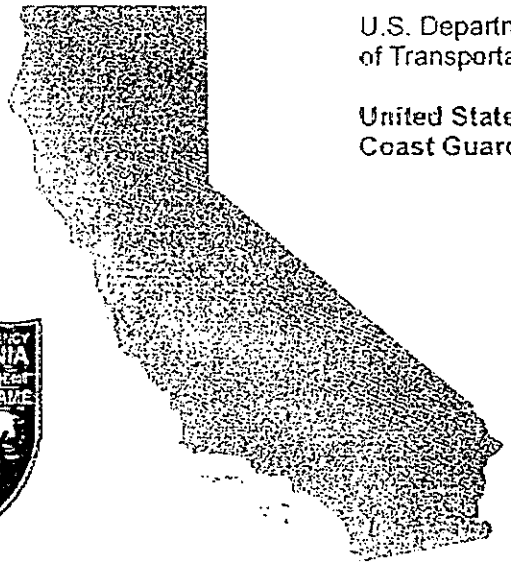
2000
AREA CONTINGENCY PLAN (ACP)

For the California NORTH COAST
SAN FRANCISCO BAY & DELTA
CENTRAL COAST

VOLUME II: Sensitive Sites (Section 9970)



U.S. Department
of Transportation

United States
Coast Guard

OSPR
OFFICE OF OIL SPILL
PREVENTION AND RESPONSE

NATIONAL RESPONSE CENTER:
1-800--424-8802

CALIFORNIA OFFICE OF EMERGENCY SERVICES:
1-800-852-7550

9973 San Francisco Bay & Delta Sensitive Sites

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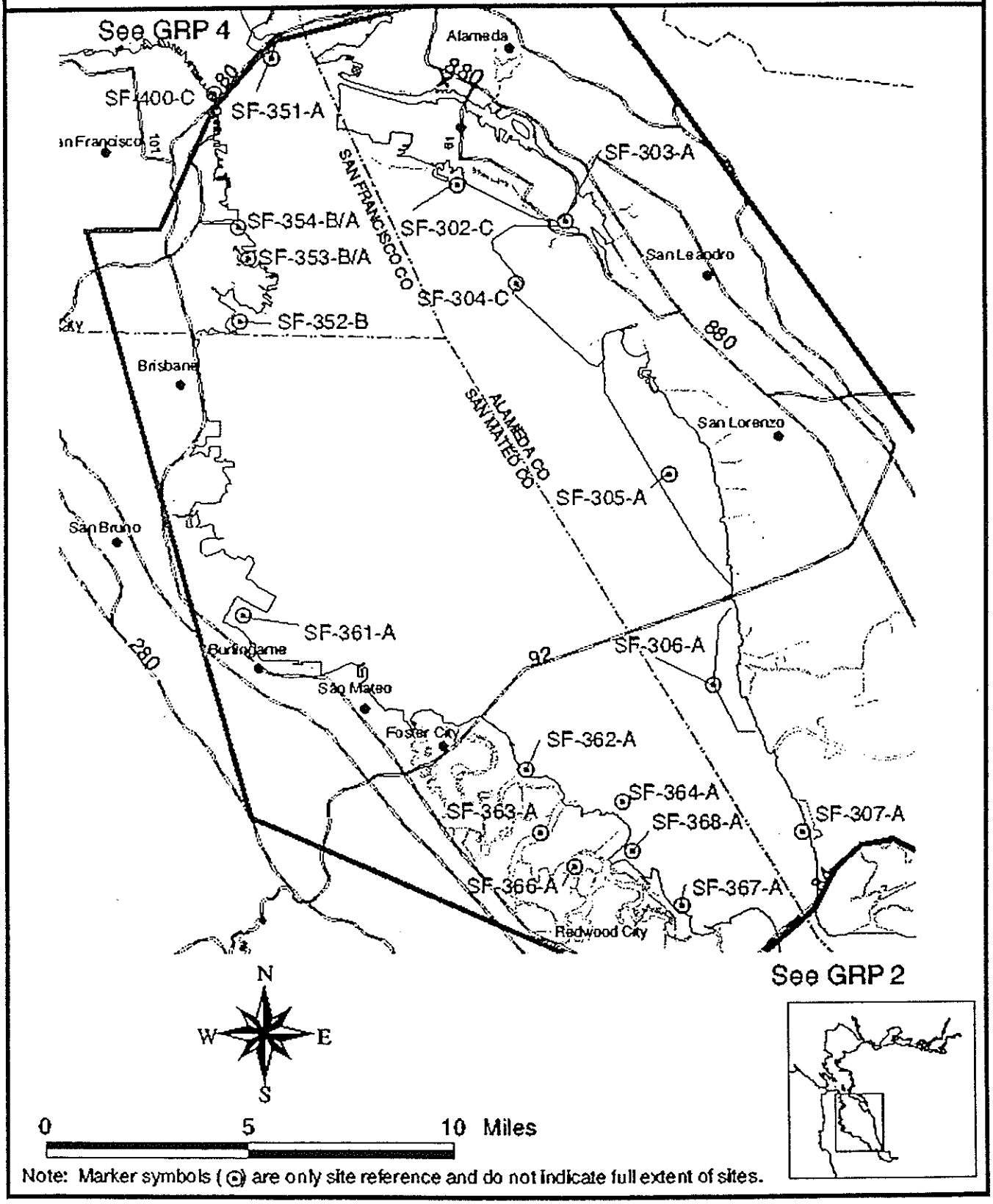
SF Geographic Response Area 3
Anchorage 9
Environmentally Sensitive Sites



Note: Marker symbols (⊙) are only site reference and do not indicate full extent of sites.

Geographic Response Plan - 3

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GRP 3 Site Index/Response Actions

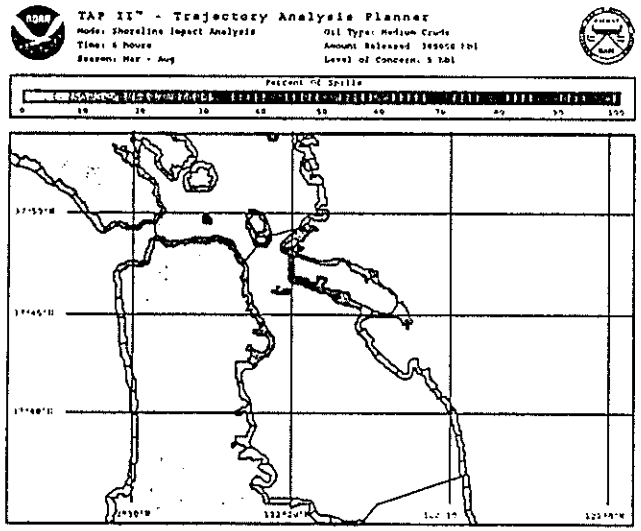
Site ID	Priority	Site Name	Assignment	Date/Time Required	Date/Time Completed
SF-302		Alameda Eelgrass Beds			
SF-303		San Leandro Bay			
SF-304		Bay Farm Island Eelgrass Beds			
SF-305		San Lorenzo Creek to Johnson Landing			
SF-306		Alameda Creek Marshes			
SF-307		Coyote Hills Slough Marshes			
SF-351		Yerba Buena Island			
SF-352		South Basin, Hunters Point			
SF-353		Heron's Head Park – India Basin			
SF-354		Islais Creek – Pier 94 Saltmarsh			
SF-361		Airport Mudflat			
SF-362		Belmont Slough			
SF-363		Steinberger Slough			
SF-364		Bair Island			
SF-365		Redwood Creek			
SF-366		Corkscrew Slough			
SF-367		Greco Island / Ravenswood Slough			

ACP Sensitive Site Resource List - GRP 3

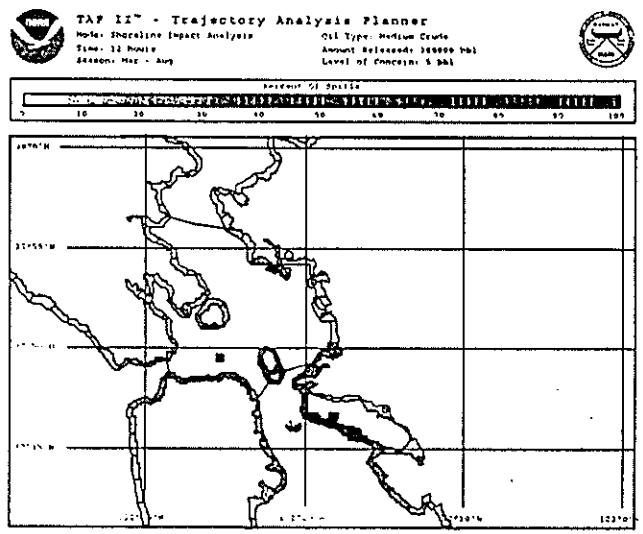
SITE	SUB	SITENAME / SO	Strategy Objective	HBOOM	SWBM	XBOOM	SORB	Bboat / skiff	# / Type Skimmer	Special Equipment	Deploy Personnel
2-302	1	Alameda Eelgrass Beds		3000				2 / 0			6
		7	Deflect oil past eelgrass bed and toward collection / protection deployments of San Leandro Bay, 2-303.								
2-303	1	San Leandro Bay		1200	300	250 tide	200	2/1	1 portable &VT Bboat: very shallow draft		9 (30 support personnel)
		5,6	Direct oil away from Alameda shore to shoreside collection at Bay Farm Island Bridge.								
	2	San Leandro Bay		1500				2/1	1 sps		8
		7	Divert oil away from Elsie Romer Bird Sanctuary to collection in the San Leandro Channel.								
	3	San Leandro Bay		3000			100	2/1	1 SPS or mobil		
		5	Exclude oil from entering the bay via Oakland Estuary.								
2-304	1	Bay Farm Island Eelgrass Beds		1000				1/1			4 PERSONS
		7	Minimize oil moving into the area by positioning a deflection boom from the runway point to diver oil borne on currents past.								
	2	Bay Farm Island Eelgrass Beds		2000	2000			2/2	1 portable & VT		8 PERSON
		6	Maximize oil capture at this locale with deflection to shore skimming unit.								
2-305	1	San Lorenzo Creek to Johnson Landing		15000	4500'		500'	25/28	3 portable	10,000' 1/2" anchor line, 5 vac trucks,	108
		5	Prevent oil from entering the marsh. Should oil enter the marsh, contain oil to the smallest possible area of marsh.								
2-306	1	Alameda Creek Marshes		10000			15000	17/2			34
		5&8	Exclude oil from channels or stranding in the marsh. Divert it to less sensitive and more accessible shorelines on either side.								
2-307	1	Coyote Hills Slough Marshes		1000	500		4000	3/1			10
		567	Exclude oil from channels and marsh, and to divert it to shorelines less sensitive and more accessible for oil recovery and cleanup. The following site-specific								
2-351	1	Yerba Buena Island		3000'				5/2		3000' 1/2" anchor line	14
		8&7	Prevent oiling of harbor seals and rocks near where they haul out. Avoid driving hauled out harbor seals into the water.								
2-352	1	South Basin, Hunters Point		3500				3*/0	1/1 SFS/SSS	*shallow draft Bboat	8-12
		5,8	Exclusion/protection booming to prevent oil from reaching marsh in South Basin or beaches at Candlestick Point.								
	2	South Basin, Hunters Point		500				1*/0		*shallow water Bboat	3
		7	Deflect oil away and past site.								
2-353	1	Heron's Head Park - India Basin			80		80				2
		6	Prevent oil from entering small tidal inlets to inner ponds and lagoons.								
	2	Heron's Head Park - India Basin		2500				4/1			12
		5	For conditions when oil is likely to enter India Basin, such as easterly winds, deflect oil away from site to south shore								
2-354	1	Islais Creek - Pier 94 Saltmarsh		1000	50		50	1/1			
		5,8	Exclude oil from entering inlet and protect site from oil								
2-361	1	Airport Mudflat		8200				4/4		4 shallow draft boomboats	25-30
		5	Exclude oil from entering slough openings and cove.								
2-362	1	Belmont Slough		4000		TB 200		3/0	1 SPS		14
		5	Prevent oil fom entering Belmont Slough.								
	2	Belmont Slough		6000				2/3			16
		8	Protective booming of bayfront tidal marsh								
2-363	1	Steinberger Slough		3500		TB 500		2/1	1 SPS	Bboat very shallow draft	10-15
		5	Exclude oil from entering/leaving Steinberger Slough								
2-364	1	Bair Island			200		200	1/1		very shallow Bboat	5
		5	Exclude oil from entering Bair Island close openings to interior.								
	2	Bair Island				4000 TBB		2/1		Very shallow water Bboat	
		8	Protective booming of exposed marsh frontage.								
2-365	1	Redwood Creek		3000	8000	4000 TBB	2000	6/3	1 sfs	very shallow Bboats	25-30
		7,8	Deflect past, Deflect to collection, Protective boom shoreline.								
2-366	1	Corkscrew Slough			2000		2000	2/0		very shallow Bboats	3-6
		5	Exclude oil from entering Slough								
2-367	1	Greco Island/Ravenswood Slough		8000	2000	10000TBB	2000	6/10	0	very shallow Bboats	35-45
		5,8	exclude oil from entering various sloughs, protective booming of bay frontage								

PROBABILITY OF OIL REACHING EACH SITE STRATEGY IN GRP 3

GRP 3



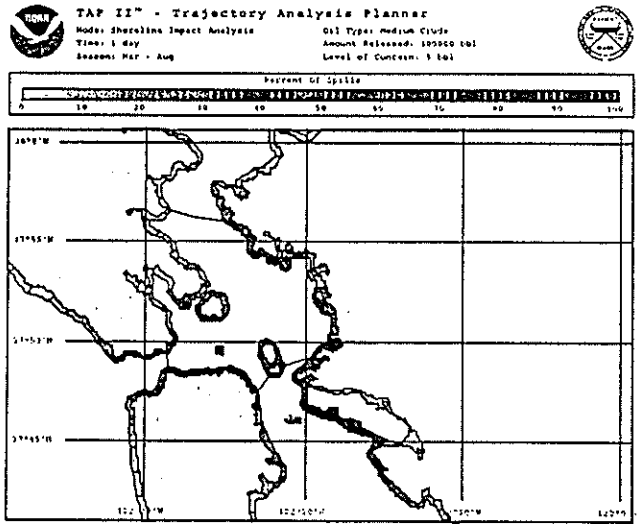
6 hours from start of spill



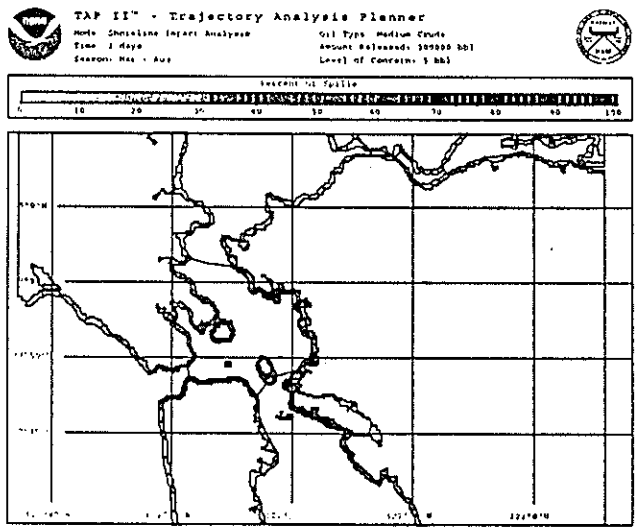
12 hours from start of spill

TAP II Maps for GRP3 Scenario: Spill of 300,000 bbls of crude at Anchorage 9 in the Spring. The shades of grey at each impacted site correspond to a percentage in the legend of the number of spill scenarios (from 500 runs of various wind, tides and currents) that brought more than 5 bbls (= Level Of Concern) of oil to that site in the specified time frame (6 hours or 12 hours).

GRP 3



24 hours from start of spill



48 hours from start of spill

TAP II Maps for GRP3 Scenario: Spill of 300,000 bbls of crude at Anchorage 9 in the Spring. The shades of grey at each impacted site correspond to a percentage in the legend of the number of spill scenarios (from 500 runs of various wind, tides and currents) that brought more than 5 bbls (= Level Of Concern) of oil to that site in the specified time frame (24 hours or 48 hours).

Table of Percent of Spills that bring oil (>5 bbls) to each site from the GRP 3 scenario.

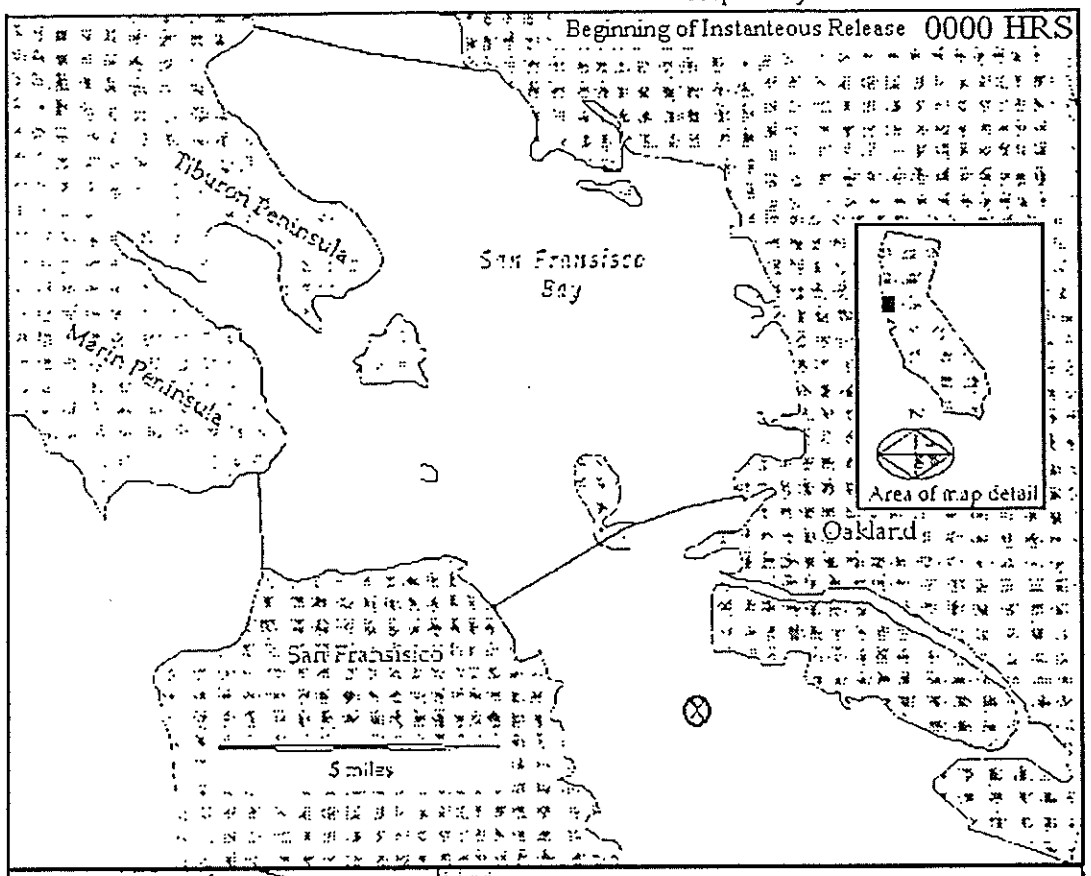
ACP SITE#	ES	SITENAME	LAT W (Deg. Min.)	LONG W (Deg. Min.)	6 HOURS (% prob)	12 HOURS (% prob)	24 HOURS (% prob)
2-351	A	Yerba Buena Island	37 48	122 22	62	86	95
2-353	B/A	Herron's Head Park - India Basin	37 44.3	122 22.5	47	54	58
2-354	B/A	Islais Creek - Pier 94 Saltmarsh	37 44.3	122 22.5	46	54	56
2-400	C	San Francisco Waterfront	37 46	122 23	45	61	69
2-402	B	Alcatraz Island	37 50	122 25	38	56	76
2-302	C	Alameda Eelgrass Beds	37 45	122 16	35	79	95
2-402	B	Alcatraz Island	37 50	122 25	35	53	75
2-458	A	Emeryville Lagoon/Mudflats	37 50	122 29	27	66	86
2-352	B	South Basin, Hunters Point	37 43	122 23	24	27	29
2-151	C	Pt. Doable to Lime Point	37 49	122 30	22	32	55
2-401	B	Pier 39	37 48	122 22	19	40	57
2-153	A	Land's End	37 47	122 30	19	28	51
2-154	A	Cliff House and Seal Rocks	37 47	122 31	15	23	44
2-303	A	San Leandro Bay	37 45	122 13	12	51	82
2-423	C	Angel Island	37 54	122 27	12	34	60
2-304	C	Bay Farm Island Eelgrass Beds	37 44	122 15.5	11	36	64
2-457	A	Berkeley Eelgrass Beds	37 51	122 19	8.6	29	73
2-150	C	Point Bonita and Bonita Cove	37 49	122 31	7.6	16	26
2-148	A	Rodeo Lagoon	37 50	122 32	6	12	22
2-149	A	Bird Island	37 49	122 32	6	12	22
2-155	A	Ocean Beach/Fort Funston	37 45	122 30	4.6	12	23
2-305	A	San Lorenzo Creek to Johnson Landing	37 29	122 02	0.4	3.6	21
2-422	B	Keil Cove	37 55	122 27	0.04	15	24
2-421	C	Tiburon Penninsula	37 54	122 27	0.01	22	37
2-420	A	Richardson Bay Marshes	36 56	122 30	0.01	4.6	10
2-420	A	Richardson Bay Marshes	36 56	122 30	0.01	19	29
2-456	A	Albany Marsh	37 54	122 19		9.4	53
2-453	A	Brook's Island	37 54	122 21.5		21	55
2-455	C	Santa Fe Channel	37 55	122 22		17	48

