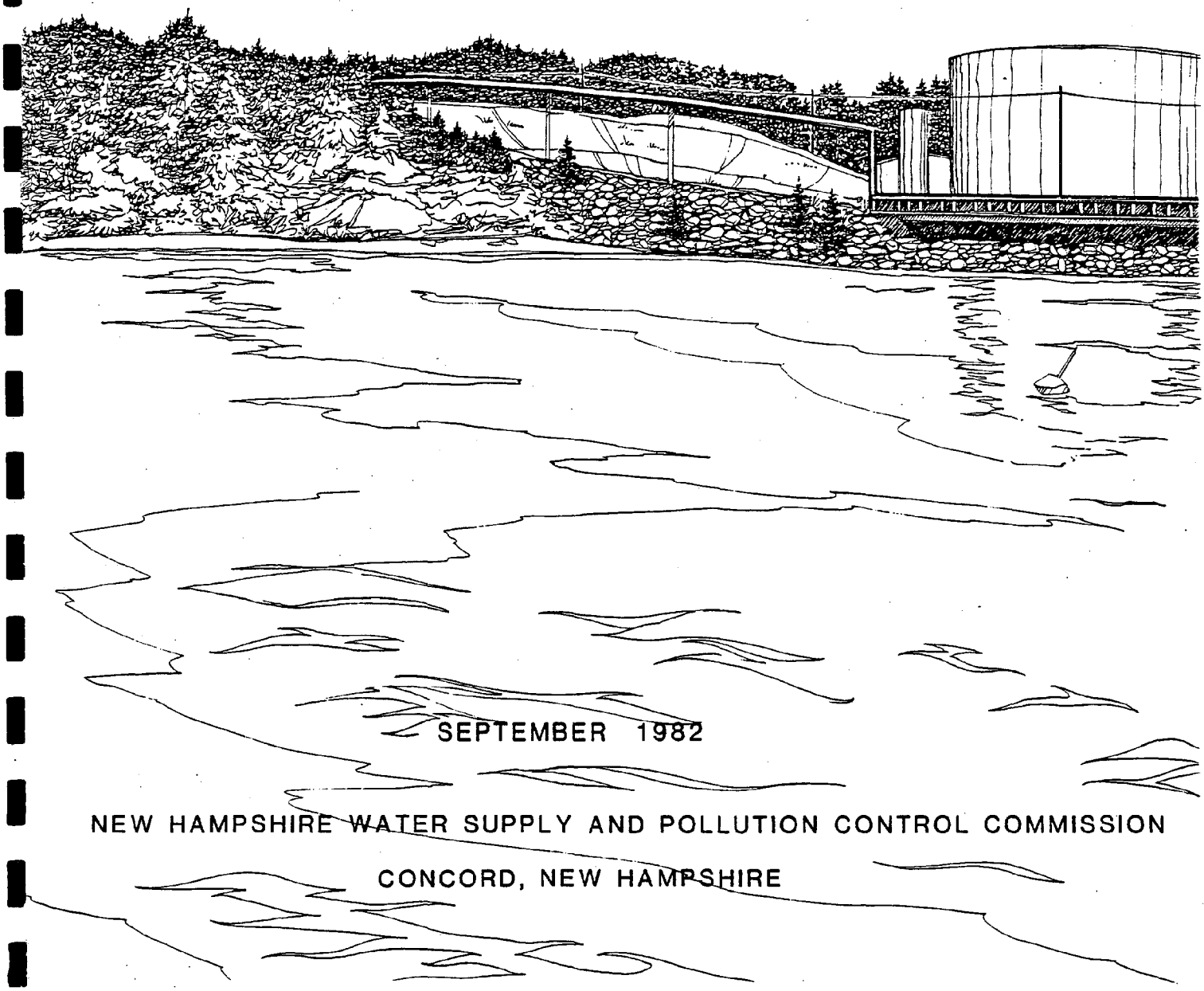
Attachment 2

REVIEW AND ANALYSIS OF NORTH ATLANTIC OCS OIL SPILL CONTINGENCY PLANS

COASTAL ZONE

INFORMATION CENTER



SEPTEMBER 1982

NEW HAMPSHIRE WATER SUPPLY AND POLLUTION CONTROL COMMISSION

CONCORD, NEW HAMPSHIRE

REVIEW AND ANALYSIS OF NORTH ATLANTIC OCS OIL SPILL CONTINGENCY PLANS

NEW HAMPSHIRE

WATER SUPPLY AND POLLUTION CONTROL COMMISSION

CONCORD, NEW HAMPSHIRE

SEPTEMBER 1982

This project was partially funded by a grant under the Coastal Energy Impact Program, Coastal Zone Management Act of 1972, as amended, administered by the Office of Coastal Zone Management, National Oceanic and Atmospheric Administration.

The State of New Hampshire

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Concord, N.H. 03301

September 30, 1982

Mr. Mark J. Chittum
Principal Planner
Office of State Planning
2 1/2 Beacon Street
Concord, New Hampshire 03301

Dear Mr. Chittum:

Transmitted herewith, in accordance with the Memorandum of Agreement dated August 26, 1981 between the Office of State Planning and the Water Supply and Pollution Control Commission, is a report in connection with the review and analysis of the oil spill contingency plans for the North Atlantic Outer Continental Shelf exploratory drilling operations. The principal contributor to the report was staff member Thomas R. Beaulieu.

The report includes discussion in the following areas:

1. A summary of the regulatory requirements to be adhered to by the oil industry as set forth in the U.S. Geological Survey Notice to Lessee No. 80-1, U.S. Geological Survey OCS Operating Order No. 7, the MOU between the Coast Guard and Geological Survey, the National and Regional Oil and Hazardous Substance Contingency Plans and other relevant requirements, and;

2. A review and analysis of the overall contingency plan developed by Clean Atlantic Associates as well as the individual plans prepared by the various oil companies involved in the exploratory drilling.

In general, the plans conform to the applicable Federal regulatory requirements.

Sincerely,

Russell A. Nylander

Russell A. Nylander, P.E.
Assistant Chief Engineer
Administrator

RAN/mjc

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REVIEW AND ANALYSIS OF NORTH ATLANTIC OCS OIL SPILL CONTINGENCY PLANS

A. Introduction.

A detailed review of the oil spill contingency plans for the North Atlantic Outer Continental Shelf (OCS) activities has been conducted. This review includes the overall contingency plan developed by Clean Atlantic Associates and the individual plans prepared by the oil companies. Taken into consideration are the regulatory requirements as set forth in the 1) U.S. Geological Survey Notice to Lessee No. 80-1, 2) U.S. Geological Survey OCS Operation Order No. 7, 3) The MOU between the Coast Guard and Geological Survey, 4) the National and Regional Oil and Hazardous Substances Contingency Plans and other relevant requirements. The review also considers how the respective oil company plans meet these requirements as well as a discussion of particular areas of concern.

B. Summary of Regulatory Requirements.

Herein is a general review of the major requirements that must be adhered to as set forth by regulatory requirements listed above.

1. The U.S. Geological Survey Notice to Lessee No. 80-1 requires an oil spill contingency plan to be submitted for approval and to be reviewed annually by the oil company proposing exploratory drilling on the OCS. A copy of this Notice is included as Appendix A.

   The plan shall contain:

   - resource capability for spill situations.

- response efforts for varying quantities of spilled oil.
- recognition of biologically sensitive areas.
- response personnel and telephone numbers for emergency situations.
- a specified trained oil spill response team with coordinator and a designated operations center.
- provisions for disposal of oily wastes.
- a schedule for drills which must be practiced at least once every 12 months.
- a program for training response personnel to be conducted periodically.

2. The U.S. Geological Survey OCS Operating Order No. 7 requires the lessee to recognize its responsibility to prevent pollution of the ocean during exploratory development, production, and transportation of oil and gas. A copy of this Order is included as Appendix B. Furthermore, the lessee shall not create conditions which will adversely affect the public health, life, property, aquatic life, wildlife, recreation, navagation, commerical fishing or other uses of the ocean by disposal of waste material. The company must indicate how it plans to deal with liquid and solid waste material disposal to minimize adverse environmental impact.

3. The Memorandum of Understanding between the U.S. Coast Guard of the Department of Transportation and the U.S. Geological Survey of the Department of the Interior for regulation of United States mobile offshore drilling units on the Outer Continental Shelf of the United States (Appendix C) is for the purpose of coordinating and implementing consistent and comprehensive requirements.

Basically, the lessee must provide maximum safety with respect to design, construction and operation of the mobile offshore drilling units. The lessee must minimize the possible adverse environmental impact on the ocean. The agreement between the Coast Guard and Geological Survey will minimize duplication and avoid possible inconsistency in safety standards applicable to the drilling units.

4. The purpose of the National, Regional and State Contingency Plan requirements is to coordinate a timely and effective response by those agencies and other organizations involved to the discharge of oil and release of hazardous substance, pollutants and contamination in order to protect public health, welfare and the environment. The company must indicate how it plans to notify the respective agencies upon knowledge of a spill and take action to remove to the greatest extent possible such discharges.

C. Review of Oil Spill Contingency Plans.

A review of the following plans was completed:*

1. Clean Atlantic Associates (CAA)
2. Atlantic Richfield
3. Exxon Company, Inc.
4. Getty Oil Company
5. Gulf Oil Exploration and Production Company
6. Mobil Oil Corporation
7. Murphy Oil Corporation
8. Shell Oil Company
9. Superior Oil Company
10. Tenneco Oil Company

11. Union Oil Company

*It is our understanding that Cheveron USA, Inc. is proposing to drill on the Outer Continental Shelf, however, a plan was not available at time of review.

