I	River, Inland, Nearshore, Offshore, Open Ocean
Island Tugger	1,321	Group I	River, Inland, Nearshore, Offshore, Open Ocean

ITB vessels operating in the U.S. are used to transport refined petroleum products in bulk between British Columbia, Canada to/from marine transportation-related (MTR) facilities located in the west coast states of the U.S.

All cargoes received or delivered in the U.S. are transported direct between Canadian and U.S. ports.

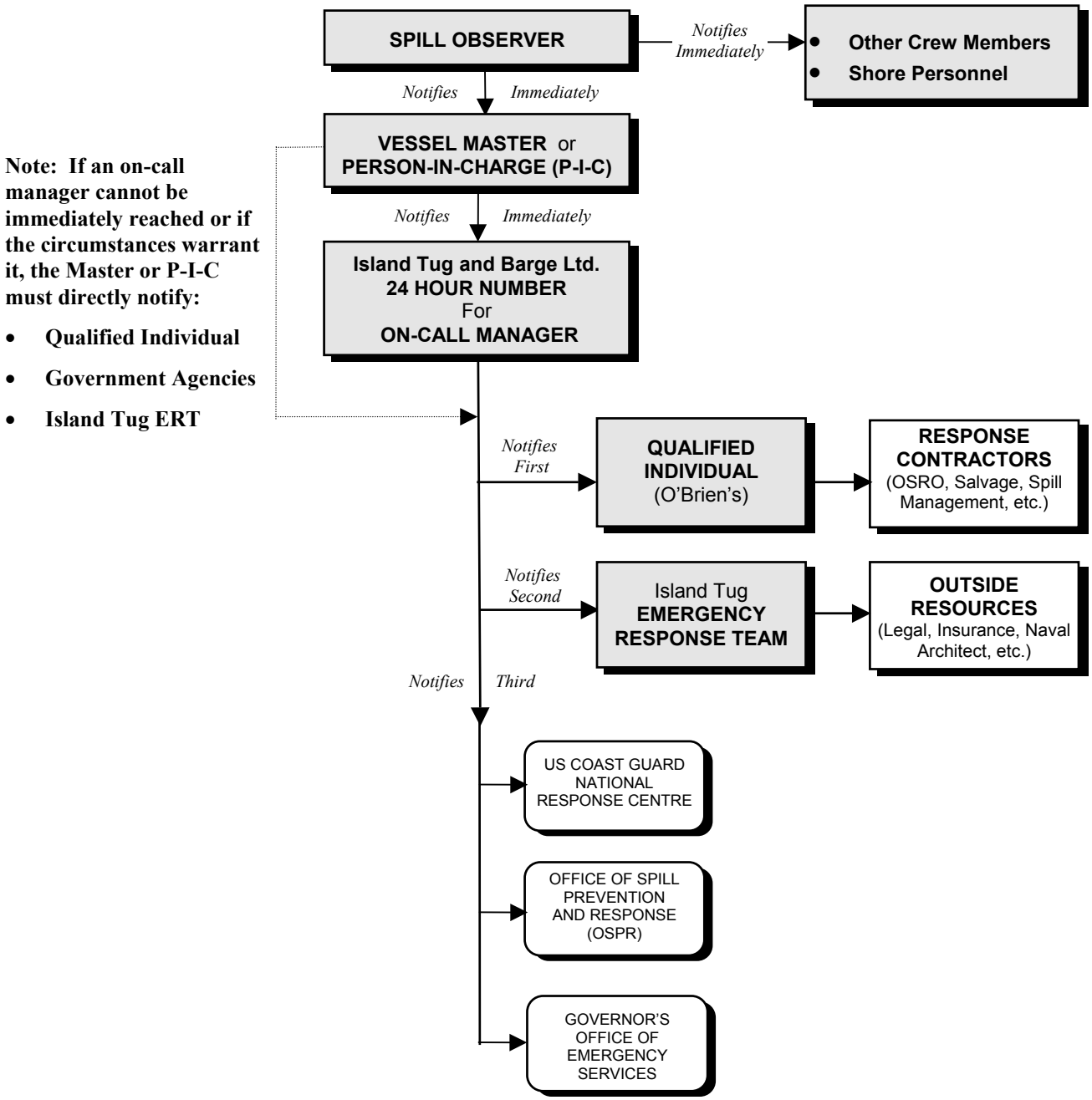

Figure E-1 - California State Spill Notification/Alerting Process

NOTIFICATION OF KEY GOVERNMENT AGENCIES

In the event of an oil spill or potential spill in the Los Angeles - Long Beach COTP, ITB personnel will immediately notify the following government agencies:

