SFUND RECORDS CTR
88196284

3128 - Vol. 2
SUPERFUND RECORDS CENTER
DOC. [redacted] VOL. [redacted]

HAZARD RANKING SYSTEM (HRS)
WORKSHEETS
NAVAL STATION, TREASURE ISLAND, CA

Site 1 - Medical Clinic
Site 3 - PCB Equipment Storage Area
Site 4 - Hydraulic Training School (Bldg. 342)
Site 19 - Refuse Transfer Area
Site 5 - Old Boiler Plant - Building 102
Site 7 - Building 62 - Pesticide Storage
Site 9 - Building 42 - Forge/Foundry
Site 10 - Building 335 - Bus Painting Shop
Site 12 - Old Bunker Area
Site 13 - Stormwater Outfalls
Site 15 - Old Fuel Farm
Site 16 - Clipper Cove Tank Farm
Site 17 - Tanks 103/14
Site 20 - Auto Hobby Shop/Transportation Cent
Site 21 - Vessel Waste Oil Recovery
Site 25 - Seaplane Maintenance
Site 22 - Navy Exchange Gas Station
Site 24 - 5th Street Fuel Release
Site 26 - Areas of Suspected Underground Tank

(OLD)
HRS
Scoresheets
and rationale

Sharon Murray

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Site 20 - Auto Hobby Shop/Transportation Center
Site 21 - Vessel Waste Oil Recovery
Site 25 - Seaplane Maintenance
Site 22 - Navy Exchange Gas Station
Site 24 - 5th Street Fuel Release
Site 26 - Areas of Suspected Underground Tanks

Facility name: Site 1 - Medical Clinic

Location: Naval Station (NAVSTA), Treasure Island

EPA Region: IX

Person(s) in charge of the facility: Federal Facility

U.S. Navy

Name of Reviewer: B.F. Aubry Date: 1/9/87

General description of the facility:

(For example: landfill, surface impoundment, pile, container; types of hazardous substances; location of the facility; contamination route of major concern; types of information needed for rating; agency action, etc.)

The site is located on the south end of Building 257. An unknown amount of developer and/or fixer solution leaked from unused x-ray equipment, corroded through the wooden floor and dripped to the soil beneath the building, which is raised on pedestals. The area of soil affected was approximately 100 ft^2. Contaminants would tend to migrate down through the soil to first groundwater at 2-6 feet.

Scores: $S_M = 2.6$ ($S_{gw} = 0$ $S_{sw} = 4.5$ $S_a = 0$)

$S_{FE} =$

$S_{DC} = 25$

FIGURE 1
HRS COVER SHEET

Ground Water Route Work Sheet						
Rating Factor	Assigned Value (Circle One)		Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Release	(0)	45	1	0	45	3.1
If observed release is given a score of 45, proceed to line 4. If observed release is given a score of 0, proceed to line 2.						
2 Route Characteristics						3.2
Depth to Aquifer of Concern	(0) 1 2 3		2	0	6	
Net Precipitation	(0) 1 2 3		1	0	3	
Permeability of the Unsaturated Zone	0 1 (2) 3		1	2	3	
Physical State	0 1 2 (3)		1	3	3	
Total Route Characteristics Score				5	15	
3 Containment	0 1 2 (3)		1	3	3	3.3
4 Waste Characteristics						3.4
Toxicity/Persistence	0 3 6 9 12 15 (18)		1	18	18	
Hazardous Waste Quantity	(0) 1 2 3 4 5 6 7 8		1	0	8	
Total Waste Characteristics Score				18	26	
5 Targets						3.5
Ground Water Use	(0) 1 2 3		3	0	9	
Distance to Nearest Well/Population Served	(0) 4 6 8 10 12 16 18 20 24 30 32 35 40		1	0	40	
Total Targets Score				0	49	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5				0	57,330	
7 Divide line 6 by 57,330 and multiply by 100			S_{gw} =	0		

FIGURE 2
GROUND WATER ROUTE WORK SHEET

Surface Water Route Work Sheet						
Rating Factor	Assigned Value (Circle One)		Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Release	(0)	45	1	0	45	4.1
If observed release is given a value of 45, proceed to line 4. If observed release is given a value of 0, proceed to line 2.						
2 Route Characteristics						4.2
Facility Slope and Intervening Terrain	(0) 1 2 3		1	0	3	
1-yr. 24-hr. Rainfall	0 1 (2) 3		1	2	3	
Distance to Nearest Surface Water	0 1 (2) 3		2	4	6	
Physical State	0 1 2 (3)		1	3	3	
Total Route Characteristics Score				9	15	
3 Containment	0 1 2 (3)		1	3	3	4.3
4 Waste Characteristics						4.4
Toxicity/Persistence	0 3 6 9 12 15 (18)		1	18	18	
Hazardous Waste Quantity	(0) 1 2 3 4 5 6 7 8		1	0	8	
Total Waste Characteristics Score				18	26	
5 Targets						4.5
Surface Water Use	0 1 (2) 3		3	6	9	
Distance to a Sensitive Environment	(0) 1 2 3		2	0	6	
Population Served/Distance to Water Intake Downstream	(0) 4 6 8 10 12 16 18 20 24 30 32 35 40		1	0	40	
Total Targets Score				6	55	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5				2,916	64,350	
7 Divide line 6 by 64,350 and multiply by 100			S_{SW} =	4.5		

FIGURE 7
SURFACE WATER ROUTE WORK SHEET

Air Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
[1] Observed Release	(0) 45	1	0	45	5.1
Date and Location: N/A					
Sampling Protocol: N/A					
If line [1] is 0, the S_a = 0. Enter on line [5]. If line [1] is 45, then proceed to line [2].					
[2] Waste Characteristics					5.2
Reactivity and Incompatibility	0 1 2 3	1		3	
Toxicity	0 1 2 3	3		9	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8	
	Total Waste Characteristics Score		N/A	20	
[3] Targets					5.3
Population Within 4-Mile Radius	0 9 12 15 18 21 24 27 30	1		30	
Distance to Sensitive Environment	0 1 2 3	2		6	
Land Use	0 1 2 3	1		3	
	Total Targets Score		N/A	39	
[4] Multiply [1] x [2] x [3]			N/A	35,100	
[5] Divide line [4] by 35,100 and multiply by 100		S_a = 0			

FIGURE 9
AIR ROUTE WORK SHEET

	S	S^2
Groundwater Route Score (S_{gw})	0	0
Surface Water Route Score (S_{sw})	4.5	20.3
Air Route Score (S_a)	0	0
$S_{gw}^2 + S_{sw}^2 + S_a^2$		20.3
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$		4.5
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2} / 1.73 = S_M =$		2.6

FIGURE 10
WORKSHEET FOR COMPUTING S_M

Fire and Explosion Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Containment	1 3	1		3	7.1
2 Waste Characteristics					7.2
Direct Evidence	0 3	1		3	
Ignitability	0 1 2 3	1		3	
Reactivity	0 1 2 3	1		3	
Incompatibility	0 1 2 3	1		3	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8	
Total Waste Characteristics Score				20	
3 Targets					7.3
Distance to Nearest Population	0 1 2 3 4 5	1		5	
Distance to Nearest Building	0 1 2 3	1		3	
Distance to Sensitive Environment	0 1 2 3	1		3	
Land Use	0 1 2 3	1		3	
Population Within 2-Mile Radius	0 1 2 3 4 5	1		5	
Buildings Within 2-Mile Radius	0 1 2 3 4 5	1		5	
Total Targets Score				24	
4 Multiply 1 x 2 x 3				1,440	
5 Divide line 4 by 1,440 and multiply by 100		S_{FE} =			

FIGURE 11
FIRE AND EXPLOSION WORK SHEET

Direct Contact Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Incident	(0) 45	1	0	45	8.1
If line 1 is 45, proceed to line 4 If line 1 is 0, proceed to line 2					
2 Accessibility	0 1 (2) 3	1	2	3	8.2
3 Containment	0 (15)	1	15	15	8.3
4 Waste Characteristics Toxicity	0 1 2 (3)	5	15	15	8.4
5 Targets					8.5
Population Within a 1-Mile Radius	0 1 2 (3) 4 5	4	12	20	
Distance to a Critical Habitat	(0) 1 2 3	4	0	12	
Total Targets Score			12	32	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			5,400	21,600	
7 Divide line 6 by 21,600 and multiply by 100	S_{DC} = 25				

FIGURE 12
DIRECT CONTACT WORK SHEET

Facility name: Site 3 - PCB Equipment Storage Area.

Location: Naval Station (NAVSTA), Treasure Island

EPA Region: IX

Person(s) in charge of the facility: Federal Facility

U.S. Navy

Name of Reviewer: B.F. Aubry Date: 1/9/87

General description of the facility:

(For example: landfill, surface impoundment, pile, container; types of hazardous substances; location of the facility; contamination route of major concern; types of information needed for rating; agency action, etc.)

PCB-containing oil was accidentally released in the PCB equipment storage area on the south side of Building 3. This accident occurred 2-3 years ago. Quantity released is unknown but the affected area is believed to be about 100 sq. ft. Clean-up believed to have been performed, but not recorded. Surface runoff would have carried contaminants to the Bay. Of 4 wipe samples collected, one showed PCB levels of 3.5mg/100cm^2. Others undetected.

Scores: S_M = 2.6 (S_{gw} = 0 S_{sw} = 4.5 S_a = 0)

S_{FE} =

S_{DC} = 37.5

FIGURE 1
HRS COVER SHEET

Ground Water Route Work Sheet						
Rating Factor	Assigned Value (Circle One)		Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Release	(0)	45	1	0	45	3.1
If observed release is given a score of 45, proceed to line 4. If observed release is given a score of 0, proceed to line 2.						
2 Route Characteristics						3.2
Depth to Aquifer of Concern	0 1 2 (3)		2	6	6	
Net Precipitation	(0) 1 2 3		1	0	3	
Permeability of the Unsaturated Zone	0 1 (2) 3		1	2	3	
Physical State	0 1 2 (3)		1	3	3	
Total Route Characteristics Score				11	15	
3 Containment	0 1 2 (3)		1	3	3	3.3
4 Waste Characteristics						3.4
Toxicity/Persistence	0 3 6 9 12 15 (18)		1		18	
Hazardous Waste Quantity	(0) 1 2 3 4 5 6 7 8		1		8	
Total Waste Characteristics Score				18	26	
5 Targets						3.5
Ground Water Use	(0) 1 2 3		3	0	9	
Distance to Nearest Well/Population Served	(0) 4 6 8 10 12 16 18 20 24 30 32 35 40		1	0	40	
Total Targets Score				0	49	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5				0	57,330	
7 Divide line 6 by 57,330 and multiply by 100			S_{gw} =	0		

FIGURE 2
GROUND WATER ROUTE WORK SHEET

Surface Water Route Work Sheet						
Rating Factor	Assigned Value (Circle One)		Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Release	(0)	45	1	0	45	4.1
If observed release is given a value of 45, proceed to line 4. If observed release is given a value of 0, proceed to line 2.						
2 Route Characteristics						4.2
Facility Slope and Intervening Terrain	(0) 1 2 3		1	0	3	
1-yr. 24-hr. Rainfall	0 1 (2) 3		1	2	3	
Distance to Nearest Surface Water	0 1 (2) 3		2	4	6	
Physical State	0 1 2 (3)		1	3	3	
Total Route Characteristics Score				9	15	
3 Containment	0 1 2 (3)		1	3	3	4.3
4 Waste Characteristics						4.4
Toxicity/Persistence	0 3 6 9 12 15 (18)		1		18	
Hazardous Waste Quantity	(0) 1 2 3 4 5 6 7 8		1		8	
Total Waste Characteristics Score				18	26	
5 Targets						4.5
Surface Water Use	0 1 (2) 3		3	6	9	
Distance to a Sensitive Environment	(0) 1 2 3		2	0	5	
Population Served/Distance to Water Intake Downstream	(0) 4 6 8 10 12 16 18 20 24 30 32 35 40		1	0	40	
Total Targets Score				6	55	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5				2,916	64,350	
7 Divide line 6 by 64,350 and multiply by 100			S_{SW} = 4.5			

FIGURE 7
SURFACE WATER ROUTE WORK SHEET

Air Route Work Sheet						
Rating Factor	Assigned Value (Circle One)		Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Release	(0)	45	1	0	45	5.1
Date and Location: N/A						
Sampling Protocol: N/A						
If line 1 is 0, the S_a = 0. Enter on line 5. If line 1 is 45, then proceed to line 2.						
2 Waste Characteristics						5.2
Reactivity and Incompatibility	0 1 2 3		1		3	
Toxicity	0 1 2 3		3		9	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8		1		8	
	Total Waste Characteristics Score			N/A	20	
3 Targets						5.3
Population Within 4-Mile Radius	0 9 12 15 18 21 24 27 30		1		30	
Distance to Sensitive Environment	0 1 2 3		2		6	
Land Use	0 1 2 3		1		3	
	Total Targets Score			N/A	39	
4 Multiply 1 x 2 x 3				N/A	35,100	
5 Divide line 4 by 35,100 and multiply by 100			S_a = 0			

FIGURE 9
AIR ROUTE WORK SHEET

	S	S^2
Groundwater Route Score (S_{gw})	0	0
Surface Water Route Score (S_{sw})	4.5	20.3
Air Route Score (S_a)	0	0
$S_{gw}^2 + S_{sw}^2 + S_a^2$		20.3
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$		4.5
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2} \,/\, 1.73 = S_M =$		2.6

FIGURE 10
WORKSHEET FOR COMPUTING S_M

Fire and Explosion Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
[1] Containment	1 3	1		3	7.1
[2] Waste Characteristics					7.2
Direct Evidence	0 3	1		3	
Ignitability	0 1 2 3	1		3	
Reactivity	0 1 2 3	1		3	
Incompatibility	0 1 2 3	1		3	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8	
Total Waste Characteristics Score				20	
[3] Targets					7.3
Distance to Nearest Population	0 1 2 3 4 5	1		5	
Distance to Nearest Building	0 1 2 3	1		3	
Distance to Sensitive Environment	0 1 2 3	1		3	
Land Use	0 1 2 3	1		3	
Population Within 2-Mile Radius	0 1 2 3 4 5	1		5	
Buildings Within 2-Mile Radius	0 1 2 3 4 5	1		5	
Total Targets Score				24	
[4] Multiply [1] x [2] x [3]				1,440	
[5] Divide line [4] by 1,440 and multiply by 100		S_{FE} =			

FIGURE 11
FIRE AND EXPLOSION WORK SHEET

Direct Contact Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Incident	(0) 45	1	0	45	8.1
If line 1 is 45, proceed to line 4 If line 1 is 0, proceed to line 2					
2 Accessibility	0 1 2 (3)	1	3	3	8.2
3 Containment	0 (15)	1	15	15	8.3
4 Waste Characteristics Toxicity	0 1 2 (3)	5	15	15	8.4
5 Targets					8.5
Population Within a 1-Mile Radius	0 1 2 (3) 4 5	4	12	20	
Distance to a Critical Habitat	(0) 1 2 3	4	0	12	
Total Targets Score			12	32	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			8,100	21,600	
7 Divide line 6 by 21,600 and multiply by 100		S_{DC} = 37.5			

FIGURE 12
DIRECT CONTACT WORK SHEET

Facility name: Sites 4, 19: Hydraulic Training School/Refuse Transfer Area

Location: Naval Station (NAVSTA), Treasure Island

EPA Region: IX

Person(s) in charge of the facility: Federal Facility

U.S. Navy

Name of Reviewer: B.F. Aubry Date: 1/9/87

General description of the facility:

(For example: landfill, surface impoundment, pile, container; types of hazardous substances; location of the facility; contamination route of major concern; types of information needed for rating; agency action, etc.)

The area behind Building 342 is currently a staging (hydraulic/ disposal) area. Drums of hydraulic fluid, motor oil, and other unidentified fluids are stored. Leakage from the drums has stained the bare ground. Surface soil samples indicate oil and grease (7,030 to 88,000 mg/kg) and total petroleum hydrocarbons (5,800 to 53,000 mg/kg).

Scores: S_M = 1.8 (S_{gw} = 0 S_{sw} = 3.0 S_a = 0)

S_{FE} =

S_{DC} = 37.5

FIGURE 1
HRS COVER SHEET

Ground Water Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Release	(0) 45	1	0	45	3.1
If observed release is given a score of 45, proceed to line 4. If observed release is given a score of 0, proceed to line 2.					
2 Route Characteristics					3.2
Depth to Aquifer of Concern	0 1 2 (3)	2	6	6	
Net Precipitation	(0) 1 2 3	1	0	3	
Permeability of the Unsaturated Zone	0 1 (2) 3	1	2	3	
Physical State	0 1 2 (3)	1	3	3	
Total Route Characteristics Score			11	15	
3 Containment	0 1 2 3	1	3	3	3.3
4 Waste Characteristics					3.4
Toxicity/Persistence	0 3 6 9 (12) 15 18	1	12	18	
Hazardous Waste Quantity	(0) 1 2 3 4 5 6 7 8	1	0	8	
Total Waste Characteristics Score			12	26	
5 Targets					3.5
Ground Water Use	(0) 1 2 3	3	0	9	
Distance to Nearest Well/Population Served	(0) 4 6 8 10 12 16 18 20 24 30 32 35 40	1	0	40	
Total Targets Score			0	49	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			0	57,330	
7 Divide line 6 by 57,330 and multiply by 100		S_{gw} =	0		

FIGURE 2
GROUND WATER ROUTE WORK SHEET

Surface Water Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Release	(0) 45	1	0	45	4.1
If observed release is given a value of 45, proceed to line 4. If observed release is given a value of 0, proceed to line 2.					
2 Route Characteristics					4.2
Facility Slope and Intervening Terrain	(0) 1 2 3	1	0	3	
1-yr. 24-hr. Rainfall	0 1 (2) 3	1	2	3	
Distance to Nearest Surface Water	0 1 (2) 3	2	4	6	
Physical State	0 1 2 (3)	1	3	3	
Total Route Characteristics Score			9	15	
3 Containment	0 1 2 (3)	1	3	3	4.3
4 Waste Characteristics					4.4
Toxicity/Persistence	0 3 6 9 (12) 15 18	1	12	18	
Hazardous Waste Quantity	(0) 1 2 3 4 5 6 7 8	1	0	8	
Total Waste Characteristics Score			12	26	
5 Targets					4.5
Surface Water Use	0 1 (2) 3	3	6	9	
Distance to a Sensitive Environment	(0) 1 2 3	2	0	5	
Population Served/Distance to Water Intake Downstream	(0) 4 6 8 10 / 12 16 18 20 / 24 30 32 35 40	1	0	40	
Total Targets Score			6	55	
6 If line 1 is 45, multiply 1 x 4 x 5 / If line 1 is 0, multiply 2 x 3 x 4 x 5			2,376	64,350	
7 Divide line 6 by 64,350 and multiply by 100		S_{SW} = 3.0			

FIGURE 7
SURFACE WATER ROUTE WORK SHEET

Air Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Release	(0) 45	1	0	45	5.1
Date and Location: N/A					
Sampling Protocol: N/A					
If line 1 is 0, the S_a = 0. Enter on line 5. If line 1 is 45, then proceed to line 2.					
2 Waste Characteristics					5.2
Reactivity and Incompatibility	0 1 2 3	1		3	
Toxicity	0 1 2 3	3		9	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8	
	Total Waste Characteristics Score		N/A	20	
3 Targets					5.3
Population Within 4-Mile Radius	0 9 12 15 18 21 24 27 30	1		30	
Distance to Sensitive Environment	0 1 2 3	2		6	
Land Use	0 1 2 3	1		3	
	Total Targets Score		N/A	39	
4 Multiply 1 x 2 x 3			N/A	35,100	
5 Divide line 4 by 35,100 and multiply by 100		S_a = 0			

FIGURE 9
AIR ROUTE WORK SHEET

	S	S^2
Groundwater Route Score (S_{gw})	0	
Surface Water Route Score (S_{sw})	3.0	9.0
Air Route Score (S_a)	0	
$S_{gw}^2 + S_{sw}^2 + S_a^2$		9.0
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$		3.0
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2} / 1.73 = S_M =$		1.75

FIGURE 10
WORKSHEET FOR COMPUTING S_M

Fire and Explosion Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Containment	1 3	1		3	7.1
2 Waste Characteristics					7.2
Direct Evidence	0 3	1		3	
Ignitability	0 1 2 3	1		3	
Reactivity	0 1 2 3	1		3	
Incompatibility	0 1 2 3	1		3	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8	
Total Waste Characteristics Score				20	
3 Targets					7.3
Distance to Nearest Population	0 1 2 3 4 5	1		5	
Distance to Nearest Building	0 1 2 3	1		3	
Distance to Sensitive Environment	0 1 2 3	1		3	
Land Use	0 1 2 3	1		3	
Population Within 2-Mile Radius	0 1 2 3 4 5	1		5	
Buildings Within 2-Mile Radius	0 1 2 3 4 5	1		5	
Total Targets Score				24	
4 Multiply 1 x 2 x 3				1,440	
5 Divide line 4 by 1,440 and multiply by 100		S_{FE} =			

FIGURE 11
FIRE AND EXPLOSION WORK SHEET

Direct Contact Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Incident	(0) 45	1	0	45	8.1
If line 1 is 45, proceed to line 4 If line 1 is 0, proceed to line 2					
2 Accessibility	0 1 2 (3)	1	3	3	8.2
3 Containment	0 (15)	1	15	15	8.3
4 Waste Characteristics Toxicity	0 1 2 (3)	5	15	15	8.4
5 Targets					8.5
Population Within a 1-Mile Radius	0 1 2 (3) 4 5	4	12	20	
Distance to a Critical Habitat	(0) 1 2 3	4	0	12	
Total Targets Score			12	32	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			8,100	21,600	
7 Divide line 6 by 21,600 and multiply by 100	S_{DC} = 37.5				

FIGURE 12
DIRECT CONTACT WORK SHEET

Facility name: Site 5 - Old Boiler Plant Building 102

Location: Naval Station (NAVSTA), Treasure Island

EPA Region: IX

Person(s) in charge of the facility: Federal Facility

U.S. Navy

Name of Reviewer: B.F. Aubry Date: 1/9/87

General description of the facility:

(For example: landfill, surface impoundment, pile, container; types of hazardous substances; location of the facility; contamination route of major concern; types of information needed for rating; agency action, etc.)

From 1943 to 1962, Building 102 was a boiler plant. Building 102 was demolished in 1968. Excavation in the former building location (5th St. & Avenue H) uncovered building debris including asbestos insulation. The excavation was backfilled. Quantity and character of the debris is unknown.

Scores: S_M = 2.4 S_{gw} = 0 S_{sw} = 4.2 S_a = 0)

S_{FE} =

S_{DC} = 12.5

FIGURE 1
HRS COVER SHEET

Ground Water Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Release	(0) 45	1	0	45	3.1
If observed release is given a score of 45, proceed to line 4. If observed release is given a score of 0, proceed to line 2.					
2 Route Characteristics					3.2
Depth to Aquifer of Concern	0 1 2 (3)	2	6	6	
Net Precipitation	(0) 1 2 3	1	0	3	
Permeability of the Unsaturated Zone	0 1 (2) 3	1	2	3	
Physical State	0 1 (2) 3	1	2	3	
Total Route Characteristics Score			10	15	
3 Containment	0 1 2 (3)	1	3	3	3.3
4 Waste Characteristics					3.4
Toxicity/Persistence	0 3 6 9 12 (15) 18	1	15	18	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1	0	8	
Total Waste Characteristics Score			15	26	
5 Targets					3.5
Ground Water Use	(0) 1 2 3	3	0	9	
Distance to Nearest Well/Population Served	(0) 4 6 8 10 12 16 18 20 24 30 32 35 40	1	0	40	
Total Targets Score			0	49	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			0	57,330	
7 Divide line 6 by 57,330 and multiply by 100		S_{gw} =	0		

FIGURE 2
GROUND WATER ROUTE WORK SHEET

Surface Water Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Release	0 45	1	0	45	4.1
If observed release is given a value of 45, proceed to line 4. If observed release is given a value of 0, proceed to line 2.					
2 Route Characteristics					4.2
Facility Slope and Intervening Terrain	(0) 1 2 3	1	0	3	
1-yr. 24-hr. Rainfall	0 1 (2) 3	1	2	3	
Distance to Nearest Surface Water	0 1 (2) 3	2	4	6	
Physical State	0 1 (2) 3	1	2	3	
Total Route Characteristics Score			10	15	
3 Containment	0 1 2 (3)	1	3	3	4.3
4 Waste Characteristics					4.4
Toxicity/Persistence	0 3 6 9 12 (15) 18	1	15	18	
Hazardous Waste Quantity	(0) 1 2 3 4 5 6 7 8	1	0	8	
Total Waste Characteristics Score			15	26	
5 Targets					4.5
Surface Water Use	0 1 (2) 3	3	6	9	
Distance to a Sensitive Environment	(0) 1 2 3	2	0	6	
Population Served/Distance to Water Intake Downstream	(0) 4 6 8 10 12 16 18 20 24 30 32 35 40	1	0	40	
Total Targets Score			6	55	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			2,700	64,350	
7 Divide line 6 by 64,350 and multiply by 100		S_{sw} = 4.2			

FIGURE 7
SURFACE WATER ROUTE WORK SHEET

Air Route Work Sheet						
Rating Factor	Assigned Value (Circle One)		Multi-plier	Score	Max. Score	Ref. (Section)
[1] Observed Release	(0)	45	1	0	45	5.1
Date and Location: N/A						
Sampling Protocol: N/A						
If line [1] is 0, the S_a = 0. Enter on line [5]. If line [1] is 45, then proceed to line [2].						
[2] Waste Characteristics						5.2
Reactivity and Incompatibility	0 1 2 3		1		3	
Toxicity	0 1 2 3		3		9	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8		1		8	
	Total Waste Characteristics Score			N/A	20	
[3] Targets						5.3
Population Within 4-Mile Radius	0 9 12 15 18 21 24 27 30		1		30	
Distance to Sensitive Environment	0 1 2 3		2		6	
Land Use	0 1 2 3		1		3	
	Total Targets Score			N/A	39	
[4] Multiply [1] x [2] x [3]				N/A	35,100	
[5] Divide line [4] by 35,100 and multiply by 100			S_a = 0			

FIGURE 9
AIR ROUTE WORK SHEET

	S	S^2
Groundwater Route Score (S_{gw})	0	
Surface Water Route Score (S_{sw})	4.2	17.6
Air Route Score (S_a)	0	
$S_{gw}^2 + S_{sw}^2 + S_a^2$		17.6
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$		4.2
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2} \,/\, 1.73 = S_M =$		2.4

FIGURE 10
WORKSHEET FOR COMPUTING S_M

Fire and Explosion Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Containment	1 3	1		3	7.1
2 Waste Characteristics					7.2
Direct Evidence	0 3	1		3	
Ignitability	0 1 2 3	1		3	
Reactivity	0 1 2 3	1		3	
Incompatibility	0 1 2 3	1		3	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8	
Total Waste Characteristics Score				20	
3 Targets					7.3
Distance to Nearest Population	0 1 2 3 4 5	1		5	
Distance to Nearest Building	0 1 2 3	1		3	
Distance to Sensitive Environment	0 1 2 3	1		3	
Land Use	0 1 2 3	1		3	
Population Within 2-Mile Radius	0 1 2 3 4 5	1		5	
Buildings Within 2-Mile Radius	0 1 2 3 4 5	1		5	
Total Targets Score				24	
4 Multiply 1 x 2 x 3				1,440	
5 Divide line 4 by 1,440 and multiply by 100			S_{FE} =		

FIGURE 11
FIRE AND EXPLOSION WORK SHEET

Direct Contact Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Incident	(0) 45	1	0	45	8.1
If line 1 is 45, proceed to line 4 If line 1 is 0, proceed to line 2					
2 Accessibility	0 (1) 2 3	1	(1)	3	8.2
3 Containment	0 (15)	1	(15)	15	8.3
4 Waste Characteristics Toxicity	0 1 2 (3)	5	(15)	15	8.4
5 Targets					8.5
Population Within a 1-Mile Radius	0 1 2 (3) 4 5	4	12	20	
Distance to a Critical Habitat	(0) 1 2 3	4	0	12	
Total Targets Score			12	32	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			2,700	21,600	
7 Divide line 6 by 21,600 and multiply by 100			S_{DC} = 12.5		

FIGURE 12
DIRECT CONTACT WORK SHEET

Facility name: Site 7 - Building 62 - Pesticide Storage.

Location: Naval Station (NAVSTA), Treasure Island

EPA Region: IX

Person(s) in charge of the facility: Federal Facility

U.S. Navy

Name of Reviewer: B.F. Aubry Date: 1/9/87

General description of the facility:

(For example: landfill, surface impoundment, pile, container; types of hazardous substances; location of the facility; contamination route of major concern; types of information needed for rating; agency action, etc.)

Building 62 was used for storage and handling of liquids including paint, pesticides, herbicides and other unidentified substances. Containers were of 1-5 gallon size. Lead and linseed oil-containing paints were mixed in Building 62 from 1943 to the late 1950's. Pesticides and herbicides were mixed in the building from 1955 to the early 1960's. Excess liquids were poured on the ground outside Building 62 from 1943 to the early 1960's. 10 - 15 yd^3 of sludge was also spread on the ground on the west side of Building 62 each month for an unknown period of time. Organics and metals may be present in the subsurface.

Scores: $S_M = 2.6$ ($S_{gw} = 0$ $S_{sw} = 4.5$ $S_a = 0$)

$S_{FE} =$

$S_{DC} = 37.5$

FIGURE 1
HRS COVER SHEET

Ground Water Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Release	(0) 45	1	0	45	3.1
If observed release is given a score of 45, proceed to line 4. If observed release is given a score of 0, proceed to line 2.					
2 Route Characteristics					3.2
Depth to Aquifer of Concern	0 1 2 (3)	2	6	6	
Net Precipitation	(0) 1 2 3	1	0	3	
Permeability of the Unsaturated Zone	0 1 (2) 3	1	2	3	
Physical State	0 1 2 (3)	1	3	3	
Total Route Characteristics Score			(11)	15	
3 Containment	0 1 2 (3)	1	3	3	3.3
4 Waste Characteristics					3.4
Toxicity/Persistence	0 3 6 9 12 15 (18)	1	18	18	
Hazardous Waste Quantity	(0) 1 2 3 4 5 6 7 8	1	0	8	
Total Waste Characteristics Score			18	26	
5 Targets					3.5
Ground Water Use	(0) 1 2 3	3	0	9	
Distance to Nearest Well/Population Served	(0) 4 6 8 10 12 16 18 20 24 30 32 35 40	1	0	40	
Total Targets Score			0	49	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			0	57,330	
7 Divide line 6 by 57,330 and multiply by 100		S_{gw} =	0		

FIGURE 2
GROUND WATER ROUTE WORK SHEET

Surface Water Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Release	(0) 45	1	0	45	4.1
If observed release is given a value of 45, proceed to line 4. If observed release is given a value of 0, proceed to line 2.					
2 Route Characteristics					4.2
Facility Slope and Intervening Terrain	(0) 1 2 3	1	0	3	
1-yr. 24-hr. Rainfall	0 1 (2) 3	1	2	3	
Distance to Nearest Surface Water	0 1 (2) 3	2	4	6	
Physical State	0 1 2 (3)	1	3	3	
Total Route Characteristics Score			9	15	
3 Containment	0 1 2 (3)	1	3	3	4.3
4 Waste Characteristics					4.4
Toxicity/Persistence	0 3 6 9 12 15 (18)	1	18	18	
Hazardous Waste Quantity	(0) 1 2 3 4 5 6 7 8	1		8	
Total Waste Characteristics Score			18	26	
5 Targets					4.5
Surface Water Use	0 1 (2) 3	3	6	9	
Distance to a Sensitive Environment	(0) 1 2 3	2	0	6	
Population Served/Distance to Water Intake Downstream	(0) 4 6 8 10 12 16 18 20 24 30 32 35 40	1	0	40	
Total Targets Score			6	55	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			2,916	64,350	
7 Divide line 6 by 64,350 and multiply by 100		S_{sw} =			4.5

FIGURE 7
SURFACE WATER ROUTE WORK SHEET

Air Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
[1] Observed Release	(0) 45	1	0	45	5.1
Date and Location: N/A					
Sampling Protocol: N/A					
If line [1] is 0, the S_a = 0. Enter on line [5]. If line [1] is 45, then proceed to line [2].					
[2] Waste Characteristics					5.2
Reactivity and Incompatibility	0 1 2 3	1		3	
Toxicity	0 1 2 3	3		9	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8	
	Total Waste Characteristics Score		N/A	20	
[3] Targets					5.3
Population Within 4-Mile Radius	0 9 12 15 18 21 24 27 30	1		30	
Distance to Sensitive Environment	0 1 2 3	2		6	
Land Use	0 1 2 3	1		3	
	Total Targets Score		N/A	39	
[4] Multiply [1] x [2] x [3]			N/A	35,100	
[5] Divide line [4] by 35,100 and multiply by 100		S_a = 0			

FIGURE 9
AIR ROUTE WORK SHEET

	S	S^2
Groundwater Route Score (S_{gw})	0	
Surface Water Route Score (S_{sw})	4.5	20.3
Air Route Score (S_a)	0	
$S_{gw}^2 + S_{sw}^2 + S_a^2$		20.3
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$		4.5
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2} \,/\, 1.73 = S_M =$		2.6

FIGURE 10
WORKSHEET FOR COMPUTING S_M

Fire and Explosion Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Containment	1 3	1		3	7.1
2 Waste Characteristics					7.2
Direct Evidence	0 3	1		3	
Ignitability	0 1 2 3	1		3	
Reactivity	0 1 2 3	1		3	
Incompatibility	0 1 2 3	1		3	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8	
Total Waste Characteristics Score				20	
3 Targets					7.3
Distance to Nearest Population	0 1 2 3 4 5	1		5	
Distance to Nearest Building	0 1 2 3	1		3	
Distance to Sensitive Environment	0 1 2 3	1		3	
Land Use	0 1 2 3	1		3	
Population Within 2-Mile Radius	0 1 2 3 4 5	1		5	
Buildings Within 2-Mile Radius	0 1 2 3 4 5	1		5	
Total Targets Score				24	
4 Multiply 1 x 2 x 3				1,440	
5 Divide line 4 by 1,440 and multiply by 100		S_{FE} =			

FIGURE 11
FIRE AND EXPLOSION WORK SHEET

Direct Contact Work Sheet						
	Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1	Observed Incident	(0) 45	1	0	45	8.1
	If line 1 is 45, proceed to line 4 If line 1 is 0, proceed to line 2					
2	Accessibility	0 1 2 (3)	1	3	3	8.2
3	Containment	0 (15)	1	15	15	8.3
4	Waste Characteristics Toxicity	0 1 2 (3)	5	15	15	8.4
5	Targets					8.5
	Population Within a 1-Mile Radius	0 1 2 (3) 4 5	4	12	20	
	Distance to a Critical Habitat	(0) 1 2 3	4	0	12	
	Total Targets Score			12	32	
6	If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			8,100	21,600	
7	Divide line 6 by 21,600 and multiply by 100	S_{DC} =				37.5

FIGURE 12
DIRECT CONTACT WORK SHEET

Facility name: Site 9 - Building 41 - Foundry

Location: Naval Station (NAVSTA), Treasure Island

EPA Region: IX

Person(s) in charge of the facility: Federal Facility

U.S. Navy

Name of Reviewer: B.F. Aubry Date: 1/9/87

General description of the facility:

(For example: landfill, surface impoundment, pile, container; types of hazardous substances; location of the facility; contamination route of major concern; types of information needed for rating; agency action, etc.)

From 1943 to 1947, Building 41 was a foundry/forge. From 1953 to 1968, the building was apparently used for paint storage and paint activities. Paints, thinners and solvents may have been discharged to the adjacent Bay. Paints contained lead or zinc-chromium pigments. From 1981 to 1987, the site was a welding school.

Scores: $S_M = 3.4$ ($S_{gw} = 0$ $S_{sw} = 4.5$ $S_a = 0$)

$S_{FE} =$

$S_{DC} = 25.0$

FIGURE 1
HRS COVER SHEET

Ground Water Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Release	(0) 45	1	0	45	3.1
If observed release is given a score of 45, proceed to line 4. If observed release is given a score of 0, proceed to line 2.					
2 Route Characteristics					3.2
Depth to Aquifer of Concern	0 1 2 (3)	2	6	6	
Net Precipitation	(0) 1 2 3	1	0	3	
Permeability of the Unsaturated Zone	0 1 (2) 3	1	2	3	
Physical State	0 1 2 (3)	1	3	3	
Total Route Characteristics Score			11	15	
3 Containment	0 1 2 (3)	1	3	3	3.3
4 Waste Characteristics					3.4
Toxicity/Persistence	0 3 6 9 12 15 (18)	1	18	18	
Hazardous Waste Quantity	(0) 1 2 3 4 5 6 7 8	1	0	8	
Total Waste Characteristics Score			18	26	
5 Targets					3.5
Ground Water Use	(0) 1 2 3	3	0	9	
Distance to Nearest Well/Population Served	(0) 4 6 8 10 12 16 18 20 24 30 32 35 40	1	0	40	
Total Targets Score			0	49	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			0	57,330	
7 Divide line 6 by 57,330 and multiply by 100		S_{gw} =	0		

FIGURE 2
GROUND WATER ROUTE WORK SHEET

Surface Water Route Work Sheet						
Rating Factor	Assigned Value (Circle One)		Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Release	(0)	45	1	0	45	4.1
If observed release is given a value of 45, proceed to line 4. If observed release is given a value of 0, proceed to line 2.						
2 Route Characteristics						4.2
Facility Slope and Intervening Terrain	(0) 1 2 3		1	0	3	
1-yr. 24-hr. Rainfall	0 1 (2) 3		1	2	3	
Distance to Nearest Surface Water	0 1 (2) 3		2	4	6	
Physical State	0 1 2 (3)		1	3	3	
Total Route Characteristics Score				9	15	
3 Containment	0 1 2 (3)		1	3	3	4.3
4 Waste Characteristics						4.4
Toxicity/Persistence	0 3 6 9 12 15 (18)		1	18	18	
Hazardous Waste Quantity	(0) 1 2 3 4 5 6 7 8		1	0	8	
Total Waste Characteristics Score				18	26	
5 Targets						4.5
Surface Water Use	0 1 (2) 3		3	6	9	
Distance to a Sensitive Environment	(0) 1 2 3		2	0	6	
Population Served/Distance to Water Intake Downstream	(0) 4 6 8 10 12 16 18 20 24 30 32 35 40		1	0	40	
Total Targets Score				6	55	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5				2,916	64,350	
7 Divide line 6 by 64,350 and multiply by 100			S_{SW} =	4.5		

FIGURE 7
SURFACE WATER ROUTE WORK SHEET

Air Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
[1] Observed Release	(0) 45	1	0	45	5.1
Date and Location: N/A					
Sampling Protocol: N/A					
If line [1] is 0, the S_a = 0. Enter on line [5]. If line [1] is 45, then proceed to line [2].					
[2] Waste Characteristics					5.2
Reactivity and Incompatibility	0 1 2 3	1		3	
Toxicity	0 1 2 3	3		9	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8	
	Total Waste Characteristics Score		N/A	20	
[3] Targets					5.3
Population Within 4-Mile Radius	0 9 12 15 18 21 24 27 30	1		30	
Distance to Sensitive Environment	0 1 2 3	2		6	
Land Use	0 1 2 3	1		3	
	Total Targets Score		N/A	39	
[4] Multiply [1] x [2] x [3]			N/A	35,100	
[5] Divide line [4] by 35,100 and multiply by 100		S_a =	0		

FIGURE 9
AIR ROUTE WORK SHEET

	S	S^2
Groundwater Route Score (S_{gw})	0	
Surface Water Route Score (S_{sw})	5.8	
Air Route Score (S_a)	0	
$S_{gw}^2 + S_{sw}^2 + S_a^2$		33.6
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$		5.8
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2} \,/\, 1.73 = S_M =$		3.4

FIGURE 10
WORKSHEET FOR COMPUTING S_M

Fire and Explosion Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Containment	1 3	1		3	7.1
2 Waste Characteristics					7.2
Direct Evidence	0 3	1		3	
Ignitability	0 1 2 3	1		3	
Reactivity	0 1 2 3	1		3	
Incompatibility	0 1 2 3	1		3	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8	
Total Waste Characteristics Score				20	
3 Targets					7.3
Distance to Nearest Population	0 1 2 3 4 5	1		5	
Distance to Nearest Building	0 1 2 3	1		3	
Distance to Sensitive Environment	0 1 2 3	1		3	
Land Use	0 1 2 3	1		3	
Population Within 2-Mile Radius	0 1 2 3 4 5	1		5	
Buildings Within 2-Mile Radius	0 1 2 3 4 5	1		5	
Total Targets Score				24	
4 Multiply 1 x 2 x 3				1,440	
5 Divide line 4 by 1,440 and multiply by 100		S_{FE} =			

FIGURE 11
FIRE AND EXPLOSION WORK SHEET

Direct Contact Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Incident	(0) 45	1	0	45	8.1
If line 1 is 45, proceed to line 4 If line 1 is 0, proceed to line 2					
2 Accessibility	0 1 (2) 3	1	2	3	8.2
3 Containment	0 (15)	1	15	15	8.3
4 Waste Characteristics Toxicity	0 0 2 (3)	5	15	15	8.4
5 Targets					8.5
Population Within a 1-Mile Radius	0 1 2 (3) 4 5	4	12	20	
Distance to a Critical Habitat	(0) 1 2 3	4	0	12	
Total Targets Score			12	32	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			5400	21,600	
7 Divide line 6 by 21,600 and multiply by 100		S_{DC} = 25			

FIGURE 12
DIRECT CONTACT WORK SHEET

Facility name: Site 10 - Building 335 - Bus Painting Shop.

Location: Naval Station (NAVSTA), Treasure Island

EPA Region: IX

Person(s) in charge of the facility: Federal Facility

U.S. Navy

Name of Reviewer: B.F. Aubry Date: 1/9/87

General description of the facility:

(For example: landfill, surface impoundment, pile, container; types of hazardous substances; location of the facility; contamination route of major concern; types of information needed for rating; agency action, etc.)

From 1947 to 1953, the building was a paint shop where buses were painted. Paints were mixed in this building. Waste paints, thinners, and solvents were spread on the ground or discharged to the Bay or onto the ground. The area was also reportedly used to store and mix herbicides and pesticides and also as a steam cleaning area. A wide range of contaminants may have been discharged to the Bay from this site.

Scores: $S_M = 2.6$ ($S_{gw} = 0$ $S_{sw} = 4.5$ $S_a = 0$)

$S_{FE} =$

$S_{DC} = 37.5$

FIGURE 1
HRS COVER SHEET

Ground Water Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Release	(0) 45	1	0	45	3.1
If observed release is given a score of 45, proceed to line 4. If observed release is given a score of 0, proceed to line 2.					
2 Route Characteristics					3.2
Depth to Aquifer of Concern	0 1 2 (3)	2	6	6	
Net Precipitation	(0) 1 2 3	1	0	3	
Permeability of the Unsaturated Zone	0 1 (2) 3	1	2	3	
Physical State	0 1 2 (3)	1	3	3	
Total Route Characteristics Score			(11)	15	
3 Containment	0 1 2 (3)	1	(3)	3	3.3
4 Waste Characteristics					3.4
Toxicity/Persistence	0 3 6 9 12 15 (18)	1	18	18	
Hazardous Waste Quantity	(0) 1 2 3 4 5 6 7 8	1	0	8	
Total Waste Characteristics Score			(18)	26	
5 Targets					3.5
Ground Water Use	(0) 1 2 3	3	0	9	
Distance to Nearest Well/Population Served	(0) 4 6 8 10 12 16 18 20 24 30 32 35 40	1	0	40	
Total Targets Score			0	49	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			0	57,330	
7 Divide line 6 by 57,330 and multiply by 100		S_{gw} =	0		

FIGURE 2
GROUND WATER ROUTE WORK SHEET

Surface Water Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Release	(0) 45	1	0	45	4.1
If observed release is given a value of 45, proceed to line 4. If observed release is given a value of 0, proceed to line 2.					
2 Route Characteristics					4.2
Facility Slope and Intervening Terrain	(0) 1 2 3	1	0	3	
1-yr. 24-hr. Rainfall	0 1 (2) 3	1	2	3	
Distance to Nearest Surface Water	0 1 (2) 3	2	4	6	
Physical State	0 1 2 (3)	1	3	3	
Total Route Characteristics Score			9	15	
3 Containment	0 1 2 (3)	1	3	3	4.3
4 Waste Characteristics					4.4
Toxicity/Persistence	0 3 6 9 12 15 (18)	1	18	18	
Hazardous Waste Quantity	(0) 1 2 3 4 5 6 7 8	1	0	8	
Total Waste Characteristics Score			18	26	
5 Targets					4.5
Surface Water Use	0 1 (2) 3	3	6	9	
Distance to a Sensitive Environment	(0) 1 2 3	2	0	6	
Population Served/Distance to Water Intake Downstream	(0) 4 6 8 10 / 12 16 18 20 / 24 30 32 35 40	1	0	40	
Total Targets Score			6	55	
6 If line 1 is 45, multiply 1 x 4 x 5 / If line 1 is 0, multiply 2 x 3 x 4 x 5			2,916	64,350	
7 Divide line 6 by 64,350 and multiply by 100	S_{sw} = 4.5				

FIGURE 7
SURFACE WATER ROUTE WORK SHEET

Air Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
[1] Observed Release	(0) 45	1	0	45	5.1
Date and Location: N/A					
Sampling Protocol: N/A					
If line [1] is 0, the S_a = 0. Enter on line [5]. If line [1] is 45, then proceed to line [2].					
[2] Waste Characteristics					5.2
Reactivity and Incompatibility	0 1 2 3	1		3	
Toxicity	0 1 2 3	3		9	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8	
	Total Waste Characteristics Score		N/A	20	
[3] Targets					5.3
Population Within 4-Mile Radius	0 9 12 15 18 21 24 27 30	1		30	
Distance to Sensitive Environment	0 1 2 3	2		6	
Land Use	0 1 2 3	1		3	
	Total Targets Score		N/A	39	
[4] Multiply [1] x [2] x [3]			N/A	35,100	
[5] Divide line [4] by 35,100 and multiply by 100		S_a = 0			

FIGURE 9
AIR ROUTE WORK SHEET

	S	S^2
Groundwater Route Score (S_{gw})	0	
Surface Water Route Score (S_{sw})	4.5	20.2
Air Route Score (S_a)	0	
$S_{gw}^2 + S_{sw}^2 + S_a^2$		20.2
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$		4.5
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2} \,/\, 1.73 = S_M =$		2.6

FIGURE 10
WORKSHEET FOR COMPUTING S_M

Fire and Explosion Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
[1] Containment	1 3	1		3	7.1
[2] Waste Characteristics					7.2
Direct Evidence	0 3	1		3	
Ignitability	0 1 2 3	1		3	
Reactivity	0 1 2 3	1		3	
Incompatibility	0 1 2 3	1		3	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8	
Total Waste Characteristics Score				20	
[3] Targets					7.3
Distance to Nearest Population	0 1 2 3 4 5	1		5	
Distance to Nearest Building	0 1 2 3	1		3	
Distance to Sensitive Environment	0 1 2 3	1		3	
Land Use	0 1 2 3	1		3	
Population Within 2-Mile Radius	0 1 2 3 4 5	1		5	
Buildings Within 2-Mile Radius	0 1 2 3 4 5	1		5	
Total Targets Score				24	
[4] Multiply [1] x [2] x [3]				1,440	
[5] Divide line [4] by 1,440 and multiply by 100		S_{FE} =			

FIGURE 11
FIRE AND EXPLOSION WORK SHEET

Direct Contact Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Incident	(0) 45	1	0	45	8.1
If line 1 is 45, proceed to line 4 If line 1 is 0, proceed to line 2					
2 Accessibility	0 1 2 (3)	1	3	3	8.2
3 Containment	0 (15)	1	15	15	8.3
4 Waste Characteristics Toxicity	0 1 2 (3)	5	15	15	8.4
5 Targets					8.5
Population Within a 1-Mile Radius	0 1 2 (3) 4 5	4	12	20	
Distance to a Critical Habitat	(0) 1 2 3	4	0	12	
Total Targets Score			12	32	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			8,100	21,600	
7 Divide line 6 by 21,600 and multiply by 100		S_{DC} =	37.5		

FIGURE 12
DIRECT CONTACT WORK SHEET

Facility name: Site 11 YBI Landfill

Location: Yerba Buena Island

EPA Region: IX

Person(s) in charge of the facility: Federal Facility

U.S. Navy

Name of Reviewer: B.F. Aubry Date: 1/9/87

General description of the facility:

(For example: landfill, surface impoundment, pile, container; types of hazardous substances; location of the facility; contamination route of major concern; types of information needed for rating; agency action, etc.)

The southwest corner of Yerba Buena Island (YBI) is a marshy area used for dumping since 1935. The volume and type of material disposed of in the area were not identified. Currently, dumping is not allowed at this location. Possible contaminants may be discharged to the Bay here.

Scores: $S_M = 0.12(S_{gw} = 0 \quad S_{sw} = 0.2 S_a = 0)$

$S_{FE} =$

$S_{DC} = 12.5$

FIGURE 1
HRS COVER SHEET

Ground Water Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Release	(0) 45	1	0	45	3.1
If observed release is given a score of 45, proceed to line 4. If observed release is given a score of 0, proceed to line 2.					
2 Route Characteristics					3.2
Depth to Aquifer of Concern	(0) 1 2 3	2	0	6	
Net Precipitation	(0) 1 2 3	1	0	3	
Permeability of the Unsaturated Zone	0 1 (2) 3	1	2	3	
Physical State	0 (1) 2 3	1	1	3	
Total Route Characteristics Score			3	15	
3 Containment	0 1 2 (3)	1	3	3	3.3
4 Waste Characteristics					3.4
Toxicity/Persistence	(0) 3 6 9 12 15 18	1	0	18	
Hazardous Waste Quantity	(0) 1 2 3 4 5 6 7 8	1	0	8	
Total Waste Characteristics Score			1	26	
5 Targets					3.5
Ground Water Use	(0) 1 2 3	3	0	9	
Distance to Nearest Well/Population Served	(0) 4 6 8 10 12 16 18 20 24 30 32 35 40	1	0	40	
Total Targets Score			0	49	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			0	57,330	
7 Divide line 6 by 57,330 and multiply by 100		S_{gw} =	0		

FIGURE 2
GROUND WATER ROUTE WORK SHEET

Surface Water Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Release	(0) 45	1	0	45	4.1
If observed release is given a value of 45, proceed to line 4. If observed release is given a value of 0, proceed to line 2.					
2 Route Characteristics					4.2
Facility Slope and Intervening Terrain	0 1 (2) 3	1	2	3	
1-yr. 24-hr. Rainfall	0 1 (2) 3	1	2	3	
Distance to Nearest Surface Water	0 1 (2) 3	2	4	6	
Physical State	0 (1) 2 3	1	1	3	
Total Route Characteristics Score			9	15	
3 Containment	0 1 2 (3)	1	3	3	4.3
4 Waste Characteristics					4.4
Toxicity/Persistence	(0) 3 6 9 12 15 18	1	0	18	
Hazardous Waste Quantity	(0) 1 2 3 4 5 6 7 8	1	0	8	
Total Waste Characteristics Score			1	26	
5 Targets					4.5
Surface Water Use	0 1 (2) 3	3	6	9	
Distance to a Sensitive Environment	(0) 1 2 3	2	0	6	
Population Served/Distance to Water Intake Downstream	(0) 4 6 8 10 12 16 18 20 24 30 32 35 40	1	0	40	
Total Targets Score			6	55	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			162	64,350	
7 Divide line 6 by 64,350 and multiply by 100	S_{SW} =				0.2

FIGURE 7
SURFACE WATER ROUTE WORK SHEET

Air Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
[1] Observed Release	(0) 45	1	0	45	5.1
Date and Location: N/A					
Sampling Protocol: N/A					
If line [1] is 0, the S_a = 0. Enter on line [5]. If line [1] is 45, then proceed to line [2].					
[2] Waste Characteristics					5.2
Reactivity and Incompatibility	0 1 2 3	1		3	
Toxicity	0 1 2 3	3		9	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8	
	Total Waste Characteristics Score		N/A	20	
[3] Targets					5.3
Population Within 4-Mile Radius	0 9 12 15 18 21 24 27 30	1		30	
Distance to Sensitive Environment	0 1 2 3	2		6	
Land Use	0 1 2 3	1		3	
	Total Targets Score		N/A	39	
[4] Multiply [1] x [2] x [3]			N/A	35,100	
[5] Divide line [4] by 35,100 and multiply by 100		S_a = 0			

FIGURE 9
AIR ROUTE WORK SHEET

	S	S^2
Groundwater Route Score (S_{gw})	0	0
Surface Water Route Score (S_{sw})	0.2	0.04
Air Route Score (S_a)	0	0
$S_{gw}^2 + S_{sw}^2 + S_a^2$		0.04
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$		0.2
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2} / 1.73 = S_M =$		0.12

FIGURE 10
WORKSHEET FOR COMPUTING S_M

Fire and Explosion Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Containment	1 3	1		3	7.1
2 Waste Characteristics					7.2
Direct Evidence	0 3	1		3	
Ignitability	0 1 2 3	1		3	
Reactivity	0 1 2 3	1		3	
Incompatibility	0 1 2 3	1		3	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8	
Total Waste Characteristics Score				20	
3 Targets					7.3
Distance to Nearest Population	0 1 2 3 4 5	1		5	
Distance to Nearest Building	0 1 2 3	1		3	
Distance to Sensitive Environment	0 1 2 3	1		3	
Land Use	0 1 2 3	1		3	
Population Within 2-Mile Radius	0 1 2 3 4 5	1		5	
Buildings Within 2-Mile Radius	0 1 2 3 4 5	1		5	
Total Targets Score				24	
4 Multiply 1 x 2 x 3				1,440	
5 Divide line 4 by 1,440 and multiply by 100		S_{FE} =			

FIGURE 11
FIRE AND EXPLOSION WORK SHEET

Direct Contact Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Incident	(0) 45	1	0	45	8.1
If line 1 is 45, proceed to line 4 If line 1 is 0, proceed to line 2					
2 Accessibility	0 1 2 (3)	1	3	3	8.2
3 Containment	0 (15)	1	15	15	8.3
4 Waste Characteristics Toxicity	0 (1) 2 3	5	5	15	8.4
5 Targets					8.5
Population Within a 1-Mile Radius	0 1 2 (3) 4 5	4	12	20	
Distance to a Critical Habitat	(0) 1 2 3	4	0	12	
Total Targets Score			12	32	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			2700	21,600	
7 Divide line 6 by 21,600 and multiply by 100		S_{DC} = 12.5			

FIGURE 12
DIRECT CONTACT WORK SHEET

Facility name: Site 12 - Old Bunker Area

Location: Naval Station (NAVSTA), Treasure Island

EPA Region: IX

Person(s) in charge of the facility: Federal Facility

U.S. Navy

Name of Reviewer: B.F. Aubry Date: 1/9/87

General description of the facility:

(For example: landfill, surface impoundment, pile, container; types of hazardous substances; location of the facility; contamination route of major concern; types of information needed for rating; agency action, etc.)

From the early 1940's to 1969, the north end of Treasure Island contained ammunition bunkers. Trench-type and general debris disposal units were constructed. These units were located by borings. Debris consists of trash to depth of about 7 feet. Removal to 5 feet was planned and presumably performed; thus, rubbish is still present and may be contaminating the groundwater and soil.

Scores: $S_M = 0.12$ ($S_{gw} = 0$ $S_{sw} = 0.2$ $S_a = 0$)

$S_{FE} =$

$S_{DC} = 8.3$

FIGURE 1
HRS COVER SHEET

Ground Water Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Release	(0) 45	1	0	45	3.1
If observed release is given a score of 45, proceed to line 4. If observed release is given a score of 0, proceed to line 2.					
2 Route Characteristics					3.2
Depth to Aquifer of Concern	0 1 2 (3)	2	6	6	
Net Precipitation	(0) 1 2 3	1	0	3	
Permeability of the Unsaturated Zone	0 1 (2) 3	1	2	3	
Physical State	0 (1) 2 3	1	1	3	
Total Route Characteristics Score			9	15	
3 Containment	0 1 2 (3)	1	3	3	3.3
4 Waste Characteristics					3.4
Toxicity/Persistence	(0) 3 6 9 12 15 18	1	0	18	
Hazardous Waste Quantity	(0) 1 2 3 4 5 6 7 8	1	0	8	
Total Waste Characteristics Score			1	26	
5 Targets					3.5
Ground Water Use	(0) 1 2 3	3	0	9	
Distance to Nearest Well/Population Served	(0) 4 6 8 10 12 16 18 20 24 30 32 35 40	1	0	40	
Total Targets Score			0	49	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			0	57,330	
7 Divide line 6 by 57,330 and multiply by 100		S_{gw} =	0		

FIGURE 2
GROUND WATER ROUTE WORK SHEET

Surface Water Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Release	(0) 45	1	0	45	4.1
If observed release is given a value of 45, proceed to line 4. If observed release is given a value of 0, proceed to line 2.					
2 Route Characteristics					4.2
Facility Slope and Intervening Terrain	(0) 1 2 3	1	0	3	
1-yr. 24-hr. Rainfall	0 1 (2) 3	1	2	3	
Distance to Nearest Surface Water	0 1 (2) 3	2	4	6	
Physical State	0 (1) 2 3	1	1	3	
Total Route Characteristics Score			7	15	
3 Containment	0 1 2 (3)	1	3	3	4.3
4 Waste Characteristics					4.4
Toxicity/Persistence	(0) 3 6 9 12 15 18	1	0	18	
Hazardous Waste Quantity	(0) 1 2 3 4 5 6 7 8	1	0	8	
Total Waste Characteristics Score			1	26	
5 Targets					4.5
Surface Water Use	0 1 (2) 3	3	6	9	
Distance to a Sensitive Environment	(0) 1 2 3	2	0	5	
Population Served/Distance to Water Intake Downstream	(0) 4 6 8 10 12 16 18 20 24 30 32 35 40	1	0	40	
Total Targets Score			6	55	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			126	64,350	
7 Divide line 6 by 64,350 and multiply by 100		S_{sw} = 0.2			

FIGURE 7
SURFACE WATER ROUTE WORK SHEET

Air Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multiplier	Score	Max. Score	Ref. (Section)
[1] Observed Release	(0) 45	1	0	45	5.1
Date and Location: N/A					
Sampling Protocol: N/A					
If line [1] is 0, the S_a = 0. Enter on line [5]. If line [1] is 45, then proceed to line [2].					
[2] Waste Characteristics					5.2
Reactivity and Incompatibility	0 1 2 3	1		3	
Toxicity	0 1 2 3	3		9	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8	
	Total Waste Characteristics Score		N/A	20	
[3] Targets					5.3
Population Within 4-Mile Radius	0 9 12 15 18 21 24 27 30	1		30	
Distance to Sensitive Environment	0 1 2 3	2		6	
Land Use	0 1 2 3	1		3	
	Total Targets Score		N/A	39	
[4] Multiply [1] x [2] x [3]			N/A	35,100	
[5] Divide line [4] by 35,100 and multiply by 100		S_a = 0			

FIGURE 9
AIR ROUTE WORK SHEET

	s	s^2
Groundwater Route Score (S_{gw})	0	
Surface Water Route Score (S_{sw})	0.2	0.04
Air Route Score (S_a)	0	
$S_{gw}^2 + S_{sw}^2 + S_a^2$		0.04
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$		0.2
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2} \,/\, 1.73 = S_M =$		0.12

FIGURE 10
WORKSHEET FOR COMPUTING S_M

Fire and Explosion Work Sheet						
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Containment	1 3	1		3	7.1
2 Waste Characteristics					7.2
Direct Evidence	0 3	1		3	
Ignitability	0 1 2 3	1		3	
Reactivity	0 1 2 3	1		3	
Incompatibility	0 1 2 3	1		3	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8	
Total Waste Characteristics Score				20	
3 Targets					7.3
Distance to Nearest Population	0 1 2 3 4 5	1		5	
Distance to Nearest Building	0 1 2 3	1		3	
Distance to Sensitive Environment	0 1 2 3	1		3	
Land Use	0 1 2 3	1		3	
Population Within 2-Mile Radius	0 1 2 3 4 5	1		5	
Buildings Within 2-Mile Radius	0 1 2 3 4 5	1		5	
Total Targets Score				24	
4 Multiply 1 x 2 x 3				1,440	
5 Divide line 4 by 1,440 and multiply by 100			S_{FE} =		

FIGURE 11
FIRE AND EXPLOSION WORK SHEET

Direct Contact Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Incident	(0) 45	1	0	45	8.1
If line 1 is 45, proceed to line 4 If line 1 is 0, proceed to line 2					
2 Accessibility	(0) 1 (2) 3	1	1	3	8.2
3 Containment	0 (15)	1	15	15	8.3
4 Waste Characteristics Toxicity	(0) 1 2 3	5	5	15	8.4
5 Targets					8.5
Population Within a 1-Mile Radius	0 1 2 (3) 4 5	4	12	20	
Distance to a Critical Habitat	(0) 1 2 3	4	0	12	
Total Targets Score			12	32	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			1800	21,600	
7 Divide line 6 by 21,600 and multiply by 100	S_{DC} = 8.3				

FIGURE 12
DIRECT CONTACT WORK SHEET

Site 13 - Stormwater Outfalls.

Facility name: _____

Location: Naval Station (NAVSTA), Treasure Island

EPA Region: IX

Person(s) in charge of the facility: Federal Facility

U.S. Navy

Name of Reviewer: B.F. Aubry Date: 1/9/87

General description of the facility:

(For example: landfill, surface impoundment, pile, container; types of hazardous substances; location of the facility; contamination route of major concern; types of information needed for rating; agency action, etc.)

Water collected in Treasure Island sewer stormwater system ~~from surface and certain building drains is discharged to the~~ Bay without treatment. There are numerous discharge outfalls ~~around the island. Contaminants which may have been discharged~~ are unknown, but include anything which might find its way to a surface drain.

Scores: S_M = 2.6 (S_{gw} = 0 S_{sw} = 4.5 S_a = 0)

S_{FE} =

S_{DC} = 25.0

FIGURE 1
HRS COVER SHEET

Ground Water Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Release	(0) 45	1	0	45	3.1
If observed release is given a score of 45, proceed to line 4. If observed release is given a score of 0, proceed to line 2.					
2 Route Characteristics					3.2
Depth to Aquifer of Concern	0 1 2 (3)	2	6	6	
Net Precipitation	(0) 1 2 3	1	0	3	
Permeability of the Unsaturated Zone	0 1 (2) 3	1	2	3	
Physical State	0 1 2 (3)	1	3	3	
Total Route Characteristics Score			11	15	
3 Containment	0 1 2 (3)	1	3	3	3.3
4 Waste Characteristics					3.4
Toxicity/Persistence	0 3 6 9 12 15 (18)	1	18	18	
Hazardous Waste Quantity	(0) 1 2 3 4 5 6 7 8	1	0	8	
Total Waste Characteristics Score			18	26	
5 Targets					3.5
Ground Water Use	(0) 1 2 3	3	0	9	
Distance to Nearest Well/Population Served	(0) 4 6 8 10 12 16 18 20 24 30 32 35 40	1	0	40	
Total Targets Score			0	49	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			0	57,330	
7 Divide line 6 by 57,330 and multiply by 100		S_{gw} =	0		

FIGURE 2
GROUND WATER ROUTE WORK SHEET

Surface Water Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Release	(0) 45	1	0	45	4.1
If observed release is given a value of 45, proceed to line 4. If observed release is given a value of 0, proceed to line 2.					
2 Route Characteristics					4.2
Facility Slope and Intervening Terrain	(0) 1 2 3	1	0	3	
1-yr. 24-hr. Rainfall	0 1 (2) 3	1	2	3	
Distance to Nearest Surface Water	0 1 (2) 3	2	4	6	
Physical State	0 1 2 (3)	1	3	3	
Total Route Characteristics Score			9	15	
3 Containment	0 1 2 (3)	1	3	3	4.3
4 Waste Characteristics					4.4
Toxicity/Persistence	0 3 6 9 12 15 (18)	1	18	18	
Hazardous Waste Quantity	(0) 1 2 3 4 5 6 7 8	1	0	8	
Total Waste Characteristics Score			18	26	
5 Targets					4.5
Surface Water Use	0 1 (2) 3	3	6	9	
Distance to a Sensitive Environment	(0) 1 2 3	2	0	6	
Population Served/Distance to Water Intake Downstream	(0) 4 6 8 10 12 16 18 20 24 30 32 35 40	1	0	40	
Total Targets Score			6	55	
6 If line 1 is 45, multiply 1 x 4 x 5. If line 1 is 0, multiply 2 x 3 x 4 x 5			2,916	64,350	
7 Divide line 6 by 64,350 and multiply by 100		S_{sw} =			4.5

FIGURE 7
SURFACE WATER ROUTE WORK SHEET

Air Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
[1] Observed Release	(0) 45	1	0	45	5.1
Date and Location: N/A					
Sampling Protocol: N/A					
If line [1] is 0, the S_a = 0. Enter on line [5]. If line [1] is 45, then proceed to line [2].					
[2] Waste Characteristics					5.2
Reactivity and Incompatibility	0 1 2 3	1		3	
Toxicity	0 1 2 3	3		9	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8	
	Total Waste Characteristics Score		N/A	20	
[3] Targets					5.3
Population Within 4-Mile Radius	0 9 12 15 18 21 24 27 30	1		30	
Distance to Sensitive Environment	0 1 2 3	2		6	
Land Use	0 1 2 3	1		3	
	Total Targets Score		N/A	39	
[4] Multiply [1] x [2] x [3]			N/A	35,100	
[5] Divide line [4] by 35,100 and multiply by 100		S_a =	0		

FIGURE 9
AIR ROUTE WORK SHEET

	S	S^2
Groundwater Route Score (S_{gw})	0	0
Surface Water Route Score (S_{sw})	4.5	20.3
Air Route Score (S_a)	0	0
$S_{gw}^2 + S_{sw}^2 + S_a^2$		20.3
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$		4.5
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2} \,/\, 1.73 = S_M =$		2.6

FIGURE 10
WORKSHEET FOR COMPUTING S_M

Fire and Explosion Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Containment	1 3	1		3	7.1
2 Waste Characteristics					7.2
Direct Evidence	0 3	1		3	
Ignitability	0 1 2 3	1		3	
Reactivity	0 1 2 3	1		3	
Incompatibility	0 1 2 3	1		3	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8	
Total Waste Characteristics Score				20	
3 Targets					7.3
Distance to Nearest Population	0 1 2 3 4 5	1		5	
Distance to Nearest Building	0 1 2 3	1		3	
Distance to Sensitive Environment	0 1 2 3	1		3	
Land Use	0 1 2 3	1		3	
Population Within 2-Mile Radius	0 1 2 3 4 5	1		5	
Buildings Within 2-Mile Radius	0 1 2 3 4 5	1		5	
Total Targets Score				24	
4 Multiply 1 x 2 x 3				1,440	
5 Divide line 4 by 1,440 and multiply by 100		S_{FE} =			

FIGURE 11
FIRE AND EXPLOSION WORK SHEET

Direct Contact Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Incident	(0) 45	1	0	45	8.1
If line 1 is 45, proceed to line 4 If line 1 is 0, proceed to line 2					
2 Accessibility	0 1 (2) 3	1	2	3	8.2
3 Containment	0 (15)	1	15	15	8.3
4 Waste Characteristics Toxicity	0 1 2 (3)	5	15	15	8.4
5 Targets					8.5
Population Within a 1-Mile Radius	0 1 2 (3) 4 5	4	12	20	
Distance to a Critical Habitat	(0) 1 2 3	4	0	12	
Total Targets Score			12	32	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			5,400	21,600	
7 Divide line 6 by 21,600 and multiply by 100		S_{DC} =			25.0

FIGURE 12
DIRECT CONTACT WORK SHEET

Facility name: Site 15 - Old Fuel Farm

Location: Naval Station (NAVSTA), Treasure Island

EPA Region: IX

Person(s) in charge of the facility: Federal Facility

U.S. Navy

Name of Reviewer: B.F. Aubry Date: 1/9/87

General description of the facility:

(For example: landfill, surface impoundment, pile, container; types of hazardous substances; location of the facility; contamination route of major concern; types of information needed for rating; agency action, etc.)

Two 210,000 gallon fuel storage tanks were located east of Building 89 prior to their transfer in 1943 to the current fuel farm location. No tank leaks are known, but abandoned underground piping may have been abandoned without being drained. Nearby excavations in 1985 revealed soil suspected of containing oil and/or hydrocarbons.

Scores: S_M = 1.7 (S_{gw} = 0 S_{sw} = 3.0 S_a = 0)

S_{FE} =

S_{DC} = 25.0

FIGURE 1
HRS COVER SHEET

Ground Water Route Work Sheet						
Rating Factor	Assigned Value (Circle One)		Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Release	(0)	45	1	0	45	3.1
If observed release is given a score of 45, proceed to line 4. If observed release is given a score of 0, proceed to line 2.						
2 Route Characteristics						3.2
Depth to Aquifer of Concern	0 1 2 (3)		2	6	6	
Net Precipitation	(0) 1 2 3		1	0	3	
Permeability of the Unsaturated Zone	0 1 (2) 3		1	2	3	
Physical State	0 1 2 (3)		1	3	3	
Total Route Characteristics Score				(11)	15	
3 Containment	0 1 2 (3)		1	3	3	3.3
4 Waste Characteristics						3.4
Toxicity/Persistence	0 3 6 9 (12) 15 18		1	12	18	
Hazardous Waste Quantity	(0) 1 2 3 4 5 6 7 8		1	0	8	
Total Waste Characteristics Score				12	26	
5 Targets						3.5
Ground Water Use	(0) 1 2 3		3	0	9	
Distance to Nearest Well/Population Served	(0) 4 6 8 10 12 16 18 20 24 30 32 35 40		1	0	40	
Total Targets Score				0	49	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5				0	57,330	
7 Divide line 6 by 57,330 and multiply by 100			S_{gw} =	0		

FIGURE 2
GROUND WATER ROUTE WORK SHEET

Surface Water Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Release	(0) 45	1	0	45	4.1
If observed release is given a value of 45, proceed to line 4. If observed release is given a value of 0, proceed to line 2.					
2 Route Characteristics					4.2
Facility Slope and Intervening Terrain	(0) 1 2 3	1	0	3	
1-yr. 24-hr. Rainfall	0 1 (2) 3	1	2	3	
Distance to Nearest Surface Water	0 1 (2) 3	2	4	6	
Physical State	0 1 2 (3)	1	3	3	
Total Route Characteristics Score			9	15	
3 Containment	0 1 2 (3)	1	3	3	4.3
4 Waste Characteristics					4.4
Toxicity/Persistence	0 3 6 9 (12) 15 (18)	1	12	18	
Hazardous Waste Quantity	(0) 1 2 3 4 5 6 7 8	1	0	8	
Total Waste Characteristics Score			12	26	
5 Targets					4.5
Surface Water Use	0 1 (2) 3	3	6	9	
Distance to a Sensitive Environment	(0) 1 2 3	2	0	5	
Population Served/Distance to Water Intake Downstream	(0) 4 6 8 10 / 12 16 18 20 / 24 30 32 35 40	1	0	40	
Total Targets Score			6	55	
6 If line 1 is 45, multiply 1 x 4 x 5 / If line 1 is 0, multiply 2 x 3 x 4 x 5			1944	64,350	
7 Divide line 6 by 64,350 and multiply by 100	S_{sw} = 3.0				

FIGURE 7
SURFACE WATER ROUTE WORK SHEET

Air Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
[1] Observed Release	(0) 45	1	0	45	5.1
Date and Location: N/A					
Sampling Protocol: N/A					
If line [1] is 0, the S_a = 0. Enter on line [5]. If line [1] is 45, then proceed to line [2].					
[2] Waste Characteristics					5.2
Reactivity and Incompatibility	0 1 2 3	1		3	
Toxicity	0 1 2 3	3		9	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8	
	Total Waste Characteristics Score		N/A	20	
[3] Targets					5.3
Population Within 4-Mile Radius	0 9 12 15 18 21 24 27 30	1		30	
Distance to Sensitive Environment	0 1 2 3	2		6	
Land Use	0 1 2 3	1		3	
	Total Targets Score		N/A	39	
[4] Multiply [1] x [2] x [3]			N/A	35,100	
[5] Divide line [4] by 35,100 and multiply by 100		S_a = 0			

FIGURE 9
AIR ROUTE WORK SHEET

	S	S^2
Groundwater Route Score (S_{gw})	0	0
Surface Water Route Score (S_{sw})	3.0	9.0
Air Route Score (S_a)	0	0
$S_{gw}^2 + S_{sw}^2 + S_a^2$		9.0
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$		3.0
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2} / 1.73 = S_M =$		

FIGURE 10
WORKSHEET FOR COMPUTING S_M

Fire and Explosion Work Sheet						
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)	
1 Containment	1 3	1		3	7.1	
2 Waste Characteristics					7.2	
Direct Evidence	0 3	1		3		
Ignitability	0 1 2 3	1		3		
Reactivity	0 1 2 3	1		3		
Incompatibility	0 1 2 3	1		3		
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8		
Total Waste Characteristics Score				20		
3 Targets					7.3	
Distance to Nearest Population	0 1 2 3 4 5	1		5		
Distance to Nearest Building	0 1 2 3	1		3		
Distance to Sensitive Environment	0 1 2 3	1		3		
Land Use	0 1 2 3	1		3		
Population Within 2-Mile Radius	0 1 2 3 4 5	1		5		
Buildings Within 2-Mile Radius	0 1 2 3 4 5	1		5		
Total Targets Score				24		
4 Multiply 1 x 2 x 3				1,440		
5 Divide line 4 by 1,440 and multiply by 100		S_{FE} =				

FIGURE 11
FIRE AND EXPLOSION WORK SHEET

Direct Contact Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Incident	(0) 45	1	0	45	8.1
If line 1 is 45, proceed to line 4 If line 1 is 0, proceed to line 2					
2 Accessibility	0 1 (2) 3	1	2	3	8.2
3 Containment	0 (15)	1	15	15	8.3
4 Waste Characteristics Toxicity	0 1 2 (3)	5	15	15	8.4
5 Targets					8.5
Population Within a 1-Mile Radius	0 1 2 (3) 4 5	4	12	20	
Distance to a Critical Habitat	(0) 1 2 3	4	0	12	
Total Targets Score			12	32	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			5,400	21,600	
7 Divide line 6 by 21,600 and multiply by 100	S_{DC} = 25.0				

FIGURE 12
DIRECT CONTACT WORK SHEET

Facility name: Site 16 - Clipper Cove Tank Farm.

Location: Yerba Buena Island

EPA Region: IX

Person(s) in charge of the facility: Federal Facility

U.S. Navy

Name of Reviewer: B.F. Aubry Date: 1/9/87

General description of the facility:

(For example: landfill, surface impoundment, pile, container; types of hazardous substances; location of the facility; contamination route of major concern; types of information needed for rating; agency action, etc.)

From 1943 until the early 1960's, ten storage tanks were present on Yerba Buena Island. When the tanks were dismantled, sludge still present in the tanks was put on the bare ground near the tanks, apparently left to erode and wash into the Bay or be absorbed into the underlying soil. Three surface soil samples revealed lead (120;110;200 mg/kg), oil and grease (160;250;470 mg/kg) and total hydrocarbons (59;180;430 mg/kg).

Scores: S_M = 4.4 (S_{gw} = 0 S_{sw} = 7.6 S_a = 0)

S_{FE} =

S_{DC} = 37.5

FIGURE 1
HRS COVER SHEET

Ground Water Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Release	(0) 45	1	0	45	3.1
If observed release is given a score of 45, proceed to line 4. If observed release is given a score of 0, proceed to line 2.					
2 Route Characteristics					3.2
Depth to Aquifer of Concern	(0) 1 2 3	2	0	6	
Net Precipitation	(0) 1 2 3	1	0	3	
Permeability of the Unsaturated Zone	0 1 (2) 3	1	2	3	
Physical State	0 1 2 (3)	1	3	3	
Total Route Characteristics Score			5	15	
3 Containment	0 1 2 (3)	1	3	3	3.3
4 Waste Characteristics					3.4
Toxicity/Persistence	0 3 6 9 12 15 (18)	1	18	18	
Hazardous Waste Quantity	(0) 1 2 3 4 5 6 7 8	1	0	8	
Total Waste Characteristics Score			18	26	
5 Targets					3.5
Ground Water Use	(0) 1 2 3	3	0	9	
Distance to Nearest Well/Population Served	(0) 4 6 8 10 12 16 18 20 24 30 32 35 40	1	0	40	
Total Targets Score			0	49	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			0	57,330	
7 Divide line 6 by 57,330 and multiply by 100		S_{gw} =	0		

FIGURE 2
GROUND WATER ROUTE WORK SHEET

Surface Water Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Release	(0) 45	1	0	45	4.1
If observed release is given a value of 45, proceed to line 4. If observed release is given a value of 0, proceed to line 2.					
2 Route Characteristics					4.2
Facility Slope and Intervening Terrain	(0) 1 2 3	1	0	3	
1-yr. 24-hr. Rainfall	0 1 (2) 3	1	2	3	
Distance to Nearest Surface Water	0 1 (2) 3	2	4	6	
Physical State	0 1 2 (3)	1	3	3	
Total Route Characteristics Score			9	15	
3 Containment	0 1 2 (3)	1	3	3	4.3
4 Waste Characteristics					4.4
Toxicity/Persistence	0 3 6 9 12 15 (18)	1	18	18	
Hazardous Waste Quantity	(0) 1 2 3 4 5 6 7 8	1	0	8	
Total Waste Characteristics Score			18	26	
5 Targets					4.5
Surface Water Use	0 1 (2) 3	3	6	9	
Distance to a Sensitive Environment	(0) 1 2 3	2	0	6	
Population Served/Distance to Water Intake Downstream	(0) 4 6 8 10 12 16 18 20 24 30 32 35 40	1	0	40	
Total Targets Score			6	55	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			4,860	64,350	
7 Divide line 6 by 64,350 and multiply by 100		S_{SW} =			7.6

FIGURE 7
SURFACE WATER ROUTE WORK SHEET

Air Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
[1] Observed Release	(0) 45	1	0	45	5.1
Date and Location: N/A					
Sampling Protocol: N/A					
If line [1] is 0, the S_a = 0. Enter on line [5]. If line [1] is 45, then proceed to line [2].					
[2] Waste Characteristics					5.2
Reactivity and Incompatibility	0 1 2 3	1		3	
Toxicity	0 1 2 3	3		9	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8	
	Total Waste Characteristics Score		N/A	20	
[3] Targets					5.3
Population Within 4-Mile Radius	0 9 12 15 18 21 24 27 30	1		30	
Distance to Sensitive Environment	0 1 2 3	2		6	
Land Use	0 1 2 3	1		3	
	Total Targets Score		N/A	39	
[4] Multiply [1] x [2] x [3]			N/A	35,100	
[5] Divide line [4] by 35,100 and multiply by 100		S_a = 0			

FIGURE 9
AIR ROUTE WORK SHEET

	S	S^2
Groundwater Route Score (S_{gw})	0	0
Surface Water Route Score (S_{sw})	7.6	58
Air Route Score (S_a)	0	0
$S_{gw}^2 + S_{sw}^2 + S_a^2$		58
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$		7.6
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2} \,/\, 1.73 = S_M =$		4.4

FIGURE 10
WORKSHEET FOR COMPUTING S_M

Fire and Explosion Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Containment	1 3	1		3	7.1
2 Waste Characteristics					7.2
Direct Evidence	0 3	1		3	
Ignitability	0 1 2 3	1		3	
Reactivity	0 1 2 3	1		3	
Incompatibility	0 1 2 3	1		3	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8	
Total Waste Characteristics Score				20	
3 Targets					7.3
Distance to Nearest Population	0 1 2 3 4 5	1		5	
Distance to Nearest Building	0 1 2 3	1		3	
Distance to Sensitive Environment	0 1 2 3	1		3	
Land Use	0 1 2 3	1		3	
Population Within 2-Mile Radius	0 1 2 3 4 5	1		5	
Buildings Within 2-Mile Radius	0 1 2 3 4 5	1		5	
Total Targets Score				24	
4 Multiply 1 x 2 x 3				1,440	
5 Divide line 4 by 1,440 and multiply by 100		S_{FE} =			

FIGURE 11
FIRE AND EXPLOSION WORK SHEET

Direct Contact Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Incident	(0) 45	1	0	45	8.1
If line 1 is 45, proceed to line 4 If line 1 is 0, proceed to line 2					
2 Accessibility	0 1 2 (3)	1	3	3	8.2
3 Containment	0 (15)	1	15	15	8.3
4 Waste Characteristics Toxicity	0 1 2 (3)	5	15	15	8.4
5 Targets					8.5
Population Within a 1-Mile Radius	0 1 2 (3) 4 5	4	12	20	
Distance to a Critical Habitat	(0) 1 2 3	4	0	12	
Total Targets Score			12	32	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			8,100	21,600	
7 Divide line 6 by 21,600 and multiply by 100		S_{DC} =			37.5

FIGURE 12
DIRECT CONTACT WORK SHEET

Facility name: Site 17 - Tanks 103/104

Location: Naval Station (NAVSTA), Treasure Island

EPA Region: IX

Person(s) in charge of the facility: Federal Facility

U.S. Navy

Name of Reviewer: B.F. Aubry Date: 1/9/87

General description of the facility:

(For example: landfill, surface impoundment, pile, container; types of hazardous substances; location of the facility; contamination route of major concern; types of information needed for rating; agency action, etc.)

