



# Department of Environmental Protection

Lawton Chiles  
Governor

Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

Virginia B. Wetherell  
Secretary

November 22, 1996

Honorable Joel W. Robbins, C.F.A.  
Dade County Property Appraiser  
Suite 710  
111 Northwest First Street  
Miami, Florida 33128-1984

Re: Marine Spill Response Corporation - Certification of Pollution Control Equipment

Dear Mr. Robbins:

The Department of Environmental Protection has reviewed material attached to your letter of November 19, 1996, concerning the Marine Spill Response Corporation. The Department has determined that the listed equipment for spill control and clean up is eligible to be considered as pollution control equipment pursuant to s. 193.621, F.S.

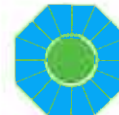
If you have any questions concerning this matter, I can be reached on (904) 487-0472 or SUNCOM 277-0472.

Sincerely,

Hamilton S. Oven, P.E.

cc: Betsy Hewitt

METROPOLITAN DADE COUNTY, FLORIDA



STEPHEN P. CLARK CENTER

DEPARTMENT OF PROPERTY APPRAISAL

ADMINISTRATIVE DIVISION

SUITE 710

111 N.W. 1st STREET

MIAMI, FLORIDA 33128-1984

(305) 375-4004

FAX (305) 375-3024

November 19, 1996

Hamilton S. Oven, P.E., Administrator  
Coordination Office  
Department of Environmental Protection  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, FL 32399-2400

RE: Pollution Control Equipment - Marine Spill Response Corporation  
(MSRC)

Dear Mr. Oven:

Marine Spill Response Corporation, located in Dade County has submitted the attached, certified list of petroleum and non-petroleum spill recovery equipment. Additional explanatory data is also attached.

The Metro-Dade County Department of Property Appraisal is requesting your review of this information for determination of whether this equipment is eligible for assessment at salvage value for ad valorem tax purposes as allowed by section 193.621, Florida Statutes.

Sincerely,

*Joel W. Robbins*

Joel W. Robbins  
Property Appraiser

GREENBERG  
ATTORNEYS AT LAW  
TRAURIG

Arthur C. Young  
(305) 579-0743

November 19, 1996

**VIA HAND DELIVERY**

Thomas W. Logue, Esq.  
Dade County Attorney's Office  
Metro-Dade Center, Suite 2810  
111 N.W. 1st Street  
Miami, Florida 33128

Re: **MSRC v. Robbins et al.**  
Case No.: 95-18194

Dear Mr. Logue:

Pursuant to your request, we have enclosed a certified engineers report classifying the subject property as pollution control devices for the above-referenced matter. Specifically, you will find a report from Wayne D. Lasch, P.E., of Post, Buckley, Schuh & Jernigan, Inc., which outlines the subject property which should be entitled to a pollution control device classification under Florida Statute §193.621. We would appreciate it if you forward this report to the Florida Department of Environmental Protection as soon as possible, as time is of the essence in resolving this matter.

Please contact me as soon as you receive this correspondence so we can discuss this matter further.

Very truly yours,



Arthur C. Young

ACY/lem  
Enclosures

November 13, 1996

To Whom It May Concern:

The enclosed documentation lists and, as appropriate, describes in detail the equipment owned by Marine Spill Response Corporation (MSRC) and used for oil (petroleum and non-petroleum) spill response. Based on the design and purpose of this equipment and information provided to me by MSRC, I certify that all of the equipment listed has a true primary use of oil spill response and, therefore, pollution control.

If additional information is required relating to this matter, please contact me at (904)367-8683.

Sincerely,



Wayne D. Lasch, P.E.  
Program Manager  
Florida Professional Engineer  
Registration No. 0049563



Enc.

cc: Arthur Young  
Pat Lee

WDL/kkm

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## **MARINE SPILL RESPONSE CORPORATION**

The following is a list of equipment expected to be located in Florida at MSRC's Regional Response Center and Prepositioned Sites. This list consists of machinery and equipment with a useful life of at least three (3) years which is used primarily in the operations of a marine discharge response corporation and includes but shall not be limited to the following:

### **VESSELS:**

- Oil Spill Response Vessel
- Barge
- Rigid Hull Inflatables
- Aluminum Support Boats
- Shallow Water Barge System

### **VEHICLES:**

- Mechanics Truck
- Stake Bed Truck
- Heavy Repair Truck
- Mule/Tractor
- Tractor w/ Crane
- Flatbed Truck
- Trailers Covered
- Forklifts
- Crane Car-10 Ton
- Crane Car-25 Ton

\*All of the above-listed vehicles are used for transport and deployment of equipment in direct support of marine discharge operations.

### **BOOMS:**

- Heavy Offshore Boom (EFC)
  - Reels
  - Class III Hydraulic Power Packs
  - Tow Bars
  - Air Inflation Nozzle
  - Spares
  - Repair Kits
  - Diesel Air Blowers
  - Boom Boxes
  - Wire Baskets for Accessory Equipment

- Medium Weight Fence Boom (Slickbar)
  - 22 Pound Anchor Assemblies
  - 40 Pound Anchor Assemblies
  - Anchor Line Reels
  - Floated Tow Bars
  - Open Top Containers w/Tarp Cover

Intertidal Boom (Texaboom)  
Water Pump/Air Blower Units  
Anchors  
Boom Tow Bridles  
Operation Repair Kits  
Open Top Containers w/Tarp Cover  
Tools for Air & Water Valves  
Workshop Repair Kits

**SKIMMERS:**

Vikoma Skimming Barrier  
Class I Hydraulic Power Pack  
3-Weir Boom System  
Spares for Boom System  
Deployment for Reel/Controller  
Hydraulic Controller  
Transfer Pumps  
Spares for Pump  
Pump Sump Unit  
Hoses & Reel for Pump

Transrec Skimming System  
Transrec (brand name) 350 (size) Weir Skimmer  
Spares  
Disc Skimmer Cassette  
Armadillo Belt Skimming Belt

Oil Trawl  
FIOCS 800 (size) Oil Trawl (fully integrated oil containment system)  
Spares  
15 Foot Container w/Reel  
PVC Covers (plastic/fabric dust/rain covers for equipment)  
Spares for Reel & Container

Walosep W-4 (model number) Weir Skimmer  
Class I Hydraulic Power Pack  
Flat Rack Container  
Skimmer Cradle  
Spares  
Horse & Reels

GT-185 (model number) Weir Skimmer  
Class III Hydraulic Power Pack  
Flat Rack Container  
Skimmer Cradle  
Accessory Equipment  
Container & Reel  
Spares

WP-1 (oil/debris skimmer)  
Class I Hydraulic Power Pack  
Flat Rack Container  
Skimmer Cradle  
Accessory Equipment  
Spares  
Remote Control  
Hoses, Reel & Floats

Desmi Ocean Skimmer  
Class II Hydraulic Power Pack  
Light Oil Adapter  
Spares for Skimmer  
Spares for Pump  
Accessory Equipment  
Flat Rack Container  
Skimmer Cradle

### **TRANSFER PUMPS:**

Desmi DOP 250 (model number), High viscosity Transfer Pump  
Class II Hydraulic Power Packs  
Spares  
150 Ft. Hose Set  
Double Hose Reel  
Containers (3 wire Baskets)  
Spare Class I Power Packs

Eureka CCN-150 (model number), High Capacity Transfer Pump  
Class I Hydraulic Power Pack  
Hoses & Reels  
Spares  
Accessory Equipment  
Containers (3 wire baskets)

### **TOWABLE STORAGE BLADDERS:**

Size 2 (500-750 Bbls.) Towable Storage Bladders  
Flatracks  
Spares  
Gripper Bars  
Rolling Bars  
Decanting Hoses  
6" Towing Hoses  
Blower Units  
Flow Meters  
Shutoff Valve Set  
Quick Release Hook  
Repair Kits  
Tow Line and Pendant  
Light Float  
Committed Offloading Pumps  
Pump Floatation Collars

## **SUPPORT EQUIPMENT:**

Safety Equipment  
Protective Clothing  
Ardivac Skimmer  
ISO Lashing Gear  
Lashing Gear  
20 Foot Steel Containers (included with skimmers)  
Helicopter Cargo Nets  
15 kw Diesel Generators  
6 kw Diesel Generators  
Light Tower for 6 kw Diesel Generator  
Welders, Air - Pack  
Welders, XMT - 200  
Hot Water Washers  
High Pressure Washers  
Trailer Air Compressor (high capacity)  
Portable Tuggers  
Fenders - Various Sizes  
Floating Boom ARms  
Boom End Connector Adapters  
Boom Rollers  
Boom Mats  
Portable Air Compressors (low capacity)  
Deep Water Boom Moorings  
Magnetic Boom Anchors  
Hose - Suction (3")  
Hose - Discharge (3")  
Equipment Tool Kits  
Portable Maintenance Containers  
Portable Spares Containers  
Adapters, Swedges  
Hydraulic Hose Reels  
Pig Launchers  
Hydraulic Hose Pressure Relief Tools  
Hose Banding Kits  
Knuckel Crane  
Centrifugal Pumps - 3"  
Diaphragm Pumps - 3"  
Fuel Transfer Pumps - Diesel  
Fuel Transfer Pumps - Hand  
Water Transfer Pumps - Diesel  
500 Gallon Portable Fuel Tanks  
55 Gallon Portable Fuel Tanks  
Pillow Tanks  
2400 Gallon Open Top Storage Tanks  
400 Gallon Open Top Storage Tanks  
Portable Water Tanks  
Port-a-Berm (fabric tank used to contain equipment while being cleaned)  
Sorbents  
Portable Shelters  
Indirect Fired Heaters/AC Units  
Hydraulic Trainer  
Fire Extinguishers

Portable Communications Package  
Chain Hoists and Come-Alongs  
Tensiometers  
Portable Rigging Containers  
Dispersant Application System

**COMMUNICATIONS AND COMPUTER EQUIPMENT:**

Communications and computer equipment will be used to provide information and communication services in direct support of the operations of a marine discharge response corporation. For example, RF equipment in the form of UHF, VHF, HF, marine band and aviation band, T1, KU band satellite and computer network equipment, all of which is directly associated with command and control during marine discharge operations.

11/11/96



# MAJOR EQUIPMENT SYSTEMS

October 10, 1996

## **MSRC EQUIPMENT SYSTEMS**

The following is a listing of the components of major equipment systems, including the container dimensions and the suggested number of operators for each system. Note that the number of operators required varies with the deployment configuration. Numbers given do not reflect support vessel(s) operators.

