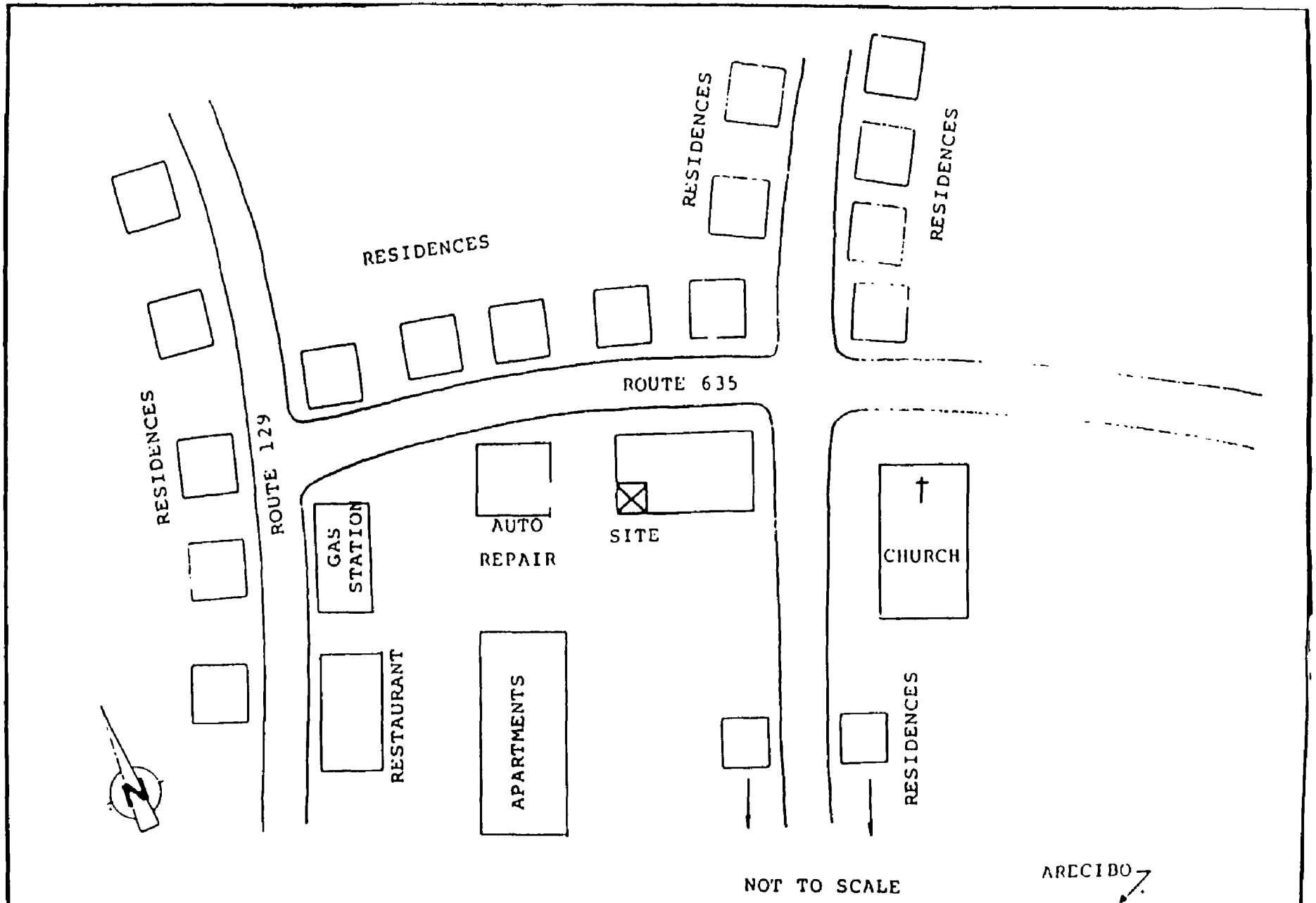
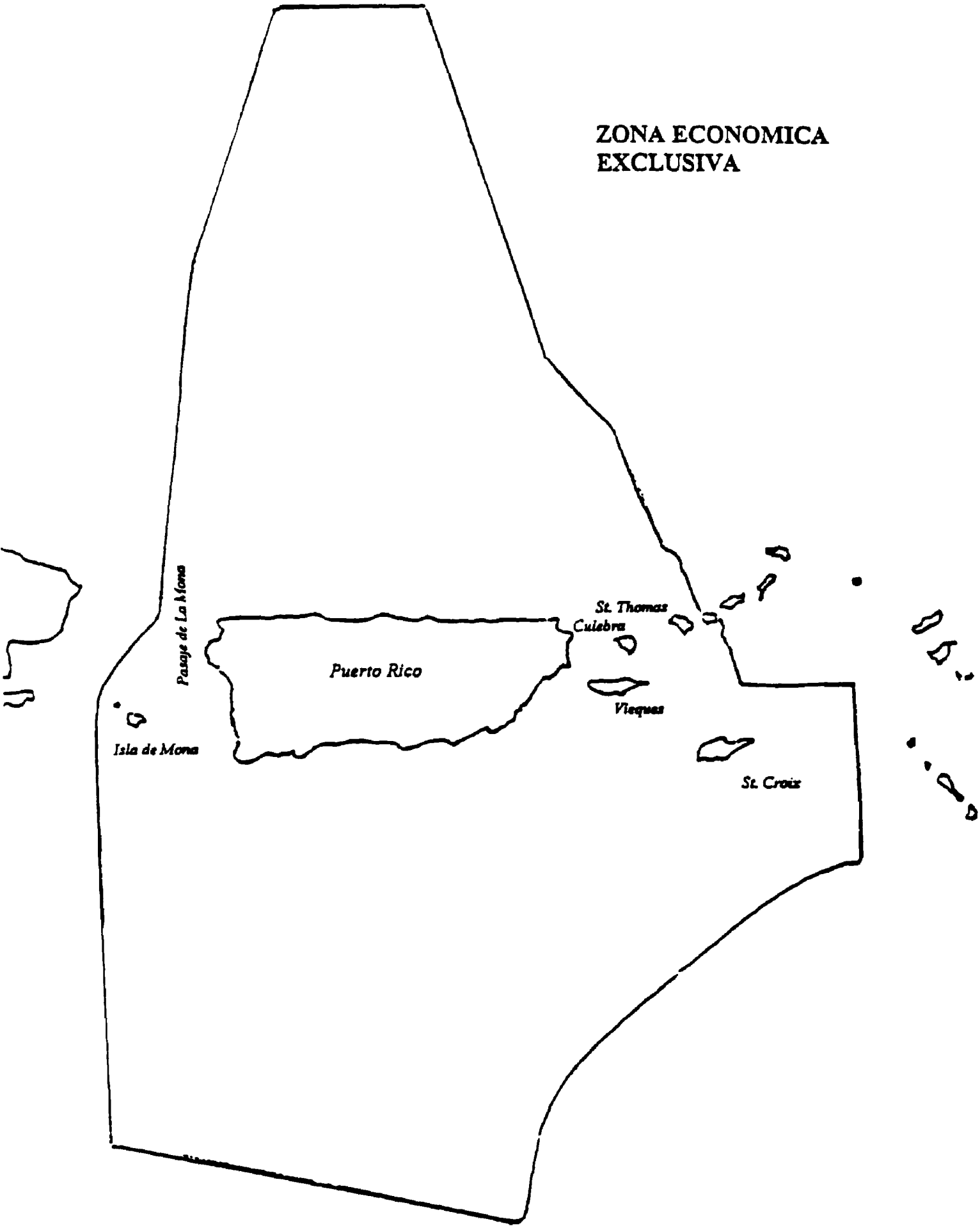