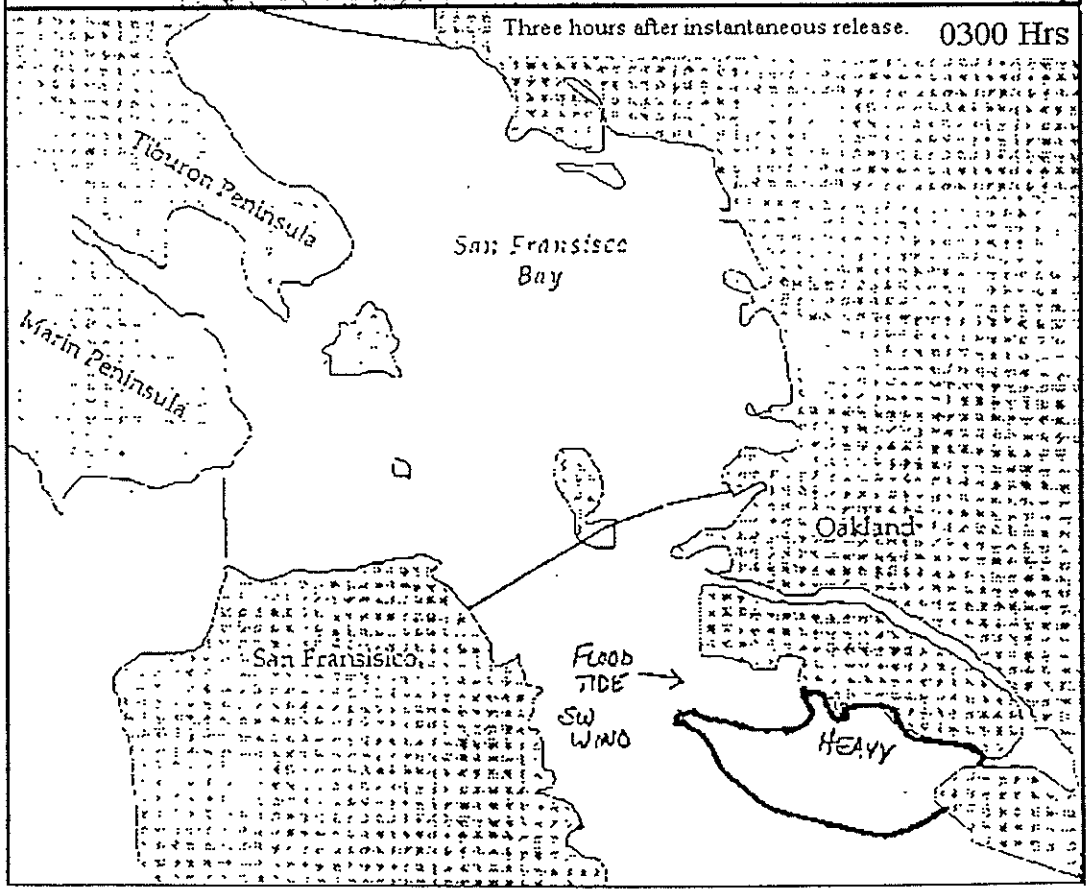
2-451	A	Castro Rocks	37 50	122 24		17	43
2-452	A	Richmond Eelgrass Beds	37 58	122 24		15	37
2-424	B	Paradise Cove	37 54	122 27		15	24
2-501	A	Castro Creek and Marshes	37 58	122 24		11	28
2-454	A	Richmond Inner Harbor/Hoffman Marsh	37 54.5	122 20		4.4	38
2-506	A	San Pablo Bay Eelgrass Bed	37 59	122 25		2.8	6.8
2-551	A	McNear's Beach Marshes	38 00	122 27		2.8	6.8
2-427	A	Marin Islands	37 58	122 28		1.6	3.6
2-502	A	San Pablo Creek Marshes	37 58.5	122 23			4.2
2-503	A	Pinole Pt. Marshes-South	37 59	122 21.6			4
2-504	A	Pinole Pt. Marshes - North	38 05	122 21			2.6
2-425	A	Corte Madera Marshes	38 56	122 30			1.8
2-426	A	San Rafael Creek Marsh	37 58	122 29			1.8
2-583	A	Napa River Marshes	38 12	122 19			0.4
2-156	A	Thornton Beach State Park	37 42	122 30			0.2

Anchorage No. 9 Spill Scenario Map

12,000 Barrels of Alaska North Slope Crude

Use Only as a General Reference.
Oil may move beyond map boundaries.
Prepared by NOAA





Anchorage No. 9 Spill Scenario Map

12,000 Barrels of Alaska North Slope Crude

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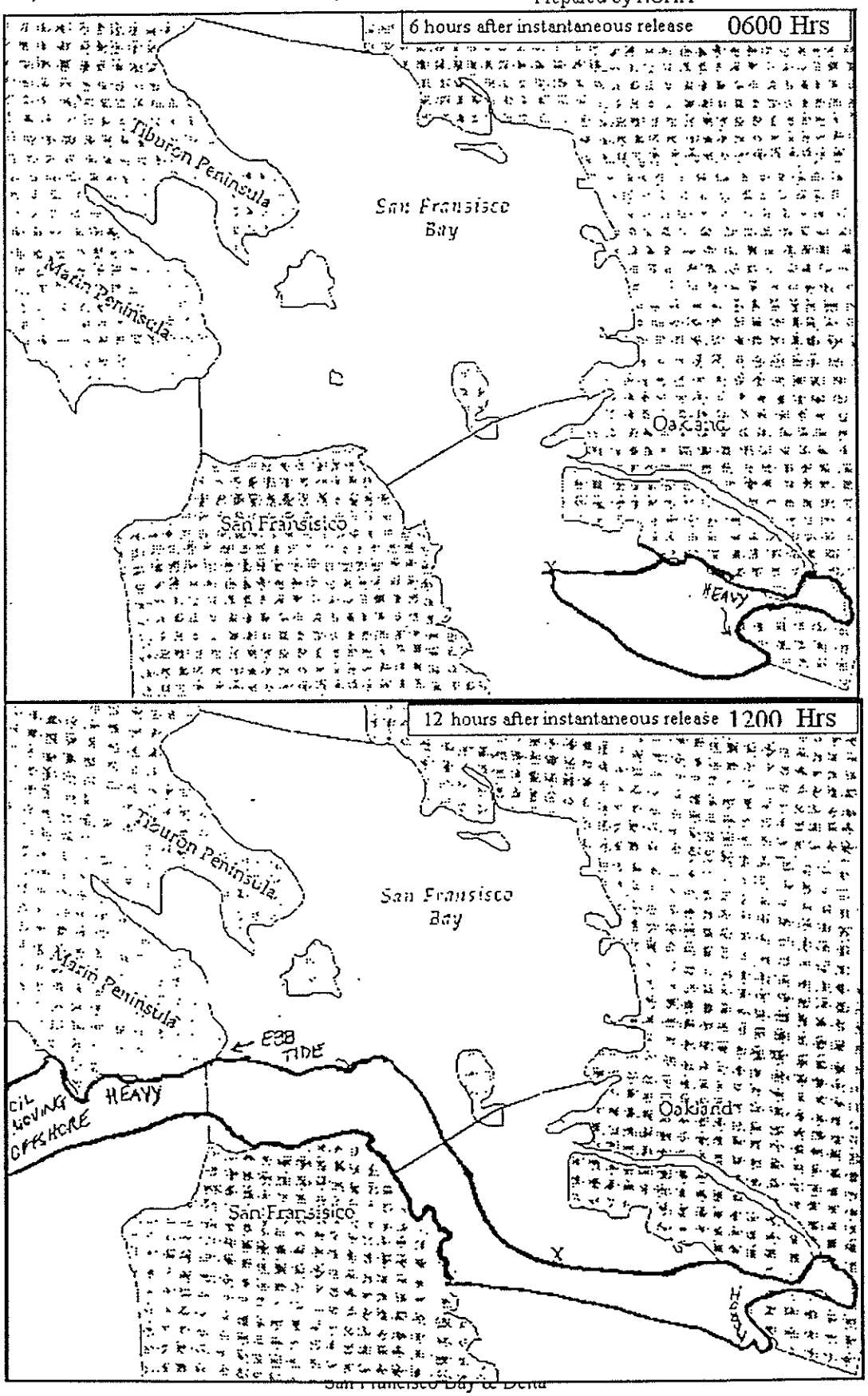

San Francisco Bay & Delta

9973-GRP3-10

Anchorage No. 9 Spill Scenario Map

12,000 Barrels of Alaska North Slope Crude

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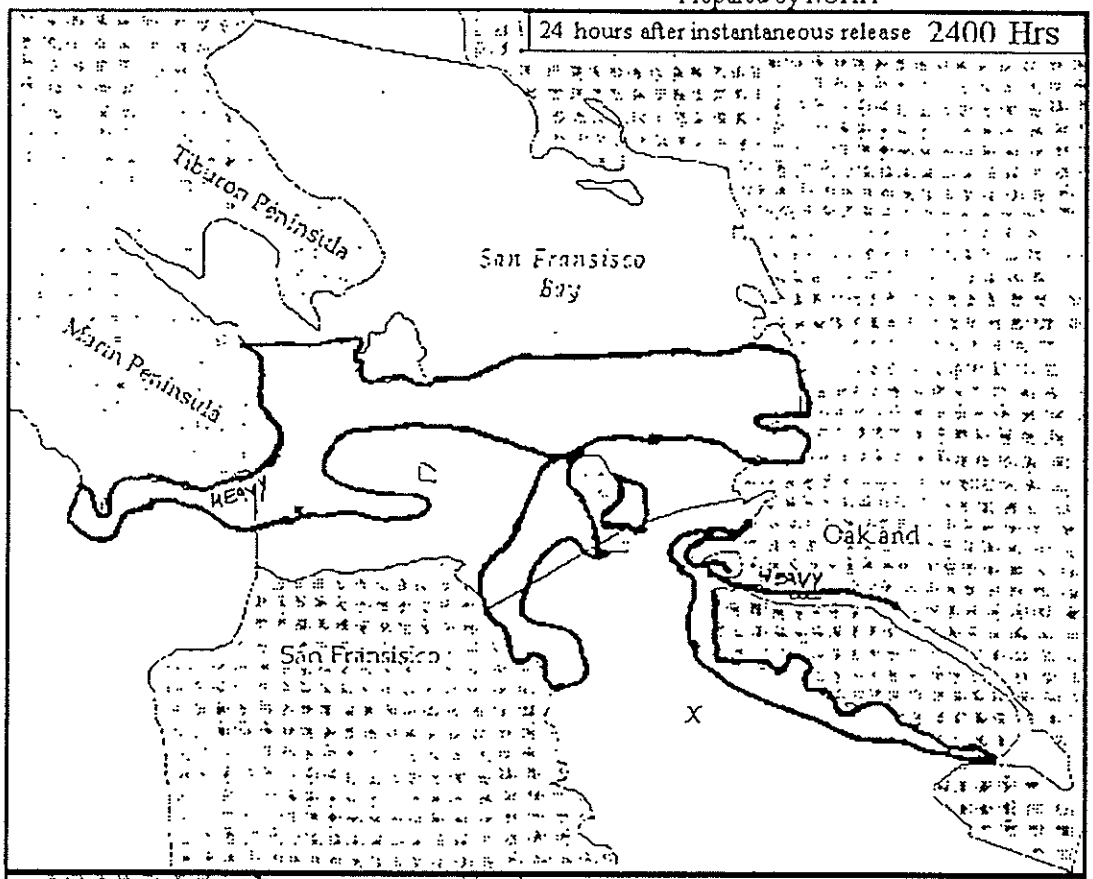

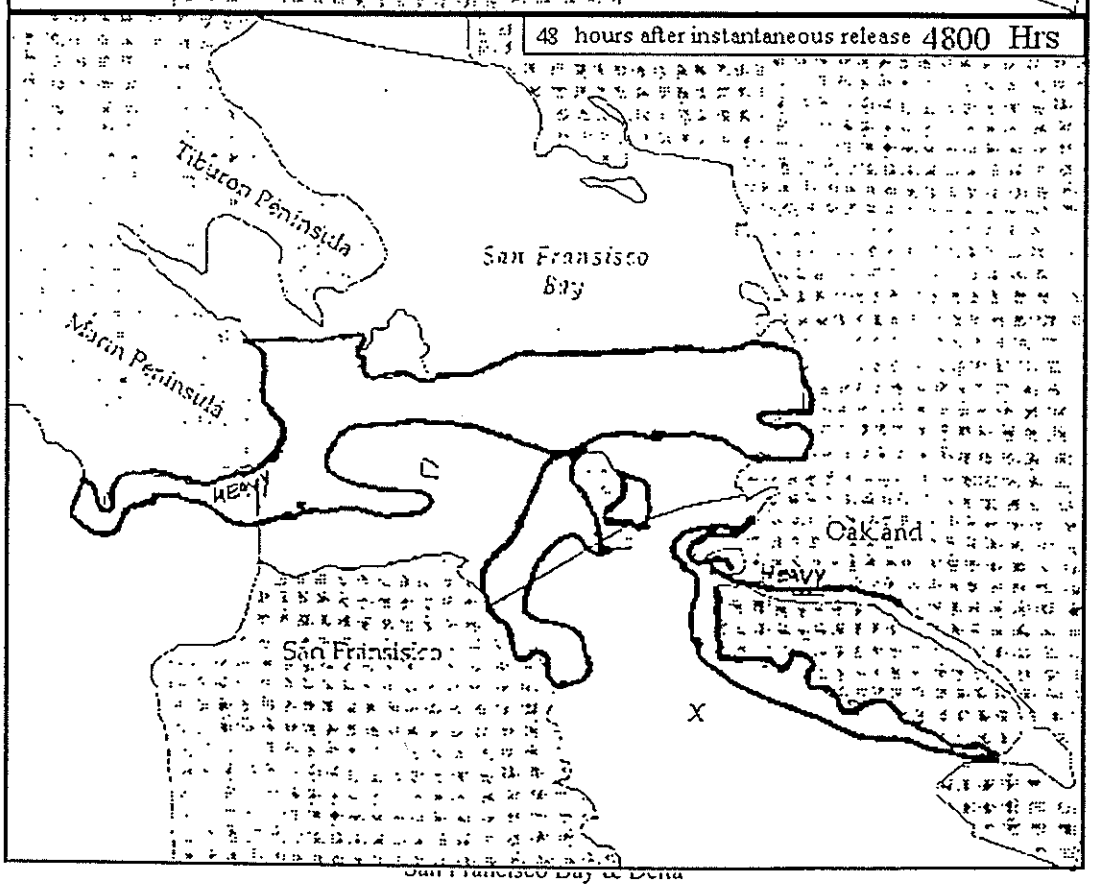

San Francisco Bay & Delta

9973-GRP3-11

Anchorage No. 9 Spill Scenario Map

12,000 Barrels of Alaska North Slope Crude

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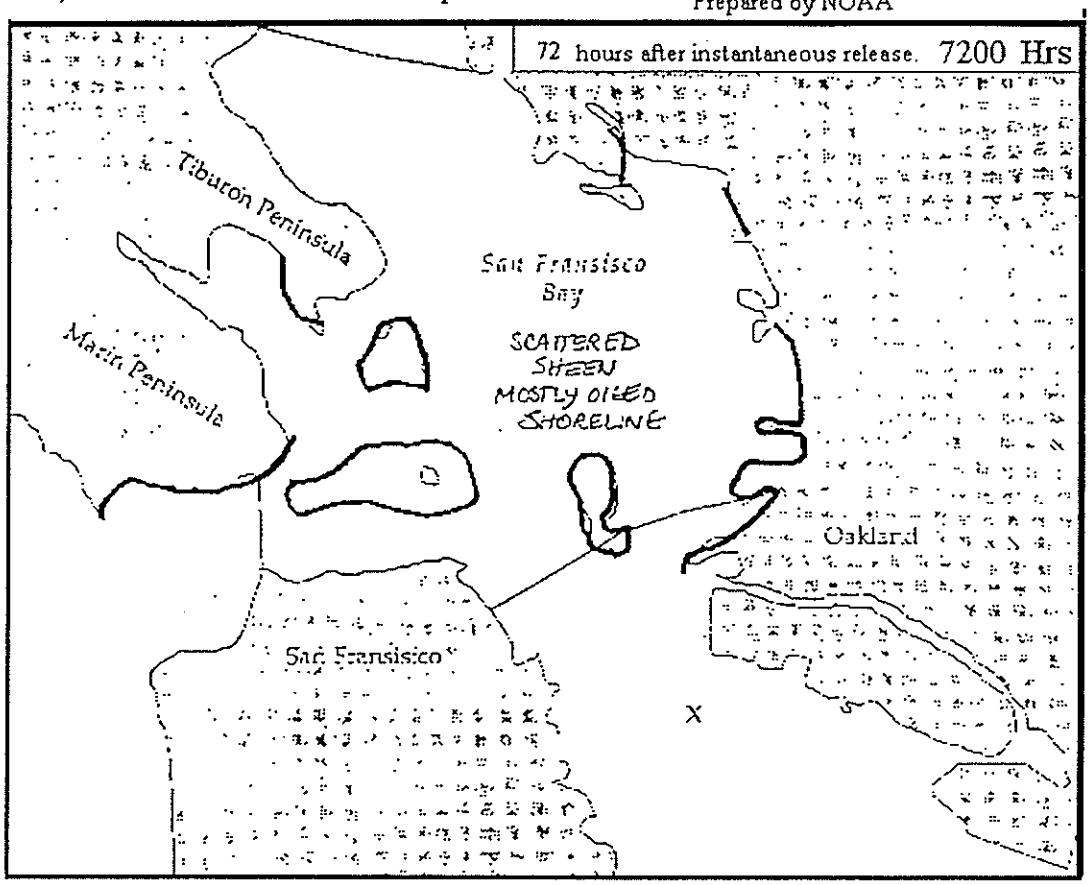

RESPONSE PRIORITIES FOR ANCHORAGE 9 SCENARIO* GRP 3

TIDE AND WIND AT TIME OF INSTANEOUS DISCHARGE	TIME PERIOD OILED (HOURS)	PRIORITY	SITE ID 1996	SITE ID 1998	SITE DESCRIPTION
WINTER SCENARIO	0.00	1			Spill Site Containment
12,000 bbl ANS Crude	0.00	2			On-Water Recovery
Max flood	0-3	3	234	302	Alameda Eelgrass Beds
Wind: 20+ kts. SW to W	3-6	4	235	303	San Leandro Bay
Runoff Unknown	6-12	5	254	352	South Basin, Hunters Point
	6-12	6	256	401	Pier 39
	6-12	7	257	402	Alcatraz Island
	6-12	8	049	151	Point Diablo to Lime Pt.
	6-12	9	048	150	Point Bonita and Cove
	6-12	10	047	149	Bird Island
	6-12	11	046	148	Rodeo Lagoon
	12-24	12	255	351	Yerba Buena Island
	12-24	13	232	458	Emeryville Lagoon/Mudflats
	12-24	14	233	457	Berkely Eelgrass Beds
	24-48	15	045	147	Redwood Creek/Big Lagoon/ Muir Beach
	24-48	16	201	420	Richardson Bay Marshes
	24-48	17	260	456	Albany Marsh
	24-48	18	228	454	Richmond Inner Harbor/ Hoffman Marsh
	24-48	19	261	453	Brooks Island

* Based on the 1995 ACP trajectory

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Alameda Eelgrass Beds - Site Summary

County: Alameda GRP: 3 Latitude 37 45 N Longitude 122 16 W
USGS: Oakland West OSPR Map: Last ACP Update 01/01/2000

SITE DESCRIPTION: (general characterization of site - geomorphology, habitat, exposure, currents)

The bed extends from near the entrance to Ballena Bay to the southerly extension of Park Street in Alameda. The eelgrass beds south of the island of Alameda total about 30 acres. The densest portion of the bed is near Ballena Bay and becomes more sparse along a sand bar running to the east about 150 yards off shore. The beds are in 8 to 10 feet of water and would not necessarily be exposed to oil on all low low tides.

SEASONAL and SPECIAL RESOURCE CONCERNS (seasonal issues, special status spp present, water intakes)

Eelgrass beds are of concern thoughout the year but particularly November to April during herring spawning.

RESOURCES AT RISK

HABITATS AT RISK: (biological habitats including time of year when most sensitive and vulnerable)

Oil readily sticks to eelgrass. The beds are an important spawning substrate for herring from November through April, and eelgrass is the sole food source for Black brant during this time.