In 1983, approximately 20,000 gallons of fuel was reportedly spilled from tanks 103/104. The area around these tanks has since been paved. It was also reported that on at least one occasion, waste oil was spread around tanks 103/104 for weed control, an area of several hundred square feet. Date, quantity, type are unknown. Oil may have contained PCB.

Scores: $S_M = 2.3$ ($S_{gw} = 0$ $S_{sw} = 4.0$ $S_a = 0$)

$S_{FE} =$

$S_{DC} = 25.0$

FIGURE 1
HRS COVER SHEET

Ground Water Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Release	(0) 45	1	0	45	3.1
If observed release is given a score of 45, proceed to line 4. If observed release is given a score of 0, proceed to line 2.					
2 Route Characteristics					3.2
Depth to Aquifer of Concern	0 1 2 (3)	2	6	6	
Net Precipitation	(0) 1 2 3	1	0	3	
Permeability of the Unsaturated Zone	0 1 (2) 3	1	2	3	
Physical State	0 1 2 (3)	1	3	3	
Total Route Characteristics Score			11	15	
3 Containment	0 1 2 (3)	1	3	3	3.3
4 Waste Characteristics					3.4
Toxicity/Persistence	0 3 6 9 (12) 15 18	1	12	18	
Hazardous Waste Quantity	0 1 2 3 (4) 5 6 7 8	1	4	8	
Total Waste Characteristics Score			16	26	
5 Targets					3.5
Ground Water Use	(0) 1 2 3	3	0	9	
Distance to Nearest Well/Population Served	(0) 4 6 8 10 12 16 18 20 24 30 32 35 40	1	0	40	
Total Targets Score			0	49	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			0	57,330	
7 Divide line 6 by 57,330 and multiply by 100		S_{gw} =	0		

FIGURE 2
GROUND WATER ROUTE WORK SHEET

Surface Water Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Release	(0) 45	1	0	45	4.1
If observed release is given a value of 45, proceed to line 4. If observed release is given a value of 0, proceed to line 2.					
2 Route Characteristics					4.2
Facility Slope and Intervening Terrain	(0) 1 2 3	1	0	3	
1-yr. 24-hr. Rainfall	0 1 (2) 3	1	2	3	
Distance to Nearest Surface Water	0 1 (2) 3	2	4	6	
Physical State	0 1 2 (3)	1	3	3	
Total Route Characteristics Score			9	15	
3 Containment	0 1 2 (3)	1	3	3	4.3
4 Waste Characteristics					4.4
Toxicity/Persistence	0 3 6 9 (12) 15 18	1	12	18	
Hazardous Waste Quantity	0 1 2 3 (4) 5 6 7 8	1	4	8	
Total Waste Characteristics Score			16	26	
5 Targets					4.5
Surface Water Use	0 1 (2) 3	3	6	9	
Distance to a Sensitive Environment	(0) 1 2 3	2	0	6	
Population Served/Distance to Water Intake Downstream	(0) 4 6 8 10 12 16 18 20 24 30 32 35 40	1	0	40	
Total Targets Score			6	55	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			2,592	54,350	
7 Divide line 6 by 64,350 and multiply by 100		S_{sw} = 4.0			

FIGURE 7
SURFACE WATER ROUTE WORK SHEET

Air Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
[1] Observed Release	(0) 45	1	0	45	5.1
Date and Location: N/A					
Sampling Protocol: N/A					
If line [1] is 0, the S_a = 0. Enter on line [5]. If line [1] is 45, then proceed to line [2].					
[2] Waste Characteristics					5.2
Reactivity and Incompatibility	0 1 2 3	1		3	
Toxicity	0 1 2 3	3		9	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8	
	Total Waste Characteristics Score		N/A	20	
[3] Targets					5.3
Population Within 4-Mile Radius	0 9 12 15 18 21 24 27 30	1		30	
Distance to Sensitive Environment	0 1 2 3	2		6	
Land Use	0 1 2 3	1		3	
	Total Targets Score		N/A	39	
[4] Multiply [1] x [2] x [3]			N/A	35,100	
[5] Divide line [4] by 35,100 and multiply by 100		S_a = 0			

FIGURE 9
AIR ROUTE WORK SHEET

	S	S^2
Groundwater Route Score (S_{gw})	0	0
Surface Water Route Score (S_{sw})	4.0	16.0
Air Route Score (S_a)	0	0
$S_{gw}^2 + S_{sw}^2 + S_a^2$		16.0
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$		4.0
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2} \,/\, 1.73 = S_M =$		2.3

FIGURE 10
WORKSHEET FOR COMPUTING S_M

Fire and Explosion Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Containment	1 3	1		3	7.1
2 Waste Characteristics					7.2
Direct Evidence	0 3	1		3	
Ignitability	0 1 2 3	1		3	
Reactivity	0 1 2 3	1		3	
Incompatibility	0 1 2 3	1		3	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8	
Total Waste Characteristics Score				20	
3 Targets					7.3
Distance to Nearest Population	0 1 2 3 4 5	1		5	
Distance to Nearest Building	0 1 2 3	1		3	
Distance to Sensitive Environment	0 1 2 3	1		3	
Land Use	0 1 2 3	1		3	
Population Within 2-Mile Radius	0 1 2 3 4 5	1		5	
Buildings Within 2-Mile Radius	0 1 2 3 4 5	1		5	
Total Targets Score				24	
4 Multiply 1 x 2 x 3				1,440	
5 Divide line 4 by 1,440 and multiply by 100		S_{FE} =			

FIGURE 11
FIRE AND EXPLOSION WORK SHEET

Direct Contact Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Incident	(0) 45	1	0	45	8.1
If line 1 is 45, proceed to line 4 If line 1 is 0, proceed to line 2					
2 Accessibility	0 1 (2) 3	1	2	3	8.2
3 Containment	0 (5)	1	15	15	8.3
4 Waste Characteristics Toxicity	0 1 2 (3)	5	15	15	8.4
5 Targets					8.5
Population Within a 1-Mile Radius	0 1 2 (3) 4 5	4	12	20	
Distance to a Critical Habitat	(0) 1 2 3	4	0	12	
	Total Targets Score		12	32	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			5,400	21,600	
7 Divide line 6 by 21,600 and multiply by 100		S_{DC} = 25.0			

FIGURE 12
DIRECT CONTACT WORK SHEET

Facility name: Site 20 - Auto Hobby Shop/Transportation Center

Location: Naval Station (NAVSTA), Treasure Island

EPA Region: IX

Person(s) in charge of the facility: Federal Facility

U.S. Navy

Name of Reviewer: B.F. Aubry Date: 1/9/87

General description of the facility:

(For example: landfill, surface impoundment, pile, container; types of hazardous substances; location of the facility; contamination route of major concern; types of information needed for rating; agency action, etc.)

From 1943 to 1950, Buildings 194, 224, 225, and 267 were used for steam cleaning and degreasing of vehicles. Waste fluids went to storm drain which led to San Francisco Bay. At an unknown time, Building 225 became an auto hobby shop. Drums of hydraulic fluid, oil, etc. were stored outside. Surface soil samples indicated chromium (44;67 mg/kg), lead (270;700 mg/kg) nickel (28 and 35 mg/kg), zinc (160;470 mg/kg), oil and grease (13,300;28,200 mg/kg), and total petroleum hydrocarbons (cont'd below)

Scores: S_M = 2.6 (S_{gw} = 0 S_{sw} = 4.5 S_a = 0)

S_{FE} =

S_{DC} = 25.0

FIGURE 1
HRS COVER SHEET

(9,700;25,000 mg/kg). Several underground tanks may also have been located in this area.

Ground Water Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
[1] Observed Release	(0) 45	1	0	45	3.1
If observed release is given a score of 45, proceed to line [4]. If observed release is given a score of 0, proceed to line [2].					
[2] Route Characteristics					3.2
Depth to Aquifer of Concern	0 1 2 (3)	2	6	6	
Net Precipitation	(0) 1 2 3	1	0	3	
Permeability of the Unsaturated Zone	0 1 (2) 3	1	2	3	
Physical State	0 1 2 (3)	1	3	3	
Total Route Characteristics Score			11	15	
[3] Containment	0 1 2 (3)	1	3	3	3.3
[4] Waste Characteristics					3.4
Toxicity/Persistence	0 3 6 9 12 15 (18)	1	18	18	
Hazardous Waste Quantity	(0) 1 2 3 4 5 6 7 8	1	0	8	
Total Waste Characteristics Score			18	26	
[5] Targets					3.5
Ground Water Use	(0) 1 2 3	3	0	9	
Distance to Nearest Well/Population Served	(0) 4 6 8 10 12 16 18 20 24 30 32 35 40	1	0	40	
Total Targets Score			0	49	
[6] If line [1] is 45, multiply [1] x [4] x [5] If line [1] is 0, multiply [2] x [3] x [4] x [5]			0	57,330	
[7] Divide line [6] by 57,330 and multiply by 100		S_{gw} =	0		

FIGURE 2
GROUND WATER ROUTE WORK SHEET

Surface Water Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Release	(0) 45	1	0	45	4.1
If observed release is given a value of 45, proceed to line 4. If observed release is given a value of 0, proceed to line 2.					
2 Route Characteristics					4.2
Facility Slope and Intervening Terrain	(0) 1 2 3	1	0	3	
1-yr. 24-hr. Rainfall	0 1 (2) 3	1	2	3	
Distance to Nearest Surface Water	0 1 (2) 3	2	4	6	
Physical State	0 1 2 (3)	1	3	3	
Total Route Characteristics Score			9	15	
3 Containment	0 1 2 (3)	1	3	3	4.3
4 Waste Characteristics					4.4
Toxicity/Persistence	0 3 6 9 12 15 (18)	1	18	18	
Hazardous Waste Quantity	(0) 1 2 3 4 5 6 7 8	1	0	8	
Total Waste Characteristics Score			18	26	
5 Targets					4.5
Surface Water Use	0 1 (2) 3	3	6	9	
Distance to a Sensitive Environment	(0) 1 2 3	2	0	6	
Population Served/Distance to Water Intake Downstream	(0) 4 6 8 10 12 16 18 20 24 30 32 35 40	1	0	40	
Total Targets Score			6	55	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			2,916	64,350	
7 Divide line 6 by 64,350 and multiply by 100		S_{SW} =	4.5		

FIGURE 7
SURFACE WATER ROUTE WORK SHEET

Air Route Work Sheet

Rating Factor	Assigned Value (Circle One)	Multiplier	Score	Max. Score	Ref. (Section)
[1] Observed Release	(0) 45	1	0	45	5.1
Date and Location: N/A					
Sampling Protocol: N/A					
If line [1] is 0, the S_a = 0. Enter on line [5]. If line [1] is 45, then proceed to line [2].					
[2] Waste Characteristics					5.2
Reactivity and Incompatibility	0 1 2 3	1		3	
Toxicity	0 1 2 3	3		9	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8	
	Total Waste Characteristics Score		N/A	20	
[3] Targets					5.3
Population Within 4-Mile Radius	0 9 12 15 18 21 24 27 30	1		30	
Distance to Sensitive Environment	0 1 2 3	2		6	
Land Use	0 1 2 3	1		3	
	Total Targets Score		N/A	39	
[4] Multiply [1] x [2] x [3]			N/A	35,100	
[5] Divide line [4] by 35,100 and multiply by 100		S_a = 0			

FIGURE 9
AIR ROUTE WORK SHEET

	S	S^2
Groundwater Route Score (S_{gw})	0	
Surface Water Route Score (S_{sw})	4.5	20.3
Air Route Score (S_a)	0	
$S_{gw}^2 + S_{sw}^2 + S_a^2$		20.3
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$		4.5
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2} \,/\, 1.73 = S_M =$		2.6

FIGURE 10
WORKSHEET FOR COMPUTING S_M

Fire and Explosion Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Containment	1 3	1		3	7.1
2 Waste Characteristics					7.2
Direct Evidence	0 3	1		3	
Ignitability	0 1 2 3	1		3	
Reactivity	0 1 2 3	1		3	
Incompatibility	0 1 2 3	1		3	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8	
Total Waste Characteristics Score				20	
3 Targets					7.3
Distance to Nearest Population	0 1 2 3 4 5	1		5	
Distance to Nearest Building	0 1 2 3	1		3	
Distance to Sensitive Environment	0 1 2 3	1		3	
Land Use	0 1 2 3	1		3	
Population Within 2-Mile Radius	0 1 2 3 4 5	1		5	
Buildings Within 2-Mile Radius	0 1 2 3 4 5	1		5	
Total Targets Score				24	
4 Multiply 1 x 2 x 3				1,440	
5 Divide line 4 by 1,440 and multiply by 100		S_{FE} =			

FIGURE 11
FIRE AND EXPLOSION WORK SHEET

Direct Contact Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Incident	(0) 45	1	0	45	8.1
If line 1 is 45, proceed to line 4 If line 1 is 0, proceed to line 2					
2 Accessibility	0 1 (2) 3	1	2	3	8.2
3 Containment	0 (15)	1	15	15	8.3
4 Waste Characteristics Toxicity	0 1 2 (3)	5	15	15	8.4
5 Targets					8.5
Population Within a 1-Mile Radius	0 1 2 (3) 4 5	4	12	20	
Distance to a Critical Habitat	(0) 1 2 3	4	0	12	
Total Targets Score			12	32	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			5400	21,600	
7 Divide line 6 by 21,600 and multiply by 100		S_{DC} = 25.0			

FIGURE 12
DIRECT CONTACT WORK SHEET

Site 21 - Vessel Waste Oil Recovery.
Facility name: Site 25 - Seaplane Maintenance .

Location: Naval Station (NAVSTA), Treasure Island

EPA Region: IX

Person(s) in charge of the facility: Federal Facility

U.S. Navy

Name of Reviewer: B.F. Aubry Date: 1/9/87

General description of the facility:

(For example: landfill, surface impoundment, pile, container; types of hazardous substances; location of the facility; contamination route of major concern; types of information needed for rating; agency action, etc.)

Adjacent to Building #3, an oil recovery system used for separating waste oil and water from ships is located. Waste oil is likely to have been spilled in this area. In addition, seaplane maintenance occurred in Buildings 2, 3 and 180 from 1943 to 1958. Waste liquids or solvents may have been spilled or discharged to the Bay. Ten aviation fuel tanks near Building #2 have no record of abandonment, although no history of tank leakage has been noted.

Scores: $S_M = 1.7$ ($S_{gw} = 0$ $S_{sw} = 3.0$ $S_a = 0$)

$S_{FE} =$

$S_{DC} = 25.0$

FIGURE 1
HRS COVER SHEET

Ground Water Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Release	(0) 45	1	0	45	3.1
If observed release is given a score of 45, proceed to line 4. If observed release is given a score of 0, proceed to line 2.					
2 Route Characteristics					3.2
Depth to Aquifer of Concern	0 1 2 (3)	2	6	6	
Net Precipitation	(0) 1 2 3	1	0	3	
Permeability of the Unsaturated Zone	0 1 (2) 3	1	2	3	
Physical State	0 1 2 (3)	1	3	3	
Total Route Characteristics Score			11	15	
3 Containment	0 1 2 (3)	1	3	3	3.3
4 Waste Characteristics					3.4
Toxicity/Persistence	0 3 6 9 (12) 15 18	1	12	18	
Hazardous Waste Quantity	(0) 1 2 3 4 5 6 7 8	1	0	8	
Total Waste Characteristics Score			12	26	
5 Targets					3.5
Ground Water Use	(0) 1 2 3	3	0	9	
Distance to Nearest Well/Population Served	(0) 4 6 8 10 12 16 18 20 24 30 32 35 40	1	0	40	
Total Targets Score			0	49	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			0	57,330	
7 Divide line 6 by 57,330 and multiply by 100	S_{gw} = 0				

FIGURE 2
GROUND WATER ROUTE WORK SHEET

Surface Water Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Release	(0) 45	1	0	45	4.1
If observed release is given a value of 45, proceed to line 4. If observed release is given a value of 0, proceed to line 2.					
2 Route Characteristics					4.2
Facility Slope and Intervening Terrain	(0) 1 2 3	1	0	3	
1-yr. 24-hr. Rainfall	0 1 (2) 3	1	2	3	
Distance to Nearest Surface Water	0 1 (2) 3	2	4	6	
Physical State	0 1 2 (3)	1	3	3	
Total Route Characteristics Score			9	15	
3 Containment	0 1 2 (3)	1	3	3	4.3
4 Waste Characteristics					4.4
Toxicity/Persistence	0 3 6 9 (12) 15 18	1	12	18	
Hazardous Waste Quantity	(0) 1 2 3 4 5 6 7 8	1	0	8	
Total Waste Characteristics Score			12	26	
5 Targets					4.5
Surface Water Use	0 1 (2) 3	3	6	9	
Distance to a Sensitive Environment	(0) 1 2 3	2	0	6	
Population Served/Distance to Water Intake Downstream	(0) 4 6 8 10 12 16 18 20 24 30 32 35 40	1	0	40	
Total Targets Score			6	55	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			1944	64,350	
7 Divide line 6 by 64,350 and multiply by 100		S_{sw} = 3.0			

FIGURE 7
SURFACE WATER ROUTE WORK SHEET

Air Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
[1] Observed Release	(0) 45	1	0	45	5.1
Date and Location: N/A					
Sampling Protocol: N/A					
If line [1] is 0, the S_a = 0. Enter on line [5]. If line [1] is 45, then proceed to line [2].					
[2] Waste Characteristics					5.2
Reactivity and Incompatibility	0 1 2 3	1		3	
Toxicity	0 1 2 3	3		9	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8	
	Total Waste Characteristics Score		N/A	20	
[3] Targets					5.3
Population Within 4-Mile Radius	0 9 12 15 18 21 24 27 30	1		30	
Distance to Sensitive Environment	0 1 2 3	2		6	
Land Use	0 1 2 3	1		3	
	Total Targets Score		N/A	39	
[4] Multiply [1] x [2] x [3]			N/A	35,100	
[5] Divide line [4] by 35,100 and multiply by 100		S_a = 0			

FIGURE 9
AIR ROUTE WORK SHEET

	S	S^2
Groundwater Route Score (S_{gw})	0	
Surface Water Route Score (S_{sw})	3.0	9.0
Air Route Score (S_a)	0	
$S_{gw}^2 + S_{sw}^2 + S_a^2$		9.0
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$		3.0
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2} \,/\, 1.73 = S_M =$		1.7

FIGURE 10
WORKSHEET FOR COMPUTING S_M

Fire and Explosion Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Containment	1 3	1		3	7.1
2 Waste Characteristics					7.2
Direct Evidence	0 3	1		3	
Ignitability	0 1 2 3	1		3	
Reactivity	0 1 2 3	1		3	
Incompatibility	0 1 2 3	1		3	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8	
Total Waste Characteristics Score				20	
3 Targets					7.3
Distance to Nearest Population	0 1 2 3 4 5	1		5	
Distance to Nearest Building	0 1 2 3	1		3	
Distance to Sensitive Environment	0 1 2 3	1		3	
Land Use	0 1 2 3	1		3	
Population Within 2-Mile Radius	0 1 2 3 4 5	1		5	
Buildings Within 2-Mile Radius	0 1 2 3 4 5	1		5	
Total Targets Score				24	
4 Multiply 1 x 2 x 3				1,440	
5 Divide line 4 by 1,440 and multiply by 100		S_{FE} =			

FIGURE 11
FIRE AND EXPLOSION WORK SHEET

Direct Contact Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Incident	(0) 45	1	0	45	8.1
If line 1 is 45, proceed to line 4 If line 1 is 0, proceed to line 2					
2 Accessibility	0 1 (2) 3	1	2	3	8.2
3 Containment	0 (15)	1	15	15	8.3
4 Waste Characteristics Toxicity	0 1 2 (3)	5	15	15	8.4
5 Targets					8.5
Population Within a 1-Mile Radius	0 1 2 (3) 4 5	4	12	20	
Distance to a Critical Habitat	(0) 1 2 3	4	0	12	
Total Targets Score			12	32	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			5400	21,600	
7 Divide line 6 by 21,600 and multiply by 100	S_{DC} = 25.0				

FIGURE 12
DIRECT CONTACT WORK SHEET

Facility name: Site 22 - Navy Exchange Gas Station

Location: Naval Station (NAVSTA), Treasure Island

EPA Region: IX

Person(s) in charge of the facility: Federal Facility

U.S. Navy

Name of Reviewer: B.F. Aubry Date: 1/9/87

General description of the facility:

(For example: landfill, surface impoundment, pile, container; types of hazardous substances; location of the facility; contamination route of major concern; types of information needed for rating; agency action, etc.)

The storm drain at the Navy Exchange Gas Station was found to contain filters and vehicle fluids. These fluids would ultimately go to the Bay. The practice has apparently gone on for some time, although volumes released is unknown. A 1972 NAVSHIPS/NAVSEC report estimated that by 1975, 12,000 gallons of waste oils and fluids would be generated by the gas station. In addition, 3 underground storage tanks are present: 2-1,000 gallon gasoline tanks and 1-500 gallon diesel fuel tank.

Scores: S_M = 2.0 (S_{gw} = 0 S_{sw} = 3.5 S_a = 0)

S_{FE} =

S_{DC} = 2.5

FIGURE 1
HRS COVER SHEET

Ground Water Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Release	(0) 45	1	0	45	3.1
If observed release is given a score of 45, proceed to line 4. If observed release is given a score of 0, proceed to line 2.					
2 Route Characteristics					3.2
Depth to Aquifer of Concern	0 1 2 (3)	2	6	6	
Net Precipitation	(0) 1 2 3	1	0	3	
Permeability of the Unsaturated Zone	0 1 (2) 3	1	2	3	
Physical State	0 1 2 (3)	1	3	3	
Total Route Characteristics Score			11	15	
3 Containment	0 1 2 (3)	1	3	3	3.3
4 Waste Characteristics					3.4
Toxicity/Persistence	0 3 6 9 (12) 15 18	1	12	18	
Hazardous Waste Quantity	0 1 (2) 3 4 5 6 7 8	1	2	8	
Total Waste Characteristics Score			14	26	
5 Targets					3.5
Ground Water Use	(0) 1 2 3	3	0	9	
Distance to Nearest Well/Population Served	(0) 4 6 8 10 12 16 18 20 24 30 32 35 40	1	0	40	
Total Targets Score			0	49	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			0	57,330	
7 Divide line 6 by 57,330 and multiply by 100		S_{gw} =	0		

FIGURE 2
GROUND WATER ROUTE WORK SHEET

Surface Water Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Release	(0) 45	1	0	45	4.1
If observed release is given a value of 45, proceed to line 4. If observed release is given a value of 0, proceed to line 2.					
2 Route Characteristics					4.2
Facility Slope and Intervening Terrain	(0) 1 2 3	1	0	3	
1-yr. 24-hr. Rainfall	0 1 (2) 3	1	2	3	
Distance to Nearest Surface Water	0 1 (2) 3	2	4	6	
Physical State	0 1 2 (3)	1	3	3	
Total Route Characteristics Score			9	15	
3 Containment	0 1 2 (3)	1	3	3	4.3
4 Waste Characteristics					4.4
Toxicity/Persistence	0 3 6 9 (12) 15 18	1	12	18	
Hazardous Waste Quantity	0 1 (2) 3 4 5 6 7 8	1	2	8	
Total Waste Characteristics Score			14	26	
5 Targets					4.5
Surface Water Use	0 1 (2) 3	3	6	9	
Distance to a Sensitive Environment	(0) 1 2 3	2	0	6	
Population Served/Distance to Water Intake Downstream	(0) 4 6 8 10 12 16 18 20 24 30 32 35 40	1	0	40	
Total Targets Score			6	55	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			2268	64,350	
7 Divide line 6 by 64,350 and multiply by 100		S_{SW} = 3.5			

FIGURE 7
SURFACE WATER ROUTE WORK SHEET

Air Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
[1] Observed Release	(0) 45	1	0	45	5.1
Date and Location: N/A					
Sampling Protocol: N/A					
If line [1] is 0, the S_a = 0. Enter on line [5]. If line [1] is 45, then proceed to line [2].					
[2] Waste Characteristics					5.2
Reactivity and Incompatibility	0 1 2 3	1		3	
Toxicity	0 1 2 3	3		9	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8	
	Total Waste Characteristics Score		N/A	20	
[3] Targets					5.3
Population Within 4-Mile Radius	0 9 12 15 18 21 24 27 30	1		30	
Distance to Sensitive Environment	0 1 2 3	2		6	
Land Use	0 1 2 3	1		3	
	Total Targets Score		N/A	39	
[4] Multiply [1] x [2] x [3]			N/A	35,100	
[5] Divide line [4] by 35,100 and multiply by 100		S_a = 0			

FIGURE 9
AIR ROUTE WORK SHEET

	S	S^2
Groundwater Route Score (S_{gw})	0	0
Surface Water Route Score (S_{sw})	3.5	12.4
Air Route Score (S_a)	0	0
$S_{gw}^2 + S_{sw}^2 + S_a^2$		12.4
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$		3.5
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2} \,/\, 1.73 = S_M =$		2.0

FIGURE 10
WORKSHEET FOR COMPUTING S_M

Fire and Explosion Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Containment	1 3	1		3	7.1
2 Waste Characteristics					7.2
Direct Evidence	0 3	1		3	
Ignitability	0 1 2 3	1		3	
Reactivity	0 1 2 3	1		3	
Incompatibility	0 1 2 3	1		3	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8	
Total Waste Characteristics Score				20	
3 Targets					7.3
Distance to Nearest Population	0 1 2 3 4 5	1		5	
Distance to Nearest Building	0 1 2 3	1		3	
Distance to Sensitive Environment	0 1 2 3	1		3	
Land Use	0 1 2 3	1		3	
Population Within 2-Mile Radius	0 1 2 3 4 5	1		5	
Buildings Within 2-Mile Radius	0 1 2 3 4 5	1		5	
Total Targets Score				24	
4 Multiply 1 x 2 x 3				1,440	
5 Divide line 4 by 1,440 and multiply by 100		S_{FE} =			

FIGURE 11
FIRE AND EXPLOSION WORK SHEET

Direct Contact Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Incident	(0) 45	1	0	45	8.1
If line 1 is 45, proceed to line 4 If line 1 is 0, proceed to line 2					
2 Accessibility	0 (1) 2 3	1	1	3	8.2
3 Containment	0 (15)	1	15	15	8.3
4 Waste Characteristics Toxicity	0 1 2 (3)	5	3	15	8.4
5 Targets					8.5
Population Within a 1-Mile Radius	0 1 2 (3) 4 5	4	12	20	
Distance to a Critical Habitat	(0) 1 2 3	4	0	12	
Total Targets Score			12	32	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			540	21,600	
7 Divide line 6 by 21,600 and multiply by 100	S_{DC} = 2.5				

FIGURE 12
DIRECT CONTACT WORK SHEET

Facility name: Site 24 - 5th Street Fuel Releases

Location: Naval Station (NAVSTA), Treasure Island

EPA Region: IX

Person(s) in charge of the facility: Federal Facility

U.S. Navy

Name of Reviewer: B.F. Aubry Date: 1/9/87

General description of the facility:

(For example: landfill, surface impoundment, pile, container; types of hazardous substances; location of the facility; contamination route of major concern; types of information needed for rating; agency action, etc.)

Leakage from underground fuel pipelines along 5th Street near Building 293 was discovered in 1986 and 1987. Samples of excavated soil showed 470 to 7,450 mg/kg oil and grease and 180 - 5,100 ug/g total hydrocarbon. Pipelines transported grade 6 fuel oil but were abandoned in place in 1985. The amount of leaked fuel or oil has not been determined.

Scores: S_M = 1.7 (S_{gw} = 0 S_{sw} = 3.0 S_a = 0)

S_{FE} =

S_{DC} = 25.0

FIGURE 1
HRS COVER SHEET

Ground Water Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Release	(0) 45	1	0	45	3.1
If observed release is given a score of 45, proceed to line 4. If observed release is given a score of 0, proceed to line 2.					
2 Route Characteristics					3.2
Depth to Aquifer of Concern	0 1 2 (3)	2	6	6	
Net Precipitation	(0) 1 2 3	1	0	3	
Permeability of the Unsaturated Zone	0 1 (2) 3	1	2	3	
Physical State	0 1 2 (3)	1	3	3	
Total Route Characteristics Score			11	15	
3 Containment	0 1 2 (3)	1	3	3	3.3
4 Waste Characteristics					3.4
Toxicity/Persistence	0 3 6 9 (12) 15 18	1	12	18	
Hazardous Waste Quantity	(0) 1 2 3 4 5 6 7 8	1	0	8	
Total Waste Characteristics Score			12	26	
5 Targets					3.5
Ground Water Use	(0) 1 2 3	3	0	9	
Distance to Nearest Well/Population Served	(0) 4 6 8 10 12 16 18 20 24 30 32 35 40	1	0	40	
Total Targets Score			0	49	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			0	57,330	
7 Divide line 6 by 57,330 and multiply by 100	S_{gw} = 0				

FIGURE 2
GROUND WATER ROUTE WORK SHEET

Surface Water Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Release	(0) 45	1	0	45	4.1
If observed release is given a value of 45, proceed to line 4. If observed release is given a value of 0, proceed to line 2.					
2 Route Characteristics					4.2
Facility Slope and Intervening Terrain	(0) 1 2 3	1	0	3	
1-yr. 24-hr. Rainfall	0 1 (2) 3	1	2	3	
Distance to Nearest Surface Water	0 1 (2) 3	2	4	6	
Physical State	0 1 2 (3)	1	3	3	
Total Route Characteristics Score			9	15	
3 Containment	0 1 2 (3)	1	3	3	4.3
4 Waste Characteristics					4.4
Toxicity/Persistence	0 3 6 9 (12) 15 18	1	12	18	
Hazardous Waste Quantity	(0) 1 2 3 4 5 6 7 8	1	0	8	
Total Waste Characteristics Score			12	26	
5 Targets					4.5
Surface Water Use	0 1 (2) 3	3	6	9	
Distance to a Sensitive Environment	(0) 1 2 3	2	0	6	
Population Served/Distance to Water Intake Downstream	(0) 4 6 8 10 12 16 18 20 24 30 32 35 40	1	0	40	
Total Targets Score			6	55	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			1,944	64,350	
7 Divide line 6 by 64,350 and multiply by 100		S_{sw} =			3.0

FIGURE 7
SURFACE WATER ROUTE WORK SHEET

Air Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
[1] Observed Release	(0) 45	1	0	45	5.1
Date and Location: N/A					
Sampling Protocol: N/A					
If line [1] is 0, the S_a = 0. Enter on line [5]. If line [1] is 45, then proceed to line [2].					
[2] Waste Characteristics					5.2
Reactivity and Incompatibility	0 1 2 3	1		3	
Toxicity	0 1 2 3	3		9	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8	
	Total Waste Characteristics Score		N/A	20	
[3] Targets					5.3
Population Within 4-Mile Radius	0 9 12 15 18 21 24 27 30	1		30	
Distance to Sensitive Environment	0 1 2 3	2		6	
Land Use	0 1 2 3	1		3	
	Total Targets Score		N/A	39	
[4] Multiply [1] x [2] x [3]			N/A	35,100	
[5] Divide line [4] by 35,100 and multiply by 100		S_a = 0			

FIGURE 9
AIR ROUTE WORK SHEET

	S	S^2
Groundwater Route Score (S_{gw})	0	
Surface Water Route Score (S_{sw})	3.0	9.0
Air Route Score (S_a)	0	
$S_{gw}^2 + S_{sw}^2 + S_a^2$		9.0
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$		3.0
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2} / 1.73 = S_M =$		1.7

FIGURE 10
WORKSHEET FOR COMPUTING S_M

Fire and Explosion Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Containment	1 3	1		3	7.1
2 Waste Characteristics					7.2
Direct Evidence	0 3	1		3	
Ignitability	0 1 2 3	1		3	
Reactivity	0 1 2 3	1		3	
Incompatibility	0 1 2 3	1		3	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8	
Total Waste Characteristics Score				20	
3 Targets					7.3
Distance to Nearest Population	0 1 2 3 4 5	1		5	
Distance to Nearest Building	0 1 2 3	1		3	
Distance to Sensitive Environment	0 1 2 3	1		3	
Land Use	0 1 2 3	1		3	
Population Within 2-Mile Radius	0 1 2 3 4 5	1		5	
Buildings Within 2-Mile Radius	0 1 2 3 4 5	1		5	
Total Targets Score				24	
4 Multiply 1 x 2 x 3				1,440	
5 Divide line 4 by 1,440 and multiply by 100		S_{FE} =			

FIGURE 11
FIRE AND EXPLOSION WORK SHEET

Direct Contact Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Incident	(0) 45	1	0	45	8.1
If line 1 is 45, proceed to line 4 If line 1 is 0, proceed to line 2					
2 Accessibility	0 (1) 2 3	1	2	3	8.2
3 Containment	0 (15)	1	15	15	8.3
4 Waste Characteristics Toxicity	0 1 2 (3)	5	15	15	8.4
5 Targets					8.5
Population Within a 1-Mile Radius	0 1 2 (3) 4 5	4	12	20	
Distance to a Critical Habitat	(0) 1 2 3	4	0	12	
Total Targets Score			12	32	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			5400	21,600	
7 Divide line 6 by 21,600 and multiply by 100	S_{DC} = 25.0				

FIGURE 12
DIRECT CONTACT WORK SHEET

Facility name: Site 26-Areas of Suspected Underground Tanks

Location: Naval Station (NAVSTA), Treasure Island / Yerba Buena Island

EPA Region: IX

Person(s) in charge of the facility: Federal Facility

U.S. Navy

Name of Reviewer: B.F. Aubry Date: 1/9/87

General description of the facility:

(For example: landfill, surface impoundment, pile, container; types of hazardous substances; location of the facility; contamination route of major concern; types of information needed for rating; agency action, etc.)

Sixteen locations where underground storage tanks are believed to be present were identified on Treasure and Yerba Buena Islands. Four of these locations were on Treasure Island and twelve were on Yerba Buena Island. These tanks probably contained petroleum hydrocarbons including gasoline and heating oil. Whether leakage has occurred is unknown.

Scores: $S_M = 0.58$ $S_{gw} = 0$ $S_{sw} = 1.0$ $S_a = 0$)

$S_{FE} =$

$S_{DC} = 0.8$

FIGURE 1
HRS COVER SHEET

Ground Water Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
[1] Observed Release	0 45	1	0	45	3.1
If observed release is given a score of 45, proceed to line [4]. If observed release is given a score of 0, proceed to line [2].					
[2] Route Characteristics					3.2
Depth to Aquifer of Concern	0 1 2 (3)	2	6	6	
Net Precipitation	(0) 1 2 3	1	0	3	
Permeability of the Unsaturated Zone	0 1 (2) 3	1	2	3	
Physical State	0 1 2 (3)	1	3	3	
Total Route Characteristics Score			11	15	
[3] Containment	0 (1) 2 3	1	1	3	3.3
[4] Waste Characteristics					3.4
Toxicity/Persistence	0 3 6 9 (12) 15 18	1	12	18	
Hazardous Waste Quantity	(0) 1 2 3 4 5 6 7 8	1	0	8	
Total Waste Characteristics Score			12	26	
[5] Targets					3.5
Ground Water Use	(0) 1 2 3	3	0	9	
Distance to Nearest Well/Population Served	(0) 4 6 8 10 12 16 18 20 24 30 32 35 40	1	0	40	
Total Targets Score			0	49	
[6] If line [1] is 45, multiply [1] x [4] x [5]. If line [1] is 0, multiply [2] x [3] x [4] x [5]			0	57,330	
[7] Divide line [6] by 57,330 and multiply by 100		S_{gw} =	0		

FIGURE 2
GROUND WATER ROUTE WORK SHEET

Surface Water Route Work Sheet						
Rating Factor	Assigned Value (Circle One)		Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Release	0	45	1	0	45	4.1
If observed release is given a value of 45, proceed to line 4. If observed release is given a value of 0, proceed to line 2.						
2 Route Characteristics						4.2
Facility Slope and Intervening Terrain	(0) 1 2 3		1	0	3	
1-yr. 24-hr. Rainfall	0 1 (2) 3		1	2	3	
Distance to Nearest Surface Water	0 1 (2) 3		2	4	6	
Physical State	0 1 2 (3)		1	3	3	
Total Route Characteristics Score				9	15	
3 Containment	0 (1) 2 3		1	1	3	4.3
4 Waste Characteristics						4.4
Toxicity/Persistence	0 3 6 9 (12) 15 18		1	12	18	
Hazardous Waste Quantity	(0) 1 2 3 4 5 6 7 8		1	0	8	
Total Waste Characteristics Score				12	26	
5 Targets						4.5
Surface Water Use	0 1 (2) 3		3	6	9	
Distance to a Sensitive Environment	(0) 1 2 3		2	0	6	
Population Served/Distance to Water Intake Downstream	(0) 4 6 8 10 12 16 18 20 24 30 32 35 40		1	0	40	
Total Targets Score				6	55	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5				648	64,350	
7 Divide line 6 by 64,350 and multiply by 100			S_{sw} =	1.0		

FIGURE 7
SURFACE WATER ROUTE WORK SHEET

Air Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multiplier	Score	Max. Score	Ref. (Section)
[1] Observed Release	(0) 45	1	0	45	5.1
Date and Location: N/A					
Sampling Protocol: N/A					
If line [1] is 0, the S_a = 0. Enter on line [5]. If line [1] is 45, then proceed to line [2].					
[2] Waste Characteristics					5.2
Reactivity and Incompatibility	0 1 2 3	1		3	
Toxicity	0 1 2 3	3		9	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8	
	Total Waste Characteristics Score		N/A	20	
[3] Targets					5.3
Population Within 4-Mile Radius	0 9 12 15 18 21 24 27 30	1		30	
Distance to Sensitive Environment	0 1 2 3	2		6	
Land Use	0 1 2 3	1		3	
	Total Targets Score		N/A	39	
[4] Multiply [1] x [2] x [3]			N/A	35,100	
[5] Divide line [4] by 35,100 and multiply by 100		S_a = 0			

FIGURE 9
AIR ROUTE WORK SHEET

Direct Contact Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Incident	(0) 45	1	0	45	8.1
If line 1 is 45, proceed to line 4 If line 1 is 0, proceed to line 2					
2 Accessibility	0 (1) 2 3	1	1	3	8.2
3 Containment	(0) 15	1	0	15	8.3
4 Waste Characteristics Toxicity	0 1 2 (3)	5	15	15	8.4
5 Targets					8.5
Population Within a 1-Mile Radius	0 1 2 (3) 4 5	4	12	20	
Distance to a Critical Habitat	(0) 1 2 3	4	0	12	
	Total Targets Score		12	32	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			180	21,600	
7 Divide line 6 by 21,600 and multiply by 100	S_{DC} = 0.8				

FIGURE 12
DIRECT CONTACT WORK SHEET

	S	S^2
Groundwater Route Score (S_{gw})	0	0
Surface Water Route Score (S_{sw})	1.0	1.0
Air Route Score (S_a)	0	0
$S_{gw}^2 + S_{sw}^2 + S_a^2$		1.0
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$		1.0
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2} \,/\, 1.73 = S_M =$		0.58

FIGURE 10
WORKSHEET FOR COMPUTING S_M

Fire and Explosion Work Sheet						
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)	
1 Containment	1 3	1		3	7.1	
2 Waste Characteristics					7.2	
Direct Evidence	0 3	1		3		
Ignitability	0 1 2 3	1		3		
Reactivity	0 1 2 3	1		3		
Incompatibility	0 1 2 3	1		3		
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8		
Total Waste Characteristics Score				20		
3 Targets					7.3	
Distance to Nearest Population	0 1 2 3 4 5	1		5		
Distance to Nearest Building	0 1 2 3	1		3		
Distance to Sensitive Environment	0 1 2 3	1		3		
Land Use	0 1 2 3	1		3		
Population Within 2-Mile Radius	0 1 2 3 4 5	1		5		
Buildings Within 2-Mile Radius	0 1 2 3 4 5	1		5		
Total Targets Score				24		
4 Multiply 1 x 2 x 3				1,440		
5 Divide line 4 by 1,440 and multiply by 100		S_{FE} =				

FIGURE 11
FIRE AND EXPLOSION WORK SHEET

Direct Contact Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multiplier	Score	Max. Score	Ref. (Section)
1 Observed Incident	(0) 45	1	0	45	8.1
If line 1 is 45, proceed to line 4 If line 1 is 0, proceed to line 2					
2 Accessibility	0 (1) 2 3	1	1	3	8.2
3 Containment	(0) 15	1	1	15	8.3
4 Waste Characteristics Toxicity	0 1 2 (3)	5	15	15	8.4
5 Targets					8.5
Population Within a 1-Mile Radius	0 1 2 (3) 4 5	4	12	20	
Distance to a Critical Habitat	(0) 1 2 3	4	0	12	
Total Targets Score			12	32	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			180	21,600	
7 Divide line 6 by 21,600 and multiply by 100		S_{DC} =	0.8		

FIGURE 12
DIRECT CONTACT WORK SHEET

3128-Vol. 2

APRIL 1988

PRELIMINARY ASSESSMENT/ SITE INSPECTION OF NAVAL STATION TREASURE ISLAND, CA.

VOLUME I

NEESA 13-092

NAVAL ENERGY AND ENVIRONMENTAL SUPPORT ACTIVITY

Port Hueneme, California 93043

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FINAL

PRELIMINARY ASSESSMENT/SITE INSPECTION (PA/SI)

NAVAL STATION,

TREASURE ISLAND, CALIFORNIA

UIC: N60028

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CODE 112E
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April 1988

EXECUTIVE SUMMARY

This report presents the results of the Preliminary Assessment/Site Inspection (PA/SI) conducted at Naval Station (NAVSTA) Treasure Island, California which includes Treasure Island (TI) and a portion of Yerba Buena Island (YBI). The purpose of the PA/SI is to identify and assess sites posing a potential threat to human health or the environment due to contamination from past hazardous materials operations.

At TI and YBI, contaminants could potentially migrate by two pathways: infiltration through the soil until reaching the ground water and surface runoff. The ultimate receptor of any soluble contamination at TI will be the surrounding San Francisco Bay waters and the Bay fauna and flora. At YBI, due to its different geologic conditions, soluble contaminants could either be transported to the Bay waters or could infiltrate into the Franciscan sandstone and shales. However, there is limited potential for harm to humans because ground water is not utilized at either TI or YBI. The ground water is also not anticipated to provide a problem for wildlife on TI and YBI because it is not a significant water source to the wildlife. Contaminated ground water and surface runoff entering San Francisco Bay could potentially affect marine fauna and flora.

Based on information from historical records, aerial photographs, agency contacts, field inspection, and personnel interviews, a total of 26 potentially contaminated sites were identified at NAVSTA TI.

Each site was evaluated with regard to contaminant characteristics, migration pathways, and pollutant receptors. The study concludes that 20 of the 26 potentially contaminated sites warrant further investigation under the Navy Installation Restoration (IR) Program. Remedial Investigation/Feasibility Study (RI/FS) involving sampling and monitoring of the 21 sites are recommended to confirm or deny the presence of suspected contaminants at the sites. The 20 sites are:

Site No. 1 - Medical Clinic
Site No. 3 - PCB Equipment Storage Area
Site No. 4 - Hydraulic Training School
Site No. 5 - Old Boiler Plant
Site No. 7 - Pesticide Storage
Site No. 9 - Foundry
Site No. 10 - Bus Painting Shop
Site No. 11 - YBI Landfill
Site No. 12 - Old Bunker Area
Site No. 13 - Stormwater Outfalls (TI)/(YBI)
Site No. 15 - Old Fuel Farm
Site No. 16 - Clipper Cove Tank Farm
Site No. 17 - Tanks 103/104
Site No. 19 - Refuse Transfer Area
Site No. 20 - Auto Hobby Shop/Transportation Center
Site No. 21 - Vessel Waste Oil Recovery
Site No. 22 - Navy Exchange Service Station
Site No. 24 - 5th Street Fuel Releases
Site No. 25 - Seaplane Maintenance
Site No. 26 - Underground Tanks

The sampling and analysis of the sites will assess whether a threat to human health or the environment exists, the extent of contamination, and the potential for migration. These RI/FS study results will then be used to evaluate the necessity of conducting remedial action or cleanup operations.

ACKNOWLEDGMENTS

The Dames & Moore PA/SI Team commends the support, assistance, and cooperation provided by personnel at Naval Station (NAVSTA) Treasure Island, California and the Naval Energy and Environmental Support Activity (NEESA). In particular, the PA/SI Team gratefully acknowledges the outstanding effort provided by the following people:

- Captain Peter S. Roder
  Commanding Officer, NAVSTA TI
- Sandy Brock
  Safety Office, NAVSTA TI
- Steve Hughes
  Safety Office, NAVSTA TI
- Ronald E. Tickle
  NEESA

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CHAPTER 1. INTRODUCTION

1.1 PROGRAM BACKGROUND. Past hazardous waste disposal methods, although acceptable at the time, have often caused unexpected long-term problems through release of hazardous substances into the soil and ground water. In response to a growing recognition of these problems, Congress directed the U.S. Environmental Protection Agency (EPA) to develop a comprehensive national program to manage past disposal sites. The program is outlined in the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of December 1980 and the Superfund Amendments and Reauthorization Act (SARA) of October 1986.

1.1.1 DOD Program. Department of Defense (DOD) efforts in this area preceded the nationwide CERCLA program. In 1975, the U.S. Army developed for DOD a pilot program to investigate past disposal sites at military installations. DOD defined the program as the Installation Restoration Program in 1980 and instructed the services to comply with program guidelines.

1.1.2 Navy Program. The Navy manages its part of the program, the Navy Installation Restoration (IR), in three phases. Phase One, the Preliminary Assessment/Site Inspection (PA/SI), identifies potential threats to human health or to the environment caused by past hazardous substance storage, handling, or disposal practices at naval activities. Phase Two, the Remedial Investigation/Feasibility Study (RI/FS), verifies and if necessary characterizes the extent of contamination present through additional sampling, provides additional information regarding migration pathways, characterizes the extent of contamination present and evaluates the most feasible type of remedial measure to implement. Phase Three, the Remedial Action, provides the required corrective measures to mitigate or eliminate confirmed problems.

1.2 AUTHORITY. The Chief of Naval Operations (CNO) initiated the Navy IR Program in OPNAVNOTE 6240 of 11 September 1980, superseded by OPNAVINST 5090.1 of 26 May 1983. The Naval Facilities Engineering Command (NAVFACENGCOM) manages the program within the existing structure of the Naval Environmental Protection Support Service (NEPSS), which is administered by the Naval Energy and Environmental Support Activity (NEESA). NEESA conducts the program's first phase, the PA/SIs, in coordination with NAVFACENGCOM Engineering Field Divisions (EFDs).

1.3 SCOPE.

1.3.1 Past Operations. The Navy IR Program focuses attention on past hazardous substance storage, use, and disposal practices on Navy property. Current practices are regularly surveyed for conformity to State and Federal regulations and, therefore, are not included in the scope of the Navy IR Program. The PA/SI report addresses operational hazardous and nonhazardous disposal and storage areas on Treasure Island (TI) and Yerba Buena Island (YBI) in the past. Current operations are investigated solely to assess what types and quantities of chemicals or other materials were used and what disposal methods were practiced.

1.3.2 Results. If necessary, a PA/SI recommends Remedial Measures to be performed by the activity or EFD, or recommends a Remedial Investigation (RI)

to be administered by the EFD under the Navy IR Program. Based on these recommendations, NAVFACENGCOM schedules an RI for those sites determined by scientific and engineering judgment to be potential hazards to human health or to the environment.

1.4 PRELIMINARY ASSESSMENT/SITE INSPECTION

1.4.1 Records Searches. The PA/SI begins with a records search at various government agencies, including EFDs, national and regional archives and records centers, and U.S. Geological Survey offices. In this integral step, study team members review records to assimilate information about the activity's past missions, industrial processes, waste disposal records, and known environmental contamination. Examples of records include activity master plans and histories, environmental impact statements, cadastral records, and aerial photographs.

1.4.2 On-Site Survey. After the records search, the study team conducts an on-site survey to complete documentation of past operations and to identify potentially contaminated areas. With the assistance of an activity point of contact, the team inspects the activity during the survey, and interviews long-term employees and retirees. The on-site survey for NAVSTA TI, which includes both TI and part of YBI, was conducted 5-9 October 1987; information in this report is current as of those dates. Figure 1-1 shows the regional location of NAVSTA TI.

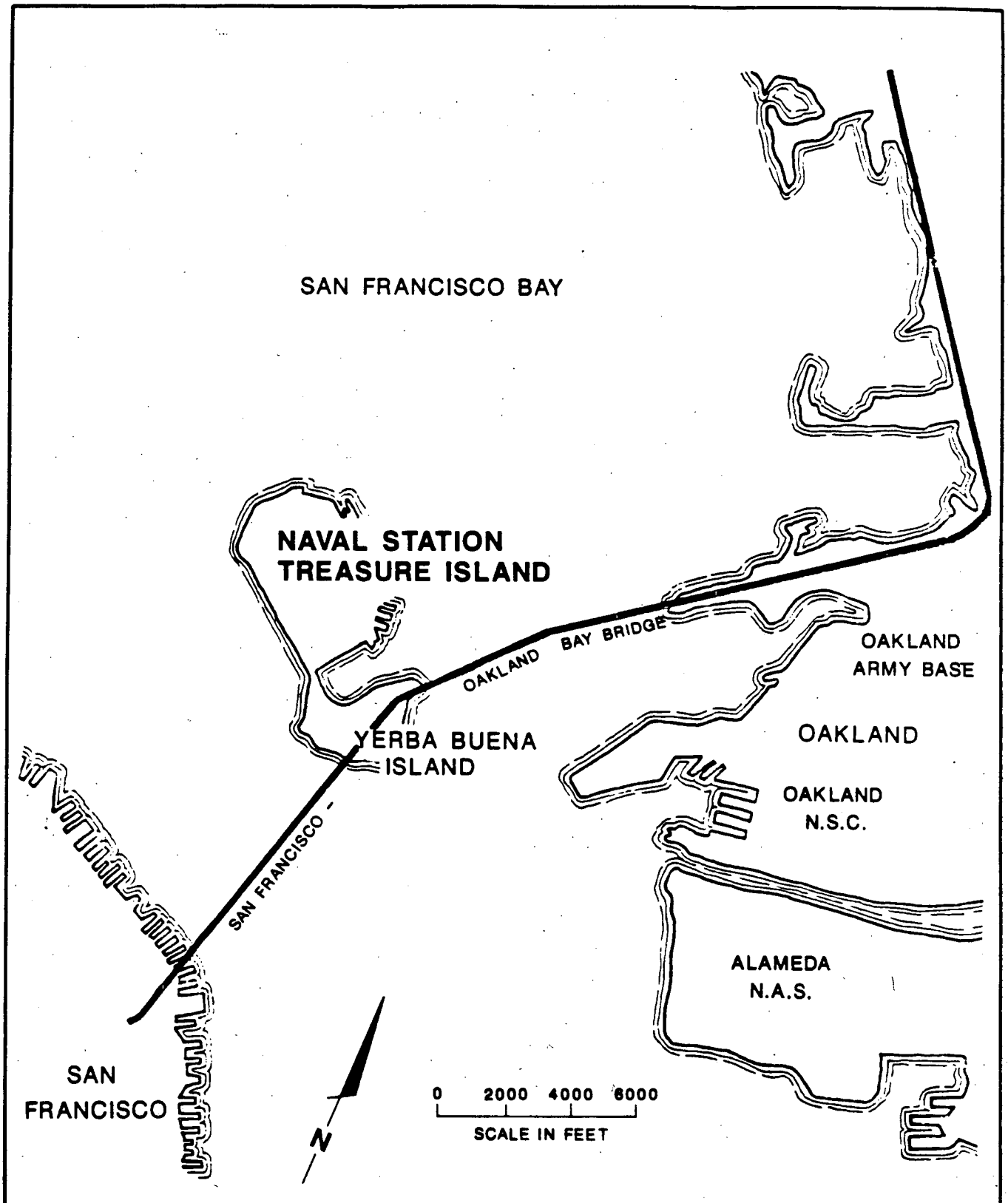
Information obtained from interviews is verified by data from other sources or from corroborating interviews. If information for certain sites is conflicting or inadequate, the team collects samples for clarification.

1.4.3 Hazard Ranking System. Sufficient information is collected during the PA/SI to provide the documentation necessary to evaluate each site using the Hazard Ranking System (HRS). The HRS, developed by EPA, is used to systematically evaluate (score) the relative severity of potential problems.

1.4.4 Remedial Investigation. A Remedial Investigation is recommended for sites at which sufficient evidence exists to indicate the presence of contamination.

1.5 REMEDIAL INVESTIGATION/FEASIBILITY STUDY. Generally the EFD conducts the RI in two steps: verification and characterization. In the verification step, short-term monitoring, sampling, and chemical analyses are performed to assess whether specific toxic and hazardous materials identified in the PA/SI are present in concentrations considered to be hazardous. The PA/SI recommends a verification step sampling and monitoring program. If appropriate, a characterization step provides more detailed information concerning contaminant migration and site hydrogeology via long-term testing and monitoring, sampling, and chemical analyses. The scope of the RI/FS usually depends on the results of the verification phase. If sites require remedial action or additional monitoring programs, a Feasibility Study is conducted to evaluate the effectiveness of various remedial action alternatives.

1.6 PA/SI REPORT CONTENTS. The significant findings and conclusions from the PA/SI at NAVSTA TI are presented in Chapter 2. Recommendations for further



Reference: Master Plan for the Naval Station Treasure Island, 1985

PRELIMINARY ASSESSMENT/ SITE INSPECTION NAVSTA Treasure Island, Ca.	REGIONAL LOCATION	FIGURE 1-1

studies are presented in Chapter 3. Chapter 4 describes general activity information, history, biological features, and physical features. Chapters 5 through 8 trace the use of chemicals and hazardous materials, from storage and transfer, through manufacturing and operations, to waste processing and disposal. The latter chapters provide documentation to support the findings and conclusions in Chapter 2.

CHAPTER 2. SIGNIFICANT FINDINGS AND CONCLUSIONS

2.1 INTRODUCTION. Naval Station (NAVSTA) Treasure Island was chosen for a PA/SI to comply with the Federal Agency Hazardous Waste Compliance Docket as published in the Federal Register on February 12, 1988. Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) as amended requires a Preliminary Assessment by April 17, 1988 for facilities listed on the Federal Agency Hazardous Waste Compliance Docket. The Federal Agency Hazardous Waste Compliance Docket indicated that the NAVSTA Treasure Island was placed on the docket because of the information submitted under the following acts: the Resource, Conservation, and Recovery Act (RCRA), Sections 3005 and 3010, and CERCLA Section 103C.

This chapter summarizes the significant findings and conclusions made by the PA/SI Team concerning characteristics of the disposal sites and potentially contaminated areas identified at NAVSTA Treasure Island which is comprised of Treasure Island (TI) and a portion of Yerba Buena Island (YBI) (Figure 2-1).

Table 2-1 summarizes the history of operations at all 26 potential sites identified. Site usage, years of operation, and potential contaminants are indicated.

With few exceptions, contamination at the sites on both TI and YBI is the result of petroleum hydrocarbons originating from fueling operations. Numerous storage tanks and underground fuel lines exist, many of which have been gradually abandoned since about the 1950s. Due to the undocumented nature of leaks and spills from these sources, the volumes released generally cannot be quantified.

This chapter begins with a summary discussion of hydrogeology and migration potential. The following sections present brief discussions of each of 20 sites recommended for subsequent RIs, 2 sites at which Remedial Measures are judged necessary, and 4 sites which require no further investigations at this time. All 26 sites are shown on Figures 2-2 and 2-3.

2.1.1 Hydrogeology and Migration Potential. TI and YBI are surrounded by the waters of San Francisco Bay (Figure 2-1). TI is a man-made island composed of dredged materials consisting of poorly graded fine sand placed over Yerba Buena Shoals. The fill materials appear to have medium permeability, 1.0×10^{-3} to 1.0×10^{-4} cm/sec (Harding Lawson Associates, 1985). Ground water at TI is generally encountered at 30-72 inches below ground surface. The direction of flow for both ground water and surface runoff at TI is towards the Bay. Soluble contaminants would tend to migrate vertically through the sand to the water table or migrate overland in surface runoff. Less soluble contaminants, however, may tend to bind with the soils and become relatively immobile. For example, hydrocarbons, a major contaminant at TI, may migrate down to the water table where the less soluble hydrocarbons may become relatively immobile in the capillary fringe, while the soluble fraction dissolves in the ground water.

YBI is a natural rock island with minimal soil cover. Surface soils are sandy loam to gravelly loam and subsoils are gravelly loam to sandy clay loam (WESTDIV, 1986b). Bedrock on YBI consists of sandstone and shale. Although there is limited information concerning ground water at YBI, the ground water

TABLE 2-1

SUMMARY OF SITE OPERATIONAL HISTORY

SITE	DESCRIPTION	YEARS	OPERATION	POTENTIAL CONTAMINANTS
1	Medical Clinic (Bldg. 257)	1940s-late 1970s	X-ray development	Developer and/or fixer solutions metals such as silver
2	Radiation Training Area	mid 1950s-1969	Radioactive water containment	Radioactive sources such as K-42, Na-24, Ra-226, Cs-137, Br-80, Br-82, and Pu-239
3	PCB Storage Area (Bldg. 3)	pre-1953-present	Outside Storage Area	PCBs
4	Hydraulic Training School (Bldg. 342)	1970s-present	Outside Storage Area	Waste hydraulic oil (mainly transmission oil)
5	Old Boiler Plant (Bldg. 102)	1964-1968 1968-1987	Boiler Plant Debris from demolished boiler plant	Mercuric nitrate Asbestos
6	Fire Training Area	1946-1987	Fire training school	Petroleum hydrocarbons, magnesium and fire extinguishing chemicals
7	Pesticide Storage (Bldg. 62)	1943-late 1950s 1955-early 1960s 1968-?	Mixed and stored paints Mixed and stored pesticides and herbicides Treatment plant spread area for wastewater sludge	Paints containing linseed oil and lead Pesticides and herbicides Organics and metals
8	Army Point (YBI) Sludge Disposal Area	1968-?	Treatment plant spread area for wastewater sludge	Organics and metals
9	Foundry (Bldg. 41)	1943-1947 1953-1968 1981-1987	Forge/foundry Paint shop Welding school	---- Paints containing lead or zinc-chromium based pigments, paint thinners and solvents ----
10	Bus Painting Shop (Bldg. 335)	1947-1953 1953-1955 ?-present	Bus paint shop Storage and mixing area for pest control shop Steam rack	Waste paints, thinners, solvents pesticides, and herbicides Oils, grease, and petroleum hydrocarbons

TABLE 2-1

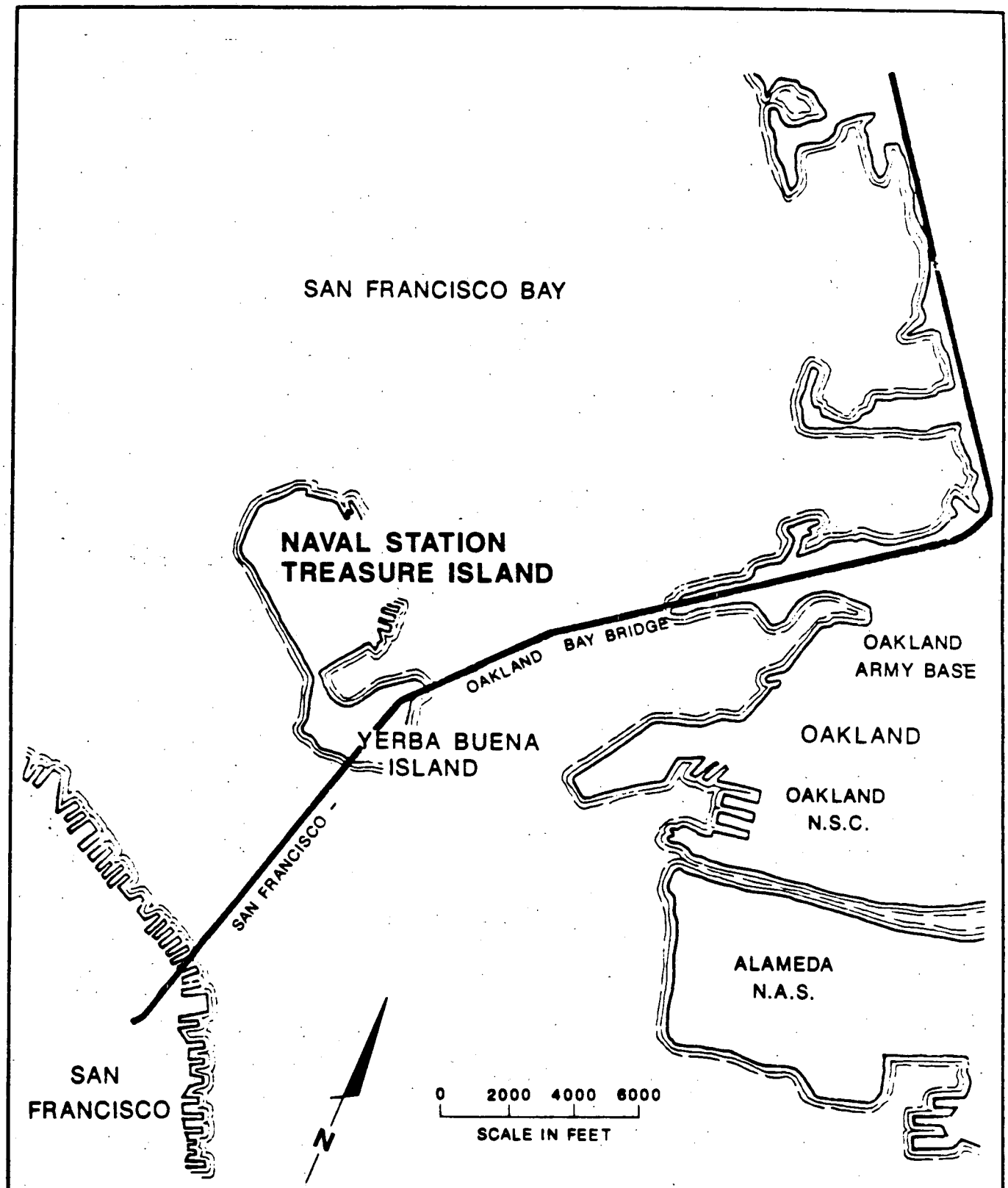
SUMMARY OF SITE OPERATIONAL HISTORY

SITE	DESCRIPTION	YEARS	OPERATION	POTENTIAL CONTAMINANTS
11	YBI Landfill	1935-present	Unsanctioned disposal area	----
12	Old Bunker Area	1940s-1969	Ammunition bunkers, disposal area	----
13	Stormwater outfalls	1936-present	Stormwater discharge; vessel discharge	Storm and wastewater effluent mercuric nitrate, vessel waste; oils
14	New Fuel Farm	1943-present	Fuel storage	Petroleum hydrocarbons
15	Old Fuel Farm	pre-1943-present	Undrained abandoned underground pipelines	Petroleum hydrocarbons
16	Clipper Cove Tank Farm	1940s-1960s	10 storage tanks	Lead, oil, and other petroleum hydrocarbons
		1960s	Spread area for sludge from dismantled tanks	Lead, oil, and other petroleum hydrocarbons
17	Tanks 103/104	1943-present	Storage tanks	Petroleum hydrocarbons (diesel) (accidental release in 1983)
18	Pier 21 Fuel Release	1985	Pipelines to Pier 21	Petroleum hydrocarbons (accidental release in 1985)
19	Refuse Transfer Area	1953-present	Refuse holding and disposal area	Unidentified fluids
20	Auto Hobby Shop/Transportation Center (Bldgs. 194, 224, 225, 230 and 267)	1943-1950	TI Transportation Center	Degreasing substances, solvents, oils, grease, hydrocarbons
	(Bldg 225)	1947-present	Auto Hobby Shop with drum storage area	Hydraulic fluid, recycled oil, grease, vehicle fluid, and metals such as chromium, nickel and zinc
21	Vessel Waste Oil Recovery	1946-present	Vessel waste oil recovery	Waste oils
22	Naval Exchange Service Station	1946-present	Gas Station	Petroleum hydrocarbons and accumulated vehicle fluids
23	YBI Line Break	Early 1980s	Pipeline	Hydrocarbons (black oil)
24	Fifth Street	1986-1987	Abandoned pipelines	Petroleum hydrocarbons

TABLE 2-1

SUMMARY OF SITE OPERATIONAL HISTORY

SITE	DESCRIPTION	YEARS	OPERATION	POTENTIAL CONTAMINANTS
25	Seaplane Maintenance (Bldgs. 2,3, and 180)	1943-1958	Seaplane maintenance	Waste liquids and solvents for engine cleaning
	(Bldg. 2)	-----	Gasoline tanks	Gasoline
26	Asbestos Covered Piping (YBI)	early 1980s	Pipelines	Asbestos ?
27	Underground Tanks	pre-1935-present	Storage of petroleum products	Petroleum products ?



Reference: Master Plan for the Naval Station Treasure Island, 1985

PRELIMINARY ASSESSMENT/ SITE INSPECTION NAVSTA Treasure Island, Ca.	REGIONAL LOCATION	FIGURE 2-1

in similar sites in the San Francisco Bay area is commonly present in sandstone or fractured shale due to infiltration. In the filled areas at YBI on the eastern side, soluble contaminants would potentially migrate to the Bay waters. At other areas on the Island, the surface runoff would either transport potential contaminants to the Bay or runoff would infiltrate into the Franciscan sandstone and shale. Less soluble contaminants would tend to bind with the soils and bedrock becoming relatively immobile or leaching small quantities to the surface runoff and ground water.

For both TI and YBI, there is limited potential for human contact with or consumption of ground water. Drinking water wells are not used on TI or YBI; instead, water used by the facilities is conveyed by pipeline from San Francisco or Emeryville via the Bay Bridge. No information was available on utilization of ground water by wildlife, but it is not anticipated to provide a significant source of water.

2.1.2 Potential Contaminant Receptors. The potential receptor of soluble contamination at TI and YBI would include flora and fauna using or inhabiting the surrounding waters of San Francisco Bay. Contaminants entering San Francisco Bay from TI and YBI could affect open water bay habitat used by two federal and state listed endangered species (California least tern and California brown pelican). Both species feed in the open water habitat of San Francisco Bay within the vicinity of TI and YBI. Feeding by these species near TI and YBI could result in the consumption of fish in which contaminants could potentially concentrate. Another species of concern that may use the shores of YBI is the harbor seal. The harbor seal is protected under the Marine Mammal Protection Act. In addition, San Francisco Bay is also subject to moderate to heavy sport and game fishing pressure. Therefore, some fish used for human consumption could contain concentrations of contaminants originating from TI or YBI.

2.2 SITES RECOMMENDED FOR REMEDIAL INVESTIGATION.

2.2.1 Site 1: Medical Clinic. Site 1, an area of soil below a portion of the Medical Clinic (Building 257; Figure 2-2) is contaminated as the result of leaks from abandoned x-ray equipment. At the south end of the middle wing of Building 257, corrosive developer and/or fixer solutions leaked from the equipment, eroded the wooden floor and then dripped directly to the soil under the building. The exact time, quantity, and duration of the release was not established. The affected area may cover up to 100 square feet to an unknown depth. No immediate receptors were identified in the area of release under the building. Surface sampling by NEESA confirmed the presence of silver in concentrations as high as 7,740 mg/kg and acidic soil conditions with pH as low as 4.0. Chemical results are shown in Table B-1, located in Appendix B.

The predominant migration pathway is vertically through soils to the ground water table, and then laterally to the Bay. Because sample analysis indicate contamination is present, Site 1 is recommended for an RI to assess the degree of contamination with depth and to evaluate if contaminants have migrated to ground water.

2.2.2 Site 3: PCB Equipment Storage Area. A paved PCB equipment storage area is located on the south side of Building 3 on TI, about 150 ft from the shore (Figure 2-2). Spills have occurred, one as recently as two to three

SITE NUMBER (CIRCLED)	DESCRIPTION
1	Medical Clinic
2	Radiation Training Area
3	PCB Equipment Storage Area
4	Hydraulic Training School
5	Old Boiler Plant
6	Fire Training School
7	Pesticide Storage
9	Foundry
10	Bus Painting Shop
12	Old Bunker Area
13	Stormwater Outfall (TI) (Island Perimeter)
14	New Fuel Farm
15	Old Fuel Farm
16	Clipper Cove Tank Farm
17	Tanks 103/104
19	Refuse Transfer Area
20	Auto Hobby Shop/ Tansportation Center
21	Vessel Waste Oil Recovery
22	Navy Exchange Service Station
24	5th Street Fuel Releases
25	Seaplane Maintenance
26	Underground Tanks (Throughout Island)

LEGEND

- Existing Structures
- —x— Fence
- Main Station Entrance
- Shore Line

0 400 Feet

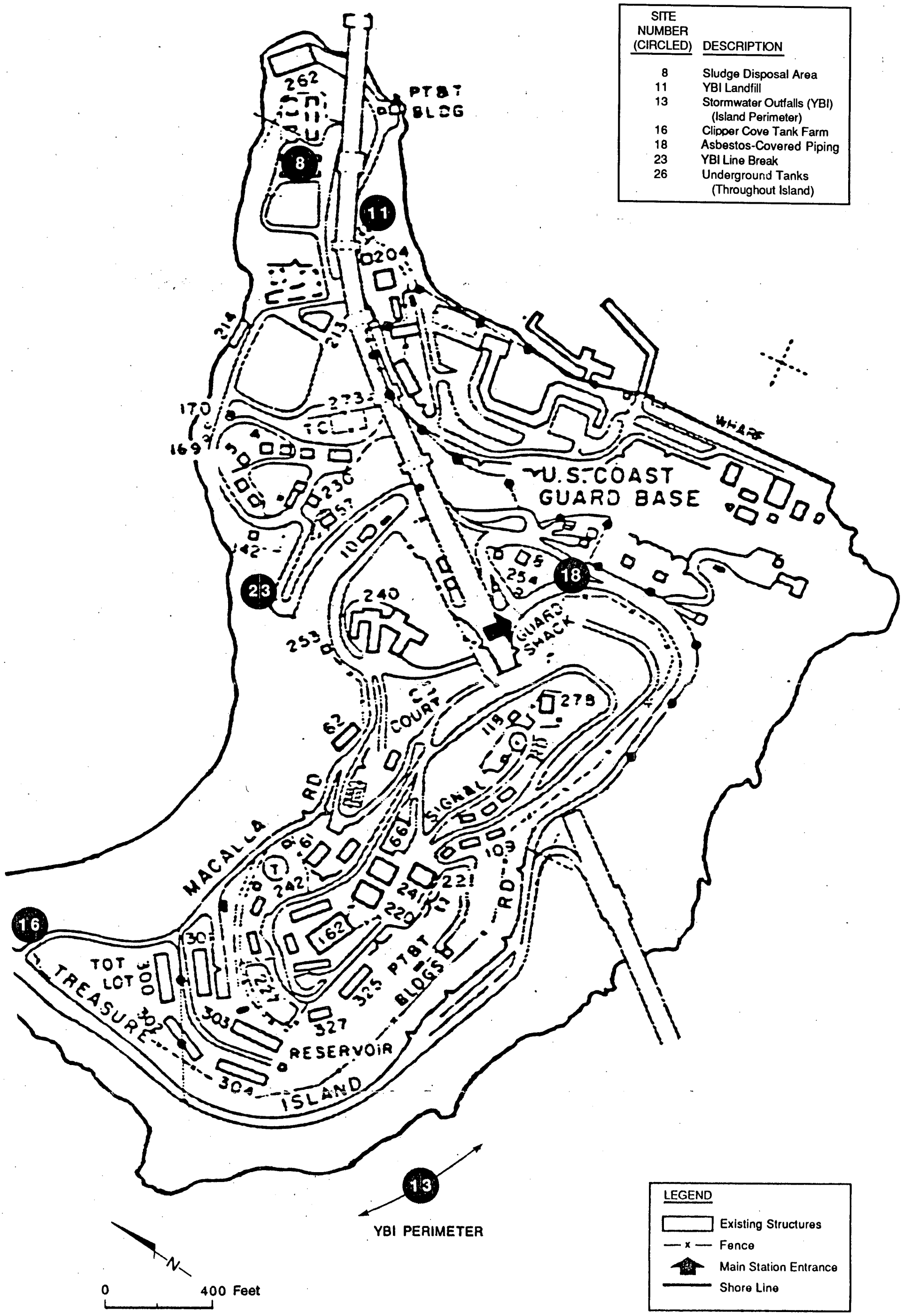
TI PERIMETER

PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

LOCATION OF IDENTIFIED SITES-TREASURE ISLAND (TI)

FIGURE 2-2

SITE NUMBER (CIRCLED)	DESCRIPTION
8	Sludge Disposal Area
11	YBI Landfill
13	Stormwater Outfalls (YBI) (Island Perimeter)
16	Clipper Cove Tank Farm
18	Asbestos-Covered Piping
23	YBI Line Break
26	Underground Tanks (Throughout Island)



PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

LOCATION OF IDENTIFIED SITES YERBA BUENA ISLAND (YBI)

FIGURE 2-3

years ago. The quantity of material released was not identified and an area up to 100 square feet may be involved. The material was reported to have been cleaned up, but records of the cleanup were not located. Of several samples taken in the storage area by NEESA during October, 1987, only one wipe sample contained PCB, at a concentration of 3.5 µg/100 cm^2 (Appendix B). However, it is likely that past spills were not remediated and, further, PCBs can migrate through asphaltic materials. Therefore, the potential for soil and ground water contamination is possible.

Pathways for contaminant migration are vertical, through the asphalt paving into subsurface soils, or through stormwater runoff into the storm sewer system and then into the Bay. Contaminant receptors are both organisms in the Bay and the soils and pavement underlying the site. Because PCBs may be present in the subsurface soils and the ground water may be affected, this site is recommended for an RI.

2.2.3 Site 4: Hydraulic Training School. In the area behind the Hydraulic Training School (Building 342, Figure 2-2), waste oil has been released from drums and has stained the underlying concrete pavement and an adjacent earthen area. The site is approximately 200 ft north of 5th Street, midway between Avenues M and N. Several hundred square feet have been affected. The quantity and duration of the release is not known and the depth of contamination is uncertain. The Hydraulic Training School, according to TI personnel, has been located at building 342 since the early 1970s. Samples obtained by NEESA personnel at the surface and at about a 6-inch depth did confirm contamination with oil and grease and petroleum hydrocarbons at maximum concentrations of 88,800 mg/kg and 53,000 µg/g, respectively (Appendix B).

The contaminant migration pathway is primarily vertical in the unpaved area, through the surface soils towards ground water. In the paved area (concrete pad), the migration pathway is via surface water flow to the unpaved areas or to a storm drain located about 30 ft from the pad between the Hydraulic Training School (Building 342) and the adjacent Building 343. The storm system drains into San Francisco Bay.

Due to the analytical results which confirmed oil and grease and petroleum hydrocarbons at this area, Site 4 is recommended for an RI.

2.2.4 Site 5: Old Boiler Plant. During the period from about 1943 to its demolition in 1968, Building 102 was used as a boiler plant on TI (Figure 2-2). In early 1987 during construction of a pipeline trench in the asphalt paved area near the intersection of Fifth Street and Avenue H where the boiler plant had been located, building debris was uncovered which reportedly included asbestos insulation. The quantity and other constituents of the debris were not established. The pipeline trench was backfilled and the asphalt pavement patched.

The asbestos, if present, is currently in a "contained" state posing no threat of airborne contamination. However, the area presumably may again unknowingly be excavated as part of routine street and pipeline maintenance, releasing asbestos fibers into the atmosphere, potentially threatening human health; therefore, Site 5 is recommended for for an RI to evaluate if the debris does

in fact contain asbestos and if necessary, to plan subsequent remedial measures.

2.2.5 Site 7: Pesticide Storage. Building 62, as shown on Figure 2-2, is located in the northeastern section of TI and lies about 250 ft from the shore. The building has been used for storage and handling of a variety of liquid substances in the past including pesticides, herbicides, paint, and other unidentified fluids. These materials were stored in small, 1 to 5 gallon containers. Pesticides and herbicides were mixed and prepared for use beginning about 1955 until at least the early 1960s. Paints containing linseed oil and lead were apparently mixed on-site near Pier 11 from 1943 to the late 1950s. Excess fluids were disposed by pouring directly onto the ground or stormwater drains outside Building 62 to the east and into San Francisco Bay. This practice occurred for approximately 20 years, from 1943 to at least the early 1960s. Relatively small volumes were involved; usually 5-10 gallons per disposal, every 1 to 40 weeks.

In addition, it was reported that sludge from the adjacent wastewater treatment plant (WWT) was spread on the ground in an area bounded by Building 62, the WWT, Avenue M, and 13th Street, about 250 ft by 100 ft in plan dimension. The volume spread was estimated to be up to 10-15 cubic yards per month, total, at this site and at Site 8, potentially spreading 960 to 1440 cubic yards of sludge from 1968 to 1976. The potential exists for organics and metals in the wet sludge to have migrated into the subsurface. Sludge contaminants may be similar to those discharged by the WWT in 1984 which included cyanide, arsenic, cadmium, chromium, copper, lead, nickel, silver, zinc, phenolics, and mercury.

The area surrounding Building 62 is almost entirely paved. However, a portion of the possible sludge spreading area is not paved. Contaminant migration pathways would generally be expected to be vertical to the ground water table, carried by percolating surface water, and then horizontal, carried in the ground water to San Francisco Bay. Because the potential exists for contamination from the spread of sludge or the various liquids which were disposed of in the area, Site 7 is recommended for an RI.

2.2.6 Site 9: Foundry. Building 41 on TI has been used for at least three operations since the early 1940s. On building indexes for 1943 and 1947, Building 41 is listed as a forge and foundry. Details regarding this use were not located. From at least 1953 to 1968, Building 41 is listed as a paint shop although a 1985 index continues to erroneously list it as a paint shop. The paint booth emission abatement equipment is reported to still be installed. Between 1968 and 1981, building usage is indeterminate. Most recently, from 1981 to 1987, the building was used as a welding training school by NTTC. The area around the building is currently paved.