# OSRV



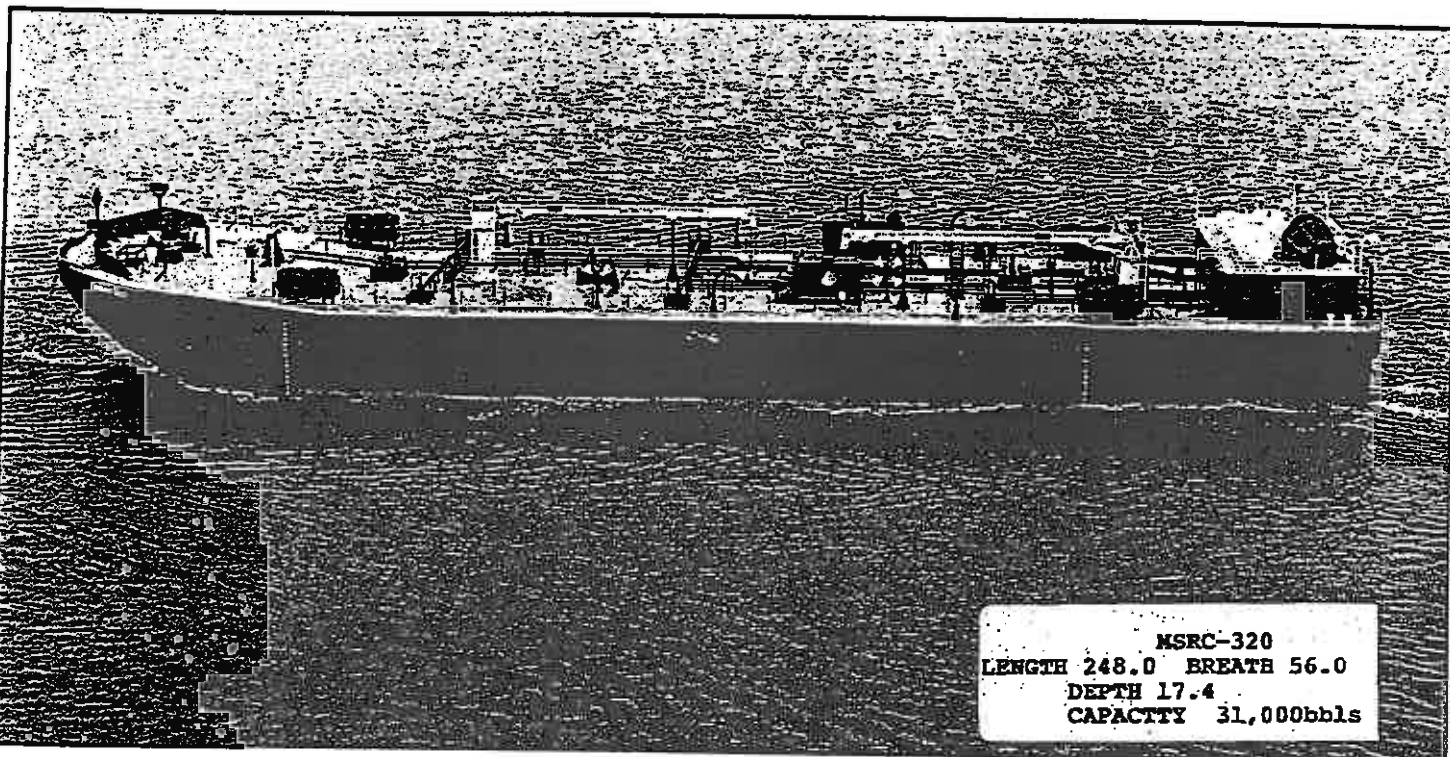
## **OSRV**

The principal recovery vessel for MSRC is the Oil Spill Response Vessel (OSRV). Each MSRC OSRV is normally equipped with the following standard oil containment and recovery devices: one (1) 32 foot support boat; one (1) Transrec 350; one (1) Norwegian Oil Trawl with 360' of boom with bottom nets and 310' of guiding boom, and 2 sections of 660 foot Sea Sentry boom. There are a total of sixteen (16) vessels constructed (12 built by Trinity and 4 built by Bender shipyards) with the following characteristics:

|                        | <b><u>Trinity</u></b> | <b><u>Bender</u></b> |
|------------------------|-----------------------|----------------------|
| Length O.A.            | 208' - 5"             | 210' - 0"            |
| Depth                  | 17' - 0"              | 17' - 0"             |
| Max. Draft             | 14' - 0"              | 14' - 0"             |
| Freeboard Design Draft | 3' - 0"               | 3' - 0"              |
| Beam                   | 44' - 0"              | 45' - 0"             |
| Quarters               | 38 Persons            | 38 Persons           |
| Fuel Capacity          | 112,890 Gals          | 105,168 Gals         |
| Fresh Water Capacity   | 20,200 Gals           | 33,344 Gals          |
| Recovered Oil Capacity | 4,000 BBLS            | 4,000 BBLS           |
| GRT                    | 488.64 Tons           | 498 Tons             |
| DWT                    | 1370.97 Light Tons    | 1182.37 Light Tons   |

Each OSRV is capable of operating in the weather conditions defined in Coast Guard guidance for the offshore environment.

# OSRB

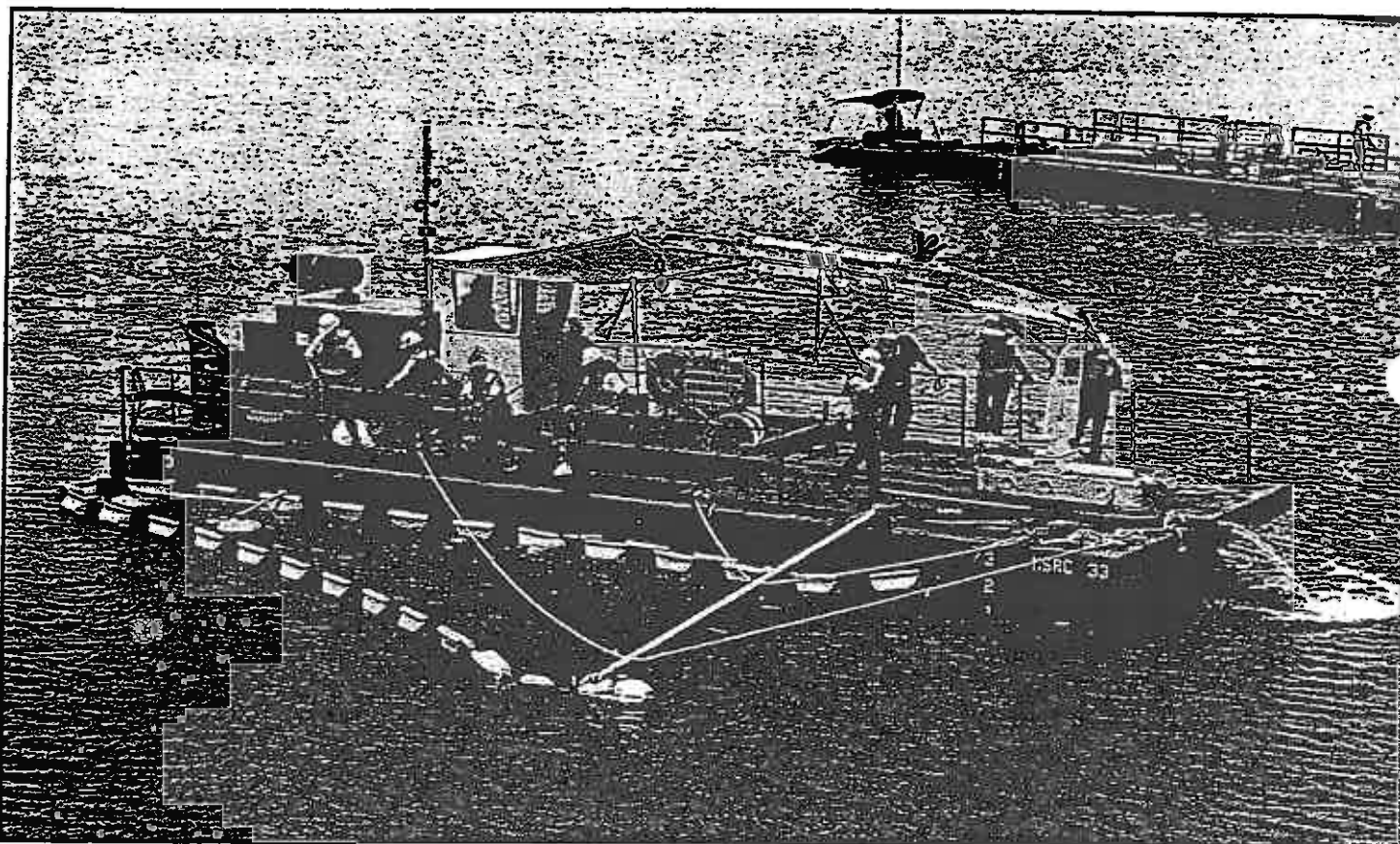


## OSRB

The principal storage vessel used by MSRC is the OSRB. A total of 17 of these vessels have been procured with varying characteristics. Listed below are the home port locations of each barge:

| <u>Barge Name</u> | <u>Vessel Location</u> | <u>Storage Capacity BBLs</u> |
|-------------------|------------------------|------------------------------|
| MSRC 401          | Gloucester, NJ         | 40,000                       |
| MSRC 520          | Perth Amboy, NJ        | 52,000                       |
| MSRC 620          | Boston, MA             | 61,989                       |
| MSRC 680          | Virginia Beach, VA     | 67,891                       |
| MSRC 350          | Savannah, GA           | 35,000                       |
| MSRC 360          | Tampa, FL              | 36,000                       |
| MSRC 381          | St. Croix, USVI        | 38,343                       |
| MSRC 451          | Miami, FL              | 44,750                       |
| MSRC 402          | Pascagoula, MS         | 40,260                       |
| MSRC 403          | Port Aransas, TX       | 40,261                       |
| MSRC 450          | Venice, LA             | 44,734                       |
| MSRC 570          | Galveston, TX          | 56,920                       |
| MSRC 320          | Port Hueneme, CA       | 32,000                       |
| MSRC 400          | Honolulu, HI           | 40,000                       |
| MSRC 452          | Richmond, CA           | 45,000                       |
| MSRC 380          | Port Angeles, WA       | 38,000                       |
| MSRC 404          | Astoria, OR            | 40,000                       |

## SHALLOW-WATER BARGE SYSTEM (SBS)



## **SHALLOW-WATER BARGE SYSTEM**

### **System configuration:**

- 2 Interlocked pontoons
- 1 Propulsion unit (self contained propulsion system or MSRC dedicated support vessel)
- 1 Deck crane
- 1 Skimming system
- 1 Boom arm
- 1 Containment boom system

### **Operating characteristics:**

|                      |                        |
|----------------------|------------------------|
| Dimensions assembled | 4'H x 16'W x 48'L unit |
| Weight:              | 36,000 lbs per barge   |
| Capacity:            | 400 bbls per barge     |
| Speed:               | 8 kts                  |
| Discharge rate:      | 800 bbls/hr            |

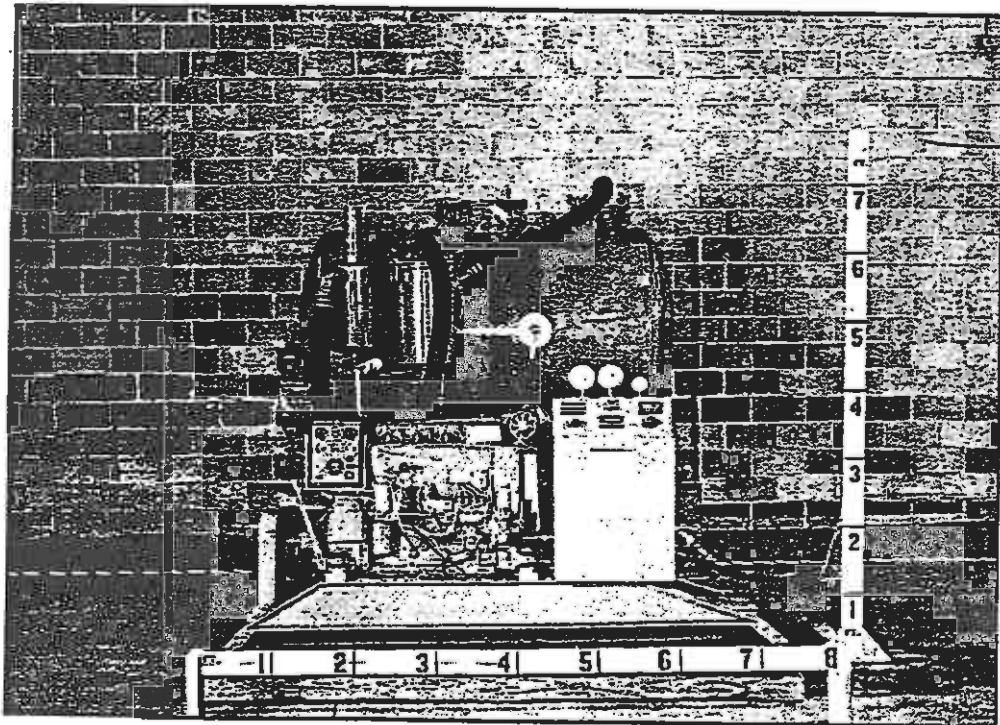
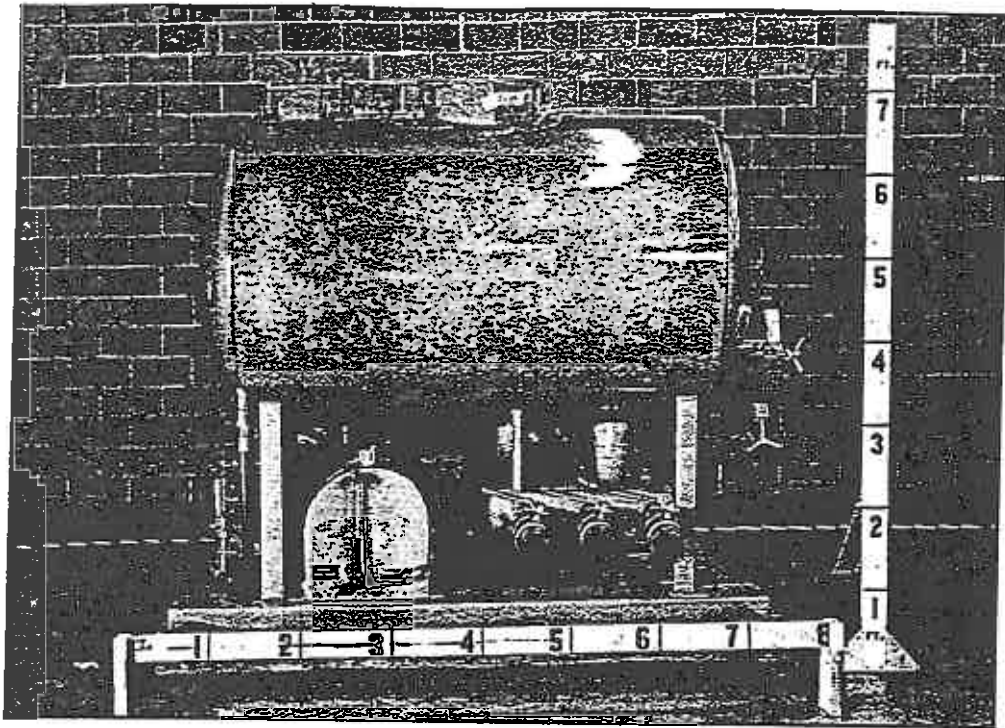
### **Personnel requirements:**

2 people, depending on configuration and operating requirement (USCG OSRO planning factor).