SPECIES/COMMUNITIES AT RISK (Brief summaries including time of year when most sensitive/vulnerable)

CULTURAL and ARCHEOLOGICAL SENSITIVITIES

For specific information on historic or cultural resources in this area, contact the California Dept of Parks and Recreation - Office of Historic Preservation, Northwest Information Center, (Leigh Jordan, Sonoma State College (707-664-2494))

KEY SITE CONTACTS - type: E-ntry/access; B-iological expertise; L-ogistical; C-ultural; T-rustee; or O-ther assistance

Type	Name	Organization	Phone	FAX
BTL	Diane Watters	Calif Dept of Fish and Game	(650) 688-6357	

2-302 -C Alameda Eelgrass Beds - Site Strategy

County: Alameda CHART 18649/18650 Entrance to SF Bay Latitude 37 45 N Longitude 122 16 W

SITE LOCATION: boundaries, landmarks, area to locate and delimit the site
The bed extends from near the entrance to Ballena Bay to the southerly extension of Park Street in Alameda.

HAZARDS and RESTRICTIONS - Air, Water & Ground - things to beware of when approaching or at site
Water is relatively shallow.

POTENTIAL OIL IMPACTS - CONCERNS/ ADVICE to RESPONDERS: (regarding sensitive species present, penetration into marshes or sediments, burial, organism burrows, tidal channel spreading, watertable limitations, collateral impacts)
The concern is that oil will readily stick to any eelgrass blades which come in contact with the oil. The oil is disruptive to the eelgrass and would be damaging to any herring eggs spawned during the herring spawning season: November to March. The strategy is to deflect the oil past this area to collection setup to the east in San Leandro Channel.

SITE STRATEGIES

Strategy 2-302.1 (USCG Strategic Objective: 7) Dates: SISRS 05/18/1999 Approved last tested ACP date 01/01/2000

Objective or Prevention Condition
Deflect oil past eelgrass bed and toward collection / protection deployments of San Leandro Bay: 2-303.

Technique Details Check here means " No strategy diagram": ( ) Check here means "Contact CCC": ( )
Cascade deflection boom from the mouth of Ballena Bay at a southeasterly angle to direct oil past the eelgrass beds and the southern side of Alameda Island toward the San Leandro Bay channel.

Table of Response Resources

strategy	hboom	swpbm	xboom	Anchoring	sorb	Bb/skif	skimmers -No	special equip	deploy personnel	tending personnel	SO
2-302.1	3000			12/22+/danforth		2 / 0			6	twice daily checks.	7

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)
This site is accessible only by water. The beds are about 200 yards from Alameda marina mouth. To drive to the nearest beach, follow the signs to Alameda from I-880. Exit on Webster and continue to the terminus of Webster at Crown Beach: right (west) on Central to 4th street to Ballena Bay and Ballena Isle Marina or left to 8th street which becomes Shore Line Drive.

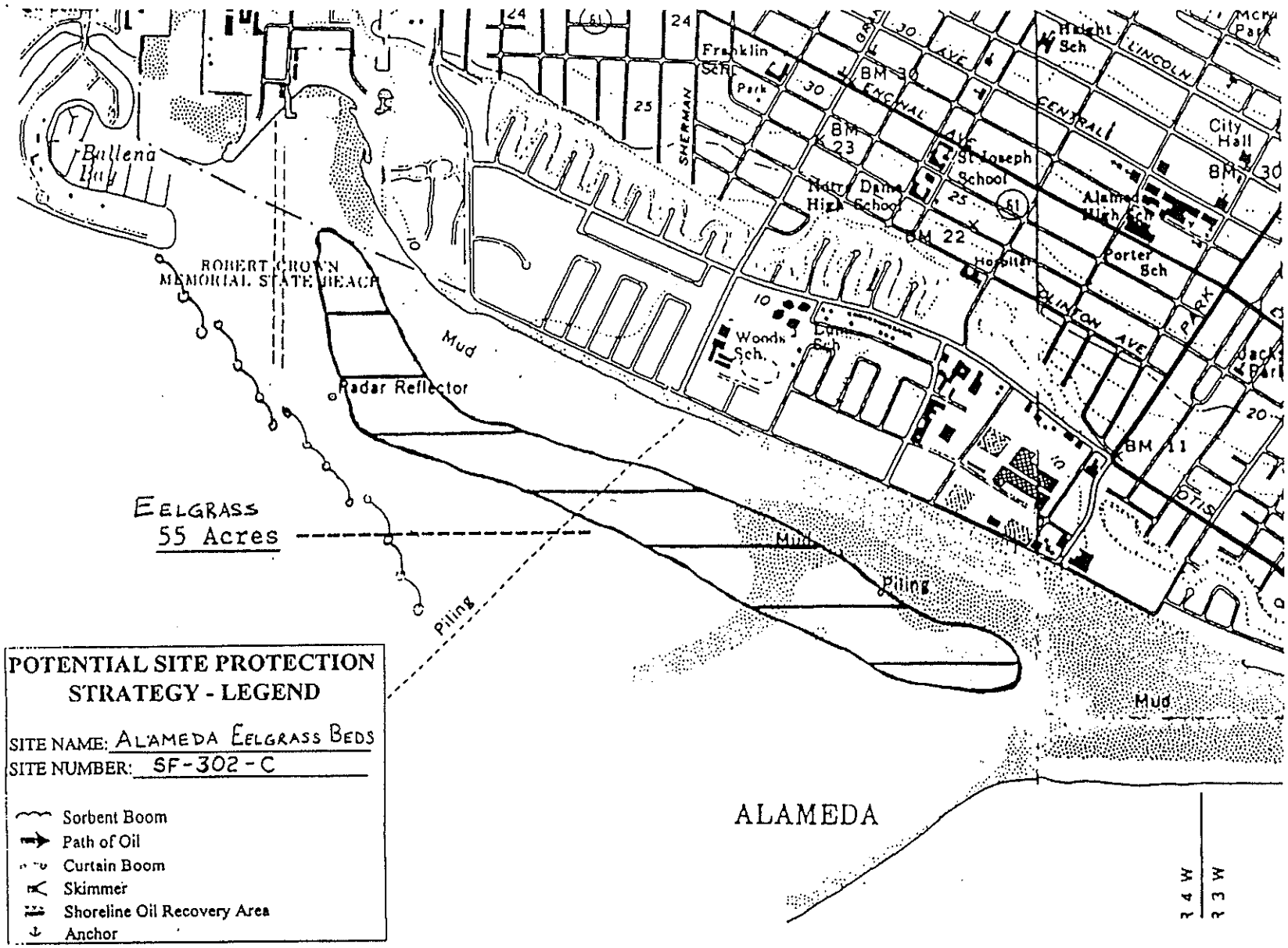
LAND ACCESS LEVEL: (foot only, 2WD, large truck, 4WD, road limitations...seasonal..locked gates)
ready access to the nearby shoreline

WATER LOGISTICS:
Access limitations: depth, obstructions: none known
Boat Launching, Loading, Docking and Services Available: Public launching at the end of Lincoln off of Central. Docking available at Ballena Isle Marina just to the west.

FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:
The Ballena Isle Marina near by is the most convenient boat facility to support this operation. Crown Beach (EBRP) may be useful for staging. The Alameda Ferry Slip on Bay Farm Island to the south is also a good site to stage boom and support equipment. Also, San Leandro Harbor, just south of the Oakland Airport is a small boat harbor accommodating 500 boats with a minimum of 15 guest slips. The channel leading into the harbor is dredged and has a controlling depth of 5-6 ft. It is marked by day beacons and two lights, and the northern most light has a fog signal. There is a yacht club and the harbor master's office is on the southwest side.

COMMUNICATIONS LIMITATIONS / PROBLEMS: X No Problems Radio Pager Cell phone

ADDITIONAL COMMENTS


POTENTIAL SITE PROTECTION STRATEGY - LEGEND
SITE NAME: ALAMEDA EELGRASS BEDS
SITE NUMBER: SF-302-C
Sorbent Boom
Path of Oil
Curtain Boom
Skimmer
Shoreline Oil Recovery Area
Anchor
EELGRASS
55 Acres
ROBERT CROWN MEMORIAL STATE BEACH
Ballena Bay
Radar Reflector
Mud
Piling
Franklin Sch
Park
SHERMAN
ENCINAL AVE
CENTRAL AVE
LINCOLN
St Joseph School
Notre Dame High School
Hospital
Woods Sch.
Lum Sch
Alameda High Sch
Porter Sch
CLINTON AVE
PARK
OTIS
City Hall
BM 23
BM 22
BM 11
ALAMEDA
R 4 W
R 3 W

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San Leandro Bay - Site Summary

County: Alameda
USGS: Oakland E.,Hntrs Point,San Leandro

GRP:
OSPR Map:

Latitude 37 45 N Longitude 122 13 W
Last ACP Update 07/01/96

2-303 -A

SITE DESCRIPTION: (general characterization of site - geomorphology, habitat, exposure, currents)

This site includes all of San Leando Bay and the San Leandro Channel, including Elsie Roemer Bird Sanctuary is located at the southeast end of Crown Beach on Alameda, west of the Alameda-Bay Farm Island bridge. This shallow bay between Alameda and Bay Farm Islands has extensive mudflats and well developed saltmarsh, including the 50 acre Arrowhead Marsh at the south end. The west and south margins are part of San Leandro Bay Regional Shoreline - EBRP. The Oakland Estuary feeds into the north end, and San Leandro Channel feeds in from the west. San Leandro Creek empties to the bay at its southeast corner. The Airport Marina is along the southwest margin.

SEASONAL and SPECIAL RESOURCE CONCERNS (seasonal issues, special status spp present, water intakes)

The saltmarshes, mudflats, and bird sanctuary are an "A" priority all year. Several Special Status Species including the endangered California clapper rail, the endangered salt marsh harvest mouse, and rare sensitive plants are present in the 50 acre Arrowhead Marsh.

RESOURCES AT RISK

HABITATS AT RISK: (biological habitats including time of year when most sensitive and vulnerable)

The main habitat of concern is the 50 acre Arrowhead Marsh. There are also chord grass marshes along the margins. There are extensive mudflats. The gravelly substrate along the southwest margin support extensive cockle beds. All these habitats are very sensitive to oiling and cleanup is very impractical.

SPECIES/COMMUNITIES AT RISK (Brief summaries including time of year when most sensitive/vulnerable)

All of the marshes, mudflats, and shallow water areas within San Leandro Bay are habitat for waterfowl, ng birds, and shorebirds, and the Elsie Roemer Bird Sanctuary is located at the southeast end of Crown Beach on Alameda, west of the lameda-Bay Farm Island bridge. The endangered California clapper rail breeds here. Brown pelican and least tern forage ere.

The endangered saltmarsh harvest mouse is also populates these marshes.

CULTURAL and ARCHEOLOGICAL SENSITIVITIES

There are probably historic and cultural sites present. For specific information on historic or cultural ources in this area, contact the California Dept of Parks and Recreation - Office of Historic Preservation, Northwest Information Center, igh Jordan, Sonoma State College (707-664-2494))

KEY SITE CONTACTS - type: E-ntry/access; B-iological expertise; L-ogistical; C-ultural; T-rustee; or O-ther assistance

Type	Name	Organization	Phone	FAX
ELO	Dispatch EBRP	East Bay Regional Park District	(510) 792-0222	

2-303 -A San Leandro Bay - Site Strategy

County: Alameda	CHART 18649/18650 Entrance to SF Bay	Latitude 37 45 N	Longitude 122 13 W

SITE LOCATION: boundaries, landmarks, area to locate and delimit the site
This site includes all of San Leando Bay and the San Leandro Channel, including Elsie Roemer Bird Sanctuary is located at the southeast end of Crown Beach on Alameda, west of the Alameda-Bay Farm Island bridge.

HAZARDS and RESTRICTIONS - Air, Water & Ground - things to beware of when approaching or at site
Beware of shallows.

POTENTIAL OIL IMPACTS - CONCERNS/ ADVICE to RESPONDERS: (regarding sensitive species present, penetration into marshes or sediments, burial, organism burrows, tidal channel spreading, watertable limitations, collateral impacts)
The main concern are the very sensitive marshes and mudflats here, which are is almost impossible to cleanup. The intention is to prevent oil from entering by diverting it to collection sites on the north shore of Bay Farm Island near the bridge. Avoid disturbing or trampling marsh vegetation and don't trample oil into the mud.

SITE STRATEGIES

Strategy 2-303.1

(USCG Strategic Objective: 5,6) Dates: SISRS 07/01/1997 Approved last tested ACP date 07/01/1997

Objective or Prevention Condition
Direct oil away from Alameda shore to shoreside collection at Bay Farm Island Bridge.

Technique Details Check here means " No strategy diagram": ( ) Check here means "Contact CCC": ( )
Deploy deflection boom across San Leandro Channel using both intertidal barrier boom and harbor boom to move oil to collection areas and exclude oil from San Leandro Bay marshes.

Flood tide - Using 1200 ft. of harbor boom and 250 ft of intertidal barrier boom (or swamp boom) connected together, place boom across channel at approximately a 45 deg. Angle. Place intertidal barrier boom on north side of channel across mudflat, extending harbor boom across channel to form a collection pocket on south side of channel at inlet next to the Alameda/Bay Farm Island bridge.

Ebb Tide:- If little to no oil is inside San Leandro Bay; flood tide harbor boom can remain in place. If strong currents exist the boom may be opened, using the boom to line the marshes on either side of the channel, allowing oil to move out of the bay. If a significant amount of oil is present inside the bay; leave existing flood tide harbor boom in place, collect oil on the north bank.

A secondary line of defense in the San Leandro Channel may be required. This could involve sorbent boom behind harbor boom or additional harbor boom and skimmers working near the bridge. Specific equipment requirements will be determined based on oil, current, and weather conditions during the incident.

Strategy 2-303.2

(USCG Strategic Objective: 7) Dates: SISRS 07/01/1997 Approved last tested ACP date 07/01/1997

Objective or Prevention Condition
Divert oil away from Elsie Romer Bird Sanctuary to collection in the San Leandro Channel.

Technique Details Check here means " No strategy diagram": ( ) Check here means "Contact CCC": ( )
Deploy 1500 ft. of harbor boom from the Park St. jetty on Alameda. Depending on weather and spill conditions, this boom can be used to either deflect oil away from the marsh east of jetty and into channel, or to deflect oil to the sandy beach into a collection area. SPS skimmer in San Leandro Channel may be replaced by portable skimming head operated from shore with Vac Truck or other shore

Strategy 2-303.3

(USCG Strategic Objective: 5) Dates: SISRS 07/01/1997 Approved last tested ACP date 07/01/1997

Objective or Prevention Condition
Exclude oil from entering the bay via Oakland Estuary.

Technique Details Check here means " No strategy diagram": ( ) Check here means "Contact CCC": ( )
Protective measures on the north channel (Oakland Estuary) entrance to San Leandro Bay may also be necessary depending on the size and location of the spill. Spills in SF Bay should be confronted in the Oakland Inner Harbor to prevent oiling of the inner harbor and San Leandro Bay. Spills in the harbor should be confronted in the Park Street Bridge Reach. Currents in the Park St. Bridge Reach are very fast. Specific strategies have not been developed for these locations, although extensive use and deployment of several thousand feet of harbor boom, boom boats, skimmers and vacuum trucks may be required. Diagonal booming will be necessary to move oil out of swift water to slower shoreside collection pockets and eddies.

Table of Response Resources

strategy	hboom	swpbm	xboom	Anchoring	sorb	Bb/skif	skimmers -No	special equip	deploy personnel	tending personnel	SO
2-303.1	1200	300	250 tide	5/22+/daforth & chain	200	2/1	portable &VT	1 Bboat: very shallow draft	9 (30 support	2	5,6
2-303.2	1500			4/22+/danforth		2/1	sps	1	8	shore resupport	7
2-303.3	3000			10/22+/danforth & chain	100	2/1	SPS or mobil	1			5

LOGISTICS

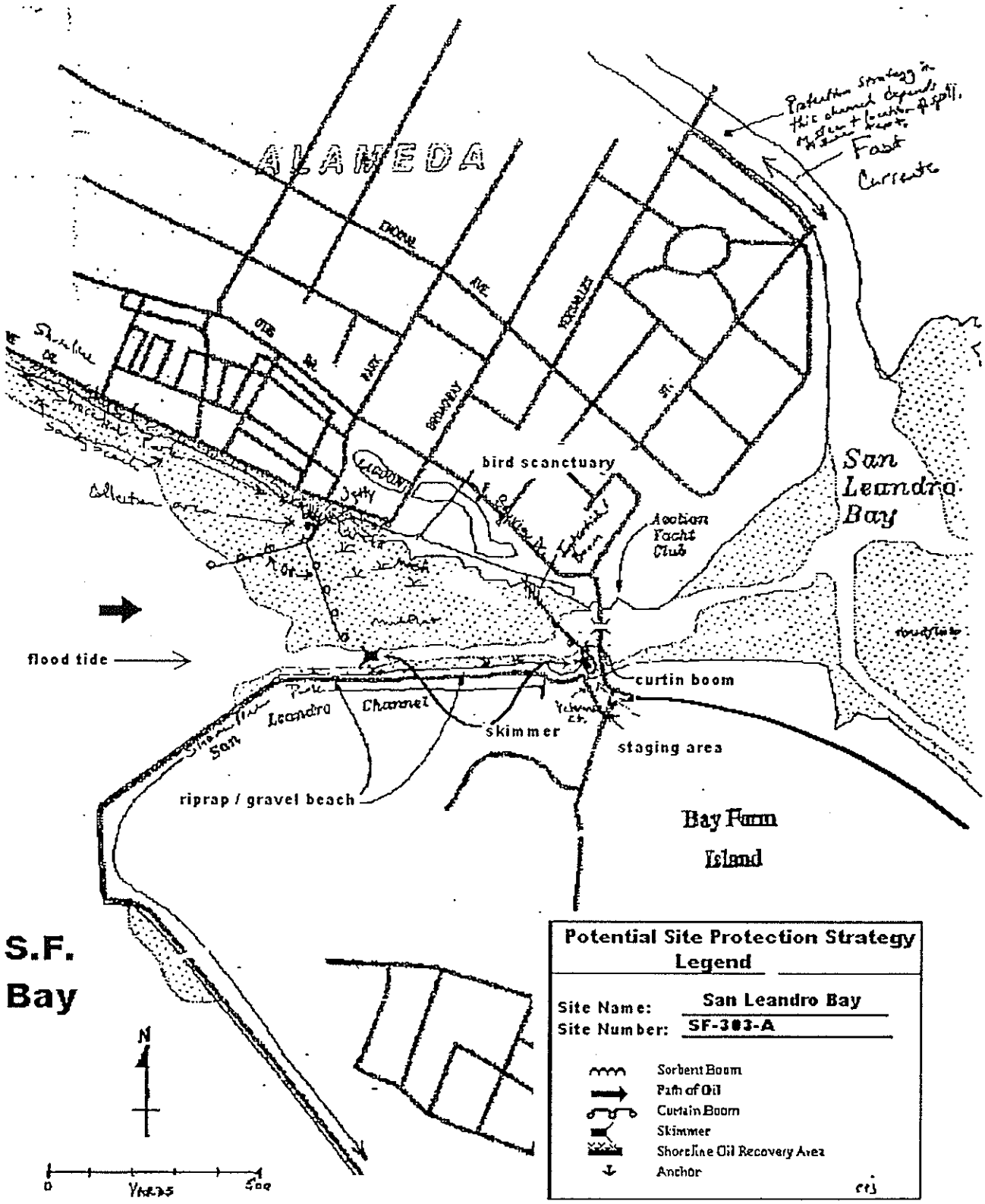
DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)
By vehicle, exit I-880 at Hegenberger Rd and proceed bayward (toward airport). Turn right (north) on Doolittle Dr (hwy 61) which runs along the west side of San Leadro Bay and crosses the San Leandro Channel. By boat, from the tip of Alameda Island, the bay is at the east end of the Island and may be approached via the Oakland Estuary or, preferably on the south side of the island, via the San Leandro

LAND ACCESS LEVEL: (foot only, 2WD, large truck, 4WD, road limitations...seasonal..locked gates)
good on west shore

WATER LOGISTICS:
Access limitations: depth, obstructions: exceedingly shallow.
Boat Launching, Loading, Docking and Services Available: There are launches in Oakland Estuary and at the southwest of Alameda Island at the end of Lincoln St. All services in Oakland Estuary.

FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:
Good staging at the foot of Bay Farm Bridge. Also at Crown Park, San Leandro Regional Shoreline, and Bay Farm Ferry Landing. Field Post at USCG, Alameda. Foss Environmental Hq is at the west end of Alameda.

COMMUNICATIONS LIMITATIONS / PROBLEMS: X No Problems Radio Pager Cell phone


ALAMEDA
bird scanctuary
San Leandro Bay
Aeolian Yacht Club
flood tide
curtin boom
skimmer
staging area
riprap / gravel beach
Bay Farm Island
S.F. Bay
Potential Site Protection Strategy Legend
Site Name: San Leandro Bay
Site Number: SF-303-A
Sorbent Boom
Path of Oil
Curtain Boom
Skimmer
Shoreline Oil Recovery Area
Anchor
N
0
Yards
500

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Bay Farm Island Eelgrass Beds - Site Summary

County: Alameda GRP: 3,4 Latitude 37 44 N Longitude 122 15.5 W
USGS: Hunters Point / San Leandro OSPR Map: 154 155 Last ACP 1/01/1998

SITE DESCRIPTION: (general characterization of site - geomorphology, habitat, exposure, currents)

This site extends from the tip of Bay Farm Island at San Leandro Channel (Ferry landing) to the next point south. This reach is a shallow cove with a rip-rap margin and shallow water of up to 15' deep. It is a natural collection area for debris. The eel grass beds begin about 50' off the shore and are about 200 yards long.