While being used as a paint booth, it was reported that paint mixing operations took place. Discharge of waste paints, thinners, and solvents to the Bay adjacent to the building and spillage of some materials is speculated by TI personnel to have occurred. Paints used at this facility are known to have contained lead or zinc-chromium-based pigments.

This area of TI was the site of seaplane maintenance operations and therefore the area surrounding the building may have been paved for much of its

existence. Paving would serve to reduce water infiltration and contaminant transport into the subsurface. Rather, the migration pathway would be via surface water flow, carrying contaminants to the storm sewer system and then to San Francisco Bay. Because the potential for soil or ground water contamination cannot be excluded due to the varied long-term use of the site, Site 9 is recommended for an RI to evaluate what contaminants may be present in the subsurface soils.

2.2.7 Site 10: Bus Painting Shop. Building 335 on TI was constructed during the mid-1940s and is located about 100 ft from the shoreline, between Site 7, Pesticide Storage, and the Bay. During the 1940s and 1950s, the building was operated as a bus paint shop and for an unspecified period of time, paints may have also been mixed at this building. Based on handling practices reported at similar facilities on TI, waste paints, thinners, and solvents may have been released onto the ground near the building, spread on the adjacent riprap, or discharged to the Bay. Building 335 was also reported to have been used for storage, mixing and handling of pest control solutions (pesticides and herbicides) during an unspecified time period. Solution residues were reported to have been washed from containers and spraying equipment. It was also reported that Building 335 housed a do-it-yourself steam rack which was used to clean vehicles, drums, garbage cans, etc.

Based on this varied usage, a wide range of contaminants were present at this site. A floor drain is present in the building, connected to the storm sewer system, which would convey potential contaminants directly to the Bay. The building is currently surrounded mainly by gravel surface, and contaminant migration pathway in this area would be vertical to the ground water table, then to the Bay. Due to the potential contamination of the soil and ground water, Site 10 is recommended for an RI.

2.2.8 Site 11: YBI Landfill. The southern edge of the eastern port of YBI is a former marsh area about 100 ft by 400 ft in plan dimension which was identified as a dump in a 1935 topographic map. The exact dates of sanctioned operation were not established. Unsanctioned disposal occurs currently although there are signs in the area to discourage additional dumping. The volume and type of material disposed in the area could not be identified. The potential for ground water contamination originating from the buried materials is possible. An RI is recommended to be performed at this site to characterize the fill materials and evaluate if contamination is present in the fill, the underlying native soils, or ground water.

2.2.9 Site 12: Old Bunker Area. From the early 1940s until about 1968, the northern one-quarter of TI contained ammunition bunkers. Surrounding the bunkers, both trench-type disposal units and general debris disposal areas were constructed. Although we have found no information detailing these operations, the disposal areas were identified in a series of trenches and borings performed during foundation excavations for the 1200-series housing units constructed in 1968. Materials were identified as "loose rubbish, bottles, wire rope, paper, steel drum, incinerator ash, etc." (MKE-Abrams-Keller & Grannon, 1968). In some areas, rubbish was found to the depths excavated, about elevation -2 feet MSL. Because site preparation recommendations included removing the debris only to elevation +2 feet MSL, rubbish probably remains buried in this area. The area is still the site of military housing with housing units, paved streets, and grassy lawns.

Contaminant migration pathways are expected to be vertical to the ground water table and then into the Bay. Due to the presence of the housing units and because the potential for soil and ground water contamination is possible if the refuse was not completely removed during construction, Site 12 is recommended for an RI.

2.2.10 Site 13: Stormwater Outfalls. TI has two distinct sewer systems: a wastewater system and a stormwater sewer system. Water conveyed by the stormwater system is collected from surface drains and some building drains and is discharged to the Bay without treatment. According to facility drawings, there are numerous discharge outfalls which convey water collected from different parts of the station. During the years of NAVSTA TI operations, it is likely that contaminants such as paints, paint thinners, hydrocarbons, solvents, and pesticides may have been deposited in the Bay waters through the storm and wastewater system effluents (e.g., Sites 3, 4, 7, 10, 20, and 22). In addition, these types of contaminants would also have deposited in the Bay through direct discharge (from vessels and from the Station) and through ground water migration. An RI is recommended to identify the potential contaminants. A systematic sediment sampling plan for both TI and YBI is proposed for the RI.

2.2.11 Site 15: Old Fuel Farm. Prior to 1943, the NAVSTA TI fuel farm was located east of Building 89 near the intersection of Avenue M and 2nd Street. The farm consisted of the two above ground 210,000 gallon fuel storage tanks (4 and 5) later transferred to Site 14, the New Fuel Farm. The location of the farm is not precisely known because its relocation predates the earliest air photos and plans available for review. Based on available information, there is no history of spills associated with these tanks but associated underground pipelines may have been abandoned without first draining the remaining fuel in the lines. Many line breaks have already occurred (e.g., Site 24: Fifth Street Fuel Releases, Section 2.2.1.9), draining segments of the lines and resulting in contamination. In 1985, excavations in this area at the nearby commissary and also for the new pier facility both revealed soil suspected of containing oil and/or hydrocarbons. The volume of oil, if any, remaining in abandoned lines cannot be quantified due to the line breaks.

Migration of released fuels is vertical, carried by surface infiltration to the ground water table and then via ground water to the Bay. The area is currently paved, however, inhibiting migration. To evaluate the degree and extent of soil contamination and assess if ground water has been affected, this site is recommended for an RI.

2.2.12 Site 16: Clipper Cove Tank Farm. Ten above ground storage tanks were located on the east side of the isthmus joining YBI and TI from about the 1940s until they were dismantled in the 1960s. These storage tanks contained aviation gasoline and automotive diesel. Unknown quantities of sludge were removed from the bottom of each of these tanks at the time they were dismantled and were reportedly deposited on bare ground east at an unspecified distance from the tanks. No record exists documenting the sludge removal and disposal or any tank or piping releases. The sludge would either erode and wash away into the Bay and/or would be absorbed into the underlying soil over a period of years. Surface soil samples revealed lead and total petroleum hydrocarbons ranging in concentration from 89 to 160 mg/k for lead and 240 to 540 µg/g for total petroleum hydrocarbons (Appendix B). Due to the

potential contamination of the soil and ground water, a more extensive soil sampling program is recommended in an RI to evaluate the extent of subsurface contamination. The area is currently unpaved and is the site of a picnic area.

2.2.13 Site 17: Tanks 103/104. Contamination at this site on TI also may result from hydrocarbon contamination. An estimated 20,000 gallons of diesel fuel were reportedly released from the above ground Tanks 103 and 104 onto the unpaved ground surface. No exact date for the release was available, but it was reported to have occurred in 1983. The area (about 130 ft by 220 ft) has since been paved and bermed. It was also reported that waste oil was spread at least once around the base of Tanks 103 and 104 for weed and dust control. The date, quantity, and source of oil used were not identified and the waste oil may potentially have contained PCB.

The predominant migration pathway is vertical to the ground water table and then to the Bay. This vertical migration path is expected to be inhibited by the surface pavement. Because residual contamination may exist either resulting from the spill or from standard operations and to assess whether ground water is contaminated, an RI is recommended for Site 17.

2.2.14 Site 19: Refuse Transfer Area. The area northeast of Building 342 adjacent to Avenue N has been used for refuse staging (holding/disposal) since about 1953. Currently, trash is transferred from various small containers to large bins for subsequent disposal off-station. A paved ramp constructed in 1970 is present, from which trucks can end-dump trash into the bins. Small quantities of loose trash are spread throughout the site and soils are stained along the fence adjacent to Site 4. Currently, the facility has signs prohibiting the disposal of acids, paints, oils, batteries, or any kind of hazardous waste. Soil, ground water, and surface runoff may be potentially contaminated as a result of past operations. Due to the age of the site and the potential for a variety of contaminants, an RI is recommended for this site.

2.2.15 Site 20: Auto Hobby Shop/Transportation Center. During the period from approximately 1943 to 1950, Buildings 194, 224, 225, and 267 were used as the TI transportation center where steam cleaning and/or degreasing of vehicles took place. A gas station was also located in Building 370 until at least 1976. Some waste fluids drained from the vehicles were reportedly allowed to run into the storm sewer system and ultimately into San Francisco Bay. It is uncertain whether the fluids were in general recycled, released into the Bay, or disposed of (buried or deposited) in other areas of the station. The quantities of fluids may have been substantial, based on the level of operations at TI during this time.

At an unspecified time, Building 225 was converted to the Auto Hobby Shop. Drums of hydraulic fluid, recycled oil, and other vehicle fluids have commonly been stored on pallets in the rear yard and the ground and concrete beneath the drums is stained (darkened). Soil surrounding the drums was sampled by NEESA personnel in October 1987. The analyses revealed the presence of chromium, lead, nickel, zinc, oil and grease, and total petroleum hydrocarbons. In the three soil samples analyzed, chromium ranged from 33 to 67 mg/kg, lead ranged from 270 to 2,000 mg/kg, nickel ranged from 27 to 35 mg/kg, and zinc ranged from 160 to 500 mg/kg. The oil and grease and total

petroleum hydrocarbons concentration from two soil samples ranged from 13,300 to 38,200 mg/kg and 9,700 to 25,000 µg/g, respectively (Appendix B).

Several underground tanks were located in this area and may have been abandoned in place. Locations include three known tanks east of Building 225, where the service station was located, and possibly others east and northeast of Building 225.

The areas where Transportation Center buildings stood are now unpaved and it is not known if they were paved in the 1940s. The Auto Hobby Shop is paved on the northwest side fronting 12th Street.

Considering the contaminants detected in the surface sampling and the extent and magnitude of the transportation center operations, Site 20 is recommended for an RI. Currently, the contaminant migration pathway in unpaved areas is vertical, to the ground water table, through which contaminants would be transported to the Bay. In paved areas, transport is via surface water flow into the storm sewer system.

2.2.16 Site 21: Vessel Waste Oil Recovery. Waste oil from vessels is unloaded into cylindrical steel shells (DONUTs) which are maintained partly above and partly below the water surface. Current DONUTs have bottoms which prevent the oil from contacting the water but older models did not have bottoms and allowed contact. The DONUT is maneuvered to shore and pumped through an oil/water separation system. The separator and DONUTs are in a paved area which is heavily stained. Volumes of waste oils were anticipated at 271,900 gallons per year for 1975 in a 1972 document (NAVSHIPS/NAVSEC). Because of the quantities involved and the direct contact, contamination of sediments and onshore soils is possible, and Site 21 is recommended for an RI.

2.2.17 Site 22: Navy Exchange Service Station. Building 330 has been used as a service station since about 1946 and is therefore expected to involve automobile fuels and fluids. Some filter and vehicle fluids have been deposited in the storm drain near the service bay and the build-up of materials in the storm drain indicates that the practice has been occurring for several years. Although the volumes of fluids and materials released is unknown, a 1972 report anticipated that by 1975, 12,000 gallons per year of fluids and materials would be generated (NAVSHIPS/NAVSEC). The ultimate receptors of fluids in the storm sewer system are organisms in San Francisco Bay (Site 13).

Underground fuel tanks and a pump island are located at the station. Although no leaks were detected in the tanks at the service station in 1986 (ERM-West, 1987), spills at tank fill pipes, pinhole leaks in tanks previously located at the station, or other pipeline leaks are likely to have occurred in the 42 years of operation. Contamination of subsurface soils and ground water may be likely due to such leaks as well as service bay operations. This site is recommended for an RI to assess if soil contamination has occurred and whether product is present on the ground water table. The contaminant migration pathway through soils is vertical to the ground water table and then to the San Francisco Bay. Due to the potential for contamination, this site is recommended for an RI to assess if soil contamination has occurred and whether product is present on the ground water table.

2.2.18 Site 24: Fifth Street Fuel Releases. An abandoned underground pipeline has recently leaked unknown volumes of product at three locations along Fifth Street. The leaks were discovered in 1986 and 1987 and excavated soil was sampled in October 1987. Analyses of samples near Buildings 293 and 40 (where package boilers may have been located) reveal the presence of oil and grease and total petroleum hydrocarbons. The oil and grease and total petroleum hydrocarbons detected in four samples collected by NEESA personnel ranged from 470 to 7,450 mg/k and 180 to 5,100 µg/g, respectively (Appendix B). The excavated spoil materials were stockpiled about 5 ft wide, 10 ft long, and 4-5 ft high, about 125 cubic ft.

The pipeline network which was formerly used to transport oil and fuel on TI and, to a lesser extent, YBI, has in many cases been abandoned in place without first draining the line. The actual volume of in place oil may have been up to 10,000 gallons on TI, but the locations of the abandoned segments are unknown as are the volumes which may already have leaked. This practice of in-place abandonment has presumably occurred from 1950 to present, paralleling the abandonment of fuel storage tanks, fueling piers, fueling stations, and buildings which required fuel deliveries.

The pathway for contaminant migration will be vertical to the ground water table via percolating surface water, and then horizontal via ground water to the Bay. The existence of contamination at the known Fifth Street release sites warrants further study during an RI to assess the degree of contamination and assess if ground water has been affected.

2.2.19 Site 25: Seaplane Maintenance. During the period from about 1943 to 1958 seaplanes were maintained in Buildings 2, 3, and 180. Little information exists regarding operations, but reportedly engineering work and cleaning occurred. Based on other operations on TI during the same time period, waste liquids or solvents from engine cleaning may have been deposited in the Bay via the storm drain system or directly to the ground surface or the Bay (Site 13).

Several underground gasoline tanks may be abandoned in place in this area. Ten aviation gasoline tanks adjacent to Building 2 have not been located precisely nor is there a record of their abandonment. Tanks may have also been located west and south of Building 2.

Although there is no specific record of leakage associated with these tanks or the maintenance activities, considering the potential for contamination, it is advisable to verify their existence and the extent of possible contamination in an RI.

2.2.20 Site 26: Underground Tanks. Locations of a possible sixteen underground petroleum storage tanks were identified during this study. Table 2-2 summarizes available information regarding the tanks. Some of these tanks may have been abandoned in place, possibly containing product, whereas others may have been removed but not recorded as no longer existing. For the former, the likelihood of contamination as the tanks have corroded and released product is high. Contaminant migration pathway is vertical, carried by percolating surface water, to the ground water table and then via ground water to the Bay.

TABLE 2-2

SITE 27: UNDERGROUND TANKS

NUMBER TANKS	LOCATION	AGE	MATERIAL	SIZE	CONTENTS	COMMENTS
2	Approximately 100' each of NE corner of former gas station 370-TI near former Building 224-TI	Building 224 used from pre-1943 until demolition prior to 1981	Steel	Unknown	Diesel?	Found two vertical pipes in open field near former site of Building 224-TI -- possibly associated with package boilers.
1	Approximately 300' east of NE corner of Building 92-TI	Building 234 used from pre-1943 until demolition prior to 1981	Steel	Estimated 500 Gallons	Diesel?	Found vertical pipe in open field near former site of Building 234-TI.
10	Adjacent to (south of) SE corner of Building 2-TI	Used from pre-1935 to	Steel	4,000(?) Gallons Each	Aviation Fuel	Found vertical pipe approximately 50' west and 4' south of SE corner of Building 2-TI -- possibly associated with the aviation tanks.
7	Buildings 1 through 7-YBI with one tank per building	Buildings operational from pre-1935 to present	Steel	Estimated 500 Gallons Each	Diesel	Indicated as possible tanks associated with package boilers for each building (quarters) -- from personnel interview.
1	Adjacent to (NW of) Building 66-YBI	Buildings operational from pre-1935 to present	Steel	Unknown	Unknown	Indicated during personnel interview. Uncertain use. Possible tank for package boiler.
1	Approximately 75' SE of Building 213-YBI	Building in use from pre-1935 until at least 1953	Steel	Estimated 500 to 1,000	Diesel	Indicated during personnel interview. Uncertain use, possible tank for package boiler.
1	Adjacent (?) to Building 204-YBI	Gas station from pre-1935 until conversion to fire station on or before 1947	Steel	Estimated 1,000 to 4,000 Gallons(?)	Diesel and/or Gasoline	Indicated during personnel interview -- tank associated with former gas station location-YBI.
1	Adjacent to Building 8-YBI	Building in use from pre-1935 to present	Steel	Estimated 500 Gallons	Diesel(?)	Indicated during personnel interview -- tank associated with possible package boiler for quarters-YBI.
1	Adjacent to Building 9-YBI	Building in use from pre-1935 to present	Steel	Estimated 500 Gallons	Diesel(?)	Indicated during personnel interview -- tank associated with possible package boiler for quarters-YBI.

According to Title 23, Chapter 2, Subchapter 16 of the California Administrative Code (CAC), closure plans must be developed and implemented for all underground storage tanks. As a first step, the presence of tanks should be verified using geophysical methods. Navy personnel can then ascertain whether the tanks are abandoned or in service, and can proceed according to the appropriate state requirements.

In addition, these underground tanks will be investigated under the Navy Underground Tank Program. If significant contamination is discovered, the tanks may be included in a RI.

2.3 REMEDIAL MEASURE SITE RECOMMENDATIONS. Remedial investigations have been performed at the following two sites and remedial measures either are being developed (Site 6) or have been formulated (Site 14).

2.3.1 Site 6: Fire Training Area. The fire training area, part of the NTTC, has been used to conduct fire training since 1946 on TI. Several consultant reports document leaking underground storage tanks and severely contaminated soil and ground water in this area. Contamination is due to the presence of petroleum hydrocarbons, such as gasoline and diesel, which are most likely present as a result of the school's operations. In the past, fire training operations may have been conducted on an earthen area prior to construction of a concrete pad. As a result, the soil in this area has the potential to be contaminated with both hydrocarbons and fire extinguishing chemicals. Prior to construction of the wastewater treatment plant in the 1960s, wastewater from this activity was discharged directly into the Bay. A remedial investigation is ongoing at this site under the direction of NAVFAC WESTDIV personnel.

2.3.2 Site 14: New Fuel Farm. Contamination at this TI site results from various tank and pipeline leaks and sludge disposal practices during the farm's existence (1943 to present). Water has been also historically bled from the fuel farm tanks and allowed to infiltrate the soil surrounding the tanks. The fuel farm area was paved in about 1980 and the bleeding operation was stopped.

Monitoring wells and borings placed around the tanks in a 1986 investigation (WESTDIV, 1986) revealed concentrations of hydrocarbons, particularly in the vadose zone. This study effectively formed the basis for and presented remediation alternatives.

2.4 NON-REMEDIAL INVESTIGATION RECOMMENDATIONS. For the four sites presented below, we do not recommend that RIs be performed at this time.

2.4.1 Site 2: Radiation Training Area. As shown on Figure 2-2, this site is located near the intersection of 12th Street and Avenue A where mockups were used for radiation training. Radioactive water was involved with this activity and was collected in two subgrade concrete tanks. At the time of the training, several hundred square feet of area could have been affected. Operations in this area began in the early 1950s and ceased in 1969 when the school moved to its current location in Building 371.

Because the half life of the radioactive material used (Bromine-82) was on the order of 24-36 hours, any remaining radiation level is expected to be below

significant levels. Reference to the area was made in a 1971 report (Lowry & Associates) which stated that testing at the ground surface for residual contamination was negative. Further tests at depth during housing construction in the area were to be performed and the soil was to have been decontaminated if necessary. Based on the radioactive half life of the source and prior studies, Site 2 is not recommended for an RI.

2.4.2 Site 8: Army Point Sludge Disposal Area, YBI. It was reported that during an unspecified time period, sludge from the wastewater treatment plant on TI was trucked to Army Point on YBI and spread on the ground in an area formerly occupied by quarters. The volume potentially spread was up to 10-15 cubic yards per month, total, at this site and Site 7, Pesticide Storage, potentially spreading 960 to 1,440 cubic yards of sludge from 1968 to 1976. Depending on the time and duration of the operation, there is a potential for organics and metals (such as cyanide, arsenic, cadmium, chromium, copper, nickel, lead, silver, zinc, phenolics, and mercury) in the wet sludge to have migrated into the subsurface. However, insofar as this practice was the same as that described near Site 7 (Section 2.2.5), consideration of this site for an RI should be deferred pending the results of the Site 7 study.

2.4.3 Site 18: Asbestos-Covered Piping, YBI. It was reported that as a result of a landslide on YBI in the early 1980s, abandoned steam piping insulated with asbestos was exposed. No other information was found to confirm this report, nor were plans located which suggested the presence of such lines. No further studies are suggested to verify the lines' existence or the presence of asbestos. Any asbestos is currently buried with the lines and therefore is contained. The possibility of the lines being uncovered as a result of routine maintenance is low given the nature of Naval operations on YBI.

2.4.4 Site 23: YBI Line Break. A landslide in early 1980s reportedly caused a rupture in a pipeline on YBI releasing black oil. The line carried the product from the fueling Piers 3 and 4 uphill to storage Tank 117 located on top of YBI. Although the volume of production released is not known, the capacity of the length of line between the refueling pier and Tank 117 is on the order of 400 gallons. Due to the steep topography and the mechanism of landslide movement, the areal distribution of product is presumed high and concentration of released product low. Therefore, Site 23 is not recommended for a confirmation study.

CHAPTER 3. RECOMMENDATIONS

3.1 INTRODUCTION. This chapter presents recommendations for the remedial investigations suggested in Chapter 2 at the potentially contaminated areas identified at NAVSTA Treasure Island.

The sampling recommendations are designed to first verify the presence of contamination. The location of these sites on TI and YBI is provided on Figures 3-1 and 3-2, respectively. Ground water samples from monitoring wells are recommended to be collected on a one-time basis. Depending on results of this verification step, a further characterization of the extent of the contamination at the sites may be required. Design of the Characterization Study would depend on results from the verification work.

3.2 REMEDIAL INVESTIGATIONS. The PA/SI team concludes that Remedial Investigations (RI) are appropriate and warranted for 20 sites. Operations at some sites are located on YBI. Operations at some sites in close proximity to one another are believed to result in overlapping areas of contamination. These sites have been grouped together for the verification field effort, resulting in a total of 18 RI areas (Figures 3-3 through 3-21).

We recommend a geophysical survey first be performed at each site on TI and YBI to determine the locations of possible underground utility lines and pipelines in the immediate vicinity. This must be done prior to drilling so that all underground tanks, pipelines, and other hazards are located first.

Because of the relatively uniform water table and minimal relief on TI, all borings and monitoring wells planned for TI may be uniformly installed. Except as noted below, at both TI and YBI we recommend that soil borings extend to the ground water table, anticipated at about 5 feet below ground surface. Further, monitoring wells should be screened about 2 feet above the water table to 8 feet below; i.e., should extend about 13 feet deep with a 10-foot screened length of PVC topped by a 5-foot blank length of PVC. Approximately 2 ft stick-up is expected at each well location on TI. The well should be installed with an appropriate filter pack and slot size in accordance with monitoring well design standards for the subsurface materials encountered. This general well construction plan may be modified depending upon the range of tidal fluctuation and specific site conditions. We recommend that the top of each well be encased in a locking steel, traffic resistant box to prevent damage or unauthorized access. After well construction, it is recommended that the location and elevation of the new wells be surveyed. Hollow-stem auger methods are also recommended for drilling.

Soil sampling, water sampling, handling, and shipment should be consistent with EPA protocol.

Monitoring wells must be developed fully by bailing, pumping, and surging, following installation. Water samples collected with a Teflon or stainless steel bailer should be obtained after developing and purging the wells. During the initial well development, a minimum of five casing volumes should be removed. Prior to sampling, a minimum of three casing volumes should be removed.

3.2.1 Site 1: Medical Clinic (Figure 3-3)

Type of Sampling: Soil
Number of Soil Borings: 1, approximately, 5 feet deep
Number of Ground Water Monitoring Wells: None
Soil Sampling: 5 samples
Number of Samples: 5
Parameters: pH, silver
Remarks: Hand-auger methods may be used to advance this boring from within Building 257. The boring should be positioned along the center-line of the eroded floor area. Samples should be obtained near the ground surface, and at about 1 ft intervals to the ground water table.

3.2.2 Site 3: PCB Equipment Storage Area (Figure 3-4)

Type of Sampling: Soil, ground water
Number of Soil Borings: 1
Number of Ground Water Monitoring Wells: 1
Soil Sampling: 3 samples
Number of Samples: 3 soil, 1 water
Test Parameters: PCBs (EPA Methods 8080 for soil and 608 for water), total petroleum hydrocarbons (EPA Method 418.1)
Remarks: The uppermost soil sample should be obtained at the ground surface from beneath the pavement, with other samples at 2 feet depth and ground water (about 5 feet depth). All soil samples and water sample are to be evaluated for PCBs and the surface soil sample and water sample for hydrocarbons.

3.2.3 Site 4: Hydraulic Training School/Site 19: Refuse Transfer Area (Figure 3-5)

Type of Sampling: Soil, ground water
Number of Soil Borings: 3
Number of Ground Water Monitoring Wells: 3
Soil Sampling: 3 samples at each well
Number of Samples: 9 soil, 3 water
Test Parameters: Priority pollutant metals, PCBs (EPA Methods 8080 for soil and 608 for water), lead, total petroleum hydrocarbons (EPA Method 418.1)
Remarks: Obtain first soil samples at ground surface, second at about 2.5 feet depth, last at ground water (about 5 feet depth). Analyze upper two samples in each well for lead and water samples from each well for lead. Analyze all soil and water samples for hydrocarbons. Analyze upper two samples in well nearest Building 342 for PCBs. Analyze mid-level soil sample in boring nearest Building 342 for Priority Pollutants.

3.2.4 Site 5: Old Boiler Plant (Figure 3-6)

Type of Sampling: Soil
Number of Soil Borings: None
Number of Ground Water Monitoring Wells: None
Number of Sampling Pits: 2
Soil Sampling: 3 samples per pit

SITE NUMBER (CIRCLED)	DESCRIPTION
1	Medical Clinic
2	Radiation Training Area
3	PCB Equipment Storage Area
4	Hydraulic Training School
5	Old Boiler Plant
6	Fire Training School
7	Pesticide Storage
9	Foundry
10	Bus Painting Shop
12	Old Bunker Area
13	Stormwater Outfall (TI) (Island Perimeter)
14	New Fuel Farm
15	Old Fuel Farm
16	Clipper Cove Tank Farm
17	Tanks 103/104
19	Refuse Transfer Area
20	Auto Hobby Shop/ Tansportation Center
21	Vessel Waste Oil Recovery
22	Navy Exchange Service Station
24	5th Street Fuel Releases
25	Seaplane Maintenance
26	Underground Tanks (Throughout Island)

LEGEND

- Existing Structures
- Fence
- Main Station Entrance
- Shore Line

0 400 Feet

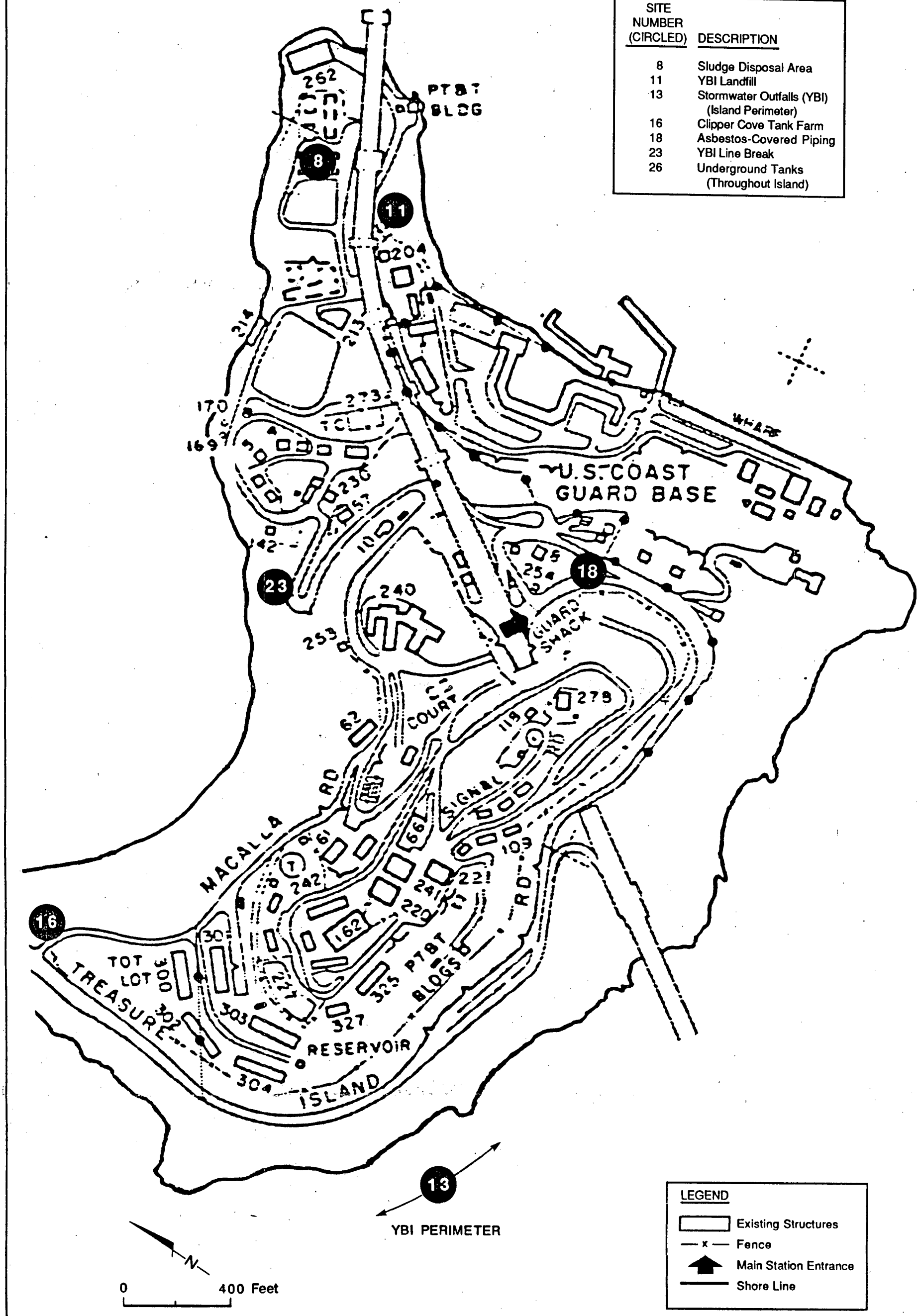
TI PERIMETER

PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

LOCATION OF IDENTIFIED SITES-TREASURE ISLAND (TI)

FIGURE 3-1

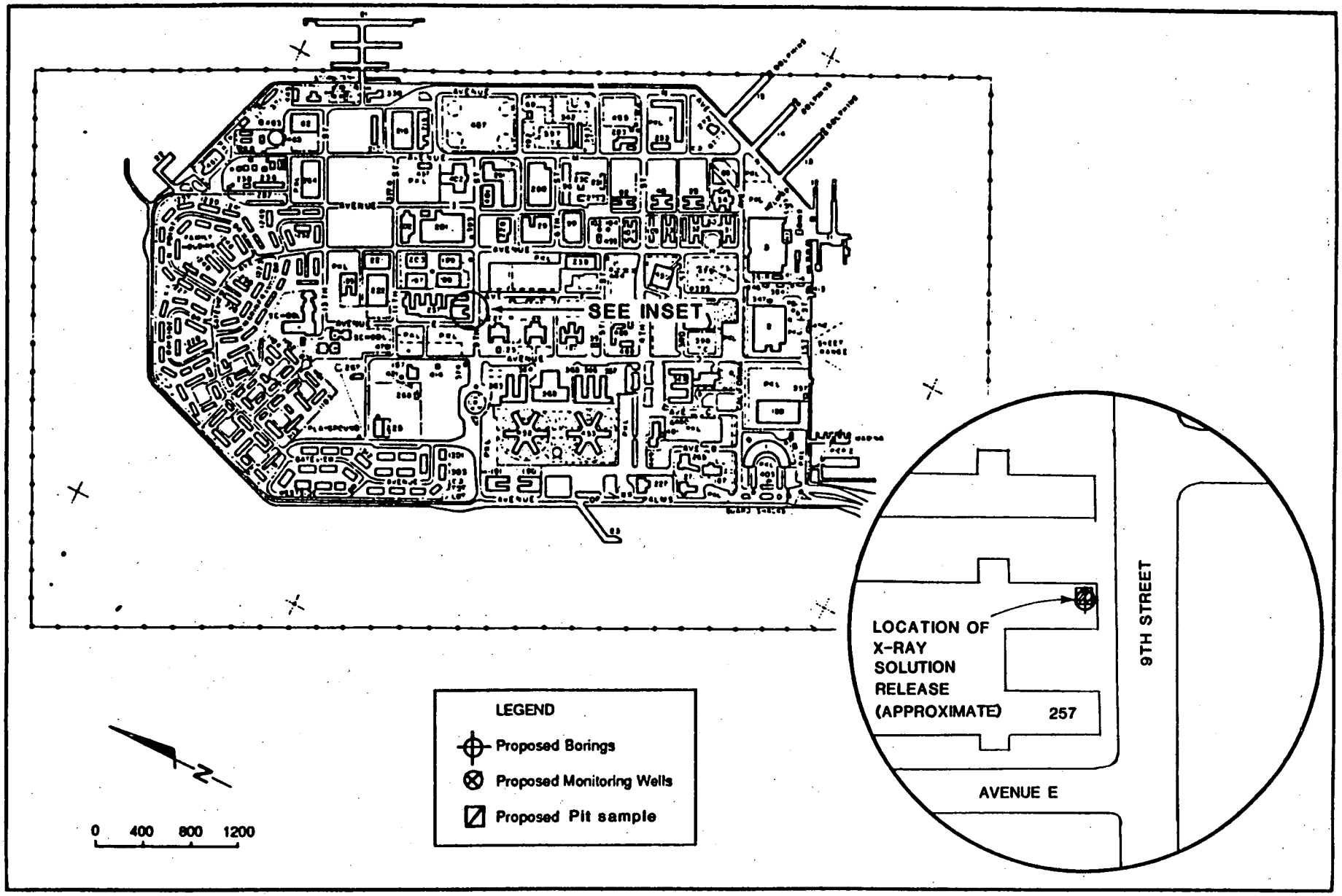
SITE NUMBER (CIRCLED)	DESCRIPTION
8	Sludge Disposal Area
11	YBI Landfill
13	Stormwater Outfalls (YBI) (Island Perimeter)
16	Clipper Cove Tank Farm
18	Asbestos-Covered Piping
23	YBI Line Break
26	Underground Tanks (Throughout Island)



PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

LOCATION OF IDENTIFIED SITES YERBA BUENA ISLAND (YBI)

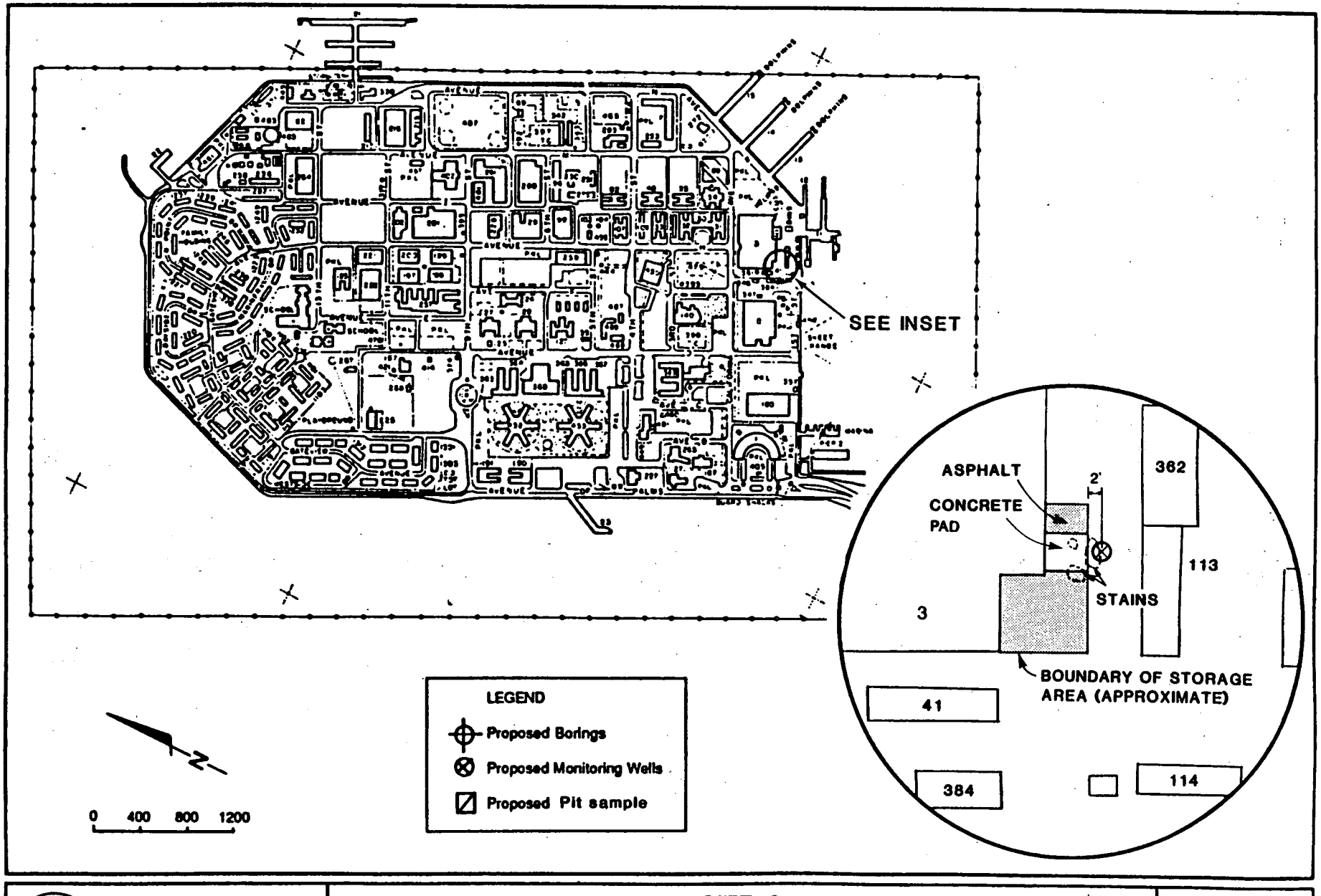
FIGURE 3-2



PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

SITE 1
MEDICAL CLINIC
REMEDIAL INVESTIGATION

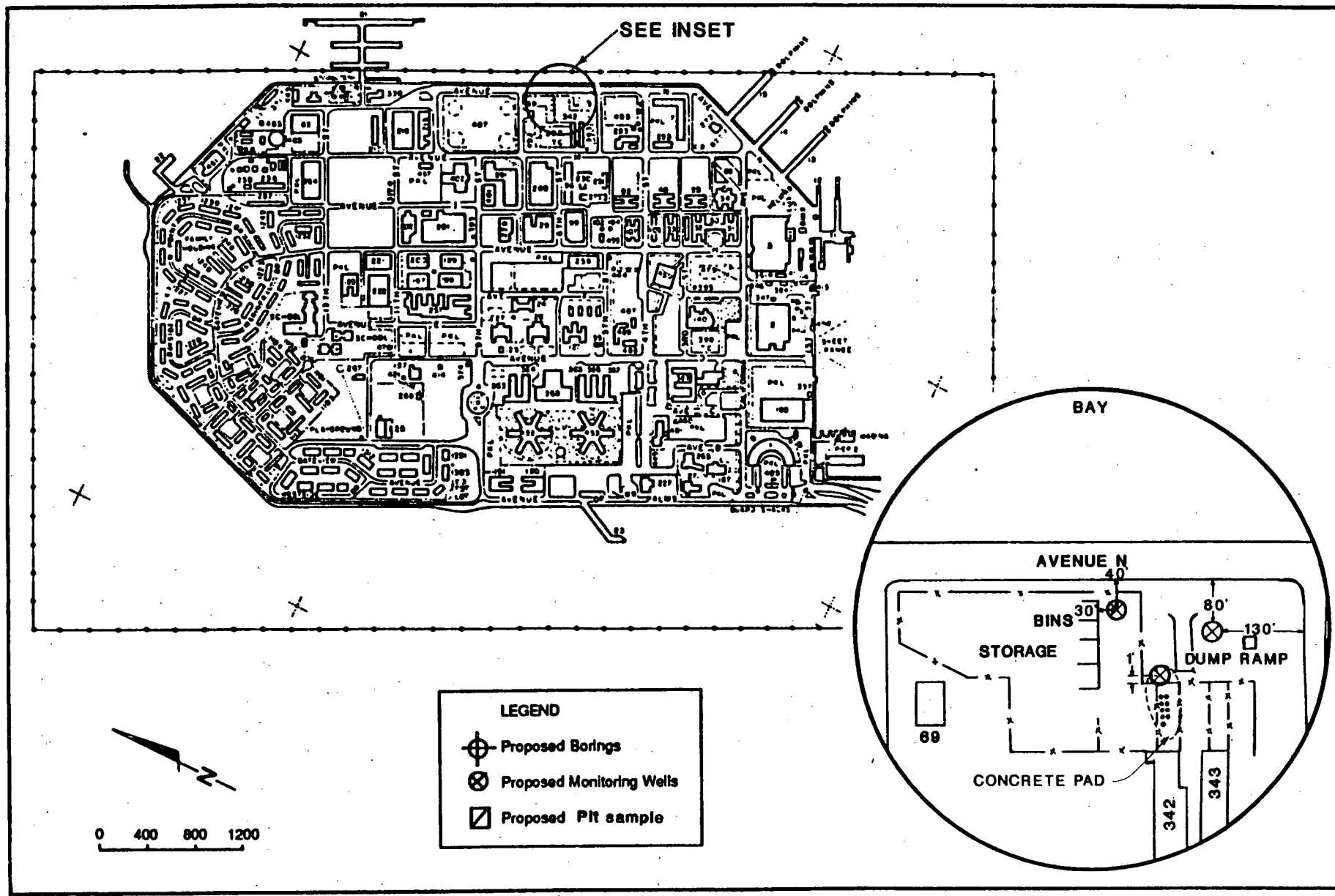
FIGURE
3-3



PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

SITE 3
PCB EQUIPMENT STORAGE AREA
REMEDIAL INVESTIGATION

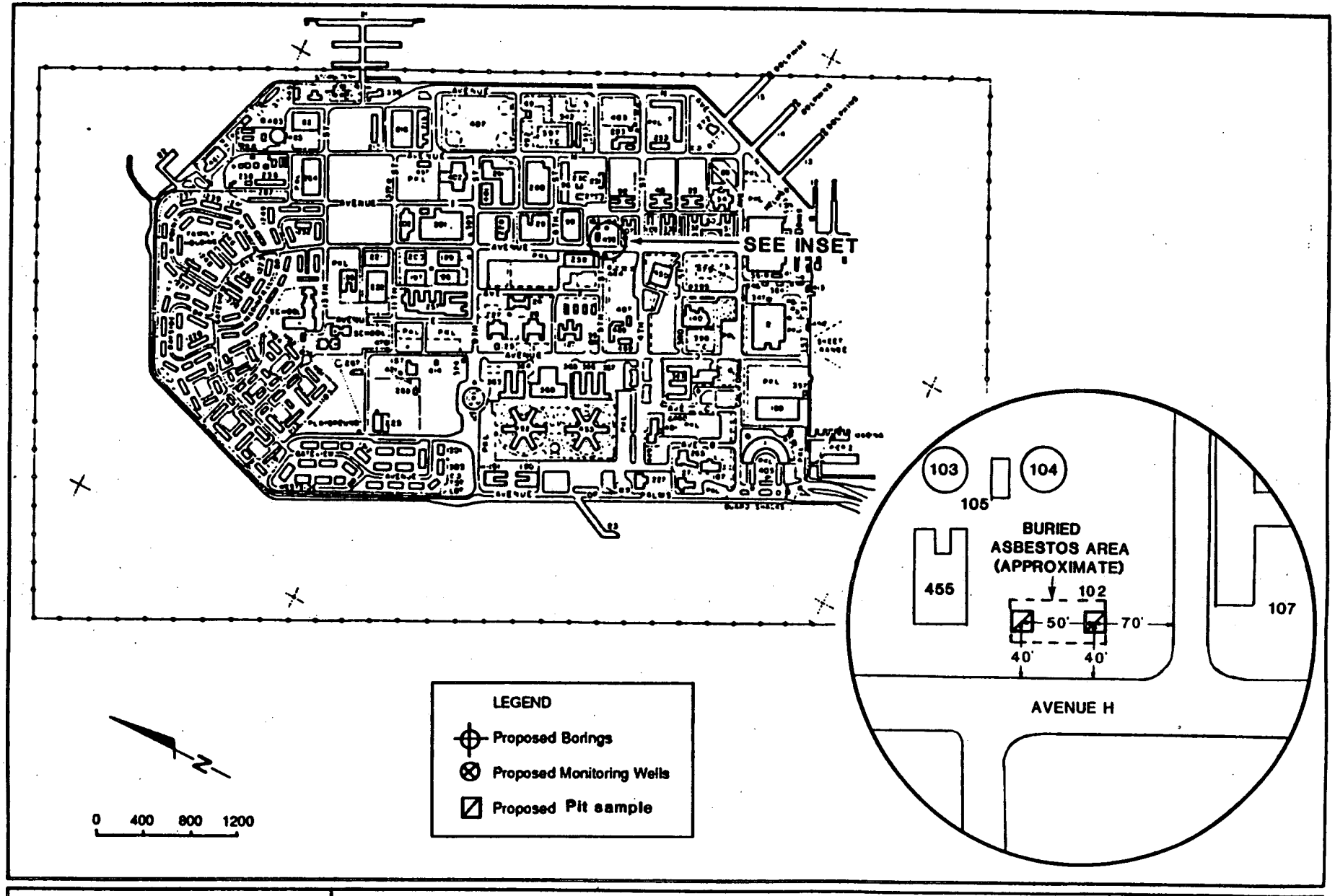
FIGURE
3-4



PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

SITE 4: HYDRAULIC TRAINING SCHOOL
SITE 19: REFUSE TRANSFER AREA
REMEDIAL INVESTIGATION

FIGURE
3-5



PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

SITE 5
OLD BOILER PLANT
REMEDIAL INVESTIGATION

FIGURE
3-6

Number of Samples: 6
Test Parameters: Asbestos
Remarks: Sample in two areas by excavating a pit approximately 2 feet x 4 feet in plan dimension and 3 feet deep. Obtain samples from pit walls at the ground surface, at about 1.5 feet deep and at about 3 feet deep or where asbestos contamination seems likely by visual inspection.

3.2.5 Site 7: Pesticide Storage (Figure 3-7)

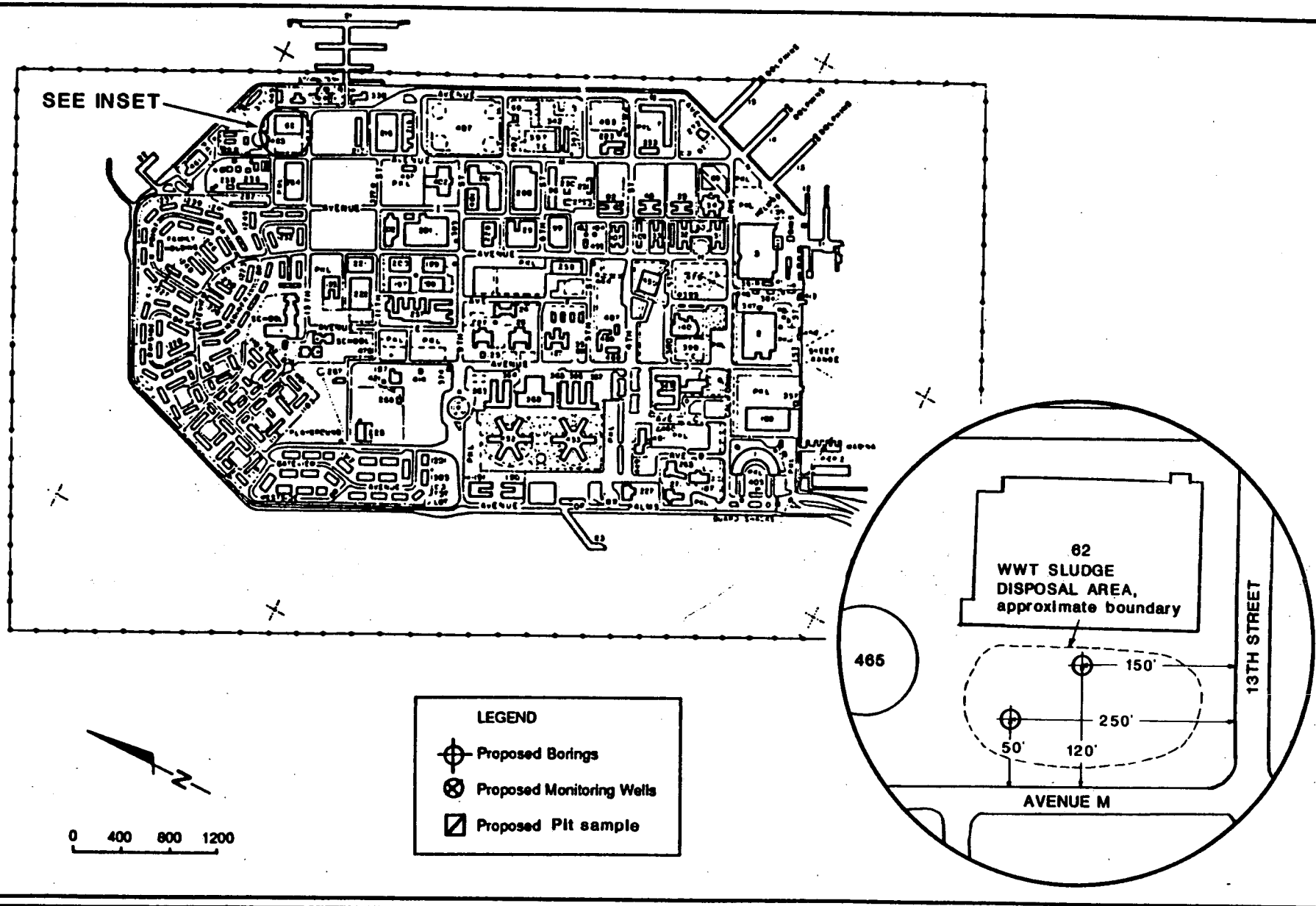
Type of Sampling: Soil
Number of Soil Borings: 2
Number of Ground Water Monitoring Wells: None
Soil Sampling: 3 samples at each boring
Number of Samples: 6
Test Parameters: Priority Pollutant metals, organochlorine pesticides and PCBs (EPA Method 8080), organophosphorous pesticides (EPA Method 8140), chlorinated herbicides (EPA Method 8150).
Remarks: Obtain samples near the ground surface, at about 2.5 feet depth, and the ground water table (about 5 feet depth). Test all samples in boring nearest Building 62 and the surface sample in the remaining boring for pesticides and herbicides. Analyze all six samples for Priority Pollutant metals.

3.2.6 Site 9: Foundry (Figure 3-8)

Type of Sampling: Soil
Number of Soil Borings: None
Number of Ground Water Monitoring Wells: None
Number of Sampling Pits: 4
Soil Sampling: 3 samples at each pit
Number of Samples: 12
Test Parameters: Priority Pollutant metals, volatiles/semi-volatiles (EPA Method 8240 and EPA Method 8270)
Remarks: Excavate four pits, approximately 2 feet x 4 feet in plan dimension and 3 feet deep. Obtain samples at 3 levels in each immediately below paving, at about 2 feet depth, and at about 3 feet depth. Composite all three samples at each pit to obtain four samples, total, and analyze each for Priority Pollutant metals, volatiles and semi-volatiles.

3.2.7 Site 10: Bus Painting Shop (Figure 3-9)

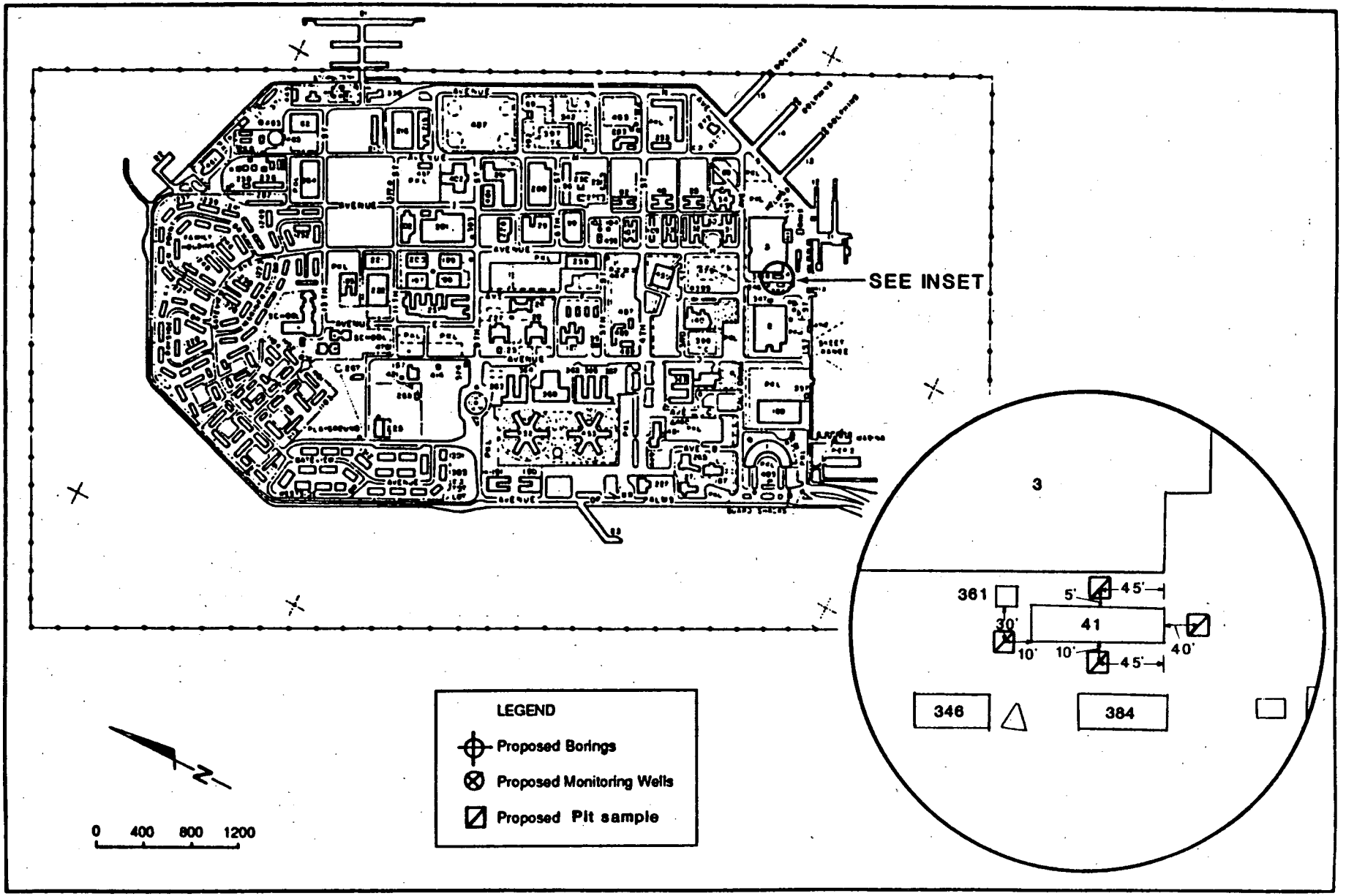
Type of Sampling: Soil, water
Number of Soil Borings: 4
Number of Ground Water Monitoring Wells: 1
Soil Sampling: 3 at each boring
Number of Samples: 12 soil, 1 water
Test Parameters: Volatile organics (EPA Methods 8240 for soil and 624 for water), semi-volatile organics (EPA Methods 8270 for soil and 625 for water), Priority Pollutant metals, organochlorine and organophosphorous pesticides (EPA Methods 8080 for soil, 608 for water, 8140 for soil, 614 for water), total hydrocarbons (EPA Method 418.1).
Remarks: Sample near the ground surface (or below paving) at about 2.5 feet depth, and the ground water table (about 5 feet depth). Analyze



PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

SITE 7
PESTICIDE STORAGE
REMEDIAL INVESTIGATION

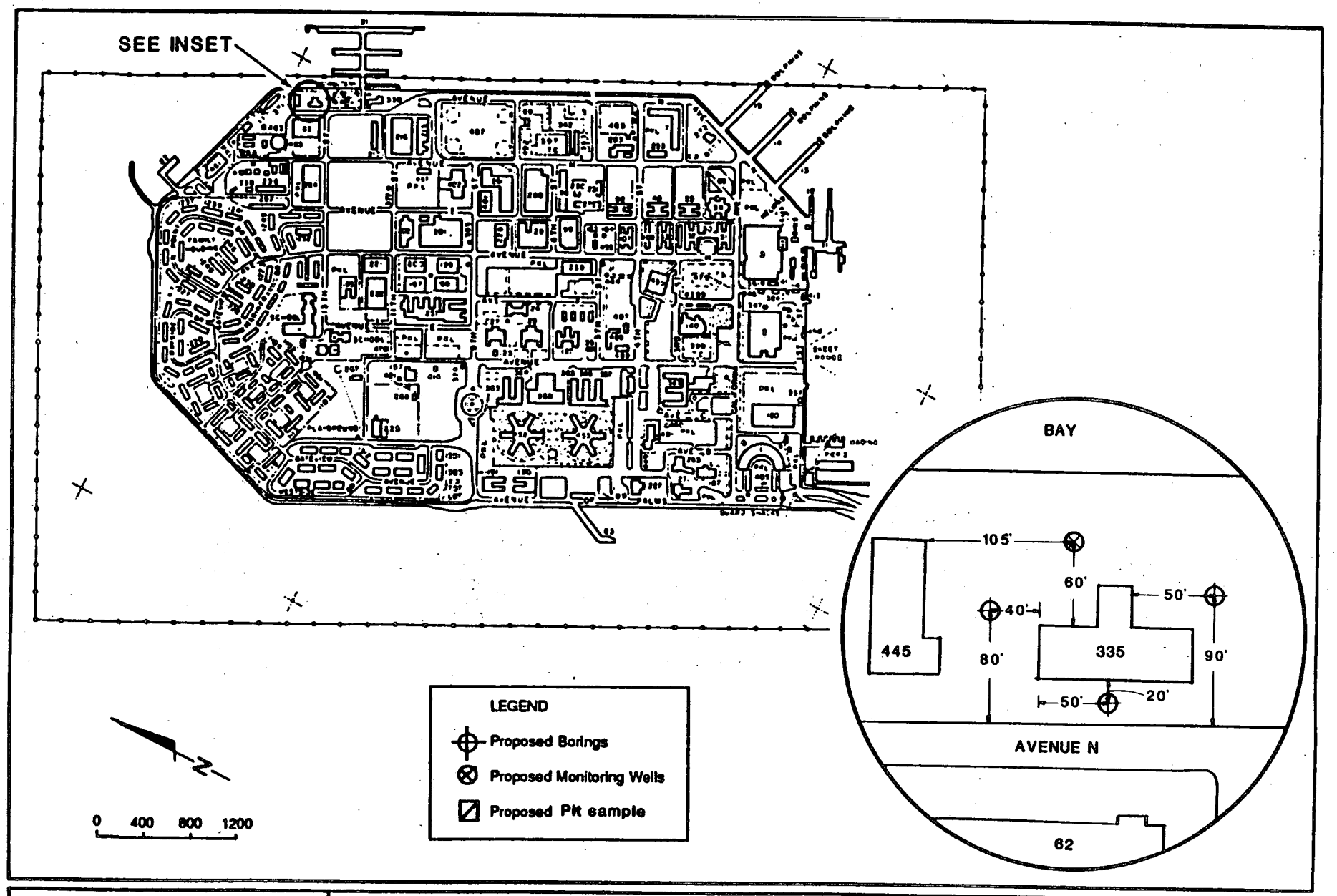
FIGURE
3-7



PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

SITE 9
FOUNDRY
REMEDIAL INVESTIGATION

FIGURE
3-8



PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

SITE 10
BUS PAINTING SHOP
REMEDIAL INVESTIGATION

FIGURE
3-9

upper two samples at each location for priority pollutant metals. Analyze uppermost sample at each location and water sample for pesticides. Analyze mid-level samples and water for hydrocarbons and volatile and semi-volatile organics. Analyze lower level samples for hydrocarbons if staining or odors are evident.

3.2.8 Site 11: YBI Landfill (Figure 3-10)

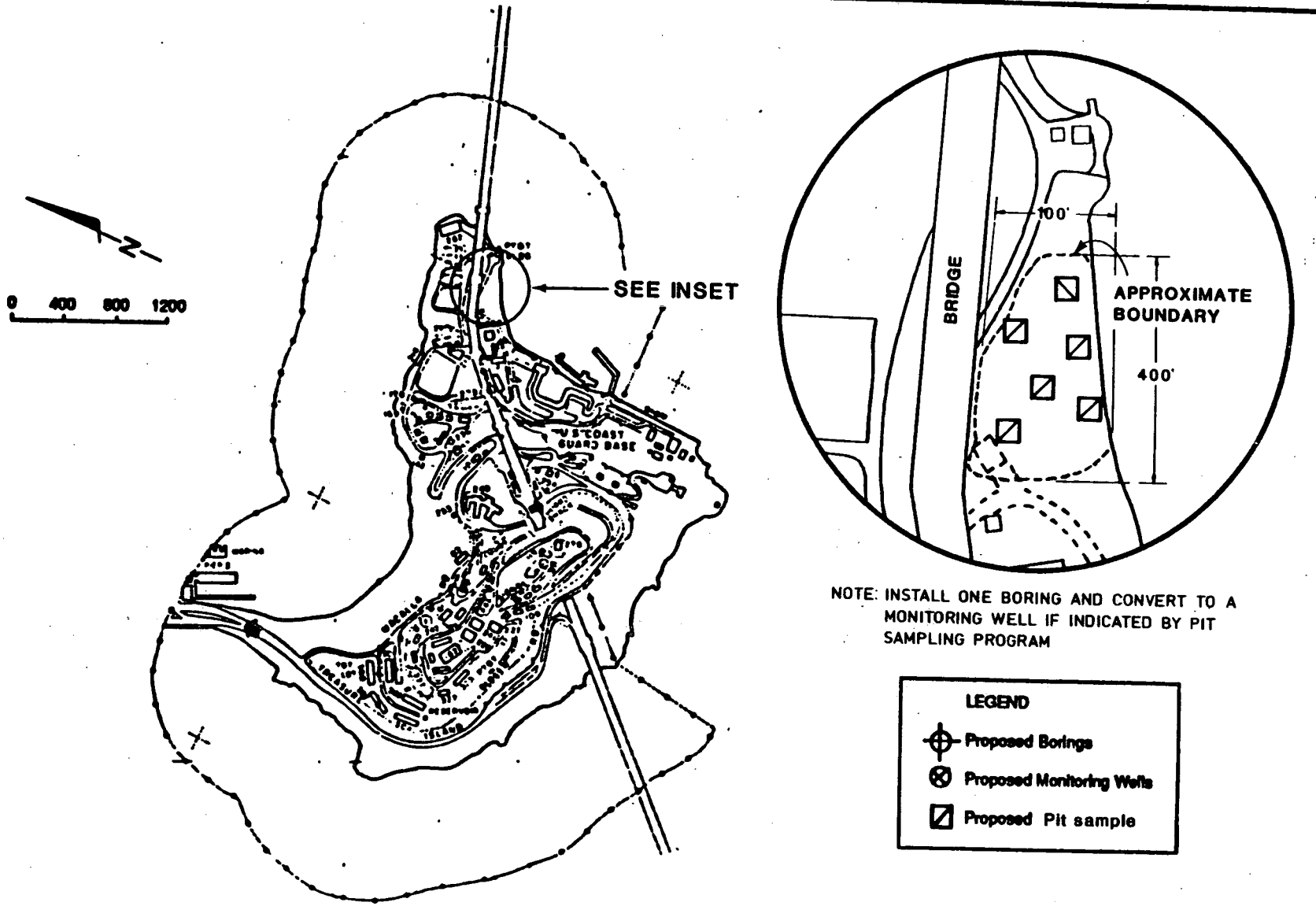
Type of Sampling: Soil, water
Number of Soil Borings: 1, to native soils underlying debris
Number of Ground Water Monitoring Wells: 1
Number of Sampling Pits: 6
Soil Sampling: 1 sample maximum at each pit; 3 samples at each boring
Number of Samples: 9 soil, 1 water
Test Parameters: Volatile and semi-volatile organics (EPA Methods 624 and 625 for water), Priority Pollutant metals, organochlorine pesticides (EPA Method 8080 for soil), total hydrocarbons (EPA Method 418.1).
Remarks: Perform pit sampling and sample organic debris encountered in each pit, if any, i.e., do not sample inert material such as concrete rubble. If rubbish is located, install boring and convert to monitoring well. Sample at about 1 foot depth, at ground water table and at native soil horizon. (If debris inhibits ability to advance boring, relocate boring in line towards shore.) Analyze all soil debris samples and water sample for priority pollutants. In addition, analyze water sample for volatile and semi-volatile organics, pesticides, and hydrocarbons.

3.2.9 Site 12: Old Bunker Area (Figure 3-11)

Type of Sampling: Soil, water
Number of Soil Borings: 9
Number of Ground Water Monitoring Wells: 7
Number of Sampling Pits: None
Soil Sampling: 2 samples at each boring
Number of Samples: 18 soil, 7 water
Test Parameters: Volatile and semi-volatile organics (EPA Methods 8240 and 8270 for soil, 624 and 625 for water), Priority Pollutant metals, organochlorine and organophosphate pesticides (EPA Methods 8080 and 8140 for soil, 608 and 614 for water), total hydrocarbons (EPA Method 418.1).
Remarks: Sample at about 1-foot depth and at ground water table (about 5 foot depth). Sample in rubbish layers, if encountered. Advance borings to a total depth of about 15 feet and log for rubbish. Analyze all water samples for volatile and semi-volatile organics, Priority Pollutant metals, pesticides, and hydrocarbons. Analyze all soil samples for Priority Pollutant metals. Analyze lower level soil samples for Priority Pollutant metals, volatiles, semi-volatiles, and hydrocarbons if samples appear to be composed of rubbish fill.

3.2.10 Site 13: Offshore Sampling/Stormwater Outfalls (Figures 3-12 and 3-13)

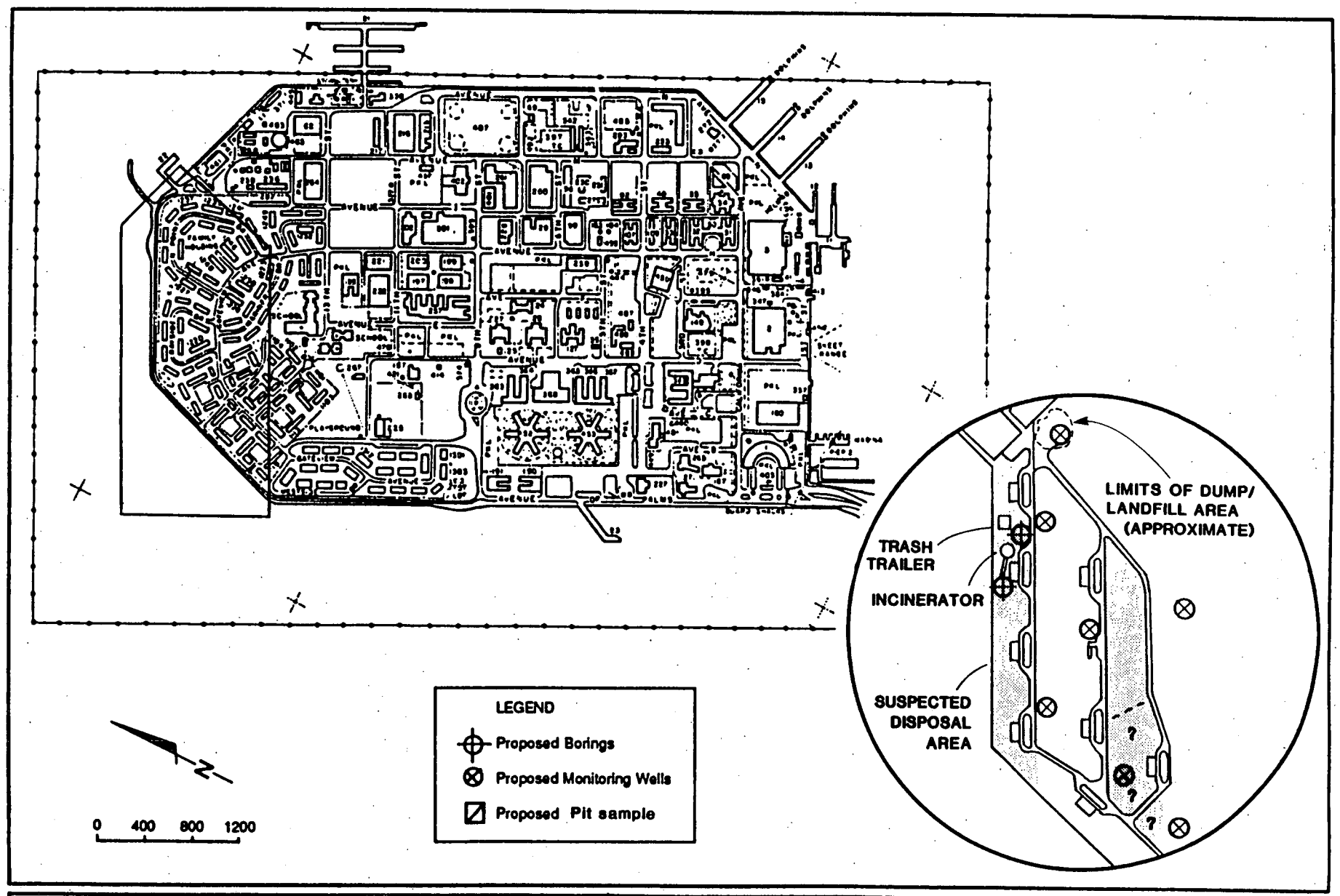
Type of Sampling: Soil
Number of Soil Borings: None
Number of Ground Water Monitoring Wells: None
Number of Sediment Sampling Locations: 21



PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

SITE 11
YBI LANDFILL
REMEDIAL INVESTIGATION

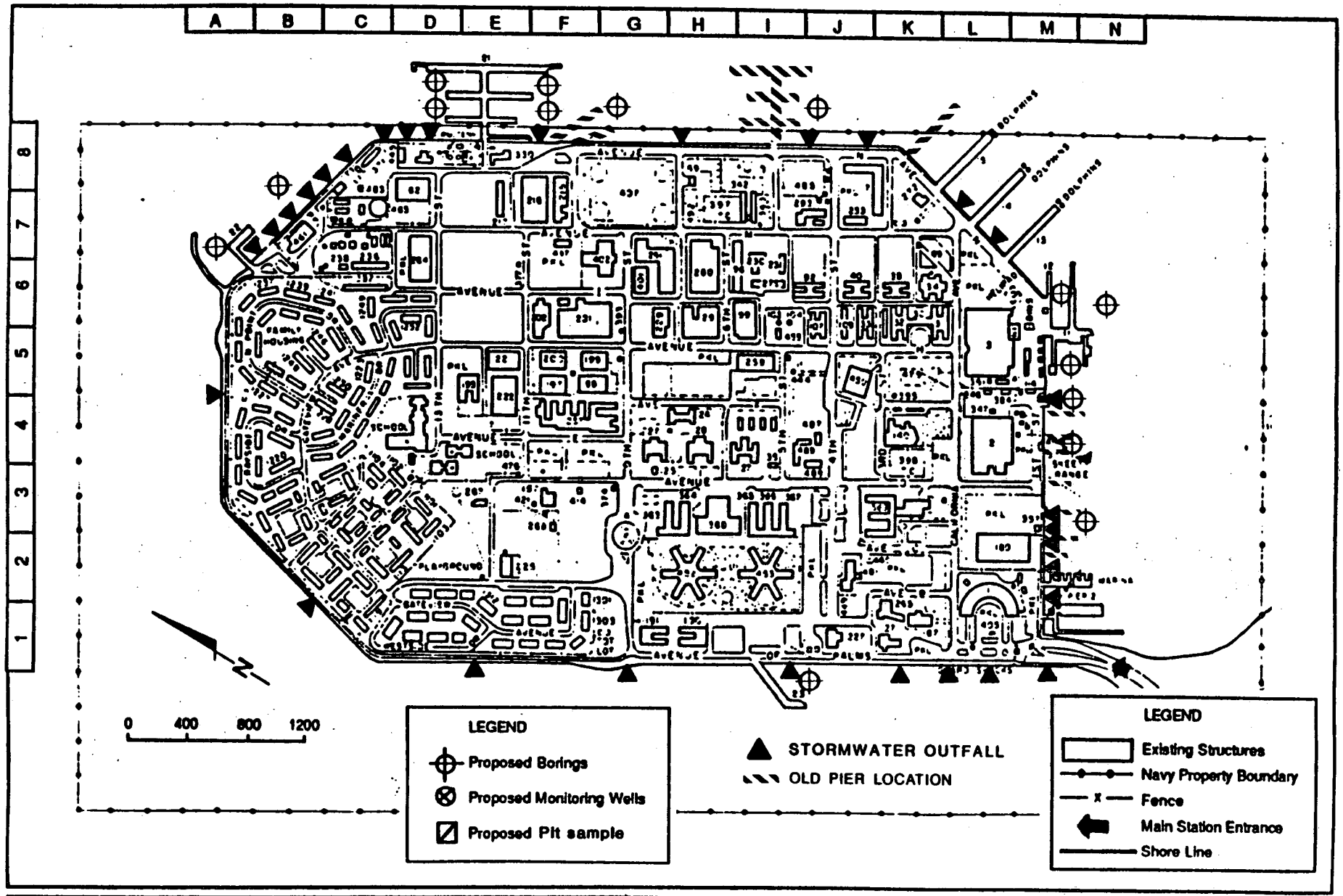
FIGURE
3-10



PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

SITE 12
OLD BUNKER AREA
REMEDIAL INVESTIGATION

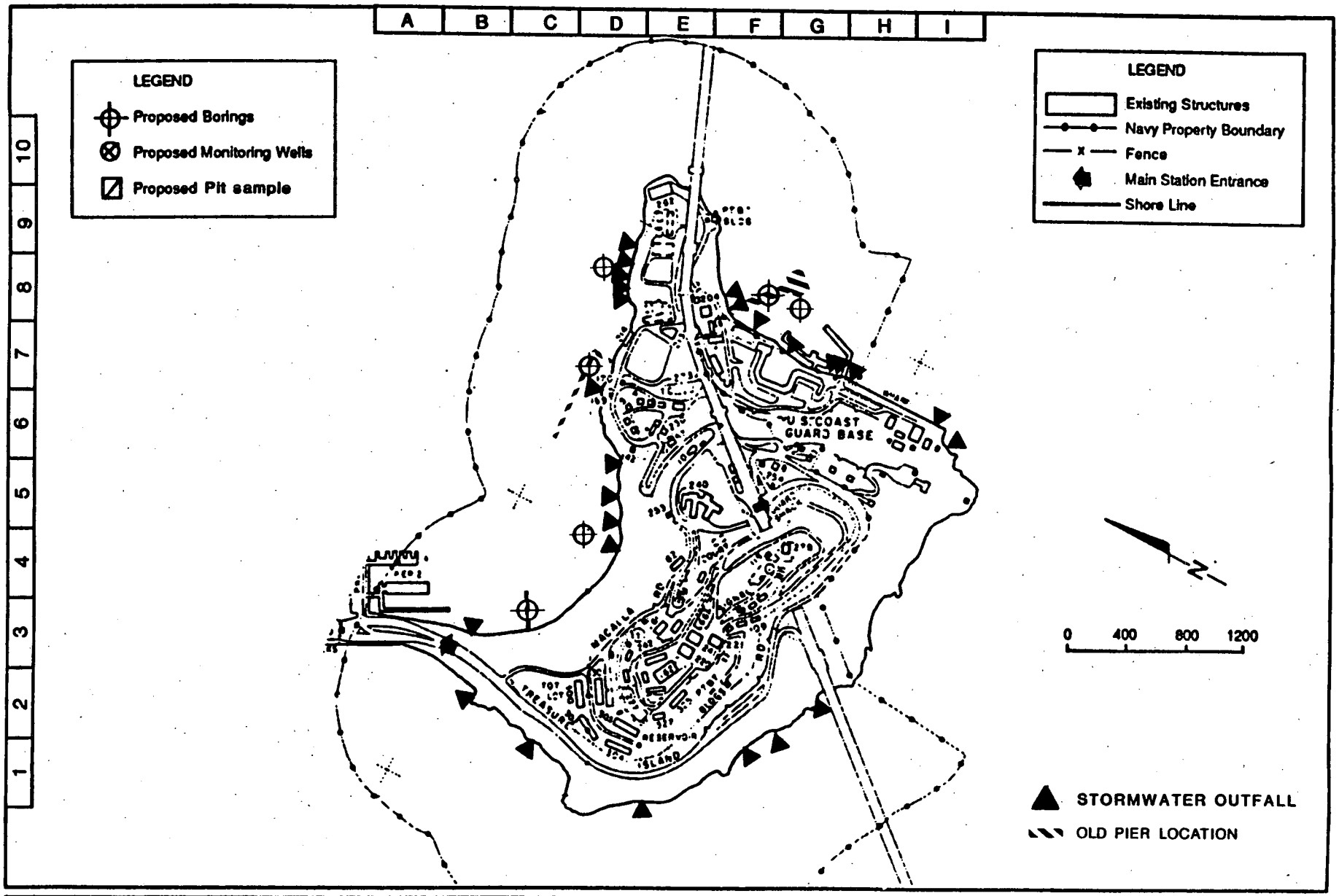
FIGURE
3-11



PRELIMINARY ASSESSMENT/
SITE INSPECTION-
NAVSTA Treasure Island, Ca.

SITE 13: OFFSHORE SAMPLING (TI)
REMEDIAL INVESTIGATION

FIGURE
3-12



PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

SITE 13: OFFSHORE SAMPLING (YBI)
REMEDIAL INVESTIGATION

FIGURE
3-13

Soil Sampling: Continuous for upper 3 feet
Number of Samples: 42
Test Parameters: Priority Pollutant metals, total hydrocarbons (EPA Method 418.1).
Remarks: Obtain sediment samples using two 1.5-foot piston tubes from barge-mounted rig. Tubes must be teflon coated or stainless steel. Analyze samples from each end of each tube for hydrocarbons. Composite sediment samples from tubes at each location in the laboratory and analyze for metals.