### **Description:**

The Shallow-Water Barge System (SBS) is a self-propelled skimming system capable of operating in a number of environments. It is staged at key locations within MSRC's area of responsibility and is configured for immediate deployment. In addition to its skimming capabilities the system can be configured for debris collection, boom transport and general logistics support. Sixteen (16) of the sixty eight (68) units in MSRC's inventory have the added capability of a self contained hydraulic power system driven by the Thrustmaster propulsion system. In addition these units are fitted with a hydraulically operated knuckle crane having a rated lift capacity of 3,100 lbs at a reach of 14'.

## AARDVAC 800 SKIMMER



## **AARDVAC 800 SKIMMER**

### **System Configuration:**

- 1 AardVac Skimmer
- 3 Skimmer heads
- 2 50' x 6" Layflat discharge hose
- 4 25' x 6" Layflat discharge hose
- 6 50' x 3" Rigid Suction hose
- 1 Tool Kit
- 1 Rigging Kit
- 1 Spare Parts Kit
- 1 Standard Utility Kit

### **Effective Daily Recovery Capacity:**

3,800 bbls/day (USCG OSRO planning factor)

### **Shipping Characteristics:**

Standard ISO 20' Flatrack

Gross weight: 14,700 lbs

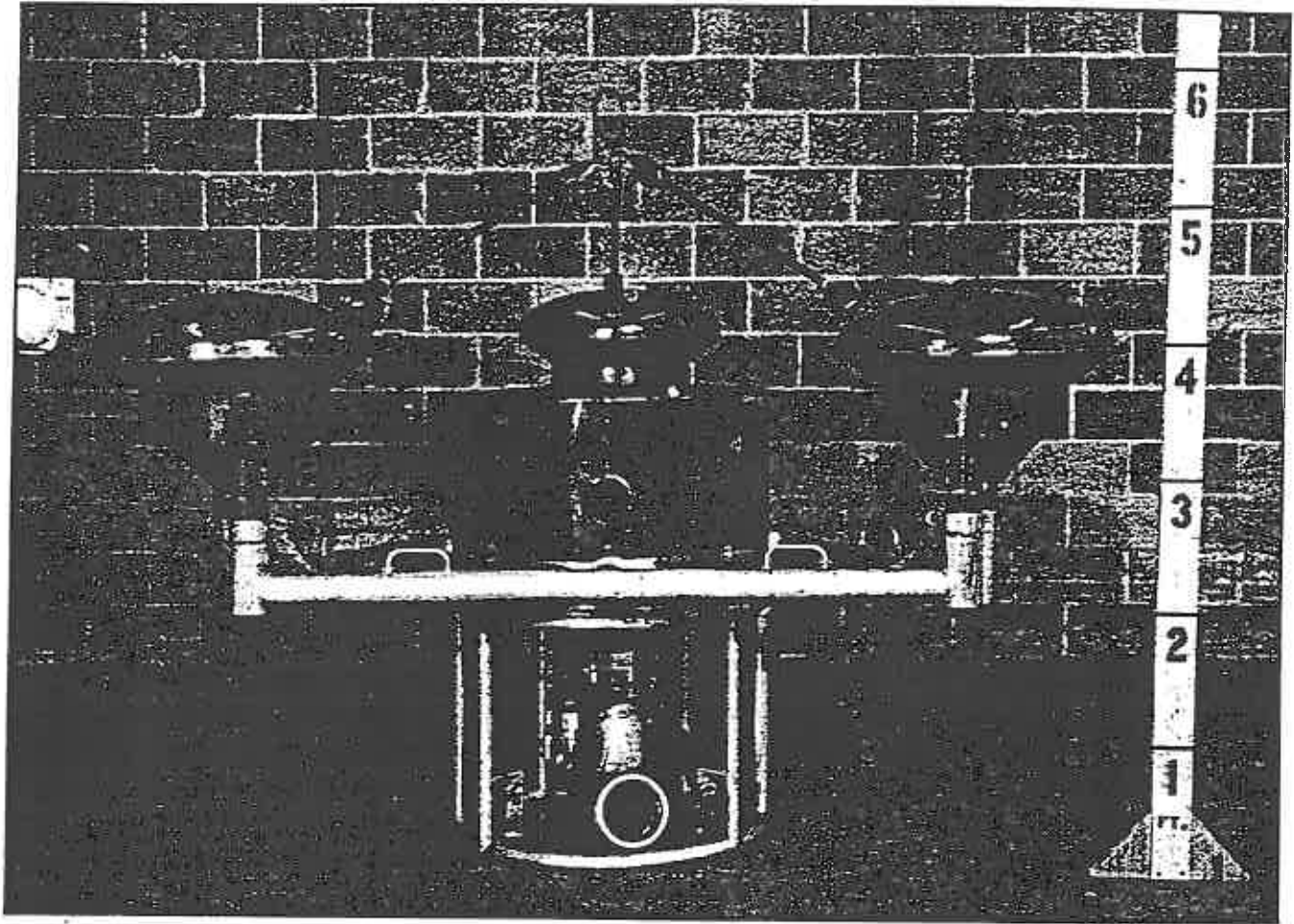
### **Personnel Requirements:**

1-3 people, depending on configuration and operating requirement. (USCG OSRO planning factor)

**Description** - The AARDVAC 800 is a self-contained, high capacity suction skimming system for beach and shoreline areas. This skid mounted vacuum system can be loaded onto a flatbed truck for mobility, or located on a beach or pier. The suction manifold allows up to three skimmer heads to operate at the same time. These skimmer heads are interchangeable to accommodate the weight of oil being recovered. The unit can simultaneously skim oil from the water and transfer the recovered oil to a separate storage tank.

**Handling/Operation** - The AARDVAC 800 skimmer is designed for beach or shoreline collection or recovery point operations. It is not likely to be used offshore as a VOSS, but the AARDVAC system could become a valuable tool in shallow water spills when it is worked off a barge type platform. The system will require the operator to be proficient in diesel engine operations in addition to having knowledge of vacuum skimming and transfer pump procedures.

## DESMI OCEAN SKIMMER



## **DESMI OCEAN SKIMMER**

### **System configuration:**

- 1 Desmi Ocean Skimmer
- 1 Type II Power Pack
- 4 50' x 6" Layflat discharge hose
- 10 50' x 1" Hydraulic hose
- 5 50' x 3/8" Hydraulic hose
- 3 25' x 3/8" Air hose
- 3 50' x 3/8" Air hose
- 1 Tool Kit
- 1 Rigging Kit
- 1 Spare Parts Kit
- 1 Standard Utility Kit
- 1 Type III Control Station

### **Effective Daily Recovery Capacity:**

1,300 bbls/day (USCG OSRO planning factor)

### **Shipping characteristics:**

Standard ISO 20' Flatrack

Air Deliverable

Gross weight: 14,450 lbs

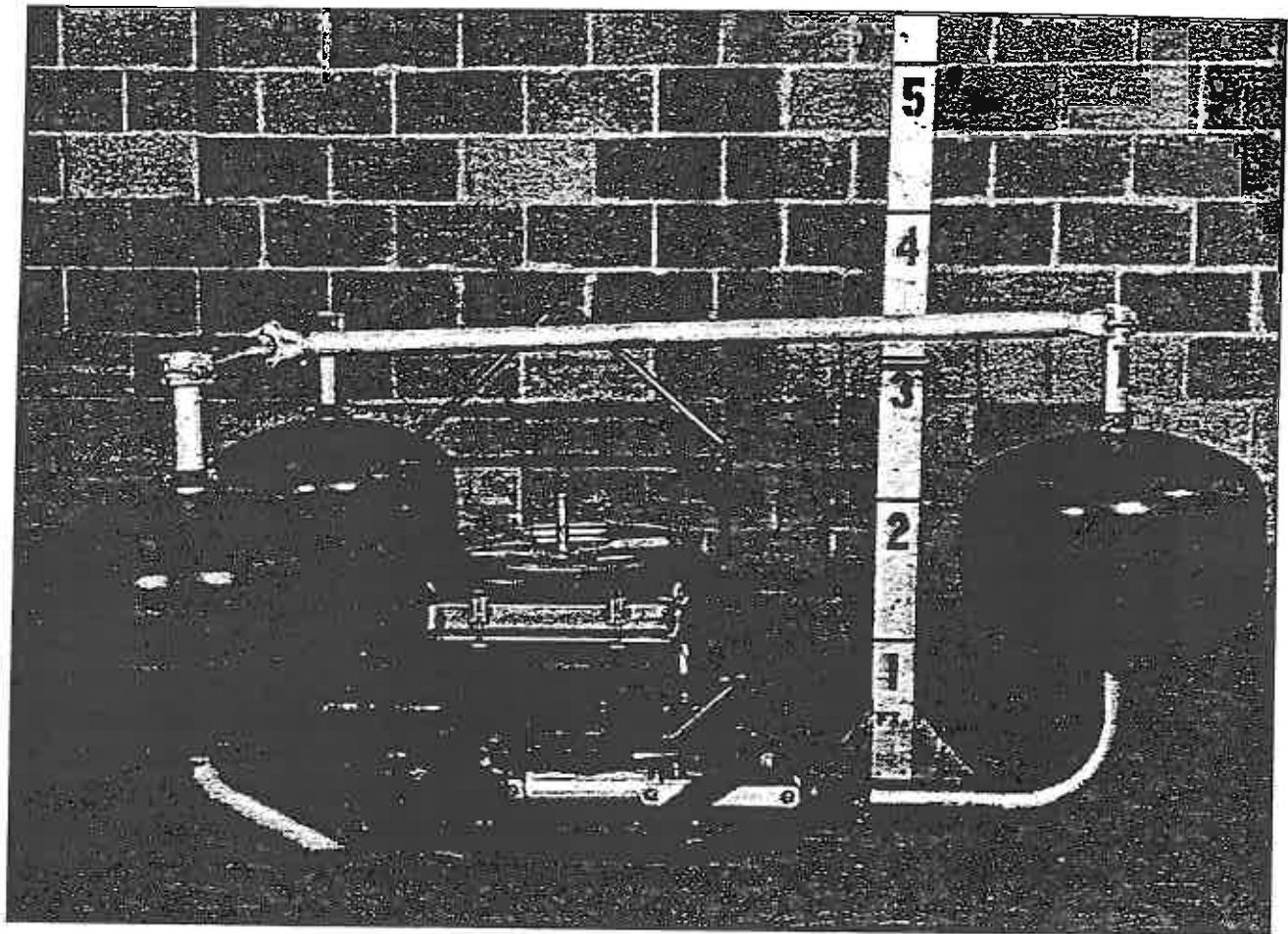
### **Personnel requirements:**

1-3 people, depending on configuration and operating requirements (USCG OSRO planning factor)

**Description** - The DESMI Ocean Skimmer is a weir lip skimmer capable of operation in the open sea. It is designed to cope with debris contaminated oil and emulsions of medium to high viscosities. The surface hopper leads directly into the suction of a Desmi DOP-250 pump. In operation, vertical adjustments of the weir lip to the oil/water interface are pneumatically controlled from a free-standing control station. An adapter may be attached to the hopper for light oil. The DOP-250 pump may be removed from the floatation frame for use in conventional pumping roles.

**Handling/Operation** - This skimmer is well suited for use on smaller VOSS vessels because its relative low weight would not require heavy hoisting capabilities at sea. It is versatile because of its relative light weight, capability to handle many types of oil, and its ability to operate off-shore and in shallow water.