Key U.S. Government Agencies	24-Hour Contact
NATIONAL RESPONSE CENTRE (NRC), Washington, D.C.	**1 800 424-8802**
USCG MSO - Los Angeles - Long Beach (24 hr Command Centre)	**1 800 221-8724**
California Department of Fish and Game -	
Office of Spill Prevention and Response (OSPR)	**1 888 334-2258**
OSPR Communications Centre	**916 445-0045**
California Governor's Office of Emergency Services (OES)	
In State Waters	**1 800 852-7550**
Outside State	**916 845-8911**
U.S. Environmental Protection Agency	
Region 9 Duty Officer for Oil or Chemical Spills in California	**1 800 300-2193**

These notification procedures and the essential information required to report a spill are outlined in the body of this Plan:

For Information on:	See:
Notification procedures and Incident reporting	*Section 1.2 - Reporting & Notification*

ITB QUALIFIED INDIVIDUALS (QI)

Qualified Individuals(s)		24-Hour Contact
Qualified Individual	Name: James L. O'Brien Company: The O'Brien's Group	Phone: 985 781-0804 Fax: 985 781-0580
Alternate QIs	Names: Ben Benson, Sanjiv Beri, Tim Perkins, Gary Stankovich Company: The O'Brien's Group	Phone: 985 781-0804 Fax: 985 781-0580

OIL SPILL REMOVAL ORGANIZATIONS (OSROs)

Island Tug and Barge's OSRO for the Los Angeles – Long Beach COTP Zone is the National Response Corporation (NRC). Island Tug is a member of the NRC and will ensure its vessels are covered by the NRC while operating in the Los Angeles – Long Beach COTP Zone

NATIONAL RESPONSE CORPORATION (NRC)	
National Response Corporation 3500 Sunrise Hwy Ste. T103 Great River NY 11739 USA	
Telephone:	**Emergency: 800 889-4672 (4NRC)** **Non-Emergency: 631 224-9141**
Fax:	631 224-9086 (IOC) 631 224-9082 (Main)
Email:	iocdo@nrcc.com
Contact:	Steven Candito - President

Island Tug and Barge will contract NRC as required until the cessation of the response.

OSRO-AVERAGE MOST PROBABLE DISCHARGE (AMPD)

ITB transfers fuel only at marine transportation-related (MTR) facilities in the Los Angeles – Long Beach COTP Zone. Prior to sailing to a specific MTR facility in the Los Angeles – Long Beach COTP Zone, ITB will ensure it is able to meet the AMPD planning requirements through the use of its OSROs, by agreement with the MTR facility, and/or by using onboard resources.

Resources currently onboard each tug/barge unit covered by this plan include:
- Commercial inshore containment boom greater than twice the length of the vessel
- Response boat adequately equipped to deploy the boom
- Personnel highly trained in oil spill response techniques
- mechanical skimming device meeting the AMPD daily recovery requirements
- Ample storage capacity both in dedicated barge spill tanks as well as portable storage containers

PLANNING VOLUME CALCULATIONS

The planning volumes for the worst case cargo discharge is presented below. For planning purposes, the total cargo capacity of ITB's largest barge (the Island Trader) is 65,320 barrels of Group I non-persistent oil (e.g., Diesel Fuel, Motor Gasolines).