3.2.11 Site 15: Old Fuel Farm (Figure 3-14)

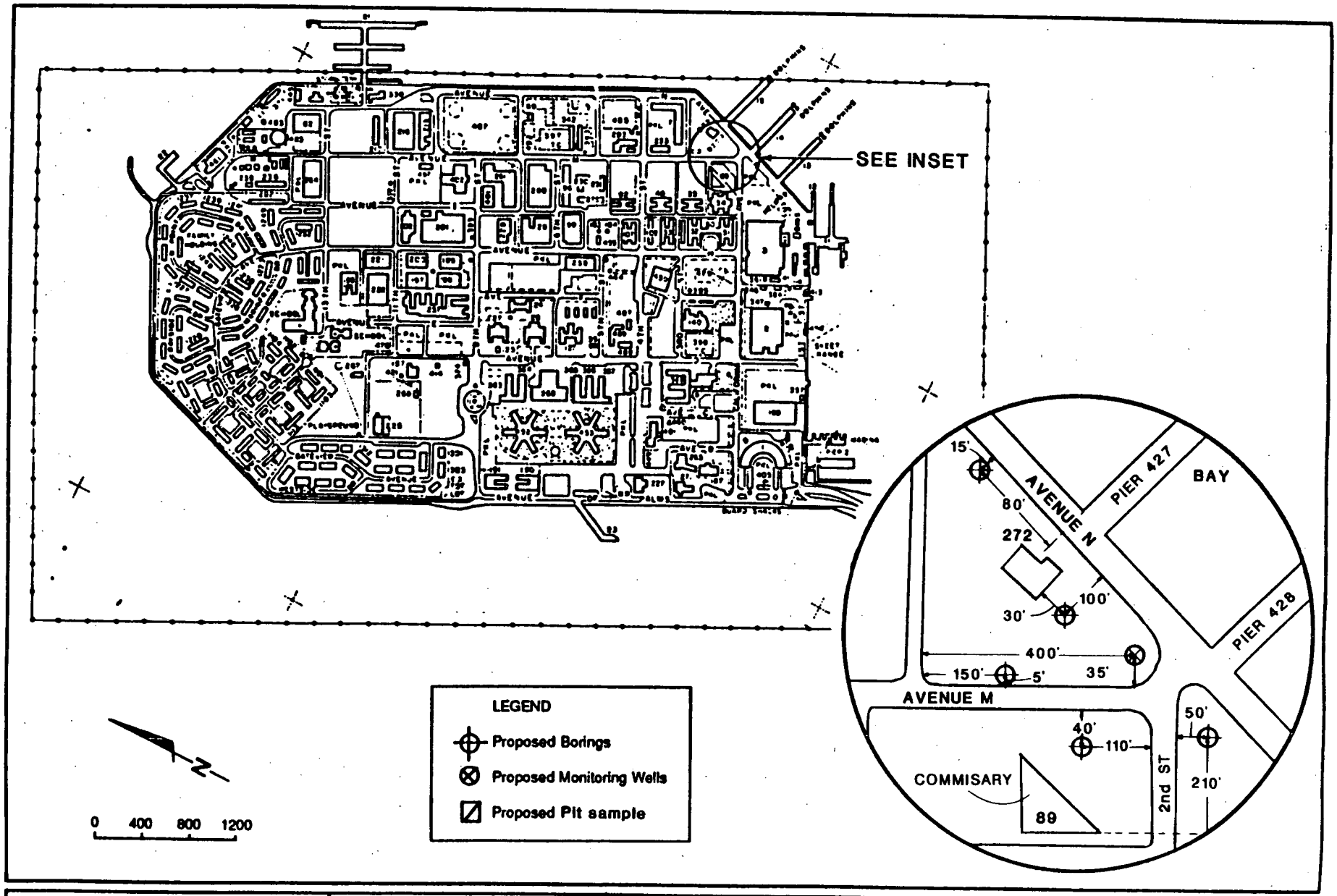
Type of Sampling: Soil, water
Number of Soil Borings: 6
Number of Ground Water Monitoring Wells: 1
Soil Sampling: 2 samples at each boring
Number of Samples: 12 soil, 1 water
Test Parameters: Volatile and semi-volatile organics (EPA Methods 8240 for soil, 624 for water, 8270 for soil, and 625 for water), lead, total hydrocarbons (EPA Method 418.1).
Remarks: Sample immediately below pavement and above the ground water table (about 5 feet depth). Analyze all soil and water samples for hydrocarbons and lead. Analyze the lower soil samples and water sample for volatiles and semi-volatiles.

3.2.12 Site 16: Clipper Cove Tank Farm (Figure 3-15)

Type of Sampling: Soil
Number of Soil Borings: 3
Number of Ground Water Monitoring Wells: None
Soil Sampling: 2 samples at each boring
Number of Samples: 6
Test Parameters: Volatile and semi-volatile organics (EPA Methods 8240 and 8270 for soil), lead, total hydrocarbons (EPA Method 418.1).
Remarks: Sample about 6 inches below ground surface and near the ground water table (about 5 feet depth). Analyze all soil samples for volatiles, semi-volatiles, lead, and total hydrocarbons. Extend the two borings nearest the cove to elevation -5 feet. If tarry materials are present, sample and analyze using the same suite of tests.

3.2.13 Site 17: Tanks 103/104 (Figure 3-16)

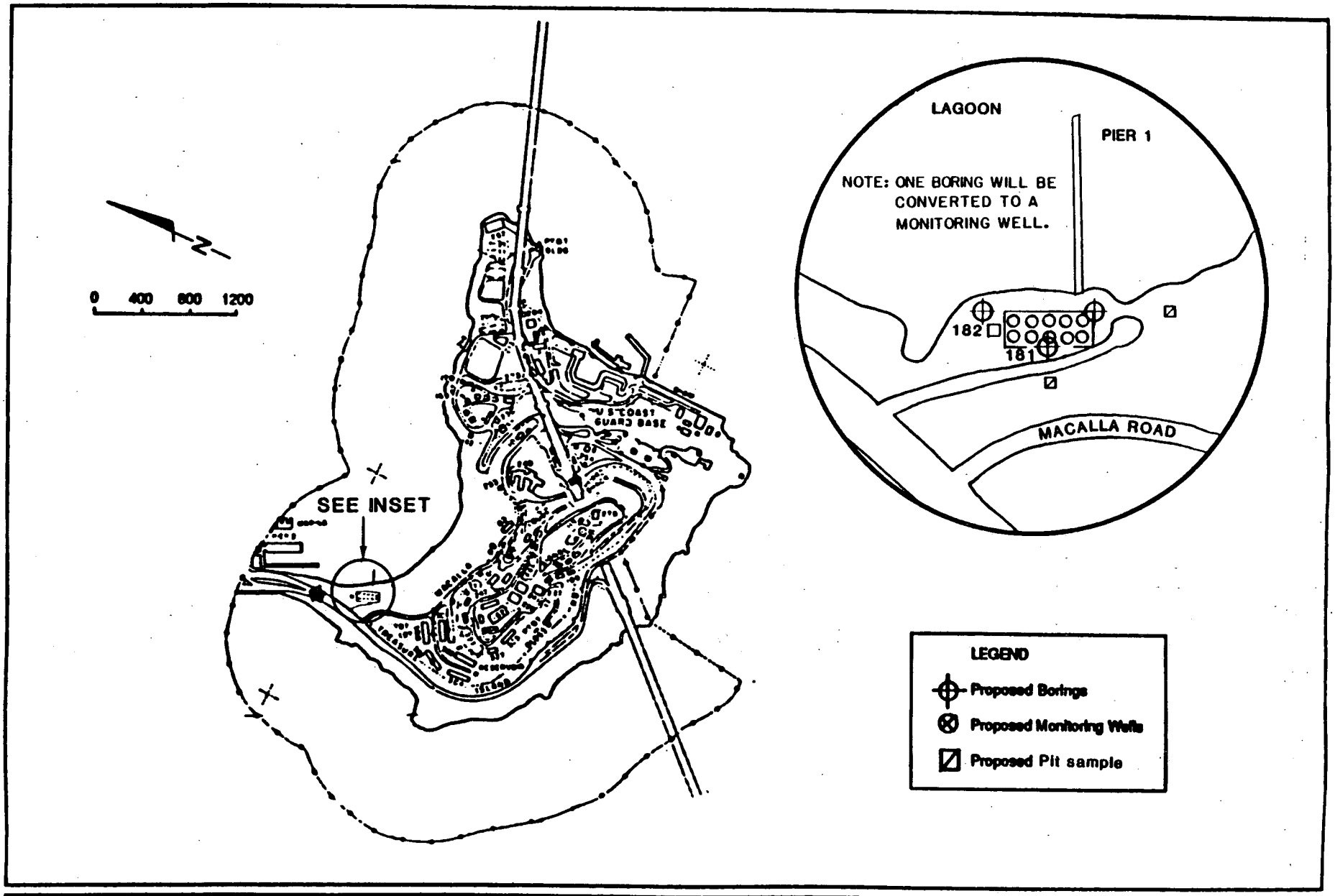
Type of Sampling: Soil, water
Number of Soil Borings: 2
Number of Ground Water Monitoring Wells: 1
Soil Sampling: 2 samples at each boring
Number of Samples: 4 soil, 1 water
Test Parameters: Volatile and semi-volatile organics (EPA Methods 8240 for soil, 624 for water, 8270 for soil and 625 for water), lead, total hydrocarbons (EPA Method 418.1), PCBs.
Remarks: Core through concrete slab. Sample immediately below slab and also near the ground water table (about 5 feet depth). If samples from one boring appear visually more contaminated than from the other, convert the first to a sampling well. Otherwise, convert the boring nearer Tank



PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

SITE 15
OLD FUEL FARM
REMEDIAL INVESTIGATION

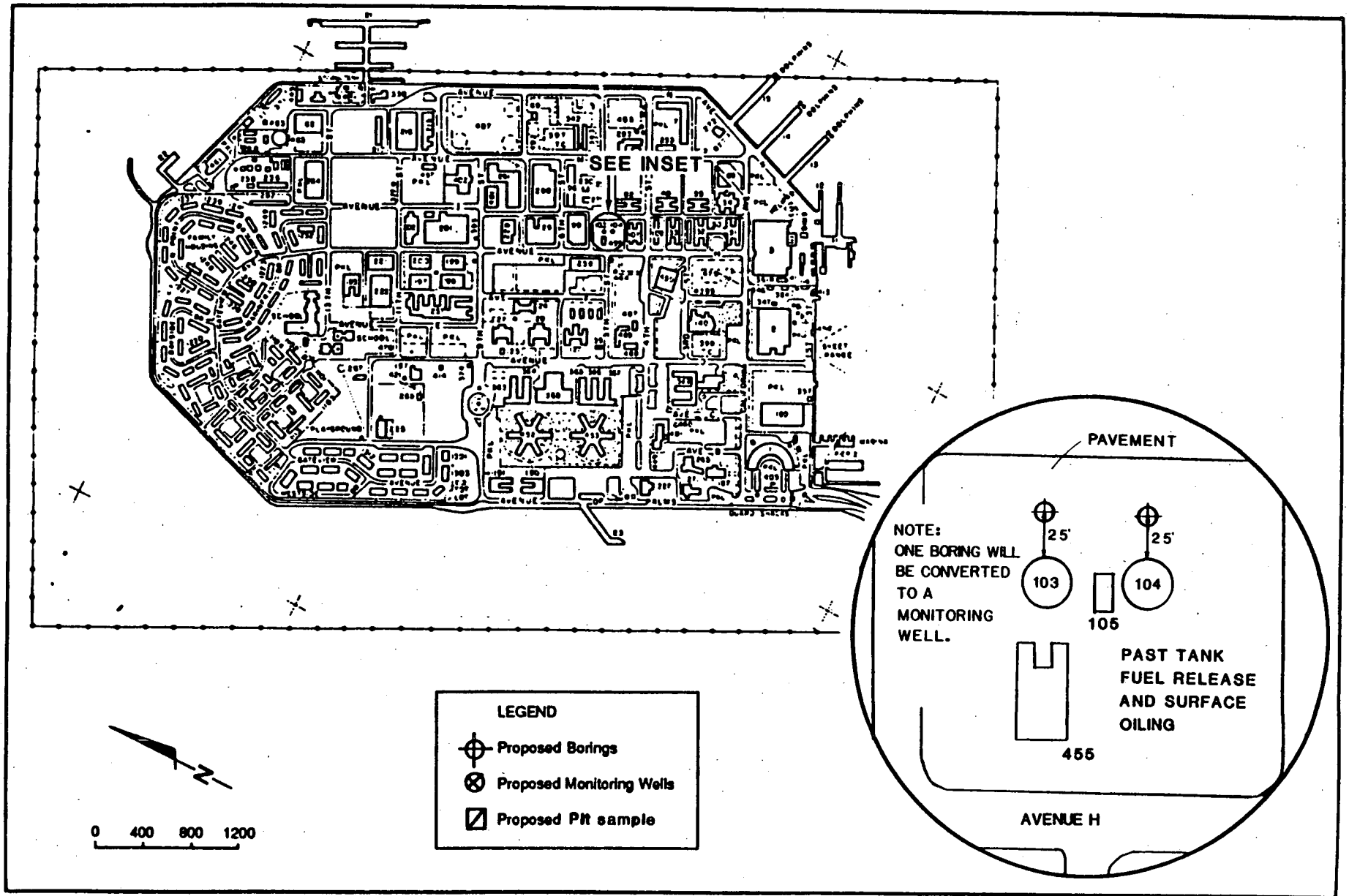
FIGURE
3-14



PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

SITE 16
CLIPPER COVE TANK FARM
REMEDIAL INVESTIGATION

FIGURE
3-15



PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

SITE 17
TANKS 103/104
REMEDIAL INVESTIGATION

FIGURE
3-16

104. Analyze all samples for volatile and semi-volatile organics. Analyze all soil samples for lead, PCBs, and total hydrocarbon content as well. Patch concrete.

3.2.14 Site 20: Auto Hobby Shop/Transportation Center (Figure 3-17)

Type of Sampling: Soil, water
Number of Soil Borings: 5
Number of Ground Water Monitoring Wells: 1
Soil Sampling: 2 samples at each boring
Number of Samples: 10 soil, 1 water
Test Parameters: Volatile and semi-volatile organics (EPA Methods 8240 for soil, 624 for water, 8270 for soil and 625 for water) PCBs, lead, total hydrocarbons (EPA Method 418.1).
Remarks: Sample approximately 6 inches below ground surface, and near the ground water table (about 5 feet depth). Analyze all soil and water samples for lead and total hydrocarbon content. Analyze the lower soil samples and water sample for volatile and semi-volatile organics.

3.2.15 Site 21: Vessel Waste Oil Recovery/Site 25: Seaplane Maintenance (Figure 3-18)

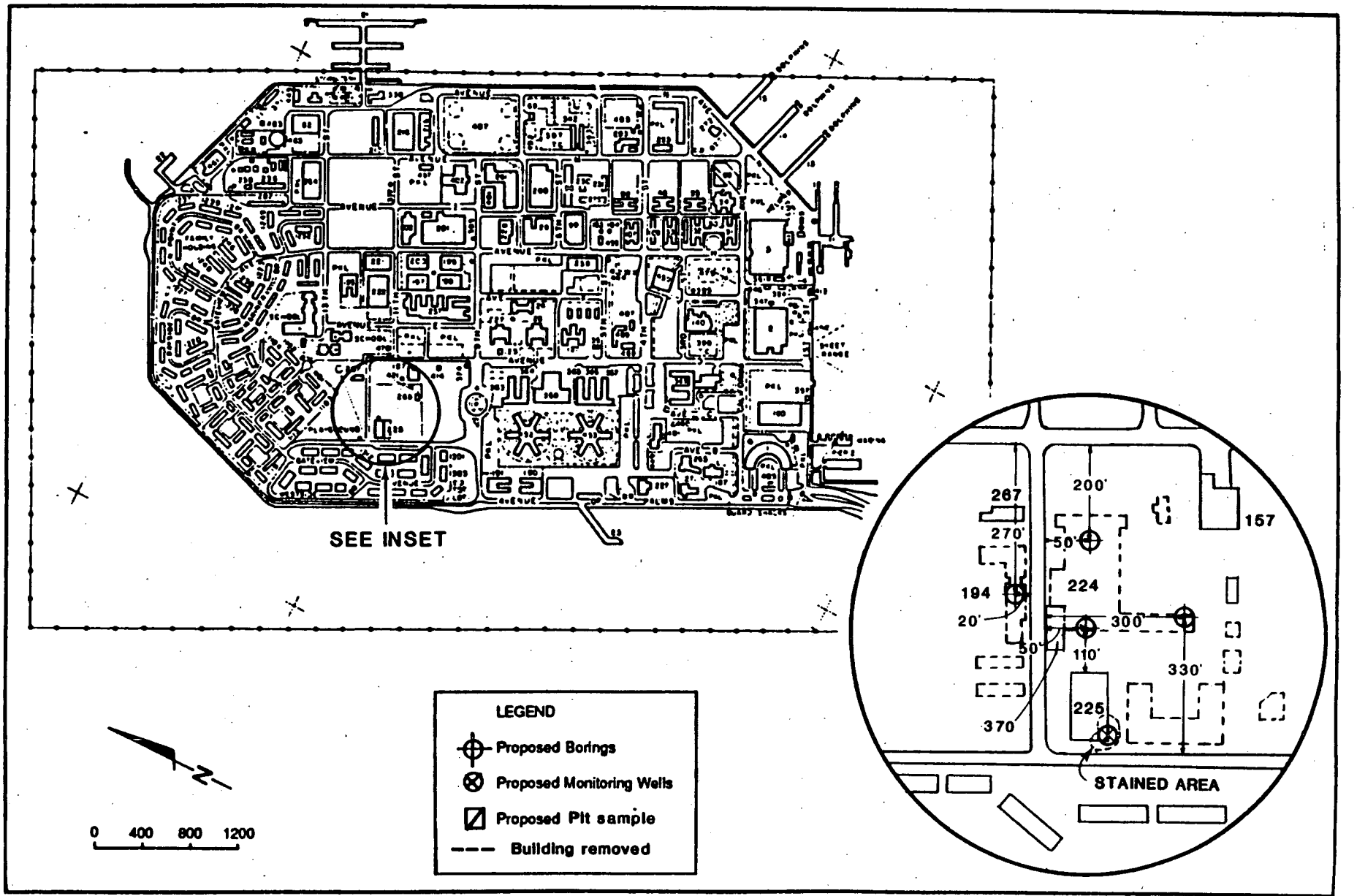
Type of Sampling: Soil
Number of Soil Borings: 10, each approximately 5 to 10 feet deep
Number of Ground Water Monitoring Wells: None
Soil Sampling: 2 samples at each boring
Number of Samples: 20
Test Parameters: Priority Pollutant metals, volatile organic analysis (EPA Method 8240 for soil), and semi-volatile analysis (EPA Method 8270 for soil)
Remarks: The borings will be advanced with an auger rig and samples will be obtained near ground surface in fill soils and at the water table (about 5 feet). The boring locations will need to be backgrouted and patched with asphalt or concrete.

3.2.16 Site 22: Navy Exchange Service Station (Figure 3-19)

Type of Sampling: Soil, water
Number of Soil Borings: 2
Number of Ground Water Monitoring Wells: 2
Soil Sampling: 2 samples at each location
Number of Samples: 4 soil, 2 water
Test Parameters: Volatile and semi-volatile organics (EPA Methods 8240 for soil, 624 for water, 8270 for soil, 625 for water), lead, total hydrocarbons (EPA Method 418.1).
Remarks: The well borings will be advanced with an auger rig. Soil samples will be taken near the ground surface and at the water table.

3.2.17 Site 24: Fifth Street Fuel Releases (Figure 3-20)

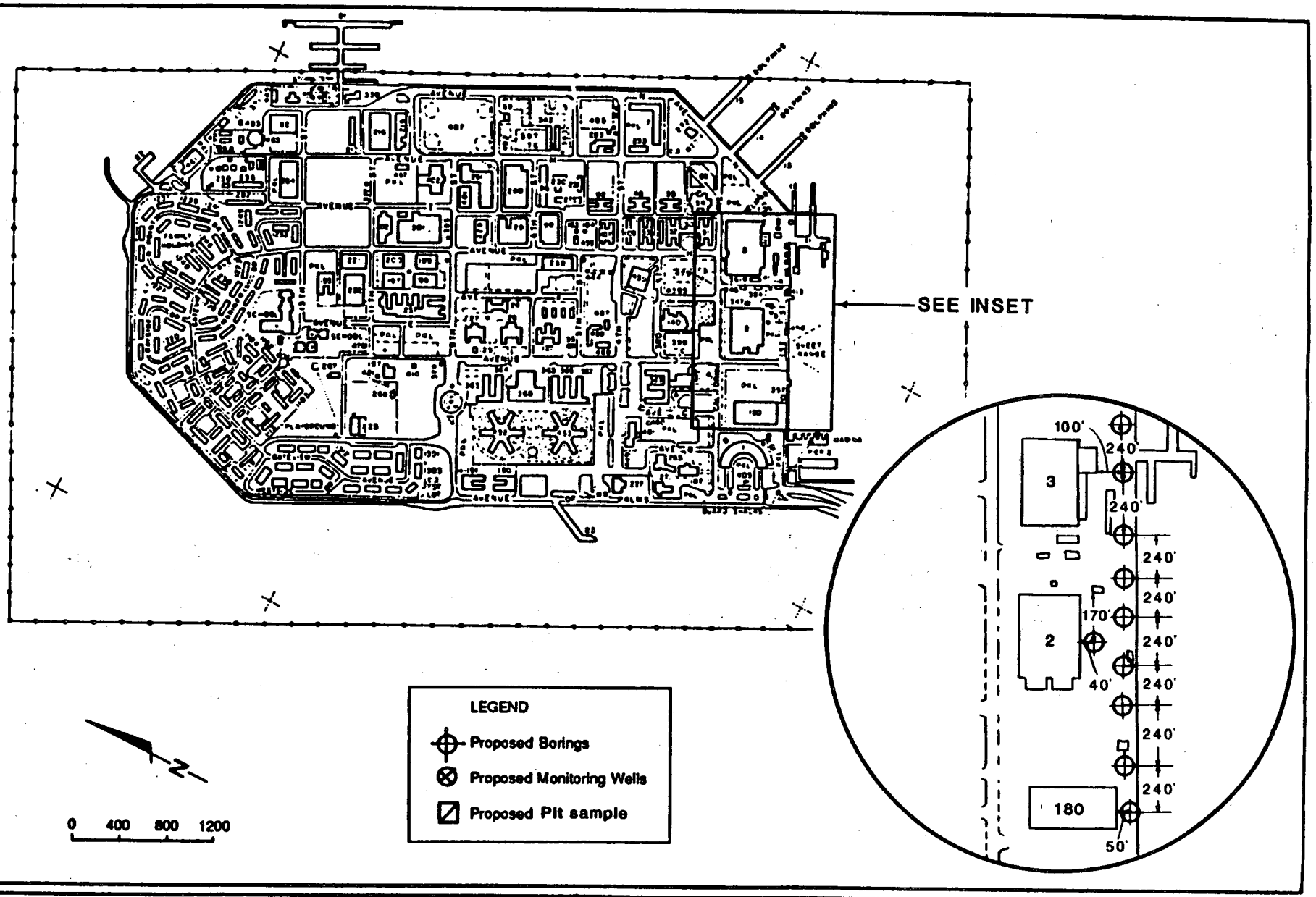
Type of Sampling: Soil
Number of Soil Borings: 7
Number of Ground Water Monitoring Wells: None
Soil Sampling: 4 samples at each location



PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

SITE 20
AUTO HOBBY SHOP/TRANSPORTATION CENTER
REMEDIAL INVESTIGATION

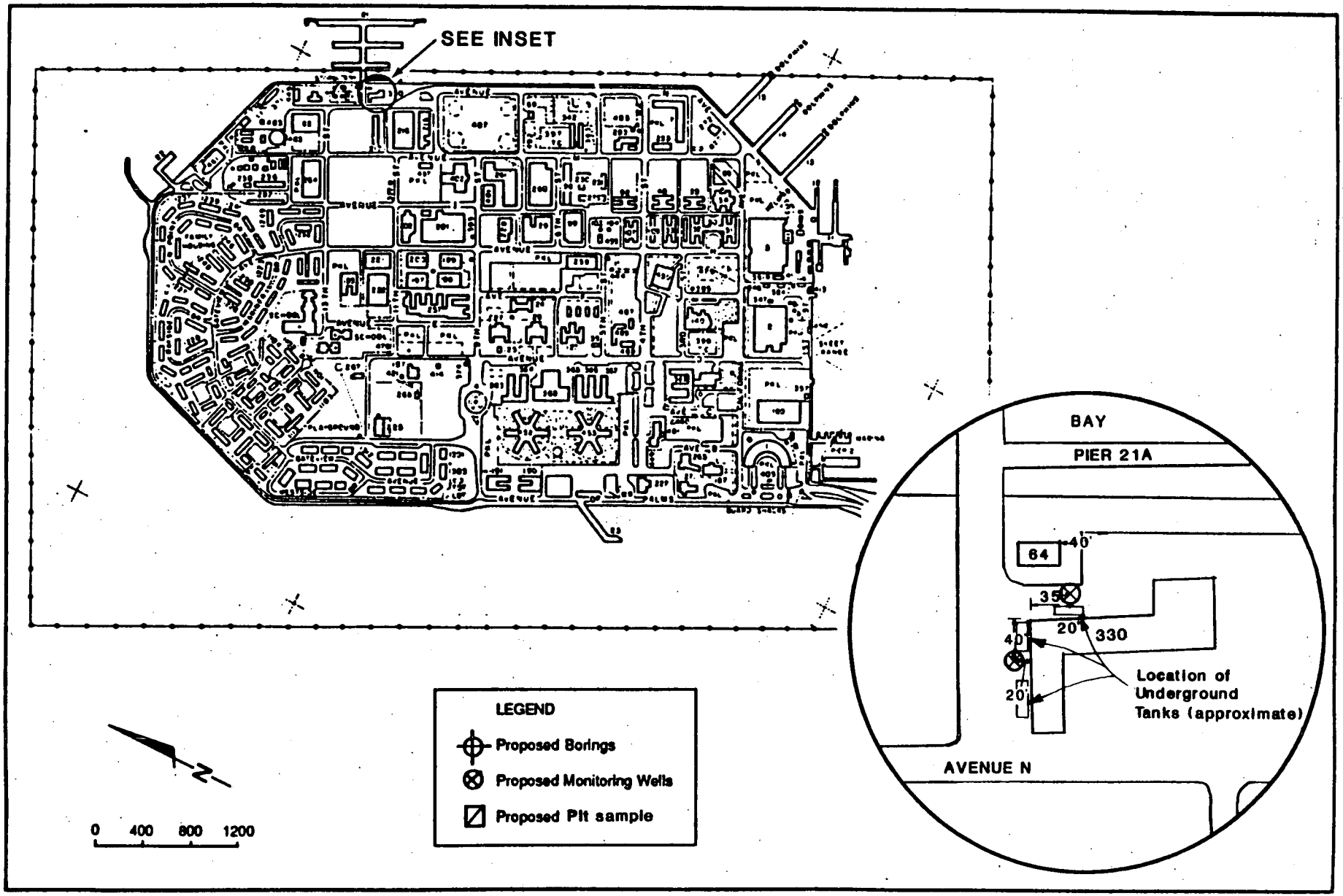
FIGURE
3-17



PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

SITE 21: VESSEL WASTE OIL RECOVERY
SITE 25: SEAPLANE MAINTENANCE
REMEDIAL INVESTIGATION

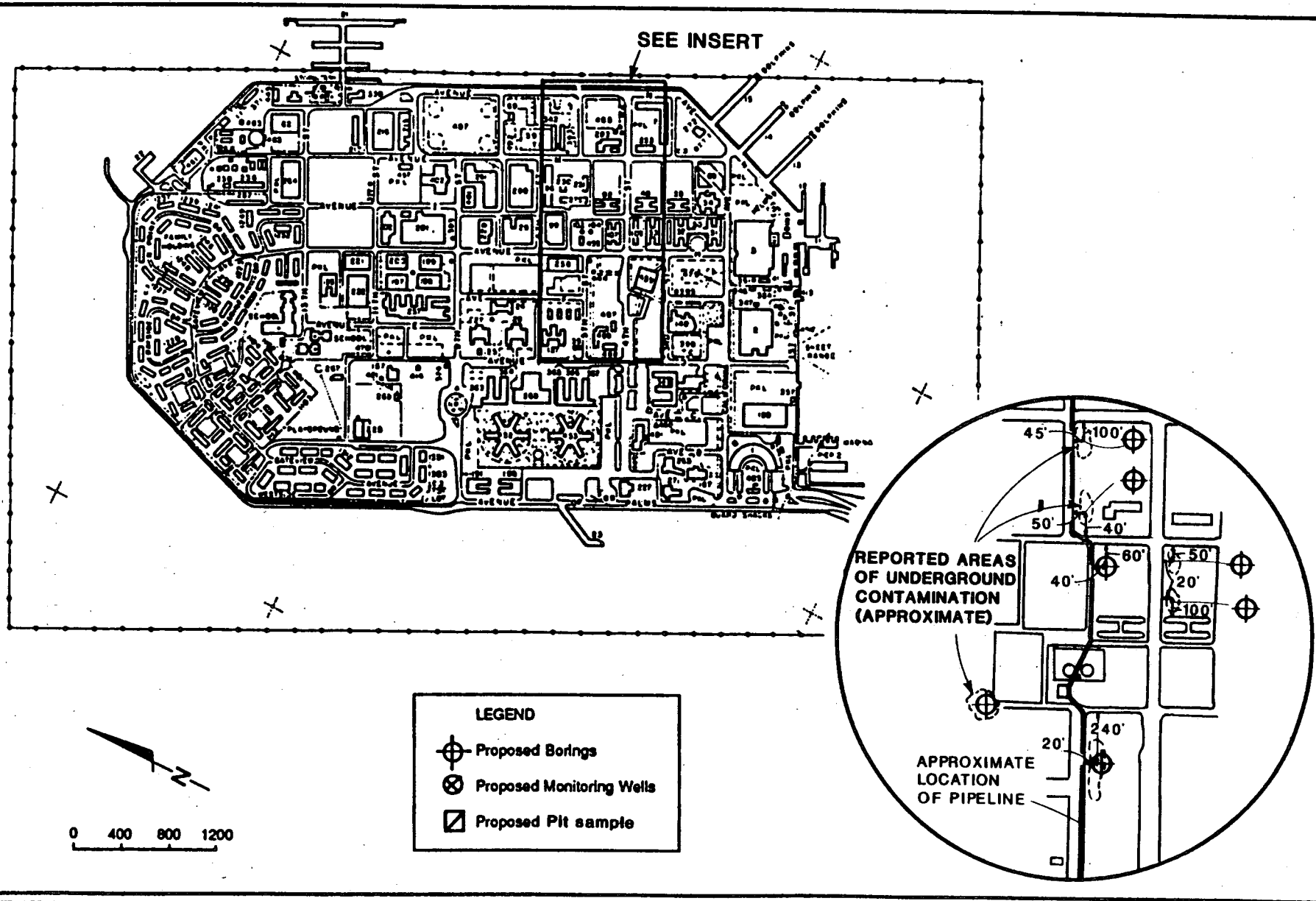
FIGURE
3-18



PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

SITE 22
NAVY EXCHANGE SERVICE STATION
REMEDIAL INVESTIGATION

FIGURE
3-19



PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

SITE 24
5TH STREET FUEL RELEASES
REMEDIAL INVESTIGATION

FIGURE
3-20

Number of Samples: 28 soil
Test Parameters: Lead, total hydrocarbons (EPA Method 418.1), and BTX
Remarks: Borings should be advanced with an auger rig and samples will be obtained near ground surface and at the water table. Where borings are advanced through asphalt or concrete, the asphalt and concrete will be patched after the borings are backgrouted.

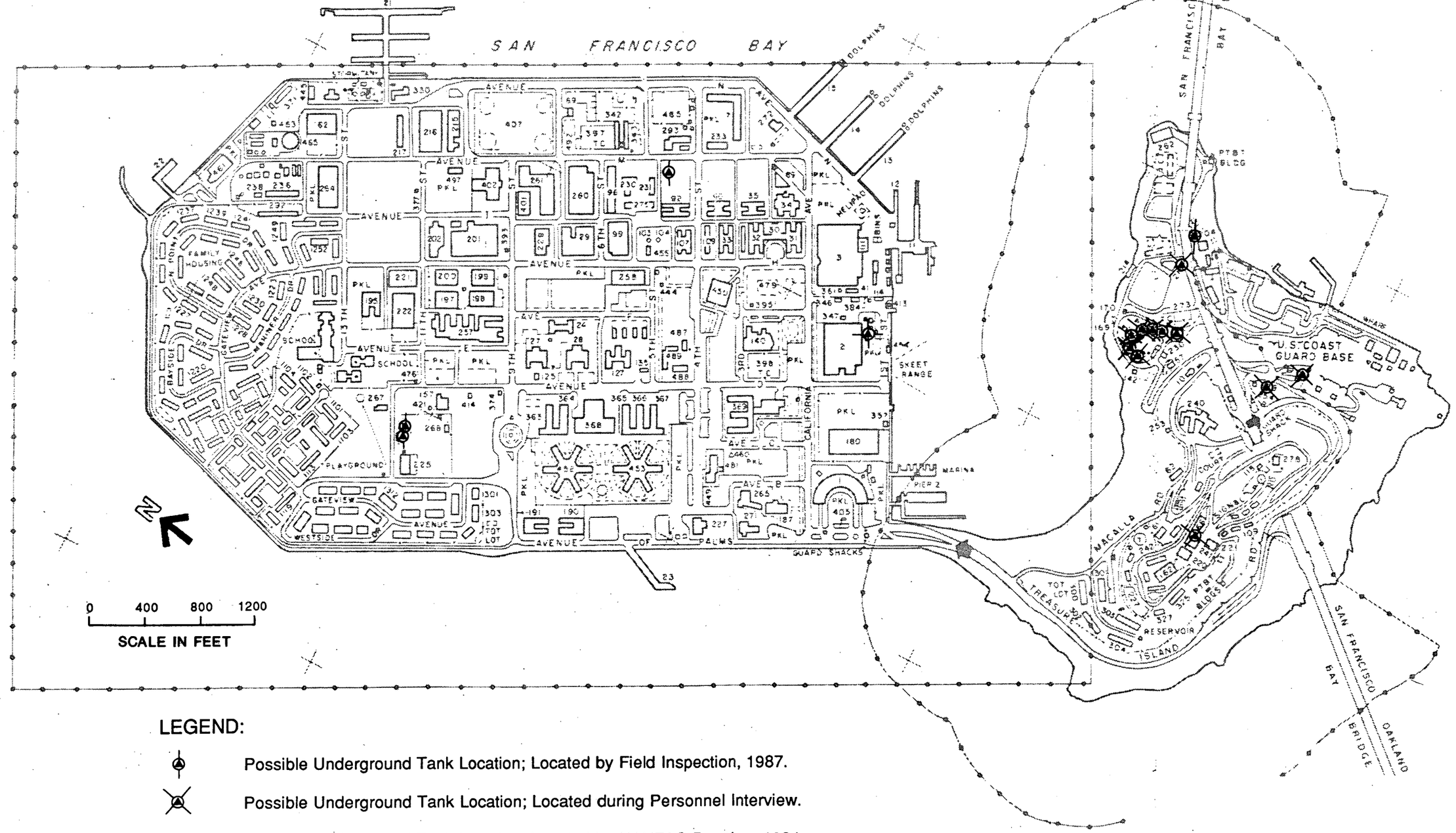
3.2.18 Site 26: Underground Tanks (Figure 3-21)

Type of Sampling: None
Number of Soil Borings: None
Number of Ground Water Monitoring Wells: None
Number of Sampling Pits: None
Soil Sampling: None
Test Parameters: Not applicable
Remarks: The RI at this site involves surface geophysical surveys to determine the presence of underground tanks at 16 locations.

3.3 REMEDIAL MEASURE RECOMMENDATIONS. The following sites warrant Remedial Measures due to the known levels of contamination.

3.3.1 Site 6: Fire Training Area (Figure 3-22). The Fire Training School is scheduled to relocate to a new center on TI by about 1989. Ongoing studies by NAVFAC WESTDIV will be completed to characterize the extent and degree of contamination at the School.

3.3.2 Site 14: New Fuel Farm (Figure 3-23). Contamination at this site has been investigated by NAVFAC WESTDIV (1986). The WESTDIV study effectively formed the basis for and presented remedial action alternatives.



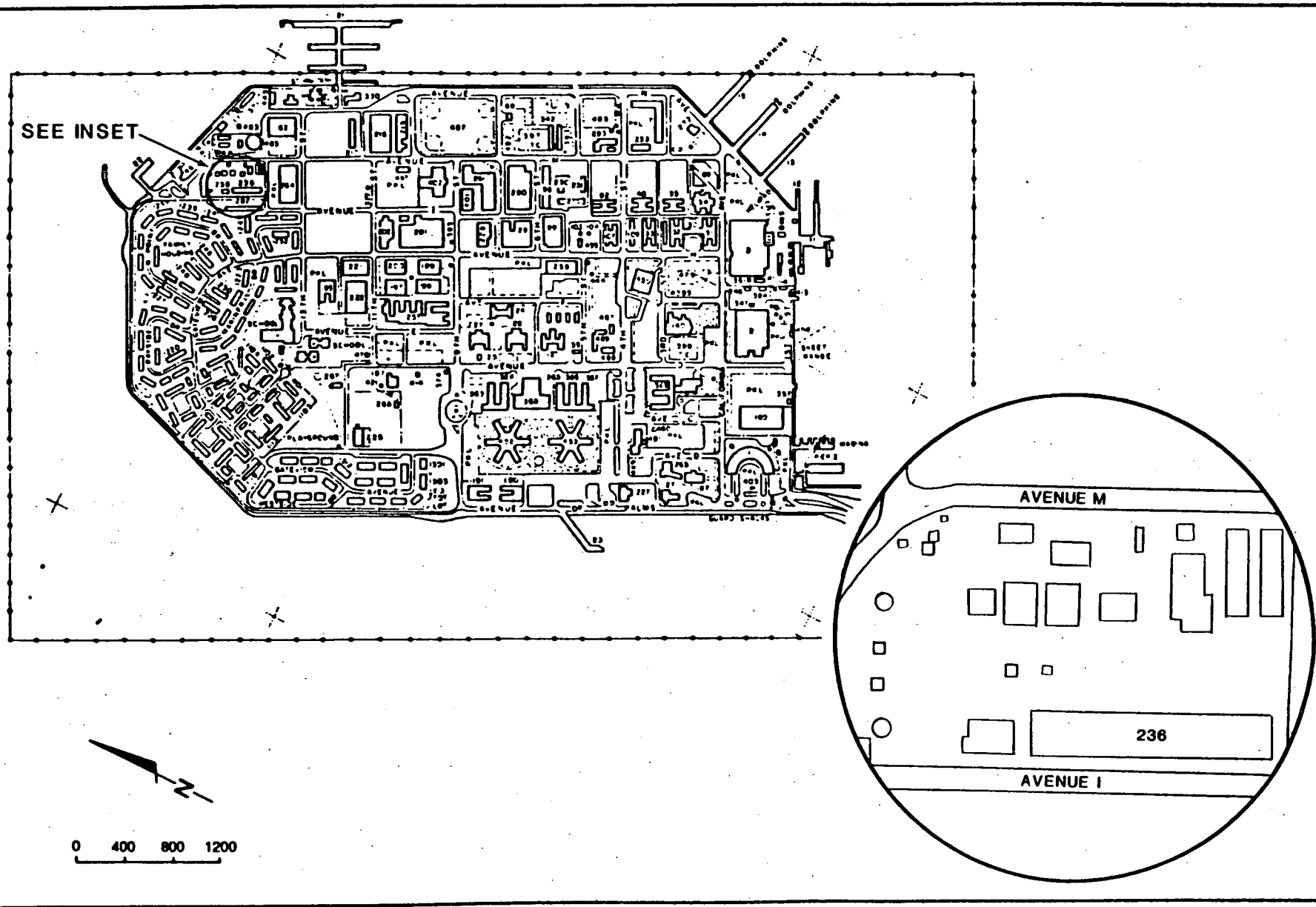
LEGEND:

- Possible Underground Tank Location; Located by Field Inspection, 1987.
- Possible Underground Tank Location; Located during Personnel Interview.
- Possible Underground Tank Location; Located by NAVFAC Drawing, 1984.

PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

SITE 26: UNDERGROUND TANKS

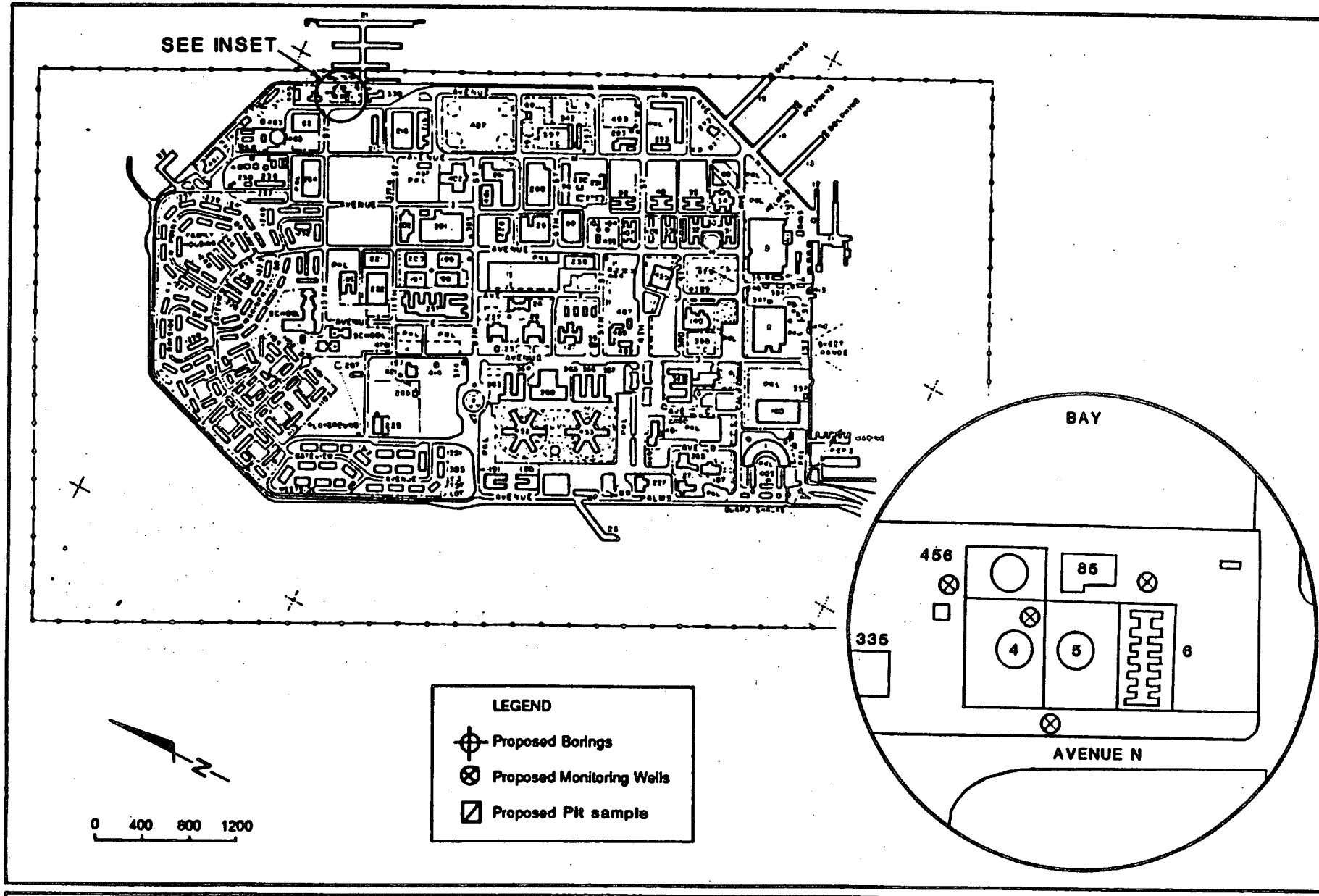
FIGURE
3-21



PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

SITE 6
FIRE TRAINING AREA

FIGURE
3-22



PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

SITE 14
NEW FUEL FARM

FIGURE
3-23

CHAPTER 4. BACKGROUND

4.1 INTRODUCTION

4.1.1 Location and Mission. Naval Station Treasure Island is located in San Francisco Bay, midway between San Francisco and Oakland, California (Figure 4-1). The station consists of two islands: Treasure Island (TI) which is approximately 450 acres in size, and Yerba Buena Island (YBI) which is about 130 acres.

Major functions on the station are the Naval Technical Training Center; waterfront facilities; troop and family housing; personnel support, Naval Readiness Command Region Twenty; a Navy brig; and Navy and Marine Corps Museum. YBI serves as a residential suburb, with 107 units of officer family housing and a major Coast Guard Station.

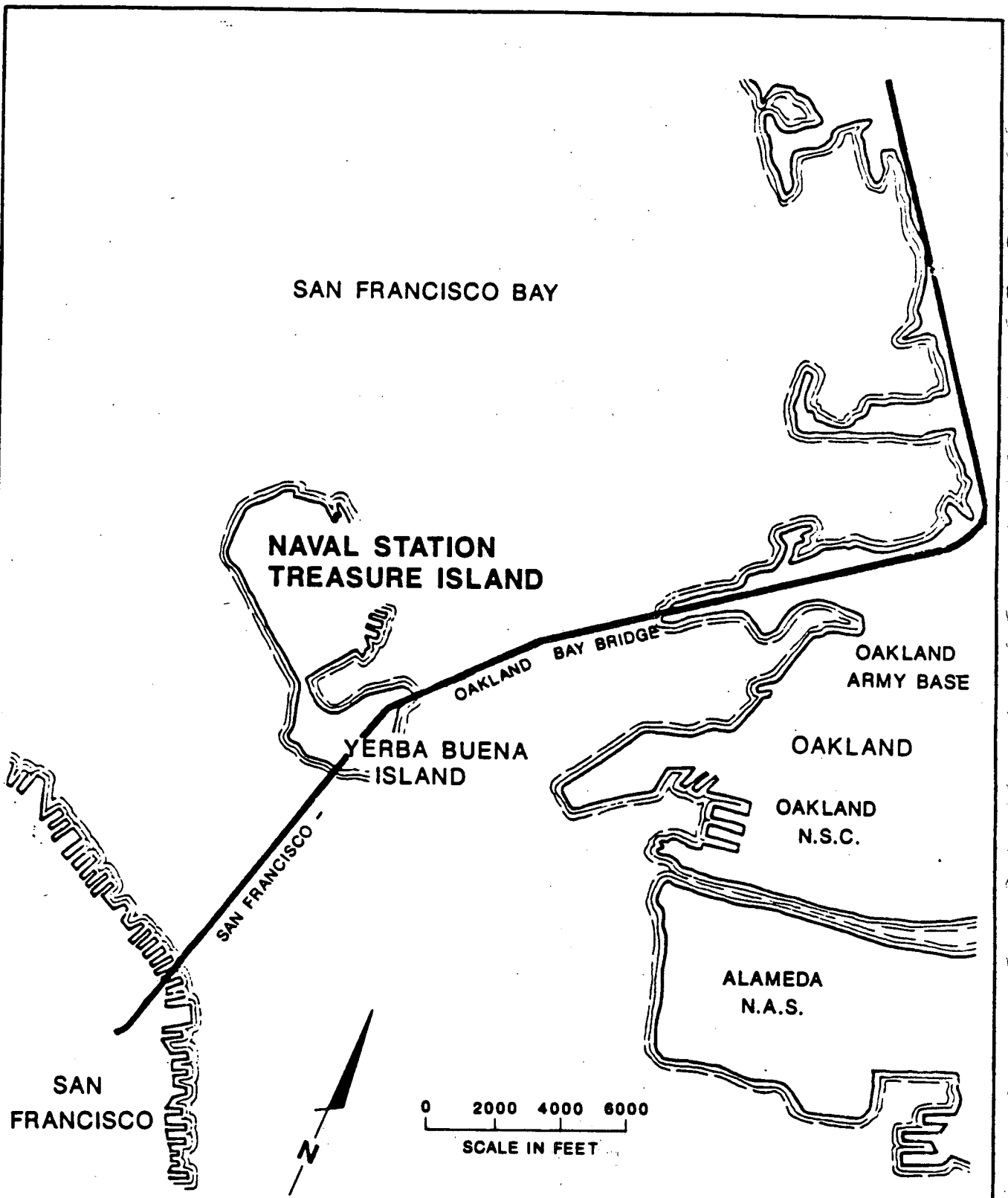
The major claimant of Naval Station TI is the Commander Naval Surface Force of the U.S. Pacific Fleet (COMNAVSURFPAC). The mission of Naval Station TI is to maintain and operate facilities; to provide services and materials in support of units of the operating forces of the U.S. Navy and designated shore functions; and to perform other tasks and functions as may be directed by higher authority.

The following tasks and functions are performed in the accomplishment of the assigned mission:

- Operations and Training
- Administration
- General Engineering Support and Mission Operations
- Personnel Support
- Medical/Dental
- Maintenance of Material
- Maintenance of Real Property and Utility Operations
- Supply Operations

4.1.2 Tenant/Host Relationships. Naval Station TI is owned by the United States Navy. The Navy has been conducting operations on YBI since 1896. The Navy began leasing TI in 1941 and traded for the deed to the Island with the City of San Francisco after World War II. It has owned and operated both islands (TI and YBI) since then. Current tenant operations are listed below:

- Air Force Office of Special Investigations Detachment
- Air Force Reserve
- American Federation of Government Employees
- American Red Cross
- Army Corps of Engineers, San Francisco
- California Conservation Corps
- Circuit Military Judge Navy-Marine Corps Trial Judiciary Northwest Circuit
- Commissary Store
- COMNAVBASE San Francisco
- DOD Housing
- Environmental Protection Agency
- Fifth Reserve Naval Construction



Reference: Master Plan for the Naval Station Treasure Island, 1985

PRELIMINARY ASSESSMENT/ SITE INSPECTION NAVSTA Treasure Island, Ca.	VICINITY MAP	FIGURE 4-1

- Headquarters, 12th Marine Corps District
- Inspector-Instructor Staff, 5th Battalion, 14th Marines
- Joint Military Postal Activity - Pacific
- Marine Corps Absentee Collection
- Military Sealift Command Fire Fighting and Damage Control School
- Mobile Technical Unit Nine
- National Maritime Union Job Corps
- Naval and Marine Corps Reserve Center
- Naval Civilian Personnel Command - Western Field Division
- Naval Hospital Branch Clinic, T.I.
- Naval Investigative Service Regional Office San Francisco
- Naval Investigative Service Resident Agency San Francisco
- Naval Legal Service Office, San Francisco
- Naval Regional Dental Clinic, Treasure Island
- Naval Reserve Intelligence Program
- Naval Reserve Readiness Command Region Twenty
- Naval Reserve Security Group Training
- Naval Technical Training Center, Treasure Island
- Naval Telecommunications Center, Oakland
- Navy Absentee Collection Unit, San Francisco
- Navy Band, San Francisco
- Navy Campus
- Navy Passenger Transportation Office
- Navy Recruiting Area Eight
- Navy Relief Office
- Office of Naval Research Patent Council
- Personnel Support Activity San Francisco
- Personnel Support Activity Detachment Treasure Island
- Post Office/U.S. Postal Service
- Recreational Services Regional Office, Naval Military Personnel Command
- Reserve Naval Mobile Construction Battalion Two
- Resident Officer-in-Charge of Construction
- Scheduled Airline Ticket Office
- Selective Service
- Shore Intermediate Maintenance Activity
- Telephone Office
- Treasure Island School, San Francisco Unified School District
- Treasure Island Yacht Club
- USO

4.1.3 Leases and Agreements. Several buildings and parcels of land on TI and YBI are leased to other government agencies or organizations. The Bureau of Alcohol, Tobacco and Firearms has operated an investigative testing laboratory in Building 233 since about 1976. The United States Coast Guard owns approximately 30 acres on YBI for a Coast Guard base to support their operations in San Francisco Bay and coastal California. The California Conservation Corps leases Building 109 to support their operations on station and in the Bay Area.

4.1.4 Adjacent Land Use. Naval Station TI is located within San Francisco County, in the middle of San Francisco Bay about three miles east of the City of San Francisco. It is surrounded on all sides by the waters of San

Francisco Bay. The station is included in a proposal to homeport a battleship battlegroup, including the U.S.S. MISSOURI.

The station is surrounded by extensively developed mixed use lands of the San Francisco Bay Area including the cities of San Francisco and Oakland. The San Francisco Bay Area is a major metropolitan center of business, industry and government. The Bay Area encompasses over 6,000 square miles with about 280 miles of shoreline. The population of the Bay Area exceeds 3 million people.

All vehicular transportation to and from TI must use the San Francisco-Oakland Bay Bridge (Highway 80) which passes through YBI by way of a tunnel. The bridge provides access and egress to San Francisco to the west and Oakland to the east. Other major transportation links in the region include San Francisco International Airport and Oakland International Airport.

4.2 HISTORY. Military activity on YBI dates back to 1866 when the U.S. government took possession of the Island for defensive fortifications. It was occupied by the U.S. Army until 1896 when the Navy assumed operations. The Navy operated a training center on YBI until 1923 when the center was moved to San Diego. YBI continued to function as a Naval Receiving Station until World War II, when Naval operations were transferred to TI.

TI was built on Yerba Buena Shoals with construction beginning in 1936 and continuing for a 14-month period. Initially built for the 1939-1940 Golden Gate International Exposition, TI was leased to the Navy in 1941 from the City of San Francisco. The Island became a major Naval facility processing and training approximately 12,000 military personnel during World War II. After the war, the City of San Francisco traded the deed to TI for government land south of San Francisco which is now San Francisco International Airport.

Today Naval Station TI is a shore activity in an active, fully operational status. The station processes Pacific-bound and homecoming personnel and provides training schools for Naval personnel. Approximately 3,000 military and 1,000 civilian personnel work on TI. There are 704 housing units on TI. YBI serves as a residential suburb with 107 units of family housing.

Because TI is man-made there is no potential for existence of prehistoric cultural resources on the Island. A cultural resources survey was prepared in 1982 to determine the eligibility of the Island and remaining exposition structures for testing in the National Register of Historic Places. Three buildings were considered eligible for the National Register. However, one building considered eligible, the former Exposition Administration (now Naval Station Headquarters), was not recommended by the National Park System Advisory Board. It was later recommended that the building be considered for nomination (WESTDIV, 1987). The other two buildings have not been proposed for nomination since the buildings have no particular architectural merit and their architectural integrity has been compromised.

4.3 LEGAL ACTIONS. On 21 October 1954, the Regional Water Pollution Control Board passed Resolution No. 161 entitled "Finding a Condition of Pollution and Nuisance to Exist as a Result of Untreated Sewage Discharges in San Francisco Bay from Shore Facilities of the United States Navy at Treasure Island and Yerba Buena Island." The resolution was passed as a result of the ongoing disposal of raw sewage into San Francisco Bay. The resolution required that

funds be provided for construction of sewage treatment and disposal facilities by no later than fiscal year 1960. This would enable the Naval Station to comply with programs formulated under state law (Executive Order No. 10014) to protect the waters of the state. An amendment to Resolution No. 161 was passed in January 1966 requiring the Navy to have disinfection facilities installed and operational by 31 October 1967.

In 1986, the Navy received a Notice of Violation from the Bay Area Air Quality Management District for asbestos removal and related handling procedures. The removal and violation were related to asbestos abatement procedures that took place on 13th Street between G and H Streets on TI.

4.4 BIOLOGICAL FEATURES. Information on the biological features of the Bay Area and on Naval Station TI was developed from the on-site Preliminary Assessment/Site Inspection (PA/SI) survey conducted on 5-9 October 1987, contacts with personnel on TI and at WESTDIV and previous reports and publications. Relatively little published information exists on the biological features of TI and YBI. Most available information focuses on the biological features of the Bay Area.

Naval Station TI is located in San Francisco County in the middle of San Francisco Bay. The Station consists of two islands: Treasure Island (TI), and Yerba Buena Island (YBI) which are approximately three miles east of San Francisco. The Bay covers a total area approximately 900 square miles extending from TI about 30 miles to the southeast and 20 miles to the north; and reaches eastward from San Pablo Bay about 30 miles through Carquinez Strait. The Bay varies from 3 to 13 miles in width, with the main channel from 20 to 60 feet deep south of the Bay Bridge; from 30 to 130 feet deep between TI and Angel Island; and from 300 to about 350 feet deep beneath the Golden Gate Bridge (Smith, 1959).

The San Francisco Bay region is characterized by a wide variety of physical habitats, each of which contains a characteristic assemblage of flora and fauna. Table 4-1 provides a summary of the 16 habitat or community types that occur in the Bay Area, as defined by Smith (1959). The table also lists some of the characteristic plant and animal species associated with each habitat type. Of the 16 habitat types listed in Table 4-1, there are at least four which occur on TI and/or YBI. These are indicated by asterisks in the table.

The Bay Area supports a variety of fish, birds and mammals. The fishery resource includes anadromous fish which migrate through the Bay to spawn; native fish that remain in the area for life and shellfish such as crab and shrimp. The Bay is also an important resting, feeding and wintering area for thousands of birds migrating along the Pacific Flyway which extends from South America to the Arctic Circle. Seventy-five different species of waterfowl visit San Francisco Bay and the waterfowl population fluctuates between 600,000 and 800,000 individuals (WESTDIV, 1986). There is also a wide variety of mammals in the region including both marine and terrestrial species.

4.4.1 Ecosystems. Terrestrial and aquatic ecosystems occur on or near TI and YBI. Wetland ecosystems are present throughout the Bay Area, but are not located on or near TI or YBI. However, both islands are highly influenced by the surrounding marine habitat of San Francisco Bay.

TABLE 4-1

BIOTIC COMMUNITIES OF THE SAN FRANCISCO BAY REGION

Community	Characteristic Plants	Characteristic Animals
1. Rocky Shore	Surf grasses (Phyllospadix Torreyi and P. Scouleri), numerous marine plants.	Black Turnstone (Arenaria melanocephala) Surfbird (Aphriza virgata), Wandering Tattler (Heteroscelus incanum).
2. Costal Strand	Tree Lupine (Lupinus arboreus), Sea Rocket (Cakile edentula), a blue grass (Poa douglasi), sand verbena (Abronia spp.), Beach Grass (Ammophila arenaria).	Sanderling (Crocethia alba), Snowy Plover (Charadrius alexandrinus), a sand crab (Emerita analoga), beach amphipods or "fleas" (Orchestia traskiana, Orchestoidea spp.).
3. Coastal Salt Marsh	Pickle-weed (Salicornia ambigua), Sea Blite (Suaeda california), Marsh Rosemary (Limonium commune), Marsh Grindelia (Grindelia cuneifolia), California Cord Grass (Spartina foliosa).	Clapper Rail (Rallus longirostris), Marsh Hawk (Circus cyaneus), Short-eared Owl (Asio flammeus), Salt-marsh harvest Mouse (Reithrodontomys raviventris), Vagrant Shrew (Sorex vagrans).
4. Freshwater Marsh	Common Tule (Scirpus acutus), California Bulrush (Scirpus californicus), Common Cat-tail (Typha latifolia), sedge (Carex and other spp.,).	Long-billed Marsh Wren (Telmatodytes palustris), Red-winged Blackbird (Agelaisu phoeniceus), Yellowthroat (Geothlypis trichas), garter snakes (Thamnophis spp.), Pacific Tree Frog (Hyla regilla).
5. Coastal Scrub*	California Sage Brush (Artemisia californica), Black Sage (Salvia mellifera), Coyote Bush (Baccharis pilularis), Bush Monkey-flower (Diplacus aurantiacus).	Rufous-crowned Sparrow (Aimophila ruficeps), Rock Wren (Salpinctes obsoletus), Wrentit (Chamaea fasciata), Brush Rabbit (Sylvilagus bachmani), Western Fence Lizard (Sceloporus occidentalis).

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TABLE 4-1 (continued)

Community	Characteristic Plants	Characteristic Animals
6. Closed-cone Pine Florest	Bishop Pine (Pinus muricata), Monterey Pine (P. radiata).	Pygmy Nuthatch (Sitta pygmaea).
7. Redwood Forest	Coast Redwood (Sequoia sempervirens), Douglas Fir (Pseudotsuga taxifolia), Wax Myrtle (Myrica californica), Redwood Sorrel (Oxalis oregona), Thimble Berry (Rubus parviflora), California Sword Fern (Polystichum munitum).	Winter Wren (Troglodytes troglodytes), Mountain Beaver (Aplodontia rufa) (north of bay), Trowbridge Shrew (Sorex trowbridgei), Pacific Giant Salamander (Dicamptodon ensatus), Ensatina (Ensatina eschscholtzi).
8. Douglas Fir Forest	Douglas Fir (P. taxifolia), Tanoak (Lithocarpus densiflora), Madrone (Arbutus menziesi), California Laurel (Umbellularia californica).	Brown Creeper (Certhia familiaris), Golden-crowned Kinglet (Regulus satrapa), Western Gray Squirrel (Sciurus griseus), Dusky-footed Wood Rat (Neotoma fuscipes).
9. Ponderosa Pine Forest	Ponderosa Pine (Pinus ponderosa), California Black Oak (Quercus kelloggi).	Pileated Woodpecker (Dryocopus pileatus).
10. Broadleaf Evergreen	Tanoak (Lithocarpus densiflora), California Laurel (Umbellularia californica), Madrone (Arbutus menziesi), California Buckeye (Aesculus californica), Golden Chinquapin (Castanopsis chrysophylla minor), Coast Live Oak (Quercus agrifolia), Douglas Fir (Pseudotsuga taxifolia).	Black-headed Grosbeak (Pheucticus melanocephalus), Hutton's Vireo (Vireo huttoni), Western Gray Squirrel (Sciurus griseus), Dusky-footed Wood Rat (Neotoma fuscipes), California Slender Salamander (Batrachoseps attenuatus), Arboreal Salamander (Aneides lugubris).

TABLE 4-1 (continued)

Community	Characteristic Plants	Characteristic Animals
11. Oak Woodland*	At lower elevations: Valley Oak (Quercus lobata), Coast Live oak (Q. agrifolia). At higher elevations: Blue Oak (Q. douglasi), Digger Pine (Pinus sabiniana). Throughout: Holly-leaf Cherry (Prunus ilicifolia), California Coffee Berry (Rhamnus californica), Poison Oak (rhusdiversiloba).	Acorn woodpecker (Melanerpes formicivorus), White-breasted Nuthatch (Sitta carolinensis), Brush Mouse (Peromyscus boylei), California Ground Squirrel (Citellus beecheyi).
12. Chaparral	Chamis (Adenostoma fasciculatum), Scrub Oak (Q. dumosa), Holly-leaf Cherry (P. ilicifolia), Buckbrush (Ceanothus cuneatus), California Coffee Berry (R. californica), manzanita (Arctostaphylos spp.), wild lilac (Ceanothus spp.).	Bewick's Wren (Thryomanes bewicki), Wrentit (Chamaea fasciata), California Thrasher (Toxostoma redivivum), North of Bay - Sonoma Chipmunk (Eutamias sonomae), South of Bay - Merriam Chipmunk (E. merriami), Striped Racer (Masticophis lateralis).
13. Grassland*	Blue Bunch Grass (Festuca idahoensis), California Oat Grass (Danthonia californica), Foothill Sedge (Carex tumulicola), brome grass (Bromus spp.), wild oats (Avena spp.)	Western Meadowlark (Sturnella neglecta), Horned Lark (Eremophila alpestris), California Ground Squirrel (Citellus beecheyi), Black-tailed Jack Rabbit (Lepus californicus) California Vole (Microtus californicus), Gopher Snake (Pituophis catenifer).
14. Riparian Woodland	[A] Western Sycamore (Platanus racemosa), Fremont Cottonwood (Populus fremonti), Red Willow (Salix laevigata), Arroyo Willow (S. lasiolepis). [B] Box elder (Acer negundo), Big Leaf Maple (A. macrophyllum), White Alder (Alnus rhombifolia/), Red Alder (A. rubra) (restricted to within 30 miles of the coast).	Downy Woodpecker (Dendrocopos pubescens), Yellow Warbler (Dendroica petechia), Yellow-breasted Chat (Icteria virens), Raccoon (Procyon lotor), Western Pond Turtle (Clemmys marmorata), California Newt (Taricha torosa).

TABLE 4-1 (continued)

Community	Characteristic Plants	Characteristic Animals
15. Rural	Alfalfa, truck crops, prune, apricot, pear, grape vines, eucalyptus, willows, and poplars.	Barn Owl (Tyto alba), Sparrow Hawk (Falco sparverius), Brewer's Blackbird (Euphagus cyanocephalus), Botta Pocket Gopher; (Thomomys bottae), California Vole (M. californicus), Gopher Snake (P. catenifer).
16. Urban*	Great variety of introduced trees, shrubs, and garden flowers.	House Finch (Carpodacus mexicanus), English Sparrow (Passer domesticus), Norway Rat (Rattus norvegicus), House House (Mus musculus).

* Community occurring within the boundaries of Treasure Island and/or Yerba Buena Island.

Source: Smith (1959)

4.4.1.1 Terrestrial ecosystems. TI is a flat man-made island created from dredgings of the Bay bottom river sands and silts (WESTDIV, 1986). The Island is intensively developed, maintained and landscaped with trees, shrubs, and lawns. There are approximately 445 acres of urban terrestrial habitat on TI consisting of buildings, roads and parking lots, landscaping and maintained areas. The vegetation consists of grasses, shrubs, herbaceous perennials, and trees; most of which have been cultivated in landscaped areas as the Island was developed. Some of the more dominant species include perennial ryegrass, Kentucky bluegrass, star acacia, bottle brush, boxwood, oleander, English ivy, ice plant, blue gum, Monterey pine, coast live oak, bishop pine, sycamore and white fir. Tables 4-2, 4-3 and 4-4 contain a listing of the known vegetation on Naval Station TI.

YBI is a rugged, steeply sloping heavily wooded island which contrasts greatly with the flat urban industrial character of the man-made TI. The majority of the approximately 130-acre island is undeveloped. However, there are approximately 55 acres of developed urban terrestrial habitat consisting mostly of residential housing areas. Vegetation in these areas is similar to the cultivated landscaping described for TI. Tables 4-2, 4-3 and 4-4 provide a listing of these species.

The majority of YBI consists of undeveloped land (approximately 75 acres). The undeveloped areas consist of grasslands, woodlands, brushlands and a proposed wildlife area for Army Point. The proposed wildlife area for Army Point is an area that can be greatly enhanced by a minimum of restoration effort. There is approximately 1 acre of grassland, 30 acres of eucalyptus woodland, 10 acres of mixed woodland, 20 acres of brushland, 10 acres of the proposed wildlife area and four acres of parkland (Clipper Cove picnic area) (WESTDIV, 1986). Some of the typical species include, brome, California oatgrass, blue gum eucalyptus, coyote bush, coastal sage, poison oak, California buckeye and blackberry. The wildlife area is located on Army Point on the eastern tip of YBI. Tables 4-2, 4-3, and 4-4 contains a complete listing of the vegetation on Naval Station TI.

Wildlife known and expected to occur on TI and YBI consist mostly of species adapted to urban environments and landscape plantings. Birds typically associated with urban or residential environments and adapted to human disturbance are found on TI and YBI. These include house finch, stellar jay, English sparrow, savannah sparrow, and robin. Large areas of shrubs interspersed with grasslands and extensive eucalyptus woodlands occur on YBI. These areas provide cover for birds such as quail, woodpecker, horned lark, cedar waxwing and white-breasted nuthatch. The shoreline areas of YBI are used by terns and pelicans for foraging and by herring gulls for roosting. A listing of the birds known to occur on TI and YBI is provided on Table 4-5.

The mammals of both TI and YBI consist primarily of California ground squirrel and pocket mice. A small group of harbor seals uses the southwest shoreline of YBI (WESTDIV, 1986). Information on the frequency of use of this area by harbor seals was not available. The harbor seal is protected from hunting, capture, killing or harassment under the Marine Mammal Protection Act.

4.4.1.2 Marine ecosystem. The San Francisco Bay-Delta is the largest estuary on the Pacific Coast of the United States. The bay has been exposed to massive anthropogenic influence over the last 200 years (Nichols, et al.,

Table 4-2

Vegetation of Naval Station Treasure Island[1]

Grass Species

Common Names	Scientific Names
Perennial grain	Agrotricum W-21
Brome	Bromus sp.
Blando brome	Bromus mollis
Pacific reedgrass	Calamagrostis mutkaensis
California oatgrass	Danthonia californica
Zorro annual fescue	Festuca megalura
Common velvetgrass	Holcus lanatus
Perennial ryegrass	Lolium perenne
Kentucky bluegrass	Poa pratensis
Hardinggrass	Phalaris Kuberosa stenoptera
Lana vetch	Vicia asycarpa

1. Includes both TI and YBI
Source: WESTDIV, 1986.

Table 4-3

Vegetation of Naval Station Treasure Island[1]

Shrubs and Herbaceous Perennials

Common Names	Scientific Names
Sydney golden wattle	Acacia longifolia
Star acacia	Acacia verticillata
California buckeye	Aesculus californica
English ivy	Algerian hedera helix canariensis
Coyote bush	Baccahris Pilularis
Boxwood	Buxus
Bottle brush	Callistemon citrinus
Ice plant	Carpolrotus edules
Flowering quicne	Chaenonekes lagenaria
Cotoneaster	Cotoneaster
Heather	Erica
Escallonia	Escallonia
Wild strawberry	Fragaria chiloensis
Gazania perennial	Gazania
Kupuka tree	Griselinia littoralis
Veronica	Hebe sp.
Ilex holly	Ilex
Burfordii holly	Ilex cornuta
Australian tea tree	Leptosperum laevigatum
Privit	Ligustrum texanum
Melaleuca	Melaleuca
Myoporum	Myoporum laetum
Oleander	Nerium oleander
Poison oak	Phus diversiloba
Rockrose cistus	Purpureus orchid
India hawthorne	Raphiolepis indica
Rosemary	Rosmarinus officinalis
Blackberry	Rubus spp.
Sage	Salvia
Elderberry	Sambucus
Periwinkle	Vinca minor

1. Includes both TI and YBI
Source: WESTDIV, 1986.

Table 4-4

Vegetation of Naval Station Treasure Island[1]

Tree Species

Common Names	Scientific Names
White fir	Abies concolar
Green wattle	Acacia decurrens
Black acacia	Acacia melanoxylon
Bigleaf maple	Acer macrophyllum
California buckeye	Aesculus californica
White alder	Alnus rhomfibolia
Red alder	Alnus rubra
Port Oxford cedar	Chamaecyparis lawsonia
Pacific dogwood	Cornus nuttallii
Monterey cypress	Cupressus macrocarpa
Eucalyptus	Eucalyptus
Yate tree	Eucalyptus cornuta
Blue gum	Eucalyptus globulus
Incence cedar	Libocedrus decurrens
New Zealand Christmas tree	Metrosideros excelsa
European olive	Olea europaea
Canary Island date palm	Phoenix canariensis
Bishop pine	Pinus muricata
Monterey pine	Pinus radiata
Torrey pine	Pinus torreyana
Sycamore	Platanus acerifolia
Douglas fir	Pseudotsuga mensiesii
Coast live oak	Quercus agrifolia
Willow	Salix
California pepper	Schinus molle
Redwood	Sequoia sempervirens
California bay	Umbellularia californica
California fan palm	Washingtonia filifera

1. Includes both TI and YBI
Source: WESTDIV, 1986.

Table 4-5

Wildlife of Naval Station Treasure Island[1]

Common Names	Scientific Names
Red-winged balckbird	Agelaius phoeniceus
Lewis woodpecker	Asyndesmus lewis
Cedar waxwing	Bombycilla cedrorum
House finch	Carpodacus mexicanus
Common crow	Corvus brachyrhynchos
Steller jay	Cyanocitta stelleri
Horned lark	Ermophila alpestris
Peregrine falcon	Falconiformes
California quail	Laphortyx california
Least tern	Laridae
Herring gull	Larus argentatus
Mockingbird	Mimus polyglottos
English sparrow	Passer domesticus
Sparrow	Passerculus sandwichensis
Savannah sparrow	Passerculus sandwichensis
Brown pelican	Pelecanidae
White-breasted nuthatch	Sitta carolinensis
American robin	Turdus migratorius
Robin	Turdus migratorius
White-crowned sparrow	Zonotrichia Leucophyrs
California ground squirrel	Citellus beeheyi
Harbor seal	Otariidae
Pocket mice	Perognathus

1. Includes both TI and YBI
Source: WESTDIV, 1986.

1987). These changes to the Bay have resulted in somewhat equal changes to its biological resources. As an example, great losses of wetland areas have occurred since the mid-1800s. In addition, benthic communities have been totally altered from historical populations and the fishery resources have undergone long-term changes. Some fish populations appear to be continuing to decline (Phillips, 1987).

A widely held belief is that pollution of the Bay has contributed and is currently contributing to changes in the biological resources of San Francisco Bay. However, incontrovertible evidence of such effects is rare for any ecosystem and San Francisco Bay is no exception (Phillips, 1987). The Bay is still heavily utilized for both sport and commercial fishing; however, commercial fishing is uncommon near TI and YBI. Marine fauna which occur in the Bay and near TI and YBI include anadromous fish such as striped bass, king salmon, and sturgeon. Other commonly occurring fish include sole, flounder, shark, rays, rockfish and perch. Bait and forage fish such as sardines, anchovies, herring and smelt are also common. Common shellfish include shrimp and crab. Many of the species listed above are common near TI and YBI. The sport fishing pier located on the western shore of TI is frequently used as a local fishing area.

The predominant marine habitat around TI and YBI is subtidal with unconsolidated mud bottom substrate. A limited intertidal habitat consisting of riprap and dock and pier pilings is also present (WESTDIV, 1987). There is some rocky intertidal shoreline with mudflats extending north between YBI and TI. The most numerous benthic species include amphipods, several species of clams and polychete worms (WESTDIV, 1987).

Marine flora also occur throughout the Bay, but are more commonly found on rocky shores, tidepools and reefs. These include the green, brown and red algae. No information is readily available on the species occurring on or immediately adjacent to the shores of TI and YBI. Apparently there is little interest in the biological resources of TI and YBI by the local scientific and academic community. However, common species on Bay shorelines that may occur on the shores of TI and YBI include Zostera sp., Ulva sp., Enteromorpha sp., Ralfsia sp. and perhaps several red alga (Rhodophyta). Eelgrass beds (Zostera sp.) are reported to occur on the eastern shore of YBI (WESTDIV, 1987).

4.4.2 Rare, Threatened and Endangered Species. The Endangered Species Act of 1973 (Public Law 93-0205), as amended, provides that all federal agencies shall carry out programs for the conservation of listed endangered and threatened species. Federal agencies must ensure that actions authorized, funded, or carried out by them will not jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of critical habitats as determined by the Secretary of the Interior (OPNAVINST 5090.1, 1983).

The list of endangered and threatened animal and plant species is published in the Federal Register 50 CFR 17.11-17.12. The official State of California listing of endangered and rare animals is contained in California Administrative Code, Title 14, Section 670.2 (State of California, 1987). The California Native Plant Protection Act of 1978 assigns primary responsibility to the state Department of Fish and Game for determining California plants to

be listed as endangered or rare. As of 20 November 1979, the State of California had listed 75 endangered and 40 rare plants. The Department of Fish and Game uses the California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California as their species-of-concern list (Smith and York, 1984).

A species is endangered when its prospects of survival and reproduction are in immediate jeopardy. A species is threatened or rare when, although not immediately facing extinction, it is in such small numbers throughout its range that it may become endangered if its present environmental conditions deteriorate.

4.4.2.1 Plants. No rare, threatened or endangered plants designated by the California Department of Fish and Game or the U.S. Fish and Wildlife Service have been observed or are expected to occur on Naval Station TI (TI and YBI). Likewise, there are no habitats of special biological interest on TI or YBI.

4.4.2.2 Wildlife. Three species of wildlife classified as endangered by both the state and federal governments are known to occur in the region and have been reported to occasionally use Naval Station TI for hunting and foraging (WESTDIV, 1986). These include peregrine falcon (Falco peregrinus anatum), California least tern (Sterna albifrons brownii) and California brown pelican (Pelicanus occidentalis californicus). These species are not expected to nest on TI or YBI. It is unlikely that the species could be adversely affected by contaminants on or from TI or YBI. These species feed throughout the Bay Area and are not specifically dependent on TI or YBI for food. In addition, other than potential direct discharge of contaminants to the Bay from TI or YBI, no method of contaminants entering the food chain from TI or YBI has been identified. All three species are carnivorous; with the least tern and brown pelican feeding on fish and the peregrine falcon feeding primarily on small birds. Additional information on all three endangered species is provided below.

The peregrine falcon (Falco peregrinus anatum) is listed as an endangered species by both the state and federal governments. The peregrine falcon is a very rare transient or winter visitor along the coast, foraging and resting in open country, river mouths, and near shore waters such as San Francisco Bay. Due to the absence of any reported suitable nesting habitat, the peregrine falcon would be considered only a rare transient or migrant at TI or YBI.

The California least tern (Sterna albifrons brownii) is listed as an endangered species by the U.S. Fish and Wildlife Service and the California Department of Fish and Game. In California, it can be found from April to September nesting on sandy beaches and salt flats. The California least tern migrates along the coast to wintering areas in Central and South America. Least terns primarily feed on small fish in near shore waters, including marshes, estuaries, bays and the surf line; it has been occasionally observed near TI and YBI. It is expected to be an infrequent visitor to near shore waters off TI and YBI.

The California brown pelican (Pelicanus occidentalis californicus) is listed as endangered by the U.S. Fish and Wildlife Service and the California Department of Fish and Game. It is the endangered species expected most frequently near TI and YBI. The brown pelican occurs year-round along the

California coastline and feeds in or rests on open water areas just outside the surf line along the coast and near shore waters like San Francisco Bay. It has a diet consisting primarily of fish.

4.5 PHYSICAL FEATURES.

4.5.1 Climate. The climate at TI and YBI, like the remainder of the Bay Area, is dominated by the Pacific Ocean, producing a maritime climate that is characterized by little variation in temperature. The average annual air temperature is 56°F to 58°F with an average frost-free period of 300 to 330 days.

The average annual precipitation is about 25 to 30 inches. Almost 90 percent of this precipitation occurs during November through April. Mean annual evaporation is 48 inches. The greatest evaporation occurs during July (WESTDIV, 1987).

During the winter the relative humidity is about 80 to 90 percent at night and 60 to 80 percent during the day. Humidity decreases in spring, but by summer it increases especially at night or morning when frequent fogs occur. In the fall the humidity is lowest, ranging from 50 percent during the day to 70 percent at night.

The wind direction for the Bay Area throughout most of the year is northwest. For more than 50 percent of the time, wind speed is less than 6 miles per hour; only 10 percent of the time does it exceed 12 miles per hour. The strongest winds are usually associated with winter storms. In winter and spring cold temperatures will sometimes accompany the winds from the north and east. In the summer westerly winds result from cool marine air flowing to the warmer interior (WESTDIV, 1987).

4.5.2 Topography.

4.5.2.1 Treasure Island. TI is essentially a flat (0 to 2 percent slopes) man-made island with little relief. Based on a 1977 topographic map, the elevation ranges from approximately 5 to 15 feet (MSL) (WESTDIV, 1986). Topographic contours indicate that the eastern side of the Island contains the highest elevations, while the lowest elevations tend to be on the northwest part of the Island. The average elevation for TI is approximately 11 feet (MSL).

4.5.2.2 Yerba Buena Island. YBI is a natural island with gently rolling to very steep slopes (5 to 95 percent slopes) (WESTDIV, 1986). The elevation range extends from sea level (0 feet at MSL) to the highest point, at elevation approximately 440 feet (MSL) which is located in the middle of the Island (Radbruch, 1957).

4.5.3 Geology.

4.5.3.1 Regional Geology. San Francisco Bay is a drowned river valley which developed within a northwest trending structural trough formed in Franciscan bedrock. In the Late Pliocene, approximately 2 million years ago, the San Francisco-Marin block tilted towards the east along the Hayward Fault. The uplifted western edge of the block formed the hills of Marin while the

downdropped eastern edge created the elongated depression which is now occupied by San Francisco Bay. Following the downdropping of the bedrock block, material eroded from the Berkeley/Oakland Hills was deposited in alluvial fans which gradually coalesced to form the broad, gently sloping plain which borders the eastern shoreline of the bay.