SEASONAL and SPECIAL RESOURCE CONCERNS (seasonal issues, special status spp present, water intakes)

This eelgrass bed has A-level protection priority at all times. Eelgrass is a prime herring spawning habitat from November though February.

RESOURCES AT RISK

HABITATS AT RISK: (biological habitats including time of year when most sensitive and vulnerable)

The shallow cove is habitat for eelgrass and all associated species. Oil readily sticks to the silicacious surface of eelgrass. Eelgrass is a favored substrate for herring spawning November through April. It is also the sole food source for black brant during this same period.

SPECIES/COMMUNITIES AT RISK (Brief summaries including time of year when most sensitive/vulnerable)

CULTURAL and ARCHEOLOGICAL SENSITIVITIES

There are probably historic and cultural sites present. For specific information on historic or cultural resources in this area, contact the California Dept of Parks and Recreation - Office of Historic Preservation, Northwest Information Center, (Leigh Jordan, Sonoma State College (707-664-2494))

KEY SITE CONTACTS - type: E-ntry/access; B-iological expertise; L-ogistical; C-ultural; T-rustee; or O-ther assistance

Type	Name	Organization	Phone	FAX
EL	City of Alameda, PD	Alameda Police -non emergency	(510) 748-4508	
TB	Diane Watters	Calif Dept of Fish and Game	(650) 688-6357	
ELBO	City of Alameda, Parks	Dept Parks and Recreation	(510) 748-4565	
B	Dr Peter Baye	USFWS Ecological Services	(707) 562-3003	

2-304 -C Bay Farm Island Eelgrass Beds - Site Strategy

Latitude	Longitude
37 44 N	122 15.5 W

County: Alameda CHART 18649/18650 Entrance to SF Bay

SITE LOCATION: boundaries, landmarks, area to locate and delimit the site
This site extends from the tip of Bay Farm Island at San Leandro Channel (Ferry landing) to the next point south.

HAZARDS and RESTRICTIONS - Air, Water & Ground - things to beware of when approaching or at site
Riprap poses slip, trip and fall hazards. Vessels beware of shallows at margins.

POTENTIAL OIL IMPACTS - CONCERNS/ ADVICE to RESPONDERS: (regarding sensitive species present, penetration into marshes or sediments, burial, organism burrows, tidal channel spreading, watertable limitations, collateral impacts)
Primary concern is oiling of eelgrass and its impacts on wildlife. This is a natural collection area for flotsam and can function as an oil collection site. Oil may become imbedded in riprap.

SITE STRATEGIES

Strategy 2-304.1

(USCG Strategic Objective: 7) Dates: SISRS 10/05/1997 Approved last tested ACP date 09/01/1998

Objective or Prevention Condition
Minimize oil moving into the area by positioning a deflection boom from the runway point to diver oil borne on currents past.

Technique Details Check here means " No strategy diagram": ( ) Check here means "Contact CCC": ( )
This strategy is most appropriate if very low tides are likely to expose eelgrass. Deploy 1000'+ from the point at the end of the runway parallel to the shoreline to deflect oil past the pocket of the cove. This strategy will require heavy anchoring since current is very strong (2+knt at point); previous deployment attempts have failed if not properly anchored.

Strategy 2-304.2

(USCG Strategic Objective: 6) Dates: SISRS 10/05/1997 Approved last tested ACP date 01/01/1998

Objective or Prevention Condition
Maximize oil capture at this locale with deflection to shore skimming unit.

Technique Details Check here means " No strategy diagram": ( ) Check here means "Contact CCC": ( )
a) For ebb tide: deploy 1000'8X8+ Hboom at an angle to direct oil to shore about 200'south of ferry landing. Complete with a lined capture and hold pocket (2000'4X4+Hboom). Line shore with 4X4+ and/or sorbent boom to keep oil from imbedding in riprap. Deploy additional 1000'Hboom to cascade oil into collection.

b) For flood tide, skimmer and collection booms will need to be positioned in the pocket of the cove to effect recovery.

Table of Response Resources

strategy	hboom	swpbm	xboom	Anchoring	sorb	Bb/skif	skimmers -No	special equip	deploy personnel	tending personnel	SO
2-304.1	1000			6/22#+ danforths/ 15'+ chain		1/1			4 PERSONS	continuous tending 2	7
2-304.2	2000	2000		9/22#+/danforth & chain + stakes		2/2	portable & VT	1	8 PERSON	continuous skim/tend	6

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)
Land access is from I-880: exit at High St, continue south (left) on Doolittle across San Leandro Bay and then continue right (west) on Mecartney Rd bay front, Shoreline Park. By water the site is about a mile southeast from the marina at Robert Crown State Beach.

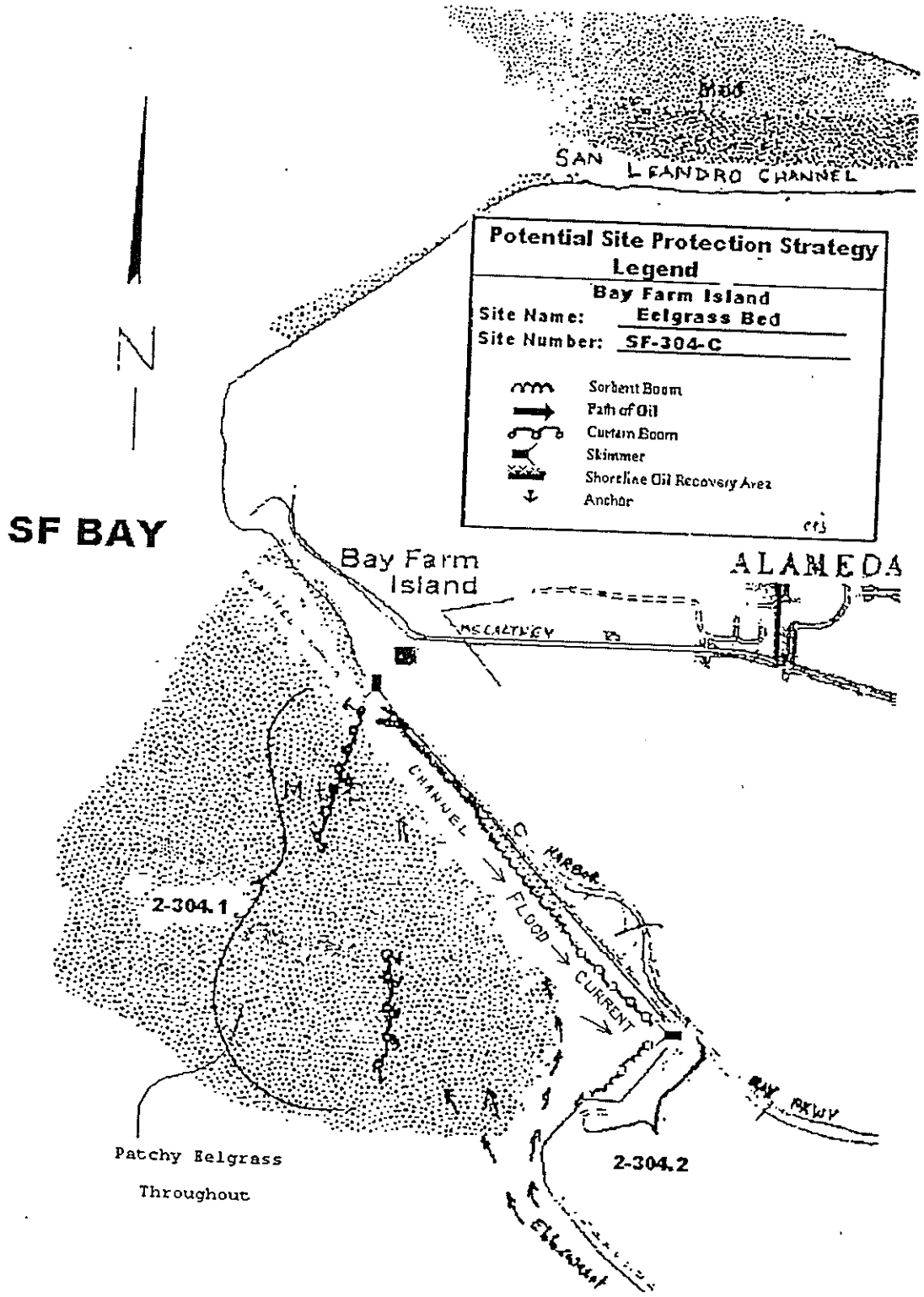
LAND ACCESS LEVEL: (foot only, 2WD, large truck, 4WD, road limitations...seasonal..locked gates)
ALL

WATER LOGISTICS:
Access limitations: depth, obstructions: GOOD WATER
Boat Launching, Loading, Docking and Services Available: Launch and moorage across at Ballena Isle Marina, Alameda.

FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:
Shoreline Park and Crown Beach can provide field local support and as deployment sites. EBRP facilities at Crown Beach, Alameda may serve well as a field post.

COMMUNICATIONS LIMITATIONS / PROBLEMS: X No Problems Radio Pager Cell phone

ADDITIONAL COMMENTS


Potential Site Protection Strategy
Legend
Bay Farm Island
Site Name: Eelgrass Bed
Site Number: SF-304-C
Sorbent Boom
Path of Oil
Curtain Boom
Skimmer
Shoreline Oil Recovery Area
Anchor
N
SF BAY
SAN LEANDRO CHANNEL
Bay Farm Island
ALAMEDA
MCCARTHY
CHANNEL
HARBOR
FLOOD
CURRENT
BAY PKWY
2-304.1
2-304.2
Patchy Eelgrass
Throughout

Yerba Buena Island - Site Summary

2-351 -A

County: San Francisco
USGS: Oakland, West

GRP: 3 Latitude 37 48.5 N Longitude 122 21.7 W
OSPR Map: 055 Last ACP Update 07/01/94

SITE DESCRIPTION: (general characterization of site - geomorphology, habitat, exposure, currents)

Yerba Buena Island is a 338' high, 0.8 X 0.5 mile, rocky island on highway 80 between Oakland and San Francisco. Yerba Buena Island lies between the two spans of the Oakland Bay Bridge. This site is a cobble beach immediately west of the lighthouse on the south side of the island. There is access for foot traffic from parking lot above vice-admiral's house. Walk south to cliff or lighthouse and descend to beach. There is a boat launch at the Treasure Island Yacht Club.

SEASONAL and SPECIAL RESOURCE CONCERNS (seasonal issues, special status spp present, water intakes)

"A" protection priority during harbor seal pupping season 15 March to 10 June, "B" priority balance of the year.

RESOURCES AT RISK

HABITATS AT RISK: (biological habitats including time of year when most sensitive and vulnerable)

Harbor seal rookery during spring when 30 to 50 seals use the site when tide is below +3 feet above mean lowere low water. 100 to 250 seals haul out at this site during the winter.

SPECIES/COMMUNITIES AT RISK (Brief summaries including time of year when most sensitive/vulnerable)

CULTURAL and ARCHEOLOGICAL SENSITIVITIES

For specific information on historic or cultural resources in this area, contact the California Dept of Parks and Recreation - Office of Historic Preservation, Northwest Information Center, (Leigh Jordan, Sonoma State College (707-664-2494))

KEY SITE CONTACTS - type: E-ntry/access; B-iological expertise; L-ogistical; C-ultural; T-rustee; or O-ther assistance

Type	Name	Organization	Phone	FAX
B	Diane Kopec	Earth Island Institue (seals)		
	C. Spencer	San Francisco State Universtiy	(415) 252-0291	
B	Peter Baye	U S Army Corps of Engineers	(415) 744-3322	

2-351 -A Yerba Buena Island - Site Strategy

County: San Francisco CHART Entrance to San Francisco Bay Latitude 37 48.5 N Longitude 122 21.7 W

SITE LOCATION: boundaries, landmarks, area to locate and delimit the site Update

Yerba Buena Island is a 338' high, 0.8 X 0.5 mile, rocky island on highway 80 between Oakland and San Francisco.

HAZARDS and RESTRICTIONS - Air, Water & Ground - things to beware of when approaching or at site

Potential for 3 foot seas. Rocky shoreline,

POTENTIAL OIL IMPACTS - CONCERNS/ ADVICE to RESPONDERS: (regarding sensitive species present, penetration into marshes or sediments, burial, organism burrows, tidal channel spreading, watertable limitations, collateral impacts)

Injury and death to be expected if harbor seal pups inhale or ingest oil. There is high risk of pups ingesting oil while nursing if mothers become oiled.

SITE STRATEGIES

Strategy 2-351.1

(USCG Strategic Objective: 8&7) Dates: SISRS Approved last tested ACP date 02/06/1999

Objective or Prevention Condition

Prevent oiling of harbor seals and rocks near where they haul out. Avoid driving hauled out harbor seals into the water.

Technique Details Check here means " No strategy diagram": ( ) Check here means "Contact CCC": ( )

Deploy 3,000 feet of harbor boom parallel to the shoreline around the south end of the island to keep oil off the pocket beaches just west of lighthouse point. Care must be taken to prevent oil from getting behind the boom at either end. A 200 foot deflection boom should be in place at the west end of the boom during the flood tide. A similar deflection may be necessary at the east end of the boom under some wind and tide conditions.

Anchoring Recommendations: The east end of the boom may be fastened to the southwest corner of the Coast Guard Station or anchored off the rocky point between the station and the lighthouse. The west end of the boom should be anchored west of the end and gravel beaches but south east of the western span of the Oakland Bay Bridge. The east end of the boom may be fastened to the USCG station seawall/pier if prior permission is obtained from the commanding officer of the Coast Guard Station. This is most rapidly accomplished through the Coast Guard's Marine Safety Office in Alameda.

Few midpoint anchors are needed where the boom is deployed parallel to straight shorelines. Although the tidal currents are strong they run parallel to the shore in these areas. Midpoint anchors are needed primarily to keep the boom off the headland below the lighthouse. Danforth anchors are satisfactory in the soft bottoms off the beaches where seals haul out, but Northhill anchors should be used on the rocky bottom below the lighthouse. The boom may be attached to the dolphin pilings off the beaches. Large eye bolts on the rocky point below lighthouse and a small rocky point west of seal haulout beach could also be used for anchoring.

If booms with incompatible end connectors are used they should be overlapped 100 ft. If fence boom is used it should be used at the east end near the Coast Guard docks, and deployed in 500 foot pieces and connected on scene to prevent the twisting to which this boom is prone when towed in long segments. Midpoint and down current anchors can be adjusted after the boom is in deployed. Use the crown line to tow anchors offshore or down current to end of the scope on the anchor line while taking care to not tow them into water deeper than the anchor or crown lines.

Table of Response Resources

strategy	hboom	swpbm	xboom	Anchoring	sorb	Bb/skif	skimmers -No	special equip	deploy personnel	tending personnel	SO
2-351.1	3000'			15 - 40# w/ 20' 1/2" chain		5/2		3000' 1/2" anchor line	14	yes	8&7

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Take Highway 880 to westbound Highway 80. Get on the Oakland Bay Bridge. While still on the Bridge take the Yerba Buena Island exit (Hillcrest Rd). Follow signs to the USCG Station.

LAND ACCESS LEVEL: (foot only, 2WD, large truck, 4WD, road limitations...seasonal..locked gates)
Poor to impossible access from land.

WATER LOGISTICS:

Access limitations: depth, obstructions: submerged rocks and rocky shore around most of island.

Boat Launching, Loading, Docking and Services Available: Estuary Park & Fifth Ave. Marina, Oakland; Ballena Isle Marina, Alameda; Emeryville Marina; Berkeley Marina, Berthing at Treasure Island Marina

FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Space for large staging area, and field post or Command Post is available on Treasure Island

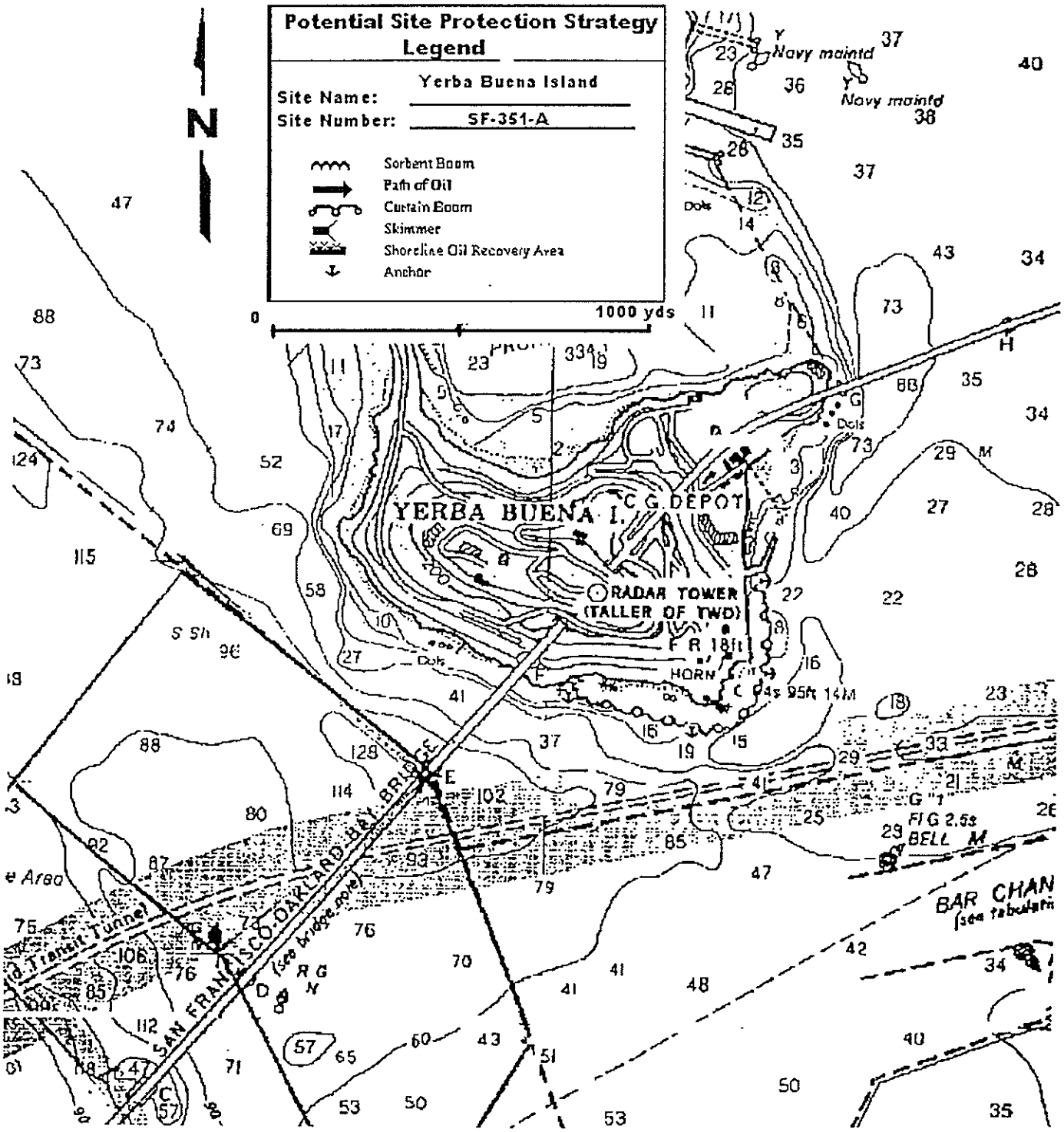
COMMUNICATIONS LIMITATIONS / PROBLEMS: No Problems Radio Pager Cell phone

ADDITIONAL COMMENTS

Bottom type - hard mud, shell, rocks. Possible staging and collection site at USCG station or US Navy facility. Boom (slick bar) on-scene in water at Treasure Island Navy docks. Contact USCG at YBI and US Navy at TI. Poor to impossible access from land. .

COMMUNICATIONS LIMITATIONS / PROBLEMS: X No Problems Radio Pager Cell phone

ADDITIONAL COMMENTS



San Francisco Bay & Delta
9973-GRP3-41

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South Basin, Hunters Point - Site Summary

2-352 -B

County: San Francisco
USGS: San Francisco South

GRP: 3 Latitude 37 43 N Longitude 122 23 W
OSPR Map: 56 Last ACP Update 07/01/1997

SITE DESCRIPTION: (general characterization of site - geomorphology, habitat, exposure, currents)

South Basin lies between Hunter's Point and Candlestick Point on the San Francisco Peninsula. At the head of South Basin is a narrow fringing marsh and mudflat, shores along Candlestick point are sandy beaches and rip rap, the remainder of the shoreline is concrete slab rip rap.

SEASONAL and SPECIAL RESOURCE CONCERNS (seasonal issues, special status spp present, water intakes)

"B" protection priority. During the fall and winter months, high concentrations of waterfowl (1,000's) and migratory shorebirds are present.

RESOURCES AT RISK

HABITATS AT RISK: (biological habitats including time of year when most sensitive and vulnerable)

There are fringe marshes and tidal mudflats of importance at this site.

SPECIES/COMMUNITIES AT RISK (Brief summaries including time of year when most sensitive/vulnerable)

Waterfowl and shorebirds use this site throughout the year but particularly in winter when massive numbers gather here. During the fall and winter months, high concentrations of waterfowl (1,000's) and migratory shorebirds are present.

eelgrass beds are present.