## GT- 185 SKIMMER



## **GT-185 SKIMMER**

### **System configuration:**

- 1 GT-185 Skimmer
- 1 Type III Power Pack
- 10 50' x 6" Layflat discharge hose
- 6 50' x 1" Hydraulic hose
- 5 50' x 3/8" Hydraulic hose
- 1 Tool Kit
- 1 Rigging Kit
- 1 Spare Parts Kit
- 1 Standard Utility Kit
- 1 Type I Control Station

### **Effective Daily Recovery Capacity:**

1,300 bbls/day (USCG OSRO planning factor)

### **Shipping characteristics:**

Standard ISO 20' Flatrack

Air Deliverable

Gross Weight: 13,400 lbs

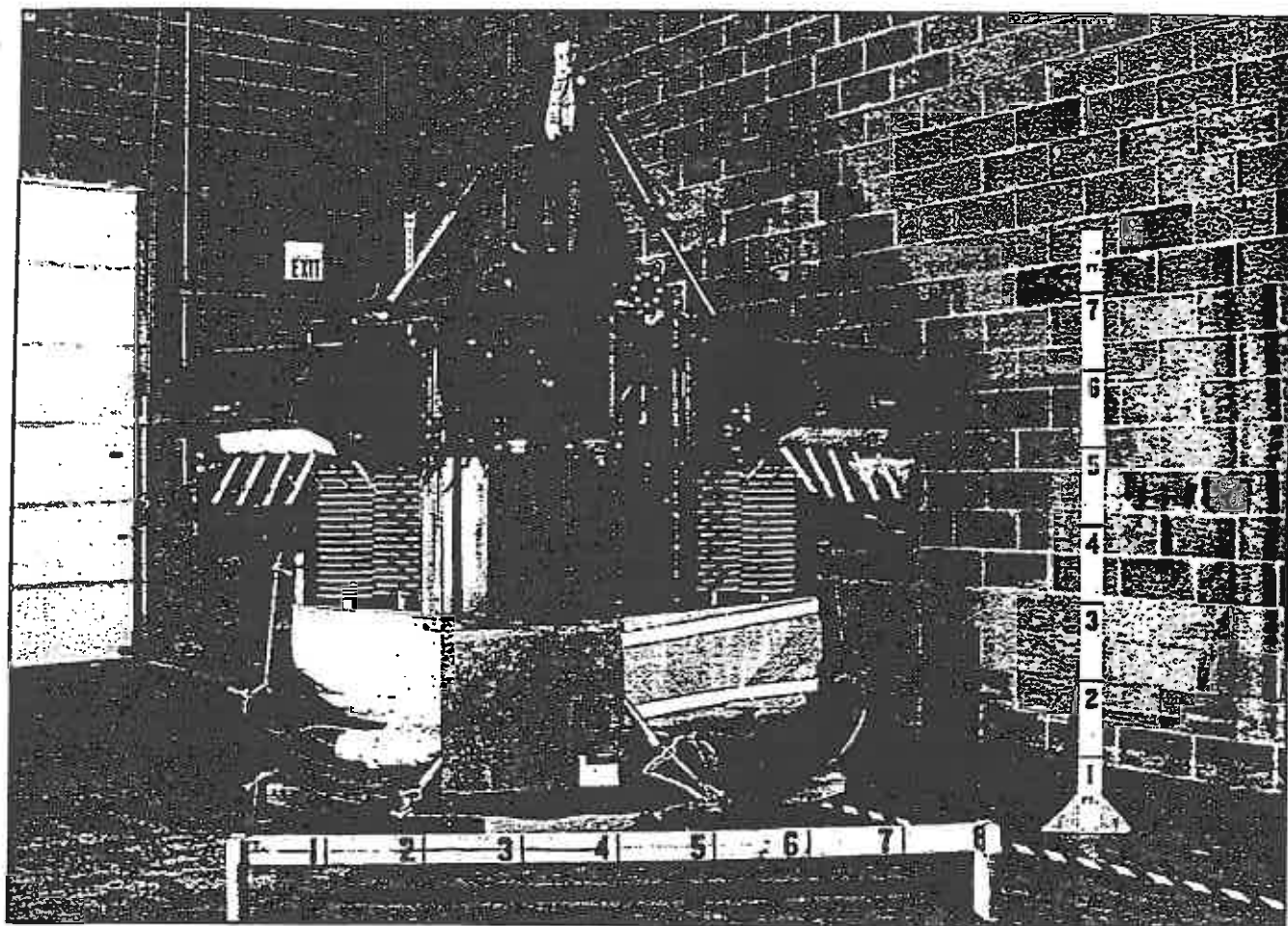
### **Personnel requirements:**

1-3 people, depending on configuration and operating requirements (USCG OSRO planning factor)

**Description** - The GT-185 is a stationary weir skimmer that can be hauled by two people. A three pontoon floating system provides seaworthiness in open ocean conditions, but it is also capable of skimming in shallow water. This type of skimmer is very effective in the latter stages of clean up where pockets of oil remain in shallow water areas that larger skimmers cannot effectively operate. The skimmer has a large suction opening that allows heavy oil to enter into the hopper. An Archimedean screw pump is fitted with multiple cutter heads for handling debris.

**Handling/Operation** - This skimmer is well suited for use on smaller VOSS vessels because its relative low weight would not require heavy hoisting capabilities at sea. It is versatile because of its relative light weight, capability to handle many types of oil, and its ability to operate off-shore and in shallow water.

## SEAWOLF SKIMMER



## **SEAWOOLF SKIMMER**

### **System configuration:**

- 1 Seawoolf Skimmer
- 1 Controller
- 1 Type I Power Pack
- 4 50' Sections of 1" hose
- 2 50' Sections of 3/8" hose
- 1 50' x 6" Layflat discharge hose
- Mobile crane

### **Shipping characteristics:**

Standard ISO 20' Flatrack  
Gross weight: 15,400 lbs

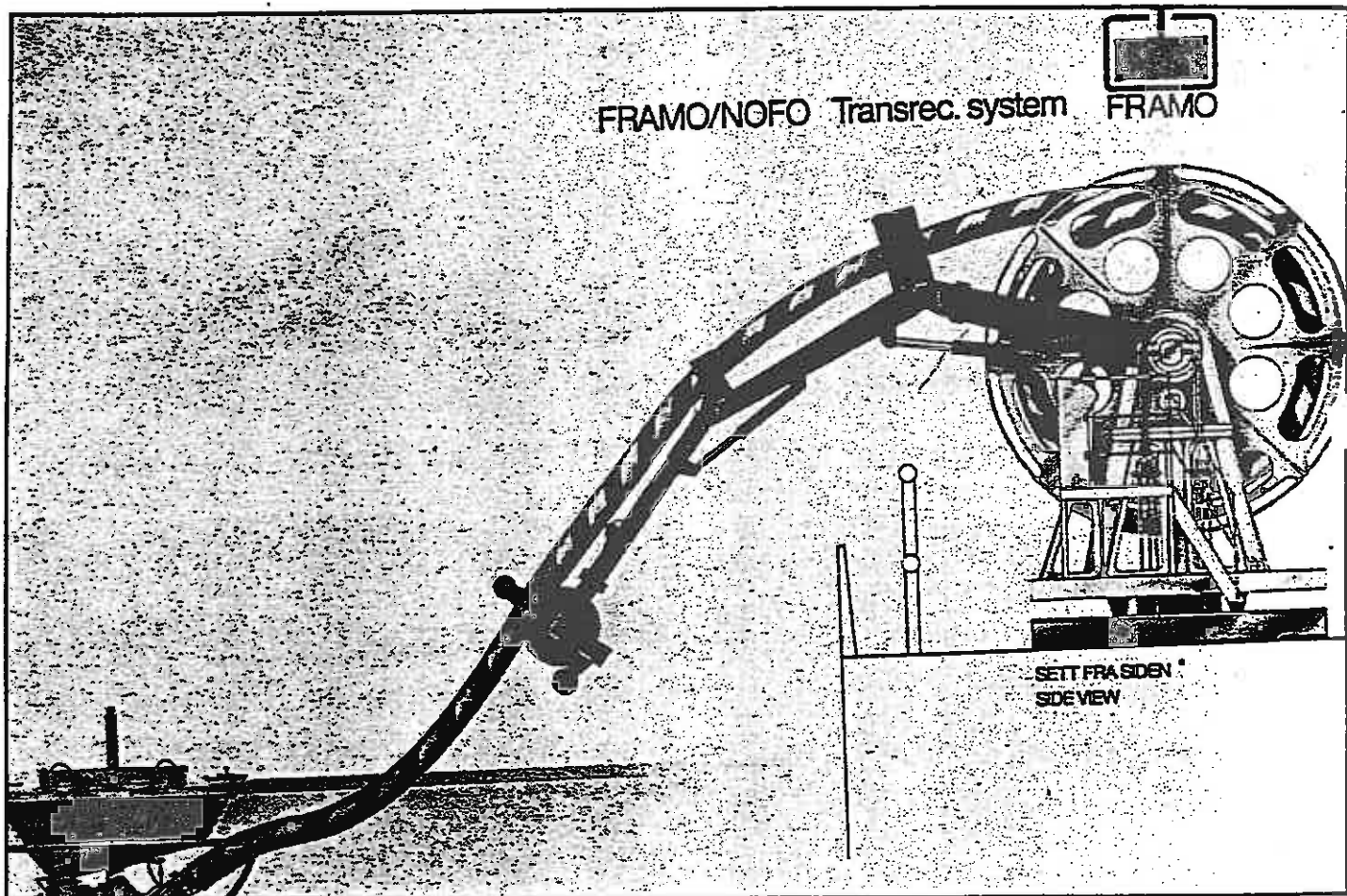
### **Personnel requirements:**

1-3 people, depending on configuration and operating requirements (USCG OSRO planning factor)

**Description** - The Seawoolf is a low capacity skimmer that is used primarily to recover debris laden oil. It is capable of skimming very heavy oil, including oil that is emulsified or "weathered." The unit draws surface floating oil, tar, and contaminated debris into a clamshell type bucket through two double vertical disk banks. A Desmi DOP-250 Pump with a weir lip inside the bucket provide normal skimming capability. When the debris inside the bucket builds up, the unit is hoisted from the water and the clamshell dumps the debris into an open barge alongside the vessel or operating platform.

**Handling/Operation** - The Seawoolf is a relatively large, heavy skimmer that will require an on board crane capable of hoisting the skimmer full of oil laden debris, and spotting the unit over a collection barge alongside to dump the clamshell. The skimmer is usually used late in the spill clean up when viscous, emulsified, and debris laden oil cannot be recovered with conventional skimming systems.

# TRANSREC 350



## **TRANSREC 350**

### **System configuration:**

- 1 Transrec 350 skimmer  
Spares
- 1 Disk Skimmer Cassette  
110 Volt AC
- 1 Extension Cord
- 1 Control Panel
- 1 50' x 6" Layflat discharge hose
- 1 Skimmer Head with weir skimmer cassette
- 1 Armadello skimmer cassette
- 1 Remote Control