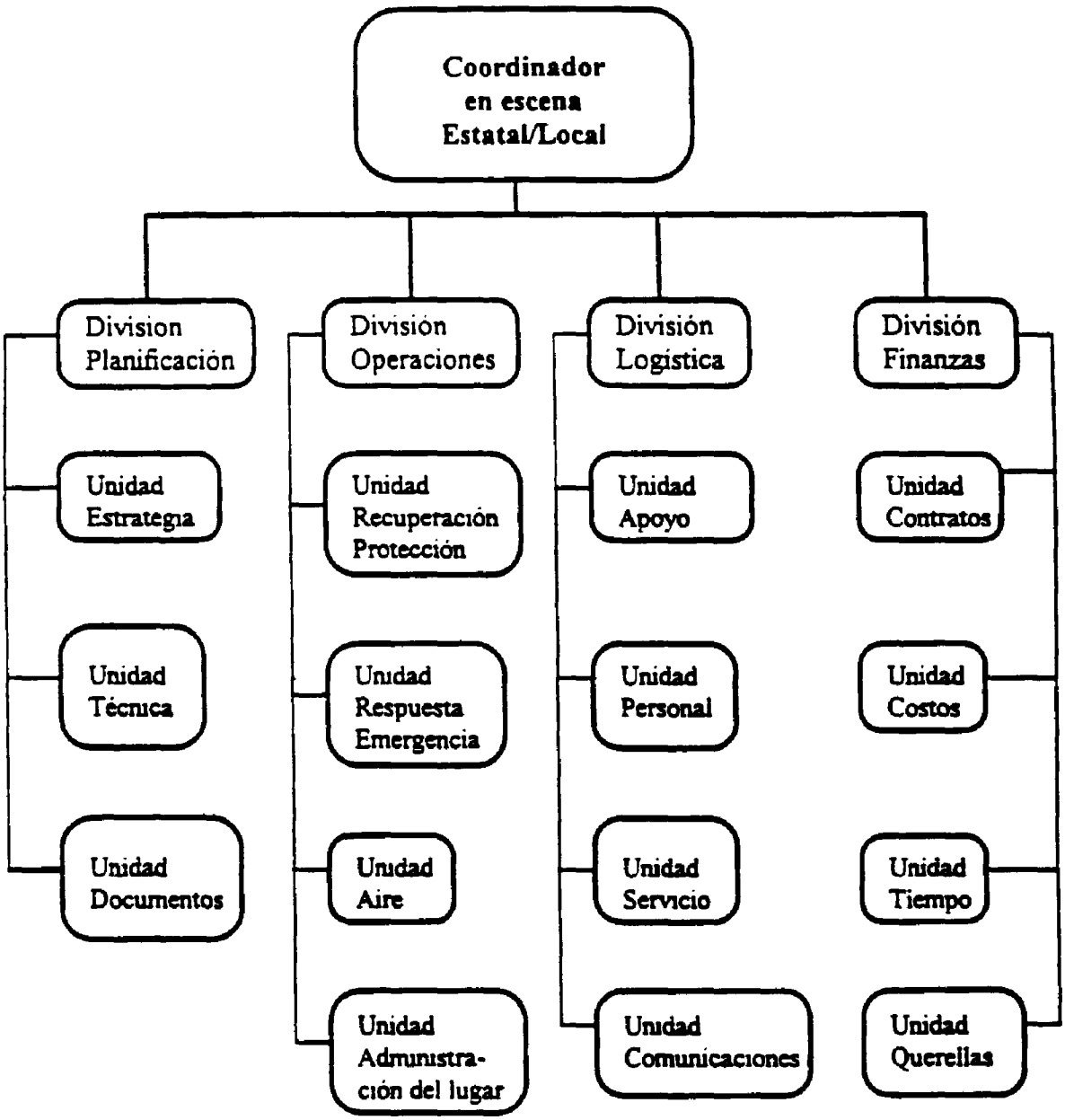
ANNEXES