Planning Volumes for Onshore Recovery

	Island Trader
Rivers	65,320 bbls X .1 x 1.0 = 6,532 bbls
Inland	65,320 bbls X .1 x 1.0 = 6,532 bbls
Nearshore	65,320 bbls X .1 x 1.0 = 6,532 bbls
Offshore	65,320 bbls X 0.0 x 1.0 = 0 bbls
Open Ocean	65,320 bbls X 0.0 x 1.0 = 0 bbls

Planning Volumes for On-Water Recovery

	Island Trader
Rivers	65,320 bbls X .1 x 1.0 = 6,532 bbls
Inland	65,320 bbls X .2 x 1.0 = 13,064 bbls
Nearshore	65,320 bbls X .2 x 1.0 = 13,064 bbls
Offshore	65,320 bbls X 0.0 x 1.0 = 0 bbls
Open Ocean	65,320 bbls X 0.0 x 1.0 = 0 bbls

The required resources for on-water recovery for each incident tier using the predetermined mobilization factors are:

	Tier 1	Tier 2	Tier 3
Rivers	1960	2613	3919
Inland	1960	3266	5226
Nearshore	1960	3266	5226
Offshore	0	0	0
Open Ocean	0	0	0
	Figures are shown in barrels per day.		

The *Planning Volume Calculation* program on the VRP/SOPEP web site identifies the minimum OSRO Classification for a Group I Oil, Tier 3 response as W3 for Rivers and W1 for Inland, Nearshore, and Oceans.

Capability of Primary Oil Spill Response Organization

ITB's primary OSRO for the Los Angeles – Long Beach COTP zone is the National Response Corporation (NRC). The NRC is capable of responding to spills of MM, W1, W2, and W3 in the River/Canals, Inland, Open Ocean, Offshore, and Nearshore operating environments.

SALVAGE AND MARINE FIREFIGHTING CONTRACTOR

ITB's salvage and marine firefighting resource for the Los Angeles – Long Beach COTP zone is the Marine Response Alliance (MRA).

MARINE RESPONSE ALLIANCE
Telephone: **206 332-8200 (24 hour emergency)** Fax: 206 332-8500 Marine Response Alliance LLC P.O. Box 2287 Seattle WA 98111 USA Contact: Jeff Taylor – General Manager Phone: 206 332-8076 Fax: 206 332-8376 e-mail: MRALLC@crowley.com web: www.marineresponsealliance.com

EMERGENCY LIGHTERING CONTRACTOR

ITB's emergency lightering resource for the Los Angeles – Long Beach COTP zone is the Marine Response Alliance. Contact information is as above.

SPILL MANAGEMENT TEAM ORGANIZATION

Island Tug and Barge's spill management team is outlined in *Section 3.3, Incident Command System.*

The contracted Qualified Individuals acting on behalf of the company may also fill the role of the Incident Commander. However, Island Tug and Barge may elect to replace the contracted Qualified Individual with the Company President (or his delegate) as the Incident Commander. The Incident Commander will be responsible for working with the pre-designated Federal On-scene Coordinator (FOSC) to ensure that Island Tug and Barge's actions are consistent with those of various government agencies and resources.

These responsibilities may include but are not limited to the following: establishing open, continuous communications with the FOSC after the initial notification; identifying types of information that will be relayed to the FOSC (i.e., projected plans, accomplishments, complications); soliciting comments and recommendations from the FOSC as well as working out differences; and, having the FOSC attend and participate in spill management team meetings.

Island Tug and Barge and their contracted spill managers will manage the response to all spills the company is involved in, including:

- Average Most Probable Discharge (AMPD)
- Maximum Probable Discharge (MPD)

Worst Case Probable Discharge (SCPD)

RESPONSE OPERATION RESOURCES

The following companies or agencies will be called upon to provide specialized services or assistance in the event of an incident as required by the situation.

Salvage Companies / Lightering Companies:	
Marine Response Alliance (MRA) (ITB has response contract in place)	**206 332-8200** (24 Hours) 206 332-8500 (Fax)
Crowley Maritime Salvage, Seattle (available through ITB's contract with the MRA)	**1 800 248-8632** (24 Hours) **or 206 332-8000** 206 332-8300 (Fax)
Foss Maritime - Seattle - Long Beach	**206 281-3800** (24 Hours) 562 435-0171
Fred Devine Diving & Salvage, Portland	**503 283-5285** (24 Hours) 503 286-2871 (Fax)
Global Diving and Salvage	**206 623-0621** (24 Hours) 206 932-9036 (Fax)