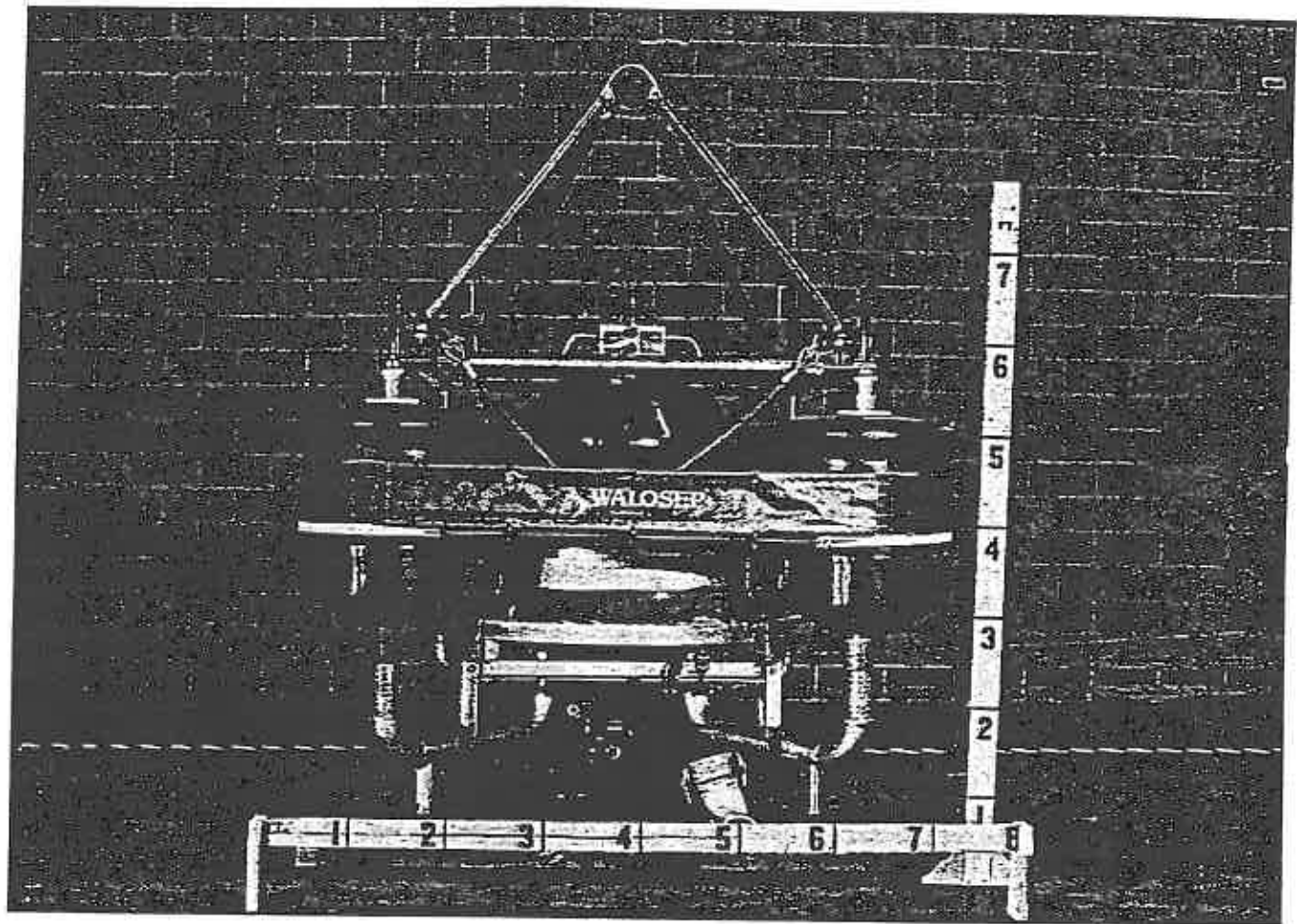
### **Personnel requirements:**

1-3 people, depending on configuration and operating requirements (USCG OSRO planning factor)

**Description** - The Transrec 350 is a high capacity skimming system designed to handle most oils and recovery conditions. MSRC's Oil Spill Response Vessels (OSRV's) were designed with the Transrec 350 positioned aft on the starboard quarter for maximum skimming efficiency when used in conjunction with the FIOCS 800 Norwegian Oil Trawl. The Transrec system consists of a skimming head, a telescoping crane, and a hose reel. The skimming head is connected to the hose reel through a hose trunk that contains both the hydraulic and discharge hoses. Three types of skimmer heads are available to be used with the Transrec 350; a weir lip, a disc, and a belt skimming head.

**Handling/Operation** - Because the skimmer is permanently mounted on board the OSRV's, this skimmer will only be used in areas where the OSRV can operate. The skimmer's hydraulic power is supplied by the OSRV's central hydraulic system. It will require at least two men for skimming operations, one equipment operator and one tankerman to monitor tank levels and operate the oily water separator. Transfer operations may require a third man to be present. During Transrec operations the skimmer will discharge to the OSRV's storage tanks.

WALOSEP W4



## **WALOSEP W-4**

### **System configuration:**

- 1 W-4 Skimmer
- 1 Type I Power Pack
- 4 50' x 6" Layflat discharge hose
- 16 50' x 1" Hydraulic hose
- 11 50' x 3/8" Hydraulic hose
- 1 Tool Kit
- 1 Rigging Kit
- 1 Spare Parts Kit
- 1 Standard Utility Kit
- 1 Type II Control Station
- 4 Wire baskets (2 Large and 2 Small)
- 1 Skimmer cradle

### **Effective Daily Recovery Capacity:**

3,000 bbls/day (USCG OSRO planning factor)

### **Shipping characteristics:**

Standard ISO 20' Flatrack

Air Deliverable

Gross weight: 17,000 lbs

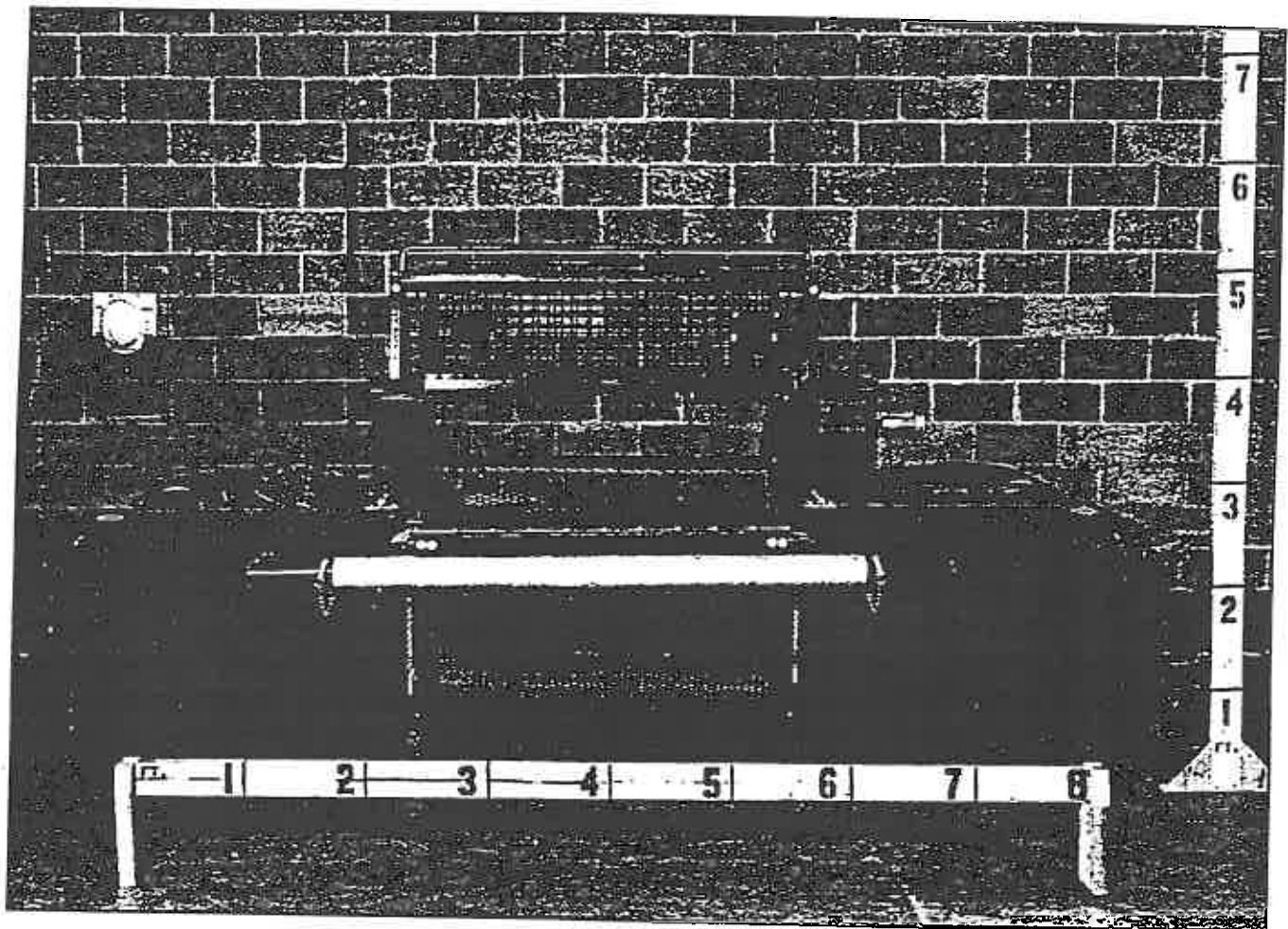
### **Personnel requirements:**

1-3 people, depending on configuration and operating requirements (USCG OSRO planning factor)

**Description** - The Walosep W-4 Skimmer is primarily used for light to medium weight oils. It can operate off shore in 5-7 foot seas and in shallow water over three feet deep. The W-4 skimmer uses a centrifugal vortex principle created by turning rotor blades which draws the oil to the skimmer. The design of the skimmer reduces the amount of water recovered to a minimum even when the skimmer is encountering relatively thin layers of oil.

**Handling/Operation** - The VOSS vessel that this system is deployed on will need to have adequate hoisting capability and the capacity to safely stow all of the system components on board. This skimmer is best suited for medium to light weight oils.

# WP-1 SKIMMER



## **WP-1 SKIMMER**

### **System configuration:**

- 1 WP-1 Skimmer
- 1 Type I Power Pack
- 4 50' x 6" Layflat discharge hose
- 16 50' x 1" Hydraulic hose
- 1 Tool Kit
- 1 Rigging Kit
- 1 Spare Parts Kit
- 1 Standard Utility Kit
- 1 Type IV Control Station
- 4 Wire baskets
- 1 Skimmer cradle

### **Effective Daily Recovery Capacity:**

2,100 bbls/day (USCG OSRO planning factor)

### **Shipping characteristics:**

Standard ISO 20' Flatrack (20'L X8'W x8.5'H)

Air Deliverable

Gross weight: 16,500 lbs

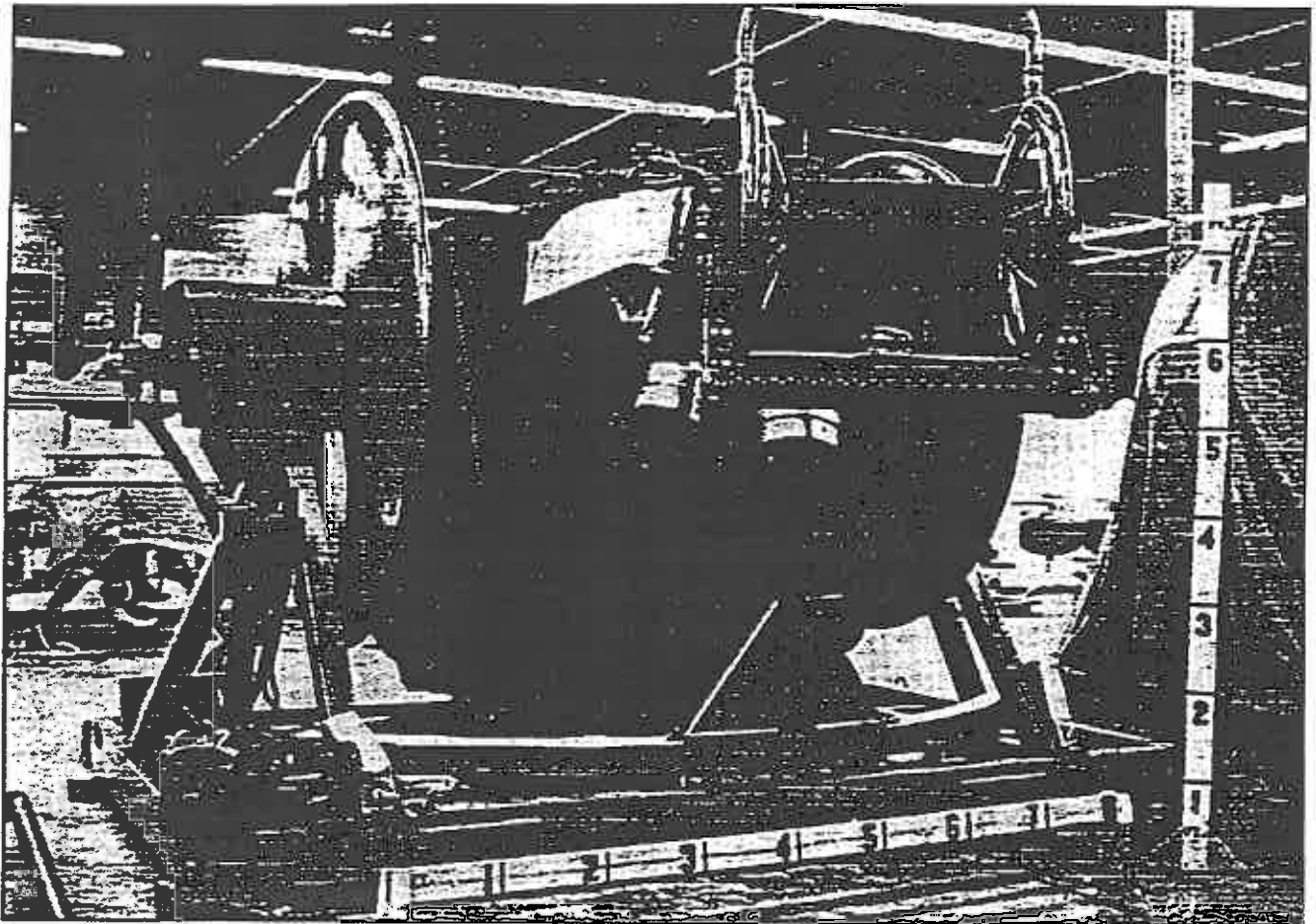
### **Personnel requirements:**

1-3 people, depending on configuration and operating requirements (USCG OSRO planning factor)

**Description** - The WP-1 is a rotating drum skimmer which separates water from oil as it operates. It skims oils of all viscosities and is most effective skimming very heavy oils which many conventional skimmers cannot handle. The skimmer components include the drum separator (skimming unit), the DOP-250 Pump, the pontoons, and a baffle plate.