WESTON — SPILL PREVENTION & EMERGENCY RESPONSE DIVISION C	EPA PM: C. Militscher	FIGURE 1
In Association with: ICF Inc, Jacobs Engineering Inc & Tetra Tech Inc	TAT PM: K. Sahatjian	Puerto Rico Organics Inc., Arecibo, P.R.


ZONA ECONOMICA
EXCLUSIVA
Pasaje de La Mona
Puerto Rico
St. Thomas
Culebra
Vieques
Isla de Mona
St. Croix

SISTEMA UNIFICADO DE RESPUESTA



El derrame de aceite de La Barcaza *Morris J. Berman*

Mapa de Sobre Vuelo

Preparado por la NOAA

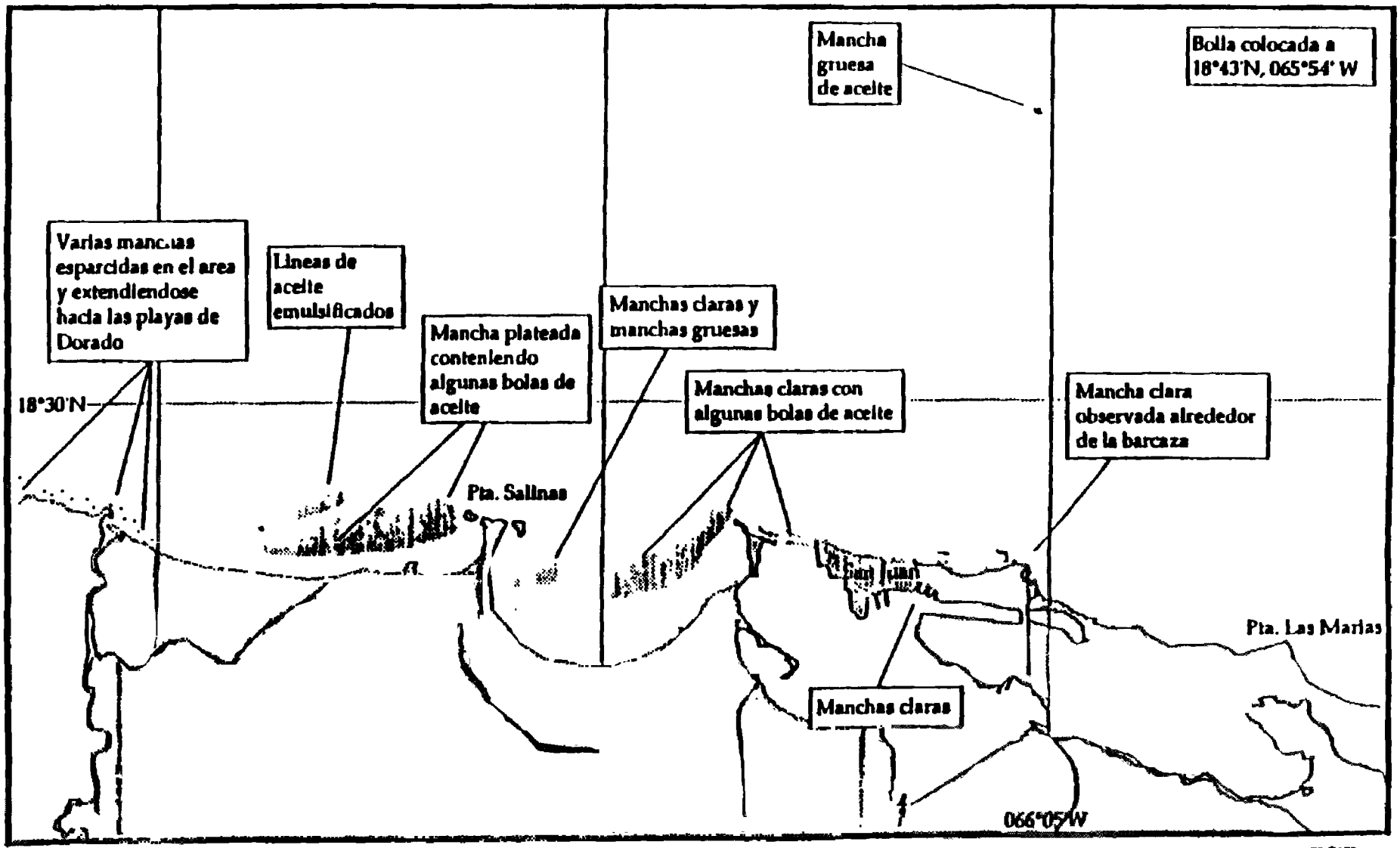
Usar solamente como una referencia general