During the mid-Pleistocene, a river system eroded deep channels into these areas of downdropped bedrock, creating an irregular bedrock topography and forming the Carquinez Straits and the Golden Gate. The river valleys were then flooded through the Golden Gate as sea level rose in response to Pleistocene continental glaciation melting cycles. Throughout the Pleistocene, there were cycles of sea level rise and fall. Even minor fluctuations in the bay water level would have resulted in extensive interfingering of alluvial and estuarine sediments as the Bay area underwent episodic flooding.

During the Quaternary the San Francisco Bay Region became a tectonically active region. It is located near the contact between the North American and Pacific crustal plates. This seismic regime is characterized by northwest trending faults. These faults exhibit mainly right lateral strike-slip movement, which means that the movement is predominantly horizontal, and when viewed from one side of a fault the zone on the opposite side of the fault has moved to the right.

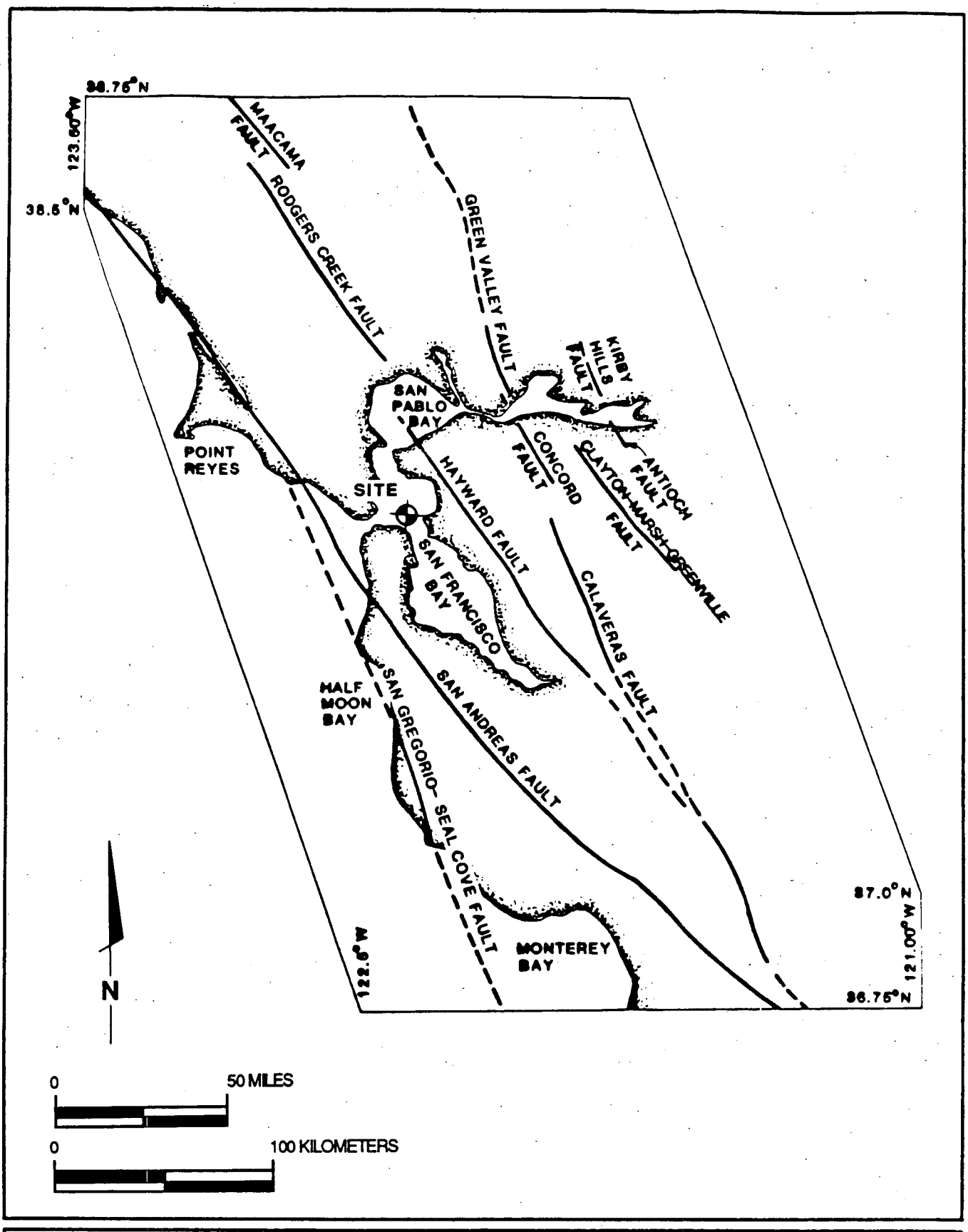
The major active faults in the site vicinity are all part of the San Andreas fault system. A schematic map of the regional faults and the site location map are presented on Figure 4-2. These faults include the Hayward fault approximately 5 kilometers to the east, the San Andreas fault approximately 15 kilometers to the west of the site, the Calaveras fault approximately 85 kilometers to the southeast, and the San Gregorio-Seal Cove fault zone 40 kilometers to the west.

Other significant faults in the site region are the Rodgers Creek fault approximately 70 kilometers north of the site and the Maacama fault approximately 175 kilometers to the north. In addition, there are several smaller, less active faults in the site region which also contribute to the regional seismicity. These faults include the Concord fault 28 kilometers to the east, the Green Valley fault about 70 kilometers to the northeast, the Antioch fault about 110 kilometers to the northeast, the Kirby Hills-Vacaville fault system about 110 kilometers to the northeast, and the Greenville-Mt. Diablo fault system about 100 kilometers to the east.

4.5.3.2 Local Geology.

4.5.3.2.1 Treasure Island. TI is a man-made island constructed of artificial fill (Qaf) dredged from the Bay (Blake and others, 1974; Radbruch, 1957) as shown on Figure 4-3. Before fill emplacement this area originally consisted of Yerba Buena Shoals and a sand spit extending from the northwest point of YBI.

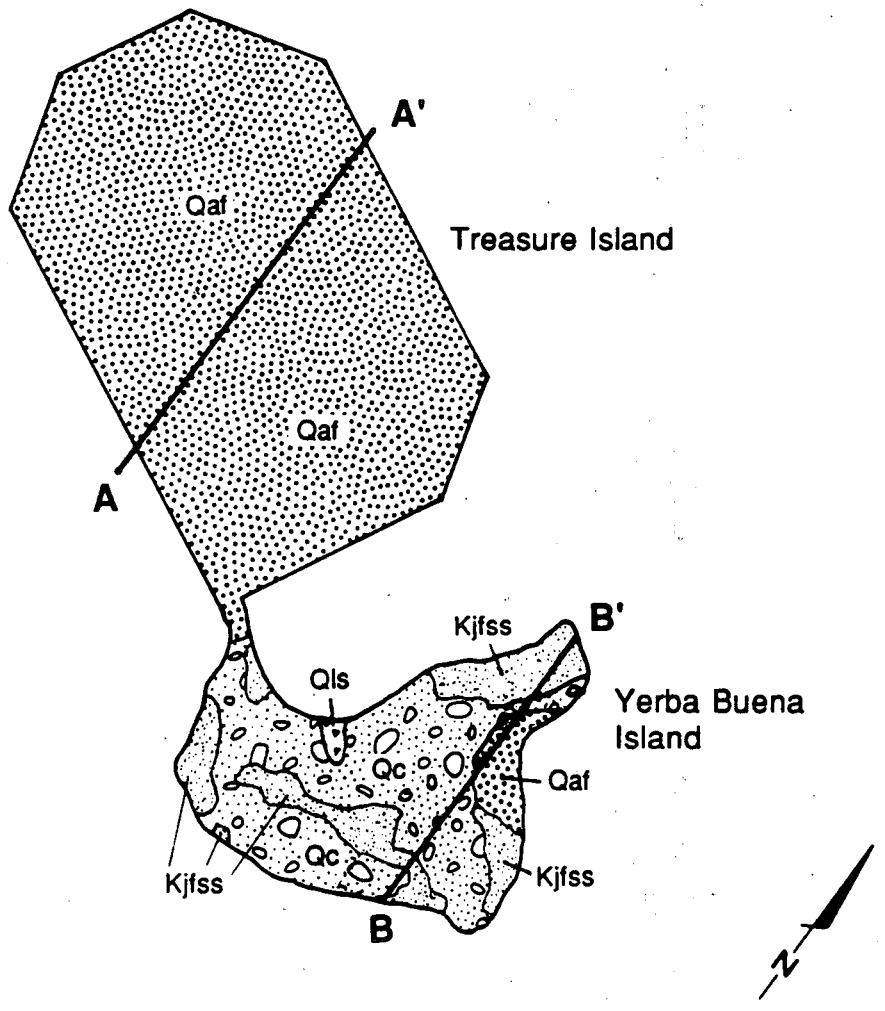
Dredging and construction of the Island began in 1936 and was completed in 1937 (Lee, 1966). The artificial fill used for construction consisted primarily of sand with lesser amounts of silt, clay, and gravel. It has been



PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

LOCATION MAP
(FAULTS WITHIN STUDY AREA)

FIGURE
4-2



KEY:

Qls	Landslide Debris
Qaf	Artificial Fill (sand, clay, or miscellaneous refuse)
Qc	Colma Formation (sand with minor sandy silt, clay, and gravel interbeds)
Kjfss	Franciscan Group (sandstone and shale)

0 1/2 1 MILE

SCALE

Adapted from: Blake, M.C. and others, 1974, Preliminary Geologic Map of Marin and San Francisco Counties and Ports of Alameda, Contra Costa and Sonoma Counties, California, U.S. Geological Survey, Miscellaneous Field Studies, Map MF 574.

Radbruch, D.H. 1957, Areal and Engineering Geology of the Oakland West Quadrangle, California, U.S. Geological Survey, Miscellaneous Geologic Investigations, Map I-239.

PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

GEOLOGIC MAP

FIGURE
4-3

reported that the fill thickness throughout the site is 50 feet (WESTDIV, 1987).

Below the hydraulically placed fill is a thick body of clayey silt known as Bay Mud. The clayey Bay Mud contains some fine-grained sand stringers and extends to a depth of 100 to 120 feet below ground surface. Underlying this are relatively consolidated interbedded clays and sands that extend 30 feet to the sandstone and shale bedrock (Lee, 1966). The cross section A-A' on Figure 4-4 shows a schematic representation of the strata underlying the placed fill.

4.5.3.2.2 Yerba Buena Island. YBI is a natural island that has been mapped by Blake and others (1974) to consist of four geologic units: landslide debris (Qls); artificial fill (Qaf); sand of the Colma Formation (Qc); and sandstone and shale bedrock of the Franciscan assemblage (Kjfss). Figure 4-3 shows the geologic units for YBI as well as TI. A description of the geologic units and their properties is listed on Table 4-6. Figure 4-5, Schematic Geologic Cross Section B-B', depicts the subsurface stratigraphy on YBI.

The most recent geologic unit at YBI is the landslide debris (Qls) which results from clayey silty sand that has moved downslope. An area of significant landslide debris is located on the north side of the Island although smaller areas of landslide debris are found at other locations. The next unit, the artificial fill (Qaf), has been placed along the eastern shoreline of the Island. The Colma Formation (Qc), a fine- to medium-grained sand with minor amounts of sandy silt, clay, and gravel interbeds, is exposed over approximately 70 percent of the island. It unconformably overlies the bedrock below and is variable in thickness, extending from a few inches to several feet. It blankets the ravines and slopes and in places even forms relatively flat benches. Underlying the Quaternary deposits (i.e., Qls, Qaf, and Qc) are the resistant sandstone and shale of the Franciscan assemblage (Kjfss). The Franciscan Assemblage is the oldest geologic unit on the island. It tends to be highly variable in composition and structure in the Bay region; however, surficially at YBI it appears very consistent in structure and composition. The Franciscan units exposed on YBI generally dip to the northeast and have a northwest to southeast trend.

4.5.4 Soils. A U.S. Department of Agriculture (USDA) soil survey of this area has recently been completed, but the publication is still in process. Therefore, there is limited information available on water capacity, shrink-swell potential, etc. Soil survey information has been obtained from the Natural Resource Management Plan Document (WESTDIV, 1986) and from communication with the USDA Soil Conservation Service in Half Moon Bay, California (1987).

According to the recent survey, TI is mapped as Urban Lands and Orthents, as shown by the symbol, 245, on Figure 4-6. A limited description provided by the USDA Soil Conservation Service of these soil properties is summarized by symbol on Table 4-7. Urban Lands are defined as those areas which are more than 85 percent covered with buildings, asphalt, concrete, and other impervious materials. Orthents are reclaimed soils that are very heterogeneous and consist of variable amounts of soils, gravel, broken rock, asphalt, concrete, Bay Mud, and other solid materials. In general, the soils found on TI are poorly graded, fine sand with occasional discontinuous lenses of silt and clay.

Table 4-6

DESCRIPTION OF GEOLOGIC UNITS
Naval Station Treasure Island, CA

GEOLOGIC* UNIT	GEOLOGIC AGE	LITHOLOGY	DISTRIBUTION AND THICKNESS	TOPOGRAPHIC FORM	ORIGIN OF DEPOSIT	PERMEABILITY	SLOPE STABILITY	EARTHQUAKE STABILITY	DRY DENSITY (AVERAGE FOR UNIT)	MOISTURE CONTENT (AVERAGE FOR UNIT)
Artificial fill (Qaf)	Quarternary	Consists of miscellaneous refuse, bay mud, or sand dredged from bay; composition varies from place to place; may be difficult to distinguish from natural bay mud or Merritt sand. In most places overlies bay mud.	Along shore of bay and on Treasure Island. Maximum known thickness 25 feet.	Flat, level areas a few feet above sea level.	Manmade.	Varies with composition.	Varies with composition; wet clay or loose sand must be supported in cuts.	Poor; unstable bay mud underlies most fill.	Varies with composition.	Varies with composition.
Colma Formation (Qc)	Quarternary	Sand, fine-grained. Moderate yellowish-brown. Predominantly quartz and feldspar, mostly highly altered; some magnetite and biotite, minor amounts of other minerals; contains fragments of sandstone up to three-eights inch in diameter; slightly cemented within silt and clay. Grains subangular to subrounded, frosted. Well-sorted. Varies from loose windblown sand to slightly coherent clayey, silty sand, which can be crumbled between the fingers. Lies unconformably oon sandstone of the Franciscan group.	Fills ravines, mantles slopes and hilltops on Yerba Buena Island. Maximum known thickness 90 feet.	Ravine filling, follows contours of hills; forms flat benches in places.	Residual, derived from underlying sandstone of the Franciscan group; reworked by gravity, water, and wind.	High; medium where clayey.	Cuts steeper than the angle of repose of loose sand must be supported. Slopes cribbed or planted to prevent erosion; slides on steep slopes when wet; slides numerous in ravines.	Fair.	Unknown.	Unknown.
Franciscan Assemblage (Kjfss)	Cretaceous and Jurassic	Sandstone, arkosic to graywacke; fine to very coarse grained, with some shale beds. Sand grains consist largely of quartz, feldspar, and shale, with some chert and biotite and minor amounts of epidote, chlorite, clay, and carbonaceous material. Fresh rock is medium gray; weathered or altered rock is light brown or very pale orange. Fresh rock dense, hard; altered rock may be scratched with finger nail. Sandstone varies from massive to thin bedded, is cut by veins of quartz or calcite. Rock jointed, fractured; contorted in some places; many fracture surfaces coated with iron, manganese, and clay minerals.	In northeastern corner and east-central part of quadrangle; on Yerba Buena Island; probably underlies alluvium throughout quadrangle. Total thickness unknown.	Forms rather steep, rounded hills.	Marine deposit in geosyncline; source of sediments thought to be land mass west of present coastline.	Low.	Stable in vertical crust except for contorted or sheared sandstone and shale, which may slide on steep faces.	Good.	138 (127-149)	7 (3-11)

Note: Table 4-6 is based on table in "Areal and Engineering Geology of the Oakland Wast Quadrangle, California" by Dorothy W. Radbruch, 1957, U.S.G.S. Miscelleneous Geologic Investigations Map I-239 and has been altered with updated information from "Preliminary Geologic Map of Marin and San Francisco Counties and Parts of Alameda, Contra Costa and Sonoma Counties, California" by M. C. Blake and others, 1974, U.S.G.S. Miscellaneous Field Studies Map MF574.

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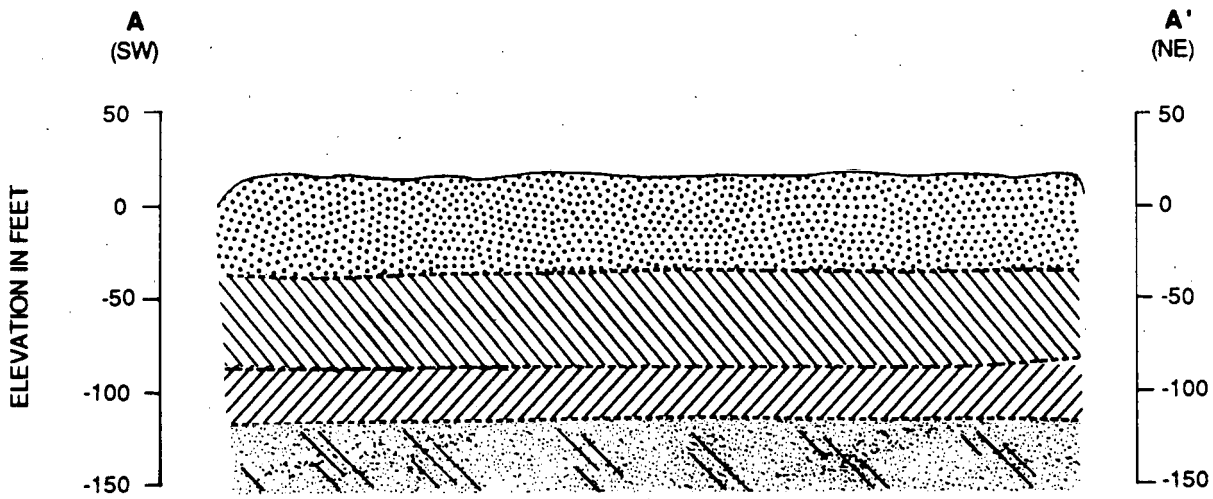


Key:

- Artificial Fill
- Bay Mud with Sand Stringers
- Interbedded Clays and Sand
- Franciscan Assemblage (Sandstone and Shale)

0 400 800 FEET

Horizontal Scale

Vertical Exaggeration 8X

REFERENCE:

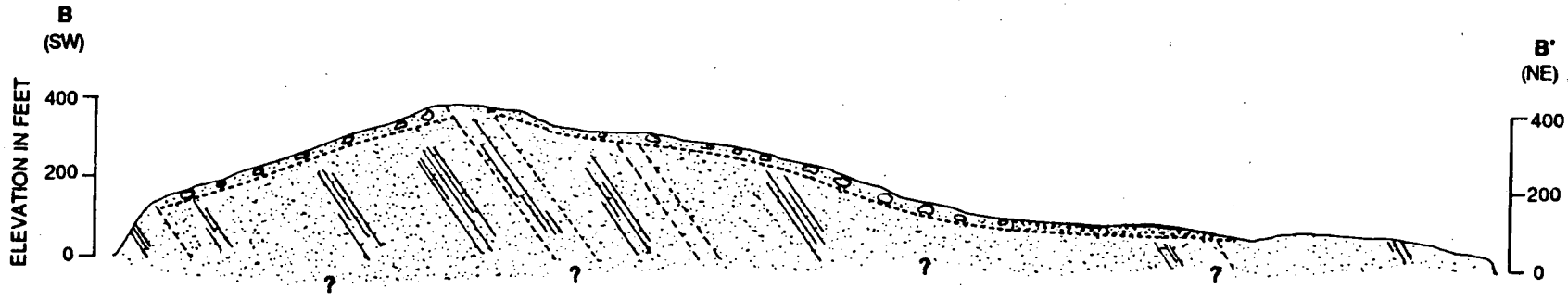
Blake, M.C. and others, 1974, Preliminary Geologic Map of Marin and San Francisco Counties and Ports of Alameda, Contra Costa and Sonoma Counties, California, U.S. Geological Survey, Miscellaneous Field Studies, Map MF 574.

Radbruch, D.H. 1957, Areal and Engineering Geology of the Oakland West Quadrangle, California, U.S. Geological Survey, Miscellaneous Geologic Investigations, Map 1-239.

PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

SCHEMATIC SUBSURFACE CROSS SECTION A-A'
TREASURE ISLAND

FIGURE
4-4



KEY:

- Artificial Fill
- Colma Formation (Fine to medium grained sand, with minor amounts of sandy silt, clay and gravel as interbeds)
- Franciscan Assemblage (sandstone and shale)

0 200 400 FEET

Horizontal Scale

No Vertical Exaggeration

REFERENCE:

Blake. M.C. and others, 1974, Preliminary Geologic Map of Marin and San Francisco Counties and Ports of Alameda, Contra Costa and Sonoma Counties, California, U.S. Geological Survey, Miscellaneous Field Studies, Map MF 574.

Radbruch, D.H. 1957, Areal and Engineering Geology of the Oakland West Quadrangle, California, U.S. Geological Survey, Miscellaneous Geologic Investigations, Map I-239.

PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

SCHEMATIC SUBSURFACE CROSS SECTION B-B'
YERBA BUENA ISLAND

FIGURE
4-5

TABLE 4-7

SOIL MAP SUMMARY

Location: Yerba Buena Island

Date: 1/27/86

Land Capability	Symbol On Map	Soil Name	Slope	Effective Rooting Depth	Soil/Profile Texture		A.W.C.	Erosion Hazard	Limiting Factors
					Surface	Subsoil			
VIII	432	Orthents, Cut & Fill - Urban Land Complex	5-75%						Slope
		Consists of: 50% Orthents, Cut & Fill		Highly variable	Highly variable		Highly variable	Moderate to very high	Steep slopes. Shallow depth to rock in some areas. Highly variable soil properties.
		35% Urban Land		Most of the soil surface is covered with asphalt, buildings, etc.				None	Rapid runoff.
VIIe	550	Candlestick Kron-Buriburi complex	30-75%						
		Consists of: 40% Candlestick		20-40"	Fine sandy loam	Loam over sandy clay loam	Low to moderate	High to very high	Steep slopes. Slippage.
		25% Kron		10-20"	Sandy loam	Loam	Very low to low	Very high to high	Steep slopes. Shallow depth to rock.
		20% Buriburi		20-40"	Gravelly loam	Gravelly loam	low to moderate	high to very high	Steep slopes.
	100	Urban land	0-2%	Most of the soil surface is covered with asphalt, buildings, etc.				None	Rapid runoff.

TABLE 4-7 (Continued)

SOIL MAP SUMMARY

Location: Treasure Island

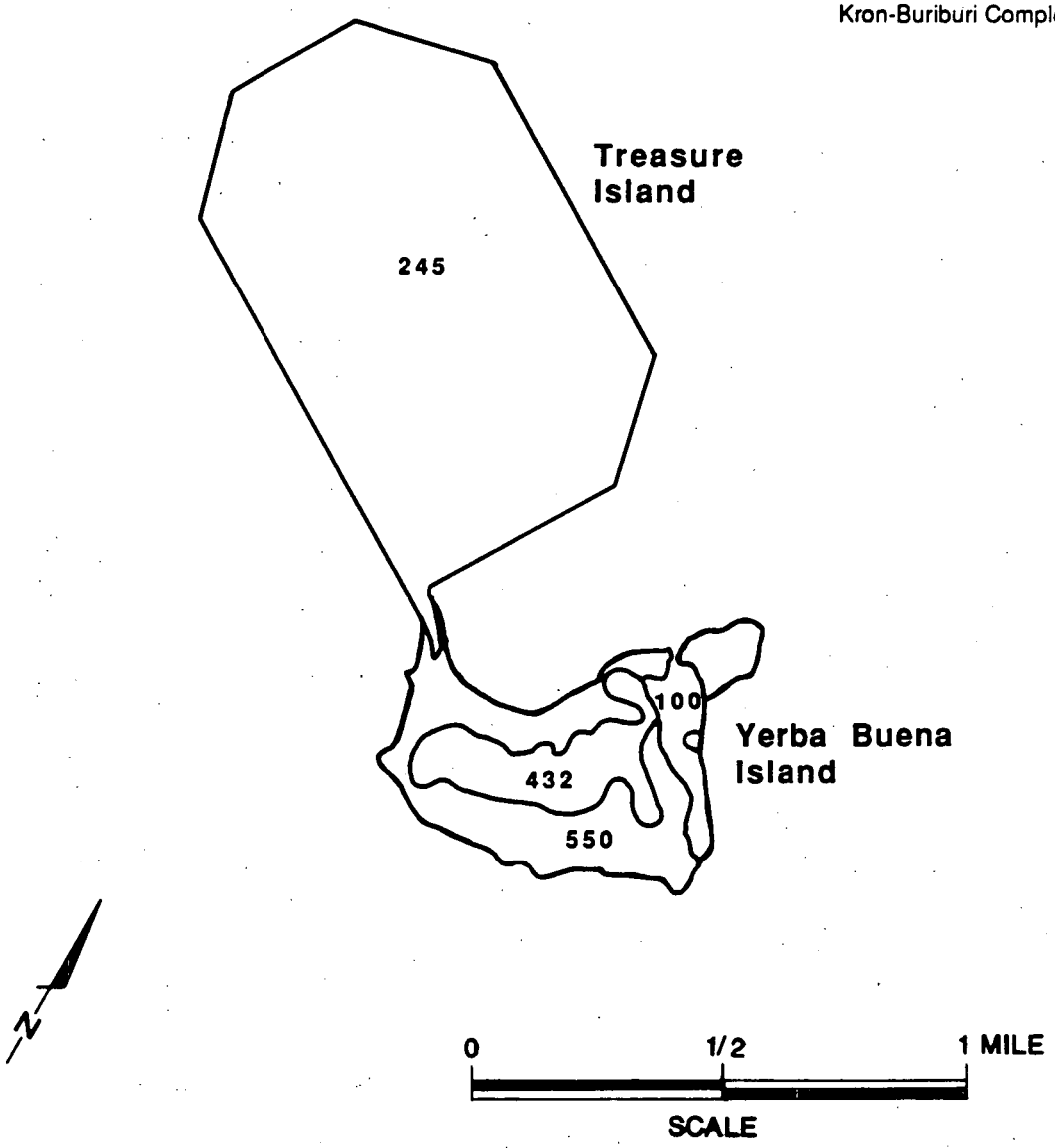
Date: 1/27/86

Land Capability	Symbol On Map	Soil Name	Slope	Effective Rooting Depth	Soil/Profile Texture		A.W.C.	Erosion Hazard	Limiting Factors
					Surface	Subsoil			
VIII	245	Urban land-Orthents, Reclaimed complex	0-2%	Most of the soil surface is covered with asphalt, buildings, etc.				None	Rapid runoff.
		Consists of: 65% Urban Land	0-2%	Most of the soil surface is covered with asphalt, buildings, etc.				None	Rapid runoff.
		30% Orthents, reclaimed		Limited at 30-60" by water table	Highly variable		Highly variable	Low	Subsidence. Highly variable soil properties. High water table. Corrosivity, salinity
		5% minor soils							

Note: Table obtained from U.S.D.A. Soil Conservation Service (1987).

KEY:

UNIT	DESCRIPTION
100	Urban Land
245	Urban Land-Orthents, Reclaimed Complex
432	Orthents, Cut & Fill-Urban Land Complex
550	Candlestick Kron-Buriburi Complex



Reference: USDA Soil Conservation Service, 1987. Unpublished soil survey.

PRELIMINARY ASSESSMENT/ SITE INSPECTION NAVSTA Treasure Island, Ca.	**YERBA BUENA ISLAND/ TREASURE ISLAND SCHEMATIC SOIL MAP**	FIGURE 4-6

At YBI the soils are classified as Candlestick, Kron, and Buriburi soils. These three soil types are found on 30 to 75 percent slopes. In addition, on YBI there are areas of Urban Land and Orthents found on 5 to 75 percent slopes. Figure 4-3 shows the USDA symbols of soils on YBI. Table 4-7, provided by the USDA Soil Conservation Service, describes the soil types for each symbol. The soils on YBI are 10 to 40 inches deep over the sandstone and shales of the Franciscan formation (McCreary-Koretsky Engineers, 1965). The soils at the surface range from fine sandy loam to gravelly loam. The subsoil ranges from gravelly loam to sandy clay loam.

4.5.5 Hydrology.

4.5.5.1 Surface water. TI and YBI are surrounded by the waters of San Francisco Bay. Any surface drainage off the two islands flows into the Bay.

San Francisco Bay has water quality problems resulting from past and present practices. One source of contamination has been the disposal of waste from urban areas into the Bay. Discharge into the Bay has declined but still occurs. Another source of release to the Bay is from surface runoff which carries pollutants into surface drainage where they are eventually carried into the Bay. A third source of pollution is accidental spills or deliberate discharge from ships. The California Water Quality Control Board which establishes local water quality standards, classifies the water quality status in the Bay Area as critical (WESTDIV, 1986).

4.5.5.2 Ground water.

4.5.5.2.1 Treasure Island. The subsurface water at TI is under water table condition. Generally the ground water is present at depths of 30 to 72 inches below ground surface. The one available report on tidal variation on TI indicated a tidal difference of approximately 0.3 foot (McCreary-Koretsky Engineers, 1965). Recharge occurs from infiltrations resulting from precipitation, landscape irrigation and leaking storm drains, and from Bay waters. Because of the presence of relatively impermeable silt and clay lenses, there may be some perched conditions above the shallow water table.

The subsurface water at the site is not used. As a source of water it proves impotable due to the contact with the saline to brackish Bay waters.

Although there is limited ground water data from TI, a crude approximation of the ground water velocity can be estimated using Darcy's flow law and some assumptions. The average linear ground water equation is $\bar{v} = Ki/n$ where $\bar{v}$ = average linear velocity (ft/day)

K = hydraulic conductivity or permeability (ft/day)
i = hydraulic gradient
n = porosity.

Based on slug tests conducted by Harding Lawson Associates (1985), the hydraulic conductivity of the sands at 10 to 20 feet below ground surface range from 1×10^{-3} to 1×10^{-4} cm/sec (2.8 to 2.8×10^{-1} ft/day). A value for the hydraulic gradient can be estimated from the average ground elevation of +11 (MSL) and average depth to ground water on the Island which is 5 feet below ground surface, resulting in a ground water elevation of +6 ft

(MSL). An average hydraulic gradient from the Island interior to sea level could be estimated as 0.0038. With the values of hydraulic conductivity, the hydraulic gradient of 0.0038, and an assumed porosity of 0.30, which is within the range of porosities listed for sands by Freeze and Cherry (1979), the average linear velocity is estimated to range from 3.6×10^{-2} ft/day to 3.6×10^{-3} ft/day.

4.5.5.2.2 Yerba Buena Island. Due to the absence of information on any wells at YBI, specifics on ground water are unavailable. However, in the Bay Area ground water is normally found in outcrops of the Franciscan sandstones and shale, if the shale is fractured. The ground water would be recharged by water infiltrating from precipitation, landscape irrigation, and from the Bay waters. The quality of the ground water is unknown but is probably of poor quality due to salt water intrusion.

From a theoretical standpoint the hydraulic conductivity or permeability of the sandstone should be higher than that of the shale, except if secondary porosity such as fracturing is significant. From Freeze and Cherry (1979) the hydraulic conductivity of the sandstone would probably range from 1×10^{-3} to 1×10^{-8} cm/sec and the hydraulic conductivity of the shale would range from 1×10^{-7} to 1×10^{-11} cm/sec if there were limited secondary porosity. An estimate of average linear velocity was not attempted because there were too many unknown variables.

A U.S. Geological Survey study by Webster (1972) contains a map showing ranges in probable maximum well yield from water-bearing rocks in the San Francisco Region. YBI on this map is designated as an "A" area, where the yield of any wells would have limited storage capacity and would likely go dry or have reduced yields during the summer and autumn months. "A" areas are considered to have marginal to adequate water for stock or single family domestic use. There is a 68 percent chance that wells in areas designated "A" will yield from 0.5 to 5 gallons per minute (gpm) and a 95 percent chance that they will yield 0.1 to 10 gpm.

4.5.5.3 Water supplies. The primary source of drinking water, industrial water, and landscape irrigation at TI and YBI is the water provided by the San Francisco Water Department. This water is conveyed from San Francisco across the Bay Bridge by a 10-inch pipeline. In addition, the East Bay Municipal Utility District supplies a secondary water source via a pipeline which begins at Emeryville and extends across the Bay Bridge. From these two pipelines the water is transported and stored in several large capacity concrete tanks on TI and YBI (WESTDIV, 1985).

4.5.6 Migration Potential. There are basically two pathways for contaminant migration at TI and YBI. The first is through subsurface flow into the ground water and the second is by surface runoff.

The ultimate receptor of any soluble contamination at TI will be to the surrounding Bay waters. The direction of flow for the ground water and surface runoff is towards the Bay. In general, surface runoff would flow from east to the north side of TI.

Less soluble contaminants, however, may tend to bind with the soils and become relatively immobile. For example, hydrocarbons, a major contaminant at TI,

may migrate downward to the water table where the less soluble hydrocarbon components will become relatively immobile in the capillary fringe, while the soluble fraction dissolves into the ground water.

At YBI, the geologic conditions differ. In the filled areas on the eastern side, soluble contaminants would migrate to the Bay waters. At other areas on the Island, the surface runoff would either transport potential contaminants to the Bay or the runoff would infiltrate into the sandstone. Once in the sandstone, the waterborne contaminants will be transported in the direction of lower hydraulic potential. If there is limited secondary porosity in the shale, it may potentially act as an impermeable barrier to contaminant migration.

Because the ground water at both YBI and TI are not used, there is limited potential for human contact. No information was available on utilization of ground water (springs, etc.) by wildlife. However, ground water is not anticipated to provide a significant source of water to YBI's wildlife. Contaminated ground water entering San Francisco Bay could potentially affect marine fauna and flora, particularly sessile organisms such as benthic invertebrates and algae in nearshore waters of TI and YBI. Contaminants could potentially accumulate in the tissues of invertebrates and be introduced into the food chain of predators such as waterfowl and fish. A detailed water quality and sediment sampling program, and extensive bioassay analyses would be necessary to determine the extent of contamination (if any) and potential effects on the food chain of nearshore marine fauna and flora.

CHAPTER 5. ACTIVITY WASTE GENERATION

5.1 INTRODUCTION. This chapter describes major waste generators at NAVSTA TI. Past operations are described as completely as possible, whereas current operations are discussed only as they relate to a better understanding of past waste practices. Section 5.2 describes Industrial Operations, Section 5.3 describes Ordnance Operations, and Section 5.4 describes Radiological Operations. Figures 5-1 and 5-2 can be used to locate the sites discussed. Table 5-1 includes information on routine work generated from activities for which data were available.

5.2 INDUSTRIAL OPERATIONS.

These sections describe waste generation from various industrial operations.

5.2.1 Bureau of Alcohol, Tobacco, and Firearms (BATF) Laboratory (J7, TI). The laboratory conducts routine testing on alcoholic beverages and investigative testing on articles associated with criminal activities. The lab has been located in Building 233 since about 1976 and is scheduled to cease operation in 1988. Approximately 1,000 gallons per year of alcoholic beverages are washed down the drain system with water to the wastewater treatment system. Small quantities of various waste solvents, especially chlorinated hydrocarbons, are collected and disposed of off-station through the TI fire department. Chemicals and solvents used in the laboratory which are reported to have been disposed of in this manner include: carbon tetrachloride, methylene chloride, acetone, ethers, toluene, pentanes, pyridine, tetrahydrofuran, trichloroethane, hexane, various acids/caustics/alcohols, silver nitrate, and brucine sulfate. Spent photographic chemicals were also disposed of in the drain system during the period 1979 to 1984. The volume of chemicals disposed of is unknown. A water filled tank is used for ballistics testing during which weapons are fired into the tank. The water is used to slow the bullet without altering its shape or markings. The tank is drained (about 500 gals) to the ground outside approximately every six months when the water stagnates. Based on the observed operation of the tank, no surface contamination is expected. Table 5-1 provides a summary of routine wastes generated from the laboratory.

5.2.2 Medical Clinic (G4, TI). The Medical Clinic is located in Building 257 and has been providing medical services to station personnel since the early 1940s. Other medical activities including surgery and recovery wards were conducted in several additional buildings during the 1940s, but no information was located on these activities. Two major types of waste generated from Building 257 activities are infectious wastes and x-ray wastes.

5.2.2.1 Infectious wastes. Infectious wastes are collected in plastic bags or containers and stored in large trash-type containers with lids. The wastes are transported off-station where they are autoclaved prior to disposal or incineration. Infectious wastes may have once been processed through the trash incinerator at Treasure Island.

5.2.2.2 X-ray wastes. The x-ray department has been located in different parts of Building 257 since the 1940s. About ten years ago it was located at the south end of the middle wing of the building (Site 1). While in this location, fixer and/or developer leaked from the equipment, produced a hole

TABLE 5-1

ROUTINE WASTE GENERATION

OPERATION	WASTE	QUANTITIES	DESTINATION	CURRENT ACTIVITY?
Bureau of Alcohol, Tobacco and Firearms				
Alcohol Testing Lab	Alcoholic Beverages	1,000 gal/yr	San Francisco Bay	Yes
Photo Lab	Spent Developers & Fixers	--	San Francisco Bay	Yes
Criminal Investigation Lab	Miscellaneous Chemicals	Small Amounts	San Francisco Bay	Yes
Naval Station, Piers 13-16	Bilge Water (1% Oil)	3,979,000 gal/yr	Hunters Point or Contractor	Yes
	Ballast Water (1% Oil)	1,350,000 gal/yr	Hunters Point or Contractor	Yes
	Oil (From Bilge in Port)	4,000 gal/yr	Hunters Point or Contractor	Yes
	Oil (From Bilge at Sea)	266,500 gal/yr	Hunters Point or Contractor	Yes
	Oil (From Ballast)	1,400 gal/yr	Hunters Point or Contractor	Yes
Wastewater Treatment Plants				
Treasure Island	Sludge	10-15 cu yds/mo	Ground	No
Treasure Island	Domestic Wastewater	1,000,000 gal/day	San Francisco Bay	Yes
Yerba Buena Island	Domestic Wastewater	20,000 gal/day	San Francisco Bay	No
Auto Hobby Shop, Naval Exchange Service Station	Waste Lube & Hydraulic Oils	21,000 gal/yr	Recycled off-station (PWC, DRMO)	Yes
Navy Technical Training Center				
Fire Training School	Oil Residues	14,000 gal/yr	Disposed of through PWC contract with IT Corporation	Yes
	Oxygen Breathing Apparatus Cannisters (Potassium Super Oxide)	34,700 lbs/yr	Neutralization, then disposal through DRMO	Yes
Boiler Water/Feed Water Training	Dilute Mercuric Nitrate Solution	220 gal/yr	Disposed of through PWC contract with IT Corporation	Yes
Public Works Center Shop	Waste Paint	--	PWC	Yes
PCB Transformers	PCB Transformers	--	Disposed of through PWC contract with IT Corporation	Yes
Radiac Test Center	Radioactive Sources (e.g., Br-82, Na-84, and non-repairable equipment)		Radiac Repair Facility at Mare Island Shipyard, Vallejo, California	Yes

SITE NUMBER (CIRCLED)	DESCRIPTION
1	Medical Clinic
2	Radiation Training Area
3	PCB Equipment Storage Area
4	Hydraulic Training School
5	Old Boiler Plant
6	Fire Training School
7	Pesticide Storage
9	Foundry
10	Bus Painting Shop
12	Old Bunker Area
13	Stormwater Outfall (TI) (Island Perimeter)
14	New Fuel Farm
15	Old Fuel Farm
16	Clipper Cove Tank Farm
17	Tanks 103/104
19	Refuse Transfer Area
20	Auto Hobby Shop/ Tansportation Center
21	Vessel Waste Oil Recovery
22	Navy Exchange Service Station
24	5th Street Fuel Releases
25	Seaplane Maintenance
26	Underground Tanks (Throughout Island)

LEGEND
- Existing Structures
- Fence
- Main Station Entrance
- Shore Line

0 400 Feet

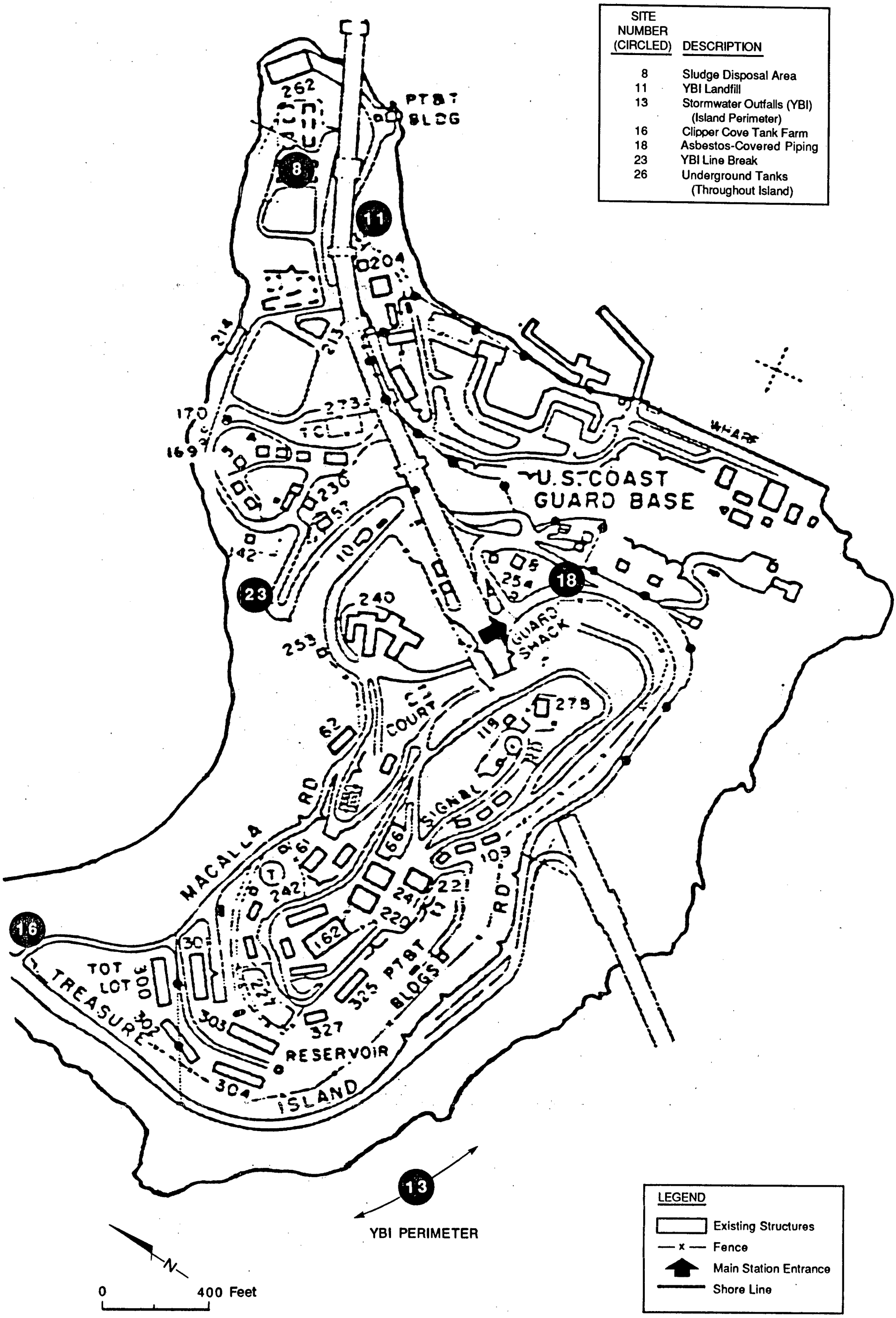
TI PERIMETER

PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

LOCATION OF IDENTIFIED SITES-TREASURE ISLAND (TI)

FIGURE 5-1

SITE NUMBER (CIRCLED)	DESCRIPTION
8	Sludge Disposal Area
11	YBI Landfill
13	Stormwater Outfalls (YBI) (Island Perimeter)
16	Clipper Cove Tank Farm
18	Asbestos-Covered Piping
23	YBI Line Break
26	Underground Tanks (Throughout Island)



PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

LOCATION OF IDENTIFIED SITES YERBA BUENA ISLAND (YBI)

FIGURE 5-2

through the wood floor, and flowed into the soil beneath the raised building. The duration and quantity of released material were not established. Two soil samples obtained from beneath the building in October 1987 contained 7,740 and 3,050 mg/kg of silver and had a pH of 4.2 and 4.0 respectively (see Appendix B). In the late 1970s the x-ray department was relocated to the east end of the north wing. Later in 1982, it was moved to its present location in the northeast corner of the middle wing. Currently, x-ray equipment solutions are managed off-station for disposal or silver recovery.

5.2.3 Dental Clinic (G4, TI). The dental clinic, like the medical clinic, is located in Building 257 and provides dental care to station personnel. The three principal wastes generated are mercury amalgam, infectious, and x-ray wastes.

5.2.3.1 Mercury amalgam. Mercury amalgam is used in dental fillings. Pre-1980, mercury was obtained in glass bottles and mixed prior to use in the fillings. No reports of spills were obtained. If spills had occurred, it was a standard naval practice to clean the spill by using a mercury vacuum. Waste mercury and mercury amalgam are reported to have been sent off-station to DRMO Alameda. The quantities of material disposed of were not identified.

5.2.3.2 Infectious wastes. Infectious wastes are collected in plastic bags or containers and stored in trash-type containers with lids. The wastes are transported off-station to be autoclaved prior to disposal or incineration. In the past infectious wastes may have been processed through the trash incinerator.

5.2.3.3 X-ray wastes. Waste developer and fixer are sent off-station for management by DRMO Alameda. Since approximately 1970, materials have been handled in this manner but prior to that they were disposed of in the sanitary drain system. Volumes of materials managed were not quantified.

5.2.4 Boiler Plants. There are currently five boiler plants (Pier Plant (K6, TI), Building 455 (I5-I6, TI), and Zones 1 (L4-M4, TI), 4 (F4-F5, TI), and 5 (C7, TI)) on TI and one (Building 66 (E3-F3, YBI)) on YBI used to provide steam. Chemicals used in most boilers include acids, caustics, and morpholine. Boiler plant blowdown is either sent to the wastewater or stormwater systems. The waters from all 5 boiler rooms on TI drain into the storm drain system; however, the storm drain from Building 455 ties into a lift station where the water is eventually processed through the sewer treatment plant. Water from the storm drains sent by the remaining 4 boiler plants of TI is discharged to the Bay (Site 13).

Moreover, in the early 1940s boiler plants were constructed at Buildings 14, 26, and 102 on TI and Building 214 on YBI. Boiler plant 102 was demolished in about 1968 and it was reported that building debris, including asbestos, is buried in the location where the building stood (Site 15). TI personnel speculated that asbestos may be buried where Buildings 26 and possibly Building 14 were demolished. Asbestos from demolition of Building 214 is reported to have been taken off-station.

5.2.5 Government Printing Office (I5-I6, TI). The GPO is located in Building 99 and has been in operation since 1984. Wastes generated at this facility

are reported to be managed according to current regulations. Based on other printing operations, the wastes would include waste inks and cleaning solvents.

5.2.6 Dry Cleaning (I5-I6, TI). Uniforms, clothing, draperies, and household fabrics and cloths are currently taken off-station to be dry cleaned. Prior to about 1970-1975, dry cleaning was conducted in Building 99. Specific information regarding solvent use and handling was not located. Types of solvents typically used in dry cleaning were tetrachloroethylene (perchloroethylene) and benzene.

5.2.7 Incinerators. Several incinerators have operated on the station since the early 1940s. Building 58 (C8, TI) was an incinerator in 1943, but is listed as a paint shop in 1947. Building 87 (L6-L7, TI) was an incinerator from at least 1943 to 1953. Building 345 (A5-A6, TI) was an incinerator from at least 1953 to 1968 and was later demolished between 1968 and 1969. Building 231 (E8, YBI) on YBI was an incinerator in 1953. Specific information was not available on the type and volumes of material burned in these units or where the ash was disposed. Building 345 had an associated trash pit approximately 43 x 12 x 10 feet deep. Information was not available as to which pit was filled in or with what type of material. Building 481 (I7, TI) is currently listed as an incinerator. These is also an incinerator located on-station which reportedly is used to burn classified documents. Details on the operation or location of this unit were not accessible.

5.2.8 Acid Dip Tanks (M5, TI). Until about 1982, acid dip tanks were located on the south side of Building 3. The acid solution in the tanks was used to remove corrosion from metal. Information was not obtained to identify how often the acid tanks were emptied or to where they were discharged. Generally both acid and caustic solutions are used in the corrosion cleaning process. An acid such as sulfuric acid may be used to remove rust and corrosion. Later the material is dipped in a weak caustic solution to neutralize the effect of the acid before the material receives a final rinse with water.

5.2.9 Paint Shops. Several paint shops have operated on station since the 1940s. Based on drawings reviewed, paint was used or stored on TI in Buildings 41 (Site 9) (L5), 58 (C8), 126 (I3), 142 (M2-M3), 151 (G3-H3), 223 (E3), 270 (B7), 334 (C7-D7), 335 (D8) (Site 10) and 379. Paint mixing activities were reported to have been conducted in Building 41 from 1953 to 1968 and in Building 335 from 1947-1953. No information was located to identify the quantities of paint used. One of the methods of disposing of waste paint, thinner, and solvents was to drain them over the riprap at the edge of the island. Paints containing lead and zinc-chromium were known to have been used in the past. Building 41 is still listed as the public works paint booth, but was reported to have not been used for painting activities since 1968. Building 379 is presently listed as a paint locker.

5.2.10 Sandblasting Area. Sandblasting was reported to have been conducted outside Building 3 (5, TI) from an unspecified time up until the early 1970s. Building 355 (M5, TI) is still listed as being a sandblasting shop, but information concerning current sandblasting activities was not obtained. The disposal location of the used sand is not known, but was reported to be the bunker area at the north end of the island, Site 12. No information was obtained to estimate the volume of sand that may have been disposed. Typical

sandblasting operations probably generate waste sand and paint; lead and zinc-chromium paints were used in the past.

5.2.11 Foundry (L5, TI). Building 41 (Site 9) was used as a foundry during at least 1943-1947. No information was located to describe the operation of this facility or to identify the types of wastes which may have been generated or how they may have been disposed. However, typically at foundries slag metals would be the anticipated generated waste.

5.2.12 Wastewater Treatment Plant (C7-D7, TI). The wastewater treatment plant was constructed in 1967 to 1968 and became operational in 1969. Previously, primary treatment of wastes had been performed beginning in 1961. Untreated wastes were discharged from TI previous to 1961. It was reported that sludge from the plant was spread on the ground on the west side of Building 62 (Site 7) and on Army Point at YBI (Site 8). The volume spread was estimated to be 10-15 cubic yards per month from approximately 1968 to 1976. In more recent times, as necessary, sludge is removed from the unit by vacuum truck and hauled off-station as a hazardous waste by the DRMO Alameda for additional processing or disposal. Prior to construction of the plant, a circular Imhoff tank and a chlorinator were used to process YBI domestic wastes. The effluent discharged directly into the San Francisco Bay. Table 5-1 provides a summary of routine wastes generated from the wastewater treatment plants.

5.2.13 Pesticide Operations. Pesticides have been stored on TI in Buildings 335 (D8), 62 (D7), 112 (M6), and 292 (C6). It is reported that pesticides were stored in Building 335 (Site 10) until approximately 1955 when they were stored in Building 112 and Building 62 (Site 7). Pesticides were stored in Building 62 from 1955 to the early 1960s. After 1980 or 1981, the pesticides were removed to their present storage location in Building 292. Two of those buildings, 335 and 112, are located adjacent to the water and it has been speculated that residues may have been discharged to the Bay (Site 13). Pesticides currently used are boric acid, diazinon, malathion, Decon, rat bait, and endosulfan. In 1974 and 1975, 35-Burgo insecticide was also applied on TI and YBI. Present practices use approximately 10 gallons/yr of all pesticides.

5.2.14 Electric Rewind Shop (L5-L6, TI). A part of Building 3 was used as an electric rewind shop. It was speculated that solvents, such as carbon tetrachloride, may have been used to degrease motors prior to rewind activities. The period of operation of this shop was not determined.

5.2.15 Boiler Training Center (L4, TI). A boiler training center was located by Building 2 at an unspecified time. Training may have involved the use of acids, caustics, or other chemicals. A summary of the routine wastes generated from the boiler training center is provided on Table 5-1.

5.2.16 Fire Training School (B6-C7, TI) (Site 6). This operation, part of the NTTC, is located at the northeast corner of TI. The complex was built in 1946 and is bounded by Buildings 264, 292, 461, and the wastewater treatment plant. We understand that, although some additions and modifications to the area have been made, operating procedures now are very similar to those followed since the center was established.

The central training yard is a paved area surrounded by a concrete trench collector (installed about 1949). Diesel and gasoline, magnesium, and wood-fueled fires are set in various mockups in the yard and are extinguished with a water, biodegradable soap and industrial talc mixture. Approximately 18,700 gallons of gasoline and 31,200 gallons of diesel are used each year. Wastewater and unburned diesel and gasoline are collected in the trench and pass through a series of oil/water separators. Ultimately, the wastewater flows to the wastewater treatment plant and waste diesel and gasoline fuels are disposed of off-site. Approximately 14,000 gallons/yr of gasoline and oil residue are generated (Table 5-1). Wood ash is periodically cleared to waste bins and dumpsters. The paved yard and sumps have been cleaned twice yearly since about 1981 with water and biodegradable soap; rinsate flows through the same trench collector system to the WWT. Information describing how wastes were disposed of prior to construction of the perimeter trench and also the WWT was not located, but discharge to the Bay is probable via the storm sewer system. Several pavement patches are evident in the yard which suggest that underground piping has been replaced although information regarding leaks was not obtained.

At an undetermined time, four concrete-lined burn pits were located at the north edge of the center, at least one of which was termed a "napalm pit." No napalm had reportedly been used as a fuel source. These pits may have been surrounded by a gravel yard, not a paved surface, and any fuel spills in this area would not have been contained.

Four underground fuel storage tanks are located at the center, two at the north edge and two at the east. The tanks apparently have always been truck-filled.

The eastern portion of the school, outside the paved training yard, is partially paved and partially a gravel surface. Above and below ground piping, underground fuel storage tanks, and the underground separator tank system are located in this area.

5.2.17 Gasoline Stations. Six gasoline stations have been located on the island in the past to provide fuels for civilian and government motor vehicles. Only two stations are currently in operation: Naval Exchange Service Station (Site 19) and dispensing pumps adjacent to Building 180. Underground tanks associated with the current and former gasoline stations are discussed in Section 6.1.5. A summary of the routine wastes generated from the Naval Exchange Service Station is provided on Table 5-1.

5.2.18 Garages and Vehicle Maintenance (See Figures 5-1 and 5-2). The vehicle maintenance operations conducted on-site included routine changing of fluids such as oil and lubricants; parts replacement including filters, brakes, tires, engines, and transmissions; body work, and vehicle (steam) cleaning and degreasing. Numerous garages and vehicle maintenance areas have been in operation on TI and YBI at various times and the dates of operation are highly variable. The majority of the vehicle maintenance operations on TI have occurred in Buildings 2 (L4-M4), 3 (L5-M6), 69 (H8), 115 (L5), 125 (H3), 129 (I4), 180 (L2-M2), 193 (D1), 194 (E3), 223 (E3-F3), 224 (E3), 225 (E2), 267 (E3), 330 (E8), and 335 (D8). Of these, only 180, 225, 330, and 335 are still active. Little information exists as to the type and intensity of usage

of the YBI maintenance areas although the service station 204/208 (H5, YBI) seems to have been in existence for the longest period of time.

Buildings 129, 194, 223, 224, and 267 have been identified as potential areas of vehicle cleaning, degreasing, and transmission repair in the past. Activities within these buildings would commonly produce oil, grease, metal shavings, and unknown cleaning solvents which have been released into San Francisco Bay by the storm sewer system. These buildings were most intensively used from 1943 to 1948. Only Building 129 currently remains today, and it is used for storage.

Disposal methods for the waste streams associated with the maintenance shops have been variable. Waste fluids, for example, from the Auto Hobby Shop 225 (Site 20) are now recycled by a certified agent via contract with PWC (Table 5-1). However, in the past wastes were routinely emptied into the storm sewer system. Waste filters and parts were disposed of in trash bins and ultimately shipped to nonhazardous landfills for disposal. This method of disposal is still used in current operations.

5.2.18.1 Auto Hobby Shop (E2, TI). The Auto Hobby Shop (Site 20) is located in Building 225 and is used by station personnel to work on motor vehicles. Wastes generated at the shop include oils, lubricants, antifreeze, and solvents from degreasing operations. A 1972 report (NAVSHIPS/NAVSEC) aniticipated that by 1975 the Auto Hobby Shop would generate 6,000 gallons of waste lube and hydraulic oils (Table 5-1). Wastes are stored in 55 gallon drums before being transported by and disposed of by contracts via PWC. However, waste fluids in the past were reported to have been routinely emptied into the storm sewer system. Waste fillers and parts were disposed of in trash bins and ultimately shipped to nonhazardous landfills for disposal. This method of disposal is still used in current operations. At two locations outside the Auto Hobby Shop, soil samples were collected and analyzed in October 1987. These samples contained 13,300 and 28,200 mg/kg of oil and grease and 9,700 and 25,000 µg/g of total petroleum hydrocarbons, as summarized in Appendix B.

5.2.19 Transformer Maintenance. Electrical transformers are used on-station to supply electricity to the various facilities. Periodic servicing of these transformers, capacitors, switches, etc. has been required and a quarterly monitoring program was instituted about 1984. Some of the units are known to have contained Polychlorinated Biphenyls (PCBs). These units have been taken out of service and stored by Building 3 or by the USS Pandemonium. IT Corporation under contract with PWC then drained the PCB fluid and disposed of the fluid and transformers (Table 5-1). Prior to 1984 maintenance consisted of checking fluid levels in the transformers and refilling the transformers when appropriate.

Since the 1984 program was implemented, PCB transformer locations have been appropriately decontaminated. For example, a transformer which had leaked was removed from inside Building 3's substation in mid-1987. Subsequent wipe-sample testing of the area by NEESA revealed residual low PCB concentrations of 2.6 µg/100cm^2 and less than 1 µg/100 cm^2 (Appendix B), confirming that any contamination was cleaned up adequately.

5.2.20 Shipping Repair. Ship repair operations were reportedly conducted on TI at Piers 11 (N6) and 12 (M6) and in Buildings 2 (L4) and 69 (H8) from at least 1943 until prior to 1983. Information regarding the nature of the ship repair operations and the associated waste volumes and management practices was not available.

5.2.21 Pier Building Shop. Routine pier operations including some wharf building operations were reported to occur during the 1950s and possibly in years before or after the 1950s. Information regarding the nature of these procedures and the associated waste volumes and management practices was not located. Whether wood treatment chemicals may have been used was not identified.

5.2.22 Aircraft Servicing. Filing information reviewed indicates routine aircraft servicing was conducted on-station in the past. It is known servicing and maintenance on the Pan Am Clipper was conducted from the late 1930s to 1958. Some servicing of naval aircraft is expected to have occurred during the period when airstrips were located on-station. Because operations ceased in 1958, detailed information regarding the nature of these procedures and the associated waste volumes and management practice was not available for review. The wastes generated probably included lube oils, fuels, fuel additives, engine fluids, paints, thinners, and cleaning solvents.

5.2.23 Welding School (L5, TI). The NTTC operated a welding school in Building 41 from about 1981 until February 1987. Information from prior instructors or operation files concerning waste generated were not located. Typical wastes generated by welding operations include metals and polishing agents.

5.3 ORDNANCE OPERATIONS. This section describes waste generation from Ordnance Operations at NAVSTA TI.

5.3.1 Ordnance Production/Loading. A review of historic facility records indicates ordnance production/loading operations were conducted on-station in the past. Detailed information regarding the nature of these operations and the associated waste volumes and management practices was not located.

5.3.2 Ordnance Storage. In the past, ordnance bunkers and storage buildings were located at the northern end of TI (Site 12). This included Buildings 43 through 54 and 277 through 287 (A2-C6). These facilities were removed during 1968 and were replaced by housing units.

5.4 RADIOLOGICAL OPERATIONS. Several operations were identified as using radioactive materials. Some are past operations and some are still conducted.

5.4.1 Radiological Instrument Calibration (I7, TI). The Radiac Test Center, part of the NTTC, is located in Building 343 and is used to train personnel on the use and calibration of radiation detection equipment. Sealed radioactive sources with long half-lives are used for the training. When spent, the sources are processed through NSC Oakland where they are later transferred to Radiac Repair Facility at Mare Island Naval Shipyard for disposal. Radioactive materials used during facility operation have included Potassium-42, Sodium-24, Radium-226, Cesium-137, Bromine-80 and 82, and Plutonium-239 compounds (Table 5-1). Use of Radium-226 was discontinued by

the Navy in 1984. Radioactive materials currently are stored in Building 344 adjacent to Building 343.

5.4.2 Radiation Decontamination Training. During the period from approximately 1964 to 1969, radiation decontamination training by NTTC was conducted near the intersection of 12th Street and Avenue A (E1, TI) using a ship and aircraft mockup (Site 2). A radioactive solution containing Bromine-82 was spread over the mockup and personnel were trained on procedures to decontaminate the equipment. Wash water from the operation was collected in concrete tanks and held approximately 21 days prior to discharge to the bay. The reported half-life of Bromine-82 is 24-36 hours. The ship mockup was moved to its current location, Building 371 (C8, TI), in 1969. Information was not located to indicate what was done with the aircraft mockup and the concrete tanks. After the move, radiation training was conducted using sealed sources.

CHAPTER 6. MATERIAL HANDLING: STORAGE AND TRANSPORTATION

This chapter describes the methods used to store and handle hazardous materials. Information for the materials handled includes locations, amounts, how stored, incidents in handling or storage, and years of operation.

The majority of operations on TI and YBI began in the early 1940s immediately after the property was transferred to Naval ownership, although YBI was the site of Army activity in the 1930s. Little information exists for the period prior to 1943 and for this reason 1943 is used as a baseline for the beginning of operations. Specific site locations can be identified using the grid reference symbols provided to the right of the operation title and the grid system located on Figure 6-1 for TI and Figure 6-2 for YBI.

6.1 PETROLEUM, OILS, AND LUBRICANTS (POL).

6.1.1 Waste Hydraulic Oil Storage (C7, TI). Building 342 is the Hydraulic Training Center (Site 4), a part of the NTTC. At the rear of the building, there is an unbermed, paved area containing generally twelve to eighteen 55-gallon drums of waste oil (mainly transmission oil). Leaks or spills have occurred resulting in staining of the pallets and asphalt surface. Some oil has flowed off of the paved area into a dirt and gravel area at the eastern and northern edges of the storage area. The drums of waste oil are temporarily stored adjacent to Building 342, before removal by the PWC or via a contractor for PWC.

6.1.2 Waste Vessel Oil (M6, TI). Waste oil from vessels is unloaded into cylindrical steel shells (DONUTs) which are maintained partly above and partly below the water surface. The number of fuel spills reported through Port Services is listed on Table 6-1. Current DONUTs have bottoms which prevent the oil from contacting the water. Older models did not have bottoms and the oil directly contacted the water. The DONUT is maneuvered to shore and pumped through an oil/water separation system (Site 21). The recovered oil is recycled by the DRMO. Volumes of waste oils for 1975 were estimated at 271,900 gallons per year in a 1972 document (NAVSHIPS/NAVSEC, 1972) which discussed shipboard oily waste generation. The volume of waste oil generated in 1985 is given on Table 6-2.

6.1.3 Fuel Farm (D8-E8, TI). The fuel farm is the primary source of storage and distribution of gasoline, oils, and fuel oils on-site. The farm office is located in Building 64. The fuel farm includes 11 above ground storage tanks, a pump and clarifier house in Building 85, Pier 21A north for offloading fuel from barges, a network of underground pipelines for distribution, and a tank truck for distribution. The fuel farm associated with the World's Fair and Pan Am clipper operations was located in the southeastern portion of TI, slightly southeast of Building 89. The fuel farm was moved to the present location in 1943 to support naval operations. Fuel is offloaded from barges at Pier 21A north and is piped onshore to the appropriate tank for storage. Fuel is distributed in several ways including tank truck delivery to underground tanks and via pipeline to the Naval Exchange Service Station (Site 22). The storage tanks include two 210,000 gallon uprights (Tanks 4 and 5), one 50,000 gallon upright (Tank 456), and eight 10,000 gallon horizontals (Tank Row 6). One source of waste from these tanks is bleed water. In the past, this stream was run onto the bare ground beside each tank, but is now

TABLE 6-1

OIL SPILLS REPORTED THROUGH PORT SERVICES

DATE	NUMBER OF SPILLS
July 1971 to December 1972	53
1973	52
1974	21
1975 through 1979	Missing Data
1980	3
1981	3
1982	Missing Data
1983	8
1984	2

Ref: Command History of U.S. Naval Station, Treasure Island, 1971 to 1984.

AMB/1212a

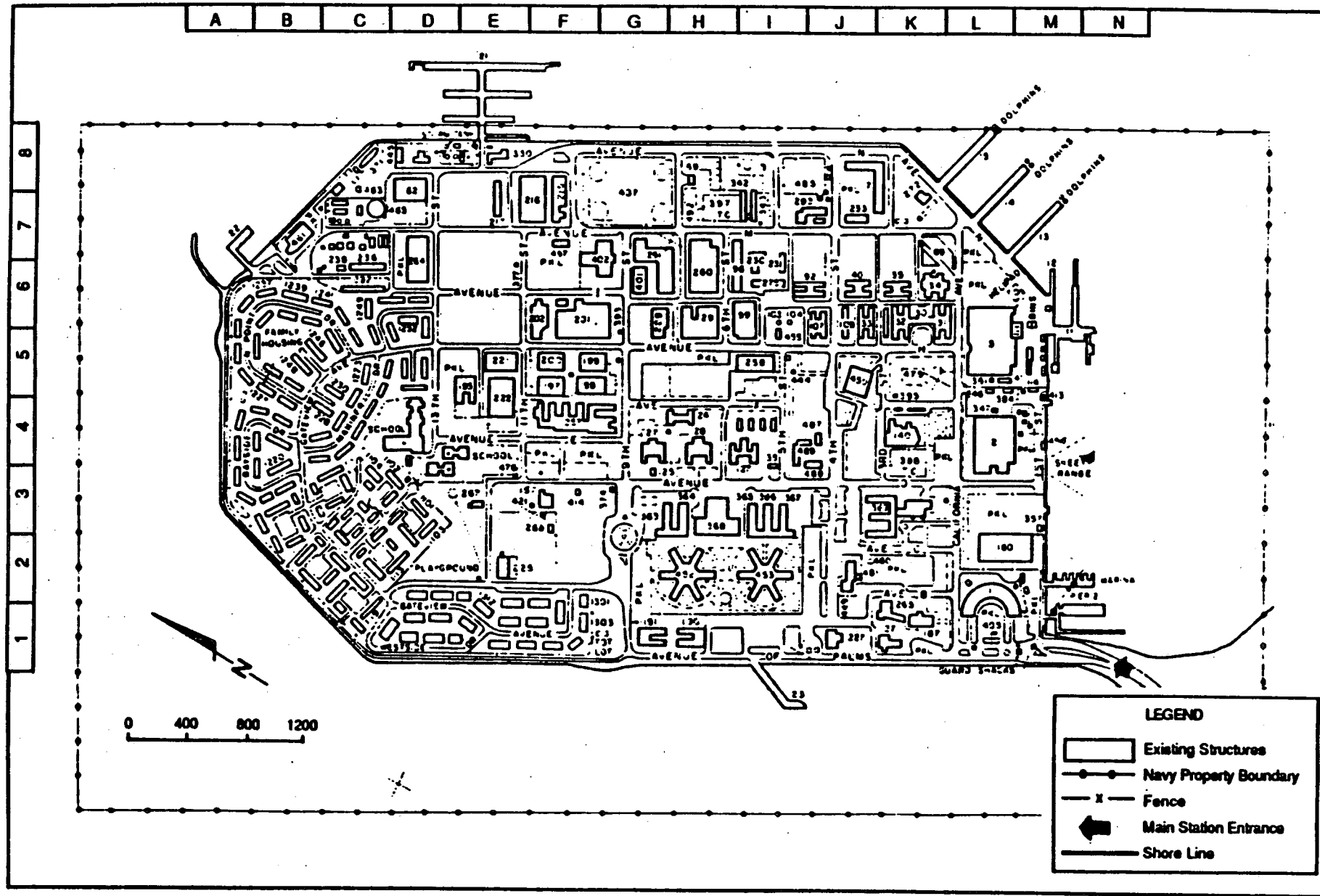
TABLE 6-2

HAZARDOUS WASTE VOLUMES REPORTED AT TREASURE ISLAND NAVAL STATION FOR 1985

GENERATOR	U.S. DOT WASTE TYPE	WASTE NUMBER	QUANTITY
Naval Station Operations	Waste Oils	221	30,093 gallons
	Trichloroethane	4226	5 gallons
	Waste Paint	--	84 gallons
	Flammable Hazardous Waste Solid	222	400 pounds
	Flammable Hazardous Waste Liquid	221	34 gallons
Naval Technical Training Center Operations	Waste Oils	221	20,000 gallons
	Oxygen Breathing Apparatus Cannisters	--	34,700 pounds
	Mercuric Nitrate	151	110 gallons
	Flammable Hazardous Waste Solid	222	450 pounds
	Flammable Hazardous Waste Liquid	221	52 gallons
U.S.S. GALLANT	Corrosive Waste Solid	D002	9,915 pounds
	Corrosive Waste Liquid	D002	20 gallons
	Flammable Hazardous Waste Solid	221	150 pounds
U.S.S. EXCEL	Flammable Hazardous Waste Solid	222	9,151 pounds
	Flammable Hazardous Waste Liquid	221	900 gallons

Ref: CY 1985 Hazardous Waste Annual Report, NEESA.

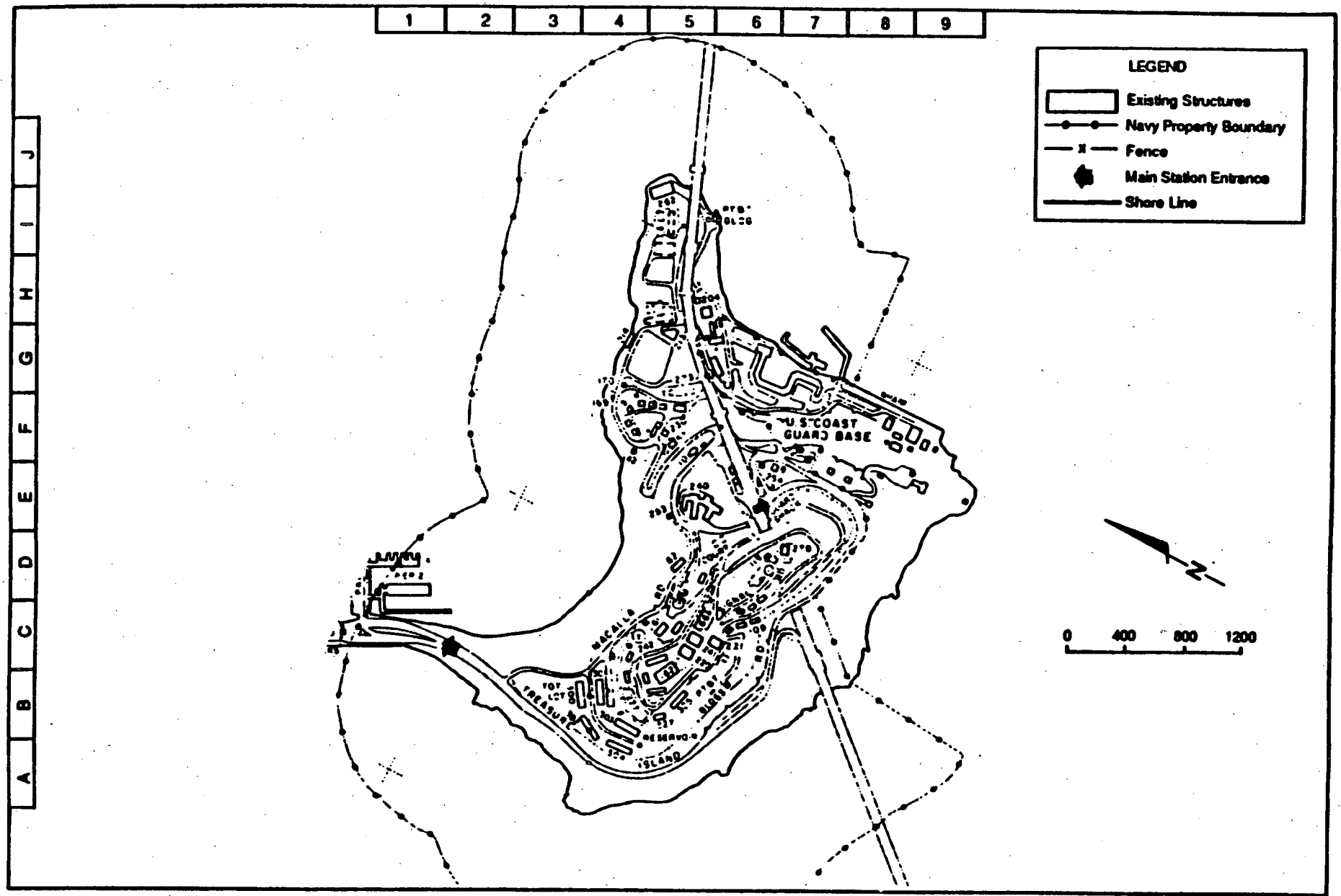
AMB/1209a



PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

TREASURE ISLAND LOCATION MAP

FIGURE
6-1



PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

YERBA BUENA LOCATION MAP

FIGURE
6-2

processed through a series of filters located inside the clarifier, Building 85. Another source of waste associated with the fuel farm is spillage from storage and distribution operations.

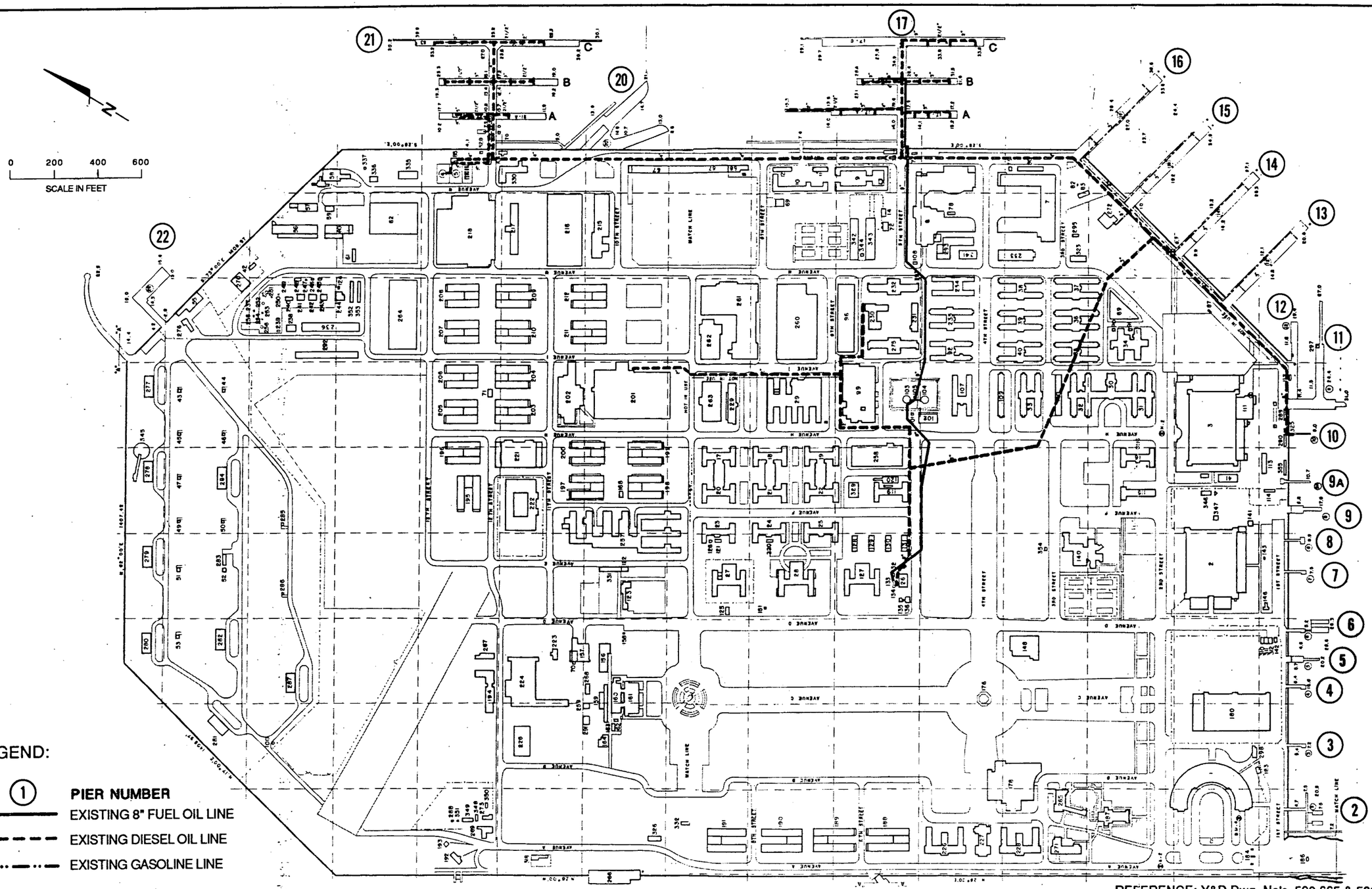
Diesel fuel and leaded and unleaded gasoline are stored and handled at the fuel farm while the tank farm housing Tanks 103 and 104 (I5-I6, TI) (Site 17) store grade 6 fuel oil. Tanks 103 and 104 are upright tanks and have been operational since 1943; each have an approximated 200,000 gallon capacity and distribution is accomplished by underground pipeline to several locations on-site. There are two oil pumping stations (Buildings 101 and 105) and one heating plant (Building 102/455) associated with Tanks 103 and 104. Plant 102 (Site 5) was demolished and replaced by Plant 455 in 1968. Figure 6-3 and 6-4 show the most recent locations of underground pipelines associated with the tank farms on TI and YBI.

A tank farm, Clipper Cove Tank Farm (Site 16), existed on the finger of fill connecting TI and YBI (C2-C3, YBI) from approximately 1943 to sometime between 1959 and 1966. The farm contained 10 upright above ground automotive diesel and aviation gasoline storage tanks of about 50,000 gallon capacity each. These tanks were filled via pipeline from the offloading point at Pier 1. Fuel was then drawn from these tanks by the pump station 182 and used for site vehicles. Between 1959 and 1966 the tanks were removed by a private contractor.

6.1.4 Storage Tanks. Above ground storage tank locations for TI and YBI are shown on Figure 6-5. The majority of the tanks on YBI which were used for fresh water, saltwater, and fuel storage are no longer in use and have been demolished or inactivated. The majority of tanks on TI are still in use. The above ground tanks on TI are mentioned in the previous and following sections.