Clean Atlantic Associates is comprised of the various oil companies involved in exploratory drilling on the Outer Continental Shelf of the Atlantic Ocean. Member oil companies have submitted oil spill contingency plans to supplement the comprehensive Clean Atlantic Associates Oil Contingency Manual. The CAA Manual is intended to assist members when responding to a spillage of oil. It includes information on reporting procedures, duties and assigned responsibilities, non-complicated communication patterns and reference lists of materials available to members.

However, each company must plan for its own response to a spill.

In general, the CAA Manual provides information on:

- Federal and State agencies that require notification.
- Qualified cleanup contractors.
- Contingency planning including spill evaluation methods, sensitive areas, protection practices, cleanup procedures, and disposal techniques.
- Response scenarios.
- Equipment available to CAA members and how to access it.
- Outside resources to the members.

CAA equipment is presently stockpiled at Davisville, Rhode Island for the North Atlantic and Middle Atlantic operations.

Haliburton Services operates the stockpile and can be contacted by phoning:

(401) 884-3501 (IMCO 24 hrs.)

(401) 885-2761 (Haliburton)

(401) 278-0447 (Pager)

A list of Clean Atlantic Associates' equipment is included as Appendix D of this report. The equipment is the latest state-of-the-art for dealing with oil spills of large magnitude on open seas. However, it is questionable as to whether state-of-the-art is adequate for containment and mechanical removal under the environmental conditions encountered on Georges Bank.

As previously indicated, a review of each oil company's plan for response to a spill has been completed. Some plans are lacking information that must be included for oil spill emergencies. Deficiencies are listed below.

1. The Tenneco Oil Company manual neglects to indicate drill schedules.
2. Getty Oil and Murphy Oil do not make provisions for identifying protective areas of special biological sensitivity.
3. Getty Oil, Shell Oil and Superior Oil do not list arrangements for disposal of spilled material.
4. Murphy Oil Corporation should give the telephone numbers for the Atlantic Coast Project Supervisor and indicate how the Manager of Operations is contacted during a spill.

5. Exxon Company, Gulf Oil, Mobil Oil, and Union Oil should have telephone numbers for the access of cleanup equipment from CAA available in their manual for emergencies.

In general, most plans have been submitted in conjunction with the CAA Manual and meet or exceed the requirements set forth by the applicable regulations. Oil spills can generate complex technical, legal and public relations problems for companies involved. Prior planning, drills, storage of spill equipment on platforms and good record keeping will help avoid or minimize the difficulties which can be encountered.

United States Geological Survey Notice to Lessee No. 80-1

An Oil Spill Contingency Plan shall be submitted in accordance with OCS Order No. 7 for approval by the Supervisor. Oil Spill Contingency Plans shall be reviewed annually. All modifications of the Oil Spill Contingency Plan and the results from the review of the plan shall be submitted to the Supervisor for approval. The Oil Spill Contingency Plan shall contain the following:

1. Provisions to assure that full resource capability is known and can be committed during an oil spill, including the identification and inventory of applicable equipment, materials, and supplies which are available locally and regionally, both committed and uncommitted, and the time required for deployment of the equipment.

2. Provisions for varying degrees of response effort depending on the severity of the oil spill.

3. Provisions for identifying and protecting areas of special biological sensitivity.

4. Establishment of procedures for the purpose of early detection and timely notification of an oil spill including a current list of names, telephone numbers, and addresses of the responsible persons and alternates on call to receive notification of an oil spill, and the names, telephone numbers, and addresses of regulatory organizations and agencies to be notified when an oil spill is discovered.

5. Provisions for well-defined and specific actions to be taken after discovery and notification of an oil spill, including:

    a. specification of an oil spill response operating team, consisting of trained, prepared, and available operating personnel.

    b. predesignation of an oil spill response coordinator who is charged with the responsibility and is delegated commensurate authority for directing and coordinating response operations.

    c. a preplanned location for an oil spill response operations center and a reliable communications system for directing the coordinated overall response operations.

    d. provisions for disposal of recovered spill materials.

Drills for familiarization with pollution control equipment and operational procedures shall be the lessee's responsibility and shall be held at least once every 12 months by the lessee or a contractor serving the lessee. The personnel identified as the oil spill response operating team in the Contingency Plan shall participate in these drills. The drills shall be realistic and shall include deployment of equipment. A time schedule with a list of equipment to be deployed shall be submitted

to the Supervisor for approval. The drill schedule shall provide sufficient advance notice to allow U.S. Geological Survey personnel to witness any of the drills. Drills shall be recorded, and the records shall be made available to U.S. Geological Survey personnel. Where drill performance and results are deemed inadequate, the Supervisor may require an increase in the frequency or a change in the location of the drills until satisfactory results are achieved.

The lessee shall ensure that training classes for familiarization with pollution-control equipment and operational procedures are provided for the oil spill response operating team. The supervisory personnel responsible for directing the oil spill response operations shall receive oil spill instruction suitable for all seasons. The lessee shall retain course completion certificates or attendance records issued by the organization where the instruction was provided. These records shall be available to any authorized representative of the U.S. Geological Survey upon request.

Immediate corrective action shall be taken in all cases where pollution has occurred. Corrective action taken under the lessee's Oil Spill Contingency Plan shall be subject to modification when directed by the Supervisor. The primary jurisdiction to require corrective action to abate the source of pollution shall remain with the Supervisor, pursuant to the provisions of Order No. 7 and the Memorandum of Understanding (MOU) between the Department of Transportation (U.S. Coast Guard) and the Department of the Interior (U.S. Geological Survey), dated August 16, 1971. The use of chemical agents or other additives shall be permitted only after approval by the Supervisor in accordance with Annex X, National Oil and Hazardous Substances Pollution Contingency Plan, and in accordance with the previously mentioned MOU.

AUGUST 13, 1980 ADDENDA

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
CONSERVATION DIVISION

ATLANTIC OCS REGION

OCS ORDER NO. 7

POLLUTION PREVENTION AND CONTROL

Addenda to the loose-leaf version of the January 1980 Edition of the OCS Orders are issued in the form of replacement pages. Revisions, additions, or deletions are incorporated directly into the affected pages. It is advisable, however, that these title sheets and all replaced pages be retained for reference. The revised portions are indicated by vertical lines and date annotations in the margins of the replacement pages.

Summary of Revisions

Revision	Date	Change	Effective
A	August 13, 1980	Jurisdictional Title Subparagraph 1.2.3 Subparagraph 2.2.2 Subparagraph 3.1 Subparagraph 3.2	September 15, 1980

Approved: August 13, 1980
[45 FR 55126, Aug. 18, 1980]

Robert E. Goff
Deputy Conservation Manager,
Offshore Field Operations

for Richard B Krahl
Robert L. Rioux
Deputy Chief, Conservation Division--
Offshore Minerals Regulation

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
CONSERVATION DIVISION

ATLANTIC OCS REGION

I Effective 09/15/80

OCS ORDER NO. 7

EFFECTIVE JANUARY 1, 1980

POLLUTION PREVENTION AND CONTROL

This Order is issued pursuant to the authority prescribed in 30 CFR 250.10, 250.11, and in accordance with 30 CFR 250.43. The lessee shall comply with the following requirements:

1. Pollution Prevention. During the exploration, development, production, and transportation of oil and gas, the lessee shall prevent pollution of the ocean. Furthermore, by the disposal of waste materials into the ocean, the lessee shall not create conditions which will adversely affect the public health, life, property, aquatic life, wildlife, recreation, navigation, commercial fishing, or other uses of the ocean.

1.1 Liquid Disposal.

1.1.1 Drilling-Mud Components. The lessee shall submit, as a part of the Application for Permit to Drill (Form 9-331 C), a detailed list of drilling-mud components including the common chemical or chemical trade name of each component, a list of the drilling-mud additives anticipated for use in meeting special drilling requirements, and the proposed method of drilling-mud disposal. The disposal of drilling mud is subject to the Environmental Protection Agency's permitting procedures, pursuant to the Federal Water Pollution Control Act, as amended. Approval of the method of drilling-mud disposal into the ocean shall be obtained from the District Supervisor; each request will be decided on a case-by-case basis.

1.1.2 Hydrocarbon-Handling Equipment. All hydrocarbon-handling equipment for testing and production such as separators, tanks, and treaters shall be designed and operated to prevent pollution. Maintenance or repairs which are necessary to prevent pollution of the ocean shall be undertaken immediately.

1.1.3 Curbs, Gutters, and Drains for Fixed Platforms or Structures and Mobile Drilling Units.

a. Fixed Platforms or Structures. After the effective date of this Order, curbs, gutters, drip pans, and drains shall be installed in all deck areas in a manner necessary to collect all contaminants and piped to a properly designed, operated, and maintained sump system which will automatically maintain the oil at a level sufficient to prevent discharge of oil into OCS waters. Sump piles shall not be used as processing devices to treat or skim liquids, but shall be used to collect treated produced water, treated sand, liquids from drip pans and deck drains, and as a final trap for hydrocarbon liquids in the event of equipment upsets. Improperly designed, operated, or maintained sump piles which do not prevent the discharge of oil into OCS waters shall be replaced as required by the District Supervisor.

b. Mobile Drilling Units. After the effective date of this Order, curbs, gutters, and drains which collect contaminants associated with the drilling operation on a mobile drilling unit shall be installed as required by subparagraph 1.1.3a.