Fecha/Hora: 11 Enero, 94 1540-1700

Plataforma: Long Ranger

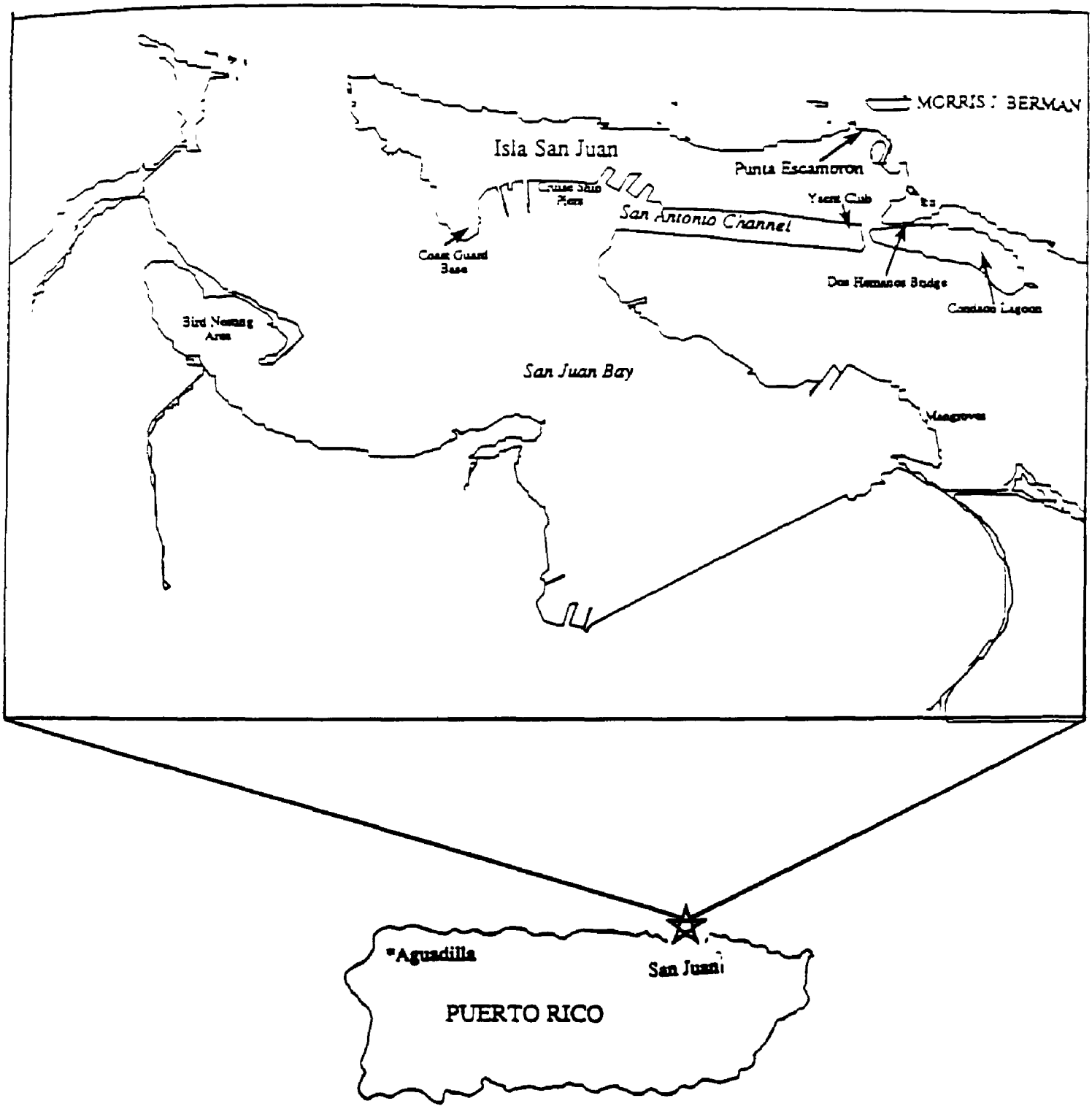
Observadores: Simecek-Beatty, Lehr, Barnea (NOAA)