Fire Departments:
In the event of a fire or explosion during cargo transfer operations at a marine transportation related (MTR) facility, the facility Fire Contingency Plan and response team will be called upon. Local Fire Departments: **9-1-1 within local calling area**

Marine Fire-Fighting	
Marine Response Alliance (MRA) (ITB has response contract in place)	**206 332-8200** (24 Hours) 206 332-8500 (Fax)
Crowley Maritime Salvage, Seattle (available through ITB's contract with the MRA)	**1 800 248-8632** (24 Hours) **or 206 332-8000** 206 332-8300 (Fax)

Marine Surveyors / Naval Architects:	
Peter S. Hatfield Ltd. 412-611 Alexander, Vancouver	**604 253-0955** 604 253-5023 (Fax)
Robert Allan Ltd. 230-1639 W.2nd, Vancouver	**604 736-9466** 604 736-9483 (Fax) 604 738-2809 (R. Allan Res)

Shipping Agent(s):	
Merit Steamship Agency	562-438-0871 (Office)

VESSEL ROUTES

Refer to *Section 3.1 - ITB Operating Overview*.

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APPENDIX F

GEOGRAPHIC-SPECIFIC INFORMATION WESTERN ALASKA COTP ZONE

PURPOSE AND SCOPE

This Appendix has been prepared in accordance with the guidelines for Vessel Response Plans described in *33 CFR 155* of the *Federal Register* (Vessel Response Plans; Final Rule). It covers the Western Alaska Captain of the Port (COTP) Zone. *Figure F-1* illustrates Island Tug's notification process for the state of Alaska.

ITB OPERATIONS IN THE WESTERN ALASKA COTP

The following ITB vessels are approved for operations in the Western Alaska COTP Zone:

Vessel Name	Capacity (bbls)	Oil Type	Operating Environments
Island Trader	65,320	Group I	River, Inland, Nearshore, Offshore, Open Ocean
ITB Vancouver	25,000	Group I	River, Inland, Nearshore, Offshore, Open Ocean
ITB 38	38,000	Group I	River, Inland, Nearshore, Offshore, Open Ocean
ITB 45	22,600	Group I	River, Inland, Nearshore, Offshore, Open Ocean
ITB Reliant	26,500	Group I	River, Inland, Nearshore, Offshore, Open Ocean
ITB Resolution	26,500	Group I	River, Inland, Nearshore, Offshore, Open Ocean
ITB Supplier	25,000	Group I	River, Inland, Nearshore, Offshore, Open Ocean
Island Monarch	2,264	Group I	River, Inland, Nearshore, Offshore, Open Ocean
Island Tugger	1,321	Group I	River, Inland, Nearshore, Offshore, Open Ocean

ITB vessels operating in the U.S. are used to transport refined petroleum products in bulk. All cargoes received or delivered in the U.S. are transported direct between Canadian and U.S. ports.