Curbs, gutters, and drains which collect contaminants not associated with the drilling operation are subject to regulation by the U.S. Coast Guard.

1.1.4 Discharges from Fixed Platforms or Structures and Mobile Drilling Units. Discharges from fixed platforms or structures and mobile drilling units, including sanitary waste, produced water, drilling mud, and deck drainage, are subject to the Environmental Protection Agency's permitting procedures, pursuant to the Federal Water Pollution Control Act, as amended.

1.2 Solid Material Disposal.

1.2.1 Well Solids. The disposal of drill cuttings, sand, and other well solids containing oil is subject to the Environmental Protection Agency's permitting procedures, pursuant to the Federal Water Pollution Control Act, as amended. Approval of the method of disposal of drill cuttings, sand, and other well solids shall be obtained from the District Supervisor.

1.2.2 Containers. Containers and other similar solid waste materials shall not be disposed of into the ocean.

1.2.3 Equipment. Disposal of equipment into the ocean is prohibited except under emergency conditions. The location and description of equipment disposed of into OCS waters shall be reported to the U.S. Coast Guard in accordance with paragraph 4 of OCS Order No. 1.

Effective 09/15/80

2. Personnel, Inspections, and Reports.

2.1 Personnel. The lessee's personnel shall be instructed in the techniques of equipment maintenance and operation for the prevention of pollution. Contractor personnel providing services offshore shall be informed in writing, prior to executing contracts, of the lessee's obligations to prevent pollution and of the provisions of this Order.

2.2 Pollution Inspections.

2.2.1 Manned Facilities. Manned drilling and production facilities shall be inspected daily to determine if pollution is occurring. Maintenance or repairs which are necessary to prevent pollution of the ocean waters shall be undertaken and performed immediately.

2.2.2 Unattended Facilities. Unattended facilities, including those equipped with remote control and monitoring systems, shall be inspected daily or at intervals prescribed by the District Supervisor to determine if pollution is occurring. Daily inspections may be postponed in the event of adverse weather conditions. Necessary maintenance or repairs shall be made immediately. Effective 09/15/80

2.3 Pollution Reports. All spills of oil and liquid pollutants shall be reported orally to the District Supervisor and shall be confirmed in writing. All reports shall include the cause, location, volume of spill, and action taken. Reports of spills of more than 5.0 cubic meters (31.5 barrels) shall include information on the sea state, meteorological conditions, size, and appearance of slick. All spills of oil and liquid pollutants shall also be reported in accordance with the procedure contained in 33 CFR 153.203.

2.3.1 Spills. Spills shall be reported orally within the following time limits:

a. Within 12 hours, if spills are 1.0 cubic meter (6.3 barrels) or less.

b. Without delay, if spills are more than 1.0 cubic meter (6.3 barrels).

2.3.2 Observed Malfunctions. Lessees shall notify each other of observed pollution resulting from another's operation.

3. Pollution-Control Equipment and Materials and Oil Spill Contingency Plans. The lessee shall submit a description of procedures, personnel, and equipment that will be used in reporting, cleanup, and prevention of the spread of any pollution resulting from an oil spill which might occur during exploration or development activities. The following subparagraphs describe the minimum requirements for pollution-control equipment and procedures.

3.1 Equipment and Materials. Pollution-control equipment and materials shall be maintained by, or shall be available to, each lessee at an offshore location or at a location approved by the Effective 09/15/80 Deputy Conservation Manager (DCM), Offshore Field Operations. The equipment shall include containment booms apparatus, cleanup materials, chemical agents and other items needed for the existing climatic conditions, and shall be available prior to the commencement of drilling and production operations. The equipment and materials shall be inspected monthly and maintained in a state of readiness for use. The results of the inspections shall be recorded and maintained at the site

3.2 Oil Spill Contingency Plans. The lessee shall submit an Effective 09/15/80 Oil Spill Contingency Plan for approval by the Deputy Conservation Manager (DCM), Offshore Field Operations, with or prior to submitting an Exploration Plan or a Development and Production Plan. Existing Oil Spill Contingency Plans which do not conform to the requirements of this subparagraph shall be modified and submitted to the DCM, Offshore Field Operations, for approval by December 15, 1980. Oil Spill Contingency Plans shall be reviewed annually. All modifications of the Oil Spill Contingency Plan and the results from the Effective 09/15/80 review of the plan shall be submitted to the DCM, Offshore Field Operations for approval. The Oil Spill Contingency Plan shall contain the following:

a. Provisions to assure that full resource capability is known and can be committed during an oil spill, including the identification and inventory of applicable equipment, materials, and supplies which are available locally and regionally, both committed and uncommitted, and the time required for deployment of the equipment.

b. Provisions for varying degrees of response effort depending on the severity of the oil spill.

c. Provisions for identifying and protecting areas of special biological sensitivity.

d. Establishment of procedures for the purpose of early detection and timely notification of an oil spill including a current list of names, telephone numbers, and addresses of the responsible persons and alternates on call to receive notification of an oil spill, and the names, telephone numbers, and addresses of regulatory organizations and agencies to be notified when an oil spill is discovered.

e. Provisions for well-defined and specific actions to be taken after discovery and notification of an oil spill, including:

(1) Specification of an oil spill response operating team consisting of trained, prepared, and available operating personnel.

(2) Predesignation of an oil spill response coordinator who is charged with the responsibility and is delegated commensurate authority for directing and coordinating response operations.

MEMORANDUM OF UNDERSTANDING

BETWEEN THE UNITED STATES COAST GUARD OF THE DEPARTMENT OF TRANSPORTATION AND THE UNITED STATES GEOLOGICAL SURVEY OF THE DEPARTMENT OF THE INTERIOR FOR REGULATION OF UNITED STATES MOBILE OFFSHORE DRILLING UNITS ON THE OUTER CONTINENTAL SHELF OF THE UNITED STATES

MEMORANDUM OF UNDERSTANDING

BETWEEN THE UNITED STATES COAST GUARD OF THE DEPARTMENT OF TRANSPORTATION AND THE UNITED STATES GEOLOGICAL SURVEY OF THE DEPARTMENT OF THE INTERIOR FOR REGULATION OF UNITED STATES MOBILE OFFSHORE DRILLING UNITS ON THE OUTER CONTINENTAL SHELF OF THE UNITED STATES

I. PURPOSE

This Memorandum of Understanding is entered into by the United States Coast Guard (USCG), Department of Transportation (DOT), and the United States Geological Survey (USGS), Department of the Interior (DOI), for the purpose of coordinating and implementing consistent and comprehensive requirements to maximize safety with respect to the design, construction, and operation of mobile offshore drilling units having United States nationality on the Outer Continental Shelf (OCS) of the United States, to minimize the possible adverse environmental impact of such units, and to minimize duplication and avoid possible inconsistency in the safety standards applicable to these units. A "mobile offshore drilling unit" or "unit" is defined as a vessel capable of engaging in drilling operations for the exploration for or exploitation of resources beneath the seabed.

II. AGENCY RESPONSIBILITIES

A. General

The Department of the Interior is responsible for initiating the OCS leasing program and coordinating governmental control over this program. The Geological Survey is the Bureau within DOI which regulates all drilling operations conducted on oil and gas leases or under exploration permits issued by DOI. This responsibility includes the review and approval of an Application for a Permit to Drill including exploration and development plans for the leased area. Approvals and permits are granted upon ensuring that the lessee complies with applicable DOI regulations and rules, standards, and

OCS Orders issued by the USGS. In addition, the USGS conducts an inspection of each unit before authorizing drilling operations by that unit on the OCS and periodically reinspects such units during drilling operations.

The USCG approves the design and inspects the construction of each United States unit. Upon completion of a unit and compliance with the USGS regulations, certificates are issued including a Certificate of Inspection, a Loadline Certificate, and appropriate international certificates. The USCG periodically reinspects vessels and renews these certificates.

Pursuant to the provisions of this agreement, each Agency will separately enforce the conditions of the permits, licenses, and certificates which it issues, and pertinent regulations or Orders. Enforcement, as used in this Memorandum, means the investigation of a violation of law or conditions of a certificate or license, the issuance of a notice of violation, or the imposition of sanctions as appropriate. To the extent practicable, each Agency will consult with the other with respect to any enforcement action concerning matters which are of mutual concern.

Each Agency agrees, consistent with its respective statutory obligations, to exercise its responsibilities in a manner that will avoid duplication. To this end, each Agency may use personnel, facilities, advice, and information provided by the other Agency for the purpose of carrying out its respective responsibilities. When access to a unit offshore is required in order to conduct an inspection or investigation, either Agency may furnish transportation to appropriate personnel.

B. Technical Review

The USCG will exercise technical review and approval responsibility relating to the safety and health of personnel, the general safety and integrity of the unit, and the protection of the environment for the following:

1. Structural integrity of the unit.

2. Construction and arrangement including structural fire protection.

3. Stability.

4. Emergency systems including fire protection and lifesaving.

5. Mechanical and electrical standards for machinery installations including propulsion systems and industrial systems.

6. Standards for arc or acetylene welding or cutting operations affecting the structural integrity or installed equipment.