Las graficas no representa precisamente la localizacion del aceite



B. Juana- Marias.1/11pS

REB

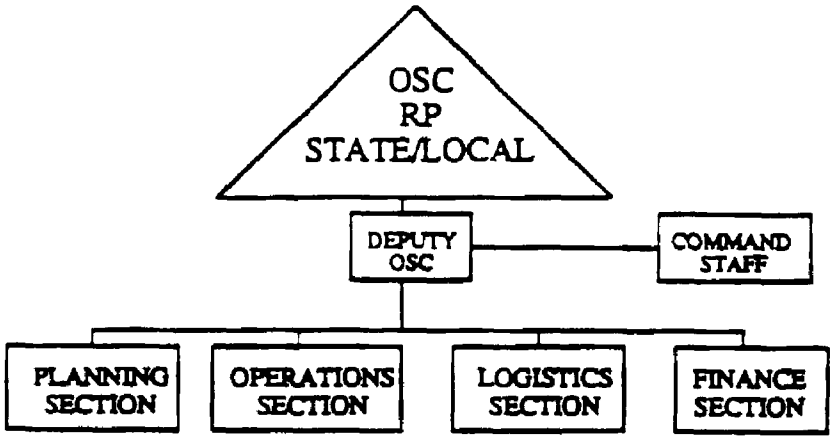


San Juan Bay and Vicinity

National Response Corporation ("NRC")

1. Cape Cañaveral Marien Services (Cabo Cañaberal, FL)
2. Caribe Hydroblast Environmental (San Juan, Puerto Rico)
3. Clean Harbors, Inc. (Braintree, MA)
4. Cliff Berry, Inc. (Miami, FL)
5. Crowley Environmental (San Juan, Puerto Rico)
6. Crowley Marine Services (San Juan, Puerto Rico)
7. Danmark Environmental Services (Houston, TX)
8. Garner Environmental Services (Houston, TX)
9. Induchem Environmental (San Juan, Puerto Rico)
10. Intracoastal Environmental Services (Port Arthur, TX)
11. Larco Environmental Services (Lake Charles, LA)
12. Martech Environmental (Broussard, LA)
13. Miller Environmental Group (Calverton, NY)
14. Ochoa Environmental Services (San Juan, Puerto Rico)
15. Riedel Environmental Services (New Orleans, LA)
16. Thompson Environmental Services (New Orleans, LA)

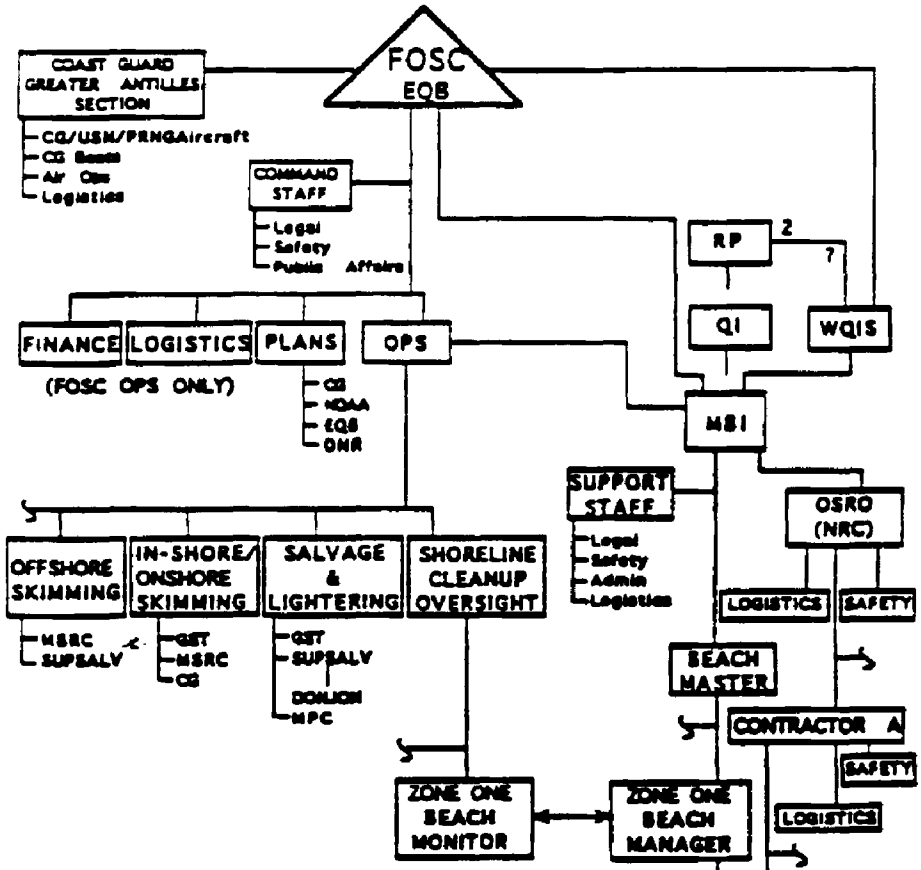
UNIFIED COMMAND SYSTEM
UCS



Each "Section" is further divided into "Branches" and "Units" in the ACP. Functional descriptions identify, in broad terms, much of "what" is to be done but provide little detail on "how."