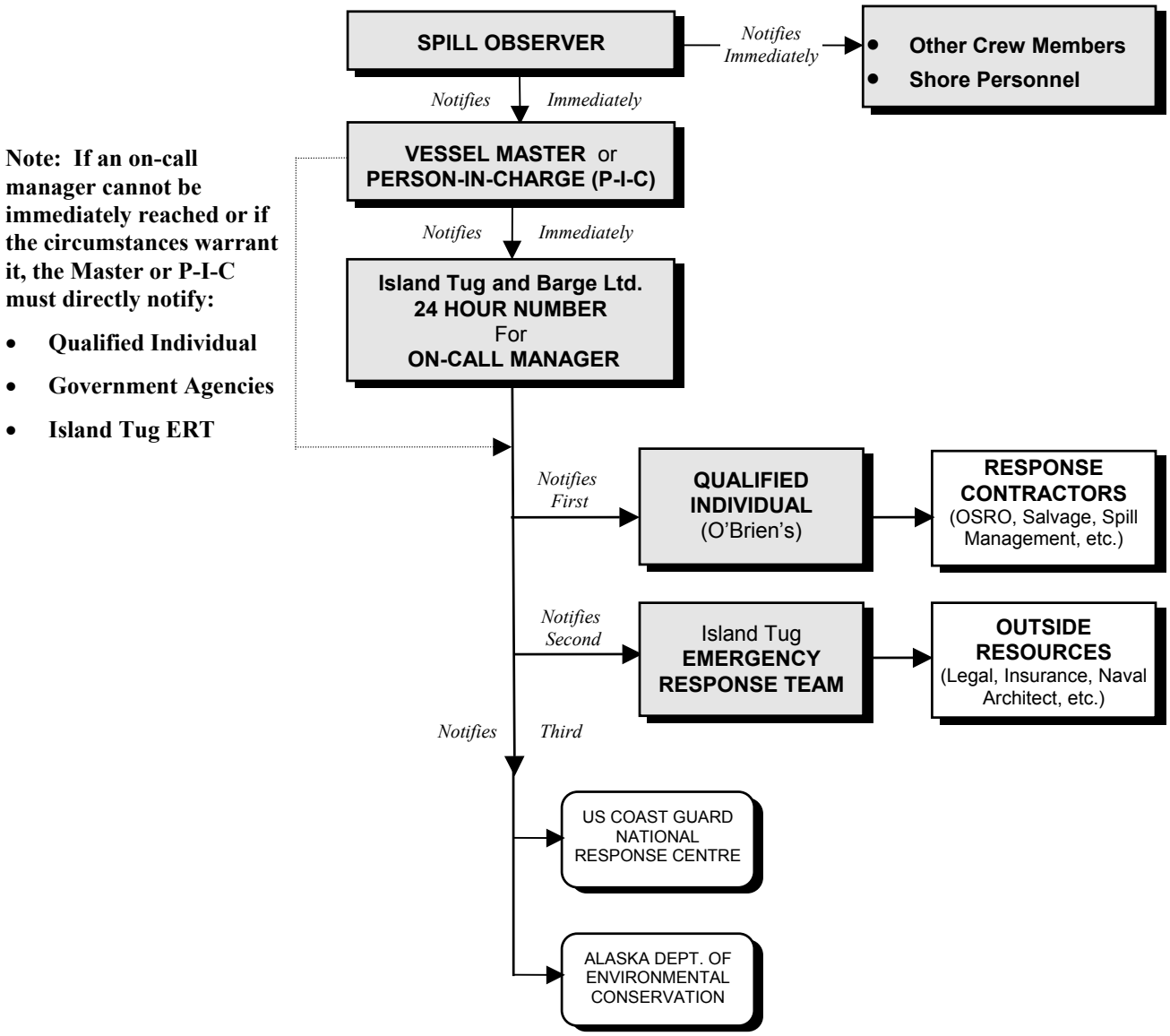

Figure F-1 - Alaska State Spill Notification/Alerting Process

NOTIFICATION OF KEY GOVERNMENT AGENCIES

In the event of an oil spill or potential spill in the Western Alaska COTP, ITB personnel will immediately notify the following government agencies:

Key U.S. Government Agencies	24-Hour Contact
NATIONAL RESPONSE CENTRE (NRC), Washington, D.C.	**1 800 424-8802**
USCG District Command Centre (24 hours)	**907 463--2000**
USCG MSO Anchorage– COTP Western Alaska	
Main business number and 24 hour emergency:	**(907) 271-6700**
Alaska Department of Environmental Conservation	
Central Area Response Team (Anchorage)	**907 269-3063**
Northern Area Response Team (Fairbanks)	**907 451-2121**
Outside of Normal Business Hours	**1 800 478-9300**

These notification procedures and the essential information required to report a spill are outlined in the body of this Plan:

For Information on:	See:
Notification procedures and Incident reporting	*Section 1.2 - Reporting & Notification*

ITB QUALIFIED INDIVIDUALS (QI)

Qualified Individuals(s)		24-Hour Contact
Qualified Individual	Name: James L. O'Brien Company: The O'Brien's Group	Phone: 985 781-0804 Fax: 985 781-0580
Alternate QIs	Names: Ben Benson, Sanjiv Beri, Tim Perkins, Gary Stankovich Company: The O'Brien's Group	Phone: 985 781-0804 Fax: 985 781-0580