7. Provisions for navigation including lights and other signals.

8. Pollution-prevention measures for sources not associated with the drilling operations, including substances such as domestic and sanitary water, domestic waste, fuel, oil, and hazardous substances.

9. Crane standards.

10. Measures for the transfer, stowage, and handling of explosives and other dangerous articles.

The USGS will exercise technical review and approval responsibility relating to safety of operations, the conservation of natural resources, and the protection of the environment for the following:

1. Drilling equipment, drilling safety systems and other well-control equipment, and operational procedures with regard to the drilling operations to be performed.

2. The effects of oceanographical, meteorological, geological, and geophysical conditions at a particular drilling site.

3. Pollution-prevention measures associated with the drilling operation, e.g., drilling fluid, drill cuttings, and well effluents.

4. Proper control of arc or acetylene welding or cutting operations during the drilling mode.

5. The conduct of drilling operations which are to be performed under an approved Critical Operations and Curtailment Plan.

C. Inspections

Each Agency will conduct inspections to ensure compliance within its areas of responsibility as set forth under Technical Review above. Either Agency may request inspection assistance from the other Agency and establish field working agreements to accommodate the procedure used by each Agency.

D. Casualty Investigations - USCG

The USCG will continue its present function of conducting investigations of marine casualties which involve any of the following:

1. Actual damage to property in excess of $1,500.

2. Material damage affecting the seaworthiness or navigational efficiency of a unit.

3. Stranding or grounding except when the unit is grounded to conduct normal operations.

4. Loss of life.

5. Injury causing any persons to remain incapacitated for a period in excess of 72 hours.

If the casualty under investigation occurred while the unit was engaged in drilling operations and in any manner involved the drilling operations, the USCG will consult with the USGS as to the scope of each Agency's respective investigative responsibilities. During an investigation, upon request by the USCG, the USGS may provide assistance and technical advice in the areas of its expertise.

If a formal investigation or Marine Board of Investigation is convened, the USCG may afford the USGS the rights of a party in interest.

The USCG will provide the USGS Area Oil and Gas Supervisor with copies of USCG reports of investigation for casualties which occurred while the unit was engaged in drilling operations.

E. Casualty Investigations - USGS

The USGS will investigate all casualties occurring during oil and gas drilling operations which involve possible violation of USGS regulations. These include, but are not limited to, casualties involving:

1. Drilling procedures.
2. Down-hole problems.
3. Loss of well control.
4. Failure or malfunction of drilling or well control equipment.
5. Fire or explosion.
6. Pollution originating from the drilling operation.
7. Loss of life.

The USGS will consult with the USCG as to the scope of each Agency's respective investigative responsibilities. During an investigation, upon request of the USGS, the USCG may provide assistance and technical advice in the areas of its expertise. The USGS may afford the USCG the rights of a party in interest to any formal proceedings convened by them.

The USGS will provide the USCG District Commander copies of USGS investigative reports of casualties.

III. DEVELOPMENT OF STANDARDS, REGULATIONS, ORDERS, AND NOTICES

To the maximum extent possible, each Agency shall cooperate with the other in the development of standards, regulations, Orders, and notices concerning mobile offshore drilling units. This includes appearance at public hearings or advisory committees, exchange of expertise, relevant information or data, and cooperation in appropriate research and development activities.

Each Agency shall send copies of all contemplated Notices of Proposed Rulemaking (NPRM's) concerning mobile offshore drilling units to the other for review before publication in the Federal Register. However, publication of NPRM's is not contingent upon the exchange of comments.

In developing and scheduling activities in the rulemaking process, each Agency shall satisfy its own procedural requirements.

Every effort shall be made to promulgate final standards or final rules which are mutually satisfactory with regard to content and jurisdiction.

IV. PROCEDURES

The Director of the USGS and the Commandant of the USCG shall each designate one senior official who shall be responsible for coordinating and implementing the provisions of this Memorandum.

Each Agency shall establish procedures for the development of field agreement to implement this Memorandum.

Each Agency shall interpret its assigned responsibilities in a manner which best achieves the purposes of this Memorandum. In the event a question arises concerning interpretation, the matter shall be brought to the attention of the cognizant USGS Area Oil and Gas Supervisor and USCG District Commander for resolution. If the matter cannot be resolved, it shall promptly be referred to the designated senior Agency officials who shall confer and seek mutual resolution.

A committee composed of representatives of each Agency shall be established to evaluate regulatory policy with regard to mobile offshore drilling units, to review legislative initiatives affecting the scope of this Memorandum, and to coordinate Agency positions regarding legal issues raised in the course of implementing this Memorandum.

V. EFFECT OF OTHER LAWS

Nothing in this Memorandum shall be deemed to restrict, modify, or otherwise limit the application or enforcement of any laws of the United States with respect to matters specified herein, nor the application or enforcement of such laws to matters other than those specified herein, nor shall anything in the Memorandum be construed as modifying the existing authority of either Agency. The Memorandum of Understanding between the Departments of the Interior and Transportation relating to responsibilities under the National Oil and Hazardous Substances Pollution Contingency Plan dated August 16, 1971, will not be affected by this Memorandum.

VI. EFFECTIVE DATE

This Memorandum of Understanding shall take effect upon signature by the parties. It may be amended at any time by mutual written agreement of the Agencies and may be terminated by either Agency upon 30 days notice.

Dated: 11 APR 1977

V. E. McKELVEY
Director, U.S. Geological Survey
Department of the Interior

Dated: 11 APR 1977

O. W. SILER
Commandant, U.S. Coast Guard
Department of Transporation

CLEAN ATLANTIC ASSOCIATES
EQUIPMENT AND MATERIALS

Equipment	Function	Quantity
I. Davisville, Rhode Island (serves North Atlantic OCS Operations)		
Fast Response Unit Model II	Open-sea skimming	2
Offshore Devices, Inc. Skimming Barrier	Containment/skimming	2
Kepner Open Sea Boom	Oil containment	1000 feet
Dracone Flexible Barge	Recovered oil storage	2
Helicopter Spray System	Collectant dispenser	1
Bird Scare Guns	Bird protection	24
II. Davisville, Rhode Island (serves Mid Atlantic OCS Operations)		
Fast Response Unit Model I	Open-sea skimming	2
Fast Response Unit Model II	Open-sea skimming	2
Kepner Open Sea Boom	Oil containment	1000 feet
Kepner Sea Boom	Oil containment	1476 feet
Goodyear Open Sea Boom	Oil containment	1000 feet
Boat Spray System	Oil spill dispersing	3
Helicopter Spray System	Collectant dispenser	2
Bird Scare Guns	Bird protection	24
Radio Communications System	Spill cleanup coordination	1
III. Brunswick, Georgia (serves South Atlantic OCS operations)		
Fast Response Unit Model I	Open-sea skimming	2
Kepner Open Sea Boom	Oil containment	1000 feet
Kepner Sea Boom	Oil containment	1476 feet
Boat Spray System	Oil spill dispersing	3
Helicopter Spray System	Collectant dispenser	1
Radio Communications System	Spill cleanup coordination	1

FAST RESPONSE UNIT

The Fast Response Units (FRU'S) are systems that skim oil off the surface of the water. They are designed for quick reply to offshore oil spills. Deployed off the starboard side of a vessel of convenience, the units are floating booms and weir-type skimmers to extract the oil from the water.

Recovered oil is stored in deck-mounted tankage. Clean Atlantic has two models available. They differ in the size of the skimmer and storage tanks. Model I uses 180 bbl storage tanks; Model II uses 90 bbl tanks.

Components:

Model I — 5 packages

1. Primary skid, 29 x 9 ft, 18,500 lb.
   180 bbl tank Lister SR3 Diesel Engine
   Gorman Rupp 4 in., 500 gpm pump
   Outrigger
   Hydraulic crane