All above ground fuel tanks on YBI are no longer used and include Tanks 117, 169, 170, and 214, all of which received offloaded fuel from Pier 3/4. Tank 117 had a volume of 37,500 gallons and was used to store black oil. Tanks 169 and 214 were used to hold 26,670 and 10,000 gallons of diesel fuel, respectively. The tank located at 214 was part of the heating plant. Tank 170 had a working capacity of 26,670 gallons and stored grade 6 oil. These four fuel tanks were in operation from 1943 until the late 1970s with the exception of Tank 117 which is reported to have been taken out of service in approximately 1950. There are numerous above ground water tanks located on YBI, several of which may have been used for oil storage at some point as well.

6.1.5 Underground Tanks. Underground tanks, shown on Figure 6-6, have been used on-site to store fuels and oils for package heaters or boilers at individual buildings, for backup power generators, for gas station fuels, for firefighter training, and for aviation fuel. These tanks are filled either by underground pipeline or by tank truck. Two underground tank surveys completed by ERM-West (1987) assessed a total of 38 locations where underground tanks were thought to exist, 31 of which were confirmed as tank locations. Of the 26 known tanks outside of the NTTC area, 5 were leak tested, 1 was detected as leaking and is scheduled for closure. Tank closure plans were filed for 21 of the 26 non-NTTC tanks in existence on Treasure Island and Yerba Buena Island. Investigation of the 6 tank locations in the NTTC area confirmed the existence of 5 such tanks. Figure 6-6 gives the locations of the known and possible underground tank locations.

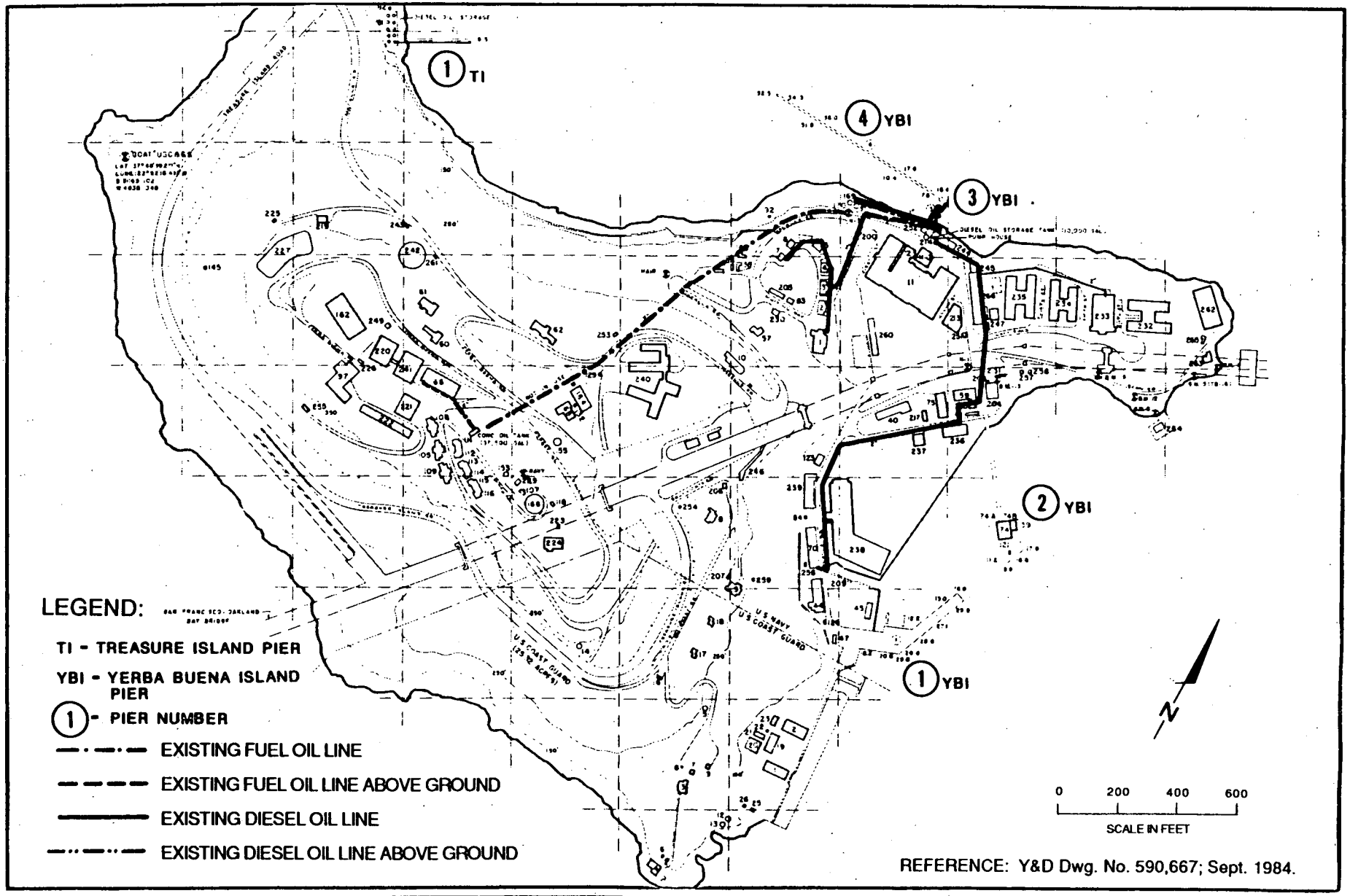


REFERENCE: Y&D Dwg. No's. 590,665 & 590,666; Sept. 1984.

PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

UNDERGROUND PETROLEUM PIPELINES AND REFUELING PIER LOCATIONS - TI

FIGURE
6-3

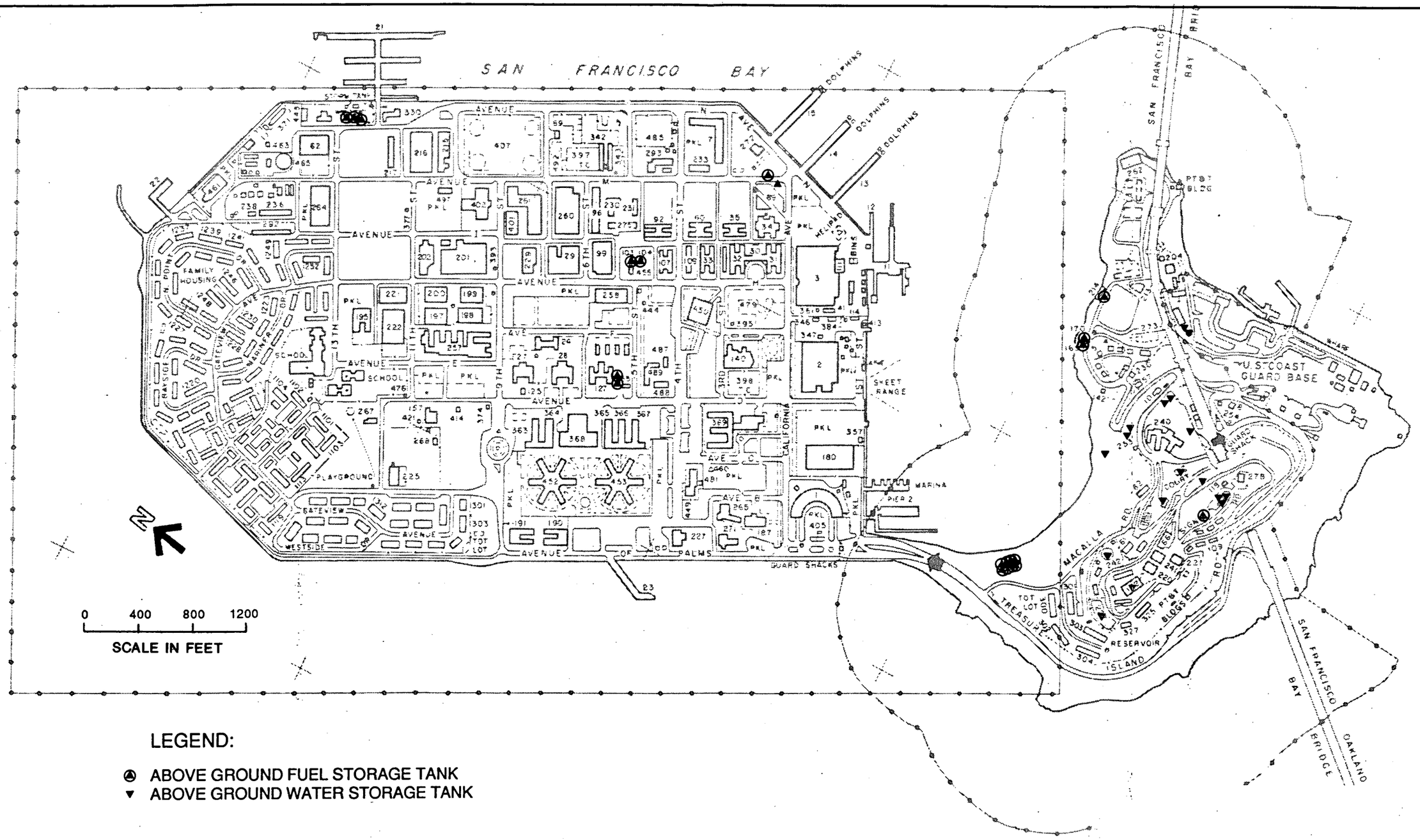


REFERENCE: Y&D Dwg. No. 590,667; Sept. 1984.

PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

UNDERGROUND PETROLEUM PIPELINES AND REFUELING PIER LOCATIONS-YBI

FIGURE 6-4



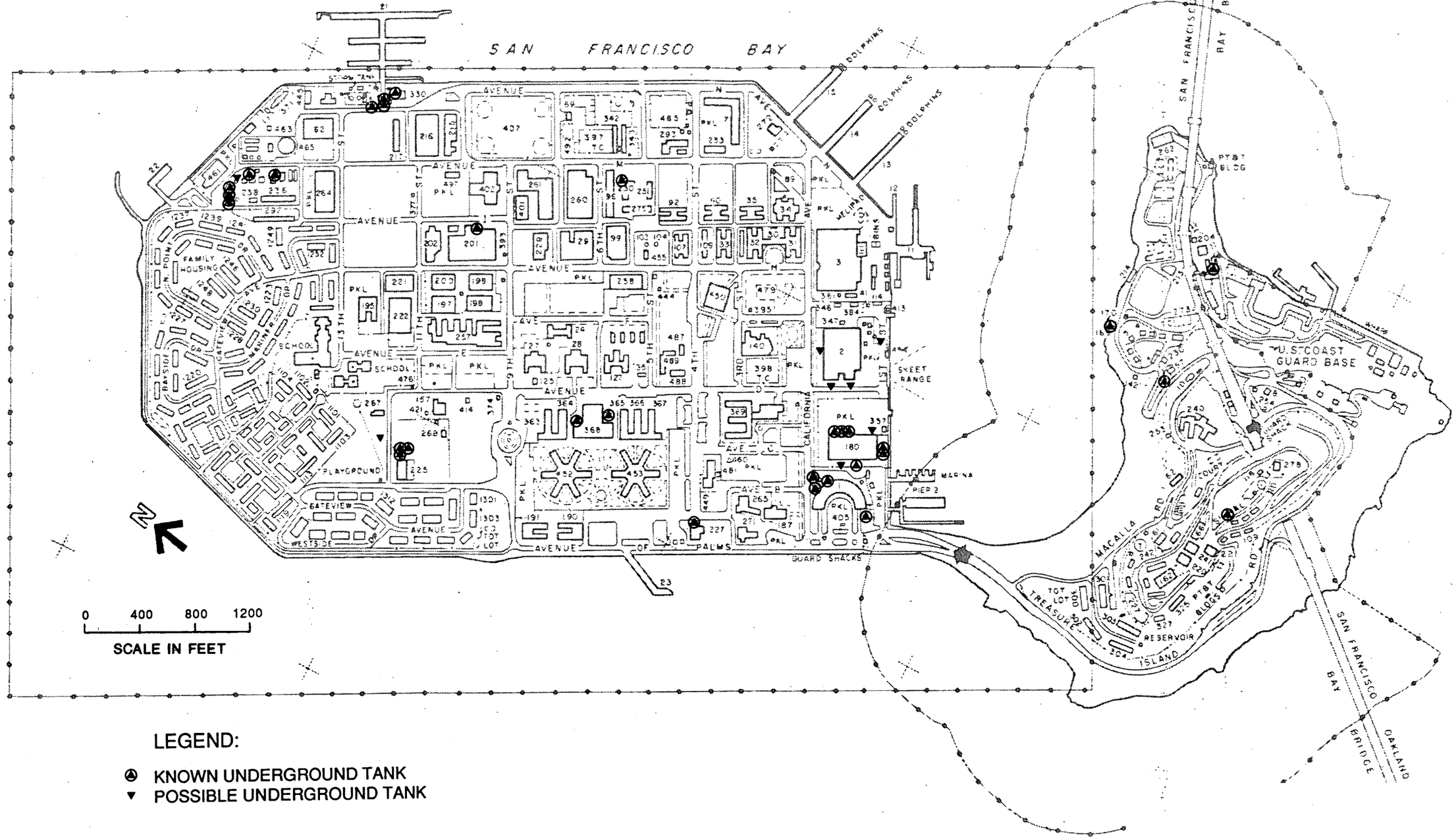
LEGEND:

- ▲ ABOVE GROUND FUEL STORAGE TANK
- ▼ ABOVE GROUND WATER STORAGE TANK

PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

LOCATION OF PRESENT AND FORMER ABOVE GROUND FUEL & WATER STORAGE TANKS

FIGURE
6-5



LEGEND:

- ▲ KNOWN UNDERGROUND TANK
- ▼ POSSIBLE UNDERGROUND TANK

PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

KNOWN AND POSSIBLE UNDERGROUND TANKS

FIGURE
6-6

An additional 16 potential underground tank locations have been identified during this site assessment. These locations are shown on Figure 6-7. As with the fuel farm, above ground tanks, and fueling piers, the primary sources of potential contamination are spillage during filling and leaking pipelines or tanks.

6.1.6 Fueling Piers (See Figures 6-3 and 6-4). TI and YBI housed several fueling piers which were used for offloading fuel from barges or for fueling docked vessels. Pipelines commonly ran from each pier to a pumping station onshore. Pier 3/4 on YBI and Piers 1, 10, 17, and 21 on TI have each been involved in fueling operations since 1943. From 1943 to 1953 all piers were operating as fueling and offloading sites. However, at some time between 1968 and 1977, Pier 3/4 on YBI and Pier 1 on TI had been completely removed. Pier 10 discontinued operation as a fueling and offloading point at an unidentified time and Pier 17 was removed sometime between 1968 and 1977 leaving Pier 21A north as the sole remaining fueling pier. The main source of potential contamination associated with fueling vessels and fuel offloading is spillage of fuel and oil during these operations. Spill quantities are difficult to estimate since records of spills were not located. The majority of the spills would have been into the waters of San Francisco Bay.

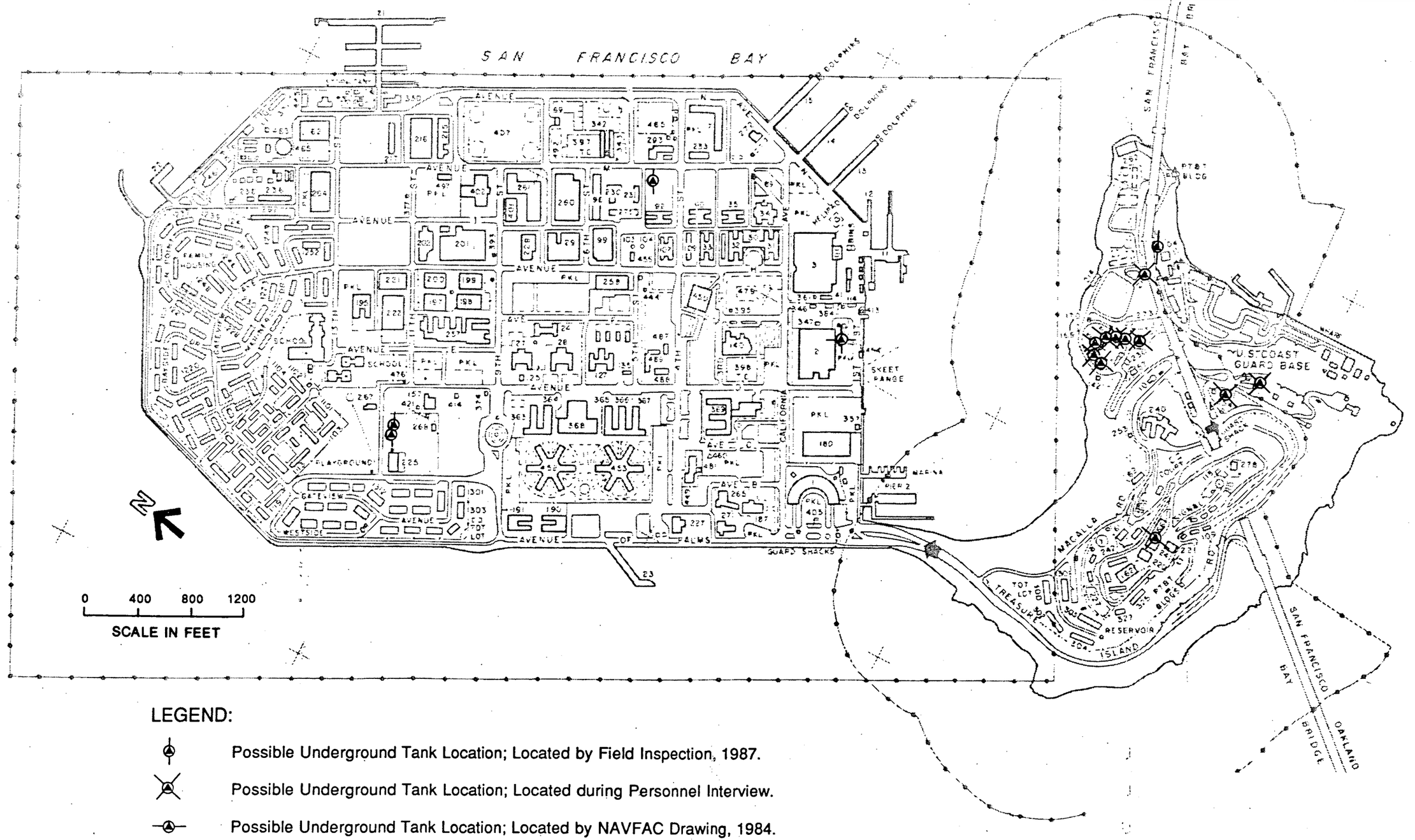
Pier 3/4 on YBI was used in offloading diesel fuel and grade 6 fuel to several destinations. Diesel fuel was routed to above ground Tanks 169 and 214 or to Buildings 1-7, 59, 70, 233, and 238 via underground and above ground piping. Grade 6 fuel oil was offloaded and delivered to Tank 170 and to Building 66, also via pipeline. The pier was partially demolished between 1959 and 1969 and completely removed sometime between 1969 and 1977.

Pier 1 on TI was located in the Clipper Cove area and operated from 1943 until its destruction between 1958 and 1959. Diesel fuel was offloaded at the pier from barges and stored in ten upright tanks (Site 16), each with approximately 50,000 gallons capacity (Tank Farm 181, YBI) located immediately west of the pier. A pumping station (Building 182, YBI) was used to fuel trucks and other vehicles from these tanks.

Pier 10 on TI was used to fuel and offload ships and barges with diesel and grade 6 fuel via an underground pipeline. Fueling operations were discontinued at Pier 10 at an unspecified time.

Pier 17 was a major offloading and fueling pier from 1943 until its demolition sometime between 1968 and 1977. Upon demolition of Pier 17, Pier 21 became the primary offloading and fueling point. Diesel fuel was offloaded at Piers 17A, 17B, and 17C and delivered to various locations on-station via pipeline. Grade 6 fuel was offloaded on 17B and routed to Tanks 103, 104, and 133 for storage. Steam lines were commonly buried immediately adjacent to grade 6 and black oil lines in order to heat the viscous oil to facilitate flow within the pipeline. An underground pipeline running parallel to Avenue N carried the offloaded fuels and oils from Pier 17 north to the fuel farm, and west and south to various storage tanks. Flow was reversed to southward from the fuel farm after demolition of Pier 17.

Diesel was offloaded on Piers 21A, 21B, and 21C and routed to the fuel farm storage tanks or to other locations on-site. Gasoline and diesel were offloaded on Pier 21A north and routed to storage tanks at the fuel farm or to



LEGEND:

- Possible Underground Tank Location; Located by Field Inspection, 1987.
- Possible Underground Tank Location; Located during Personnel Interview.
- Possible Underground Tank Location; Located by NAVFAC Drawing, 1984.

PRELIMINARY ASSESSMENT/ SITE INSPECTION NAVSTA Treasure Island, Ca.	**POSSIBLE UNDERGROUND TANKS**	FIGURE 6-7

other tanks on-site via an underground pipeline. Pier 21A north has been operational from 1943 until the present time as an offloading site. Piers 21B and 21C were operational from 1943 until an unspecified time.

6.1.7 Service Stations (See Figures 6-1 and 6-2). During the period from 1943 to 1953, up to 5 service stations were operating on TI and YBI including Buildings 81 (K8, TI), 82 (K8, TI), 225 (E2, TI) (Site 20), and 330 (E8, TI) (Site 22), and 204/208 (H5, YBI), respectively. A sixth fueling station (Building 182) was associated with the diesel storage (Tanks 181) near Clipper Cove (C2-C3, YBI). Two service stations are currently in operation on TI including the Naval Exchange Service Station (Building 330, Site 22) and the station located south of Building 180 (M2, TI). Station 81 was in use from 1943 until its conversion to a storage area in about 1947. Station 82 appears to have operated from 1943 until at least 1953, while the service station east of the Auto Hobby Shop (Site 20, Building 225) operated from 1943 until it was destroyed by fire in about 1958. The Clipper Cove station (Building 182) was removed during the demolition of the upright storage tanks (Building 181) sometime between 1959 and 1966. Station 204/208 was operational as Building 204 from 1943 to 1947 and was moved to Building 208 during 1947 where it existed until closure at an unknown time.

Stations 81 and 82 received fuel from underground piping which may have been connected to underground tanks of unknown volume. Station 225 contains three underground tanks with surface fill lines, two of which are 1,000 gallon capacity, and one of which is 5,000 gallon capacity. These tanks are still in place although the service station has been closed. No information was located regarding tanks associated with the YBI gas station (Buildings 204/208). There is reason to suspect at least one tank existed near Building 204 at one time based on conversations with a former employee. Station 330 has been connected to the storage tanks at the fuel farm via underground piping, although three underground tanks were previously used as day tanks for the station. The station south of Building 180 is served by a tank truck from the fuel farm and contains two underground storage tanks. Waste associated with the gas stations includes spilled gasoline and diesel which is difficult to quantify. This spilled product was periodically washed from the ground surface into storm drains or carried by runoff to the storm drains which discharged into San Francisco Bay (Site 13). Other waste products associated with the gas stations are included in the following section titled Garages and Vehicle Maintenance.

6.1.8 Garages and Vehicle Maintenance (See Figures 6-1 and 6-2). Numerous garages and vehicle maintenance areas have been in operation on TI and YBI at various times and the dates of operation are highly variable. The majority of the vehicle maintenance operations on TI have occurred in Buildings 2 (L4-M4), 3 (L5-M6), 69 (H8), 115 (L5), 125 (H3), 129 (I4), 180 (L2-M2), 193 (D1), 194 (E3), 223 (E3-F3), 224 (E3), 225 (E2), 267 (E3), 330 (E8), and 335 (D8). Of these, only 180, 225, 330, and 335 are still active. Little information exists as to the type and intensity of usage of the YBI maintenance areas although the service station 204/208 (H5, YBI) seems to have been in existence for the longest period of time. The garage and vehicle maintenance operations conducted on-site included routine changing of fluids such as oil and lubricants; parts replacement including filters, brakes, tires, engines, and transmissions; body work; and vehicle (steam) cleaning and degreasing.

Disposal methods for the waste streams associated with the maintenance shops have been variable. Waste fluids from the Auto Hobby Shop (Building 225) are now recycled by a certified agent under contract with the DRMO. However, they were reported to have been routinely emptied into the storm sewer system in the past. Waste filters and parts were disposed of in trash bins and ultimately shipped to nonhazardous landfills for disposal. This method of disposal is still used in current operations.

Degreasing and vehicle cleaning operations commonly produced oil, grease, metal shavings, and unknown cleaning agents which may have been released into San Francisco Bay by the storm sewer system. Buildings 129, 194, 223, 224, and 267 have been identified as potential areas of vehicle cleaning, degreasing, and transmission repair in the past. Activities within these buildings were probably most intensive from 1943 to 1948. Only Building 129 currently remains and it is used for storage.

A 1972 report (NAVSHIPS/NAVSEC) anticipated that by 1975 the transportation shop would generate 3,000 gallons of waste lube and hydraulic oils while the Auto Hobby Shop and Naval Exchange would generate 6,000 and 12,000 gallons of these fluids, respectively. While such fluids are currently recycled, there is reason to believe that this was not always the case. The quantities have certainly varied in the past depending upon the volume of vehicle maintenance. No further information regarding actual quantities managed was located.

Seaplanes commonly landed near Clipper Cove from 1943 to approximately 1958. The planes were pulled from the water at Piers 13 through 16. The planes were fueled with aviation fuel supplied from the 10 underground tanks located south of Building 2, and were serviced in Buildings 2, 3, and 180 (Site 25). Little is known of the types of service and maintenance provided for the planes although there are indications that engine repair and cleaning were a common practice. Information regarding the disposal methods of the wastes generated was not located.

6.1.9 Transformer Storage (N5, TI). A storage area for electrical transformers is presently located on the south side of Building 3 (Site 4). The area is covered by asphalt or concrete. Some but not all of the transformer units stored are marked as hazardous materials. Treasure Island personnel indicated that a spill had occurred in the storage area within the past two to three years. The transformers are transported to NSC Oakland for management and disposal. In addition, it has been reported that in the past transformers were also stockpiled by the U.S.S. PANDEMONIUM behind Building 445.

It has been suggested that the approximate number of transformers on Yerba Buena Island and Treasure Island has been 15. The major transformer on YBI has been located near the old boiler plant, Building 214. It was reported to have been removed over two years ago. On TI transformers are believed to have been located in the Star Barracks (Buildings 452 and 453), Building 1, U.S.S. PANDEMONIUM (currently Building 371), and in the buildings opposite the Chiefs Barracks. Transformers were also reported to exist below the wooden piers; however, when the vault boxes were opened, the transformers were missing. Personnel have stated that all potentially contaminated PCB transformers have been removed and replaced from TI and YBI.

6.2 PHOTO CHEMICALS. Chemicals used in photograph and x-ray processes are purchased in commercial containers. Waste chemicals are either recycled though DRMO Alameda or disposed of in the wastewater system.

6.3 TRASH, RUBBISH, AND SCRAP (H8-I8, TI). Debris storage yards have been located at several sites on TI. Currently, trash is collected from around the station and transported to a handling area east of Building 342 (Site 19). The trash is consolidated in large containers prior to being taken off-station for disposal by the PWC. Loose debris and soil staining were visible in the area around the transfer area. A scrap/salvage storage area is also located north of this handling area.

Formerly, a salvage yard was located in the 1940s and 1950s at the northeast corner of the island in the area of the present-day Buildings 371 and 445. A trash disposal trailer was located immediately north of family housing unit 1235 and appears on a general development map dated 1953. Presumably, the trailer was removed when the family housing was constructed in the late 1960s. An area indicated as a dump is also noted on a 1977 map, located approximately midway between family housing unit 1237 and Building 461. The northern end of TI, where the 1200 series family housing units stand, was used as a disposal area as well, presumably during the 1950s and is discussed further in Section 8.12. The exact dates of use of all facilities, the materials disposed of, and the quantities involved are not known.

6.4 INFECTIOUS WASTES. Infectious wastes from the medical and dental clinic are collected in special bags and placed in metal trash containers at the facility. The containers are transferred off-station for further handling. In the past infectious wastes may have been processed through the trash incinerator.

6.5 RADIOLOGICAL MATERIALS (I7, TI). Sealed radioactive sources are transported to and from the facility in motor vehicles in compliance with Department of Transportation requirements. Spent sealed sources are disposed of through NSC Oakland where they are later transferred to the Radiac Repair Facility at Mare Island Naval Shipyard for disposal. The radioactive sources are stored in Building 344.

6.6 DRMO OPERATIONS.

The Defense Reutilization and Marketing Office (DRMO) in Alameda and Public Works Center (PWC) in Oakland handle the disposal of hazardous wastes generated on Treasure Island. This is done either directly by PWC and DRMO personnel or indirectly by PWC via contracts with certified waste haulers. Radioactive wastes are handled through Radiac Repair Facility at Mare Island.

PWC arranges, generally through subcontractors, for the disposal of its wastes generated in PWC shop and PWC operations onsite.

DRMO handles approximately 90 percent of the hazardous wastes generated on Treasure Island. Naval Station operations and the Naval Technical Training Center operations are the primary generators although docked vessels, the U.S.S. Gallant and U.S.S. Excel, are also large generators (see Table 6-2). During 1985, over 50,000 gallons of waste oil were manifested off-station. Almost half of this volume was generated by the Naval Technical Training

Center (NTTC) at the Fire Training School. NTTC also generated 34,700 pounds of canisters from oxygen breathing apparatus (OBA) and over 100 gallons of mercuric nitrate from the Boiler Water/Feeder School. The U.S.S. Excel generated over 9,100 pounds of flammable hazardous waste solids, and the U.S.S. Gallant generated almost 10,000 pounds of corrosive wastes.

The wastes manifested by DRMO off-station are transported either directly to a disposal facility or to Alameda where subsequent disposal arrangements are made. Wastes are usually transferred to Alameda when storage time is about to exceed the 90-day limit at Treasure Island and/or volumes are not sufficient for cost-effective disposal. In the latter case, they are consolidated and held by DRMO in Alameda until disposal at a later date. Total hazardous waste volumes transported off Treasure Island, either directly to a disposal facility or to Alameda, are shown in Table 6-3.

TABLE 6-3

HAZARDOUS WASTE VOLUMES MANIFESTED OFF-STATION IN 1985

U.S. DOT WASTE TYPE	WASTE NUMBER	QUANTITY
Waste Oils N.O.S.	221	50,093 gallons
Flammable Hazardous Waste Solid	222	10,151 pounds
Trichloroethane	4226	5 gallons
Waste Paint	--	144 gallons
Flammable Hazardous Waste Liquid	221	986 gallons
Oxygen Breathing Apparatus Cannisters	--	34,700 pounds
Mercuric Nitrate	151	110 gallons
Corrosive Waste Solid	D002	9,915 pounds
Corrosive Waste Liquid	D002	20 gallons
TRANSFERRED TO DRMO, ALAMEDA:		
Waste Paint	D001	930 pounds
Coating Compound	D001	45 pounds
Duplicating Fluid	D001	336 pounds
Removal Fluid	D001	45 pounds
Polychlorinated Biphenyls (PCBs)	261	90 pounds

Ref: EPA Generator Biennial Hazardous Waste Report for 1985, U.S. Naval Station, Treasure Island.

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CHAPTER 7. WASTE PROCESSING OPERATIONS

This chapter provides information on the chemical, physical, and biological waste processing operations including a description of the process, quantities processed (where available), and characterization of the effluent streams. In the following sections, grid locations of various TI facilities are referenced to Figure 7-1 and YBI facilities are referenced to Figure 7-2. Specific site locations can be identified using the grid system located on the figure.

7.1 SEWAGE PLANT (C7,8 - D7,8, TI). The current wastewater treatment plant (WWT) became operational in 1969 with secondary treatment and receives wastewater streams from TI and YBI. From 1961 to 1969, only primary treatment was performed, and prior to 1961, no treatment facility existed for TI wastewater. A small waste treatment system which included an Imhoff tank (used to separate soild wastes from liquid wastes) was operated on YBI as early as 1966 according to maps and aerial photos of the area. The YBI system processed only YBI wastes. The exact time period of operation of this facility is unspecified

Where necessary, oil/water separators are used to separate oil and water. The TI WWT system consists of grit (solids) separators, digestors, a trickling filter, and a chlorination basin. Sludge and solids are periodically removed for off-station management. The WWT effluent water is discharged to the Bay under an NPDES permit. Maximum flow through the system is currently about 2 million gallons per day. Tables 7-1 and 7-2 summarize facility capacity and volume treated.

Reportedly, for a brief period of time from 1968 to 1976, the sludge was spread in open areas adjacent to the WWT (near Building 62) and on YBI (Sections 8.7 and 8.8, Sites 7 and 8). Spread volumes were estimated at about 10 to 15 cubic yards per month total for both sites, potentially spreading 960 to 1440 cubic yards of sludge from 1968 to 1976. Table 7-3 presents pollutants discharged by the WWT in 1984. Similar compounds may have been present in the sludge in 1969 and therefore may be expected to exist in two spreading areas.

7.2 DOCUMENT INCINERATOR (J2, TI). An incinerator, Building 481, is used to burn classified documents. Because of the nature of the operation, specific details of the quantity of material burned, the time period during which it has operated, and the disposal and volume of the ash were not provided. Several small incinerators have been located on TI for brief periods of time. Other locations on TI include Buildings 58 (C8), 87 (M6), and 345 (A5) (see Section 7.5).

7.3 RUBBISH TRANSFER AREA (H8-I8, TI). A rubbish transfer area is located to the east of Building 342. Trash is transferred from small containers to large bins which are transported off-station for disposal.

7.4 WASTE OIL RECOVERY SYSTEM (M6, TI). Waste oil unloaded from ships is transferred to an on-shore oil/water separation facility consisting of five above ground tanks each with a 2,000-gallon capacity. The oil recovered from the system is disposed of off-site through contracts at PWC by a certified waste hauler and through DRMO Alameda. The water from the system is processed through the wastewater treatment system. A 1972 report estimated 271,900

TABLE 7-1

WASTEWATER VOLUMES TREATED ANNUALLY

YEAR	VOLUMES (Million Gallons)
1974	511.0
1975	474.5
1976	485.5
1977	220.0
1978	Unknown*
1979	365 (Estimate)*

Ref: "Questionnaire on Waste Water Treatment and Reuse in California," State of California, Department of Water Resources, Sacramento, California, 1980.

AMB/1213a

TABLE 7-2

WASTEWATER TREATMENT PLANT DAILY FLOW RATES

	TREASURE ISLAND (Million Gallons Per Day)	YERBA BUENA ISLAND (Million Gallons Per Day)
1969:		
Average Daily Flow	1.0	0.02 (Estimate)
Peak Daily Flow	1.9	Not Metered
Design Capacity	1.3	0.09
1980:		
Average Daily Flow	1.0	Not Operating
Average Dry-Weather Design Flow	2.0	Not Operating
Peak Wet-Weather Design Flow	4.4	Not Operating

References:

Report on Waste Disposal Practices at Naval Station, Treasure Island, Pacific Southwest Region, California-Nevada Basins Office, Alameda, June 13, 1969.

Report on Waste Disposal Practices, Yerba Buena Island, Pacific Southwest Region, California-Nevada Basins Office, Alameda, June 13, 1969.

California Regional Water Quality Control Board, San Francisco Bay Region, Resolution No. 69-_____, July 31, 1969.

California Regional Water Quality Control Board, San Francisco Bay Region, Order No. 80-23, May 20, 1980.

AMB/1214a

TABLE 7-3

POLLUTANTS DISCHARGED BY TREASURE ISLAND WASTEWATER TREATMENT PLANT

PARAMETER	AVERAGE LOADING (kg/day)	NPDES* PERMIT REQUIREMENT (kg/day, 6 mo. med.)
Cyanide, Total	<0.07	0.76
Arsenic, Total	<0.129	0.076
Cadmium, Total	<0.13	0.15
Chromium, Total	0.017	0.038
Copper, Total	0.07	1.5
Lead, Total	0.07	0.76
Nickel, Total	<0.07	0.76
Silver, Total	<0.07	0.15
Zinc, Total	0.15	2.3
Phenolics, Total Recoverable	0.02	3.8
Mercury, Total	<0.004	0.0076
Chlorinated Hydro-Carbons, General	Not Detected	0.015

* National Pollutant Discharge Elimination System.

Ref: NPDES Permit No. CA0110116 Discharge Monitoring Report for 1984, dated December 14, 1984.

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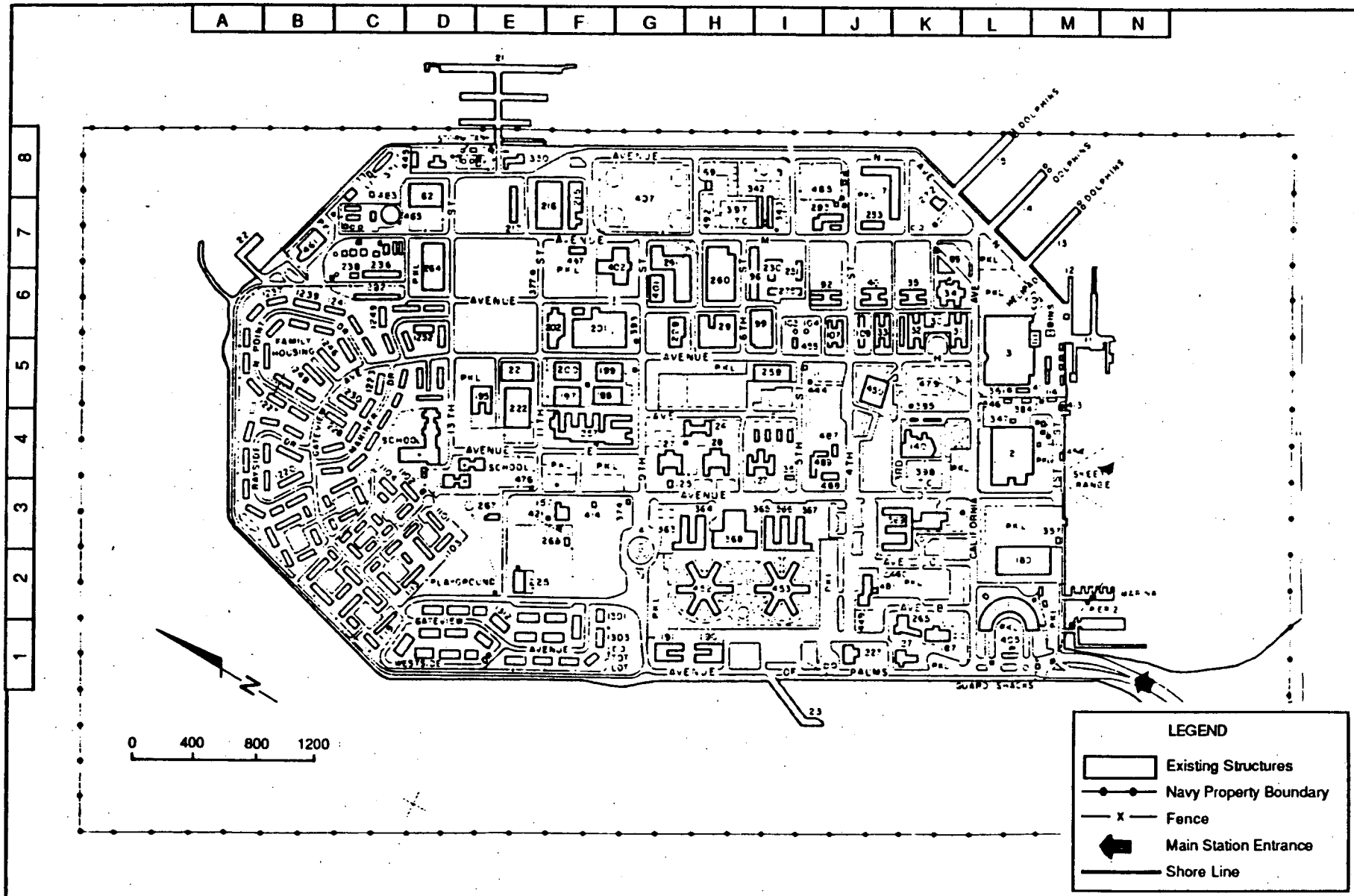
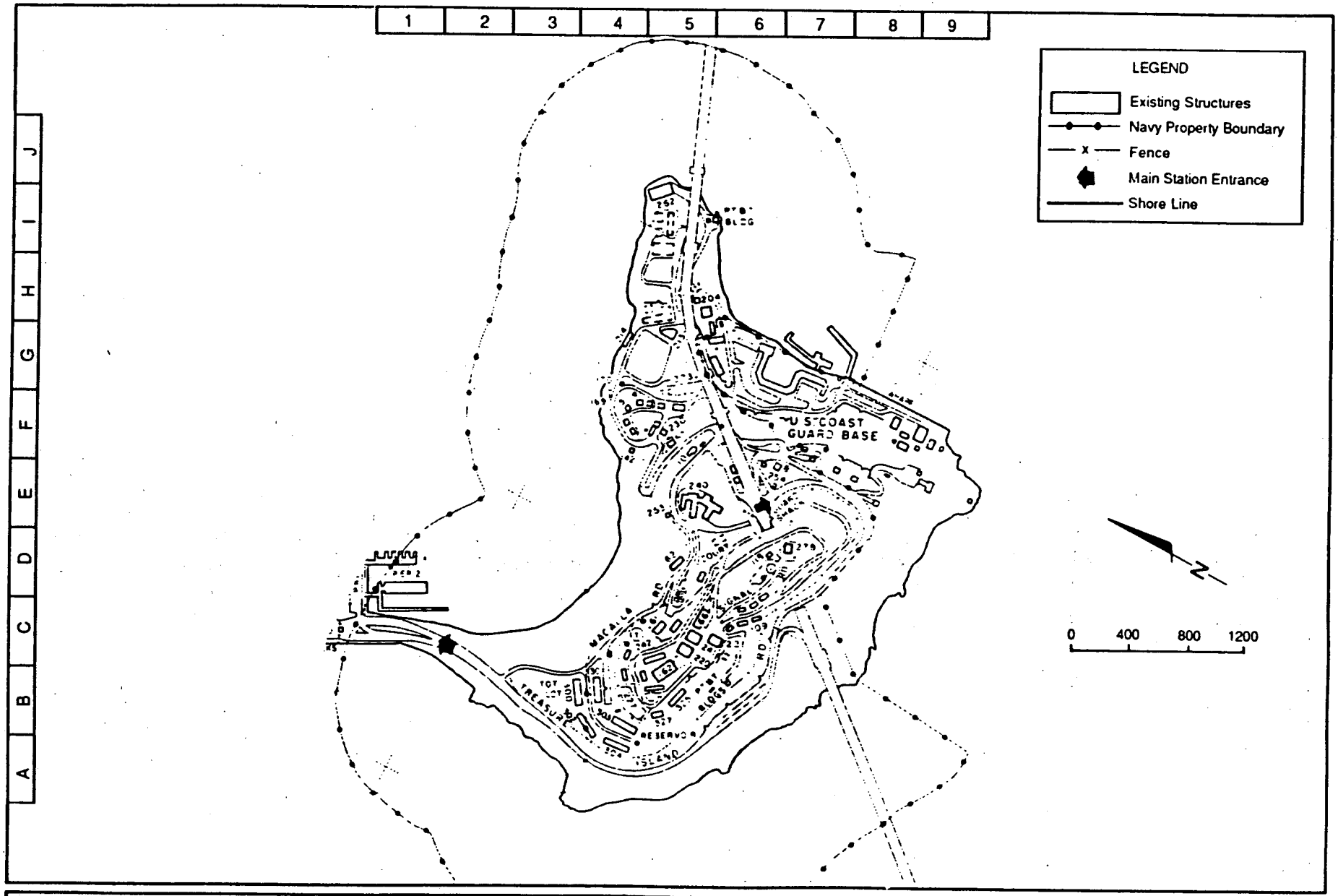


PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

TREASURE ISLAND LOCATION MAP

FIGURE
7-1



PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

YERBA BUENA LOCATION MAP

FIGURE
7-2

gallons per year of oil would be recovered by 1975; however, this is dependent upon the number of ships which are serviced.

7.5 TRASH INCINERATOR (A5, TI). A large trash incinerator (Building 345) was located at the northern edge of TI in the ammunition bunker area between at least 1953 and the mid-1960s. Based on a 1951 design plan, a conveyor belt system was used to transport materials from a trash pit located southwest of the incinerator to the top of the 84-foot incinerator. A trash trailer was also located in this area on a 1955 general development map. Both are discussed further in Section 8.12. Information regarding the volume and types of materials incinerated and the disposition of ash and unburned waste was not found.

CHAPTER 8. DISPOSAL SITES AND POTENTIALLY CONTAMINATED AREAS

This Chapter describes potentially contaminated areas identified during this study. Specific site locations for TI can be identified using the grid system located on Figure 8-1, while locations for YBI can be identified using Figure 8-2. A summary of operations at each site is shown in Table 8-1.

8.1 SITE 1: MEDICAL CLINIC. (G4, TI) At the south end of the middle wing of Building 257 (Figure 8-3), the wood flooring was eroded by leaks from x-ray equipment. Corrosive developer and/or fixer solution leaked from the equipment and then dripped onto the soils under the building, which is raised on pedestals. The affected area may cover up to 100 square feet to an unknown depth. The exact time, quantity, and duration of the release material was not established. The eroded flooring section is now carpeted and has been either repaired or replaced. This portion of the building was temporarily used as a day care facility. Surface sampling by NEESA confirmed the presence of silver in concentrations of 3,050 and 7,740 mg/kg and acidic soil (pH of 4.0 and 4.2, Appendix B).

8.2 SITE 2: RADIATION TRAINING AREA. (D1,2-E1,2, TI) The area near the intersection of 12th Street and Avenue A contained ship and aircraft mockups used for radiation training (Figure 8-4). Radioactive water was involved with this activity and was collected in two subgrade concrete tanks. Records reviewed did not indicate whether the training area and water conveying devices were coated or were bare earth. At the time of the training, several hundred square feet of area could have been affected. The training operations in this area began in the mid-1950s and ceased in 1969 when the school moved to its current location in Building 371. Because the half life of the radioactive material used (Bromine-82) was on the order of 24-36 hours, any remaining radiation level is expected to be below significant levels. Reference to the area was made in a 1971 foundation study for housing units (Lowry & Associates) which stated that testing at the ground surface for residual contamination was negative. The area is currently the site of military housing.

8.3 SITE 3: PCB EQUIPMENT STORAGE AREA. (N5, TI) It was reported that PCB containing oil was accidentally released in the PCB equipment storage area on the south side of Building 3 (Figure 8-5) about two to three years ago. The quantity of material released was not identified and an area up to 100 square feet may be involved. The material was reported to have been cleaned up, but records of the cleanup were not located. Based on the location of the storage area, any oil which may have floated on rain water may be expected to flow into the Bay where it would be rapidly diluted to insignificant levels. Of several samples taken by NEESA personnel in the storage area, only one wipe sample contained PCB, at a concentration of 3.5 $\mu g/100\ cm^2$ (Appendix B).

8.4 SITE 4: HYDRAULIC TRAINING SCHOOL. (H7-I7, TI) The concrete pad immediately behind the Hydraulic Training School, Building 342, is used as a drum storage area (Figure 8-6). Drums of hydraulic oil, motor oil, and unidentified fluids in unknown quantities are stored on pallets which are leaking and appear to have leaked in the past. The concrete beneath the pallets is stained (darkened) as is the bare ground immediately surrounding the pad. An area about 40 ft by 100 ft in plan dimension has been affected. The quantity and duration of the release is not known and so the depth of

TABLE 8-1

SUMMARY OF SITE OPERATIONAL HISTORY

SITE	DESCRIPTION	YEARS	OPERATION	POTENTIAL CONTAMINANTS
1	Medical Clinic (Bldg. 257)	1940s-late 1970s	X-ray development	Developer and/or fixer solutions metals such as silver
2	Radiation Training Area	mid 1950s-1969	Radioactive water containment	Radioactive sources such as K-42, Na-24, Ra-226, Cs-137, Br-80, Br-82, and Pu-239
3	PCB Storage Area (Bldg. 3)	pre-1953-present	Outside Storage Area	PCBs
4	Hydraulic Training School (Bldg. 342)	1970s-present	Outside Storage Area	Waste hydraulic oil (mainly transmission oil)
5	Old Boiler Plant (Bldg. 102)	1964-1968 1968-1987	Boiler Plant Debris from demolished boiler plant	Asbestos
6	Fire Training Area	1946-1987	Fire training school	Petroleum hydrocarbons, magnesium and fire extinguishing chemicals
7	Pesticide Storage (Bldg. 62)	1943-late 1950s	Mixed and stored paints	Paints containing linseed oil and lead
		1955-early 1960s	Mixed and stored pesticides and herbicides	Pesticides and herbicides
		1968-1976	Treatment plant spread area for wastewater sludge	Organics and metals
8	Army Point (YBI) Sludge Disposal Area	1968-1976	Treatment plant spread area for wastewater sludge	Organics and metals
9	Foundry (Bldg. 41)	1943-1947	Forge/foundry	----
		1953-1968	Paint shop	Paints containing lead or zinc-chromium based pigments, paint thinners and solvents
		1981-1987	Welding school	----
10	Bus Painting Shop (Bldg. 335)	1947-1953	Bus paint shop	Waste paints, thinners, solvents pesticides, and herbicides
		1953-1955	Storage and mixing area for pest control shop	
		?-present	Steam rack	Oils, grease, and petroleum hydrocarbons

TABLE 8-1

SUMMARY OF SITE OPERATIONAL HISTORY

SITE	DESCRIPTION	YEARS	OPERATION	POTENTIAL CONTAMINANTS
11	YBI Landfill	1935-present	Sanctioned and unsanctioned disposal area	----
12	Old Bunker Area	1940s-1969	Ammunition bunkers, disposal area	----
13	Stormwater outfalls	1936-present	Stormwater discharge; vessel discharge	Storm and wastewater effluent mercuric nitrate, vessel waste; oils
14	New Fuel Farm	1943-present	Fuel storage	Petroleum hydrocarbons
15	Old Fuel Farm	pre-1943-present	Undrained abandoned underground pipelines	Petroleum hydrocarbons
16	Clipper Cove Tank Farm	1940s-1960s	10 storage tanks	Lead, oil, and other petroleum hydrocarbons
		1960s	Spread area for sludge from dismantled tanks	Lead, oil, and other petroleum hydrocarbons
17	Tanks 103/104	1943-present	Storage tanks	Petroleum hydrocarbons (diesel) (accidental release in 1983)
18	Asbestos Covered Piping (YBI)	early 1980s	Pipelines	Asbestos
19	Refuse Transfer Area	1953-present	Refuse holding and disposal area	Unidentified fluids
20	Auto Hobby Shop/Transportation Center (Bldgs. 194, 224, 225, 230 and 267)	1943-1950	TI Transportation Center	Degreasing substances, solvents, oils, grease, hydrocarbons
	(Bldg 225)	1947-present	Auto Hobby Shop with drum storage area	Hydraulic fluid, recycled oil, grease, vehicle fluid, and metals such as chromium, nickel and zinc
21	Vessel Waste Oil Recovery	1946-present	Vessel waste oil recovery	Waste oils
22	Naval Exchange Service Station	1946-present	Gas Station	Petroleum hydrocarbons and accumulated vehicle fluids
23	YBI Line Break	Early 1980s	Pipeline	Hydrocarbons (black oil)

TABLE 8-1

SUMMARY OF SITE OPERATIONAL HISTORY

SITE	DESCRIPTION	YEARS	OPERATION	POTENTIAL CONTAMINANTS
24	Fifth Street Fuel Releases	1986-1987	Abandoned pipelines	Petroleum hydrocarbons
25	Seaplane Maintenance (Bldgs. 2, 3, and 180)	1943-1958	Seaplane maintenance	Waste liquids and solvents for engine cleaning
	(Bldg. 2)	----	Gasoline tanks	Gasoline
26	Underground Tanks	pre-1935-present	Storage of petroleum products	Petroleum products

SITE NUMBER (CIRCLED)	DESCRIPTION
1	Medical Clinic
2	Radiation Training Area
3	PCB Equipment Storage Area
4	Hydraulic Training School
5	Old Boiler Plant
6	Fire Training School
7	Pesticide Storage
9	Foundry
10	Bus Painting Shop
12	Old Bunker Area
13	Stormwater Outfall (TI) (Island Perimeter)
14	New Fuel Farm
15	Old Fuel Farm
16	Clipper Cove Tank Farm
17	Tanks 103/104
19	Refuse Transfer Area
20	Auto Hobby Shop/ Tansportation Center
21	Vessel Waste Oil Recovery
22	Navy Exchange Service Station
24	5th Street Fuel Releases
25	Seaplane Maintenance
26	Underground Tanks (Throughout Island)

LEGEND
- Existing Structures
- —x— Fence
- Main Station Entrance
- Shore Line

0 400 Feet

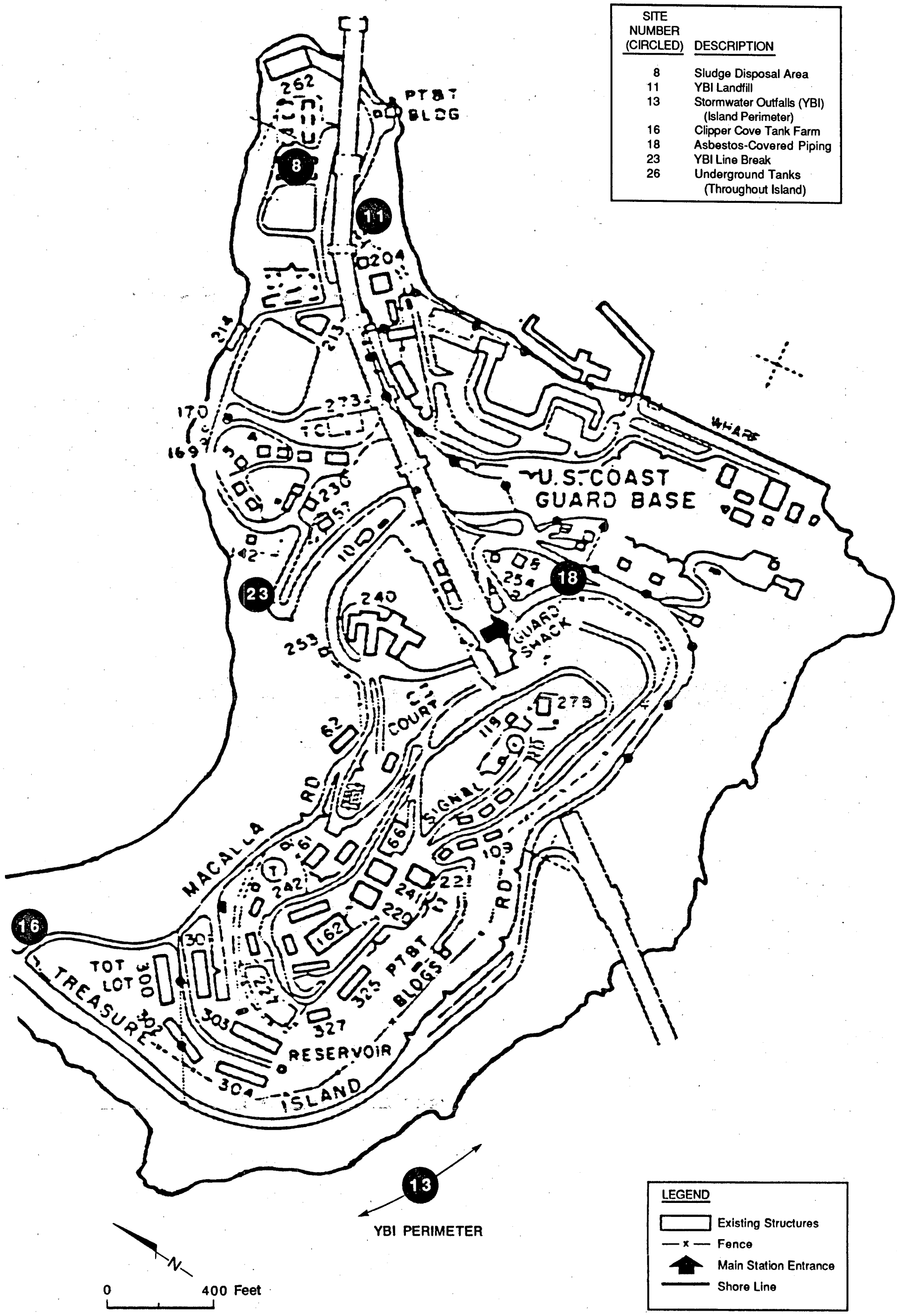
TI PERIMETER

PRELIMINARY ASSESSMENT/ SITE INSPECTION
NAVSTA Treasure Island, Ca.

LOCATION OF IDENTIFIED SITES-TREASURE ISLAND (TI)

FIGURE 8-1

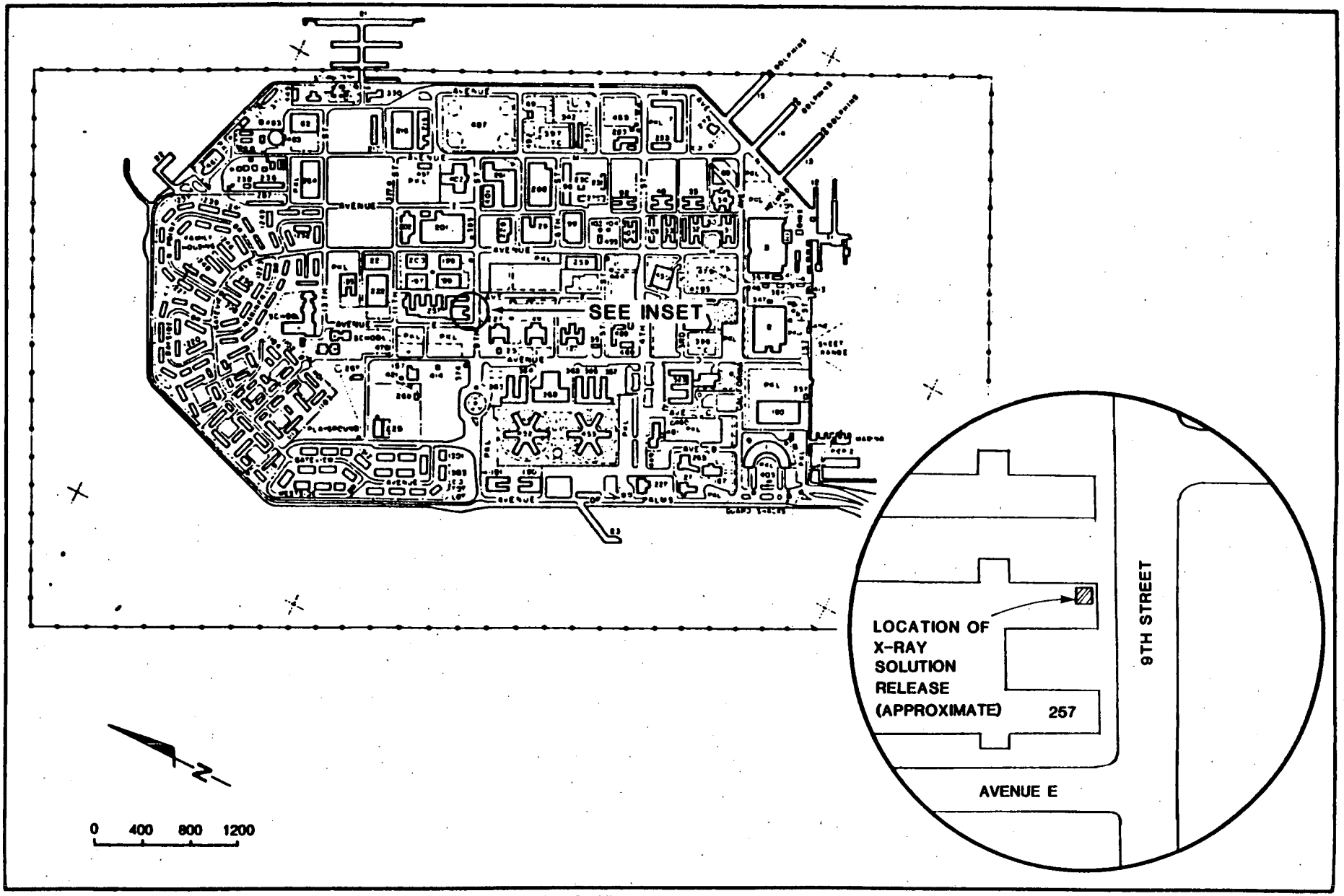
SITE NUMBER (CIRCLED)	DESCRIPTION
8	Sludge Disposal Area
11	YBI Landfill
13	Stormwater Outfalls (YBI) (Island Perimeter)
16	Clipper Cove Tank Farm
18	Asbestos-Covered Piping
23	YBI Line Break
26	Underground Tanks (Throughout Island)



PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

LOCATION OF IDENTIFIED SITES YERBA BUENA ISLAND (YBI)

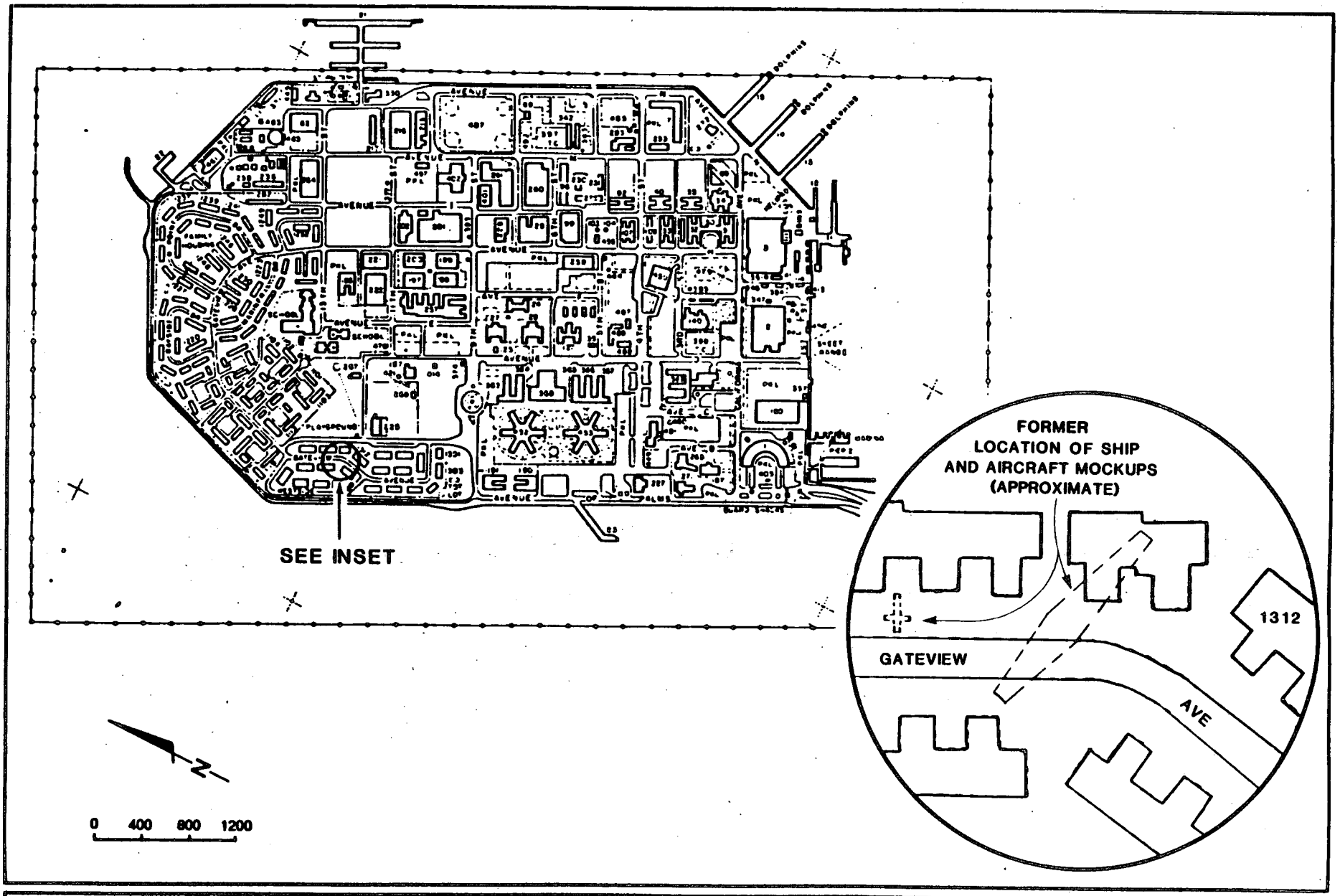
FIGURE 8-2



PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

SITE 1
MEDICAL CLINIC

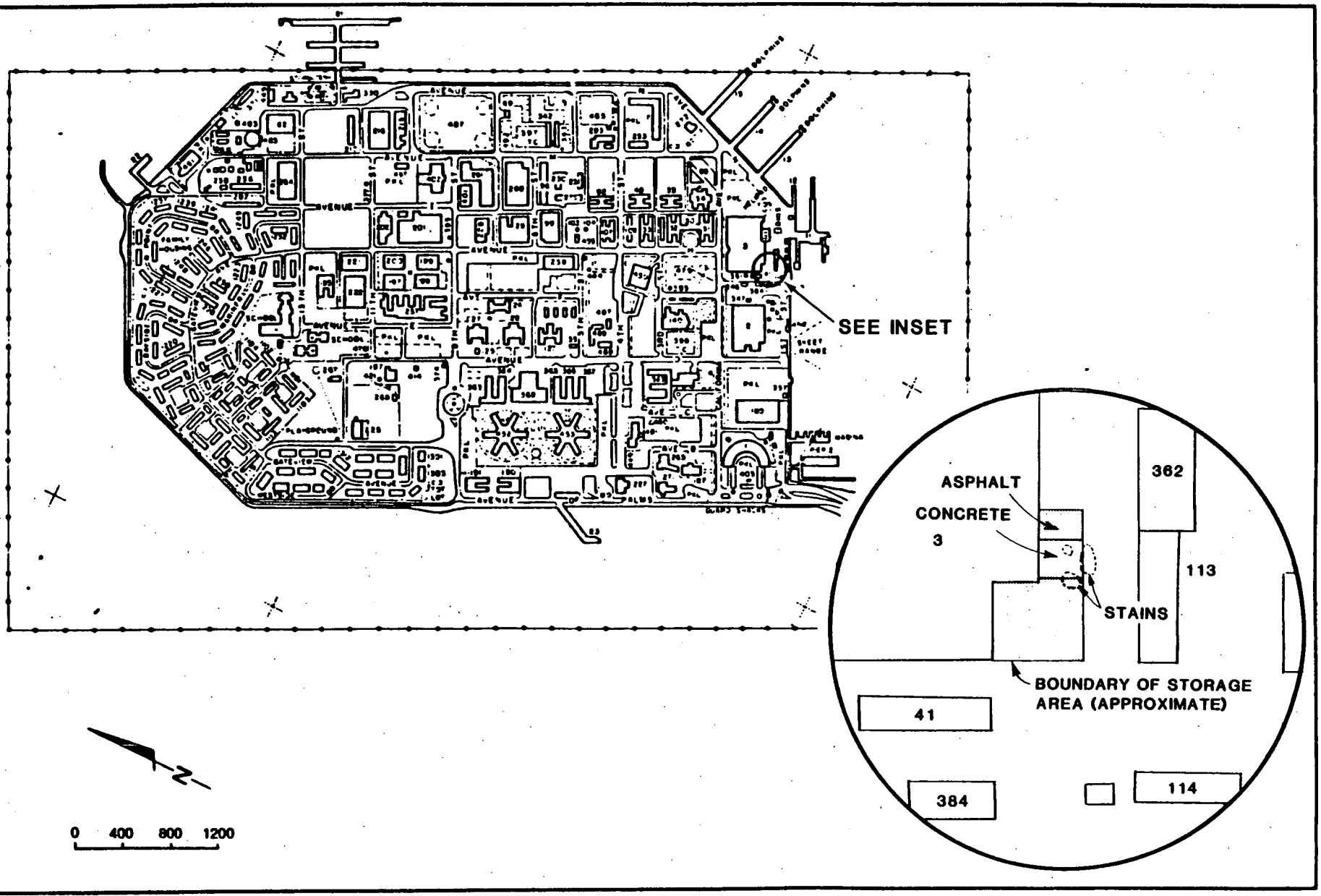
FIGURE
8-3



PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

SITE 2
RADIATION TRAINING AREA

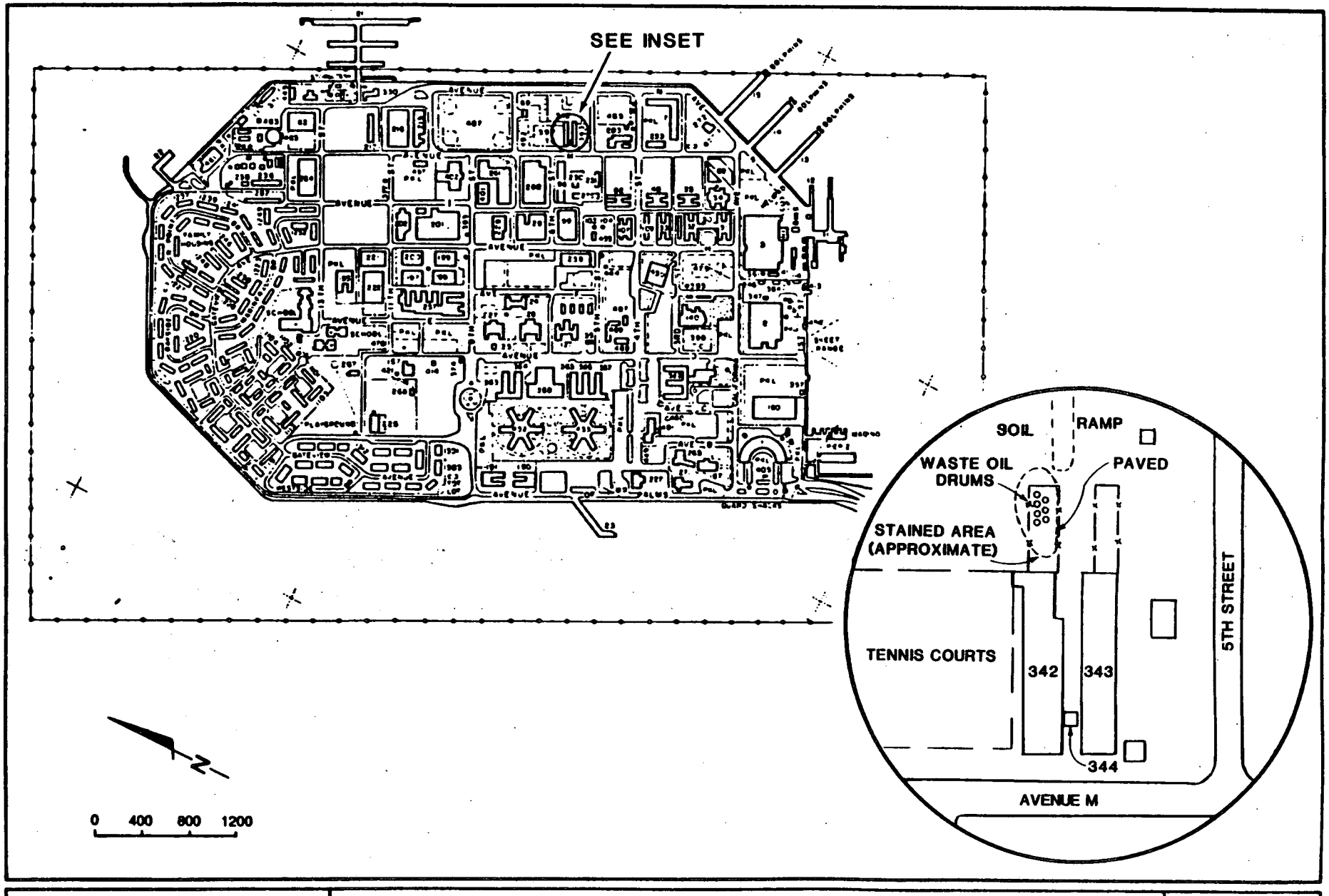
FIGURE
8-4



PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

SITE 3
PCB EQUIPMENT STORAGE AREA

FIGURE
8-5



PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

SITE 4
HYDRAULIC TRAINING SCHOOL

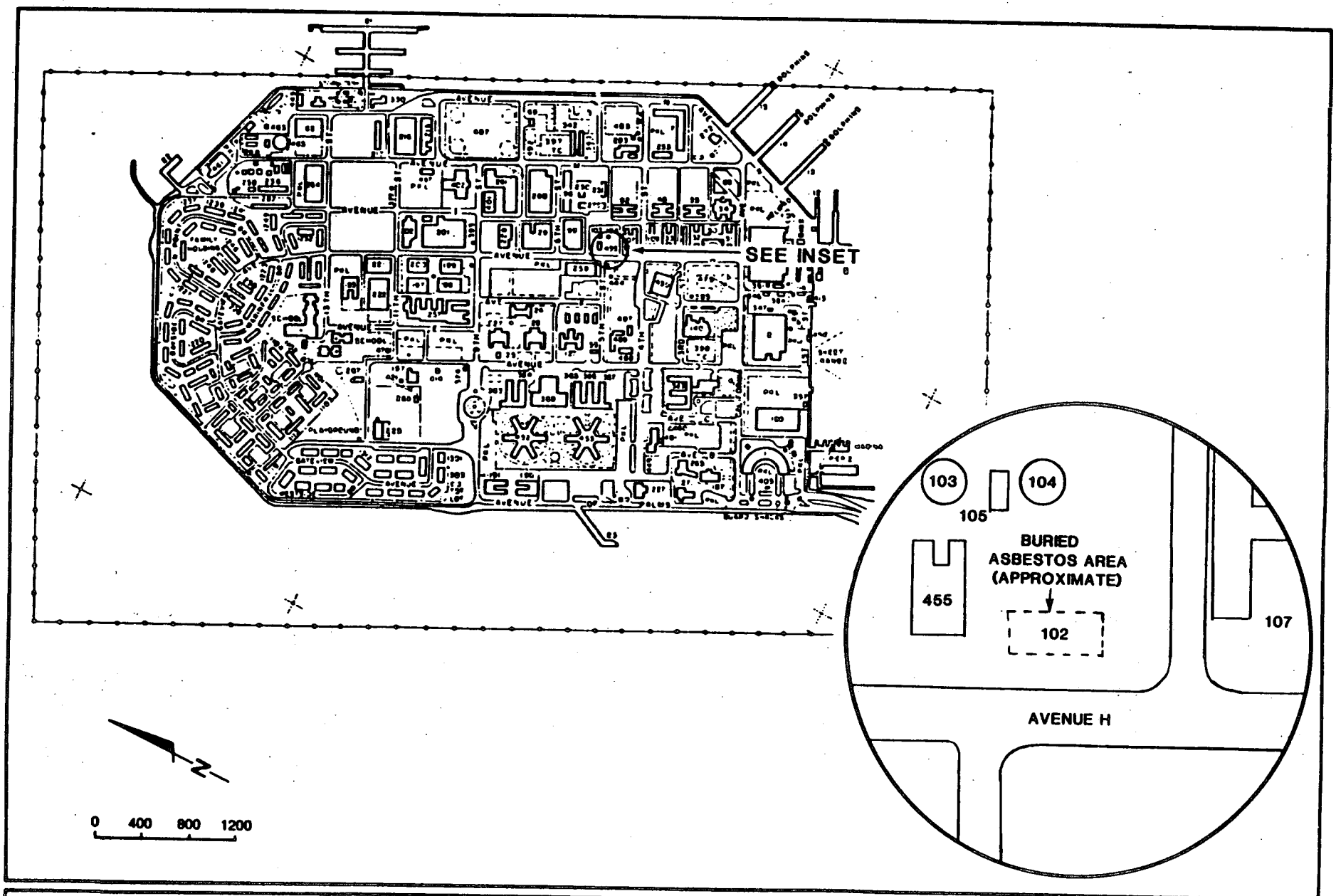
FIGURE
8-6

contamination is uncertain. Samples obtained by NEESA personnel at the surface and at about a 6-inch depth adjacent to the paved area were contaminated with oil and grease (7,030 to 88,800 mg/kg) and hydrocarbons (5,800 to 53,000 µg/g). No PCBs were detected (Appendix B).

8.5 SITE 5: OLD BOILER PLANT. (I5,6-J5,6, TI) During the period from approximately 1943 to 1968, Building 102, located near the intersection of 5th Street and Avenue H as shown in Figure 8-7, was used as a boiler plant. In 1968, Building 455 was constructed to replace boiler plant 102 which was then demolished. It was reported that in early 1987, excavation for a pipeline trench in the asphalt paved area where boiler plant Building 102 had been located uncovered building debris including asbestos insulation. The pipeline was rerouted, the trench backfilled, and the asphalt pavement was patched. Consequently, asbestos-containing debris is reported to be buried in the former location of boiler plant Building 102. The quantity and constituency of the debris was not established.

8.6 SITE 6: FIRE TRAINING AREA. (C6-C7, TI) The fire fighter training area is part of the Naval Technical Training Center (Figure 8-8) and has been used to conduct fire training since 1946. The ERM-West underground tanks investigation conducted in 1987 and a follow-up study performed by Harding Lawson Associates identified leaking underground storage tanks and severely contaminated soil and groundwater in this area. Contamination is due to the presence of petroleum hydrocarbons, such as gasoline and diesel, which are most likely present as a result of the tank leaks, underground piping leaks, above ground uncontained fuel spills and pipe leaks in paved and gravel areas, etc., originating from the school's activities. Prior to construction of the WWT in the late 1960s, wastewater from this activity is reported to have been discharged directly to the Bay. It was also reported that in the past, fire training operations were conducted on an earthen area prior to the construction of the concrete pad which now covers the area. Based in the reported operation of the facility, the soil in this area is potentially contaminated with hydrocarbons and fire extinguishing chemicals which may have migrated into the subsurface. A remedial investigation of this site is currently being conducted by NAVFAC WESTDIV.