CULTURAL and ARCHEOLOGICAL SENSITIVITIES

For specific information on historic or cultural resources in this area, contact the California Dept of Parks and Recreation - Office of Historic Preservation, Northwest Information Center, (Leigh Jordan, Sonoma State College (707-664-2494))

KEY SITE CONTACTS - type: E-ntry/access; B-iological expertise; L-ogistical; C-ultural; T-rustee; or O-ther assistance

Type	Name	Organization	Phone	FAX
		Candlestick Point State Recreation Area	(415) 671-0147	
	DISPATCH	Candlestick Point State Recreation Area	(800) 548-1431	

2-352 -B South Basin, Hunters Point - Site Strategy

County: San Francisco CHART 18649/18650 Entrance to SF Bay

Latitude	Longitude
37 43 N	122 23 W

Update

SITE LOCATION: boundaries, landmarks, area to locate and delimit the site
South Basin lies between Hunter's Point and Candlestick Point on the San Francisco Peninsula.

HAZARDS and RESTRICTIONS - Air, Water & Ground - things to beware of when approaching or at site
Vessels beware of shallow waters and obstructions.

POTENTIAL OIL IMPACTS - CONCERNS/ ADVICE to RESPONDERS: (regarding sensitive species present, penetration into marshes or sediments, burial, organism burrows, tidal channel spreading, watertable limitations, collateral impacts)
This site is used by large numbers of birds, particularly in fall/winter, and there are marshes and mudflats which are vulnerable to oiling. The primary concern is to keep oil out pocket coves by exclusion booming and collection. Always a concern is that response and cleanup will result in impacts: avoid disturbing wildlife, trampling vegetation, tearing up eelgrass beds with anchors and boat props, and tracking oil into marsh and mudflat sediments.

SITE STRATEGIES

Strategy 2-352.1

(USCG Strategic Objective: 5,8) Dates: SISRS 03/01/1995 Approved last tested 04/03/1996 ACP date 07/01/1996

Objective or Prevention Condition
Exclusion/protection booming to prevent oil from reaching marsh in South Basin or beaches at Candlestick Point.

Technique Details Check here means " No strategy diagram": ( ) Check here means "Contact CCC": ( )
1) Deploy 1,300 - 1,500 ft. of curtain boom across narrowed opening to inner South Basin to exclude oil from marsh and mudflat. Place skimmer at apex of boom if oil collects here.
2) Deploy 2,000 ft of curtain boom in a J-hook configuration from middle point at the opening of the inner South Basin to the inside of Candlestick Point. Place skimmer or vacuum truck hose at J-hook pocket near shore if oil collects here.

Strategy 2-352.2

(USCG Strategic Objective: 7) Dates: SISRS 03/01/1995 Approved last tested ACP date 07/01/1996

Objective or Prevention Condition
Deflect oil away and past site.

Technique Details Check here means " No strategy diagram": ( ) Check here means "Contact CCC": ( )
Deploy deflection with 500 ft of curtain boom off end of Navy pier.

Table of Response Resources

strategy	hboom	swpbm	xboom	Anchoring	sorb	Bb/skif	skimmers	No	special equip	deploy personnel	tending personnel	SO
2-352.1	3500			5 / 22+/ Danforth with chain		3*/0	SFS/SSS	1/1	*shallow draft Bboat	8-12		5,8
2-352.2	500			2/22+/danforth		1*/0			*shallow water Bboat	3		7

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)
Site is south of San Francisco at Candlestick Point area. Exit Hwy 101 at Candlestick (3Com Park) exit and proceed bayward past 3COM Stadium to Candlestick Pt State Recreation Area.

LAND ACCESS LEVEL: (foot only, 2WD, large truck, 4WD, road limitations...seasonal..locked gates)
good access all types: contact Park Maintenance

WATER LOGISTICS:
Access limitations: depth, obstructions: shallow water and obstructions
Boat Launching, Loading, Docking and Services Available: Oyster Pt marina, ramps near piers 70 and 50.

FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:
Staging at Candlestick Point. Access restricted from land to heavy trucks.. Contact Park Maintenance.

COMMUNICATIONS LIMITATIONS / PROBLEMS: X No Problems Radio Pager Cell phone

ADDITIONAL COMMENTS

PROTECTION SITE SKETCH MAP

SOUTH BASIN

Site Name SAN FRANCISCO, CA.

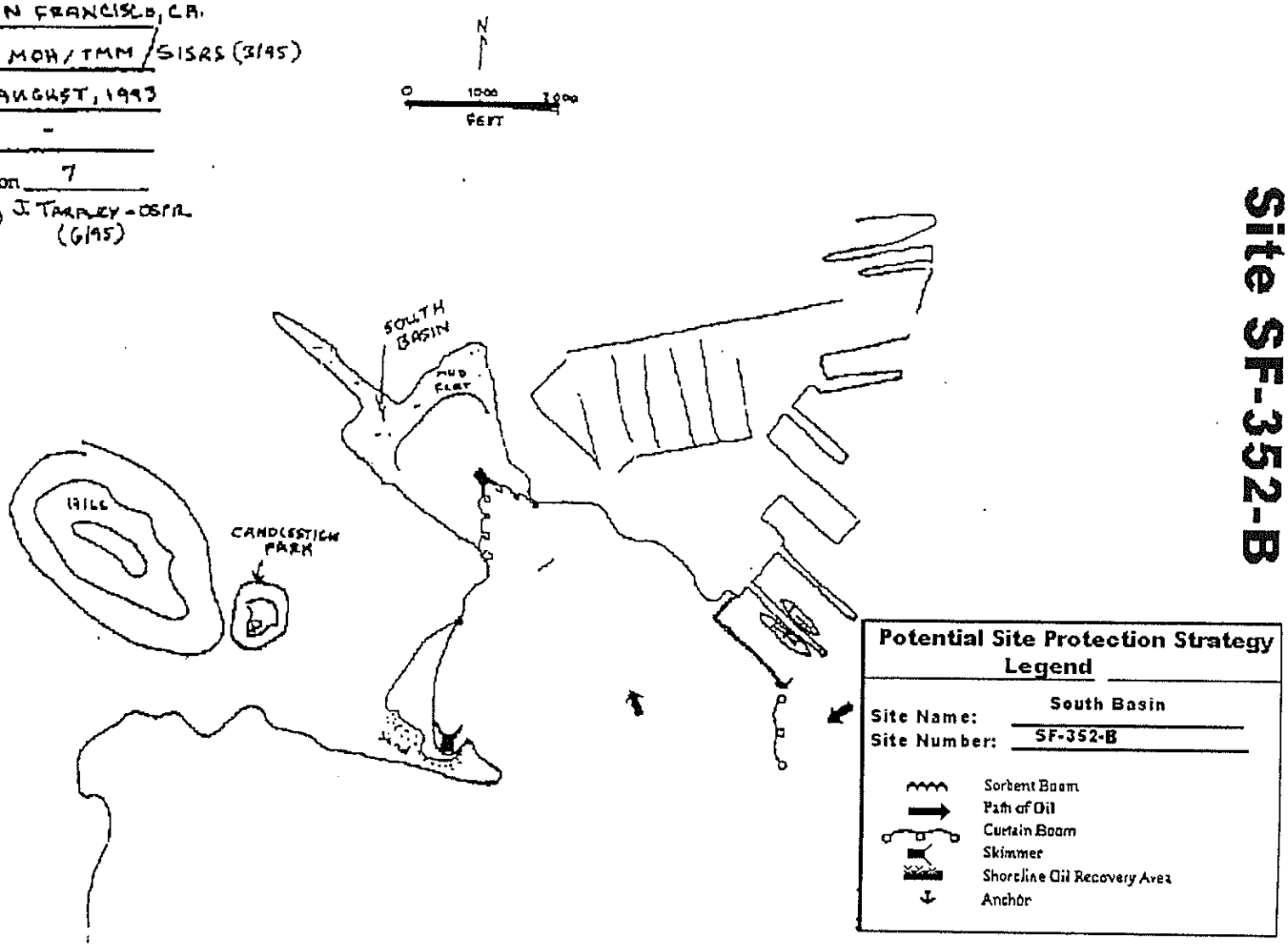
Recorder(s) MOH / TMM / SISRS (3/95)

Date/Time AUGUST, 1993

Tide Stage -

Site Classification 7

Modified by J. TARPLEY - OSPR (6/95)



Site SF-352-B

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Heron's Head Park - India Basin - Site Summary

2-353-A

County: San Francisco | GRP: 3 | Latitude 37 44.3 N | Longitude 122 22.5 W
USGS: San Francisco South | OSPR Map: | Last ACP Update 01/01/2000

SITE DESCRIPTION: (general characterization of site - geomorphology, habitat, exposure, currents)

This site includes the entire north margin of India Basin and the land north of the power plant discharge channel. This wetland park is undergoing restoration. It is a narrow peninsula with high ground, about 8 acres of tidal marsh, and mudflat shores. The site has been graded to create a combination of pools and high grounds with walking paths. There are several small tidal inlets on the south and west margins (about 500 ft total length) which admit tidal exchange to interior ponds. There is a channel with power plant cooling water discharge at the southwest edge. The bay to the south is exceedingly shallow. The north side is a riprap/pebble shore with low sensitivity. The site is undergoing natural revegetation, and the marshy vegetation is not very developed at this time.

With time it will become increasingly sensitive as marsh vegetation and the marsh community develop fully

SEASONAL and SPECIAL RESOURCE CONCERNS (seasonal issues, special status spp present, water intakes)

Marshes have A-sensitivity and priority protection at all times.

RESOURCES AT RISK

HABITATS AT RISK: (biological habitats including time of year when most sensitive and vulnerable)

This is a wetland restoration site. It has high ground vegetation, pickleweed marsh, and saltmarsh ponds and lagoons. The site is surrounded by mudflats. As of 1999, vegetation is in early stages of recolonization following grading and reconstruction.

SPECIES/COMMUNITIES AT RISK (Brief summaries including time of year when most sensitive/vulnerable)

A variety of water birds, shorebirds and upland songbirds.
Potentially this site is suitable for saltmarsh harvest mouse.

CULTURAL and ARCHEOLOGICAL SENSITIVITIES

None likely since this site was created by wetland filling. For specific information on historic or cultural resources in this area, contact the California Dept of Parks and Recreation - Office of Historic Preservation, Northwest Information Center, (Leigh Jordan, Sonoma State College (707-664-2494)).

KEY SITE CONTACTS - type: E-ntry/access; B-iological expertise; L-ogistical; C-ultural; T-rustee; or O-ther assistance

Type	Name	Organization	Phone	FAX
OLE	Nicholas Salcedo	BCDC - Bay Conservation and	(415) 557-3689	(415) 557-3767
LEB	David Hayes	Ca Coastal Conservancy	(510) 286-0736	(510) 286-0470
BEL	Carol Bach	Port of San Francisco	(415) 274-0569	(415) 274-0586

2-353 -C/A Heron's Head Park - India Basin - Site Strategy

County: San Francisco CHART 18649/18650 Entrance to SF Bay Latitude 37 44.3 N Longitude 122 22.5 W

SITE LOCATION: boundaries, landmarks, area to locate and delimit the site
This site includes the entire north margin of India Basin and the land north of the power plant discharge channel.

HAZARDS and RESTRICTIONS - Air, Water & Ground - things to beware of when approaching or at site
This basin is very shallow - follow the stakes which mark the channel.

POTENTIAL OIL IMPACTS - CONCERNS/ ADVICE to RESPONDERS: (regarding sensitive species present, penetration into marshes or sediments, burial, organism burrows, tidal channel spreading, watertable limitations, collateral impacts)
The tidal inlets could admit oil to the lagoons, ponds, low marsh areas on this site, and as emergent marshes develop along shorelines, these would be vulnerable to oil impacts. Exclude oil from all inlets and protect shorelines or deflect away. Avoid trampling marsh vegetation. This is a marsh restoration site.

SITE STRATEGIES

Strategy 2-353.1

(USCG Strategic Objective: 6) Dates: SISRS 06/06/1999 Approved last tested ACP date 01/01/2000

Objective or Prevention Condition
Prevent oil from entering small tidal inlets to inner ponds and lagoons.

Technique Details Check here means " No strategy diagram": ( ) Check here means "Contact CCC": ( )
Close small tidal inlets with shore sections of swamp (river) boom 4X4+ (80ft) and back with sorbent. Stake in place. Several openings are along south middle margin of the site and one at the end of a rock wall opposite the power plant. This can be most easily accomplished by land deployment.

Strategy 2-353.2

(USCG Strategic Objective: 5) Dates: SISRS 02/06/1999 Approved last tested ACP date 01/01/2000

Objective or Prevention Condition
For conditions when oil is likely to enter India Basin, such as easterly winds, deflect oil away from site to south shore.

Technique Details Check here means " No strategy diagram": ( ) Check here means "Contact CCC": ( )
Deploy 2,500 feet of Hboom from the east end of the spit to the south shore of India basin. Deploy at an angle to the prevailing wind so that the oil will slide down the boom to the south shoreline where the oil can be collected can be collect at the shoreline with shore-based skimming equipment. The boom may be cascaded if that will make it easier to deploy. Stakes may be helpful to keep the boom from forming catinary pockets. Boom can be delivered to site by boat or vehicle. Sites on south side can enable rapid recharge of boom boats from shore support. A cascade may be necessary to admit boat traffic to boat launch at India Basiin Park.

Table of Response Resources

strategy	hboom	swpbm	xboom	Anchoring	sorb	Bb/skif	skimmers -No	special equip	deploy personnel	tending personnel	SO
2-353.1		80		stakes	80				2	daily checks	6
2-353.2	2500			4/22+/danforths & stakes		4/1			12	2	5

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)
By boat the site is at the back of India Basin: proceed south along the SF waterfront about 4 miles from the Bay Bridge and turn west into India Basin just north of Hunters Pt. - Pt. Avisadero (Light G 5). By vehicle, exit Hwy 101 south of SF center at Army St. Continue east toward Bay on Arm and turn south (right) on Evans Ave. Evans Ave becomes Hunters Point Blvd. India Basin Shoreline Park is on the left and there is a marina of Griffith St.

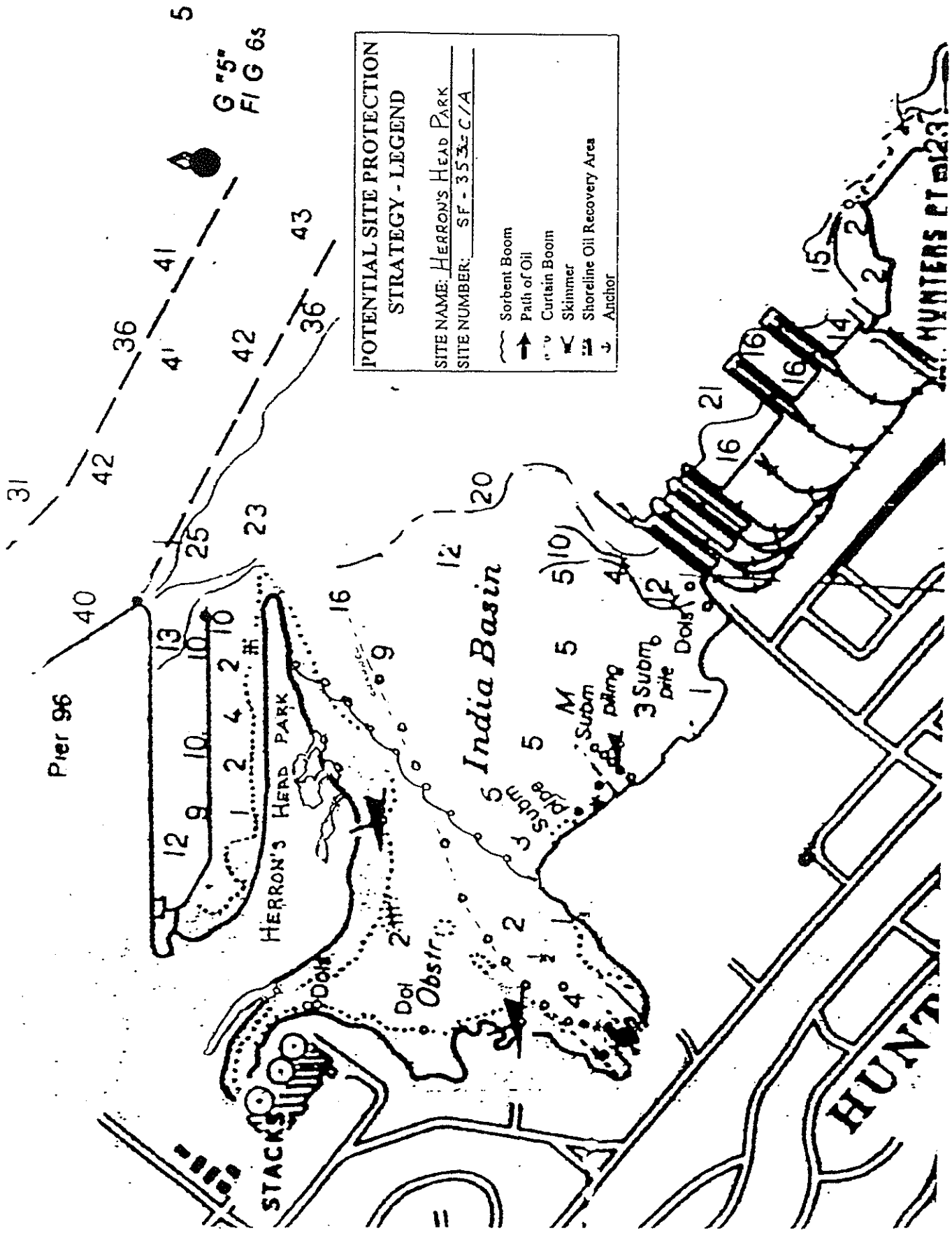
LAND ACCESS LEVEL: (foot only, 2WD, large truck, 4WD, road limitations...seasonal..locked gates)
foot & ATV on site. All types on south shore of India Basin

WATER LOGISTICS:
Access limitations: depth, obstructions: Very shallow < 4' in most of basin and shallower at shore.
Boat Launching, Loading, Docking and Services Available: Launch on south shore of basin.

FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:
Staging on south shore of India Basin.

COMMUNICATIONS LIMITATIONS / PROBLEMS: X No Problems Radio Pager Cell phone

ADDITIONAL COMMENTS


POTENTIAL SITE PROTECTION
STRATEGY - LEGEND
SITE NAME: HERRON'S HEAD PARK
SITE NUMBER: SF - 35 - C/A
Sorbent Boom
Path of Oil
Curtain Boom
Skimmer
Shoreline Oil Recovery Area
Anchor
Pier 96
HERRON'S HEAD PARK
India Basin
Obstr
STACKS
HUNTERS PT
G "5"
Fl G 6s

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Islais Creek - Pier 94 Saltmarsh - Site Summary

B/A

2-354-

County: San Francisco
USGS: San Francisco South

GRP: 3 Latitude 37 44.3 N Longitude 122 22.5 W
OSPR Map: Last ACP Update 01/01/2000

SITE DESCRIPTION: (general characterization of site - geomorphology, habitat, exposure, currents)

This 10+ acre site is the cornerof Pier 94 at the south edge of the mouth of Islais Creek Channel and extends from pier 96 back into the channel about a third of a mile. It is a narrow 200+ yard wide parcel along the south side of the channel with high ground and about 5 acres of high saltmarsh. The site had been undergoing fill and there are mounds of rubble interspersed across the pickleweed and saltgrass marsh. The north side is a ripped shore with low sensitivity. There is a small tidal inlet on the east margin near the pier 96 wharf which admits tidal exchange to an interior marsh there. For this reason it is now evaluated as a B-level site because it is uncommon habitat for water and shorebird use and resting in a very industrial area, but is anticipated to become an A-level site in time.

SEASONAL and SPECIAL RESOURCE CONCERNS (seasonal issues, special status spp present, water intakes)

This site has "B" sensitivity because it is a small wetland and has heavy waterbird and shorebird use during the winter migration. It has the potential to become a substantial wetland in time (A-level).

RESOURCES AT RISK

HABITATS AT RISK: (biological habitats including time of year when most sensitive and vulnerable)

This site is traditional saltmarsh that has undergone some filling. It provides valuable wetland habitat in a heavily industrialized portion of the Bay. It has demolition debris fill, high ground vegetation, pickleweed marsh, and saltmarsh ponds. The perimeter is riprap.

SPECIES/COMMUNITIES AT RISK (Brief summaries including time of year when most sensitive/vulnerable)

A variety of water birds, shorebirds and marsh birds.
This is possible saltmarsh harvest mouse habitat.

CULTURAL and ARCHEOLOGICAL SENSITIVITIES

For specific information on historic or cultural resources in this area, contact the California Dept of Parks and Recreation - Office of Historic Preservation, Northwest Information Center, (Leigh Jordan, Sonoma State College (707-664-2494))

KEY SITE CONTACTS - type: E-ntry/access; B-iological expertise; L-ogistical; C-ultural; T-rustee; or O-ther assistance

Type	Name	Organization	Phone	FAX
EO	Carol Bach	Port of San Francisco	(415) 274-0569	(415) 274-0586

2-354 -B/A Islais Creek - Pier 94 Saltmarsh - Site Strategy

County: San Francisco CHART 18649/18650 Entrance to SF Bay Latitude 37 44.3 N Longitude 122 22.5 W

SITE LOCATION: boundaries, landmarks, area to locate and delimit the site **Update**

This 10+ acre site is the corner of Pier 94 at the south edge of the mouth of Islais Creek Channel and extends from pier 96 back into the channel about a third of a mile.