**Handling/Operation** - The deployment vessel for this system will require adequate deck space area and hoisting capabilities to safely handle this equipment. This skimmer works very effectively with heavy oils and debris. It separates water from oil as it skims, which reduces the need for decanting and decreases the amount of excess water recovered with the oil.

## VIKOMA 3-WEIR



## **VIKOMA 3-WEIR**

### **System configuration:**

|    |                                 |
|----|---------------------------------|
| 1  | Vikoma 3-Weir Boom              |
| 1  | Type I Power Pack               |
| 1  | Type II Power Pack              |
| 1  | Reel                            |
| 4  | 50' x 6" Layflat discharge hose |
| 28 | 50' x 1" Hydraulic hose         |
| 12 | 50' x 3/8" Hydraulic hose       |
| 1  | Air Blower                      |
| 1  | Tool Kit                        |
| 1  | Rigging Kit                     |
| 1  | Spare Parts Kit                 |
| 4  | Wire baskets                    |
| 1  | Standard Utility Kit            |

### **Effective Daily Recovery Capacity:**

5,700 bbls/day (USCG OSRO planning factor)

### **Shipping characteristics:**

Standard ISO 20' Flatrack

Air Deliverable

Gross weight: 18,000 lbs

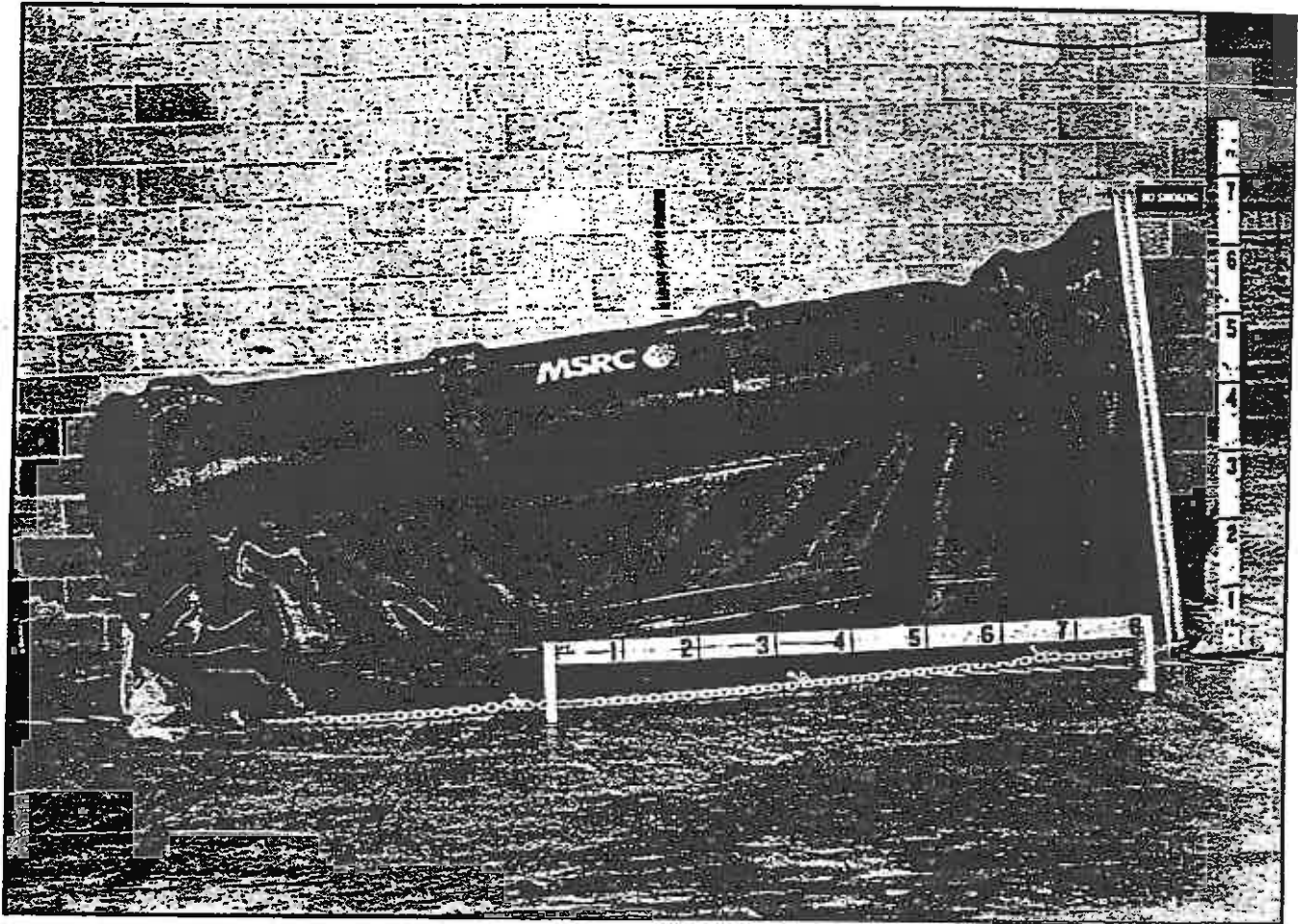
### **Personnel requirements:**

1-3 people, depending on configuration and operating requirements (USCG OSRO planning factor)

**Description** - The Vikoma 3-Weir boom is a transportable skimming system with three weir skimmers located in the boom. The boom is deployed in a "J" formation alongside of the OSRV or VOSS vessel. It concentrates and collects large quantities of oil in the boom's apex, and recovers the oil through the three skimmers installed within the boom at the oil/water interface.

**Handling/Operation** - The VOSS vessel that this system is deployed on will need to have adequate hoisting capability and the capacity to safely stow all of the system components on board.

# SEA SENTRY



## **SEA SENTRY**

### **System configuration:**

- 6 Sections 110' Sea Sentry Boom (660' total per system)
- 1 Type III Power Pack
- 1 Air Blower
- 1 Reel
- 4 50' x 3/8" Hydraulic hose
- 2 50' x 1" Hydraulic hose
- 4 25' x 2" Air hose
- 4 50' x 3/8" Hydraulic hose
- 1 Tool Kit
- 1 Rigging Kit
- 1 Spare Parts Kit and Standard Utility Kit

### **Shipping characteristics:**

Custom pallet

Air Deliverable

Gross weight: 12,900 lbs

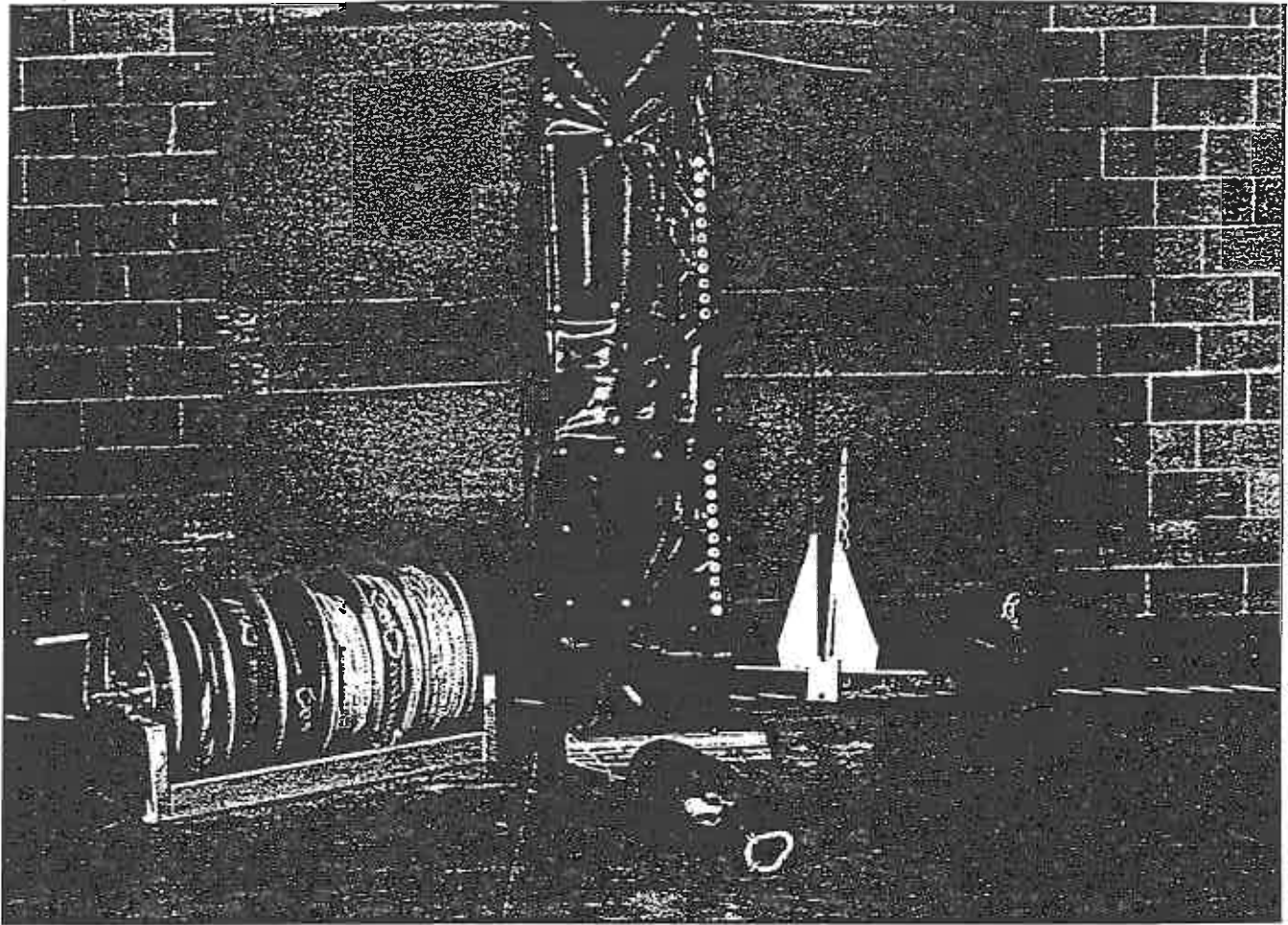
### **Personnel requirements:**

2-5 people, per 1000' of boom (USCG OSRO planning factor)

**Description** - The Sea Sentry II 23/44 is a heavy duty offshore oil containment boom deployed from a reel or pallet to provide offshore spill containment in heavy wind and wave conditions. The freeboard/inflation chamber above the water line has a height of 23 inches, and the draft/skirt below the waterline has a depth of 44 inches. A chain is attached to the bottom of the skirt for ballast and tensile strength.

**Handling/Operation** - Vessel deployment of this offshore boom will require that the working deck of the VOSS vessels meet two criterion: the vessel must have adequate deck space and deck load capacity to safely stow the equipment, and it must also have enough deck space to inflate at least one air chamber before that chamber goes over the side. This boom is likely to be used with two vessels towing the boom in a "J" formation in conjunction with a skimmer in the boom's apex. In this scenario, the VOSS host vessel will require substantial open deck space to stow the boom and skimmer equipment and still have enough deck space to deploy the gear.