OIL SPILL REMOVAL ORGANIZATIONS (OSROs)

Island Tug and Barge's OSRO for the Western Alaska COTP Zone is the Alaska Chadux Corporation. Island Tug is a member of Alaska Chadux and will ensure its vessels are covered by the Alaska Chadux while operating in the Western Alaska COTP Zone

Alaska Chadux Corporation		
2347 Azurite Court Anchorage Alaska 99507 USA		
Telephone:	**Emergency:**	**907 348-2365** **888 831-3438**
	Non-Emergency:	**907 348-2365**
Fax:	907 348-2330	
Contact:	Robert E. Heavilin – General Manager	

Island Tug and Barge will contract Alaska Chadux as required until the cessation of the response.

AGREEMENT FOR ALTERNATE COMPLIANCE TO 33 CFR PART 155

In order that Island Tug and Barge Ltd. tank barges may transit the Nearshore Operating Environment, Island Tug is currently in the process of becoming a signatory to the *Agreement for Compliance for Tank Barge Transport of Non-persistent Oil in Alaska* as well as the *Memorandum of Understanding Regarding the Use of Tank Barges of Opportunity to Provide Temporary Storage in Support of an Oil Spill Response in Alaska*. Under this agreement, any Island Tug and Barge tank barges transiting the nearshore operating environment will have increased immediate onboard response cabability including:

- sufficient equipment to meet, to the maximum extent practicable, the response-planning standard for the Maximum Most Probable Discharge.
- As a minimum, boom approximately three times the length of the barge sufficient to allow for skimming operations.
- Skimmers capable of recovering the Maximum Most Probable Discharge.
- Self-contained, portable lightering pumps for moving product from damaged tanks.
- Training of all tow vessel crews to deploy all onboard response equipment.

OSRO-AVERAGE MOST PROBABLE DISCHARGE (AMPD)

Prior to sailing to transferring fuel in the Western Alaska COTP Zone, ITB will ensure it is able to meet the AMPD planning requirements through the use of its OSROs, by agreement with the MTR facility, and/or by using onboard resources.

Resources currently onboard each tug/barge unit covered by this plan include:
- Commercial inshore containment boom greater than twice the length of the vessel
- Response boat adequately equipped to deploy the boom
- Personnel highly trained in oil spill response techniques
- mechanical skimming device meeting the AMPD daily recovery requirements
- Ample storage capacity both in dedicated barge spill tanks as well as portable storage containers

PLANNING VOLUME CALCULATIONS

The planning volumes for the worst case cargo discharge is presented below. For planning purposes, the total cargo capacity of ITB's largest barge (the Island Trader) is 65,320 barrels of Group I non-persistent oil (e.g., Diesel Fuel, Motor Gasolines).

Planning Volumes for Onshore Recovery

	Island Trader
Rivers	65,320 bbls X .1 x 1.0 = 6,532 bbls
Inland	65,320 bbls X .1 x 1.0 = 6,532 bbls
Nearshore	65,320 bbls X .1 x 1.0 = 6,532 bbls
Offshore	65,320 bbls X 0.0 x 1.0 = 0 bbls
Open Ocean	65,320 bbls X 0.0 x 1.0 = 0 bbls

Planning Volumes for On-Water Recovery

	Island Trader
Rivers	65,320 bbls X .1 x 1.0 = 6,532 bbls
Inland	65,320 bbls X .2 x 1.0 = 13,064 bbls
Nearshore	65,320 bbls X .2 x 1.0 = 13,064 bbls
Offshore	65,320 bbls X 0.0 x 1.0 = 0 bbls
Open Ocean	65,320 bbls X 0.0 x 1.0 = 0 bbls

The required resources for on-water recovery for each incident tier using the predetermined mobilization factors are:

	Tier 1	Tier 2	Tier 3
Rivers	1960	2613	3919
Inland	1960	3266	5226
Nearshore	1960	3266	5226
Offshore	0	0	0
Open Ocean	0	0	0
	Figures are shown in barrels per day.		