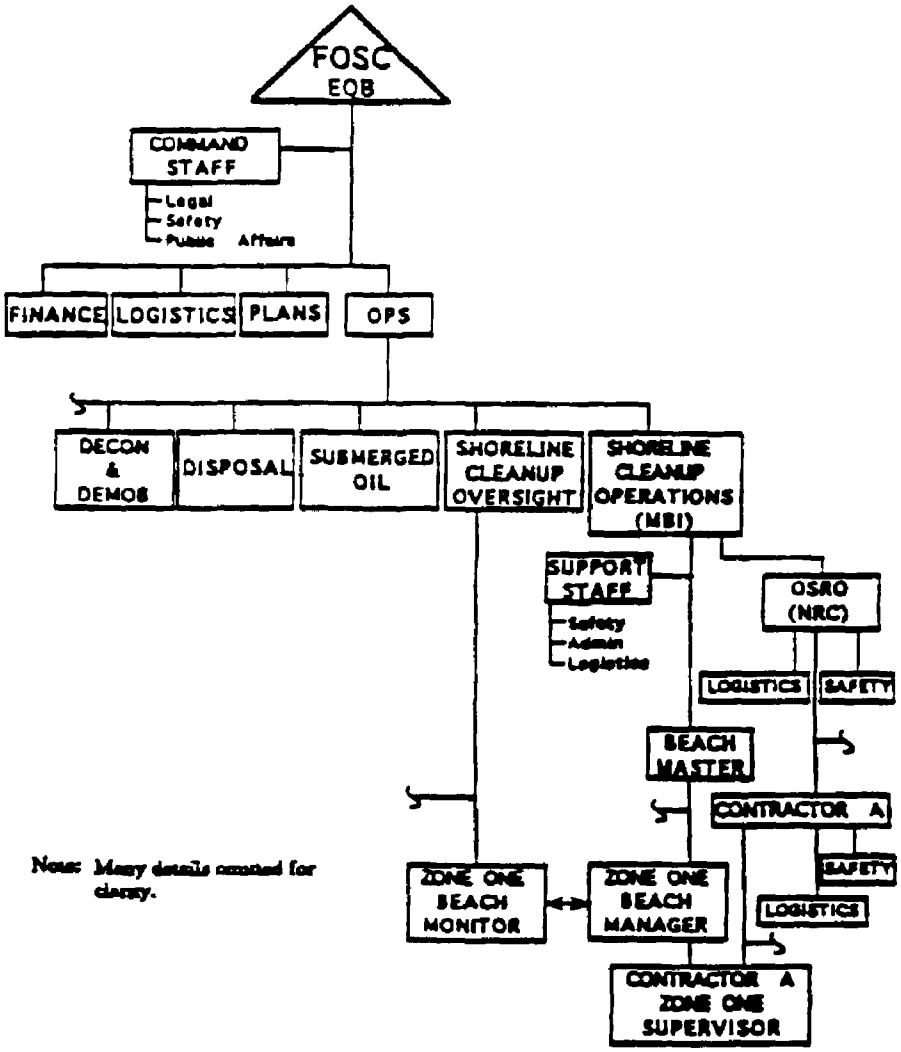
The PR/USVI Area Contingency Plan
UCS Organization
Figure 3