2. Auxiliary skid and tank, 23 x 9 ft, 10,000 lb.
   180 bbl tank
   Tool box

3. Skimmer, triangular 9 x 9 x 10 ft, 2000 lb.

4. Basket, 3600 lb.
   Oil boom sections
   4 in. suction & discharge hoses

5. Fire Extinguisher skid

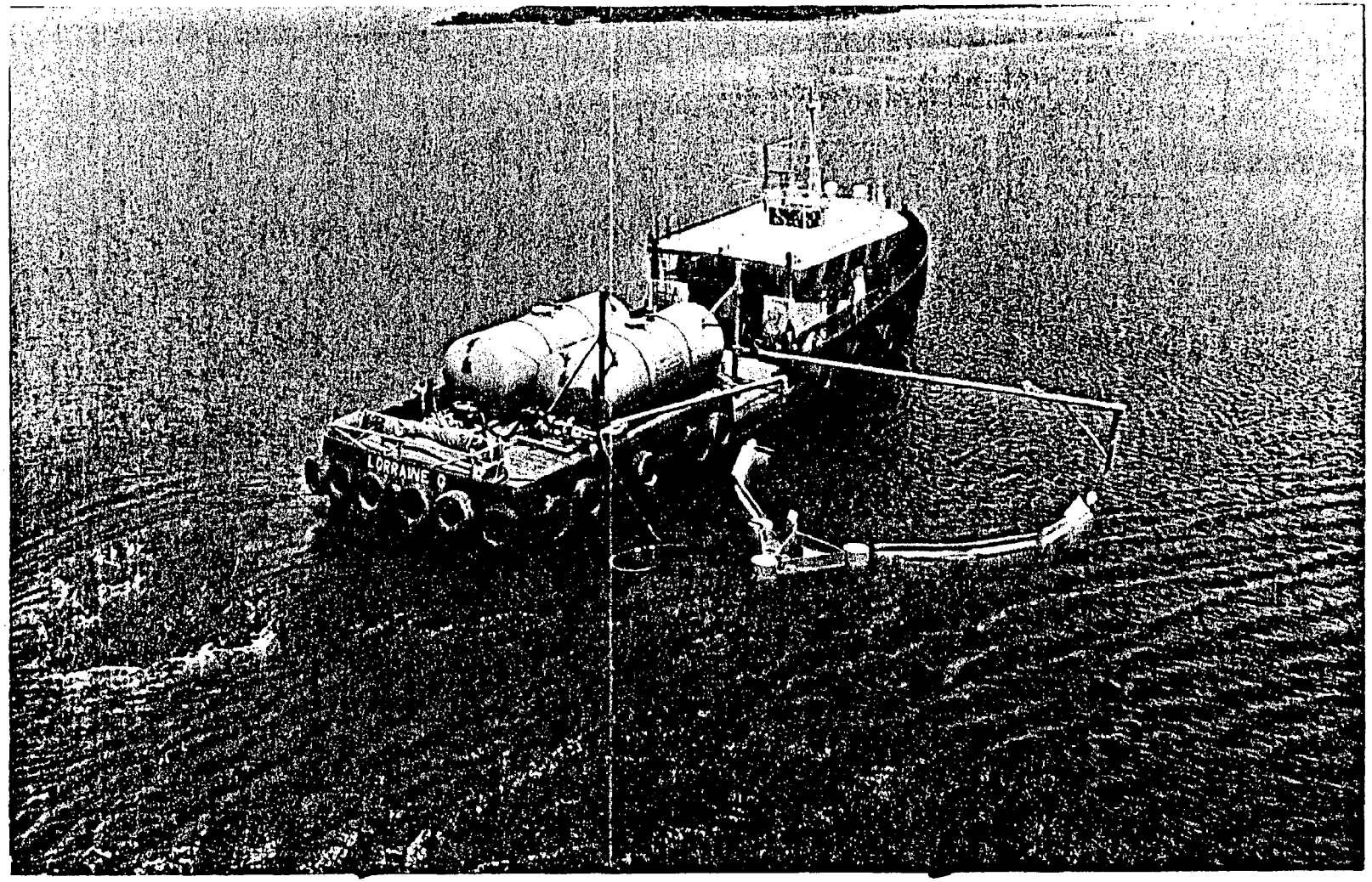
Model II — 4 packages

1. Primary skid, 8 x 21 ft, 18,500 lb.
   90 bbl tank
   Lister ST3 diesel engine
   Gormann Rupp 4 in., 500 gpm pump
   Outrigger
   Hydraulic crane
   Oil boom sections
   4 in. hose lines

2. Auxiliary skid and tank, 8 x 21 ft, 8000 lb.
   90 bbl tank
   Skimmer (triangular 8 x 8 x 8 ft), 1400 lb.

3. Tool box

4. Fire extinguisher skid



FAST RESPONSE UNIT

OIL CONTAINMENT BOOMS

Oil containment booms are like "floating fences" that physically restrict the spreading of an oil slick. The booms are made up of a flotation portion (above the water line), and a skirt (below the water line). Clean Atlantic has two types of booms: "Open sea" and "Bay and Harbor."

Open Sea Boom: In addition to the skirt, open sea booms have a net that extends below the skirt and is attached to a chain (3/4 in. galvanized steel). The chain provides ballast for the boom and the net provides flexibility for wave conformance.

Bay and Harbor Boom: It is smaller in float diameter than the "open sea" type and does not have the net below the skirt. A smaller tension chain is attached to the bottom of the skirt.

Tow Assemblies: Often, after a boom has been deployed onto the water, it must be towed several miles. Tow assemblies improve a boom's towability and stability during towing and reduce the possibility of damage to the boom.

1. Goodyear "Sea Sentry"™ open sea boom

This boom is 1000 ft in length. The flotation chambers are approximately ten ft long and must be inflated by air compressor or blower. Specially designed storage containers are being built and will hold 500 ft of boom.

The net strands are oriented at a 20 degree angle for improved flexibility and wave conformance. However, the bottom tension chain has a tendency to allow the net to extend to about a 12 ft depth when the boom is in a deployed but relaxed mode. Therefore, the use of this boom should be limited to waters at least 15 ft deep.

Specifications:

Float diameter:	24 in.
Skirt length:	36 in.
Mesh net length:	6 ft (Normally extends 3 ft below skirt)
Boom section length:	100 ft
Total boom length:	1000 ft
Weight:	15 lb/ft (approximate)
Tow assemblies:	2
Bottom Tension Member:	3/4 in. galvanized steel chain
Float and skirt cover:	Heavy duty rubberized fabric

2. Kepner "Sea Curtain"™ open sea boom

This boom comes in 200 ft lengths. It is compactible for storage, and does not require inflation for use. Permanent flotation material keeps the boom afloat even if the covering has been torn or punctured. The boom is stored in a specially designed container which holds 400 ft of boom and allows the boom to be quickly and easily deployed from a pier or workboat.

Because the netting below the skirt is rectangular in orientation, the boom tension chain is held within 6 ft of the surface. Thus, this boom can be used in waters as shallow as 8 ft in depth.

Specifications:

Float diameter:	24 in.
Skirt length:	36 in.
Mesh net length:	36 in. (Attaches to bottom of skirt)
Boom section length:	200 ft.
Total boom length:	1000 ft. (Five sections)
Weight:	12 lb/ft (approximate)
Tow assemblies:	2
Bottom tension member:	3/4 in. galvanized steel chain
Float and skirt cover:	Heavy duty urethane material

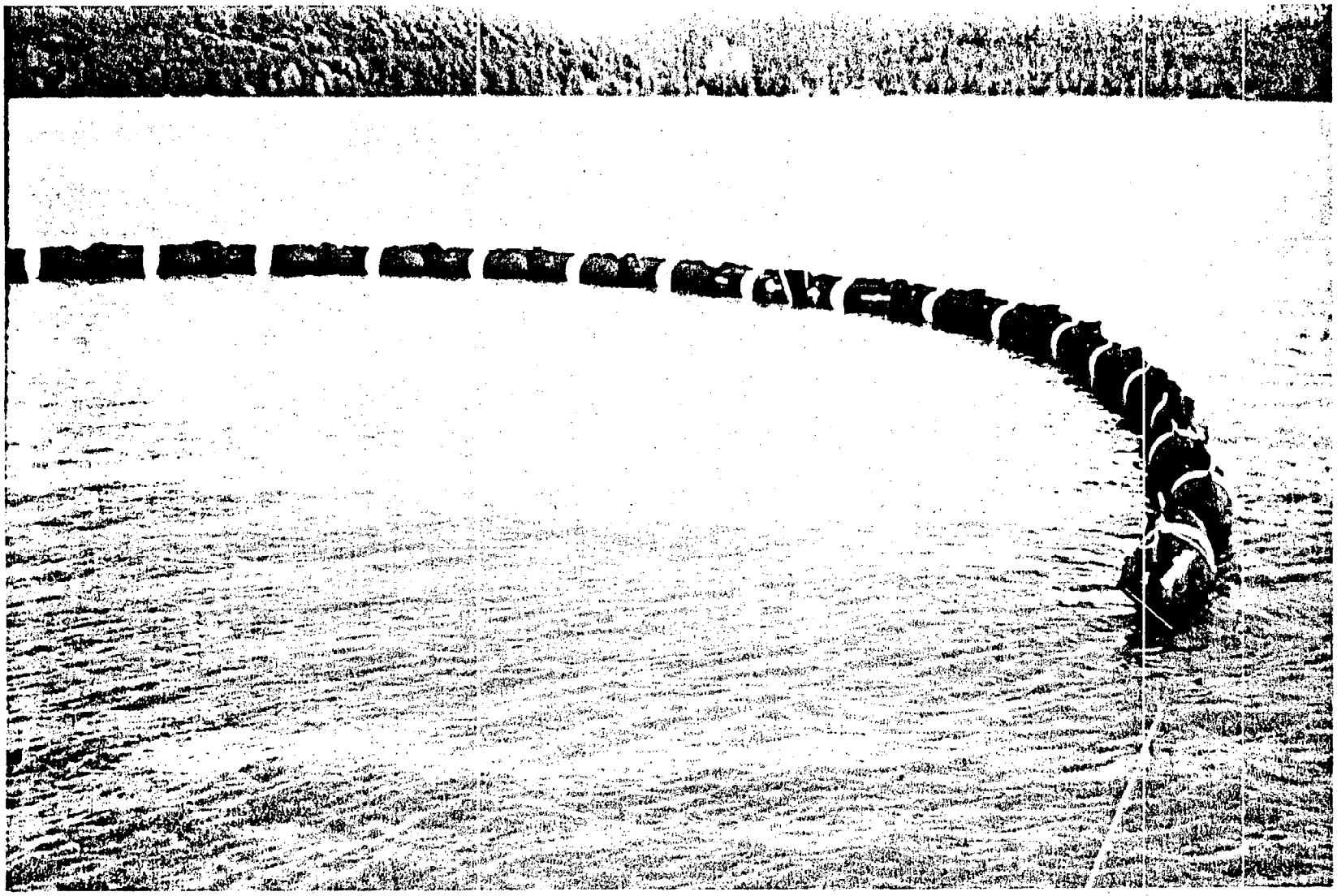
3. Kepner "Sea Curtain"™ — Bay and Harbor boom

This boom is very similar to the Kepner open sea boom except that it has a smaller float diameter and no net between the skirt and bottom tension chain. The chain is fastened directly to the bottom of the skirt.