HAZARDS and RESTRICTIONS - Air, Water & Ground - things to beware of when approaching or at site

Riprap poses slip, trip and fall hazards. Vessels beware of submerged objects and shallows at margins.

POTENTIAL OIL IMPACTS - CONCERNS/ ADVICE to RESPONDERS: (regarding sensitive species present, penetration into marshes or sediments, burial, organism burrows, tidal channel spreading, watertable limitations, collateral impacts)

The tidal inlets could admit oil to the ponds and low marsh areas on this site. The openings are at the east end and can be protected exclusion booming at the inlet and protective booming just offshore. Avoid trampling marsh vegetation. This is a planned marsh restoration site.

SITE STRATEGIES

Strategy 2-354.1

(USCG Strategic Objective: 5,8) Dates: SISRS 06/05/1999 Approved last tested ACP date 01/01/2000

Objective or Prevention Condition

Exclude oil from entering inlet and protect site from oil.

Technique Details Check here means " No strategy diagram": ( ) Check here means "Contact CCC": ( )

Place a length of boom at opening of rocks near pier 96 wharf and back with sorbent. Stake in place.

Deploy 1,000 feet of harbor boom from pier 94 to the south shore of the entrance to Islais Creek.

Table of Response Resources

strategy	hboom	swpbm	xboom	Anchoring	sorb	Bb/skif	skimmers -No	special equip	deploy personnel	tending personnel	SO
2-354.1	1000	50		3/22+/danforths & stakes	50	1/1					5,8

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

By boat the site is at the south margin of the mouth of Islais Creek Channel (which is Pier 94): proceed south along the SF waterfront about 4 miles from the Bay Bridge to Islais Creek Channel (just south of Army St Terminal-North Container Terminal -Pier 80). By vehicle, exit Hwy 101 south of SF center at Army St. Continue east toward Bay on Army and turn south (right) on 3rd St and then left on Cargo Way. Access through industrial drives toward bay - pier 94 and pier 96

LAND ACCESS LEVEL: (foot only, 2WD, large truck, 4WD, road limitations...seasonal..locked gates)
foot & ATV on site. All types to adjacent piers.

WATER LOGISTICS:

Access limitations: depth, obstructions: Good water.

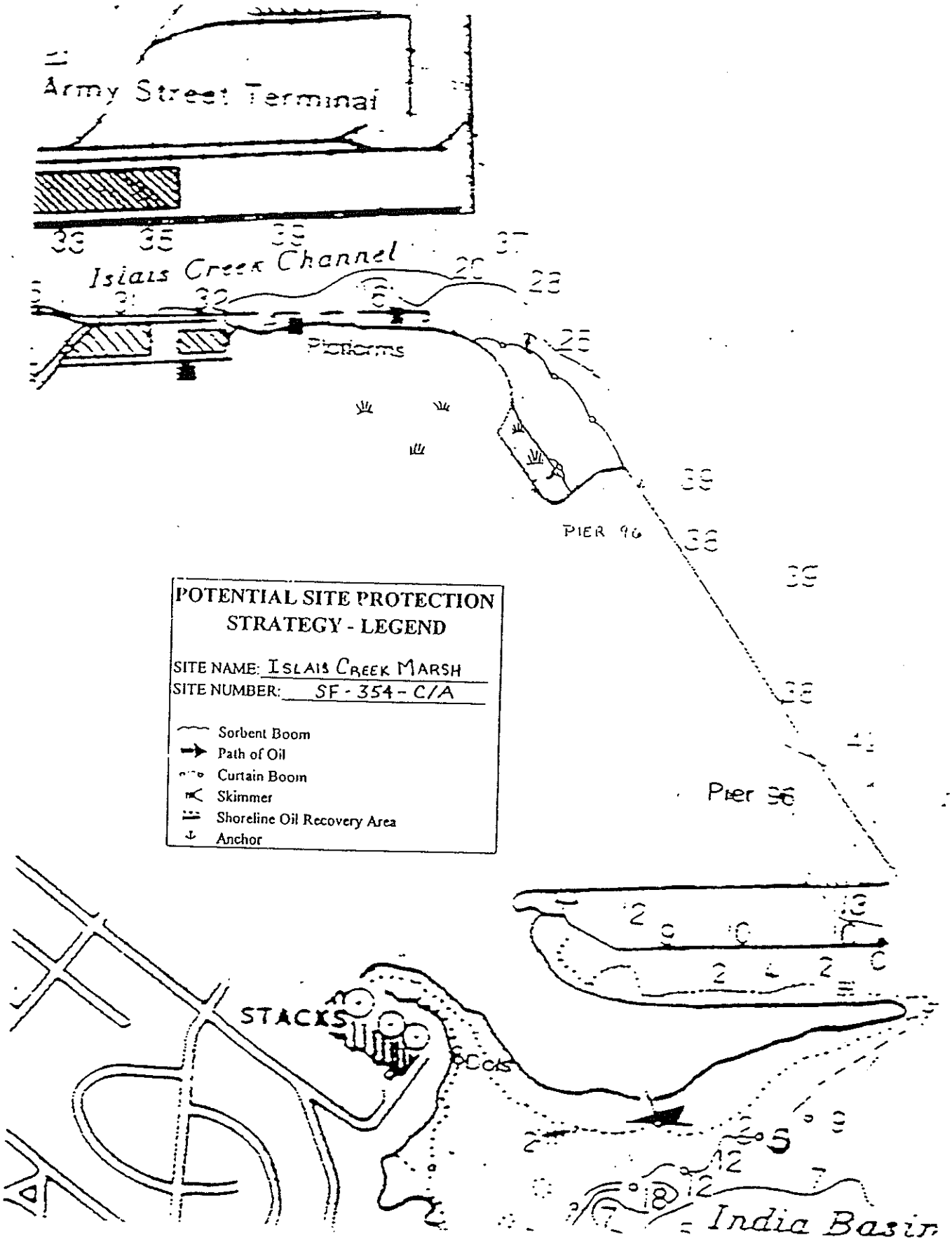
Boat Launching, Loading, Docking and Services Available: Launch on south shore of India Basin or at South Beach Marina near the Bay Bridge, where there are facilities, fuel and mooring.

FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Staging on Pier 96 or Pier 80, either side of the channel.

COMMUNICATIONS LIMITATIONS / PROBLEMS: X No Problems Radio Pager Cell phone

ADDITIONAL COMMENTS



POTENTIAL SITE PROTECTION STRATEGY - LEGEND

SITE NAME: ISLAIS CREEK MARSH
SITE NUMBER: SF - 354 - C/A

- Sorbent Boom
- Path of Oil
- Curtain Boom
- Skimmer
- Shoreline Oil Recovery Area
- Anchor

APPENDIX G

MSDS FOR JET FUEL-A AND DIESEL OIL #2

Emergency Number (800)457-2022 or (510)233-3737

Material Safety Data Sheet

CHEVRON Jet Fuel A

CPS21610

PACIFIC GAS & ELECTRIC 5454944
245 MARKET STREET RM 344
BILL FAGEN
SAN FRANCISCO, CA 94106

MATERIAL ORDERED FOR:
RICHMOND REFINERY DOCK
ALAMEDA, CA 94801

Print Date: March 28, 1992

This Material Safety Data Sheet contains environmental, health and toxicology information for your employees. Please make sure this information is given to them. It also contains information to help you meet community right-to-know/emergency response reporting requirements under SARA Title III and many other laws. If you resell this product, this MSDS must be given to the buyer or the information incorporated in your MSDS. Discard any previous edition of this MSDS.

Revised for indexing purposes only. No data has been changed.

1. PRODUCT IDENTIFICATION

CHEVRON Jet Fuel A

DANGER:
- COMBUSTIBLE
- HARMFUL OR FATAL IF SWALLOWED - CAN ENTER LUNGS AND CAUSE DAMAGE
- CAUSES SKIN IRRITATION
- PROLONGED OR REPEATED SKIN CONTACT MAY INCREASE THE RISK OF CANCER.
- KEEP OUT OF REACH OF CHILDREN

PRODUCT NUMBER(S): CPS216103
PRODUCT INFORMATION: (510)242-5357

Prepared According to the OSHA Hazard Communication Standard (29 CFR 1910.1200) by the Chevron Environmental Health Center, Inc. P.O. Box [illegible]

2. FIRST AID-EMERGENCY PH. (800)457-2022/(510)233-3737 (24 HR)

EYE CONTACT:
No first aid procedures are required. However, as a precaution flush eyes with fresh water for 15 minutes. Remove contact lenses if worn.
SKIN CONTACT:
Remove contaminated clothing. Wash skin thoroughly with soap and water. See a doctor if any signs or symptoms described in this document occur. Discard contaminated non-waterproof shoes and boots. Wash contaminated clothing.
INHALATION:
If any signs or symptoms as described in this document occur, move the person to fresh air. If any of these effects continue, see a doctor.
INGESTION:
If swallowed, give water or milk to drink and telephone for medical advice. DO NOT make person vomit unless directed to do so by medical personnel. If medical advice cannot be obtained, then take the person and product container to the nearest medical emergency treatment center or hospital. Note to Physician: Ingestion of this product or subsequent vomiting can result in aspiration of light hydrocarbon liquid which can cause pneumonitis.

3. IMMEDIATE HEALTH EFFECTS - (ALSO SEE SECTIONS 11 & 12)

EYE CONTACT:
This substance is not expected to cause prolonged or significant eye irritation.
SKIN IRRITATION:
This substance is a moderate skin irritant so contact with the skin could cause prolonged (days) injury to the affected area. The degree of injury will depend on the amount of material that gets on the skin and the speed and thoroughness of the first aid treatment. Signs and symptoms may include pain or a feeling of heat, discoloration, swelling, and blistering. Read the Additional Health Data section (12) of this document for more information.
DERMAL TOXICITY:
If absorbed through the skin, this substance is considered practically non-toxic to internal organs.
RESPIRATORY/INHALATION:
Prolonged breathing of vapors can cause central nervous system effects. Signs and symptoms of central nervous system effects may include one or more of the following: headache, dizziness, loss of appetite, weakness and loss of coordination.
INGESTION:
If swallowed, this substance is considered practically non-toxic to internal organs. Because of the low viscosity of this substance, it can directly enter the lungs if it is swallowed (this is called aspiration). This can occur during the act of swallowing or when vomiting the substance. Once in the lungs, the substance is very difficult to remove

and can cause severe injury to the lungs and death.

4. PROTECTIVE EQUIPMENT

EYE PROTECTION:
No special eye protection is usually necessary.
SKIN PROTECTION:
Avoid contact with skin or clothing. Skin contact should be minimized by wearing protective clothing including gloves.
RESPIRATORY PROTECTION:
No special respiratory protection is normally required. However, if operating conditions create high airborne concentrations, the use of an approved respirator is recommended.
VENTILATION:
Use this material only in well ventilated areas.

5. FIRE PROTECTION

FLASH POINT: (TCC) 100F (38C) Min.
AUTOIGNITION: NDA
FLAMMABILITY LIMITS (% by volume in air): Lower: 0.6 Upper: 4.7
EXTINGUISHING MEDIA:
CO_2, Dry Chemical, Foam and Water Fog.
NFPA RATINGS: Health 0; Flammability 2; Reactivity 0; Special NDA; (Least-0, Slight-1, Moderate-2, High-3, Extreme-4). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association or, if applicable, the National Paint and Coating Association, and do not necessarily reflect the hazard evaluation of the Chevron Environmental Health Center. Read the entire document and label before using this product.
FIRE FIGHTING PROCEDURES:
Liquid evaporates and forms vapor (fumes) which can catch fire and burn with explosive violence. Invisible vapor spreads easily and can be set on fire by many sources such as pilot lights, welding equipment, and electrical motors and switches. Fire hazard is greater as liquid temperature rises above 85 F.

For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment. This may include self-contained breathing apparatus to protect against the hazardous effects of normal products of combustion or oxygen deficiency. Read the entire document.
COMBUSTION PRODUCTS:
Normal combustion forms carbon dioxide and water vapor; incomplete combustion can produce carbon monoxide.

6. STORAGE, HANDLING, AND REACTIVITY

HAZARDOUS DECOMPOSITION PRODUCTS:
NDA.
STABILITY:
Stable.
HAZARDOUS POLYMERIZATION:
Polymerization will not occur.
INCOMPATIBILITY:
May react with strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.
SPECIAL PRECAUTIONS:
DO NOT USE OR STORE near flame, sparks or hot surfaces. USE ONLY IN WELL VENTILATED AREA. Keep container closed. DO NOT weld, heat or drill container. Replace cap or bung. Emptied container still contains hazardous or explosive vapor or liquid. CAUTION! Do not use pressure to empty drum or drum may rupture with explosive force. WARNING! Not for use as portable heater or appliance fuel. Toxic fumes may accumulate and cause death.

AVIATION FUEL SHOULD BE FILTERED DURING TRANSFER INTO FUEL TANKS.

7. PHYSICAL PROPERTIES

SOLUBILITY: Soluble in hydrocarbon solvents; insoluble in water.
APPEARANCE: Pale yellow liquid.
BOILING POINT: 204 - 300C (400-572F)
MELTING POINT: NA
EVAPORATION: NDA
SPECIFIC GRAVITY: 0.85 @ 15.6/15.6C (Min.)
VAPOR PRESSURE: NDA
PERCENT VOLATILE (VOLUME %): NDA
VAPOR DENSITY (AIR=1): NDA
VISCOSITY: 1.9 cSt @ 40C (Min.)

8. ENVIRONMENTAL CONCERNS, SPILL RESPONSE AND DISPOSAL

CHEMTREC EMERGENCY PH. (800)424-9300/(202)483-7616 (24 hr)
SPILL/LEAK PRECAUTIONS:
Eliminate all sources of ignition in vicinity of spill or released vapor.

Clean up spills immediately, observing precautions in Protective Equipment section. This material is considered to be a water pollutant and releases of this product should be prevented from contaminating soil and water and from entering drainage and sewer systems.

U.S.A. regulations require reporting spills of this material that could reach any surface waters. The toll free number for the U.S. Coast Guard National Response Center is (800) 424-8802.
DISPOSAL METHODS:
Clean up small spills using appropriate techniques such as sorbent materials or pumping. Where feasible and appropriate, remove contaminated

soil. Follow prescribed procedures for reporting and responding to larger releases. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations. Contact local environmental or health authorities for approved disposal of this material.

9. EXPOSURE STANDARDS, REGULATORY LIMITS AND COMPOSITION

COMPOSITION COMMENT:
All the components of this material are on the Toxic Substances Control Act Chemical Substances Inventory.

The percent compositions are given to allow for the various ranges of the components present in the whole product and may not equal 100%.

PERCENT/CAS#	COMPONENT/REGULATORY LIMITS
100.0 %	CHEVRON Jet Fuel A
CONTAINING	
CAS8008206	KEROSINE
CAS64742810	KEROSINE, HYDRODESULFURIZED
CAS64742809	DISTILLATES, HYDRODESULFURIZED MIDDLE
CAS64741442	DISTILLATES, STRAIGHT RUN MIDDLE

TLV	- Threshold Limit Value	TWA	- Time Weighted Average
STEL	- Short-term Exposure Limit	TPQ	- Threshold Planning Quantity
RQ	- Reportable Quantity	CPS	- CUSA Product Code
CC	- Chevron Chemical Company	CAS	- Chemical Abstract Service Number

10. REGULATORY INFORMATION

DOT basic descriptions can vary based on package quantity and may not coincide with international description requirements. Consult the Hazardous Materials Regulations in 49CFR and the appropriate Dangerous Goods Regulations to confirm description applicability to specific shipments.

DOT SHIPPING NAME: FUEL, AVIATION, TURBINE ENGINE
DOT HAZARD CLASS: COMBUSTIBLE LIQUID
DOT IDENTIFICATION NUMBER: UN1863

SARA 311 CATEGORIES:
1. Immediate (Acute) Health Effects; YES
2. Delayed (Chronic) Health Effects; YES
3. Fire Hazard; YES
4. Sudden Release of Pressure Hazard; NO
5. Reactivity Hazard; NO

The following components of this material are found on the regulatory lists indicated by the number below the component name:

KEROSINE
is found on lists: 02,10,11,

REGULATORY LISTS SEARCHED:

01=SARA 313	02=MASS RTK	03=NTP Carcinogen
04=CA Prop. 65	05=MI 406	06=IARC Group 1
07=IARC Group 2A	08=IARC Group 2B	09=SARA 302/304
10=PA RTK	11=NJ RTK	12=CERCLA 302.4
13=MN RTK	14=ACGIH TLV	15=ACGIH STEL
16=ACGIH Calculated TLV	17=OSHA TWA	18=OSHA STEL
19=Chevron TLV	20=EPA Carcinogen	21=TSCA Sect 4(e)
22=TSCA Sect 5(a)(e)(f)	23=TSCA Sect 6	24=TSCA Sect 12(b)
25=TSCA Sect 8(a)	26=TSCA Sect 8(d)	28=Canadian WHMIS
29=OSHA CEILING		

11. PRODUCT TOXICOLOGY DATA

EYE IRRITATION:
Minimal effects clearing in less than 24 hours.
SKIN IRRITATION:
Moderate irritation at 72 hours. (Moderate erythema).
DERMAL TOXICITY:
The dermal LD50 in rabbits is > 5 ml/kg.
RESPIRATORY/INHALATION:
The 4-hour inhalation LC50 in rats is greater than 5 mg/l.
INGESTION:
The oral LD50 in rats is > 5 ml/kg.
ADDITIONAL TOXICOLOGY DATA:
The data above is obtained from studies sponsored by the American Petroleum Institute (API).

12. ADDITIONAL HEALTH DATA

ADDITIONAL HEALTH DATA COMMENT:
This product contains a mixture of petroleum hydrocarbons called middle distillates (which means they boil between approximately 350F and 700F). Because of this broad description, many products are considered middle distillates yet they are produced by a variety of different petroleum refining processes. Toxicology data developed on some middle distillates found that they caused positive responses in some mutagenicity tests and

caused skin cancer when repeatedly applied to mice over their lifetime. This product may contain some middle distillates found to cause those adverse effects.

Brief or intermittent skin contact with this product is not expected to produce any serious effects if it is washed from the skin. While normal handling of this product is not likely to cause cancer in humans, skin contact and breathing of mists, fumes or vapors should be reduced to a minimum.

Reports in the literature conclude that long-term exposure to jet fuels may result in changes in 1) the incidence and prevalence of psychiatric symptoms 2) psychological tests and 3) EEGs. These studies were conducted in specific work situations where there were exposures to jet fuels. We have reviewed these studies and it is our opinion that the work situations are too complex and the analytical methods that define brain damage are too imprecise to state with scientific certainty that either the condition occurs or that it was due to the type of material discussed in this document.

****

The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modification of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.

Material Safety Data Sheet

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

HS DIESEL FUEL 2

PRODUCT NUMBER(S): CPS270010 CPS272102 CPS272152 CPS272185

COMPANY IDENTIFICATION

CHEVRON USA PRODUCTS COMPANY
ENVIRONMENTAL, SAFETY, AND HEALTH
ROOM 2900
575 MARKET ST.
SAN FRANCISCO, CA 94105-2856

EMERGENCY TELEPHONE NUMBERS

HEALTH (24 hr): (800)231-0623 or
(510)231-0623 (International)
TRANSPORTATION (24 hr): CHEMTREC
(800)424-9300 or (202)483-7616

PRODUCT INFORMATION: MSDS REQUEST: (415) 894-2783
ENVIRONMENTAL, SAFETY & HEALTH INFO.: (415) 894-1899
Product Information: (510) 242-5357

2. COMPOSITION/INFORMATION ON INGREDIENTS

100.0 % HS DIESEL FUEL 2

CONTAINING

COMPONENTS	AMOUNT	LIMIT/QTY	AGENCY/TYPE
DIESEL FUEL NO. 2 Chemical Name: FUELS, DIESEL, NO. 2 CAS68476346	100.0%	NONE	NA
HDS DISTILLATE, MIDDLE Chemical Name: DISTILLATES, HYDRODESULFURIZED MIDDLE CAS64742809		NONE	NA
GAS OIL, LIGHT Chemical Name: DISTILLATES, STRAIGHT RUN MIDDLE CAS64741442		NONE	NA

Revision Number: 19 Revision Date: 06/03/95 MSDS Number: 000525
NDA - No Data Available NA - Not Applicable

Prepared according to the OSHA Hazard Communication Standard
(29 CFR 1910.1200) and the ANSI MSDS Standard (Z400.1) by the Toxicology

KEROSENE
Chemical Name: KEROSINE
CAS8008206 NONE NA

HYDRODESULFURIZED KEROSINE
Chemical Name: KEROSINE, HYDRODESULFURIZED
CAS64742810 NONE NA

CAT CRACKED DISTILLATE, LIGHT
Chemical Name: DISTILLATES, LIGHT CATALYTIC CRACKED
CAS64741599 NONE NA

COMPOSITION COMMENT:
All the components of this material are on the Toxic Substances Control Act Chemical Substances Inventory.