## SLICKBAR BOOM



## **SLICKBAR BOOM**

### **System: configuration:**

- 20 100' Sections Slickbar Boom (total of 2,000')
- 2 Tool Kit
- 2 Rigging Kit
- 2 Spare Parts Kit
- 2 Standard Utility Kit

### **Shipping characteristics:**

Standard ISO 20' container

Air Deliverable

Gross weight: 14,000 lbs

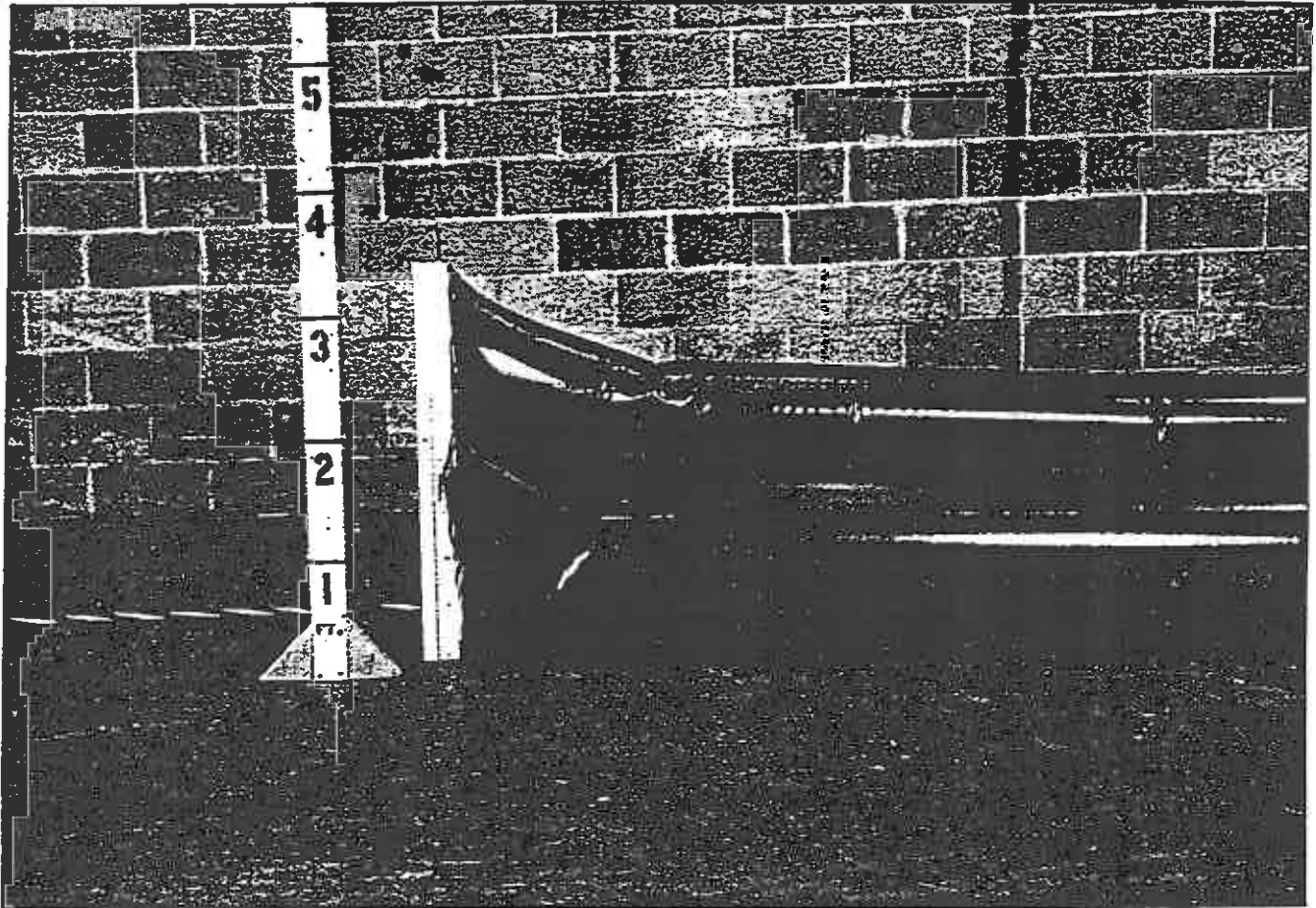
### **Personnel requirements:**

2-5 people, per 1000' of boom (USCG OSRO planning factor)

**Description** - The Mark 7 boom is a rigid floatation type boom which is very durable, stores compactly, and is easily deployed from a container. This boom contains oil by providing a barrier in shoreline areas with moderate seas. The boom has an overall width of 24 inches: a freeboard of 8 inches and a draft of 16 inches.

**Handling/Operation** - This medium weight boom was selected by MSRC for deployment from storage containers by either VOSS vessels or from beach locations. The weight of the boom allows it to be stowed manually with two to three people minimum. The relatively compact size of the containers makes them transportable to the site by truck, boat or air. The strength and flexibility of the Mark 7 gives it the ability to follow wave contours, making it the ideal boom to use in exposed shoreline waters where its high freeboard and deep skirt are particularly effective against severe wave action. It can also be connected to other types of boom, such as the Intertidal boom. This configuration establishes a complete boom system to provide protective coverage around environmentally sensitive areas or marinas.

## INTER-TIDAL BOOM



## **INTER-TIDAL BOOM**

### **System configuration:**

|    |                                           |
|----|-------------------------------------------|
| 40 | 50 ' Sections Texa Boom (total of 2,000') |
| 2  | Combination pump/blowers                  |
| 8  | Jumper hoses                              |
| 4  | 25' x 2" Inflation hoses                  |
| 4  | 25' x 2" Water fill hoses                 |
| 4  | 25' x 2" Suction hoses                    |
| 2  | Tool Kit                                  |
| 2  | Rigging Kit                               |
| 2  | Spare Parts Kit                           |
| 2  | Standard Utility Kit                      |

### **Shipping characteristics:**

Standard ISO 20' Container

Air Deliverable

Gross weight: 12,000 lbs

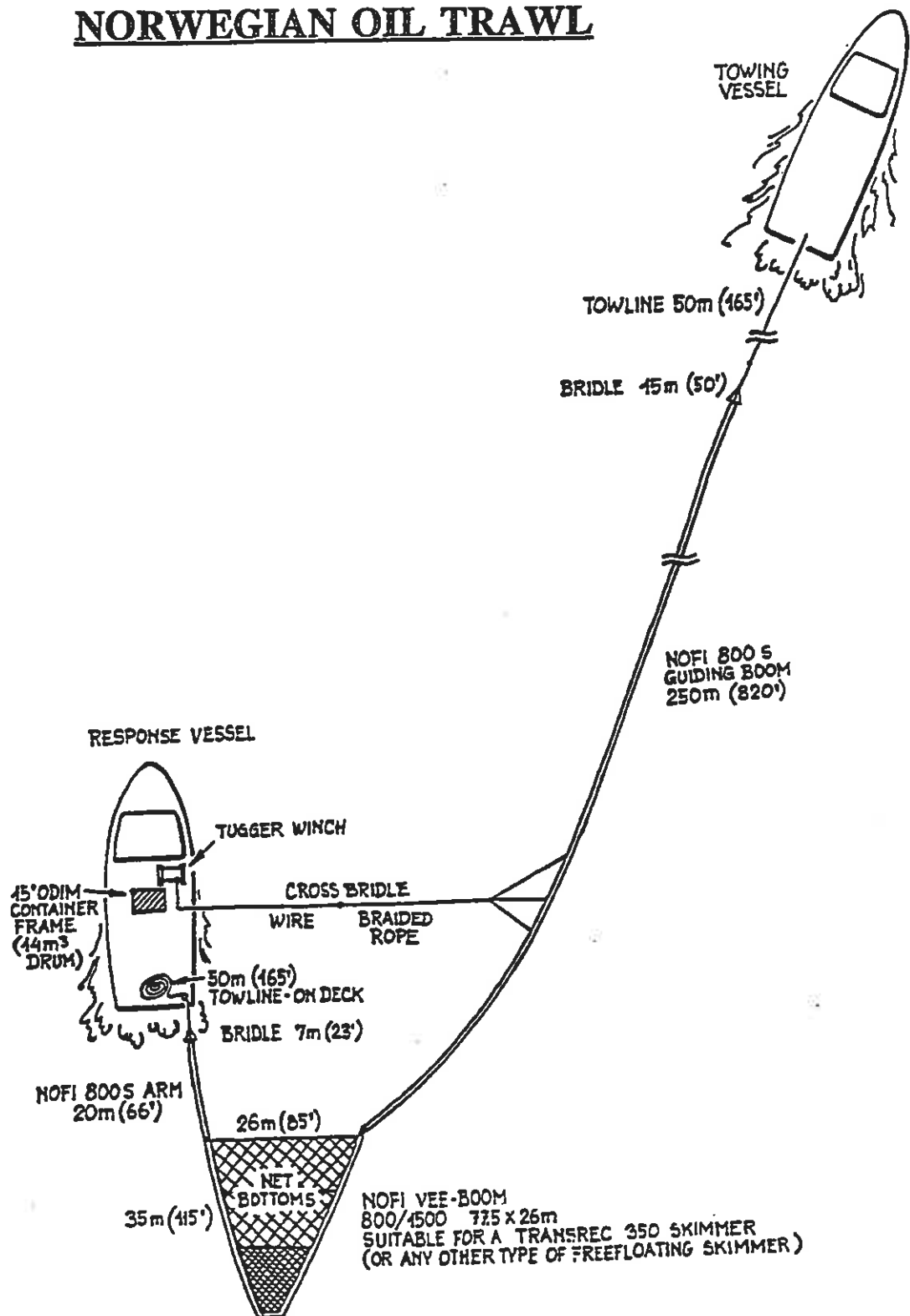
### **Personnel requirements:**

2-5 people, per 1000' of boom (USCG OSRO planning factor)

**Description** - The Inter-tidal STXB-26 Boom is designed to provide spill containment in the most difficult and sensitive areas to protect: shallow tidal waters on sandy shorelines and coastal marsh lands. The inter-tidal boom is comprised of an air filled chamber on the top, coupled with large twin water chambers on the bottom. At high tide the boom floats like a standard containment boom. At low tide, the weight of the water in the bottom chamber forms a seal between the boom and the exposed tidal flat or beach contours. This dike effect prevents the spilled oil from spreading across the inter tidal zone.

**Handling/Operation** - This light weight Inter-tidal boom is designed for repeated emergency operations. This boom must be positioned with the air chamber inflated and the water chambers empty, because once the water chambers are filled, the boom cannot be moved unless it's floating. The Inter-tidal boom is not a rapid deployment type boom and is best deployed at low tide to provide maximum protection. The deployment process is extremely time consuming; adequate preparation time is a must. In a complete shore barrier boom system, the inter-tidal boom might be used in conjunction with the Slickbar Mark 7 boom to cover tidal flats and open water areas.

# NORWEGIAN OIL TRAWL



## **NORWEGIAN OIL TRAWL**

### **System:**

Dimensions: N/A

Weight: 18,000 lbs

Container: Reel mounted on OSRV (8.5'H x 8'W x 15'L)

### **Components:**

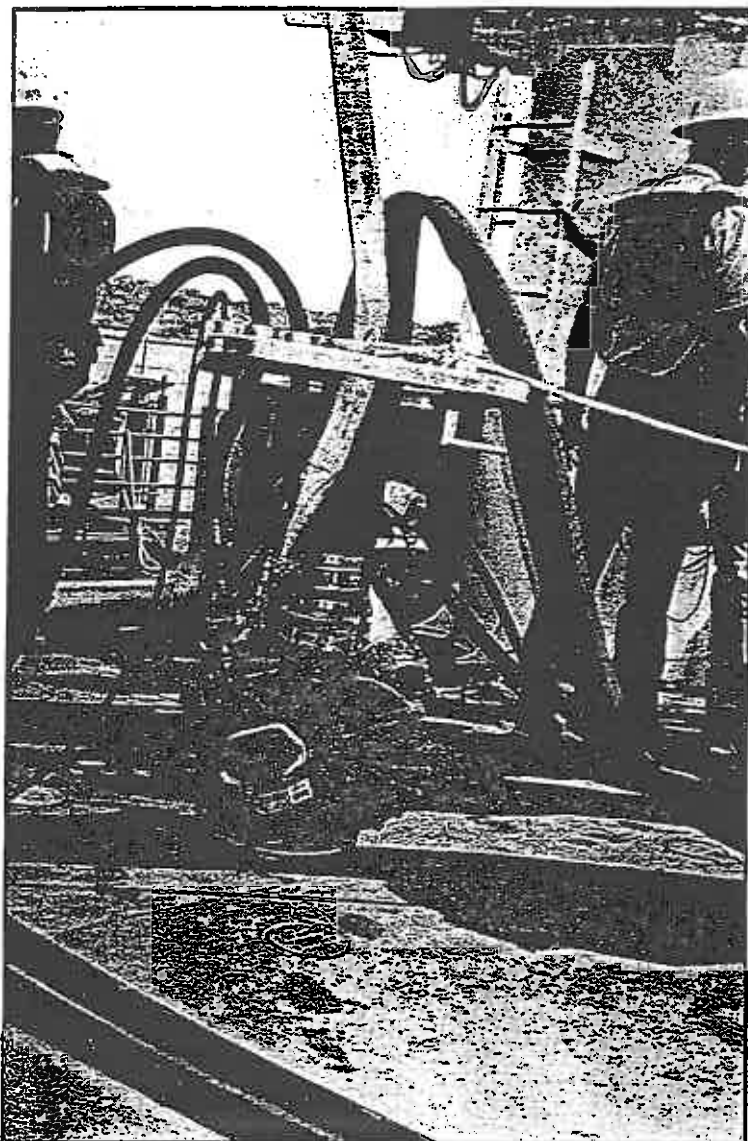
- 1 Norwegian Oil Trawl
- 95 meters of Guiding boom
- 1 Cross Bridle
- 1 15 ft. Container Frame with Reel
- Spares for reel and container

\* Number of Operators Required: 4-6

**Description** - The Fully Integrated Oil Containment System (FIOCS) 800 Norwegian Oil trawl is a boom containment system with bottom netting across a "V" shaped apex. Oil layers can build up to a thickness of 1-2 feet to provide optimal skimming conditions for the Transrec 350 skimmer. This boom system will be used aboard OSRV's.