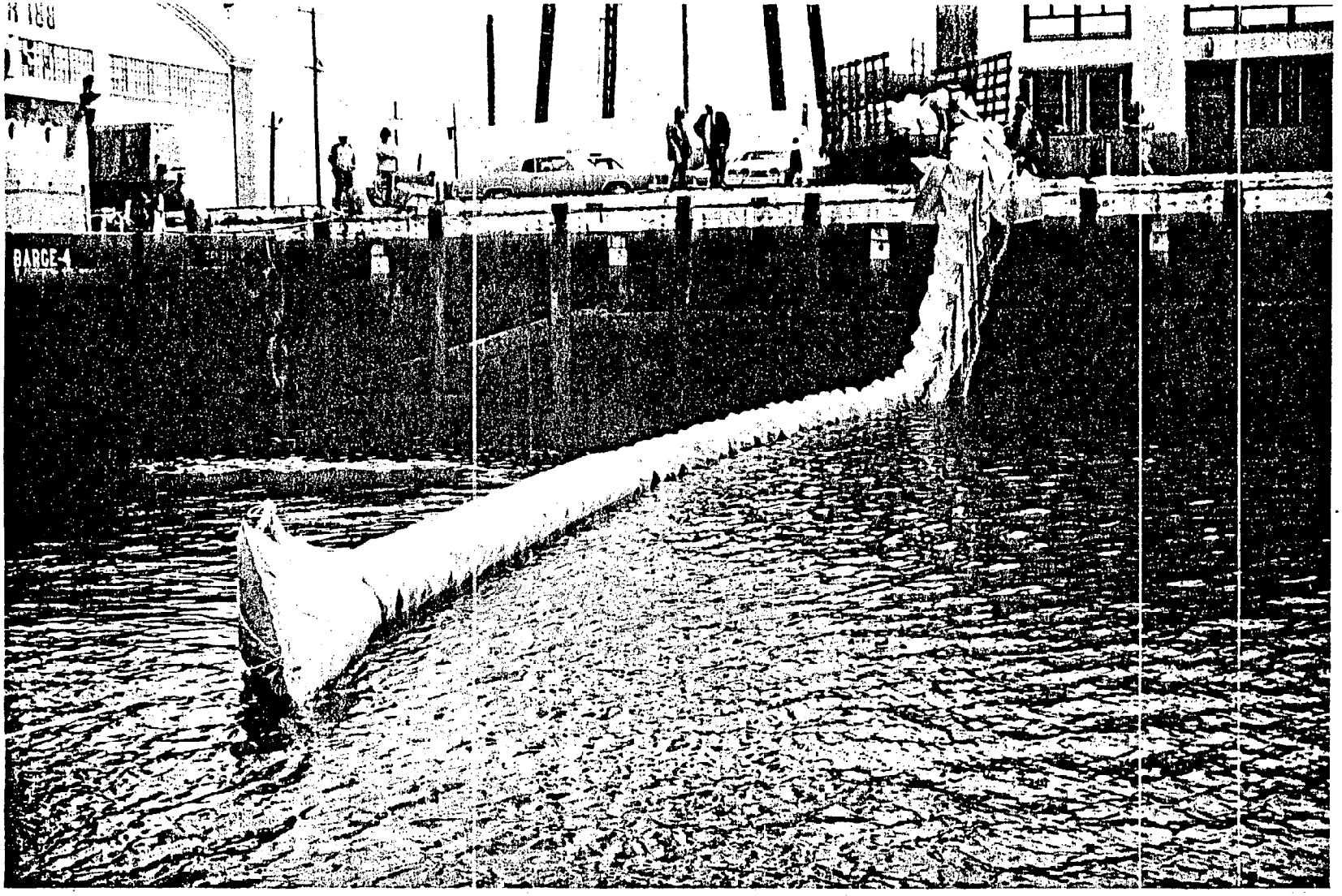
The bay and harbor boom is also compactible, unsinkable and does not require inflation for use. The boom is stored in aluminum storage containers, each holding 492 ft (150 m) of boom.

Specifications:

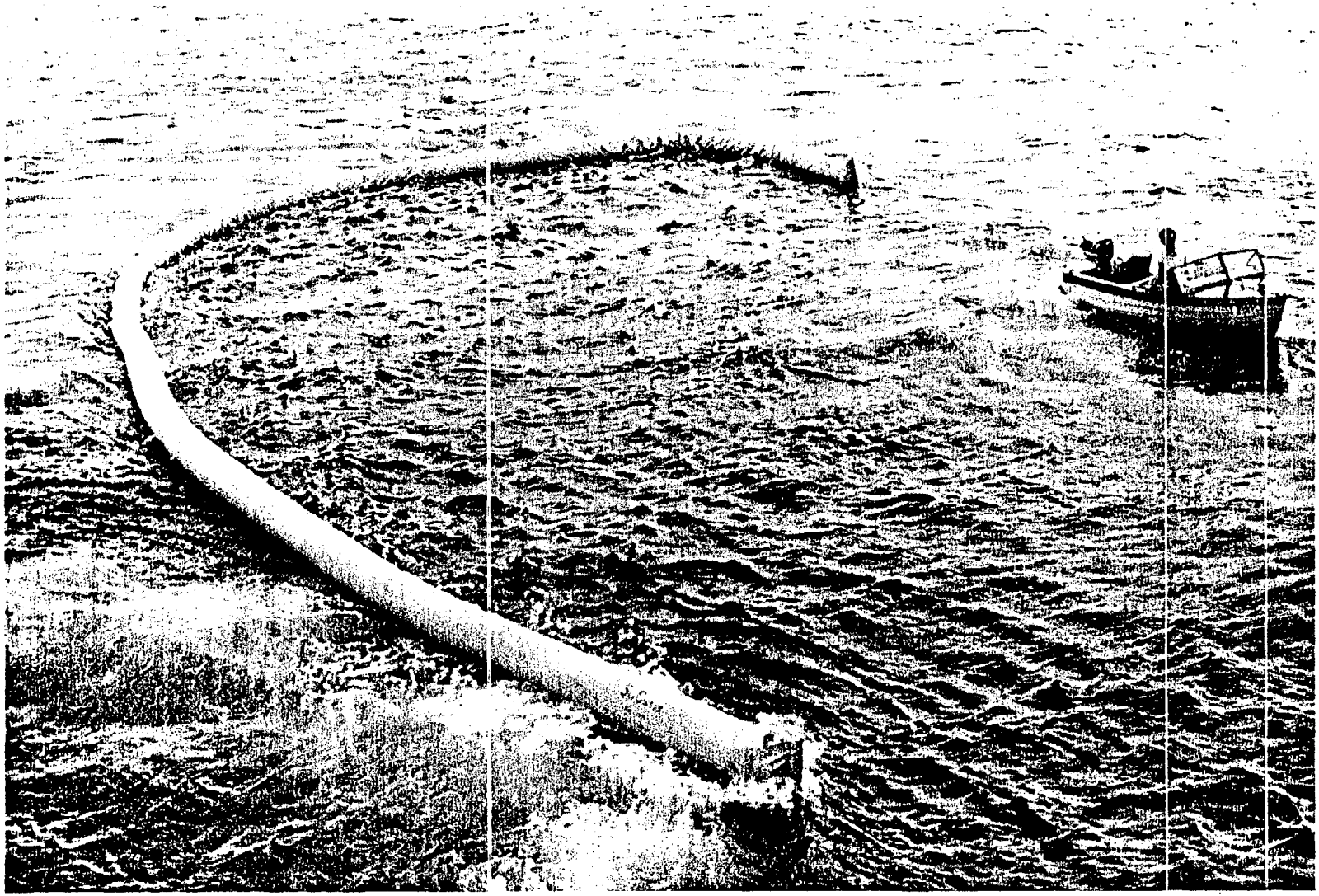
Float diameter:	18 in.
Skirt length:	24 in.
Boom section length:	492 ft (150 m)
Total boom length:	1476 ft (450 m)
Tow assemblies:	3
Bottom tension member:	1/2 High Test
Float and skirt cover:	Heavy-duty urethane material



GOODYEAR OPEN SEA BOOM



KEPNER OPEN SEA BOOM – DEPLOYMENT



KEPNER BAY AND HARBOR BOOM

BOAT SPRAY SYSTEM

A large, portable system that sprays chemical dispersants on an oil slick from a sea-going type vessel, usually a workboat. It is designed to be quickly mounted on a "vessel of convenience" during an oil spill, and is readily adaptable to many sizes and shapes of boats.

Mounted on the bow of the boat, the spray system uses two booms to spray a mixture of chemical and seawater directly on the oil slick. The seawater is used to dilute the chemical, allows the application of a large droplet spray and does not blow easily.

Also the system includes 500 gal chemical storage tanks and a 45 hp pump skid.