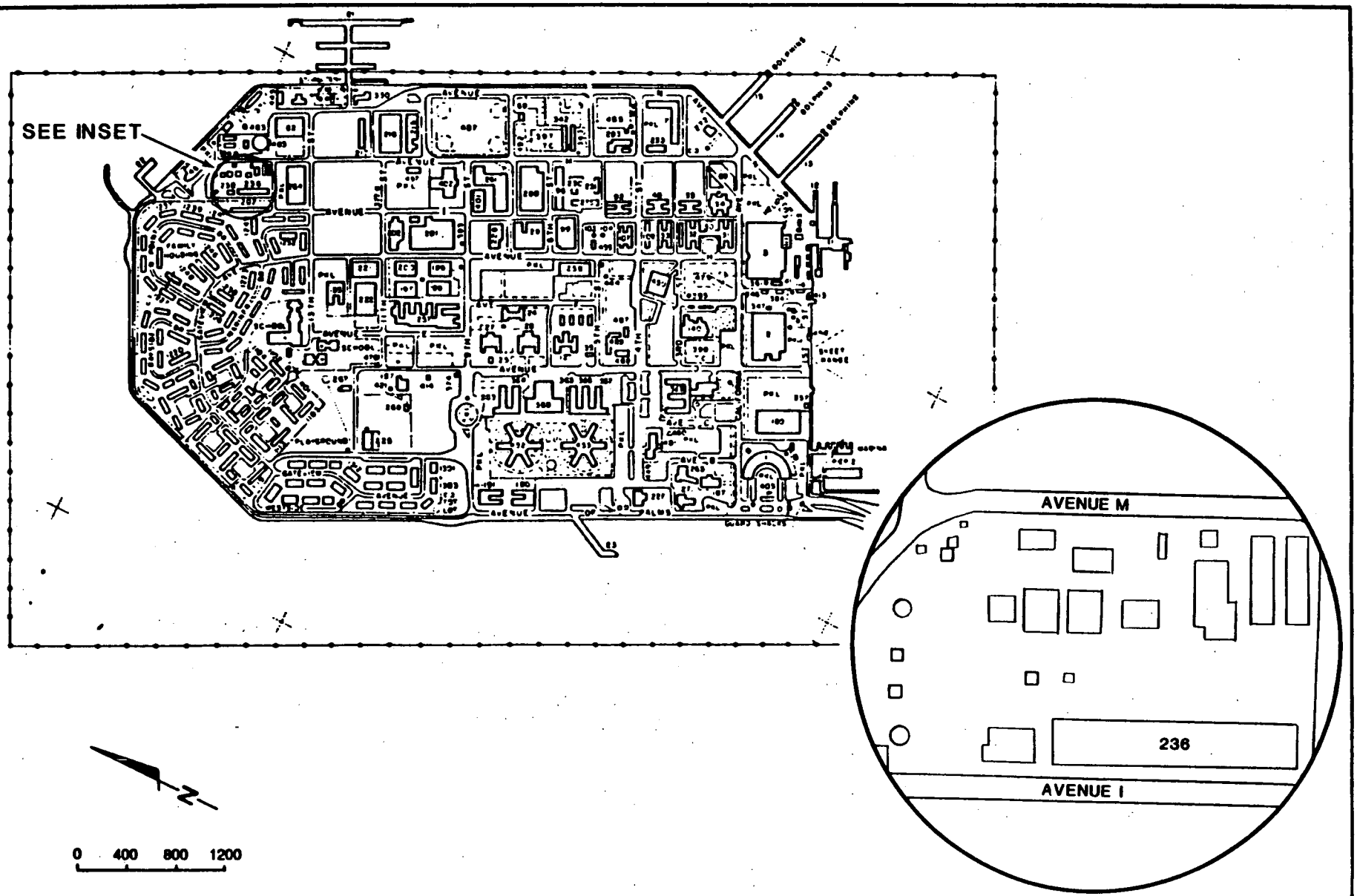
8.7 SITE 7: PESTICIDE STORAGE. (D7, TI) Building 62 (Figure 8-9) was used for storage and handling of a variety of liquid substances in the past including paint, pesticides, herbicides, and other unidentified fluids. Currently, pesticides and herbicides are distributed by Alameda personnel. The volumes handled were apparently in the 1 to 5 gallon range. Paints were reportedly mixed on-site near Pier 11 from 1943 to the late 1950s and contained linseed oil and lead. Pesticides and herbicides were mixed and prepared for use beginning in about 1955 until at least the early 1960s. Type and mixtures of pesticides and herbicides used on TI and YBI at the time are not known; however, currently used pesticides include boric acid, diazinon, malathion, Decon, rat bait, and endosulfan. 35-Burgo insecticide is also known to have been applied in 1975 and 1976. Excess fluids were disposed by pouring directly onto the ground outside Building 62 to the east and into San Francisco Bay. This practice occurred for approximately 20 years from 1943 to at least the early 1960s. Relatively small volumes were involved; usually 5-10 gallons per disposal, every 1 to 40 weeks.



PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

SITE 5
OLD BOILER PLANT

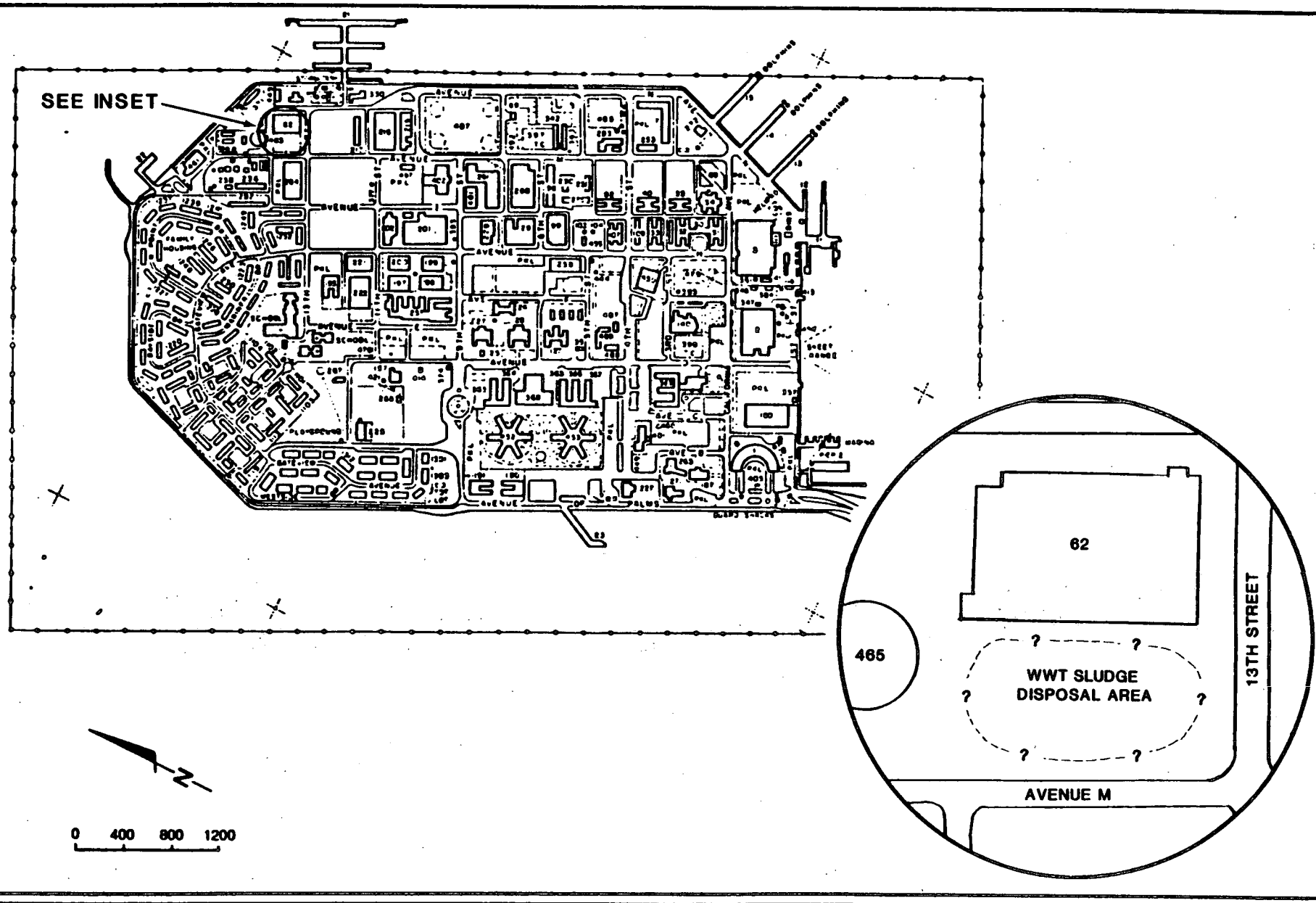
FIGURE
8-7



PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

SITE 6
FIRE TRAINING AREA

FIGURE
8-8



PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

SITE 7
PESTICIDE STORAGE

FIGURE
8-9

In addition, it was reported that sludge from the TI wastewater treatment plant (WWT), constructed in 1968, was spread on the ground west of Building 62. The volume spread was estimated to be up to 10-15 cubic yards per month total, at this location and at Site 8, potentially having spread 960 to 1440 cubic yards from 1968 to 1976. There is a potential for organics and metals in the wet sludge to have migrated into the subsurface. Although possible contaminants cannot be specifically identified, they may be similar to those discharged through the WWT in 1984 discussed in Section 7.1.

8.8 SITE 8: ARMY POINT SLUDGE DISPOSAL AREA, YBI. (E9, YBI) Army Point is located at the east end of YBI. It was reported that sludge from the WWT on TI was trucked to Army Point and spread on the ground in an area formerly occupied by quarters (Figure 8-10). The sludge was reportedly spread between housing foundations which still exist. The volume potentially spread at this site and at Site 7 totaled up to 10-15 cubic yards per month, potentially spreading 960 to 1440 cubic yards from approximately 1968 to 1976. There is a potential for organics and metals in the wet sludge to have migrated into the subsurface. Contaminants may be similar to those identified in WWT effluent (Section 7.1).

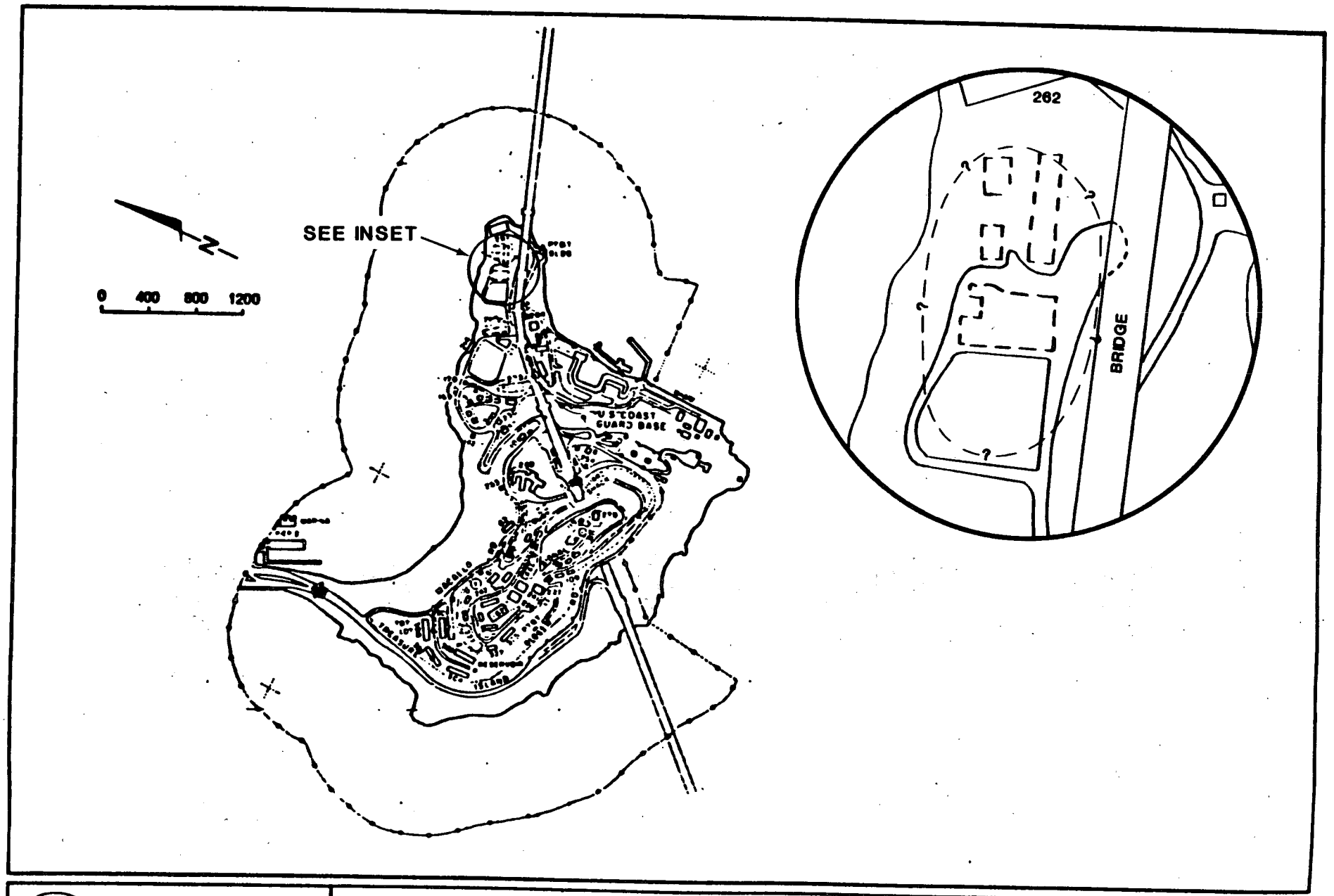
8.9 SITE 9: FOUNDRY. (L5, TI) Building 41 (Figure 8-11) has been used for at least three operations since the early 1940s. On building indexes for 1943 and 1947, Building 41 is listed as a forge/foundry. Beginning at least in 1953, the building was reported to have been used as a paint shop until 1968 when it was converted to storage. A 1985 index still incorrectly lists the building as a paint shop and the paint booth emission abatement equipment is reported to be still in place. The NTTC operated a welding school in Building 41 from roughly 1981 until early 1987. Details regarding this use were not located.

While being used as a paint booth, it was reported that paint mixing operations took place. It was reported that waste paints, thinners, and solvents may have been discharged to the Bay adjacent to the building. Spillage of some materials may have also occurred. Paints used at this facility are known to have contained lead or zinc-chromium-based pigments.

Because this area was developed as part of the World's Fair and Pan Am Clipper operations, the area may have been asphalt or concrete paved; the area currently is paved. If the area has continuously been paved, contaminant migration into subsurface soils may not have occurred or contaminants may not be present in substantial concentrations. Alternatively, contaminants may have been carried via surface water into the storm sewer system and then into the Bay.

8.10 SITE 10: BUS PAINTING SHOP. (D8, TI) Building 335 (Figure 8-12) was constructed during the mid-1940s and has been used for various purposes. On the building indexes for 1947 and 1953, the building was operated as a bus paint shop. It was reported that for an unspecified period of time, paints were mixed at this building. There are reports that waste paints, thinners, and solvents were spread on the adjacent riprap, discharged to the Bay, and released onto the ground near the building.

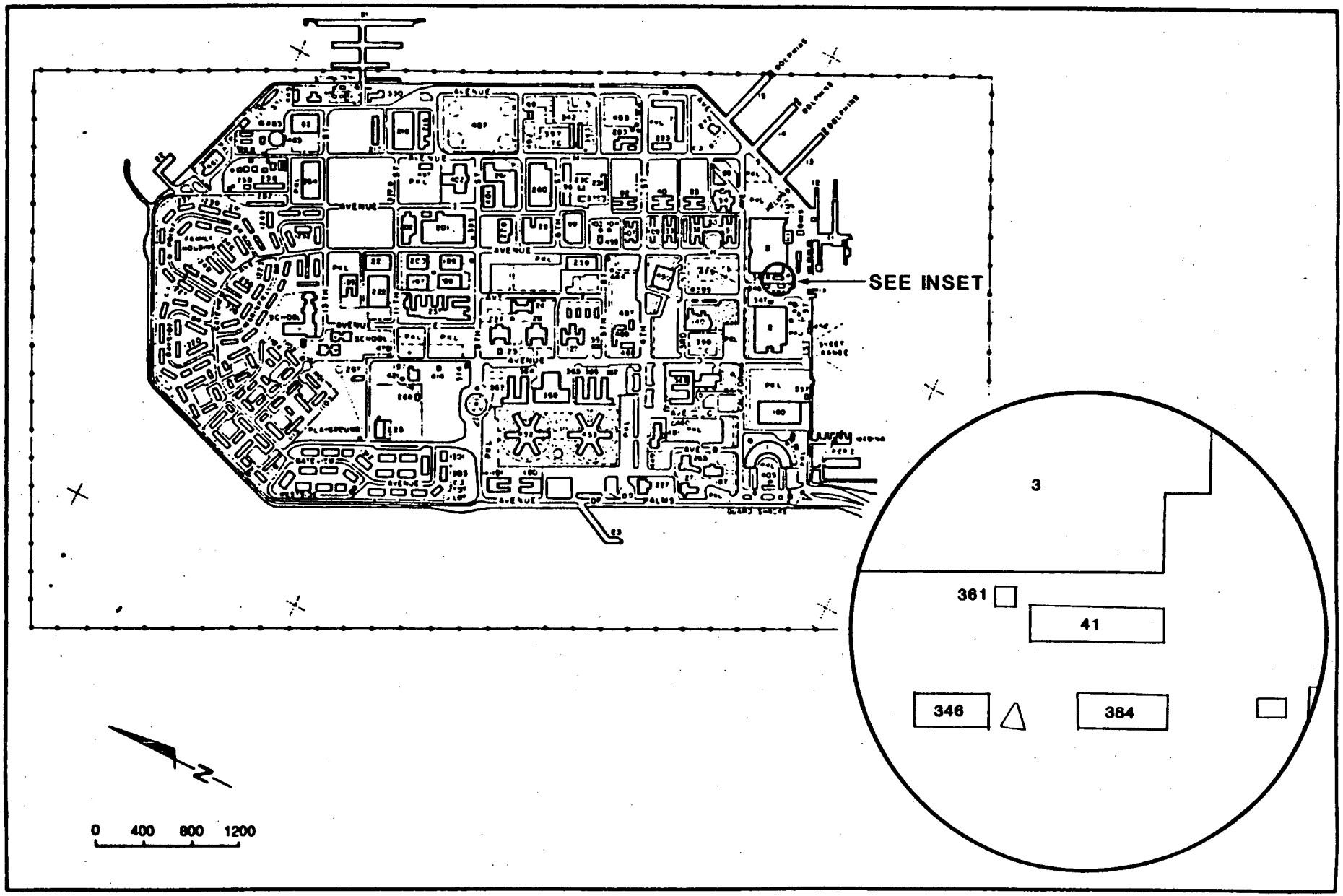
Building 335 was also reportedly used for storage and mixing of pest control solutions (pesticides and herbicides) during an unspecified time period.



PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

SITE 8
ARMY POINT SLUDGE DISPOSAL AREA, YBI

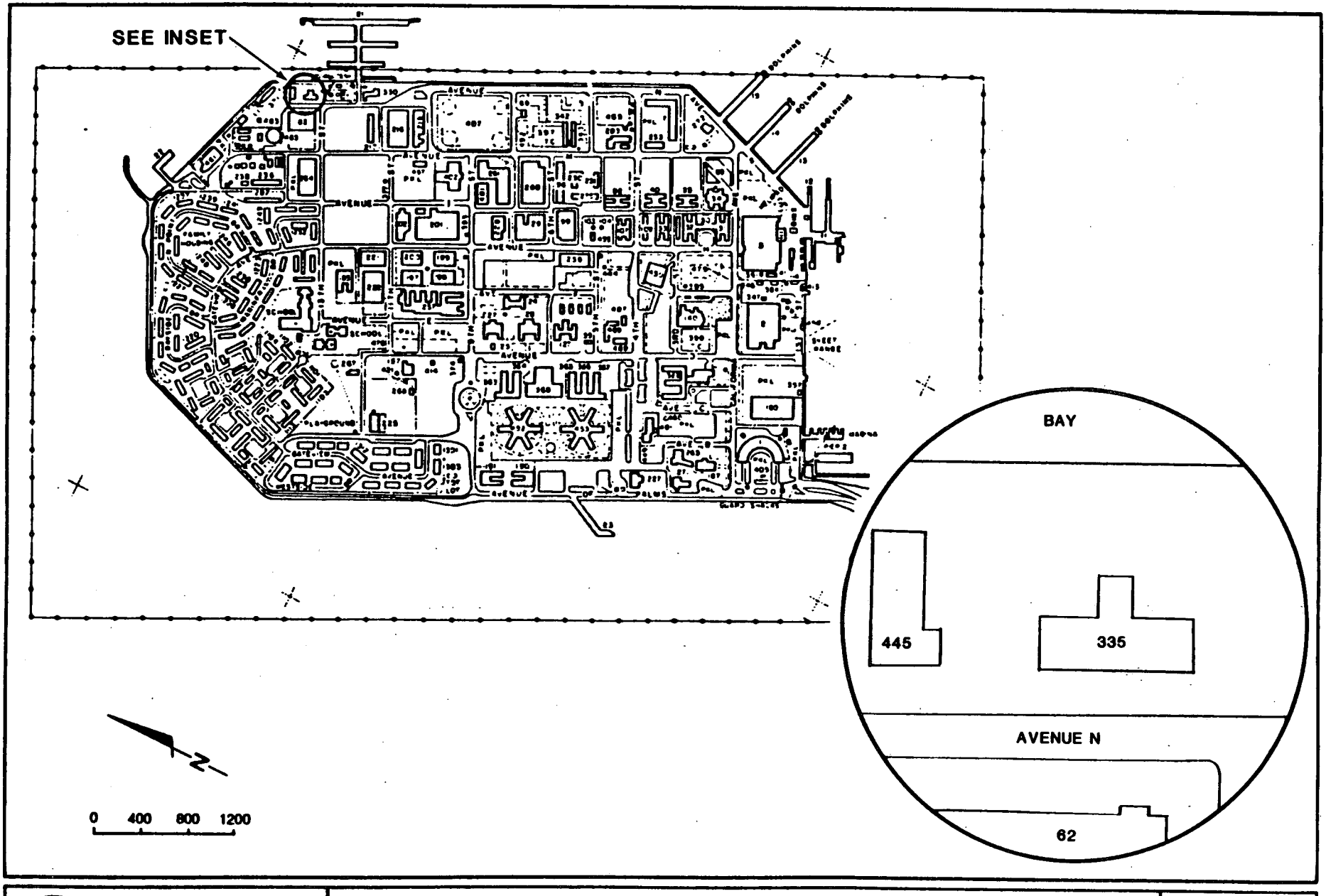
FIGURE
8-10



PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

SITE 9
FOUNDRY

FIGURE
8-11



PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

SITE 10
BUS PAINTING SHOP

FIGURE
8-12

Solution residues were reported to have been washed from containers and spraying equipment. It was also reported that Building 335 housed a do-it-yourself steam rack used to clean vehicles, drums, garbage cans, etc.

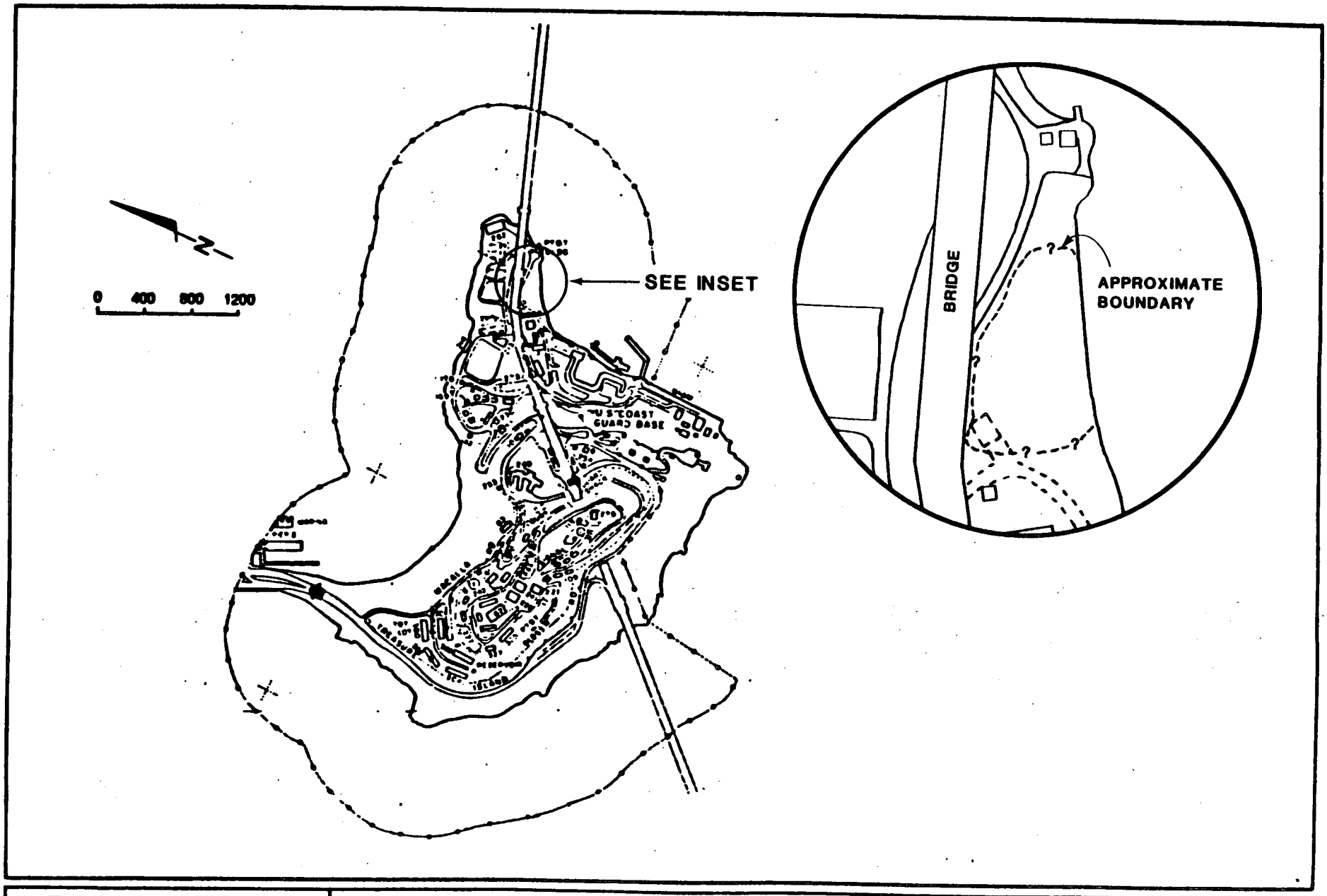
A floor drain is present in the shop, connected to the storm sewer system. Storm drains are also located near the building; the storm system discharges directly into the Bay. However, no information was found indicating whether the area surrounding the shop was ever paved, and it is conceivable that possible contaminants may have migrated into the subsurface soils. The potential for current contamination of the soils around the building and sediments at the storm outfalls does exist.

8.11 SITE 11: YBI LANDFILL. (E11, YBI) The southern edge of the eastern tip of YBI is a former marsh area which was identified as a dump in a 1935 topographic map (Figure 8-13). The area is roughly 100 ft by 400 ft in plan dimension. The volume and type of material disposed in the area were not identified. The area is somewhat overgrown at this time, and signs are posted to discourage additional disposal.

8.12 SITE 12: OLD BUNKER AREA. (A2-6, B2-6, TI) From the early 1940s until 1968, ammunition bunkers were located at the north end of TI. Surrounding the bunkers, both cell-type disposal units and general debris disposal areas were constructed (Figure 8-14). Although we have found no information detailing these operations, the disposal areas were identified in a series of trenches and borings performed during foundation excavations for the 1200-series housing units. Locations of the trenches and typical trench logs are shown in Figures 8-15 and 8-16. Figure 8-15 also shows the limits of the disposal area, as identified in the 1968 report, and the location of the incinerator discussed in Section 2.5. Extrapolating from the trench logs, it is estimated that originally 6,200 cubic yards of rubbish may have been disposed of in cell-disposal units and 24,400 cubic yards as loose debris. On the order of 3,800 cubic yards may still exist in former cell units and 12,200 cubic yards of loose debris, assuming rubbish was excavated to elevation +2 ft MSL. The debris is described in the trench logs as comprised of "loose rubbish, bottles, wire rope, paper, steel drum, incinerator ash, etc." (MKE-Abrams-Keller & Gannon, 1968).

In some trenched areas, rubbish was found from the ground surface, approximately elevation +5.5 feet MSL, to the depths excavated, about elevation -2 feet MSL. Site preparation recommendations included removing rubbish only to elevation +2 feet MSL. Assuming these recommendations were adhered to, rubbish probably remains buried in this area beneath the housing units and the potential for both soil and ground water contamination is likely.

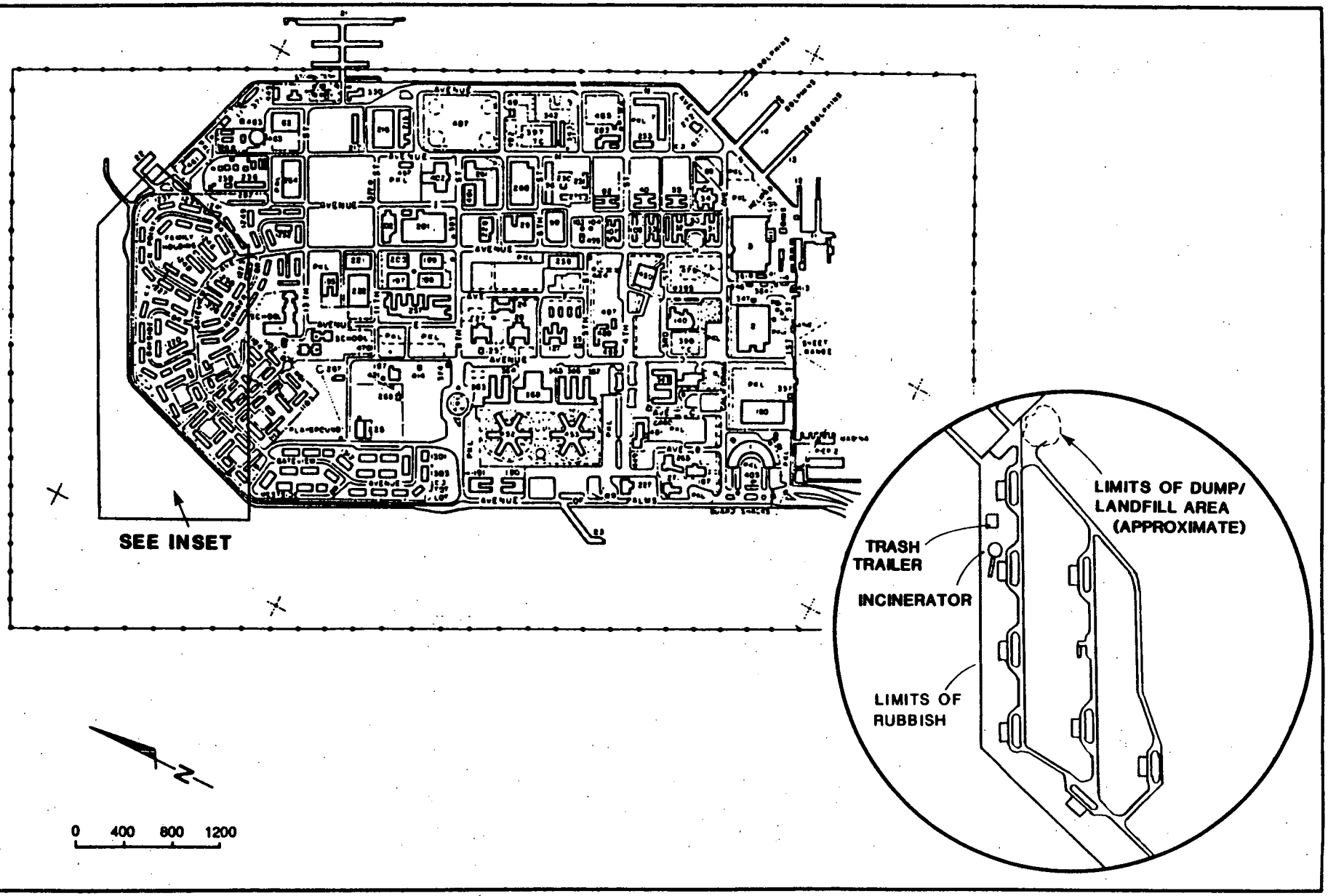
8.13 SITE 13: (TI AND YBI PERIMETER) STORMWATER OUTFALLS. Treasure Island has two distinct sewer systems: a wastewater system and a stormwater sewer system. Water conveyed by the stormwater system is collected from surface drains and some building drains. Stormwater system effluent is discharged to the Bay without treatment. According to facility drawings, there are numerous discharge outfalls which convey water collected from different parts of the station. The outfall locations for TI are indicated on Figure 8-17 and for YBI on Figure 8-18.



PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

SITE 11
YBI LANDFILL

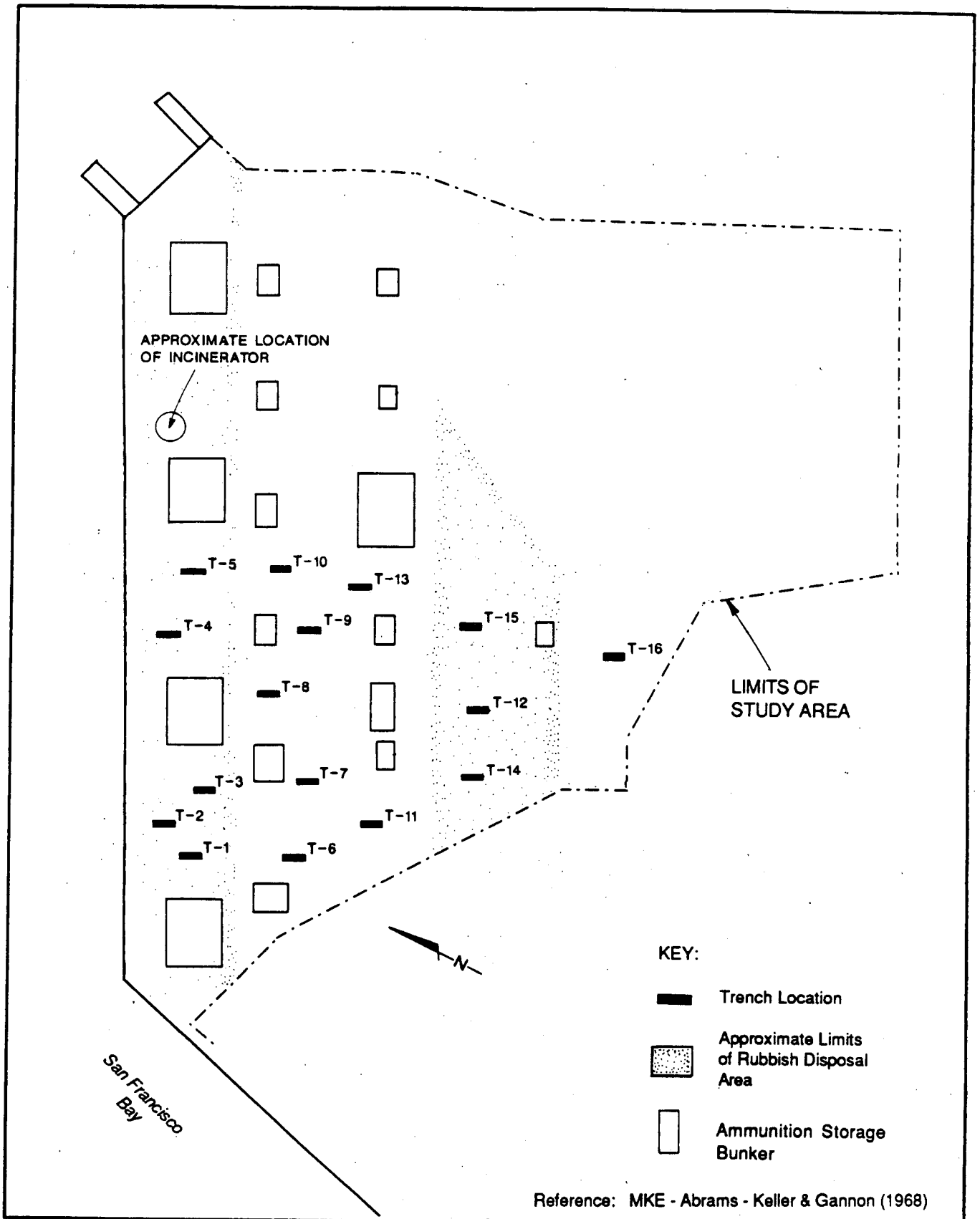
FIGURE
8-13



PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

SITE 12
OLD BUNKER AREA

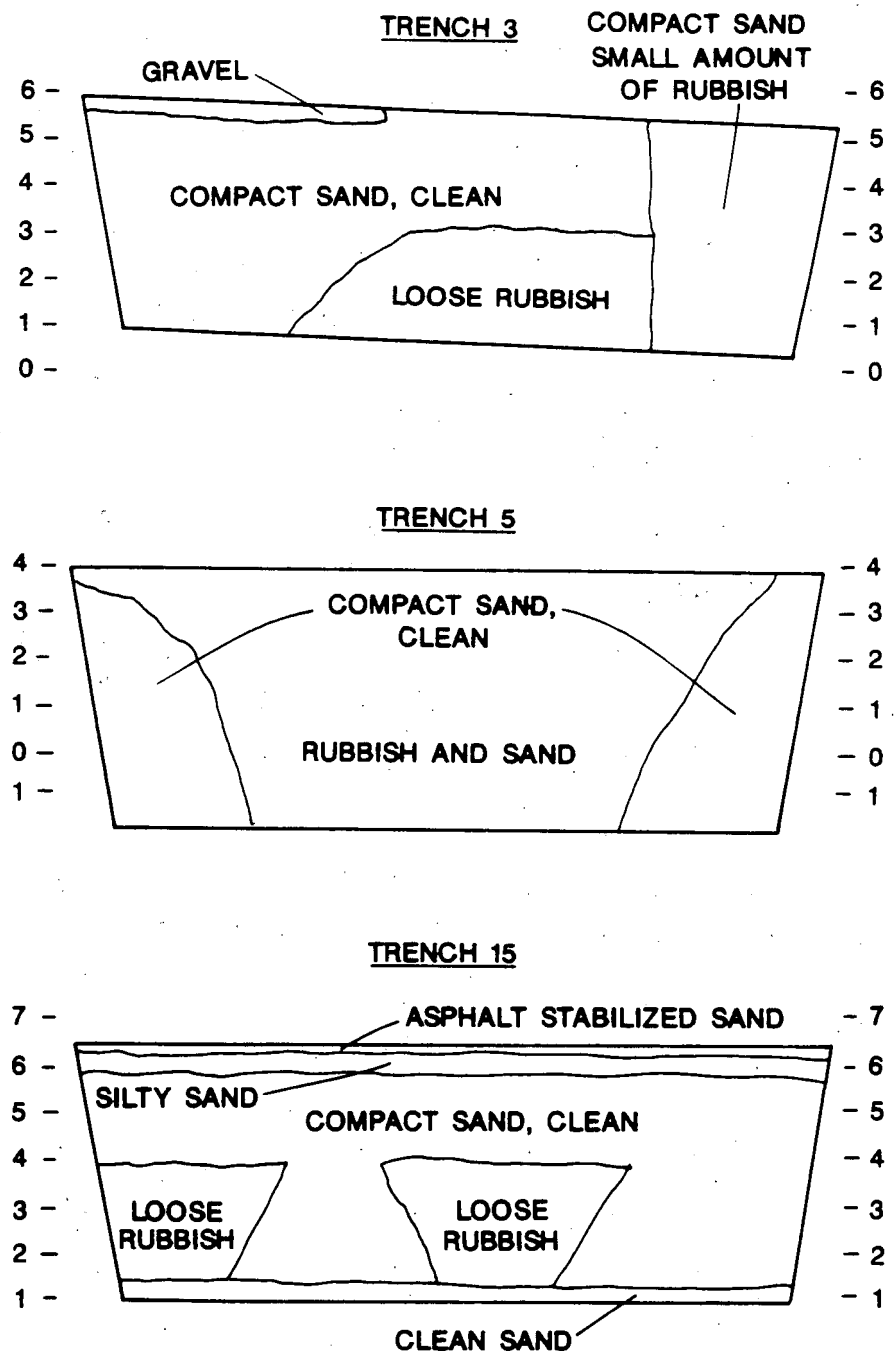
FIGURE
8-14



PRELIMINARY ASSESSMENT/ SITE INSPECTION
NAVSTA Treasure Island, Ca.

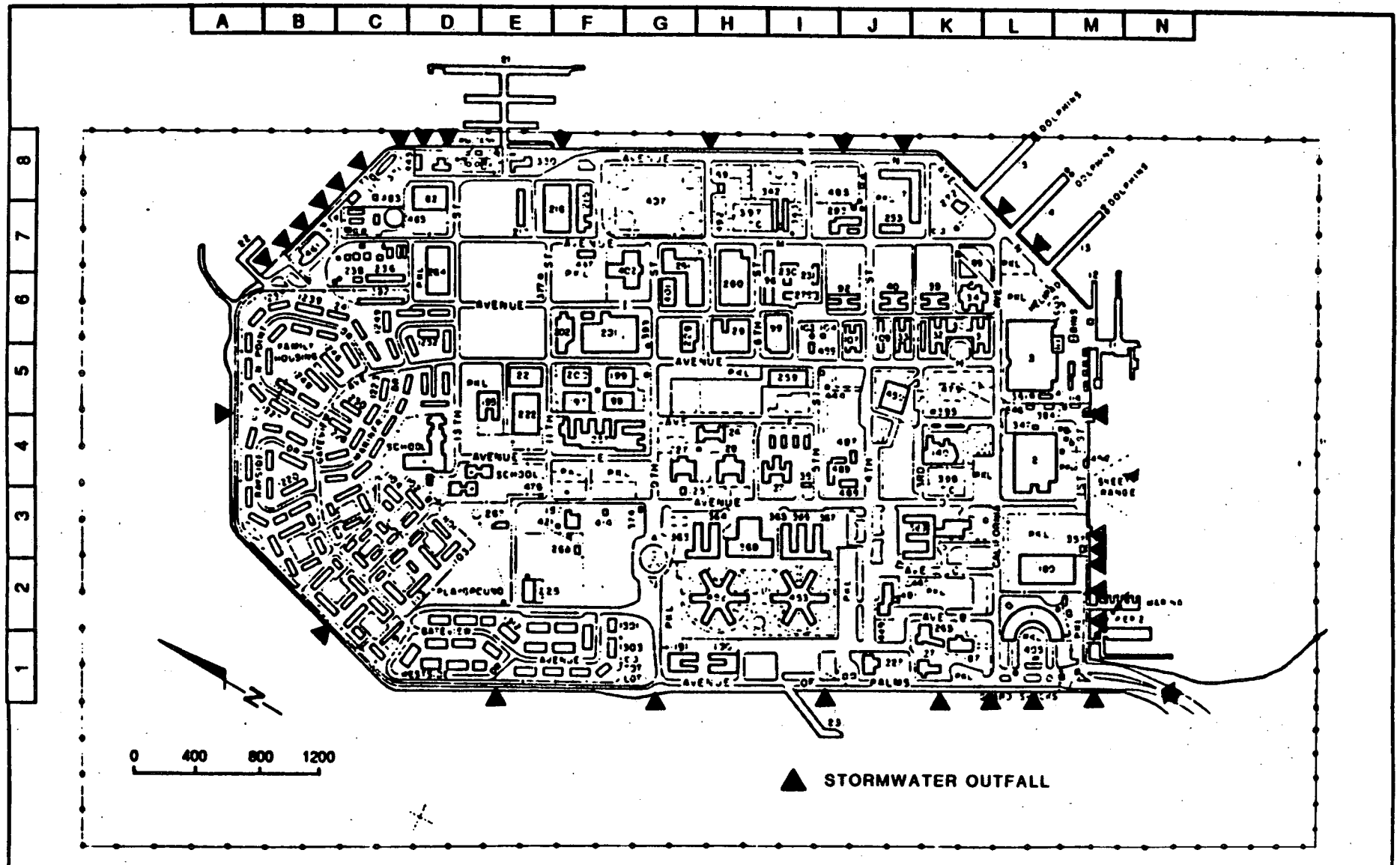
SITE 12 TRENCH LOCATIONS- 1968 FOUNDATION INVESTIGATION

FIGURE 8-15



Reference: MKE - Abrams - Keller & Gannon (1968)

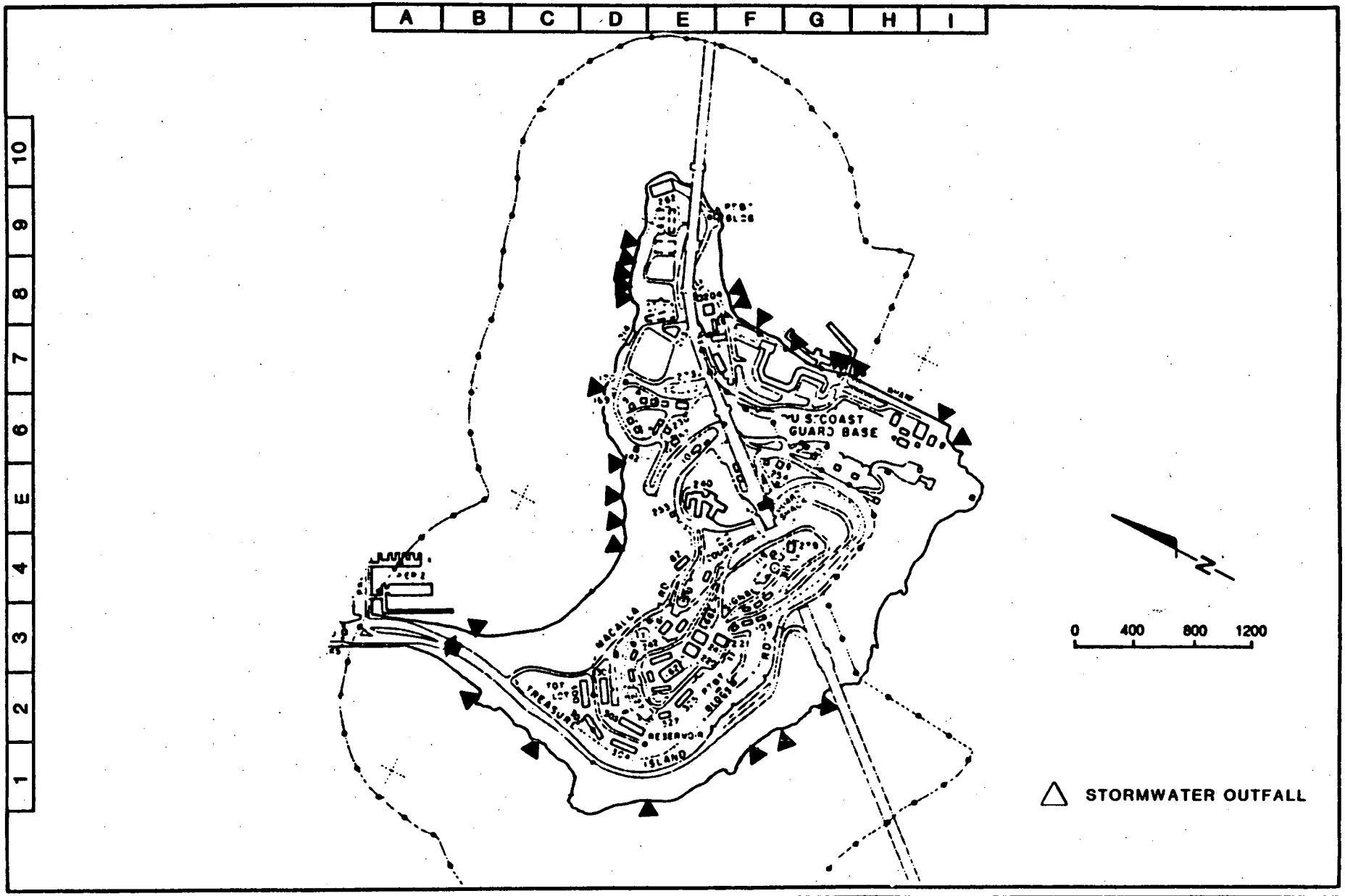
PRELIMINARY ASSESSMENT/ SITE INSPECTION NAVSTA Treasure Island, Ca.	SITE 12 TYPICAL TRENCH LOGS	FIGURE 8-16



PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

SITE 13
STORMWATER OUTFALLS, TI

FIGURE
8-17



PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

SITE 13
STORMWATER OUTFALLS, YBI

FIGURE
8-18

Contaminants carried in the WWT effluent were characterized for the 1984 NPDES permit and are discussed in Section 7.1. These contaminants are illustrative of those discharged since secondary treatment at the WWT began in 1969, at the outfall adjacent to the plant. For reference, Table 8-2 summarizes various chemical concentrations of Bay sediments.

The storm sewer system has discharged contaminants deposited in it by surface water flow from all areas of TI and YBI. Contaminants could include:

- o pesticides, herbicides, and insecticides (e.g. Site 7);
- o paint-related compounds (solvents, lead, zinc, and chromium) (e.g. Site 7 and Site 10);
- o hydrocarbons generated at service stations, the Transportation Center, the Auto Hobby Shop (degreasers, oils, fuels, solvents, and grease) (e.g. Site 22);
- o hydrocarbons generated during refueling operations (black oil, and diesel fuels);
- o hydrocarbons generated during spill incidents on land (gasoline, and diesel fuel) (e.g. Site 17 and and Site 25);
- o wastes generated by tenant activities: NTTC Fire Fighter School - oil, fuel, and fire fighting chemicals (e.g. Site 6); NTTC Boiler Water/Feeder Water School - mercuric nitrate; and Hydraulic Shop - waste oil (e.g. Site 4);
- o PCBs from leaking transformers and spill incidents (e.g. Site 3).

Contaminants collected in the stormwater system have been discharged through outfalls surrounding TI and YBI. However, because of current action and tidal scour, the buildup of sediments is greatest along the northern and eastern coast of TI, Clipper Cove, and the eastern and southern coast of YBI.

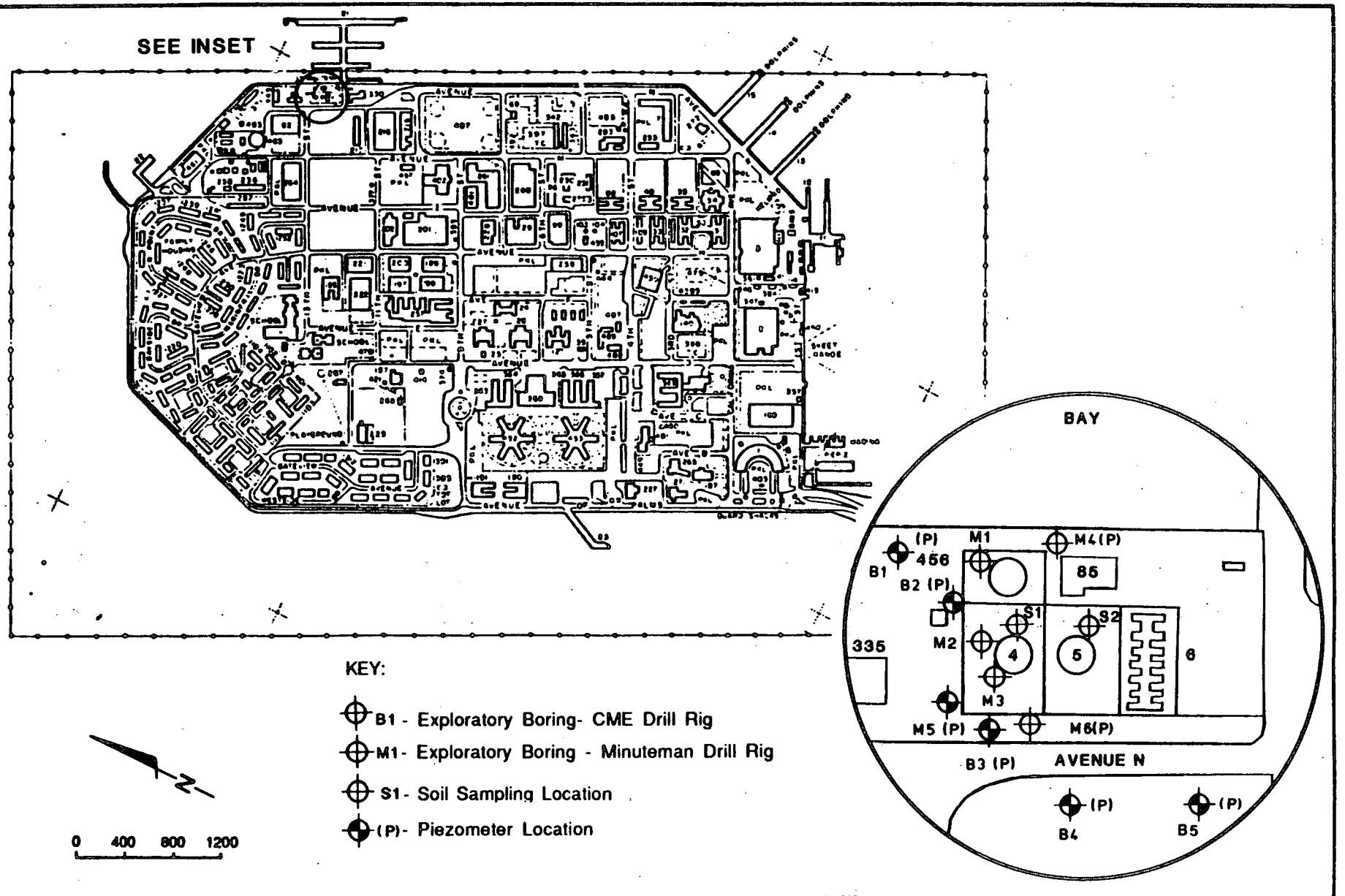
8.14 SITE 14: NEW FUEL FARM. (D8-E8, TI) Approximately 20,000 gallons of fuel were released from Tank 4 at the New Fuel Farm (Figure 8-19) during the period from November 1984 to February 1985. A subsequent investigation by Smith and Denison (1985) revealed cracked and corroded tank walls and floors. Analyses of samples from monitoring wells and borings placed around the tanks (WESTDIV, 1986; Figure 8-19) revealed detectable hydrocarbons but in concentrations incompatible with a leak of such magnitude. Concentrations of volatile hydrocarbons found in soil samples taken from borings M1 through M5, S1 and S2 ranged from 7.3 to 150 mg/kg (milligrams per kilogram). Concentrations of volatile hydrocarbons detected in water samples taken from borings and wells B1 through B5, M1 through M6, S1 and S2 ranged from less than 0.005 milligrams per liter (mg/l) to 1.84 mg/l. The greatest concentrations of hydrocarbons were found in wells M1 through M5 which were placed around the northern half of the fuel farm as shown on Figure 8-19. Water from two of the monitoring wells also contained hydrocarbons in excess of California State Drinking Water Standards.

TABLE 8-2 SUMMARY OF BAY SEDIMENT CHEMICAL PROPERTIES

Location	Date Sampled	Constituents				
		Mercury (mg/kg)	Cadmium (mg/kg)	Lead (mg/kg)	Zinc (mg/kg)	Oil & Grease (mg/kg)
Alameda NAS	7/72	0.2–0.7	0.5–1.7	27–87	82–180	420–1700
	5/73	0.08–1.4	0.8–3.4	5–150	16–380	120–5500
	10/74	0.2–1.0	0.9–4.5	37–134	62–185	380–3000
Concord NWS	6/74	0.2–0.4	0.3–2.0	14–87	68–500	300–1500
Mare Island	8/72	0.4–0.7	0.7–6.7	30–120	160–291	300–1400
	2/72	0.2–0.7	2.0	25–35	80–125	500–34,000
Motba E.	8/73	0.1–2.2	---	14–136	41–274	300–1100
Motba N.	11/74	0.3–1.0	0.9–1.9	34–90	85–186	820–2200
Motba S.	11/74	0.5–0.8	1.2–1.8	44–83	118–172	940–1500
Pt. Molate	7/74	0.2–1.0	0.7–2.2	6–26	80–160	200–1600

Reference:

Adapted from International Engineering Co., Inc., 1975. Final Report Engineering Concept Study Dredge Spoils Disposal Facility, Skaggs Island, California.



PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

SITE 14
NEW FUEL FARM

FIGURE
8-19

Previous reports (WESTDIV, 1986) also state that sludge from the tank bottoms has been historically disposal of into pits excavated adjacent to the tanks. In addition, water has been historically bled from the fuel farm tanks and this bleed water was allowed to infiltrate into the soil surrounding the tanks. The bleeding would continue until product was visible in the water. Hence, the water released contained some small percentage of hydrocarbons which may have accumulated in the soil over a period of years. The fuel farm area was paved about 1981 and the bleeding operation was stopped.

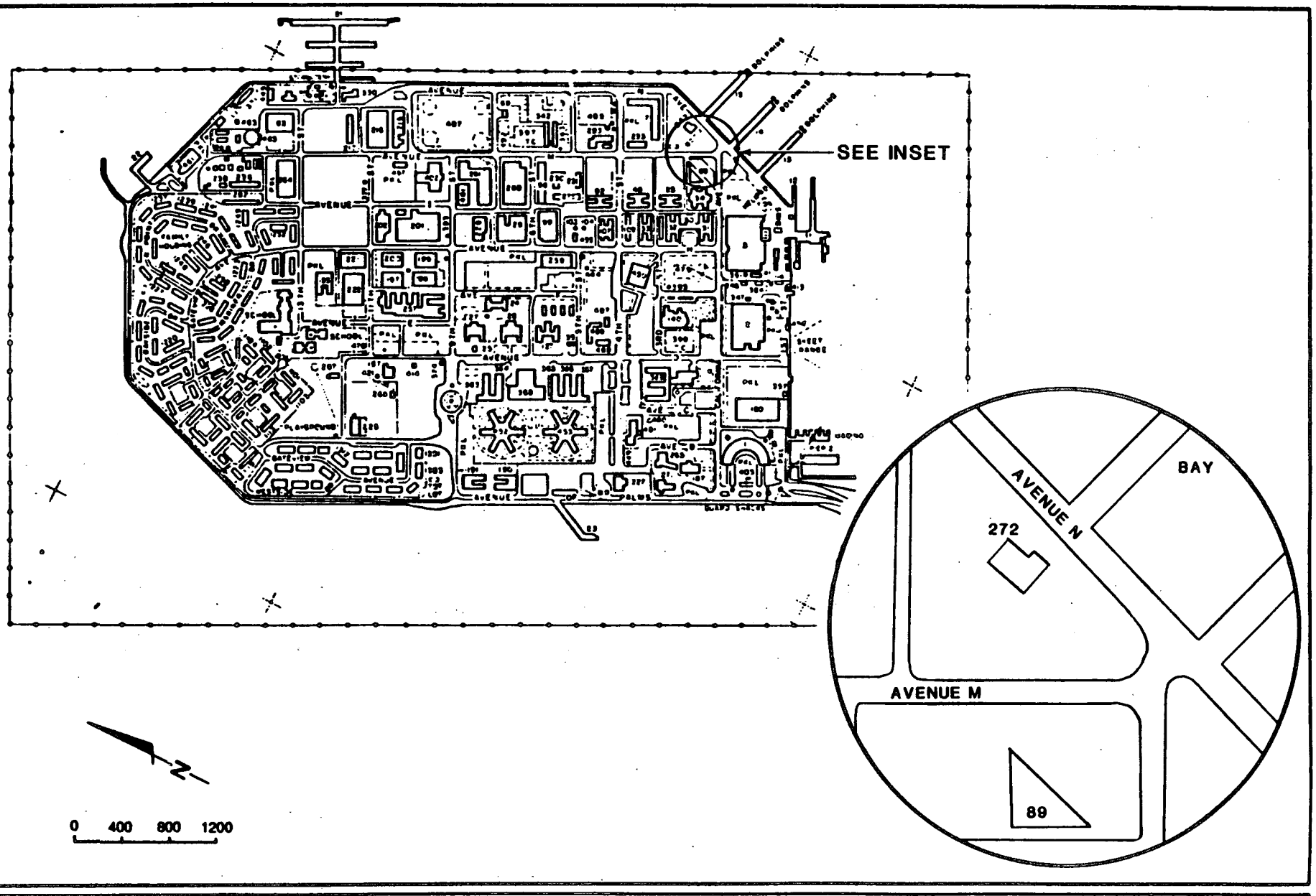
The WESTDIV (1986) report concluded that the contamination present is due to tank leakage and other sources such as surface spills and sludge disposal. The contamination is now concentrated in the vadose zone beneath the concrete-paved tank pad. Because infiltration of percolating water is effectively prohibited by the concrete, the contaminants are now relatively immobilized.

Deeper contamination, below the water table, was not explored by the report. Recommendations included continued ground water monitoring and sampling, installation of additional monitoring wells along the shore east of the fuel farm, additional soil and water sampling around Tank 5 and around the horizontal tank area, and further evaluation of the possibility of adding an extraction and recovery system.

8.15 SITE 15: OLD FUEL FARM. (K7-L7, TI) Two above ground 210,000 gallon diesel fuel storage tanks (4 and 5) were located east of Building 89 (Figure 8-20) before about 1943 when they were moved to the current fuel farm, Site 14. The tank locations are not precisely known as no air photos or plans were found which pre-date 1943. Based on available information, there is no history of spills associated with the former tank locations. However, it was reported that associated underground pipelines were abandoned without first draining fuel from the lines. Excavations at the nearby commissary in 1985 and for the new pier facility (also in 1985) both revealed soil suspected of containing oil and/or hydrocarbons.

8.16 SITE 16: CLIPPER COVE TANK FARM. (B3, YBI) Ten above ground storage tanks of 50,000 gallon capacity each, were located on YBI from at least 1943 until they were dismantled by a private contractor in the 1960s (Figure 8-21). The tanks were reported to have stored aviation gasoline and automotive diesel. Unknown quantities of sludge were removed from the bottom of the tanks at that time. The sludge was reportedly deposited on bare ground on the cliff ledge northeast of the tanks. No record exists documenting the sludge removal and disposal. The sludge was apparently left to erode and wash away into the Bay and/or be absorbed into the underlying soil over a period of years. Surface soil samples taken by NEESA in the vicinity of the tanks revealed lead (in concentrations of 89 to 160 mg/kg) and total petroleum hydrocarbons (240 to 540 µg/g) (see Appendix B). The lead concentrations are below total threshold limit concentrations, but the hydrocarbons exceed the 100 µg/g California limit. A more thorough soil sampling program may help pinpoint the disposal location, although it is likely that little trace of the sludge remains. The site is currently a picnic area, including a barbecue pit.

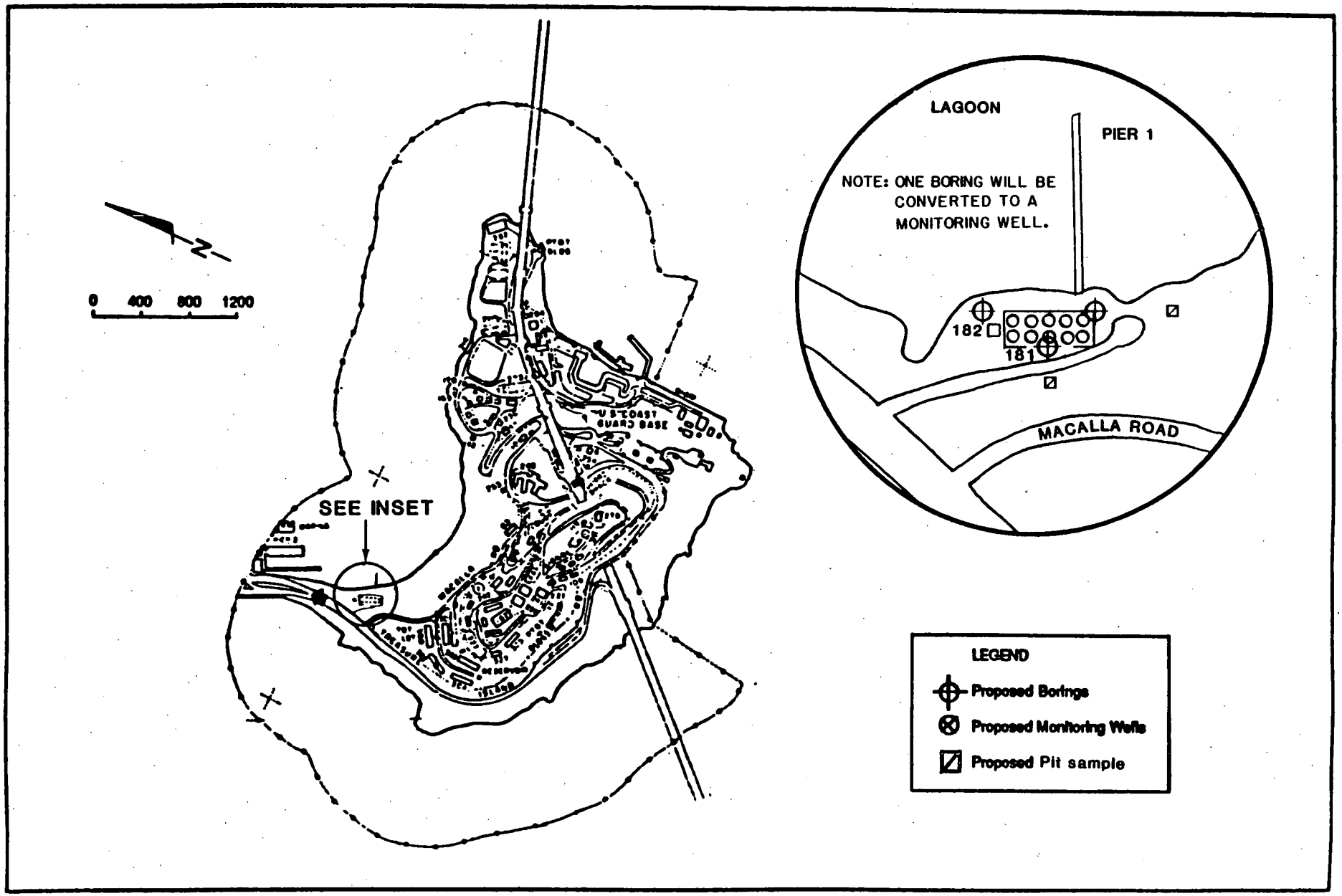
8.17 SITE 17: TANKS 103/104. (I6, TI) An estimated 20,000 gallons of fuel oil were reportedly spilled from Tank(s) 103 and 104 (200,000 gallon capacity,



PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

SITE 15
OLD FUEL FARM

FIGURE
8-20



PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

SITE 16
CLIPPER COVE TANK FARM

FIGURE 8-21

each; Figure 8-22). No exact date for the release was available, but it was reported to have occurred about 1983. A specific cause for the incident was not available. At the time of the release, the tanks stood on bare ground; the area around these tanks about 130 ft by 220 ft has since been bermed and paved.

It was also reported that at least once waste oil was spread around the base of Tanks 103 and 104 for weed and dust control, an area of several hundred square feet. The date, quantity, and source of oil for the incident were not identified. The waste oil may have contained PCB.

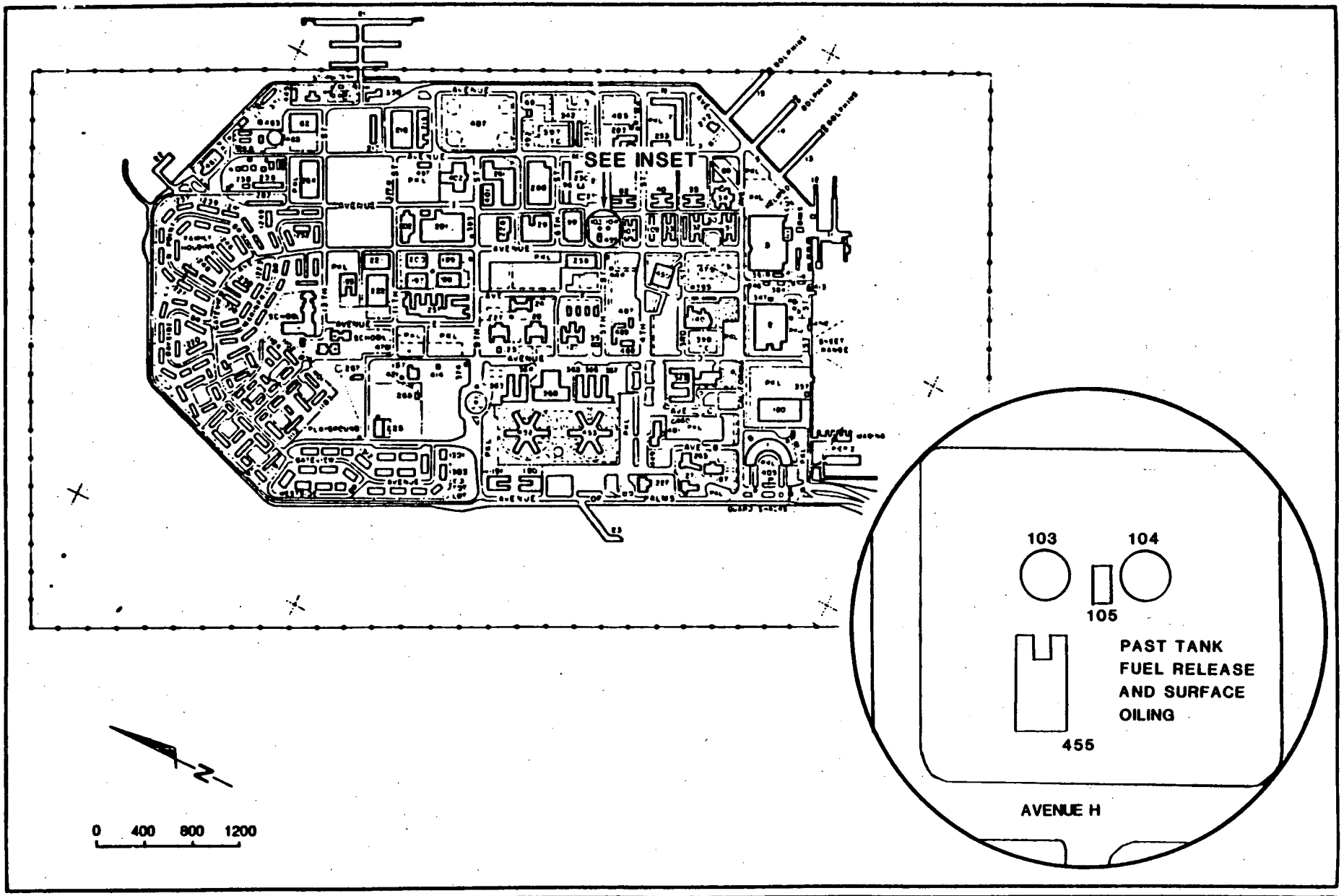
8.18 SITE 18: ASBESTOS-COVERED PIPING, YBI. (G5, YBI) It was reported that as a result of a landslide in the early 1980s on YBI, abandoned steam piping was exposed which was insulated with asbestos (Figure 8-23). No other information was found to confirm this report nor were plans located which suggested the presence of such lines. Because any asbestos coating on other lines is buried with the lines, the asbestos may be considered to be contained. The possibility of such lines becoming exposed (e.g., through maintenance operations) and thus presenting a hazard is low given the nature of operations on YBI.

8.19 SITE 19: REFUSE TRANSFER AREA. (H8-I8, TI) A rubbish transfer area has been located to the east of Building 342 along Avenue M since about 1953 (Figure 8-24). Trash is transferred from small containers to large bins which are transported off-station for disposal. The area contains a paved disposal ramp for trucks to back up and deposit their contents in large containers. Several large containers are stored on the site. Small quantities of miscellaneous trash were spread around the area. There were several small areas of oil contaminated soil associated with leaking engine fluids. The transfer area is approximately 200 ft by 130 ft in plan dimension.

8.20 SITE 20: AUTO HOBBY SHOP/TRANSPORTATION CENTER. (E2, TI) During the period from approximately 1943 to 1950 Buildings 194, 224, 225, and 267 were used as a transportation center where steam cleaning and/or degreasing of vehicles took place (Figure 8-25). Only Building 225 remains. The waste fluid drained from the vehicles was apparently allowed to run off into the storm sewer system and ultimately into San Francisco Bay. It is uncertain whether or not any of the fluids were alternatively routed to the wastewater treatment plant or recycled.

At an unspecified time, Building 225 was converted to the Auto Hobby Shop. Drums of hydraulic fluid, recycled oil, and other vehicle fluids are stored on pallets in the rear yard of the Shop. This practice was common through the history of the shop. The ground and concrete beneath the drums is stained (darkened), apparently by fluid from the drums. The stain extends to the gutter and storm drain as shown on Figure 8-25. Soil surrounding the drums was sampled and revealed the presence of chromium at concentrations of 44 and 67 mg/kg, lead at 270 and 700 mg/kg, nickel at 28 and 35 mg/kg, zinc at 160 and 470 mg/kg, oil and grease at 13,300 and 28,200 mg/kg, and total petroleum hydrocarbons at 9700 and 25,000 µg/g (Appendix B).

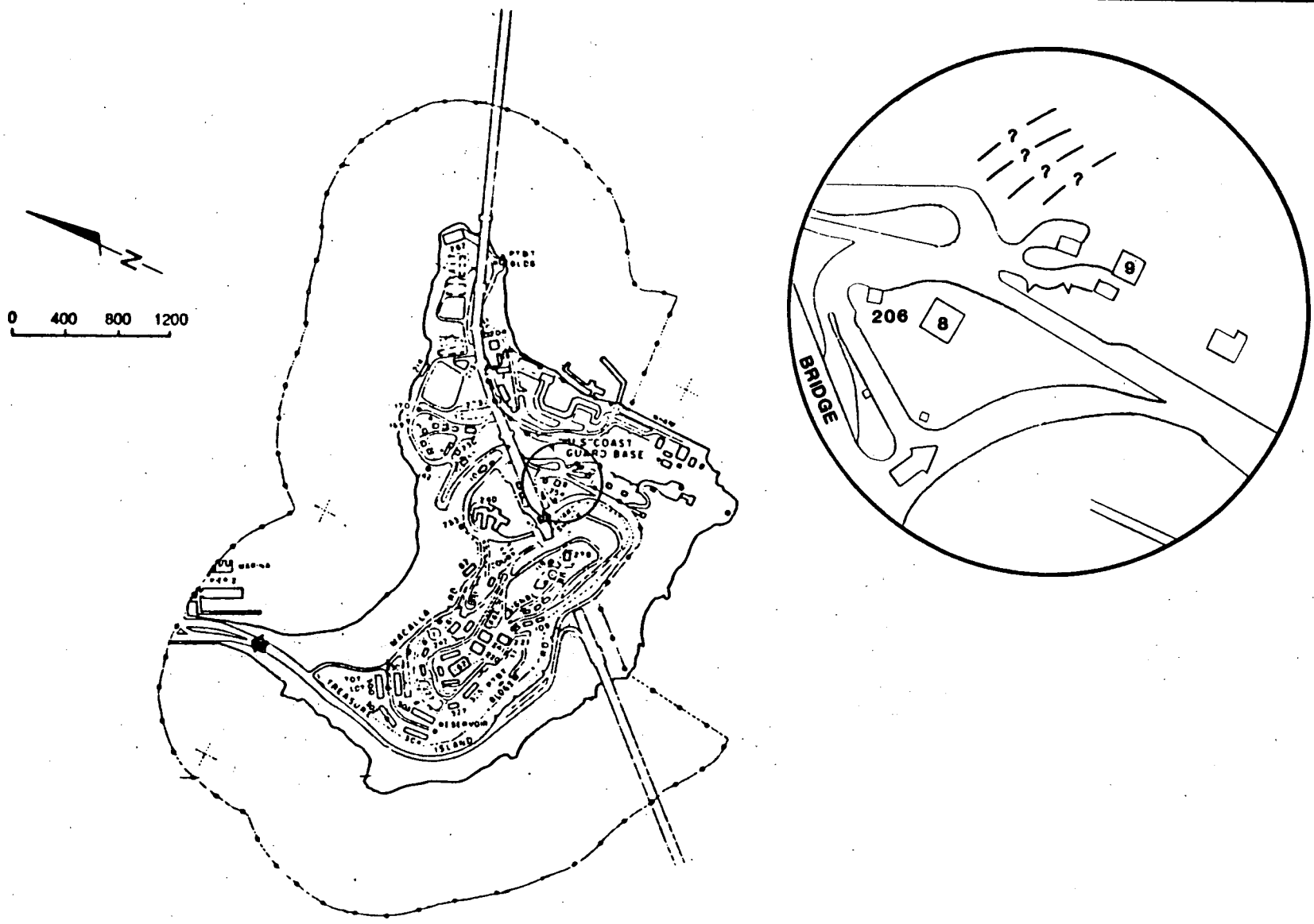
An investigation performed by BSK Associates (1987) of the area surrounding Building 225 included advancing 10 borings, 3 of which were converted to monitoring wells as shown on Figure 8-25. Soil samples from 6 of the borings



PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

SITE 17
TANKS 103/104

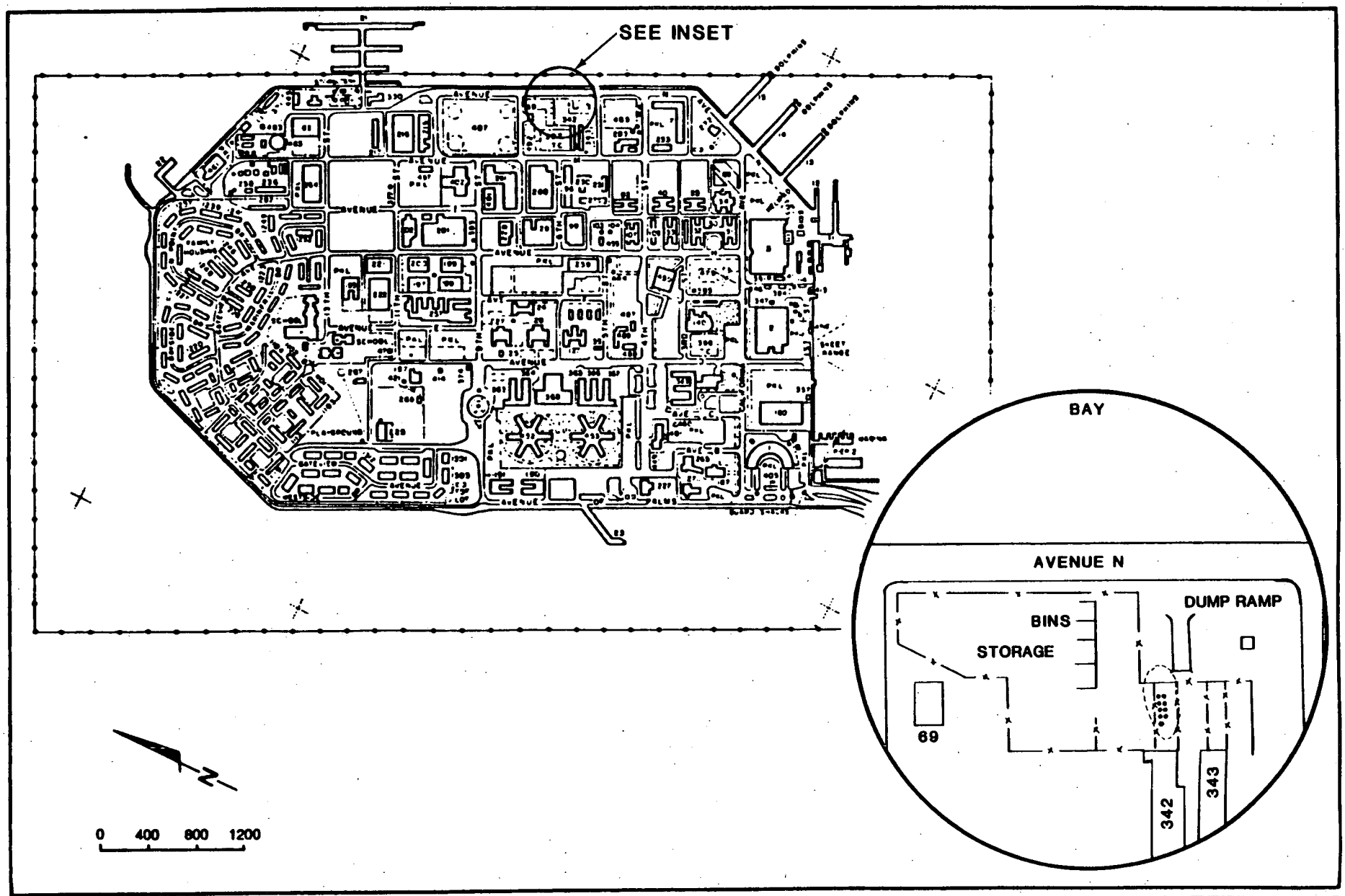
FIGURE
8-22



PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

SITE 18
ASBESTOS COVERED PIPING, YBI

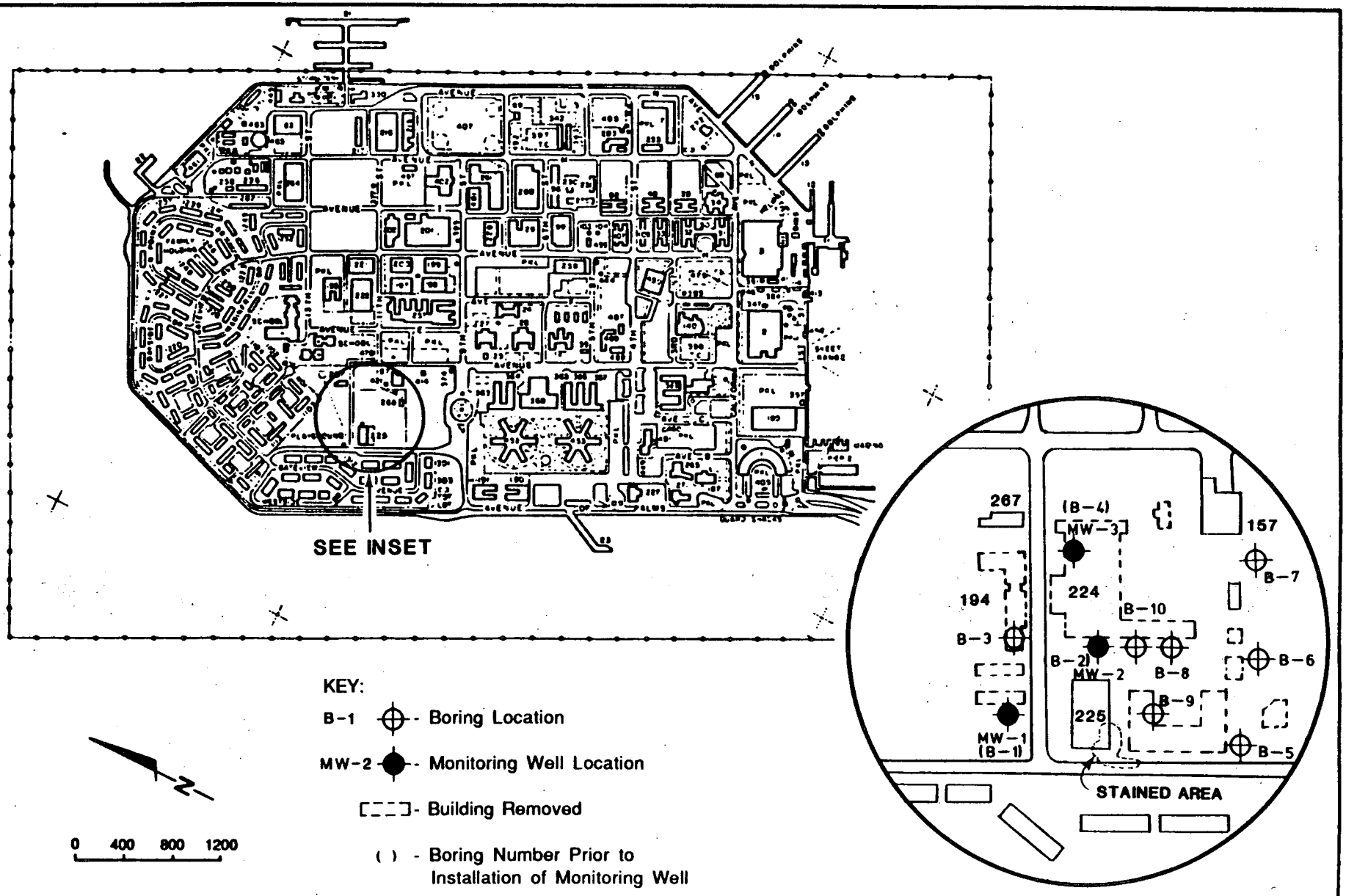
FIGURE
8-23



PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

SITE 19
REFUSE TRANSFER AREA

FIGURE
8-24



PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

SITE 20
AUTO HOBBY SHOP / TRANSPORTATION CENTER

FIGURE
8-25

were analyzed for total volatile hydrocarbons and total extractable hydrocarbons. Soil from boring B-2 contained concentrations of volatile hydrocarbons at 241 mg/kg and extractable hydrocarbons at 104 and 2 mg/kg. A soil sample from boring B-1 contained 30 mg/kg of extractable hydrocarbons. Water from boring B-2 contained volatile hydrocarbons of 195 mg/l (milligrams per liter) and extractable hydrocarbons of 320 mg/l.