TLV	- Threshold Limit Value	TWA	- Time Weighted Average
STEL	- Short-term Exposure Limit	TPQ	- Threshold Planning Quantity
RQ	- Reportable Quantity	PEL	- Permissible Exposure Limit
C	- Ceiling Limit	CAS	- Chemical Abstract Service Number
A1-5	- Appendix A Categories	()	- Change Has Been Proposed

3. HAZARDS IDENTIFICATION

********** EMERGENCY OVERVIEW **********

Red liquid.

- COMBUSTIBLE
- HARMFUL OR FATAL IF SWALLOWED - CAN ENTER LUNGS AND CAUSE DAMAGE
- CAUSES SKIN IRRITATION
- CANCER HAZARD
- PROLONGED OR REPEATED SKIN CONTACT MAY INCREASE THE RISK OF SKIN CANCER
- KEEP OUT OF REACH OF CHILDREN

****

POTENTIAL HEALTH EFFECTS
EYE:
This substance is not expected to cause prolonged or significant eye irritation.
SKIN:
This substance is a moderate skin irritant so contact with the skin could cause prolonged (days) injury to the affected area. The degree of injury will depend on the amount of material that gets on the skin and the speed and thoroughness of the first aid treatment. If absorbed through the skin, this substance is considered practically non-toxic to internal

organs.
INGESTION:
If swallowed, this substance is considered practically non-toxic to

internal organs. Because of the low viscosity of this substance, it can directly enter the lungs if it is swallowed (this is called aspiration). This can occur during the act of swallowing or when vomiting the substance. Once in the lungs, the substance is very difficult to remove and can cause severe injury to the lungs and death.
INHALATION:
Prolonged breathing of vapors can cause central nervous system effects. This hazard evaluation is based on data from similar materials.
SIGNS AND SYMPTOMS OF EXPOSURE:
SKIN: May include pain or a feeling of heat, discoloration, swelling, and blistering. INHALATION: Central nervous system effects may include one or more of following: headache, dizziness, loss of appetite, weakness and loss of coordination.
CARCINOGENICITY:
This product contains a mixture of petroleum hydrocarbons called middle distillates (which means they boil between approximately 350F and 700F). Because of this broad description, many products are considered middle distillates yet they are produced by a variety of different petroleum refining processes. Toxicology data developed on some middle distillates found that they caused positive responses in some mutagenicity tests and caused skin cancer when repeatedly applied to mice over their lifetime. This product may contain some middle distillates found to cause those adverse effects.

---

4. FIRST AID MEASURES

EYE:
No first aid procedures are required. However, as a precaution flush eyes with fresh water for 15 minutes. Remove contact lenses if worn.
SKIN:
Remove contaminated clothing. Wash skin thoroughly with soap and water. See a doctor if any signs or symptoms described in this document occur. Discard contaminated non-waterproof shoes and boots. Wash contaminated clothing.
INGESTION:
If swallowed, give water or milk to drink and telephone for medical advice. DO NOT make person vomit unless directed to do so by medical personnel. If medical advice cannot be obtained, then take the person and product container to the nearest medical emergency treatment center or hospital.
INHALATION:
If any signs or symptoms as described in this document occur, move the person to fresh air. If any of these effects continue, see a doctor.

NOTE TO PHYSICIANS:
Ingestion of this product or subsequent vomiting can result in aspiration of light hydrocarbon liquid which can cause pneumonitis.

---

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES:
FLASH POINT: (P-M) 125F (52C) Min.
AUTOIGNITION: NDA
FLAMMABILITY LIMITS (% by volume in air): Lower: 0.6 Upper: 4.7
EXTINGUISHING MEDIA:
CO2, Dry Chemical, Foam and Water Fog.
NFPA RATINGS: Health 0; Flammability 2; Reactivity 0.
FIRE FIGHTING INSTRUCTIONS:
Liquid evaporates and forms vapor (fumes) which can catch fire and burn with explosive violence. Invisible vapor spreads easily and can be set on fire by many sources such as pilot lights, welding equipment, and electrical motors and switches. Fire hazard is greater as liquid temperature rises above 85 F.

For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment. This may include self-contained breathing apparatus to protect against the hazardous effects of normal products of combustion or oxygen deficiency. Read the entire document.
COMBUSTION PRODUCTS:
Normal combustion forms carbon dioxide and water vapor; incomplete combustion can produce carbon monoxide.

---

6. ACCIDENTAL RELEASE MEASURES

CHEMTREC EMERGENCY NUMBER (24 hr): (800)424-9300 or (202)483-7616
ACCIDENTAL RELEASE MEASURES:
Eliminate all sources of ignition in vicinity of spill or released vapor.

Clean up small spills using appropriate techniques such as sorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Follow prescribed procedures for reporting and responding to larger releases. This material is considered to be a water pollutant and releases of this product should be prevented from contaminating soil and water and from entering drainage and sewer systems.

U.S.A. regulations require reporting spills of this material that could reach any surface waters. The toll free number for the U.S. Coast Guard National Response Center is (800) 424-8802.

7. HANDLING AND STORAGE

DO NOT USE OR STORE near flame, sparks or hot surfaces. USE ONLY IN WELL VENTILATED AREA. Keep container closed.

DO NOT weld, heat or drill container. Replace cap or bung. Emptied container still contains hazardous or explosive vapor or liquid.

CAUTION! Do not use pressure to empty drum or drum may rupture with explosive force.

WARNING! Not for use as portable heater or appliance fuel. Toxic fumes may accumulate and cause death.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS
Use this material only in well ventilated areas.

PERSONAL PROTECTIVE EQUIPMENT
EYE/FACE PROTECTION:
No special eye protection is usually necessary.
SKIN PROTECTION:
Avoid contact with skin or clothing. Skin contact should be minimized by wearing protective clothing including gloves.
RESPIRATORY PROTECTION:
No special respiratory protection is normally required. However, if operating conditions create high airborne concentrations, the use of an approved respirator is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL DESCRIPTION:
Red liquid.

pH:	NDA
VAPOR PRESSURE:	0.04 PSIA @ 40C
VAPOR DENSITY (AIR=1):	NDA
BOILING POINT:	176 - 370C (348-698F)
FREEZING POINT:	NDA
MELTING POINT:	NA
SOLUBILITY:	Soluble in hydrocarbon solvents; insoluble in water.

SPECIFIC GRAVITY: 0.84 @ 15.6/15.6C (Typical)
VISCOSITY: 1.9 cSt @ 40C (Min.)

---

10. STABILITY AND REACTIVITY

HAZARDOUS DECOMPOSITION PRODUCTS:
NDA.
CHEMICAL STABILITY:
Stable.
CONDITIONS TO AVOID:
No data available.
INCOMPATIBILITY WITH OTHER MATERIALS:
May react with strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.
HAZARDOUS POLYMERIZATION:
Polymerization will not occur.

---

11. TOXICOLOGICAL INFORMATION

EYE EFFECTS:
Minimal effects clearing in less than 24 hours.
SKIN EFFECTS:
Moderate irritation at 72 hours. (Moderate erythema).
ACUTE ORAL EFFECTS:
The oral LD50 in rats is > 5 ml/kg.
ACUTE INHALATION EFFECTS:
The 4-hour inhalation LC50 in rats is greater than 5 mg/l.
SUBCHRONIC EFFECTS:
The data above is obtained from studies sponsored by the American Petroleum Institute (API).

Whole diesel engine exhaust was reviewed by the International Agency for Research on Cancer (IARC) in their Monograph 46 (1989). Evidence for causing cancer was considered sufficient in animals and limited in humans. IARC placed diesel exhaust in category 2A, considering it probably carcinogenic to humans.

The National Institute of Occupational Safety and Health (NIOSH) has recommended that whole diesel exhaust be regarded as potentially causing cancer. This recommendation was based on test results showing increased lung cancer in laboratory animals exposed to whole diesel exhaust. The excess risk of cancer for people exposed to diesel exhaust has not been determined as studies on exposed workers have been inconclusive. It is recommended that exposure to diesel exhaust be minimized to reduce the

potential cancer risk.

---

12. ECOLOGICAL INFORMATION

ECOTOXICITY:
No data available.
ENVIRONMENTAL FATE:
No data available.

---

13. DISPOSAL CONSIDERATIONS

Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations. Contact local environmental or health authorities for approved disposal of this material.

---

14. TRANSPORT INFORMATION

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

DOT SHIPPING NAME: GAS OIL
DOT HAZARD CLASS: COMBUSTIBLE LIQUID
DOT IDENTIFICATION NUMBER: UN1202
DOT PACKING GROUP: III

---

15. REGULATORY INFORMATION

SARA 311 CATEGORIES:

1. Immediate (Acute) Health Effects: YES
2. Delayed (Chronic) Health Effects: YES
3. Fire Hazard: YES
4. Sudden Release of Pressure Hazard: NO
5. Reactivity Hazard: NO

REGULATORY LISTS SEARCHED:

01=SARA 313
02=MASS RTK
03=NTP Carcinogen
04=CA Prop 65-Carcin
05=CA Prop 65-Repro Tox
06=IARC Group 1
07=IARC Group 2A
08=IARC Group 2B
09=SARA 302/304
10=PA RTK
11=NJ RTK
12=CERCLA 302.4
13=MN RTK
14=ACGIH TWA
15=ACGIH STEL
16=ACGIH Calc TLV
17=OSHA PEL
18=DOT Marine Pollutant
19=Chevron TWA
20=EPA Carcinogen
22=TSCA Sect 5(a)(2)
23=TSCA Sect 6
24=TSCA Sect 12(b)
25=TSCA Sect 8(a)
26=TSCA Sect 8(d)
27=TSCA Sect 4(a)
28=Canadian WHMIS
29=OSHA CEILING
30=Chevron STEL

The following components of this material are found on the regulatory lists indicated.

KEROSINE
is found on lists: 02,10,11,

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16. OTHER INFORMATION

NFPA RATINGS: Health 0; Flammability 2; Reactivity 0;
(Least-0, Slight-1, Moderate-2, High-3, Extreme-4). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the National Paint and Coating Association (for HMIS ratings).

REVISION STATEMENT:
This revision updates Section 1 (Chemical Product and Company ID).

****

The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modification of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.

APPENDIX H

EQUIPMENT INSPECTION, PERSONNEL TRAINING AND DRILL LOGS

APPENDIX H

TABLE OF CONTENTS

LIST OF FIGURES

TABLE NO.	TITLE
H-1	Tank and Secondary Containment Inspection Log
H-2	Response Equipment Inspection Log
H-3	Qualified Individual Notification Drill Log
H-4	Facility Drill Log
H-5	Spill Management Team Tabletop Exercise Log
H-6	Personnel Response Training Log

TABLE H-1
OAKLAND POWER PLANT
DAILY INSPECTION CHECKLIST/LOG FOR TANKS AND SECONDARY CONTAINMENT

Week of: _____/_____/_____ (Monday Date)

The following should be observed during inspections:

Check for **leaks** specifically:	Check **supports and foundations**:	Check **piping**:	Check **secondary containment**:
➢ drip marks ➢ cracks ➢ discoloration or corrosion ➢ puddles containing oil ➢ localized dead vegetation	➢ drip marks ➢ discoloration ➢ settling ➢ gaps between tank and foundation ➢ damage from vegetation roots	➢ droplets of oil ➢ discoloration or corrosion ➢ bowing of pipe between supports ➢ oil seepage on valves or seals	➢ level of precipitation /available capacity ➢ cracks, erosion ➢ dike, berm, or floor permeability ➢ debris ➢ operational status of drainage valves ➢ presence of oil ➢ discoloration or corrosion ➢ stressed vegetation ➢ location/status of pipes, inlets, drainage, beneath tanks, etc.
Check **High Level and Leak Detection Alarms** - Local & Control Room			

	Generator Oil Reservoir Unit 1	Generator Oil Reservoir Unit 2	Generator Oil Reservoir Unit 3	Free Turbine Reservoir K1A	Free Turbine Reservoir K1B	Free Turbine Reservoir K2A	Free Turbine Reservoir K2B	Free Turbine Reservoir K3A	Free Turbine Reservoir K3B	Engine Oil Reservoir K1A	Engine Oil Reservoir K1B	Engine Oil Reservoir K2A
Monday Inspector:	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*
Tuesday Inspector:	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*
Wednesday Inspector:	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*
Thursday Inspector:	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*
Friday Inspector:	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*
Saturday Inspector:	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*
Sunday Inspector:	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*

***Comments on problems observed include date discovered(use back of page 3 as necessary):**

During inspection, note any discrepancies and report them immediately to the Oakland PTL. Copies of completed inspection forms must be given to the Oakland PTL and MLPP Plant Environmental Scientist for record keeping requirements. This record must be kept for 5 years

TABLE H-1
OAKLAND POWER PLANT
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The following should be observed during inspections:

Check for **leaks** specifically:	Check **supports and foundations**:	Check **piping**:	Check **secondary containment**:
➢ drip marks ➢ cracks ➢ discoloration or corrosion ➢ puddles containing oil ➢ localized dead vegetation	➢ drip marks ➢ discoloration ➢ settling ➢ gaps between tank and foundation ➢ damage from vegetation roots	➢ droplets of oil ➢ discoloration or corrosion ➢ bowing of pipe between supports ➢ oil seepage on valves or seals	➢ level of precipitation /available capacity ➢ cracks, erosion ➢ dike, berm, or floor permeability ➢ debris ➢ operational status of drainage valves ➢ presence of oil ➢ discoloration or corrosion ➢ stressed vegetation ➢ location/status of pipes, inlets, drainage, beneath tanks, etc.
Check **High Level and Leak Detection Alarms** - Local & Control Room			

	Engine Oil Reservoir K2A	Engine Oil Reservoir K2B	Engine Oil Reservoir K3A	Engine Oil Reservoir K3B	No. 9 Transformer	No. 8 Transformer	No. 7 Transformer	No. 4 Auxiliary Bank Transformer	Water Injection Transformer	Fuel Oil Storage Tank	Oily Water Storage Tank	Stormwater Collection Pond
Monday	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	Sheen: ❑ Y ❑ N Water discharged: ❑ Y ❑ N
Tuesday	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	Sheen: ❑ Y ❑ N Water discharged: ❑ Y ❑ N
Wednesday	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	Sheen: ❑ Y ❑ N Water discharged: ❑ Y ❑ N
Thursday	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	Sheen: ❑ Y ❑ N Water discharged: ❑ Y ❑ N
Friday	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	Sheen: ❑ Y ❑ N Water discharged: ❑ Y ❑ N
Saturday	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	Sheen: ❑ Y ❑ N Water discharged: ❑ Y ❑ N
Sunday	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	Sheen: ❑ Y ❑ N Water discharged: ❑ Y ❑ N

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Check **High Level and Leak Detection Alarms** - Local & Control Room			

	Diesel Dump Tank Unit 1	Diesel Dump Tank Unit 2	Diesel Dump Tank Unit 3	Water Fuel Separator Filter 1	Water Fuel Separator Filter 2	Water Fuel Separator Filter 3						
Monday	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*
Tuesday	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*
Wednesday	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*
Thursday	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*
Friday	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*
Saturday	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*
Sunday	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*	❑ OK ❑ Problem*

***Comments on problems observed include date discovered(use back of page 3 as necessary):**

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REV. 1: July 2004

TABLE H-2
QUARTERLY RESPONSE EQUIPMENT INSPECTION LOG
OAKLAND POWER PLANT

Operator Name: _____ Date: _____

Location: Emergency Response Shed

Equipment Type	Expected Quantity	Current Quantity	Equipment is easily accessible?		Equipment is in good condition?		Equipment exceeded its shelf life?		Notes
			Yes	No	Yes	No	Yes	No	
Sorbent Equipment									
Oil absorbent sand	18 bags								
Oil absorbent pads	3 bxs								
Oil absorbent socks	3 bxs								
10' x 8" oil absorbent boom	1								
Oil absorbent pig pans	25								
Hand Tools Equipment									
Non Sparking shovel	4								
Broom, plastic	6								
Wheelbarrow	1								
Rubber boots	20								
Solvex-butyl gloves	26								
laytex gloves	1 bx								
Scrub Brush	2								

Location: Turbine Building

Equipment Type	Expected Quantity	Current Quantity	Equipment is easily accessible?		Equipment is in good condition?		Equipment exceeded its shelf life?		Notes
			Yes	No	Yes	No	Yes	No	
55-gallon Drum	2								

* Copies of completed inspection forms must be given to the Oakland Qualified Individual and MLPP Plant Environmental Scientist for record keeping requirements.

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TABLE H-2
QUARTERLY RESPONSE EQUIPMENT INSPECTION LOG
OAKLAND POWER PLANT

Location: Various location throughout the facility

Equipment Type	Expected Quantity	Current Quantity	Equipment is easily accessible?		Equipment is in good condition?		Equipment exceeded its shelf life?		Notes
			Yes	No	Yes	No	Yes	No	
Flashlight	Ensure all flashlights are in working condition								
	Various								
Communication Equipment	Ensure all communication equipment is in working condition								
Telephone	Various								
Cell Phones	Various								
Walkie Talkies	Various								
Firefighting	Ensure all extinguishers have current certification								
CO2 fire extinguisher	3								
Dry chemical fire extinguisher	Various								
Halon type fire extinguisher	Various								
Hose reel stations	Various								

Location: Units 1, 2 & 3 - Ensure all extinguishers have current certification

Equipment Type	Expected Quantity	Current Quantity	Equipment is easily accessible?		Equipment is in good condition?		Equipment exceeded its shelf life?		Notes
			Yes	No	Yes	No	Yes	No	
Automatic water spray deluge system	3								
High pressure CO2 flooding system	3								

Location: Maintenance Shop

Equipment Type	Expected Quantity	Current Quantity	Equipment is easily accessible?		Equipment is in good condition?		Equipment exceeded its shelf life?		Notes
			Yes	No	Yes	No	Yes	No	
First-aid kit	1								

* Copies of completed inspection forms must be given to the Oakland Qualified Individual and MLPP Plant Environmental Scientist for record keeping requirements.

TABLE H-3

OAKLAND POWER PLANT
QUALIFIED INDIVIDUAL NOTIFICATION DRILL LOG

DATE: _____

COMPANY: _____

QUALIFIED INDIVIDUAL: _____

EMERGENCY SCENARIO: _____

_____

_____

EVALUATION: _____

_____

_____

_____

_____

CHANGES TO BE IMPLEMENTED: _____

_____

_____

_____

_____

TIMETABLE FOR IMPLEMENTATION: _____

_____

_____

TABLE H-4

OAKLAND POWER PLANT
FACILITY DRILL LOG

DATE: _____

COMPANY: _____

QUALIFIED INDIVIDUAL: _____

EMERGENCY SCENARIO: _____

_____

_____

LOCAL RESPONSE TEAM'S RESPONSE TIME: _____

CONTRACTED PERSONNEL RESPONSE TIME: _____

FACILITY PERSONNEL RESPONSE TIME: _____

NOTES: _____

_____

_____

_____

_____

CHANGES TO BE IMPLEMENTED: _____

_____

_____

_____

_____

TIMETABLE FOR IMPLEMENTATION: _____

_____

_____

TABLE H-5

OAKLAND POWER PLANT
SPILL MANAGEMENT TEAM
TABLETOP EXERCISE LOG

DATE: _____

COMPANY: _____

QUALIFIED INDIVIDUAL: _____

EMERGENCY SCENARIO: _____

_____

_____

EVALUATION: _____

_____

_____

_____

_____

CHANGES TO BE IMPLEMENTED: _____

_____

_____

_____

_____

TIMETABLE FOR IMPLEMENTATION: _____

_____

_____

TABLE H-6

OAKLAND POWER PLANT
PERSONNEL RESPONSE TRAINING LOGS

NAME	RESPONSE TRAINING/ DATE AND NUMBER OF HOURS	PREVENTION TRAINING/ DATE AND NUMBER OF HOURS

31180/Oakland Rev. 3 (8/27/01/jb)

APPENDIX I

NATIONAL PREPARDNESS FOR RESPONSE EXERCISE
PROGRAM GUIDELINES
(EXCERPTS)

NATIONAL PREPAREDNESS

FOR

RESPONSE EXERCISE PROGRAM

(PREP)

GUIDELINES

DEPARTMENT OF TRANSPORTATION
U.S. Coast Guard
Research and Special Programs Administration

ENVIRONMENTAL PROTECTION AGENCY

DEPARTMENT OF THE INTERIOR
Minerals Management Service

August 2002

To the "Response Community":

This is the first revision since August 1994 to the Preparedness for Response Exercise Program (PREP) when we set out together to design an effective and coordinated exercise program under the Oil Pollution Act of 1990. As before, the revisions are the result of an open dialogue and the incorporation of lessons learned over the past 8 years. We considered issues identified in public meetings and in written comments received to the Department of Transportation regulatory docket (2000-7514). The PREP will evolve as the government and industry continue to meet the challenge of protecting the environment, public health and welfare. We look forward to working with all parties as we continue to improve the PREP process.