The boat spray system is stored on shore until needed. The entire system consists of three packages: the pump skid; the chemical storage tank skid (more than one tank may be used); and a storage basket (holds the masts, booms, hoses, and hardware). The three component packages can be quickly loaded onto a large workboat.

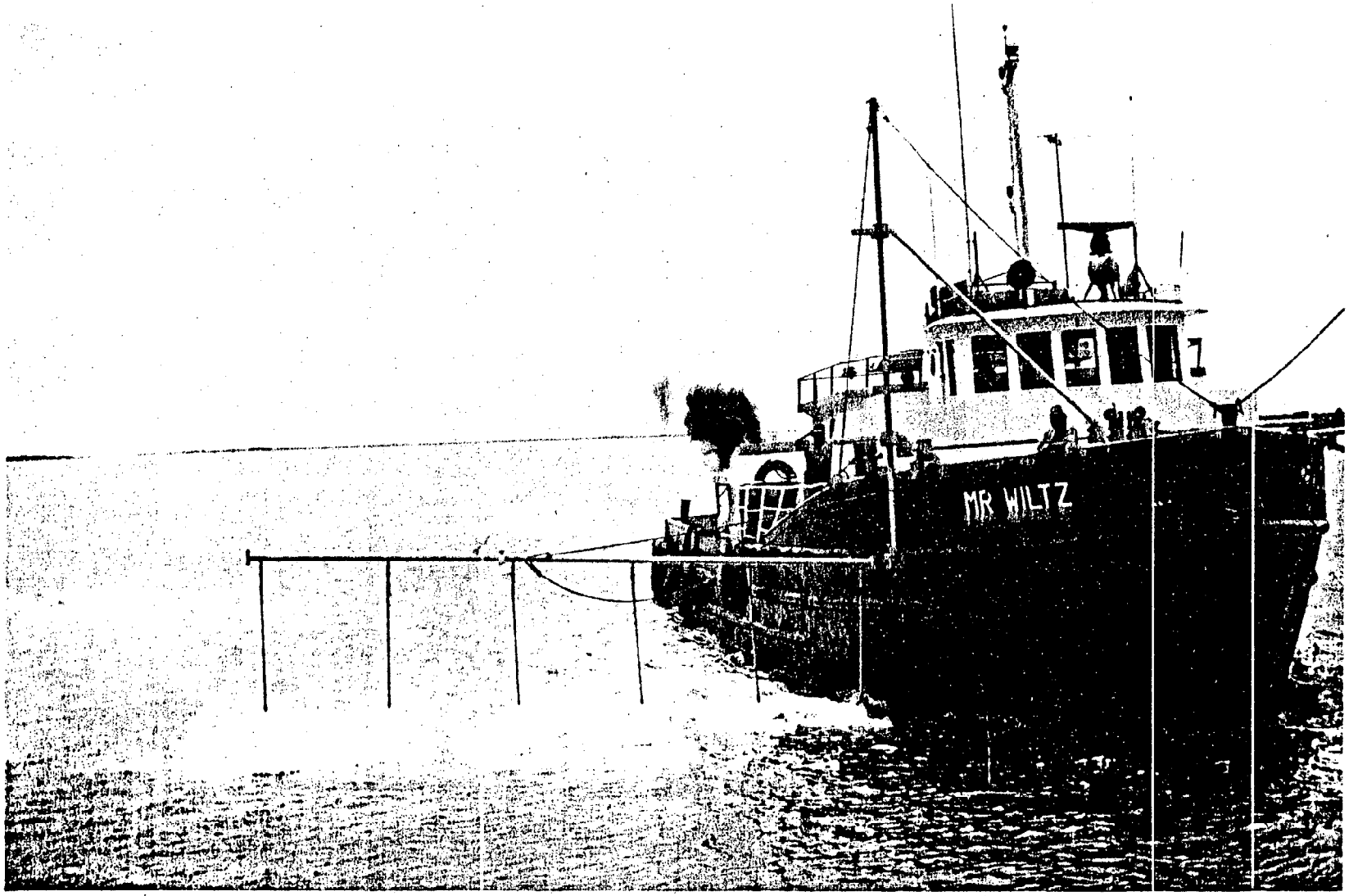
Using two spray booms, a path up to 60 ft wide can be covered. Under optimum conditions, the boat spray system can cover as much as 67 acres in one hour.

Specifications:

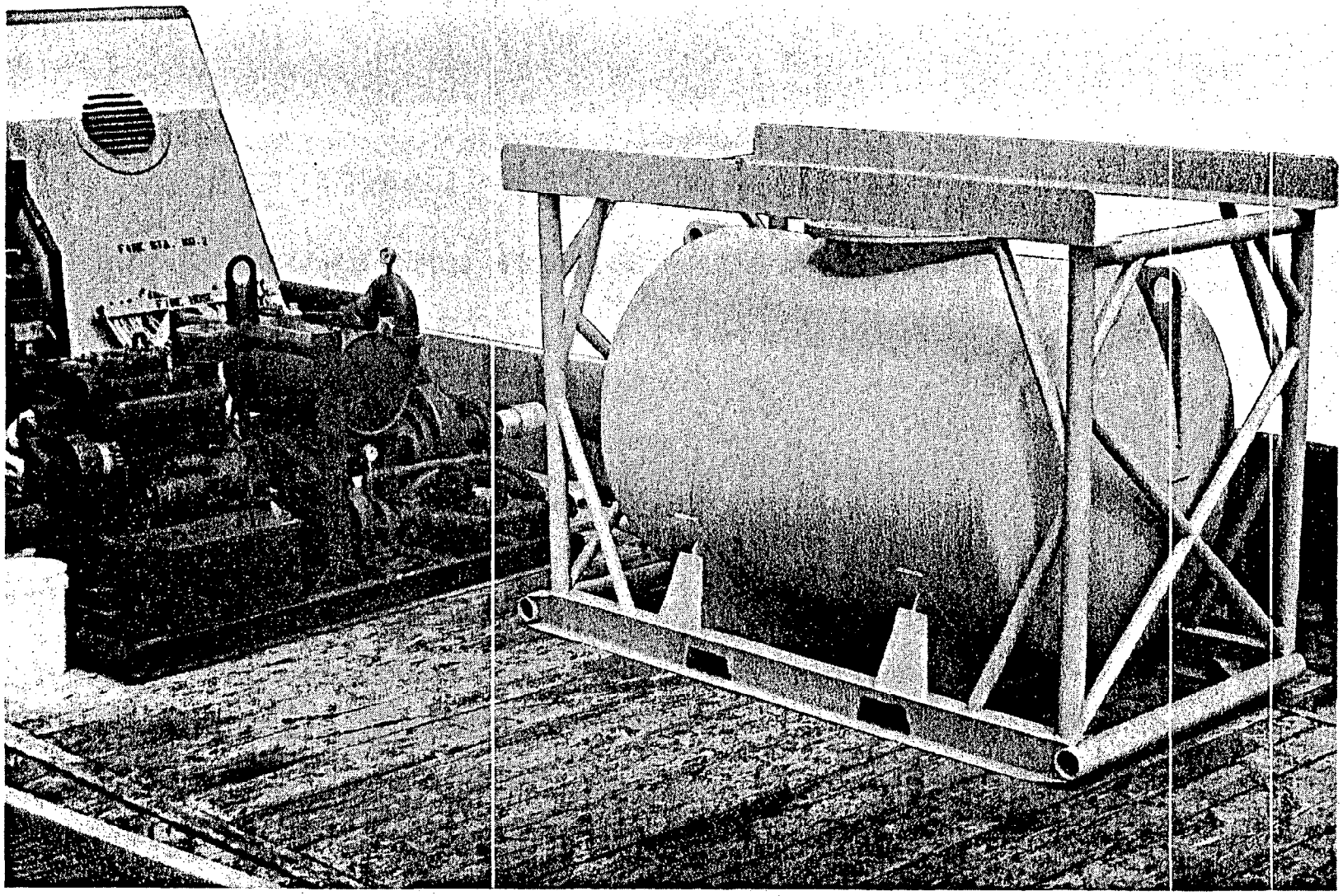
Storage Basket, 37 x 255 x 35 in. high, 3700 lb.
- Masts, 2, 20 ft
- Booms, 2, 20 ft
- Boom Support Members, 2, 20 ft
- Boom Extensions, 2, 10 ft
- Hoses, various diameters
- Clamps and assorted hardware

Pump Skid, 41 x 87.5 x 51 in. high, 2320 lb.

Chemical Storage Tank Skid, 50 x 96 x 67 in. high, 6255 lb (loaded)



BOAT SPRAY UNIT



BOAT SPRAY UNIT — PUMP SKID AND CHEMICAL TANK

HELICOPTER UNDERSLUG SPRAY SYSTEM (HUSS)

HUSS is a spray unit hung from a helicopter and is used to spread chemical surface collecting agents around the perimeter of an oil spill. Collecting agents are chemicals that limit the spreading of the oil.