**Handling/Operation** - The FIOCS 800 Norwegian Oil Trawl on board the OSRV will work in conjunction with the Transrec 350 skimmer. The Oil trawl has three integral components which make up the system: the 110m trawl with bottom nets, the 95m of guide boom with a tow bridle, and the cross bridle outrigger. It will provide MSRC with its maximum recovery production system. This evolution will require the OSRV's support boat to work in coordination with the OSRV for deployment and operation of this boom. Manning requirements for the Norwegian Oil Trawl will include several equipment operators on board the OSRV to handle the boom deployment and two operators aboard the support boat.

## DOP 250 PUMP



## **DOP 250 PUMP**

### **System configuration:**

- 1 DOP 250 Pump
- 1 Type II Power Pack
- 4 50' x 6" Layflat discharge hose
- 6 50' x 1" Hydraulic hose
- 3 50' x 3/8" Hydraulic hose
- 1 Tool Kit
- 1 Rigging Kit
- 1 Spare Parts Kit
- 3 Wire baskets (Large)
- 1 Standard Utility Kit

### **Shipping characteristics:**

Standard ISO 20' Flatrack

Air Deliverable

Gross weight: 1,100 lbs

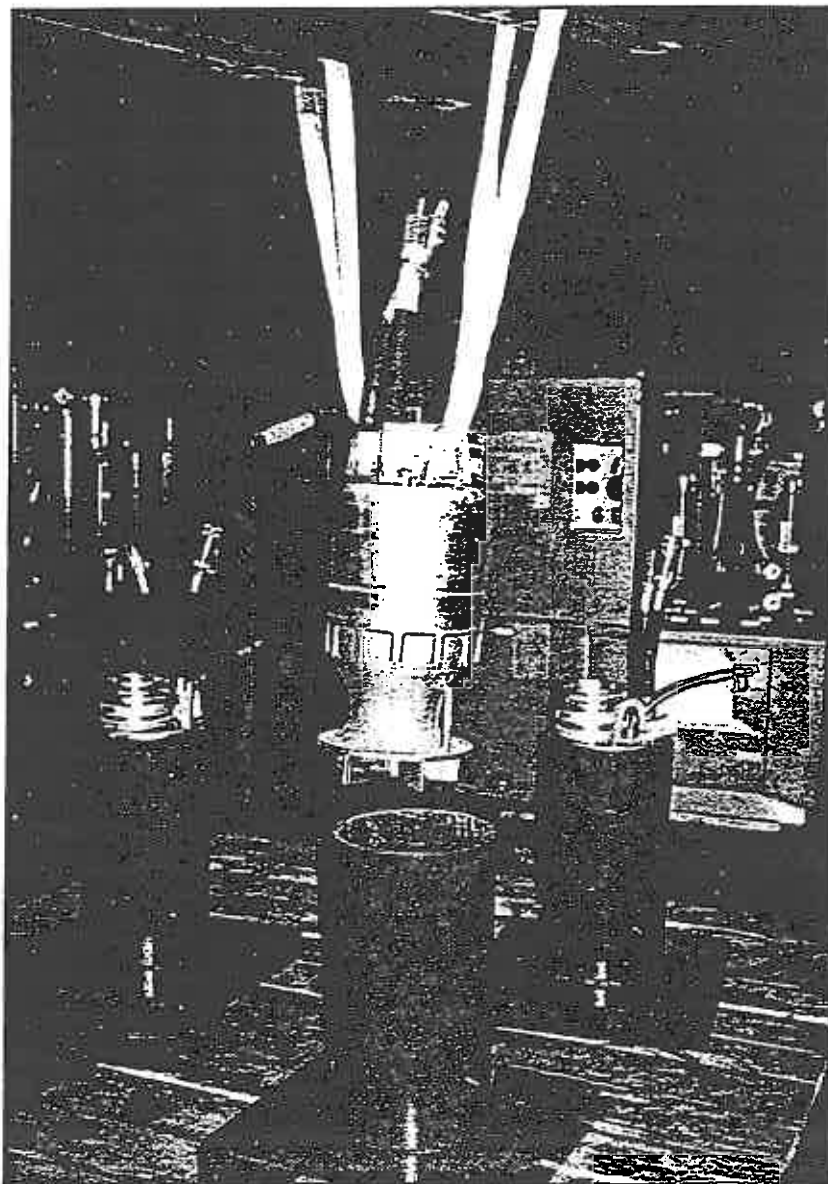
### **Personnel requirements:**

1-3 people, depending on configuration and operating requirements

**Description** - The DOP 250 pump is a general purpose, positive displacement, Archimedes screw pump with a capacity of 400-1200 barrels per hour while pumping oils of viscosities up to 1,000,000 centistokes. The DOP 250 pump will be used in skimming systems and in transfer operations.

**Handling/Operations** - The DOP 250 pump is relatively small and light weight; two men can easily carry and deploy it. This pump is used with several of the skimmers in the MSRC inventory, but it is also a versatile pump on its own. The minimum diameter opening required to lower this pump into a tank is 23 inches. As with all hydraulic powered equipment, it is essential for the operator to know all the operating pressures and limits to prevent damage to the equipment. This pump also has a 3/8" hydraulic case drain line which must be used to prevent damage to the hydraulic seals. The DOP 250 pump is a component part of the following MSRC skimmers; the Desmi Ocean Skimmer, the Walosep W-4, and the WP-1 skimmer.

## EUREKA CCN-150 PUMP



## **EUREKA CCN-150 PUMP**

### **System configuration:**

- 1 Eureka Pump
- 1 Type I Power Pack
- 4 50' x 6" Layflat discharge hose
- 6 50' x 1" Hydraulic hose
- 3 50' x 3/8" hose
- 1 Tool Kit
- 1 Rigging Kit
- 1 Spare Parts Kit
- 1 Standard Utility Kit

### **Shipping characteristics:**

Standard ISO 20' Flatrack

Air Deliverable

Gross weight 1,300 lbs

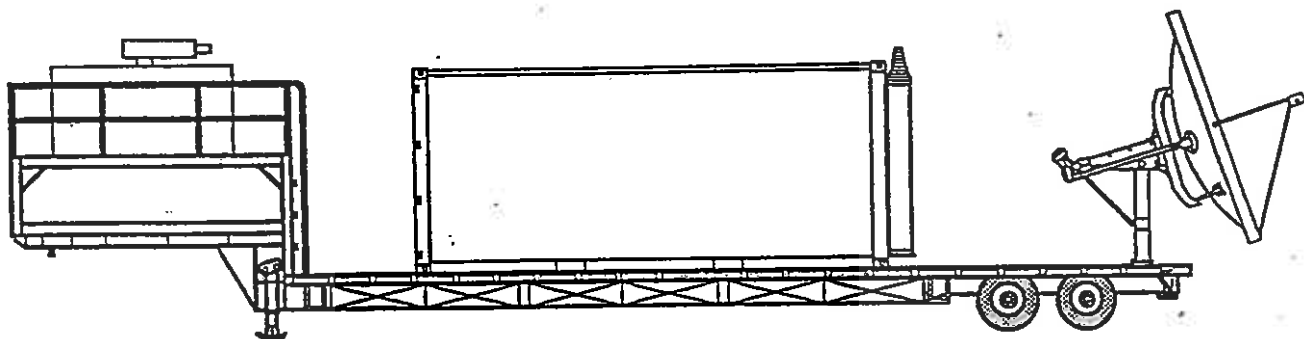
### **Personnel requirements:**

1-3 people, depending on configuration and operating requirements

**Description** - The Eureka CCN-150 is a portable high capacity, centrifugal lightweight pump typically used for emergency off-loading or lightering of cargo tanks. The capacity of the pump ranges from 1,500 to 3,500 barrels per hour depending on the viscosity of the product being pumped. The Eureka is not recommended for the pumping of heavy or weathered oil. The pump is designed to be an extremely compact and narrow unit so that it may pass through the 12.5" Butterworth plates of tankers for transferring cargo.

**Handling/Operation** - Use of this pump will be dictated by conditions present at a given spill incident. Although MSRC at the present time does not plan on providing lightering services, these pumps may be necessary for emergency purposes. The Eureka can also be used in the discharge line to overcome head pressure when pumping up a steep embankment or over a distance in excess of 150 feet. The operator must be thoroughly familiar with the hydraulic operating pressures and limits of this pump to prevent inadvertent damage.

## MOBILE COMMUNICATIONS SUITE



## **MOBILE COMMUNICATIONS SUITE**

### **System:**

Dimension: 8'W x 12'6"H x 48'L  
Weight: 30,000 lbs  
Container: Flatbed Trailer

### **Components:**

|   |                           |   |                           |
|---|---------------------------|---|---------------------------|
| 1 | Telephone System          | 1 | UHF Business Band Radio   |
| 1 | Telephone/Radio Interface | 2 | UHF Repeaters             |
| 1 | HF SSB Marine Radio       | 1 | Ku Band Satellite System  |
| 2 | VHF Marine Radios         | 1 | MSRC Data Support Package |
| 1 | VHF Aviation Radio        | 1 | 48' Trailer               |
| 2 | VHF Business Band Radios  | 1 | 30KVA Generator           |
| 2 | VHF Repeaters             | 1 | 20' ISO Container         |

\* Number of Operators Required: 4-6 depending on operations

**Description:** The Mobile Comm Suite is a fully self supporting communication system that can be towed to a location and setup for full operation within 4-6 hours of arrival. The system is designed to provide emergency communications support until local resources can be obtained to provide telephone, data and radio support for extended spills.

**Handling/Operation:** The Mobile Communications Suite must be positioned in such a way that:

1. There is nothing overhead to interfere with the erection of the 52' pneumatic antenna.
2. There is a clear and unobstructed view toward a satellite positioned at 97 degrees west and directly over the equator.
3. Easy access is available to run cables and wire from the MCS to the area where the telephone and data support is required.
4. The running of the onboard generator will not disturb personnel.

There is enough diesel fuel in the daytank to run the generator for three days before refueling. Spares are carried for all the communications equipment in the comm suite. The generator is the single point of failure that could stop the system from being operational. Arrangements for commercial power or a standby generator need to be made as soon as possible after deployment.

# **COMMUNICATIONS FLY-AWAY KIT**

## **System:**

Dimension: 15"W x 26"L x 18"H  
Weight: 60 lbs  
Container: Anvil Case

## **Components:**

- 1 Anvil Case with wheels
- 1 Three watt cellular telephone
- 1 Portable facsimile machine that can be operated over cellular
- 1 MacIntosh Powerbook 520 computer
- 1 HP DeskJet 320 Portable Printer

\* Number of Operators Required: 1

**Description:** The staging site kit is a system that can be used to support remote staging sites and other areas away from the main communication facility. It is small enough that it can be carried in the trunk of a car or as airline baggage allowing the first person that deploys to an area to take this kit with them to provide initial communications if commercial services are not available. The system contains a cellular telephone that can be used for normal voice communication or can be connected to either the facsimile machine for fax communication or to the Powerbook computer for dial-in data access to regional facilities.

**Handling/Operation:** The system is easy to setup and can be operated by anyone with an hour of training. The cellular phone can be operated by battery, by plugging in to an automobile cigarette lighter or by utilizing 120VAC. The area of operation must be within range of a cellular carrier. When the cellular telephone is turned on it will give an indication of whether the phone is or is not in a cellular coverage area.