Captain David Westerholm
Chief, Office of Response
U.S. Coast Guard

Michael B. Cook
Director, Office of Emergency and Remedial Response
U.S. Environmental Protection Agency

Stacey Gerard
Associate Administrator for Pipeline Safety
Research and Special Programs Administration

Elmer P. Danenberger
Chief, Engineering and Operations Division
Minerals Management Service

PREP GUIDELINES

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Section 4

EPA-Regulated Onshore And Certain Offshore Non Transportation-Related Facilities

PREP Guidelines do not create binding legal requirements.

While the PREP Guidelines have been developed with the regulated community, they cannot be considered to be legally binding substantive rules. Plan holders can accept the PREP Guidelines to fulfill the exercise requirements of the Oil Pollution Act of 1990. An alternative program can also be acceptable subject to approval by the Regional Administrator. (See 40 CFR 112.21) Either the PREP Guidelines or the EPA-approved exercise program developed by the plan holder become binding when referenced in the submitted response plan.

QI Notification Exercises

EPA-Regulated Facilities

Applicability: Facility.

Frequency: Quarterly.

Initiating Authority: Company policy.

Particip. Elements: Facility personnel and qualified individual.

Scope: Exercise communications between facility personnel and qualified individual.

Objectives: Contact must be made with a qualified individual or designee, as designated in the response plan.

Certification: Self-certification.

Verification: Environmental Protection Agency (EPA)

Records:

Retention: 5 years.

Location: Records to be kept at the facility.

Evaluation: Self-evaluation.

Credit: Plan holder should take credit for this exercise when conducted in conjunction with other exercises as long as all objectives are met, the exercise is evaluated, and a proper record is generated. Credit should be taken for an actual spill response when these objectives are met, the response is evaluated, and a proper record is generated.

Emergency Procedures Exercises

Facilities (Optional)*

Applicability: Facility.

Frequency: Quarterly.

Initiating Authority: Facility owner or operator.

Partlcip. Elements: Facility personnel.

Scope: Exercise the emergency procedures for the facility to mitigate or prevent any discharge or a substantial threat of such discharge of oil resulting from facility operational activities associated with oil transfers.

Objectives: Conduct an exercise of the facility's emergency procedures to ensure personnel knowledge of actions to be taken to mitigate a spill. This exercise may be a walk-through of the emergency procedures.

Exercise should involve one or more of the sections of the emergency procedures for, spill mitigation. For example, the exercise may involve a simulation of a response to an oil spill.

The facility should ensure that spill mitigation procedures for all contingencies at the facility are addressed at some time.

Certification: Self-certification.

Verification: EPA.

Records:

Retention: 5 years.

Location: At each facility.

Evaluation: Self-evaluation.

Credit: Plan holder should take credit for this exercise when conducted in conjunction with other exercises, as long as all objectives are met, the exercise is evaluated, and a proper record is generated. Credit should be taken for an actual spill response when these objectives are met, the response is evaluated, and a proper record is generated.

***This is offered as an optional exercise to provide facilities with an exercise that may be conducted <u>unannounced</u> to fulfill the internal unannounced exercise requirement.**

Spill Management Team Tabletop Exercise

EPA-Regulated Facilities

Applicability: Facility spill management team.

Frequency: Annually.

Initiating Authority: Company policy.

Particip. Elements: Spill management team as established in the response plan.

Scope: Exercise the spill management team's organization, communication, and decision- making in managing a spill response.

Objectives: Exercise the spill management team in a review of-

> Knowledge of the response plan;

> Proper notifications;

> Communications system;

> Ability to access an OSRO;

> Coordination of internal organization personnel with responsibility for spill response;

> An annual review of the transition from a local team to a regional, national, and international team, as appropriate;

> Ability to effectively coordinate spill response activity with the National Response System (NRS) infrastructure. (If personnel from the NRS are not participating in the exercise, the spill management team should demonstrate knowledge of response coordination with the NRS.)

> Ability to access information in Area Contingency

Plan for location of sensitive areas, resources available within the area, unique conditions of area, etc.

At least one spill management team tabletop exercise in a triennial cycle would involve simulation of a worst-case discharge scenario.

Certification: Self-certification.

Verification: EPA.

Records:

Retention: 5 years.

Location: At each facility.

Evaluation: Self-evaluation.

Credit: Plan holder should take credit for this exercise when conducted in conjunction with other exercises as long as all objectives are met, the exercise is evaluated, and a proper record is generated. Credit should be taken for an actual spill response when these objectives are met, the response is evaluated, and a proper record is generated.

Equipment Deployment Exercises

EPA-Regulated Facilities

Applicability: Facilities with facility owned and operated response equipment.

Frequency: Semiannually.

Initiating Authority: Company policy.

Particip. Elements: Facility personnel.

Scope: Deploy and operate facility owned and operated response equipment identified in the response plan. The equipment to be deployed would be either (1) the minimum amount of equipment for deployment as described in "Guiding Principles", or (2) the equipment necessary to respond to a small discharge at the facility, whichever is less.

All of the facility personnel involved in equipment deployment operations must be included in a comprehensive training program. All of the facility equipment must be included in a comprehensive maintenance program. Credit should be taken for deployment conducted during training. The maintenance program must ensure that the equipment is periodically inspected and maintained in good operating condition in accordance with the manufacturers recommendations and best commercial practices. All inspection and maintenance must be documented by the owner.

Objectives: Demonstrate ability of facility personnel to deploy and operate equipment.

Ensure equipment is in proper working order.

Certification: Self-certification.

Verification: EPA.

Records:

Retention: 5 years.

Location: Records to be kept at the facility.

Evaluation Self–Evaluation.

Credit: Plan holder should take credit for this exercise when conducted in conjunction with other exercises as long as all objectives are met, the exercise is evaluated, and a proper record is generated. Credit should be taken for an actual spill response when these objectives are met, the response is evaluated, and a proper record is generated.

Note: If a facility with facility owned and operated equipment also identifies OSRO equipment in its response plan, the OSRO equipment must also be deployed and operated in accordance with the equipment deployment requirements for OSRO owned equipment.

Equipment Deployment Exercises

EPA-Regulated Facilities

Applicability: Facilities with OSRO response equipment cited in their response plan.

Frequency: Annually.

Initiating Authority: Company policy.

Particip. Elements: Facility owner or operator and OSRO.

Scope: Deploy and operate response equipment identified in the response plan. The equipment to be deployed would be the minimum amount of equipment for deployment as described in "Guiding Principles."

All of the OSRO personnel involved in equipment deployment operations must be included in a comprehensive training program. All of the OSRO equipment must be included in a comprehensive maintenance program. Credit should be taken for equipment deployment conducted during training. The maintenance program must ensure that the equipment is periodically inspected and maintained in good operating condition in accordance with the manufacturer's recommendations and best commercial practices. The facility owner or operator must ensure that inspection and maintenance by the OSRO is documented. The OSRO must provide inspection and maintenance information to the owner or operator.

Plan holders must ensure that when a regional OSRO is identified in the response plan, the OSRO conducts annual equipment deployment exercises in each operating environment for each CG or EPA Contingency Planning Area, or EPA sub-area

(where identified).

Objectives: Demonstrate the ability of the personnel to deploy and operate response equipment.

Ensure the response equipment is in proper working order.

Certification: The facility owner or operator should ensure that the OSRO identified in the response plan provides adequate documentation that the requirements for this exercise have been met.

Verification: EPA.

Records:

Retention 5 years, kept at the facility.

Evaluation: Self-evaluation.

Credit: Plan holder should take credit for this exercise when conducted in conjunction with other exercises as long as all objectives are met, the exercise is evaluated, and a proper record is generated. Credit should be taken for an actual spill response when the objectives are met, the response is evaluated, and a proper record is generated.

Government-Initiated Unannounced Exercises

EPA—Regulated Facility Response Plan Holders

Applicability: EPA-regulated facility response plan holders within the region.

Frequency: Triennially, if successfully completed. A facility deemed by the CG/EPA not to have successfully completed the exercise may be required to participate in another government initiated unannounced exercise at the discretion of the exercising agency. (Plan holders who have successfully completed a PREP government-initiated unannounced exercise will not be required to participate in another one for at least 36 months from the date of the exercise).

Initiating Authority: EPA.

Partlcip. Elements: EPA-regulated facility response plan holders.

Scope: Unannounced exercises are limited to a maximum of 10% of response plan holders per EPA Region per year.

Exercises are limited to approximately 4 hours in duration.

Exercises should involve response to a small discharge scenario (assume 2,100 gallons outside secondary containment and discharged into or on navigable waters and adjoining shorelines).

Exercise would involve deployment of response equipment identified in the facility response plan to respond to spill scenario.

RSPA and MMS will cover unannounced exercises for pipelines and offshore facilities not

a part of a complex in their exercise programs.

Objectives: Conduct proper notifications to respond to unannounced scenario of a small discharge.

Demonstrate that the response is -

> Timely as defined in section 1 of these Guidelines;

> Conducted with adequate amount of equipment for scenario; and

> Properly conducted.

Certification: EPA.

Verification: EPA.

Records:
Retention: 5 years, kept at the facility.

Evaluation: Evaluation to be conducted by initiating agency.

Credit: Credit may be granted by the initiating authority for an actual spill response when the PREP objectives are met, the response is evaluated by the initiating authority and a proper record is generated. Plan holders participating in this exercise may take credit for notification and equipment deployment exercises, if criteria for those exercises are met, the response is evaluated by the plan holder and a proper record is generated.

Section 7

Area Exercises

Notification Exercise

Area

Applicability: Area.

Frequency: Quarterly.

Initiating Authority: On-Scene Coordinator.

Participating Elements: Key Elements of the unified command (appropriate federal, state and local government agencies).

Scope: Exercise and test communication between On-Scene Coordinator and key elements of the unified command.

Objectives: Ensure that the key elements of the unified command know whom to call in the event of a discharge within the area.

Ensure contact by telephone, radio, message-pager, or facsimile and confirmation is made between the On-Scene Coordinator and key elements of the unified command.

Certification: Self-certification.

Verification: Verification to be conducted by the District or Region.

Records:

Retention: 3 years (USCG).

5 years (EPA).

Location: With the On-Scene Coordinator.

Evaluation: By Area Committee.

Credit: Plan holder should take credit for this exercise when conducted in conjunction with other exercises, as long as all exercise objectives are met, the exercise is evaluated, and a proper record is generated. Credit should be taken for an actual spill response when these objectives are met, the response is evaluated, and a proper record is generated.

Spill management Team Tabletop Exercise

Area

Applicability: Area spill management team.

Frequency: Annually.

Initiating Authority: U.S. Coast Guard District (m) or EPA Region.

Participating Elements: Spill management team for the area (U.S. Coast Guard or EPA and respective response team) and state(s).

Scope: Exercise the spill management team's organization, communication, and decision-making in managing a spill response.

Objectives: Exercise the spill management team in a review of

> Knowledge of the Area Contingency Plan;

> Proper notifications;

> Communications system

> Ability to access response equipment

> Coordination of organization or agency personnel with responsibility for spill response;

> Ability to effectively coordinate spill response activity with National Response System infrastructure;

> Ability to access information in Area Contingency Plan for location of sensitive areas, resources available within the area, unique conditions of the area, etc.; and

Exercise the response management system identified in the ACP and to the extent possible the unified command.

At least one spill management team tabletop exercise in a triennial cycle would involve simulation of a worst-case discharge scenario.

Certification: Self- Certification.

Verification: Verification to be conducted by District or Region.

Records

Retention 3 years (USCG).

5 years (EPA).

Location: With On-Scene Coordinator.

Evaluation: Self-evaluation.

Credit: Credit should be taken for this exercise when conducted in conjunction with other exercises as long as all objectives are met, the exercise is evaluated, and a proper record is generated. Credit should be taken for an actual spill response when these objectives are met, the response is evaluated, and a proper record is generated.

Equipment Deployment Exercises

Area

Applicability: Area Committee.

Frequency: Annually.

Initiating Authority: On-Scene Coordinator.

Participating Elements: Local area response community (appropriate federal, state and local response agencies).

Scope: Deploy and operate Coast Guard and EPA "first aid" response equipment and the Coast Guard's prepositioned equipment. All of the "first aid" equipment or that which is necessary to respond to an average most probable discharge in the Area, whichever is less, should be deployed annually.

All response personnel must be included in a comprehensive training program, and all response equipment in a comprehensive maintenance program. Credit should be taken for deployment of equipment during training. The maintenance program must ensure that the equipment is periodically inspected and maintained in good operating condition in accordance with the manufacturer's recommendations and best commercial practices.

Objectives: Demonstrate the ability of the response personnel to deploy and operate the equipment.

Ensure that the response equipment is in proper working order.

Certification: Self-certification.

Verification: District or Region.

Records:

Retention: 3 years (USCG).

5 years (EPA).

With On-Scene Coordinator.

Evaluation: Self-evaluation.

Credits: Plan holder should take credit for this exercise when conducted in conjunction with other exercises as long as all objectives are met, the exercise is evaluated, and a proper record is generated. Credit should be taken for an actual spill response when these objectives are met, the response is evaluated, and a proper record is generated.

Area Exercises

Area

Applicability: Area Response community.

Frequency: Triennially for each area.

Initiating Authority: U.S. Coast Guard, EPA and Industry.

Participating Elements: Appropriate Federal, state, and local government, and industry and other members of the response community.

Scope: Area exercises will exercise the Area Response Community.

Objectives: Exercise the Area Contingency Plan, along with selected industry response plans.

Exercise the response management system identified in the ACP and, to the extent possible, the unified command with the appropriate participants.

Exercise the area and industry spill management teams.

Deploy adequate response equipment for the exercise scenario. At a minimum, the scenario must involve exercise of Tier I Worst Case discharge capability.

Format: Total annual exercises would consist of the following-

> 6 government-led exercises; and

> 14 industry-led.

Total = 20 Area Exercises Per Year.

Area exercises should be *approximately* 8 - 12

hours in duration.

Exercise scenario to be developed by the exercise design team.

To simulate realism, the exercise should be conducted in the command post that would be utilized for a spill response, whenever possible.

Exercise may be in real or limited compressed time, and may start at any point during an incident, as determined by the Exercise Design Team. Flexibility should be allowed, to ensure the exercise objectives are met.

Lessons learned from the exercise should be incorporated into the PREP Lessons Learned System (e.g., CGSAILS), whenever possible.

Certification: The On-Scene Coordinator will certify completion of the area exercise. In certifying the area exercise, the On-Scene Coordinator will consider the following-

> The area exercise was conducted.

> The area exercise met the objectives outlined in the PREP guidelines.

> The area response community was exercised for spill response preparedness.

Industry plan holders should take credit for all of the exercises completed during the area exercise. These exercises shall be self-certified by the plan holder.

Verification: Verification to be done by the National Scheduling Coordinating Committee.

Records

Retention: 3 years (USCG).

5 years (EPA).

Location: On Scene Coordinator.

Evaluation: Joint evaluation team to be comprised of the federal government (U.S. Coast Guard, EPA, RSPA or MMS) state and industry.

Scheduling: Scheduling of area exercises will be done by the NSCC, utilizing input from the On-Scene Coordinator, Area Committee and Regional Response Team, in consultation with the industry. A 3-year schedule of PREP Area exercises will be published in the federal register as a public forum for government and industry input to the scheduling process.

Appendix A: Internal Exercise Documentation Forms

The following sample documentation forms are provided to give plan holders an idea of how to document the internal PREP exercises. These sample forms, are provided only as guidance. Plan holders do not have to include all of the information presented on these forms nor do they have to use these exact forms. Plan holders may choose to develop their own forms. Documentation should be completed within 60 days of exercise completion. Documentation should include, as a minimum, the following information:

- The type of exercise;
- Date and time of the exercise;
- A description of the exercise;
- The objectives met in the exercise;
- The components of the response plan exercised; and
- Lessons learned along with procedures and schedules for implementing lessons learned.

Internal Exercise Documentation Form

Notification Exercise

1. Date performed:_____
2. Exercise or actual response?_____
3. Vessel/Facility/Pipeline/Offshore Facility initiating exercise: _____
4. Name of person notified_____
   Is this person identified in your response plan as qualified individual Or designee?_____
5. Time initiated: _____
   Time in which qualified individual or designee responded _____
6. Method used to contact:
   ____Telephone
   ____Pager
   ____Radio
   ____Other _____
7. Description of notification procedure:
   _____
   _____
   _____
   _____
   _____
8. Identify which of the 15 core components of your response plan were exercised during this particular exercise:
   _____
   _____
   _____
   _____

_____
Certifying Signature

Retain this form for a minimum of 3 years (for USCG/RSPA/MMS) or 5 years (for EPA).

For vessel qualified individual notification, ensure log entry is also made and retained for a minimum of 3 years.

Internal Exercise Documentation Form

Emergency Procedures Exercise

1. Date performed: _____
2. Exercise or actual response ? _____
   If an exercise, announced or unannounced? _____
3. Location: _____
4. Vessel/Barge/Facility name: _____
5. Time started: _____
   Time completed: _____
6. Sections of Vessel/Barge/Facility emergency procedures exercised (i.e., response to collision, response to oil spill on deck, response to vessel fire, etc.)? _____
7. Description of exercise: _____
8. Identify which of the 15 core components of your response plan were exercised during this particular exercise: _____

Emergency Procedures Exercise (continued)

9. Attach a description of lesson(s) learned, procedures and schedule for implementation, and person(s) responsible for follow up of corrective measures.

_____
Certifying Signature

Retain this form for a minimum of 3 years (for USCG/RSPA/MMS) and 5 years (for EPA).

For manned vessels, ensure log entry is made and retained for 3 years.

Internal Exercise Documentation Form

Spill Management Team Tabletop Exercise

1. Date(s) performed: _____

2. Exercise or actual response? _____
If an exercise, announced or unannounced? _____

3. Location of tabletop: _____

4. Time started: _____
Time completed: _____

5. Response plan scenario used (check one):
_____Average most probable discharge
_____ Maximum most probable discharge
_____ Worst case discharge
_____ Size of (simulated) spill-bbls/gals

6. Describe how the following objectives were exercised:

a) Spill management team's knowledge of oil-spill response plan:

_____
_____
_____
_____
_____
_____

b) Proper notifications:

_____
_____
_____
_____
_____
_____

c) Communications system:

d) Spill management team's ability to access contracted oil spill removal organizations:

e) Spill management team's ability to coordinate spill response with On-Scene Coordinator, state and applicable agencies:

f) Spill management team's ability to access sensitive site and resource information in the Area Contingency Plan:

7. Identify which of the 15 core components of your response plan were exercised during this particular exercise:

8. Attach a description of lesson(s) learned, procedures and schedule for implementation, and person(s) responsible for follow up of corrective measures.

Certifying Signature

Retain this form for a minimum of 3 years (for USCG/RSPA/MMS) or 5 years (for EPA).

Internal Exercise Documentation Form

Equipment Deployment Exercise

1. Date(s) performed: _____

2. Exercise or actual response? _____
   If an exercise, announced or unannounced? _____

3. Deployment location(s):

4. Time started: _____
   Time OSRO/HSRO called_____
   Time on-scene_____
   Time boom deployed_____
   Time recovery equipment arrives on-scene_____

   Time completed: _____

5. Equipment deployed was:
_____Facility-owned
_____OSRO/HSRO-owned if so, which OSRO/HSRO?_____
_____Both

Equipment Deployment Exercise (continued)

6. List type and amount of all equipment (e.g., boom and skimmers) deployed and number of support personnel employed:

7. Describe goals of the equipment deployment and list any Area Contingency Plan strategies tested. (Attach a sketch of equipment deployments and booming strategies):

8. For deployment of facility-owned equipment, was the amount of equipment deployed at least the amount necessary to respond to your facility's average most probable spill?

   Was the equipment deployed in its intended operating environment?

Equipment Deployment Exercise (continued)

9. For deployment of OSRO/HSRO-owned equipment, was a representative sample (at least 1000 feet of each boom type and at least one of each skimmer type) deployed?

_____
_____
_____
_____

Was the equipment deployed in its intended operating environment?

_____
_____
_____

10. Are all facility personnel that are responsible for response operations involved in a comprehensive training program, and all pollution response equipment involved in a comprehensive maintenance program? _____

_____
_____
_____

If so, describe the program: _____

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

Date of last equipment inspection: _____

11. Was the equipment deployed by personnel responsible for its deployment in the event of an actual spill? _____

12. Was all deployed equipment operational? If not, why not?

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

13. Identify which of the 15 core components of your response plan were exercised during this particular exercise: _____

_____
_____
_____
_____
_____
_____
_____
_____

14. Attach a description of lesson(s) learned, procedures and schedule for implementation, and person(s) responsible for follow up of corrective measures.

_____
Certifying Signature

Retain this form and other documentation related to this exercise on file for a minimum of 3 years (for USCG/RSPA/MMS) or for a minimum of 5 years (for EPA).

Triennial CYLCLE Documentation FORM

	Year												Core Components														
	CY				CY				CY																		
	Quarters				Quarters				Quarters																		
	1	2	3	4	5	6	7	8	9	10	11	12	Notification	Staff Mobilization	Operate in RMS	Discharge Contained	Assessment	Containment	Recovery	Protection	Disposal	Communications	Transportation	Personnel Support	Equipment Maint.	Procurement	Documentation
QI Notification																											
Emergency Procedures																											
SMT Tabletop																											
Equipment Deployment																											
OSRO/HSRO Equipment Deployment																											
Gov't-initiated Unnannounced																											
Area Exercise																											

For each quarter in which an exercise was completed, mark that with an "X" then mark each core component tested during an exercise.