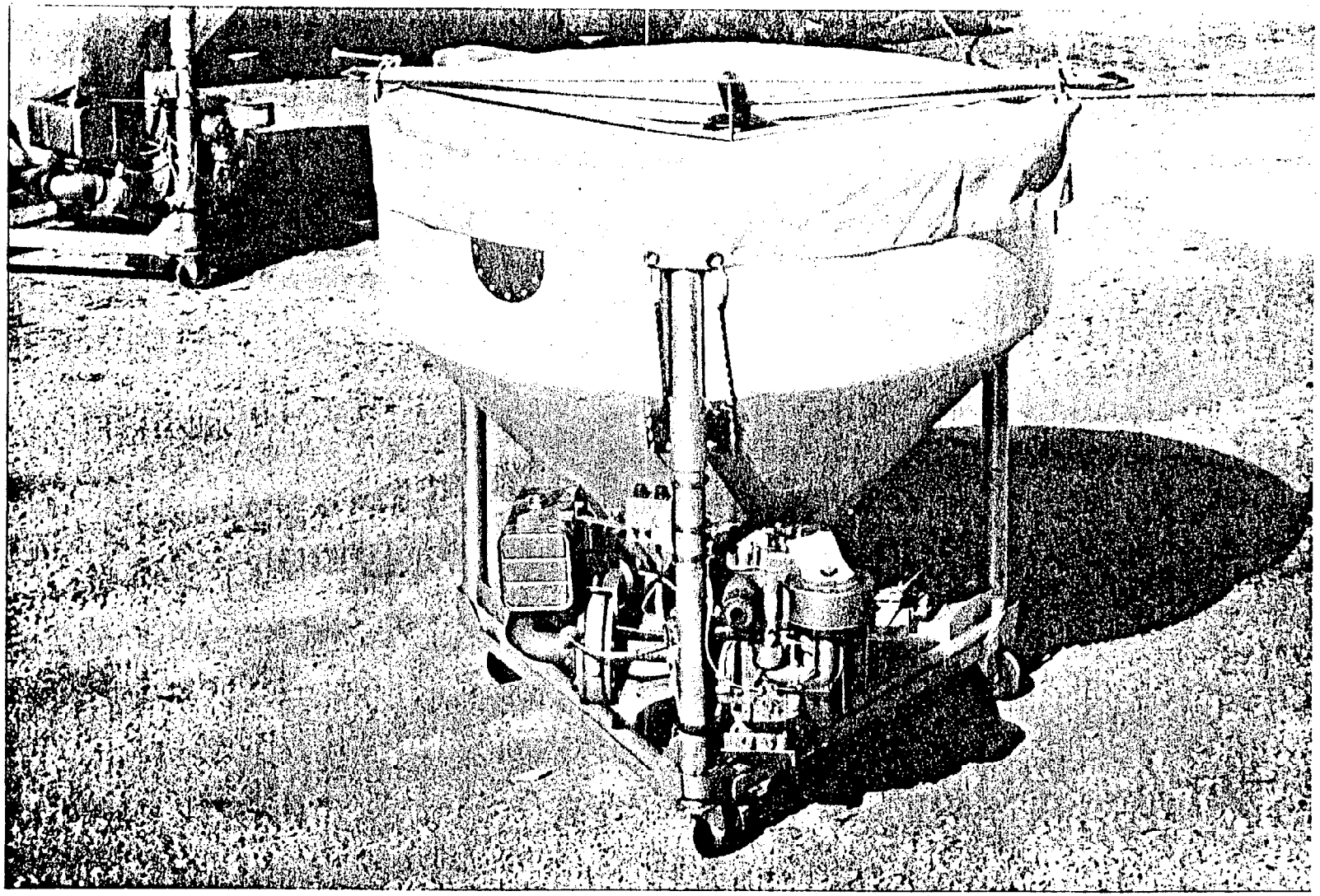
The self-contained tank and pump unit is controlled from the cockpit of the helicopter. The chemical is pumped from a tank through a hose and onto the water.

Components:

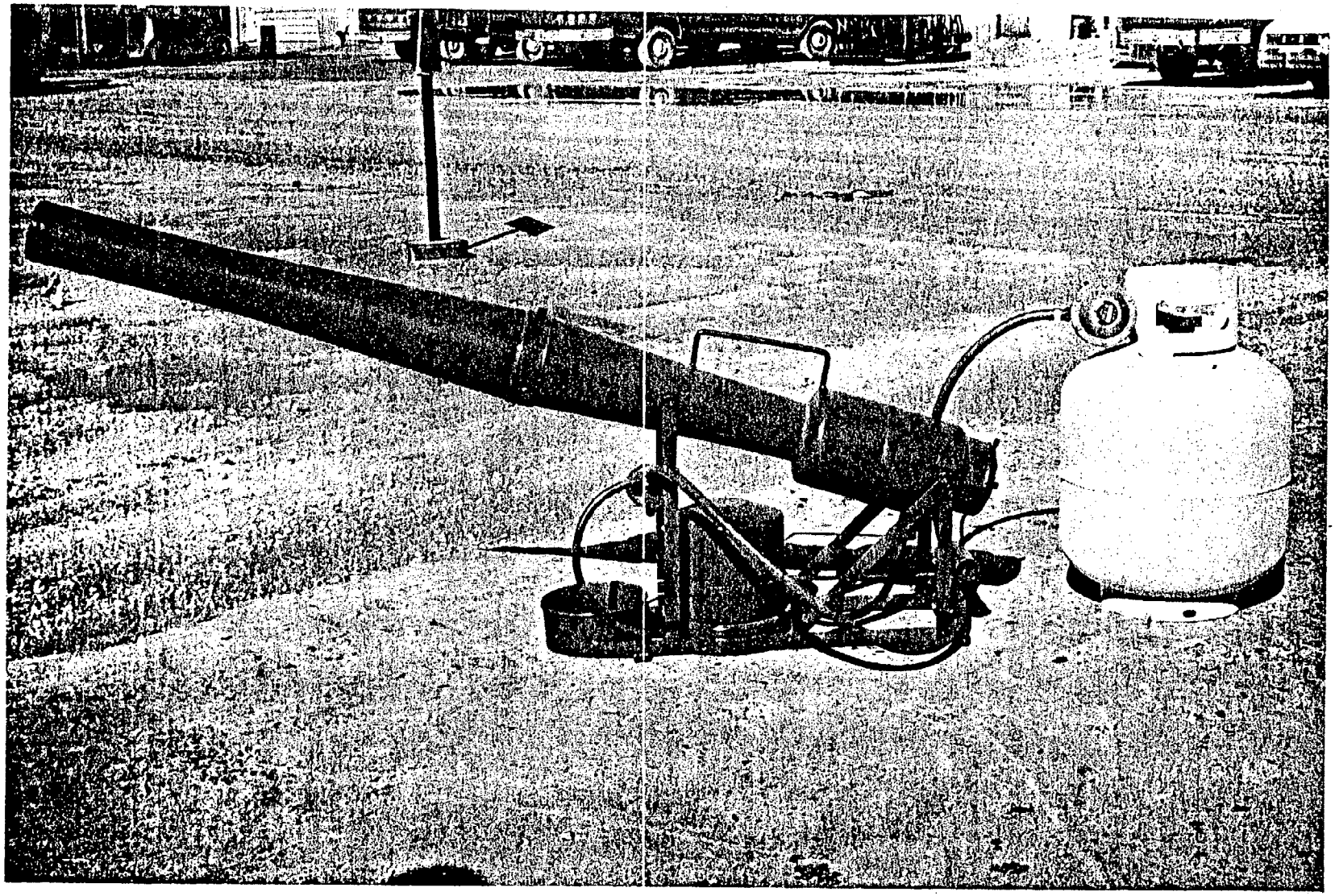
Briggs and Stratton 8 hp, 4 cycle engine
Simplex 2 in., high volume, centrifugal pump
150 gal, cone-shaped bucket

SCARE AWAY UNIT

The Scare Away unit is a small, lightweight device that uses loud noise to frighten waterfowl away from an oil spill. Propane is used to produce harmless detonations that sound like a small cannon being fired. The firing frequency can be varied from 1 to 60 minute intervals and the effective range of these units is about one-third mile. One 5 gal propane tank lasts about two weeks.



HELICOPTER SPRAY UNIT



BIRD SCARER UNIT

RADIO COMMUNICATION SYSTEM

To provide better coordination of clean-up efforts during an oil spill, Clean Atlantic has set up two radio communication networks: operations and logistics. The operations network provides communications at the oil spill; the logistics network provides communication between the oil spill and a shore location.

The operations network helps coordinate use of the clean-up equipment and provides communications between teams at the oil spill site.

Six-channel, hand-held tranceivers are provided to various individuals and teams participating. The small radios can be used on aircraft or boats in the area.

Two control stations provide a centralized communication location for the operations network. They broadcast on two channels and transmit with more power than the hand-held units.

A radio repeater is provided so that teams as far apart as 70 miles can maintain contact. The repeater receives a radio signal and re-transmits it on a different frequency, extending the effective range of the control stations and the hand-held radios.

At the present time, the logistics network is made up of the individual member company's radio communication system. As a back up, CAA will soon purchase transportable, high frequency-single sideband (HF/SSB) radio equipment.

Major Equipment:

1. Two control stations, 90 watt, 14.5 x 21.5 x 11.5 in., 68 lb (each).
2. One VHF Radio Repeater, 110 watt, with 115 VAC/60 Hz power supply, 14.5 x 21.5 x 11.5 in., 77 lb.
3. Twelve hand-held tranceivers, 6 watt, intrinsically safe, 6 channel with remote speaker/microphone.

Additional radio equipment includes battery chargers, antennas, transmission line kits, headsets, and connecting hardware.

CLEAN ATLANTIC ASSOCIATES
OIL SPILL CLEANUP
COMMUNICATIONS SYSTEMS

AUGUST 1978