MORRIS J. BERMAN
RESPONSE MANAGEMENT ORGANIZATION
DAYS 2-7

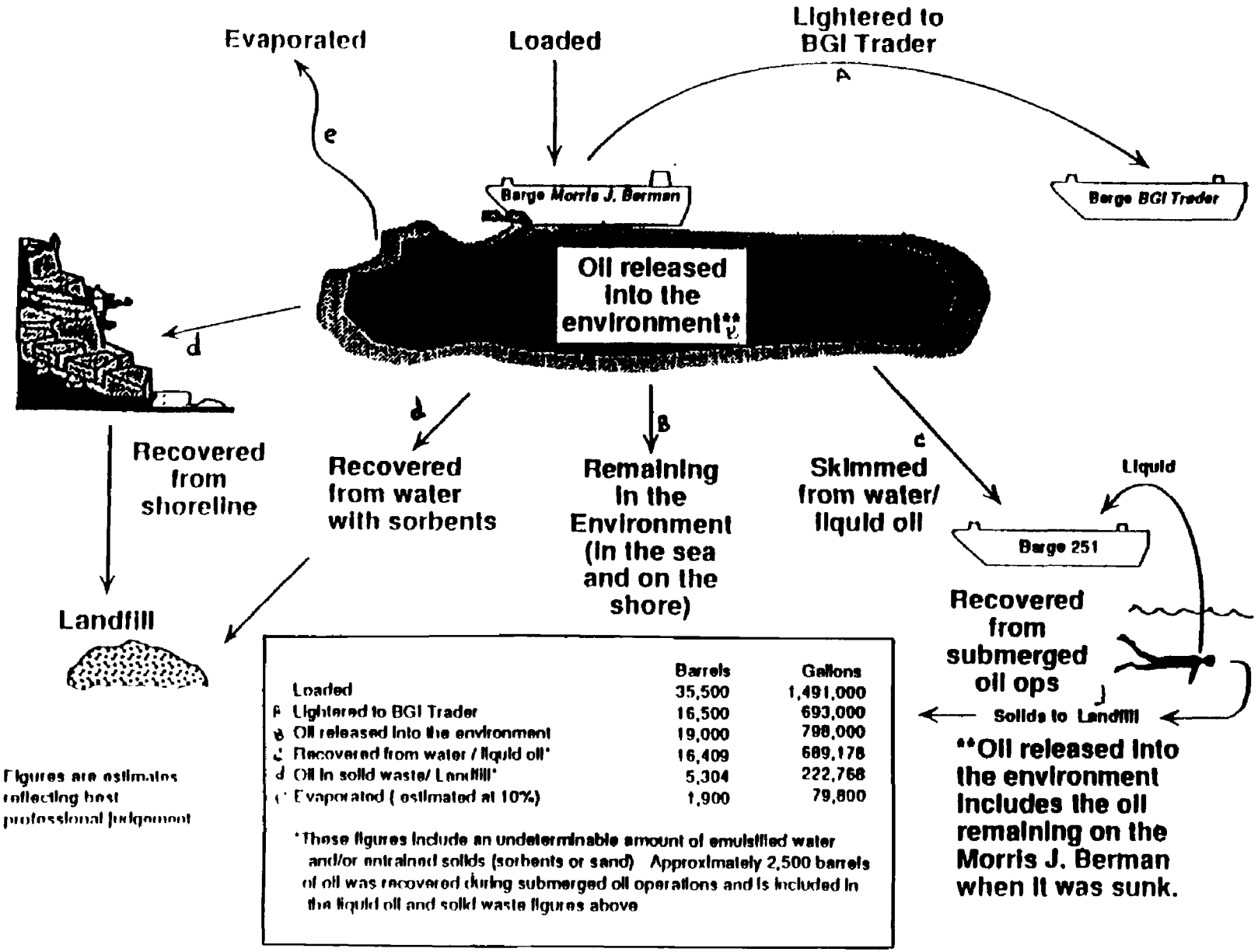


Notes: 1. Many details omitted for clarity.
2. The RP never had any effective presence on-scene.

MORRIS J. BERMAN
RESPONSE MANAGEMENT ORGANIZATION
DAYS 8-42



Note: Many details omitted for clarity.



		Barrels	Gallons
	Loaded	35,500	1,491,000
A	Lightered to BGI Trader	16,500	693,000
B	Oil released into the environment	19,000	798,000
c	Recovered from water / liquid oil*	16,409	689,178
d	Oil in solid waste/ Landfill*	5,304	222,768
e	Evaporated (estimated at 10%)	1,900	79,800

*These figures include an undeterminable amount of emulsified water and/or entrained solids (sorbents or sand) Approximately 2,500 barrels of oil was recovered during submerged oil operations and is included in the liquid oil and solid waste figures above

The MORRIS J. BERMAN Spill
Oil Budget

CLEANUP COSTS AND RECOVERY EFFECTIVENESS COMPARISONS[1,2]

Incident	Spill Size	Offshore Cleanup Costs[3,4]	Shoreline Cleanup Costs[3,4]	Recovery Effectiveness
AMERICAN TRADER	9500 bbl	$2,494/bbl	$9,396/bbl	44%
ARCO ANCHORAGE	5690 bbl	$2,659/bbl	$4,964/bbl	58%
TENYO MARU	1430 bbl	$6,537/bbl	$11,833/bbl	>80%
WORLD PRODIGY	7000 bbl	$3,158/bbl	$9,894/bbl	20%[5]
BERMAN	19000 bbl	$2,049/bbl[6]	$4,660/bbl[6]	>85%[7]

Notes:
1. Figures, except WORLD PRODIGY oil recovery % and BERMAN data, are taken from "Costs Associated with The Cleanup of Marine Oil Spills"; John Harper w/ Godon and Allen; Proceedings of the 1995 International Oil Spill Conference, p. 27-30. BERMAN cost figures calculated by FOSC staff using a similar methodology, excluding costs of salvage and lightering. Governmental costs for monitoring/oversight and public safety activities are excluded in each case.
2. All figures are best estimates. All figures reflect some difficulty in accessing data and/or assigning costs to a particular category of response operations. The non-BERMAN data are those identified by the authors as those being the most reliable in their study.
3. Costs are on a $/bbl recovered basis, not $/bbl spilled.
4. All figures 1994 U.S. Dollars.
5. Estimate provided by MSO Providence.
6. BERMAN figures include both OSLTF and WQIS costs.
7. BERMAN effectiveness estimate includes both recycled liquid and landfilled oil. Lightered oil excluded.

Explosivos
Procedimientos Estándares para la Operación

En general:

1. La transportación de materiales será hecha por la Policía, en un camión para transportar explosivos, uno o dos en cantidad, dependiendo de la cacacidad de los mismos.