The *Planning Volume Calculation* program on the VRP/SOPEP web site identifies the minimum OSRO Classification for a Group I Oil, Tier 3 response as W3 for Rivers and W1 for Inland and Nearshore.

Capability of Primary Oil Spill Response Organization

ITB's primary OSRO for the Western Alaska COTP zone is the Alaska Chadux Corporation. Alaska Chadux is capable of responding to spills of MM, W1, W2, and W3 in the River/Canals operating environment and MM, W1, W2 in the Inland operating environment.

SALVAGE AND MARINE FIREFIGHTING CONTRACTOR

ITB's salvage and marine firefighting resource for the Western Alaska COTP zone is the Marine Response Alliance (MRA).

MARINE RESPONSE ALLIANCE
Telephone: **206 332-8200 (24 hour emergency)** Fax: 206 332-8500 Marine Response Alliance LLC P.O. Box 2287 Seattle WA 98111 USA Contact: Jeff Taylor – General Manager Phone: 206 332-8076 Fax: 206 332-8376 e-mail: MRALLC@crowley.com web: www.marineresponsealliance.com

EMERGENCY LIGHTERING CONTRACTOR

ITB's emergency lightering resource for the Western Alaska COTP zone is the Marine Response Alliance. Contact information is as above.

SPILL MANAGEMENT TEAM ORGANIZATION

Island Tug and Barge's spill management team is outlined in *Section 3.3, Incident Command System.*

The contracted Qualified Individuals acting on behalf of the company may also fill the role of the Incident Commander. However, Island Tug and Barge may elect to replace the contracted Qualified Individual with the Company President (or his delegate) as the Incident Commander. The Incident Commander will be responsible for working with the pre-designated Federal On-scene Coordinator (FOSC) to ensure that Island Tug and Barge's actions are consistent with those of various government agencies and resources.

These responsibilities may include but are not limited to the following: establishing open, continuous communications with the FOSC after the initial notification; identifying types of information that will be relayed to the FOSC (i.e., projected plans, accomplishments, complications); soliciting comments and recommendations from the FOSC as well as working out differences; and, having the FOSC attend and participate in spill management team meetings.

Island Tug and Barge and their contracted spill managers will manage the response to all spills the company is involved in, including:

- Average Most Probable Discharge (AMPD)
- Maximum Probable Discharge (MPD)
- Worst Case Probable Discharge (SCPD)

RESPONSE OPERATION RESOURCES

The following companies or agencies will be called upon to provide specialized services or assistance in the event of an incident as required by the situation.

Salvage Companies / Lightering Companies:	
Marine Response Alliance (MRA) (ITB has response contract in place)	**206 332-8200** (24 Hours) 206 332-8500 (Fax)
Crowley Maritime Salvage, Seattle (available through ITB's contract with the MRA)	**1 800 248-8632** (24 Hours) **or 206 332-8000** 206 332-8300 (Fax)
Foss Maritime - Seattle	**206 281-3800** (24 Hours)
Fred Devine Diving & Salvage, Portland	**503 283-5285** (24 Hours) 503 286-2871 (Fax)
Global Diving and Salvage	**206 623-0621** (24 Hours) 206 932-9036 (Fax)

Fire Departments:
In the event of a fire or explosion during cargo transfer operations at a marine transportation related (MTR) facility, the facility Fire Contingency Plan and response team will be called upon. Local Fire Departments: **9-1-1 within local calling area**

Marine Fire-Fighting	
Marine Response Alliance (MRA) (ITB has response contract in place)	**206 332-8200** (24 Hours) 206 332-8500 (Fax)
Crowley Maritime Salvage, Seattle (available through ITB's contract with the MRA)	**1 800 248-8632** (24 Hours) **or 206 332-8000** 206 332-8300 (Fax)

Marine Surveyors / Naval Architects:	
Peter S. Hatfield Ltd. 412-611 Alexander, Vancouver	**604 253-0955** 604 253-5023 (Fax)
Robert Allan Ltd. 230-1639 W.2nd, Vancouver	**604 736-9466** 604 736-9483 (Fax) 604 738-2809 (R. Allan Res)

VESSEL ROUTES

Refer to *Section 3.1 - ITB Operating Overview*.