2. Durante el movimiento, el camión será escoltado por dos carros de policía, uno al frente y otro atrás.

3. El camión será cargado y descargado durante las horas del día.

4. El movimiento deberá ser coordinado de manera tal que el movimiento vehicular presente en ruta sea el mínimo (e.j. 3:00 AM).

5. Una ambulancia y un camión de bomberos estará presente mientras dure la disposición.

6. Se realizará una monitoría de aire mientras se esté desarrollando la disposición.

7. Solamente personal autorizado podrá estar en el lugar durante la operación.

8. Solamente personal de OHM estará autorizado al manejo de explosivos y la destrucción de las sustancias químicas.

9. Los explosivos usados para la destrucción de los materiales será de tipo binaro, como "Kinpar". Las cargas se iniciarán con fulminante número seis (6), de tipo eléctrico.

10. Una vez hecha la detonación, se recogerá una muestra del terreno alrededor y se comparará en análisis con una muestra del terreno antes de la detonación. La monitoría específica del aire se realizará con tubos "Draeger" y un detector de fotoionización.

11. Se asignarán Guardias de Seguridad en la entrada del área.

12. Se observarán todas las reglas de seguridad relevantes sobre el manejo de explosivos.

Procedimientos de Detonación:

1. Los materiales serán empacados en su totalidad y segregados.

2. Los materiales serán destridos de acuerdo a su composición particular, y la cantidad de explosivos necesaria será establecida de acuerdo a las limitaciones del perímetro.

3 Se localizará en lugar seguro y se mantendrá debidamente envasado todo explosivo, material sensitivo a golpes, o material reactivo

4. Se conectará un fulminante eléctrico al recipiente en la línea de fuego y se será revisado con un galvanómetro antes de añadirle la carga explosiva.

5 El grupo OHM regresará al área de seguridad y se revisará toda el área al igual que al personal presente El grupo identificado dará la señal de aviso previo a la detonación La carga será detonada

6 Una vez ocurrida la detonación, el especialista de OHM se asegurará de que no se produzcan fuegos ni reacciones secundarias. Este determinará cuándo haya finalizado la combustión.

7 La secuencia aquí enumerada será repetida cuantas veces se estime necesaria.

LOCAL NEWS

3 shipping firms, executive convicted in Berman spill case

650,000 gallons of fuel oil poured from barge in '94

By CHRIS HAWLEY
Of The STAR Staff

A federal jury on Thursday convicted three shipping firms and a shipping executive of negligence in the oil spill that contaminated San Juan's beaches for months in 1994.

Bunker Group Puerto Rico; its general manager, Pedro Rivera; Bunker Group Inc. and New England Marine Services were convicted of sending out an unseaworthy vessel, negligently discharging oil and failing to notify the U.S. Coast Guard that a hazardous condition existed on the tanker barge Morris J. Berman.

The barge was being towed out of San Juan harbor in the early morning of Jan. 7, 1994 when the cable connecting it to a tugboat snapped. The barge ran aground on a reef about 300 yards from Escambrón Beach, spilling at least 650,000 gallons of fuel oil into the water.

Federal prosecutor Charles A. DeMonaco said Rivera could be sentenced to a maximum five years in prison, and the companies could face fines of up to twice the amount of damages caused by the spill. The Coast Guard spent more than $81 million cleaning up the oil, and DeMonaco said total damages were at least $100 million. The fine would go into an oil spill trust fund administered by the Coast Guard.

The companies and Rivera will be sentenced on Aug. 12 by Judge Héctor M. Lafitte.

Rivera and other company officials could not be reached for comment.

DeMonaco said Lafitte could also order the companies to pay back damages to businesses and individuals affected by the spill, or put them on probation with the condition that they develop tougher environmental safety procedures.

The government charged the shipping companies were negligent because the cable had broken before and the tugboat crew repaired it without using a "thimble," a device that strengthens the joint between the cable and the barge. That made the boat unfit for operation, DeMonaco said.

"The prosecution alleged that Pedro Rivera and these companies sent this boat out to sea in a definitely unseaworthy condition," DeMonaco said. "That was a clear violation of the law."

The boat should have been kept in port and Rivera should have notified the Coast Guard of the faulty cable, he said. Prosecutors also charged the company was negligent because there was no one watching the barge.

Captain Roy McMichael and First Mate Víctor Martínez pleaded guilty in 1994 to violating the Clean Water Act because McMichael had not had the cable repaired correctly and Martínez, who was piloting the boat, did not have someone watching the barge. Both men testified against the company.

The three companies are owned by the Peter Frank family, which controls more than 50 firms including shipyards and Bunker Group shipping companies in five states.

The trial took seven days, and the jury deliberated four hours, DeMonaco said. Rivera and the companies were convicted of violating the 1972 Ports and Waterways Safety Act, the Oil Pollution Act of 1990, and laws prohibiting the sailing of an unseaworthy vessel.

They can appeal the verdict, but not until Lafitte hands down a sentence in August, DeMonaco said.