Analyses of soil and water samples from boring B-2 for Organochlorine Pesticides and PCBs did not detect any contaminants; analyses of soil and water samples from boring B-2 for EPA metals revealed the presence of arsenic, chromium (+6), copper, lead, mercury, nickel, and zinc all at levels far below Total Threshold Limit Concentrations (TTLC) and Soluble Threshold Limit Concentrations (STLC).

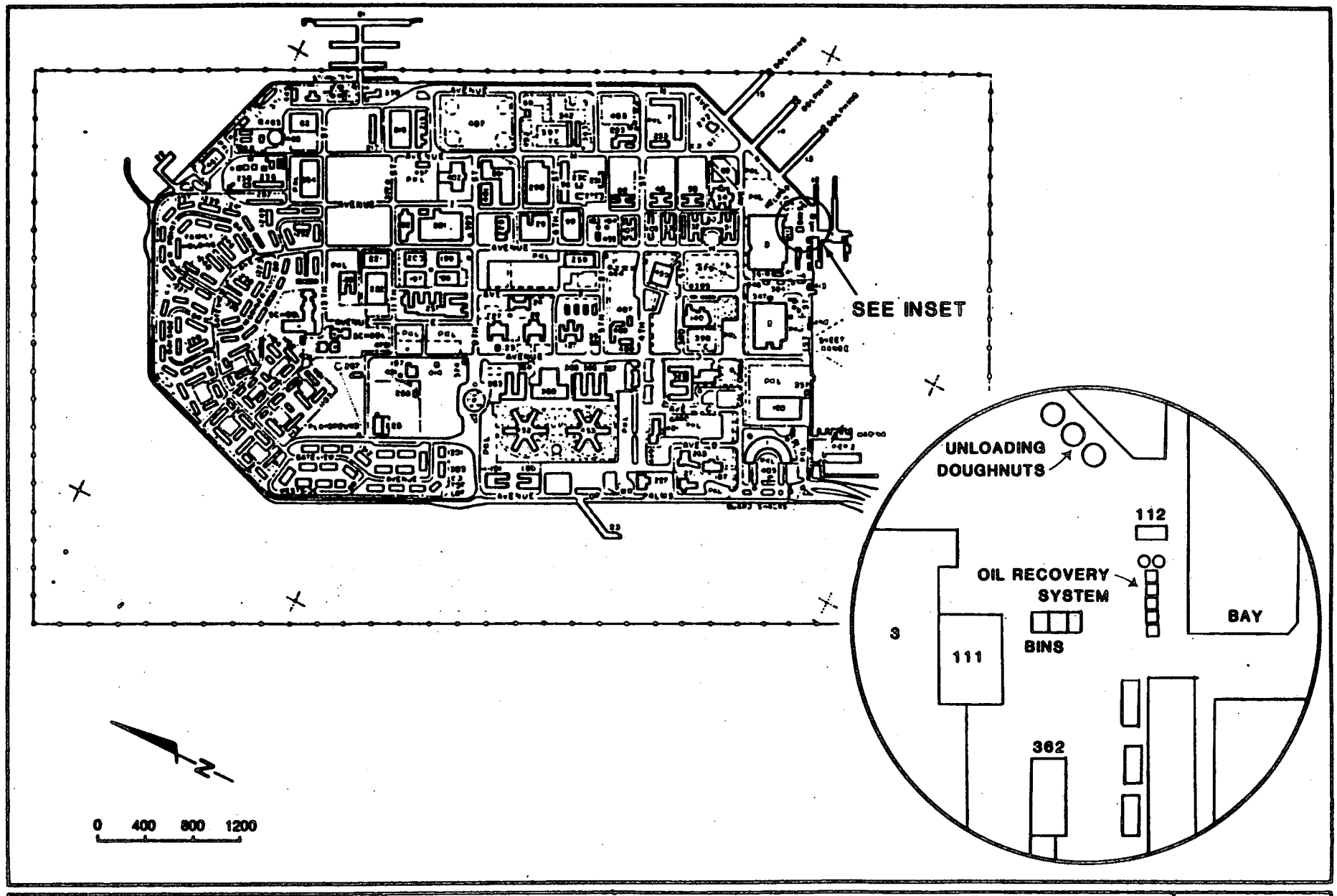
Several underground tanks may have been located in this area which have been abandoned in place. Locations include three known tanks east of Building 225 near boring B-2 and possibly others east and northeast of Building 225. The location of underground tanks associated with the former gas station (Building 370), transportation centers, and vehicle cleaning area may account for the presence of the contaminants detected as described above.

8.21 SITE 21: VESSEL WASTE OIL RECOVERY. (M5-M6) Waste oil from vessels is unloaded into cylindrical steel shells (DONUTs) which are maintained partly above and partly below the water surface. Current DONUTs have bottoms which prevent the oil from contacting the water. Older models did not have bottoms and the oil directly contacted the water. The DONUT is maneuvered to shore and pumped through an oil/water separation system (Figure 8-26). The separator and DONUTs stand on a paved area which is heavily stained. The recovered oil is recycled. Volumes of waste oils anticipated for 1975 were at 271,900 gallons per year according to a NAVSHIPS/NAVSEC (1972) document. Contamination at this site may involve sediments, due to spills and contact in older DONUTs, and onshore soils, due to spills associated with the separator.

Sediments in this area may also be contaminated with mercury as a result of vessel boiler operations. Mercuric nitrate is introduced to the vessel boiler lines to inhibit scale. The systems are occasionally purged and liquids are dumped at sea or in dock.

8.22 SITE 22: NAVY EXCHANGE SERVICE STATION. (E8, TI) Recent examination of the storm drain at the service bay of the Naval Exchange Service Station (Figure 8-27) has revealed that filters and vehicle fluids have been deposited in the storm drain. The ultimate receptors of the waste fluids are organisms in San Francisco Bay. The condition of the materials found in the storm drain indicates that the practice has been occurring for some time although the volumes of fluids and materials released is unknown. A 1972 NAVSHIPS/NAVSEC report estimated that by 1975 12,000 gallons of waste oils and fluids would be generated from service station activities.

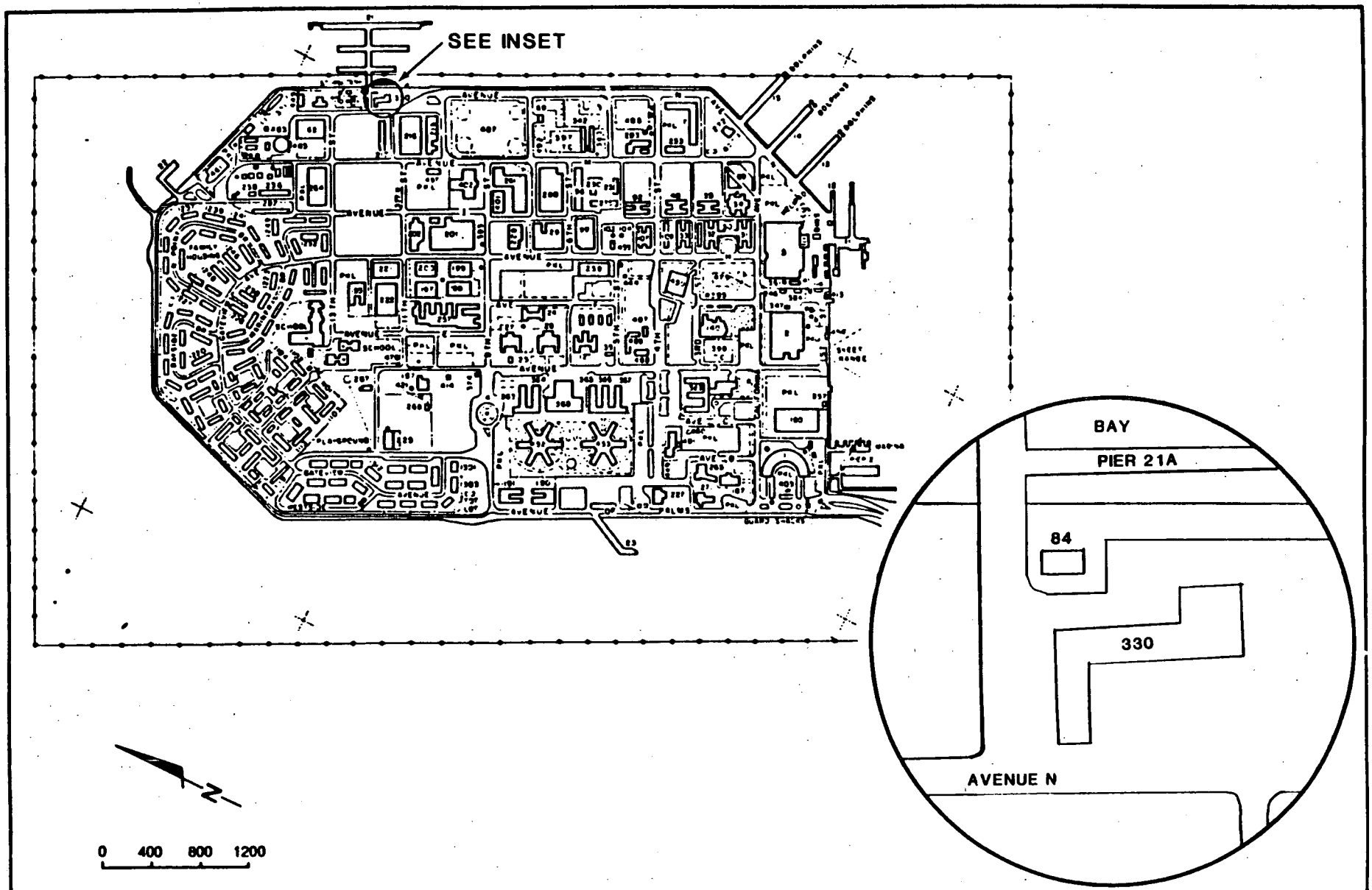
Three underground storage tanks are located at the service station, as shown in Figure 8-27. Because the service station has been in operation since 1946, it is likely that fuels have leaked from the tanks or tank fill pipes and have also spilled in the area.



PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

SITE 21
VESSEL WASTE OIL RECOVERY

FIGURE
8-26



PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

SITE 22
NAVY EXCHANGE SERVICE STATION

FIGURE
8-27

8.23 SITE 23: YBI LINE BREAK. (D5, YBI) A landslide in early 1980s reportedly ruptured a pipeline on YBI (Figure 8-28). The line carried black oil from fueling Pier 3/4 uphill to storage Tank 117 located on top of YBI. Although the volume of product released is not known, the capacity of the line was about 400 gallons between the Pier and Tank 117. The landslide occurred at a steep, rocky cliff face with minimal soil cover and the spilled product is assumed to have been carried via surface water flow to the Bay.

8.24 SITE 24: 5TH STREET FUEL RELEASES. (I6-I8, TI) Abandoned underground pipelines on TI have reportedly leaked recently in three locations along 5th Street in the vicinity of Buildings 293 and both 40 or 92 (Figure 8-29). The leaks were discovered in 1986 and 1987 and excavated soil was sampled in October 1987. Analyses of samples north of Building 293 reveal the presence of oil and grease from 470 to 7,450 mg/kg and total petroleum hydrocarbons at 180 to 5,100 µg/g. A sample northeast of Building 40 had oil and grease at 680 mg/kg and total hydrocarbons at 500 µg/g. The pipelines were once used to transport grade 6 fuel oil but were abandoned in place about 1985. A cathodic protection system was installed between 1980 and 1985 to help protect the existing pipelines from corrosion. The system was installed incorrectly and may have actually enhanced the corrosion of the pipeline system. The actual quantity of leaked fuel or oil has not been estimated.

The pipeline network which was formerly used to transport oil and fuel has in many cases been abandoned in place without first draining the pipeline. The actual volume of in place oil may have been up to 10,000 gallons, but the locations of the abandoned pipeline segments are unknown. This practice of in-place abandonment has presumably occurred from 1950 to present, paralleling the abandonment of fuel storage tanks, fueling piers, fueling stations, and buildings which required fuel deliveries. Abandoned pipelines may be located both on TI and YBI.

8.25 SITE 25: SEAPLANE MAINTENANCE. (L2-L6, TI) During the period from about 1943 to 1958 seaplanes were maintained in Buildings 2, 3, and 180 (Figure 8-30). Little information exists regarding operations, but apparently engineering work and cleaning occurred. Given the method of waste handling with regard to other similar operations (i.e. Auto Hobby Shop), further investigations may determine if contamination is present. Based on other operations on TI during the same time period, waste liquids or solvents from engine cleaning may have been deposited in the Bay via the storm drain system or directly to the ground surface.

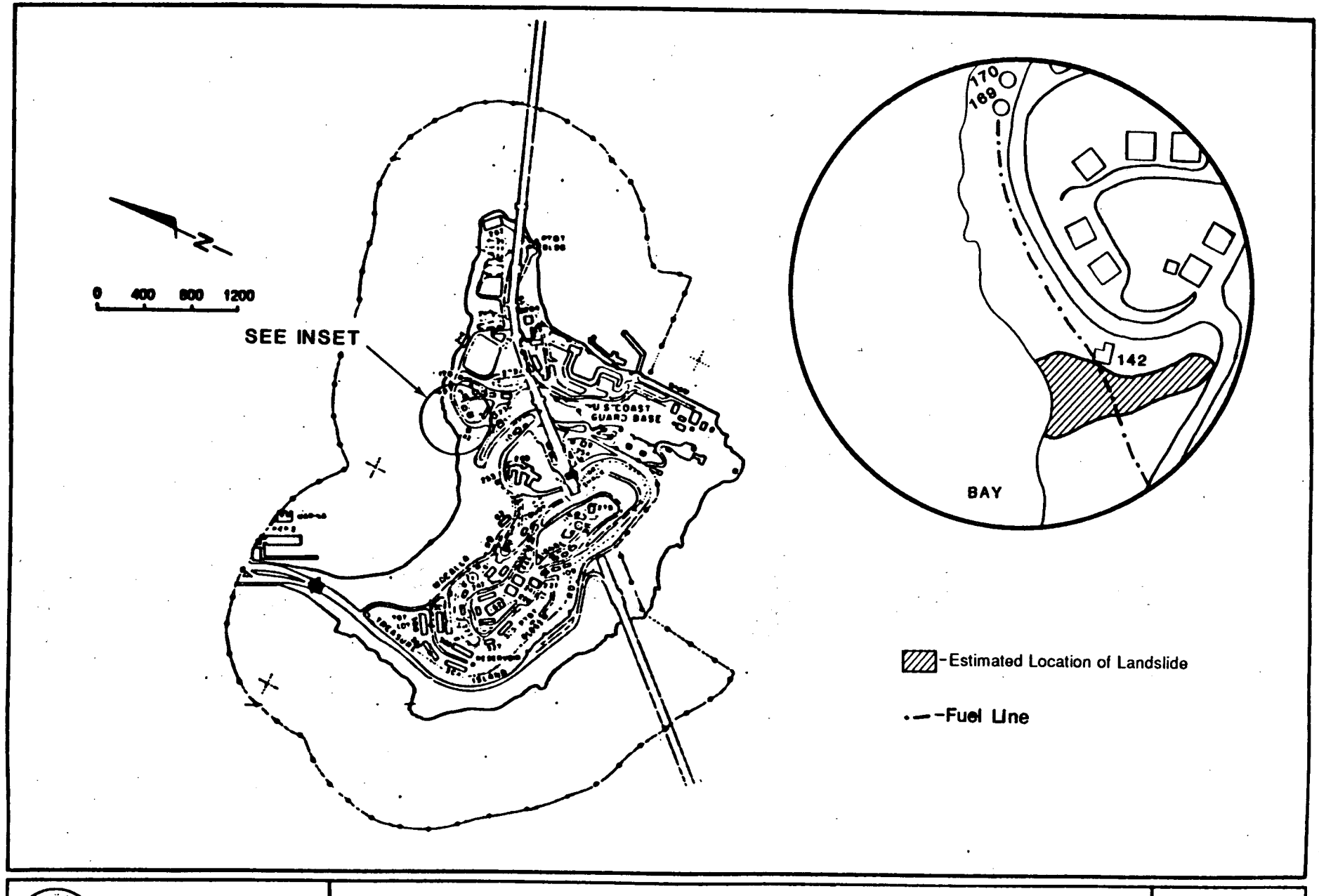
The ten aviation gasoline tanks adjacent to Building 2 have not been located precisely nor is there a record of their abandonment. Tanks may have also been located west and south of Building 2. No records of leakage associated with these tanks were found.

8.26 SITE 26: UNDERGROUND TANKS. The locations of suspected underground tanks on TI (excluding Site 6: Fire Training Area tanks) and YBI are shown on Figure 8-31. ERM-West (1987) located 28 underground tanks and filed closure plans for 21 underground tanks. An additional 16 potential underground tank locations remain. These suspected tank locations were identified by field inspection, during discussions with station personnel, and by NAVFAC Drawing 6085580P (November 16, 1984). Information regarding each tank is given in Table 8-3.

TABLE 8-3

SITE 26: UNDERGROUND TANKS

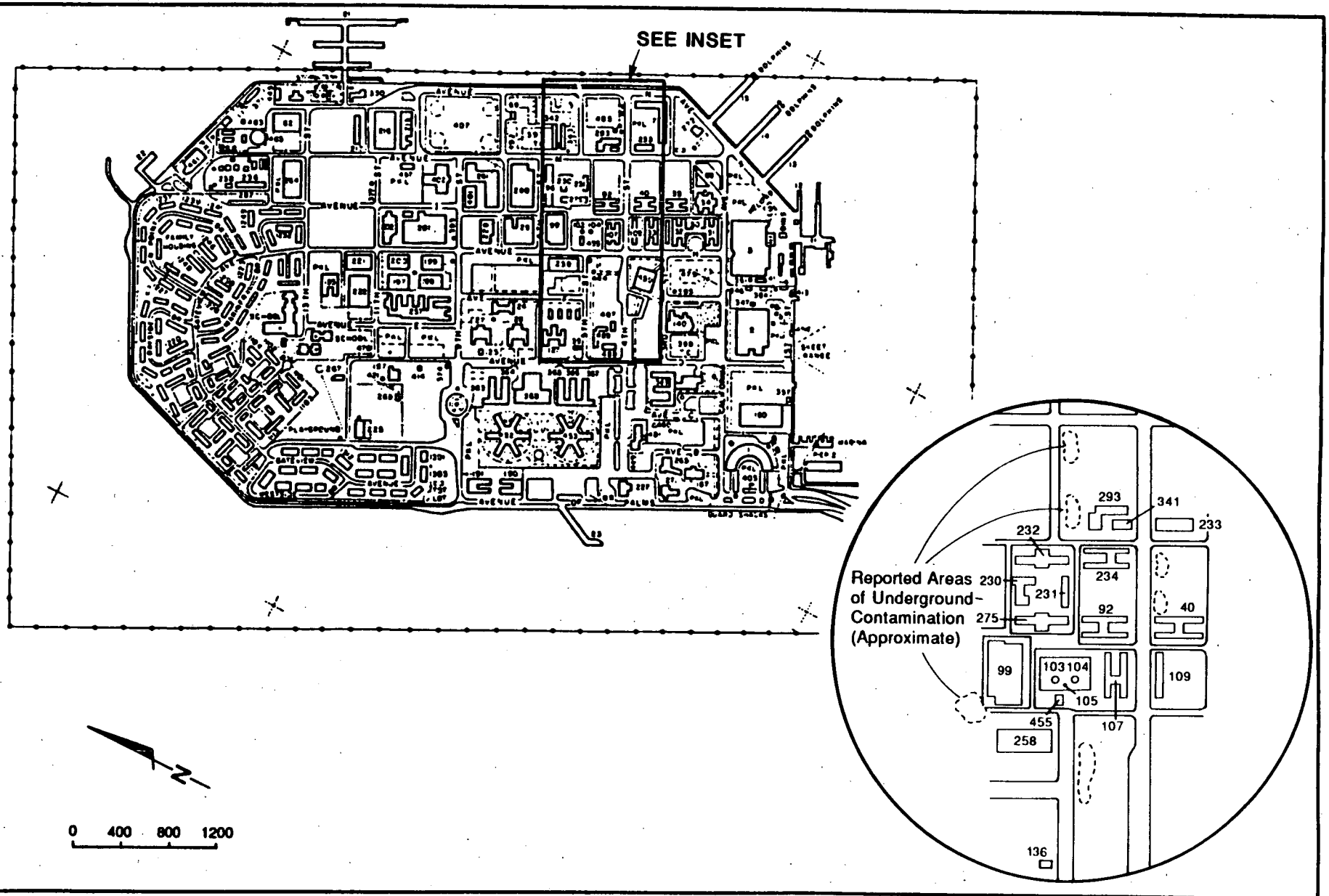
NUMBER TANKS	LOCATION	AGE	MATERIAL	SIZE	CONTENTS	COMMENTS
2	Approximately 100' each of NE corner of former gas station 370-TI near former Building 224-TI	Building 224 used from pre-1943 until demolition prior to 1981	Steel	Unknown	Diesel?	Found two vertical pipes in open field near former site of Building 224-TI -- possibly associated with package boilers.
1	Approximately 300' east of NE corner of Building 92-TI	Building 234 used from pre-1943 until demolition prior to 1981	Steel	Estimated 500 Gallons	Diesel?	Found vertical pipe in open field near former site of Building 234-TI.
10	Adjacent to (south of) SE corner of Building 2-TI	Used from pre-1935 to	Steel	4,000(?) Gallons Each	Aviation Fuel	Found vertical pipe approximately 50' west and 4' south of SE corner of Building 2-TI -- possibly associated with the aviation tanks.
7	Buildings 1 through 7-YBI with one tank per building	Buildings operational from pre-1935 to present	Steel	Estimated 500 Gallons Each	Diesel	Indicated as possible tanks associated with package boilers for each building (quarters) -- from personnel interview.
1	Adjacent to (NW of) Building 66-YBI	Buildings operational from pre-1935 to present	Steel	Unknown	Unknown	Indicated during personnel interview. Uncertain use. Possible tank for package boiler.
1	Approximately 75' SE of Building 213-YBI	Building in use from pre-1935 until at least 1953	Steel	Estimated 500 to 1,000	Diesel	Indicated during personnel interview. Uncertain use, possible tank for package boiler.
1	Adjacent (?) to Building 204-YBI	Gas station from pre-1935 until conversion to fire station on or before 1947	Steel	Estimated 1,000 to 4,000 Gallons(?)	Diesel and/or Gasoline	Indicated during personnel interview -- tank associated with former gas station location-YBI.
1	Adjacent to Building 8-YBI	Building in use from pre-1935 to present	Steel	Estimated 500 Gallons	Diesel(?)	Indicated during personnel interview -- tank associated with possible package boiler for quarters-YBI.
1	Adjacent to Building 9-YBI	Building in use from pre-1935 to present	Steel	Estimated 500 Gallons	Diesel(?)	Indicated during personnel interview -- tank associated with possible package boiler for quarters-YBI.



PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

SITE 23
YBI LINE BREAK

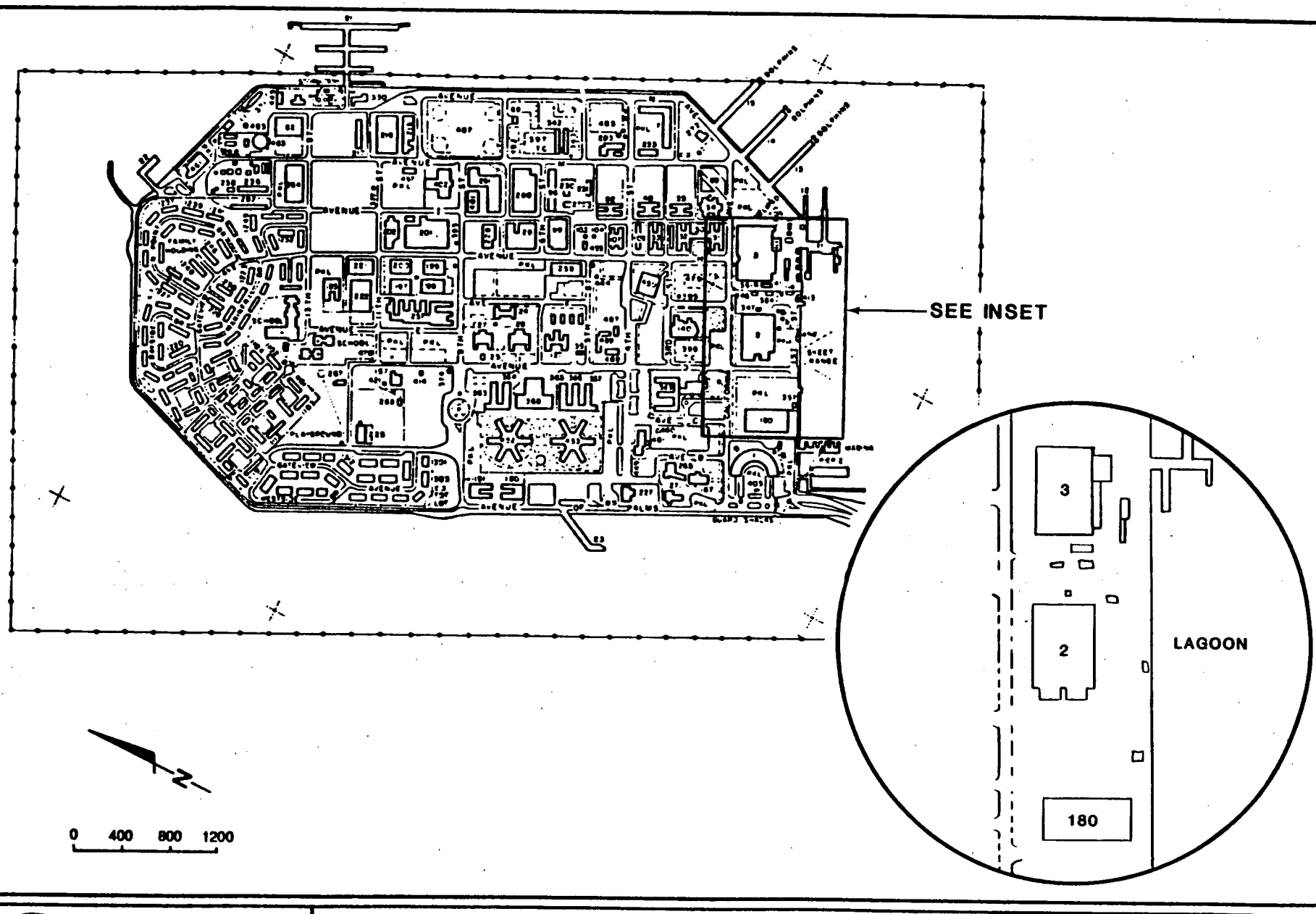
FIGURE
8-28



PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

SITE 24
5th STREET FUEL RELEASES

FIGURE
8-29



PRELIMINARY ASSESSMENT/
SITE INSPECTION
NAVSTA Treasure Island, Ca.

SITE 25
SEAPLANE MAINTENANCE

FIGURE
8-30

LEGEND:

Possible Underground Tank Location; Located by Field Inspection, 1987.

Possible Underground Tank Location; Located during Personnel Interview.

Possible Underground Tank Location; Located by NAVFAC Drawing, 1984.

PRELIMINARY ASSESSMENT/ SITE INSPECTION NAVSTA Treasure Island, Ca.

SITE 26: UNDERGROUND TANKS

FIGURE 8-31

Four potential locations were identified during field inspection due to unexplained vertical pipes, possibly fill pipes, protruding from the ground east of Building 225, in the field east of Building 92 and against the south side of Building 2 on TI (also identified by NAVFAC Drawing, 1984).

Station personnel indicated that as many as 11 underground tanks associated with package boilers may still exist on YBI.

The last potential underground tank site is located near Building 204 on YBI, the former site of a gas station. No records were found indicating the closure of this tank.

Of these 16 potential tank locations, those associated with the package boilers and gas station on YBI appear to be the most likely locations while those sites identified by protruding pipes are the least certain. A thorough survey by geophysical methods is the most definitive technique, besides excavation, for locating these possible tanks.

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APPENDIX A

Glossary

Table A-1

Glossary: Acronyms

BATF	Bureau of Alcohol, Tobacco, and Firearms
BTX	Benzene, Toluene, and Xylenes
CAC	California Administrative Code
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CNO	Chief of Naval Operations
COMNAVSURFPAC	Commander Naval Surface Force U.S. Pacific Fleet
DOD	Department of Defense
DOT	Department of Transportation
DPDO	Defense Property Disposal Office
DRMO	Defense Reutilization and Marketing Office (Alameda)
EFD	Engineering Field Division
EPA	Environmental Protection Agency
FS	Feasibility Study
HRS	Hazard Ranking System
HW	Hazardous Waste
IR	Installation Restoration
Kjfss	Sandstone and shale (Franciscan)
MSL	Mean Sea Level
NACIP	Navy Assessment and Control of Installation Pollutants
NAVFAC	Naval Facility
NAVFACENGCOM	Naval Facilities Engineering Command
NAVSTA TI	Naval Station Treasure Island (Treasure Island and a portion of Yerba Buena Island)
NEESA	Naval Energy and Environmental Support Activity
NEPSS	Naval Environmental Protection Support Service
NPDES	National Pollutant Discharge Elimination System
NSC	Naval Supply Center (Oakland)
NTTC	Naval Technical Training Center
OBA	Oxygen Breathing Apparatus
PA/SI	Preliminary Assessment/Site Inspection
PCB	Polychlorinated biphenyl
PWC	Public Works Center (Oakland)
Qaf	Artificial fill
Qls	Landslide debris
Qc	Colma Formation
Radiac	Radiation training activity
RCRA	Resource, Conservation, and Recovery Act
RI	Remedial Investigation
RI/FS	Remedial Investigation/Feasibility Study
SARA	Superfund Amendments and Reauthorization Act
TI	Treasure Island
TTLC	Total Threshold Limit Concentration
USDA	United States Department of Agriculture
USGS	United States Geological Survey
WESTDIV	Western Division
WWT	Wastewater Treatment, Wastewater Treatment Plant
YBI	Yerba Buena Island

APPENDIX B

Summary of NEESA Sampling and Analyses

A total of 30 samples were collected by Dames & Moore and NEESA personnel from 10 sites at Naval Station Treasure Island on October 28 and 29 and in mid-November, 1987. The samples taken included soil, wipe samples from asphalt or concrete surfaces, and asphalt chunks. The samples were analyzed for petroleum, PCBs, pH, and various metals. The analytical results are shown on Tables B-1 and B-2 while Plates B-1 through B-4 show the sampling locations.

TABLE B-1

METALS AND SOIL ACIDITY ANALYSES

SITE NO.	SITE DESCRIPTION	SAMPLE NUMBER	PLATE REF.	SAMPLE TYPE	DEPTH	pH	LEAD (mg/K)	CHROMIUM (mg/K)	NICKEL (mg/K)	ZINC (mg/K)	SILVER (mg/K)
1	Medical Clinic	1	B-1	Soil	0-6"	4.2	--	--	--	--	7,740
		2	B-2	Soil	0-6"	4.0	--	--	--	--	3,050
16	Clipper Cove Tank Farm	1	B-2	Soil	0-6"	--	130	--	--	--	--
		2	B-2	Soil	0-6"	--	89	--	--	--	--
		3(1)	B-2	Soil	0-6"	--	160	--	--	--	--
20	Auto Hobby Shop/ Transportation Center	1	B-3	Soil	0-6"	--	270	44	28	160	--
		2	B-3	Soil	0-6"	--	700	67	35	470	--
		3	B-3	Soil	0-6"	--	2,000	33	27	550	--
	Regulatory Threshold(2)						1,000	2,500	2,000	5,000	500

NOTES:

-- Analysis not performed.
ND Not detected.

(1) Three other samples were also obtained and analyzed but results have been discarded due to assumed improper sampling procedures.
(2) State of California, Total Threshold Limit Concentration (TTLC), CAC, Title 22, Division 4, Chapter 30.

AMB/1216a

TABLE B-2

PETROLEUM AND PCB ANALYSES

SITE NO.	SITE DESCRIPTION	SAMPLE NUMBER	PLATE REF.	SAMPLE TYPE	DEPTH	OIL/GREASE (mg/K)	TOTAL PETROLEUM HYDROCARBONS (ug/G)	POLYCHLORINATED BIPHENYLS(1) 1016	1221	1232	1242	1248	1254	1260
3	PCB Equipment Storage Area	1	B-1	Wipe	Surface	—	—	ND	ND	ND	ND	ND	ND	ND
		2	B-1	Wipe	Surface	—	—	ND	ND	ND	ND	ND	ND	2.6
		3	B-1	Wipe	Surface	—	—	ND	ND	ND	ND	ND	ND	ND
		4	B-1	Wipe	Surface	—	—	ND	ND	ND	ND	ND	ND	ND
		5	B-1	Wipe	Surface	—	—	ND	ND	ND	ND	ND	ND	3.5
		6	B-1	Wipe	Surface	—	—	ND	ND	ND	ND	ND	ND	ND
		7	B-1	Wipe	Surface	—	—	ND	ND	ND	ND	ND	ND	ND
		8	B-1	Asphalt	Surface	—	—	ND	ND	ND	ND	ND	ND	ND
4,19	Hydraulic Training School, Refuse Transfer Area	1	B-2	Soil	0-6"	68,800	50,000	ND	ND	ND	ND	ND	ND	ND
		2	B-2	Soil	0-6"	77,300	53,000	ND	ND	ND	ND	ND	ND	ND
		4(2)	B-2	Soil	6-12"	7,030	5,800	ND	ND	ND	ND	ND	ND	ND
16	Clipper Cove Tank Farm	1	B-2	Soil	0-6"	—	310	—	—	—	—	—	—	—
		2	B-2	Soil	0-6"	—	540	—	—	—	—	—	—	—
		3(3)	B-2	Soil	0-6"	—	240	—	—	—	—	—	—	—
20	Auto Hobby Shop/ Transportation Center	1	B-3	Soil	0-6"	13,300	9,700	—	—	—	—	—	—	—
		2	B-3	Soil	0-6"	28,200	25,000	—	—	—	—	—	—	—
24	Fifth Street Fuel Releases	1	B-3	Soil	Dirt Pile	7,450	5,100	—	—	—	—	—	—	—
		2	B-3	Soil	Dirt Pile	5,130	2,500	—	—	—	—	—	—	—
		3	B-3	Soil	Dirt Pile	470	180	—	—	—	—	—	—	—
		4	B-3	Soil	0-6"	680	500	—	—	—	—	—	—	—
—	Transformer Storage, Bldg. 445	1	B-4	Wipe	Surface	—	—	ND	ND	ND	ND	ND	ND	ND
		2	B-4	Wipe	Surface	—	—	ND	ND	ND	ND	ND	ND	ND
	Regulatory Threshold					None	100(4)	50(5)	50	50	50	50	50	50

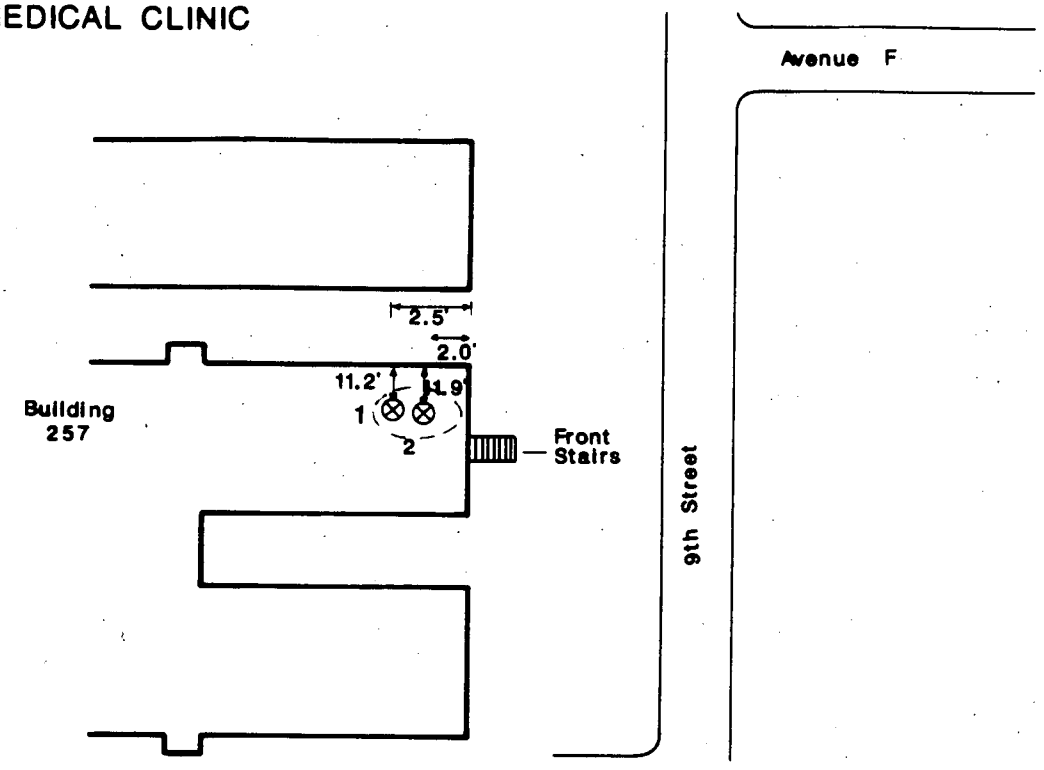
NOTES:

— Analysis not performed.
ND Not detected.

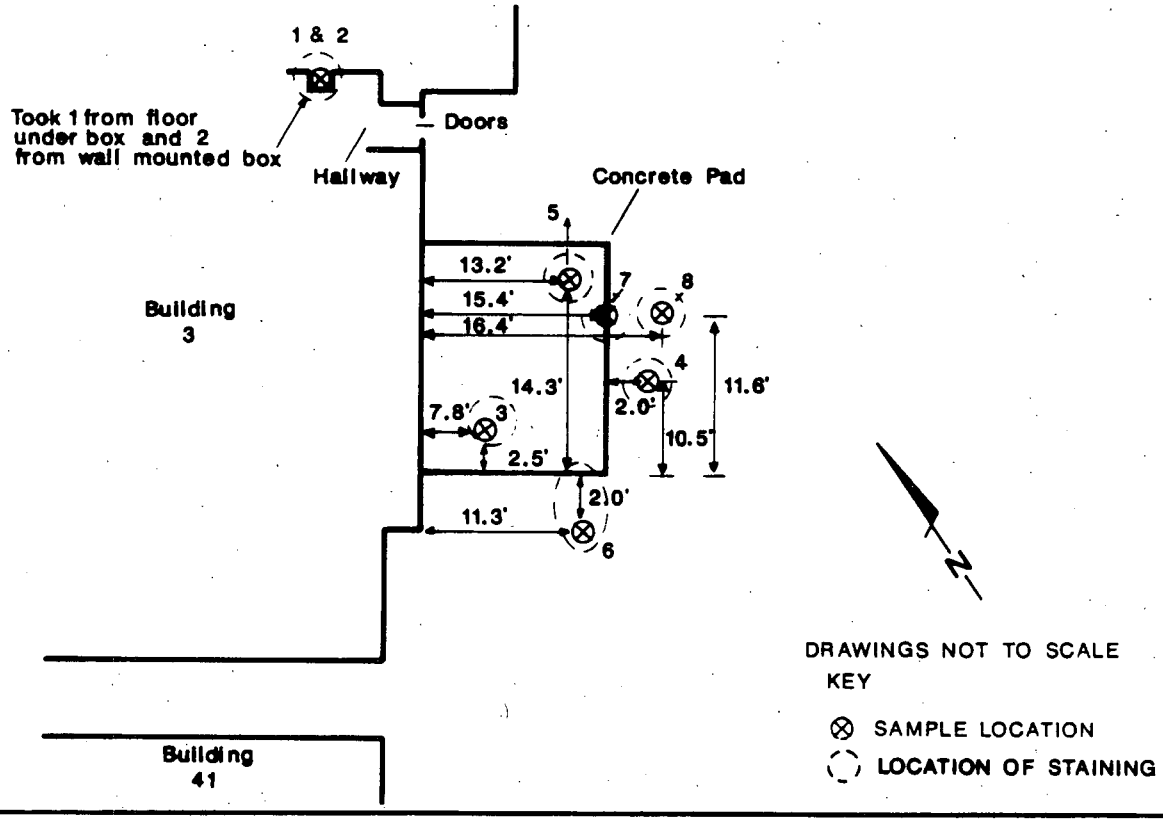
(1) Units are ug/100 cm2 for wipe samples, ug/K for soil samples.
(2) Sample number 3 was broken in shipment.
(3) Three other samples were also obtained and analyzed but results have been discarded due to assumed improper sampling procedures.
(4) California Regional Water Quality guideline for fuel leaks, San Francisco Bay Region, September 1985.
(5) No regulatory limits have been developed for wipe samples. Limits shown are the total threshold limit concentration (TTLC) from the California Assessment Manual (CAM), 1985, for bulk samples. Units are milligrams/Kilogram.

AMB/1217a

A) SITE 1: MEDICAL CLINIC



B) SITE 3: PCB EQUIPMENT STORAGE AREA



DRAWINGS NOT TO SCALE

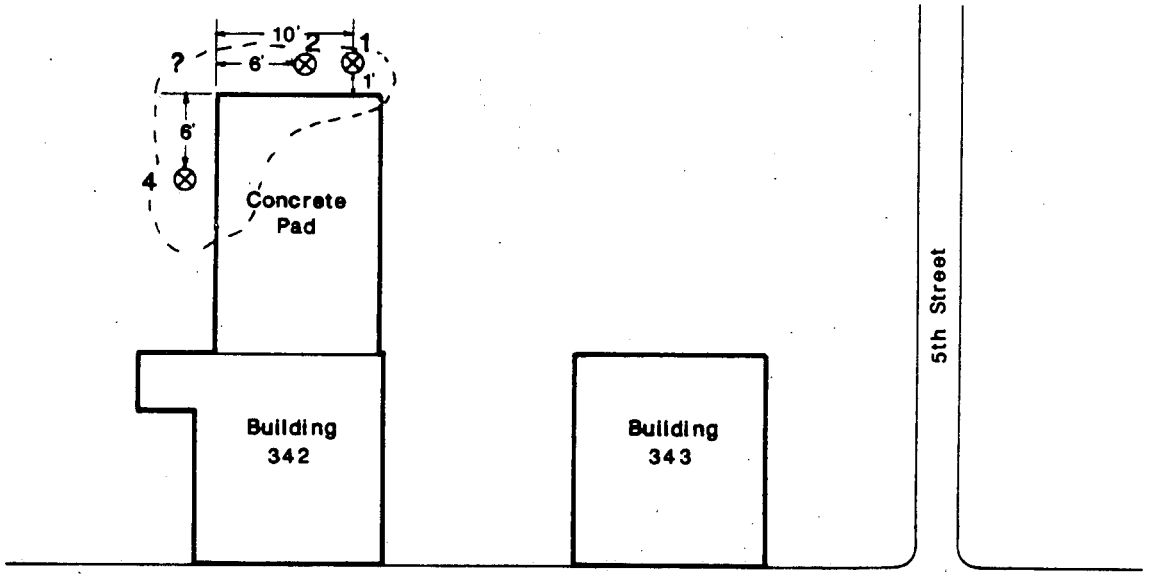
KEY

⊗ SAMPLE LOCATION

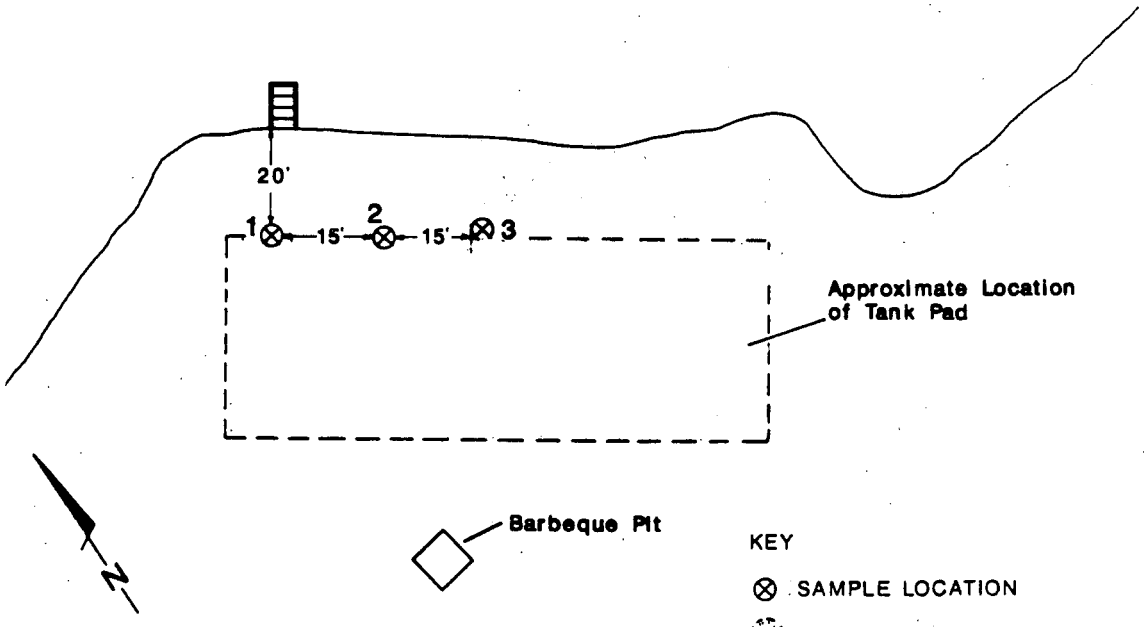
◌ LOCATION OF STAINING

PRELIMINARY ASSESSMENT/ SITE INSPECTION NAVSTA Treasure Island, Ca.	**CONFIRMATION SAMPLING LOCATIONS - SITES 1 AND 3**	FIGURE B-1

C) SITE 4: HYDRAULIC TRAINING SCHOOL
SITE 19: REFUSE TRANSFER AREA



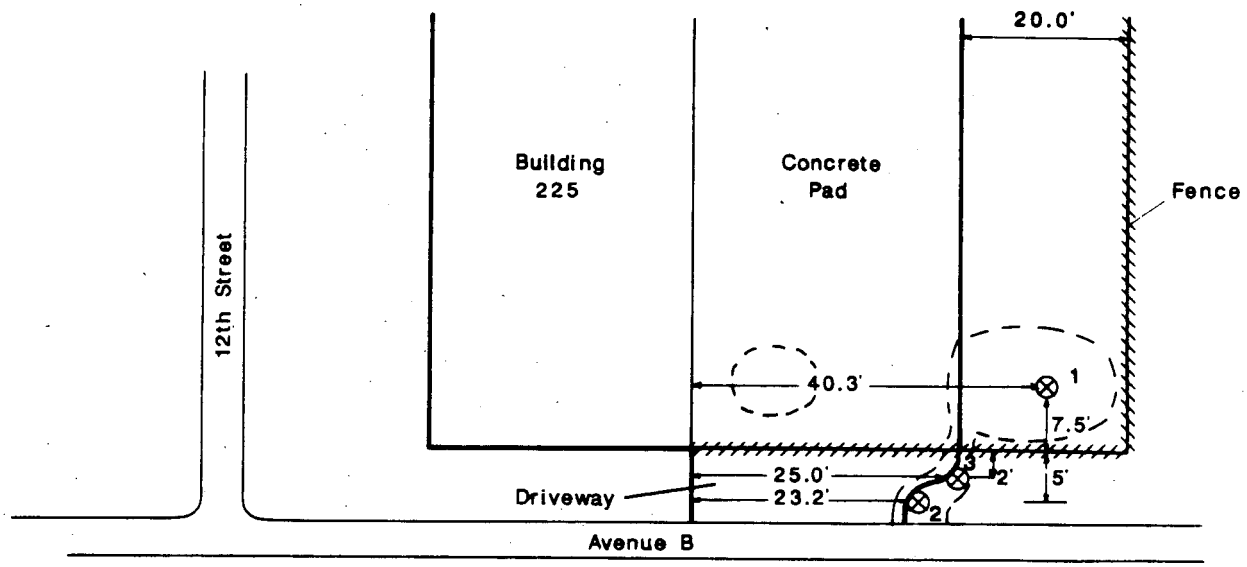
D) SITE 16: CLIPPER COVE TANK FARM



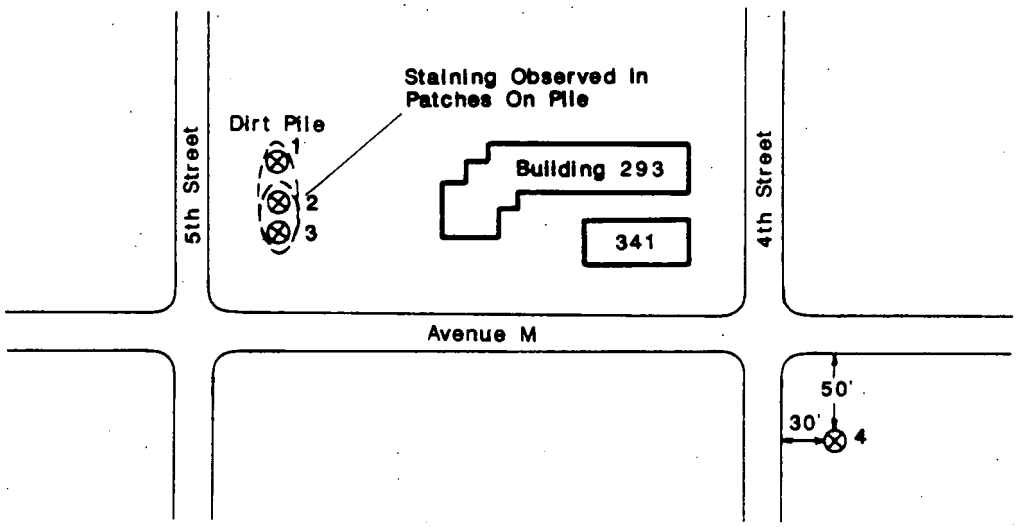
DRAWINGS NOT TO SCALE

PRELIMINARY ASSESSMENT/ SITE INSPECTION NAVSTA Treasure Island, Ca.	**CONFIRMATION SAMPLING LOCATIONS - SITES 4, 19, AND 16**	FIGURE B-2

E) SITE 20: AUTO HOBBY SHOP/TRANSPORTATION CENTER



F) SITE 24: FIFTH STREET FUEL RELEASES



DRAWINGS NOT TO SCALE

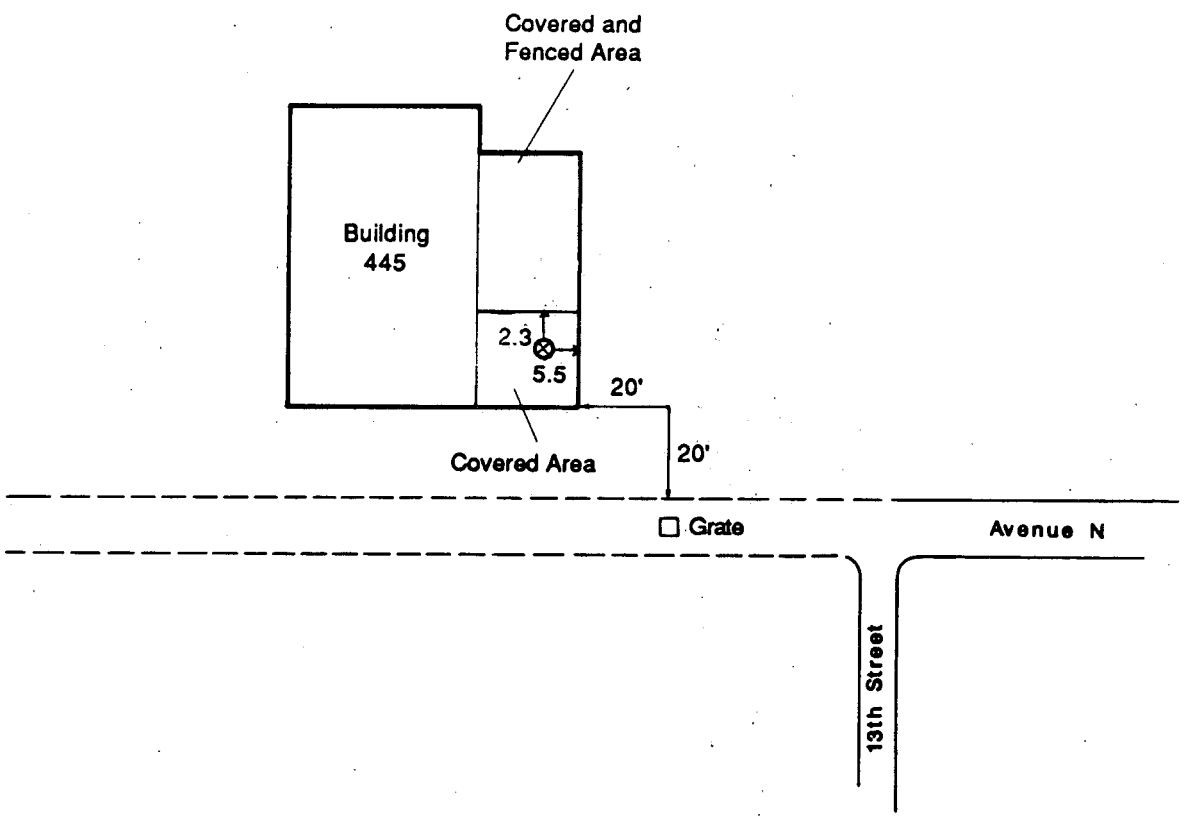
KEY

⊗ SAMPLE LOCATION

◌ LOCATION OF STAINING

PRELIMINARY ASSESSMENT/ SITE INSPECTION NAVSTA Treasure Island, Ca.	**CONFIRMATION SAMPLING LOCATIONS - SITES 20 AND 24**	FIGURE B-3

G) TRANSFORMER STORAGE AREA, BUILDING 445



DRAWING NOT TO SCALE

KEY

⊗ SAMPLE LOCATION

PRELIMINARY ASSESSMENT/ SITE INSPECTION NAVSTA Treasure Island, Ca.	**CONFIRMATION SAMPLING LOCATIONS - BUILDING 445**	FIGURE B-4

3128-Vol.2
SUPERFUND RECORDS CENTER
DOC. [redacted] VOL. [redacted]

APRIL 1988

PRELIMINARY ASSESSMENT/ SITE INSPECTION OF NAVAL STATION TREASURE ISLAND, CA.

VOLUME II
PRELIMINARY ASSESSMENT / SITE INSPECTION FORMS

NEESA 13-092

NAVAL ENERGY AND ENVIRONMENTAL SUPPORT ACTIVITY
Port Hueneme, California 93043

RELEASE OF THIS DOCUMENT REQUIRES PRIOR NOTIFICATION OF THE CHIEF OFFICIAL OF THE STUDIED ACTIVITY

PRELIMINARY ASSESSMENT/SITE INSPECTION FORMS
NAVAL STATION, TREASURE ISLAND, CA

Site 1 - Medical Clinic
Site 3 - PCB Equipment Storage Area
Site 4 - Hydraulic Training School (Bldg. 342)
Site 19 - Refuse Transfer Area
Site 5 - Old Boiler Plant - Building 102
Site 7 - Building 62 - Pesticide Storage
Site 9 - Building 42 - Forge/Foundry
Site 10 - Building 335 - Bus Painting Shop
Site 12 - Old Bunker Area
Site 13 - Stormwater Outfalls
Site 15 - Old Fuel Farm
Site 16 - Clipper Cove Tank Farm
Site 17 - Tanks 103/14
Site 20 - Auto Hobby Shop/Transportation Center
Site 21 - Vessel Waste Oil Recovery
Site 25 - Seaplane Maintenance
Site 22 - Navy Exchange Gas Station
Site 24 - 5th Street Fuel Release
Site 26 - Areas of Suspected Underground Tanks

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 1 - SITE INFORMATION AND ASSESSMENT

EPA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
Naval Station (NAVSTA) Treasure Island	NAVSTA Treasure Island

03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
San Francisco	CA	94130	San Francisco	075	05

09 COORDINATES LATITUDE	LONGITUDE
37° 49' 00" N	122° 22' 00" W

10 DIRECTIONS TO SITE (Starting from nearest public road)
From Interstate 80 (San Francisco-Oakland Bay Bridge) exit on Treasure Island road and proceed approximately 0.5 miles to NAVSTA Treasure Island main gate.

III. RESPONSIBLE PARTIES

01 OWNER (If known)	02 STREET (Business, mailing, residential)
United States Navy	NAVSTA Treasure Island

03 CITY	04 STATE	05 ZIP CODE	06 TELEPHONE NUMBER
San Francisco	CA	94130	(415) 765-6114

07 OPERATOR (If known and different from owner)	08 STREET (Business, mailing, residential)
Not applicable	

09 CITY	10 STATE	11 ZIP CODE	12 TELEPHONE NUMBER
			( )

13 TYPE OF OWNERSHIP (Check one)
☐ A. PRIVATE ☒ B. FEDERAL: U.S. Navy (Agency name) ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL
☐ F. OTHER: (Specify) ☐ G. UNKNOWN

14 OWNER/OPERATOR NOTIFICATION ON FILE (Check all that apply)
☒ A. RCRA 3001 DATE RECEIVED: / / (MONTH DAY YEAR) ☒ B. UNCONTROLLED WASTE SITE (CERCLA 103 c) DATE RECEIVED: 6 / 21 / 81 (MONTH DAY YEAR) ☐ C. NONE

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION
☒ YES DATE 10 / 5 / 87 (MONTH DAY YEAR)
☐ NO

BY (Check all that apply)
☐ A. EPA ☐ B. EPA CONTRACTOR ☐ C. STATE ☒ D. OTHER CONTRACTOR
☐ E. LOCAL HEALTH OFFICIAL ☐ F. OTHER: (Specify)
CONTRACTOR NAME(S): Dames & Moore

02 SITE STATUS (Check one)
☒ A. ACTIVE ☐ B. INACTIVE ☐ C. UNKNOWN

03 YEARS OF OPERATION
1941 (BEGINNING YEAR) 1986 (ENDING YEAR) ☐ UNKNOWN

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED
Jet fuels, avgas, diesel, gasoline, fuel oil, lube oil, waste oil, PCB oils, paints, solvents, pesticides, herbicides, asbestos, metals, wastewater sludge, trash, garbage

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION
Mostly potential contamination of soil, groundwater, and adjacent bay muds. Potentially exposed population include facility employees and residents and marine life in adjacent waters

V. PRIORITY ASSESSMENT

01 PRIORITY FOR INSPECTION (Check one. If high or medium is checked, complete Part 2 - Waste Information and Part 3 - Description of Hazardous Conditions and Incidents)
☐ A. HIGH (Inspection required promptly) ☒ B. MEDIUM (Inspection required) ☐ C. LOW (Inspect on time available basis) ☐ D. NONE (No further action needed, complete current disposition form)

VI. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NUMBER
Steve Hughes	NAVSTA Treasure Island	(415) 765-6114

04 PERSON RESPONSIBLE FOR ASSESSMENT	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NUMBER	08 DATE
Ann M. Becker	Contractor	Dames & Moore	(415) 896-5858	11 / 25 / 87 (MONTH DAY YEAR)

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- X A SOLID
- B POWDER, FINES
- X C SLUDGE
- D OTHER (Specify)
- E SLURRY
- X F LIQUID
- G GAS

02 WASTE QUANTITY AT SITE

(Measures of waste quantities must be independent)

- TONS: unknown
- CUBIC YARDS:
- NO OF DRUMS:

03 WASTE CHARACTERISTICS (Check all that apply)

- X A TOXIC
- X B CORROSIVE
- C RADIOACTIVE
- X D PERSISTENT
- X E SOLUBLE
- F INFECTIOUS
- X G FLAMMABLE
- X H IGNITABLE
- I HIGHLY VOLATILE
- J EXPLOSIVE
- K REACTIVE
- L INCOMPATIBLE
- M NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE	Unknown		
OLW	OILY WASTE	Unknown		Waste oil; jet fuel
SOL	SOLVENTS	Unknown		
PSD	PESTICIDES	Unknown		
OCC	OTHER ORGANIC CHEMICALS	Unknown		
IOC	INORGANIC CHEMICALS	Unknown		Asbestos
ACD	ACIDS	Unknown		
BAS	BASES			
MES	HEAVY METALS	Unknown		lead, silver, chromium, nickel

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
OLW	Waste Oil	999	PL, DR, TK, LF	Unknown	
OLW	Diesel Fuel	999	TK, LF	Unknown	
OLW	Avgas	999	TK, LF	Unknown	
OCC	X-ray fixer/developer	999	LF	Unknown	
MES	Silver, lead, chromium nickel	999	LF	Unknown	
OLW	PCB's	1336-363	DR, LF	Unknown	
IOC	Asbestos	999	LF	Unknown	
OLW	Gasoline	999	TK, LF	Unknown	

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Personnel Interviews
Observations

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 [X] A. GROUNDWATER CONTAMINATION — 02 [ ] OBSERVED (DATE: --) — [ ] POTENTIAL [X] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 0
04 NARRATIVE DESCRIPTION: Groundwater contamination has been measured at the New Fuel Farm where a fuel spill occurred. Total hydrocarbons were detected at a range of 0.005 mg/l to 1.84 mg/l. At other sites, where spills, dumping or leaks have occurred, contaminants may have migrated to the water table which is at a depth of 2-6 feet.

01 [X] B. SURFACE WATER CONTAMINATION — 02 [ ] OBSERVED (DATE: --) — [ ] POTENTIAL [X] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: < 100
04 NARRATIVE DESCRIPTION: The nearest surface water body is San Francisco Bay. Several spills consisting of hydrocarbons, paints, solvents, oils, pesticides, etc. may have reached the Bay via the stormwater sewer system, surface runoff, direct dumping, spillage into the Bay or migration in groundwater.

01 [ ] C. CONTAMINATION OF AIR — 02 [ ] OBSERVED (DATE:) — [ ] POTENTIAL [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 0
04 NARRATIVE DESCRIPTION: No data exist showing any release of air contaminants nor do they appear likely.

01 [ ] D. FIRE/EXPLOSIVE CONDITIONS — 02 [ ] OBSERVED (DATE:) — [ ] POTENTIAL [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 0
04 NARRATIVE DESCRIPTION: No fire/explosive conditions have been certified by a fire marshall or by observation.

01 [ ] E. DIRECT CONTACT — 02 [ ] OBSERVED (DATE:) — [ ] POTENTIAL [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 0
04 NARRATIVE DESCRIPTION: No incidents have been observed or appear likely.

01 [X] F. CONTAMINATION OF SOIL — 02 [X] OBSERVED (DATE: 1941-1986) — [ ] POTENTIAL [ ] ALLEGED
03 AREA POTENTIALLY AFFECTED: Unknown (Acres)
04 NARRATIVE DESCRIPTION: Areas with observed and potential soil contamination include refuse landfills, fuel spill sites, chemical spill sites including x-ray developer/fixer, paint, oils, solvents, metals, etc.

01 [ ] G. DRINKING WATER CONTAMINATION — 02 [ ] OBSERVED (DATE:) — [ ] POTENTIAL [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 0
04 NARRATIVE DESCRIPTION: Drinking water has not been impacted since the drinking water is piped in to the island.

01 [ ] H. WORKER EXPOSURE/INJURY — 02 [ ] OBSERVED (DATE:) — [ ] POTENTIAL [ ] ALLEGED
03 WORKERS POTENTIALLY AFFECTED: 0
04 NARRATIVE DESCRIPTION: No incidents have occurred. Conditions for worker/exposure injury could occur if certain areas were excavated without proper precautions.

01 [ ] I. POPULATION EXPOSURE/INJURY — 02 [ ] OBSERVED (DATE:) — [ ] POTENTIAL [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 0
04 NARRATIVE DESCRIPTION: No incidents have occurred and are generally unlikely.

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
CA	7170023330

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 [X] J. DAMAGE TO FLORA — 02 [ ] OBSERVED (DATE: 10/6,10/9) — [X] POTENTIAL — [ ] ALLEGED

04 NARRATIVE DESCRIPTION: Contaminated soils could potentially damage landscape and/or ruderal vegetation in localized areas. Damage would be restricted to vicinity of actual contamination at scattered location on NAVSTA TI. Disposal of excess fluids to S.F. Bay could have potentially damaged marine flora (algae) on shores of YBI or TI

01 [X] K. DAMAGE TO FAUNA — 02 [ ] OBSERVED (DATE: 10/6,10/9) — [X] POTENTIAL — [ ] ALLEGED

04 NARRATIVE DESCRIPTION (Include name(s) of species): Localized damage to soils is not expected to have damaged flora throughout NAVSTA TI. No evidence of burrowing animals near areas of contamination or potential contamination. Potential damage to marine fauna (intertidal&benthic) along TI shorelines may have occurred as a result of disposal of excess fluids.

01 [X] L. CONTAMINATION OF FOOD CHAIN — 02 [ ] OBSERVED (DATE: 10/6,10/9) — [X] POTENTIAL — [ ] ALLEGED

04 NARRATIVE DESCRIPTION: Waste discharges to S.F. Bay via direct discharge or runoff may have accumulated in marine life such as benthic and intertidal fauna and entered the food chain via predator by waterfowl and fish.

01 [X] M. UNSTABLE CONTAINMENT OF WASTES (Spills, runoff, standing liquids, leaking drums) — 02 [ ] OBSERVED (DATE: _____) — [ ] POTENTIAL — [X] ALLEGED

03 POPULATION POTENTIALLY AFFECTED: < 100

04 NARRATIVE DESCRIPTION: Released substances are generally contained within the soil and may migrate to groundwater and the waters of the Bay.

01 [X] N. DAMAGE TO OFFSITE PROPERTY — 02 [ ] OBSERVED (DATE: _____) — [ ] POTENTIAL — [X] ALLEGED

04 NARRATIVE DESCRIPTION

In general, no damage to offsite property has occurred.
In some cases, discharge of substances into the Bay could have occurred.

01 [ ] O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 [ ] OBSERVED (DATE: _____) — [ ] POTENTIAL — [ ] ALLEGED

04 NARRATIVE DESCRIPTION

Surface runoff may have carried certain contaminants into sewers and storm drains.

01 [ ] P. ILLEGAL/UNAUTHORIZED DUMPING — 02 [X] OBSERVED (DATE: 1940-1987) — [ ] POTENTIAL — [ ] ALLEGED

04 NARRATIVE DESCRIPTION

Direct dumping of certain toxic substances onto the ground or into the Bay has occurred in past at several locations.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

None observed.

III. TOTAL POPULATION POTENTIALLY AFFECTED: ≤100

IV. COMMENTS

None.

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Personnel Interviews
Site Observations

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

EPA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	717023330

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
Site 1 - Medical Clinic	NAVSTA Treasure Island

03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
San Francisco	CA	94130	San Francisco	075	05

09 COORDINATES	10 TYPE OF OWNERSHIP (Check one)
LATITUDE 37° 49 00 ON / LONGITUDE 122° 22 00 OW	☐ A. PRIVATE ☒ B. FEDERAL NAVY ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL ☐ F. OTHER ☐ G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION	02 SITE STATUS	03 YEARS OF OPERATION
10 / 7 / 87 (MONTH DAY YEAR)	☒ ACTIVE ☐ INACTIVE	1940s (BEGINNING YEAR) / 1970's (ENDING YEAR) ___ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)

☐ A. EPA ☐ B. EPA CONTRACTOR _____ (Name of firm) ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR _____ (Name of firm)
☐ E. STATE ☐ F. STATE CONTRACTOR _____ (Name of firm) ☒ G. OTHER Dames & Moore (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
Ann M. Becker	Team Leader, Engineer	Dames & Moore	(415) 896-5858
09 OTHER INSPECTORS	10 TITLE	11 ORGANIZATION	12 TELEPHONE NO.
James G. Ritchie	Geologist	Dames & Moore	(415) 896-5858
Dale D. Shileikis	Biologist	Dames & Moore	(415) 896-5858
Carol L. Creasey	Hydrogeologist	Dames & Moore	(415) 896-5858
William H. Welsh	Engineer	Dames & Moore	(805) 685-4415
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
Not Applicable			( )
			( )
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
☒ PERMISSION ☐ WARRANT	1430	clear, mild

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO
Steve Hughes	NAVSTA Treasure Island	(415) 765-6114

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
Ann M. Becker	Contractor	Dames & Moore	(415)896-5858	11 / 25 / 87 (MONTH DAY YEAR)

EPA FORM 2070-13 (7-81)

REPRODUCED AT GOVERNMENT EXPENSE

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- ☐ A. SOLID
- ☐ B. POWDER, FINES
- ☐ C. SLUDGE
- ☐ D. OTHER _____ (Specify)
- ☐ E. SLURRY
- ☒ F. LIQUID
- ☐ G. GAS

02 WASTE QUANTITY AT SITE (Measures of waste quantities must be independent)

TONS: Unknown

CUBIC YARDS: _____

NO. OF DRUMS: _____

03 WASTE CHARACTERISTICS (Check all that apply)

- ☒ A. TOXIC
- ☒ B. CORROSIVE
- ☐ C. RADIOACTIVE
- ☒ D. PERSISTENT
- ☐ E. SOLUBLE
- ☐ F. INFECTIOUS
- ☐ G. FLAMMABLE
- ☐ H. IGNITABLE
- ☐ I. HIGHLY VOLATILE
- ☐ J. EXPLOSIVE
- ☐ K. REACTIVE
- ☐ L. INCOMPATIBLE
- ☐ M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			
SOL	SOLVENTS			
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS	Unknown		x-ray developer/fixer
BAS	BASES			
MES	HEAVY METALS	Unknown		silver from x-ray solution

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently used CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
MES	Silver(from x-ray soln)	999	OD	7740/3050	mg/kg
ACD	X-ray developer/fixer	999	OD	4.2/4.0	pH units

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Employee Interviews
Site sampling and analysis

EPA FORM 2070-12 (7-81)

REPRODUCED AT GOVERNMENT EXPENSE

REPRODUCED AT GOVERNMENT EXPENSE

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
CA	7170023330

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☒ A. GROUNDWATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: < 100
04 NARRATIVE DESCRIPTION

Depth to groundwater is 2 to 6 feet. Contaminants may have passed through the vadose zone to the saturated zone, although this has not been documented or even observed. Groundwater in the area is saline and unusable without treatment.

01 ☐ B. SURFACE WATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: <100
04 NARRATIVE DESCRIPTION

If contaminants reach groundwater, they could be conveyed to San Francisco Bay by groundwater discharge.

01 ☐ C. CONTAMINATION OF AIR — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 0
04 NARRATIVE DESCRIPTION

No data exists documenting any air contamination.
Air contamination extremely unlikely.

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: --
04 NARRATIVE DESCRIPTION

No fire/explosive conditions present.
A fire marshall has not certified this area to be of significant risk.

01 ☐ E. DIRECT CONTACT — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 0
04 NARRATIVE DESCRIPTION

Contamination is in soil under a building. Direct contact extremely unlikely.

01 ☒ F. CONTAMINATION OF SOIL — 02 ☒ OBSERVED (DATE: 10/5/87) ☐ POTENTIAL ☒ ALLEGED
03 AREA POTENTIALLY AFFECTED: < 0.1 acres
04 NARRATIVE DESCRIPTION

X-ray solution released from equipment leaked to soil under elevated building after eroding hole in wooden floor. Perimeter of building is fenced to deter access. Slope of ground conveys water away. Surface soil sampling indicated presence of silver in concentrations of 3,050 and

01 ☐ G. DRINKING WATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 0
04 NARRATIVE DESCRIPTION

(cont'd from above:
7,740 mg/kg and acidic soil (pH of 4.0 and 4.2). Affected area is about 100 square feet and extends to an unknown depth.
No potential for contamination of drinking water since drinking water source is off the island.

01 ☐ H. WORKER EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: 0
04 NARRATIVE DESCRIPTION

Extremely unlikely unless soil is excavated.

01 ☐ I. POPULATION EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 0
04 NARRATIVE DESCRIPTION

Extremely unlikely.

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☒ J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE: 10/7/87) — ☒ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION: Contaminated soils could potentially damage landscape flora in localized area by drainage of stormwater during heavy rains. Damage would be restricted to vegetation adjacent to the contaminated soils.

01 ☒ K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE: 10/7/87) — ☐ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION (include names of species): Contamination of soils is not expected to damage fauna in the vicinity. No evidence of burrowing animals near facility.

01 ☒ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE:) — ☒ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION: Migration of contaminants into groundwater draining to San Francisco Bay could potentially accumulate in the food chain through marine invertebrates and fish.

01 ☒ M. UNSTABLE CONTAINMENT OF WASTES (Spills, runoff, standing liquids, leaking drums) — 02 ☒ OBSERVED (DATE: 10/5/87) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: Unknown
04 NARRATIVE DESCRIPTION: Surface soil under building is contaminated with silver containing x-ray solution. The potential collection of stormwater under the building during heavy rains could cause the silver to migrate deeper into the soil Groundwater in the area is saline and unusable without treatment.

01 ☐ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE:) — ☐ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION: Extremely unlikely unless significant groundwater migration has occurred.

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE:) — ☐ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION: Extremely unlikely.

01 ☒ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE:) — ☐ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION: A release of x-ray solution to the ground has occurred.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

None

III. TOTAL POPULATION POTENTIALLY AFFECTED: < 100

IV. COMMENTS

None

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Primarily employee interviews
Site sampling

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
☐ A. NPDES				
☐ B. UIC				
☐ C. AIR				
☐ D. RCRA				
☐ E. RCRA INTERIM STATUS				
☐ F. SPCC PLAN				
☐ G. STATE (Specify)				
☐ H. LOCAL (Specify)				
☐ I. OTHER (Specify)				
☒ J. NONE				

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE
☐ A. SURFACE IMPOUNDMENT		
☐ B. PILES		
☐ C. DRUMS, ABOVE GROUND		
☐ D. TANK, ABOVE GROUND		
☐ E. TANK, BELOW GROUND		
☐ F. LANDFILL		
☐ G. LANDFARM		
☐ H. OPEN DUMP		
☒ I. OTHER (Specify) Medical Clinic spill area, Bldg 257	Unknown	

04 TREATMENT (Check all that apply)
- ☐ A. INCENERATION
- ☐ B. UNDERGROUND INJECTION
- ☐ C. CHEMICAL/PHYSICAL
- ☐ D. BIOLOGICAL
- ☐ E. WASTE OIL PROCESSING
- ☐ F. SOLVENT RECOVERY
- ☐ G. OTHER RECYCLING/RECOVERY
- ☐ H. OTHER (Specify) _____

05 OTHER
- ☒ A. BUILDINGS ON SITE

06 AREA OF SITE
< 0.1 (Acres)

07 COMMENTS

None

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)
☐ A. ADEQUATE, SECURE ☒ B. MODERATE ☐ C. INADEQUATE, POOR ☐ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC.

Material leaked into soil is uncontained, but there is minimal threat of exposure.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE ☐ YES ☒ NO

02 COMMENTS Perimeter of building is fenced to deter access under building

VI. SOURCES OF INFORMATION (Cite specific references, e.g. state files, sample analysis, reports)

Personnel Interviews
Site Visit

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as applicable): Pipeline from off-site

	SURFACE	WELL
COMMUNITY	A. ☐	B. ☐
NON-COMMUNITY	C. ☐	D. ☐

02 STATUS: Not used

ENDANGERED	AFFECTED	MONITORED
A. ☐	B. ☐	C. ☐
D. ☐	E. ☐	F. ☐

03 DISTANCE TO SITE: N/A
A. _____ (mi)
B. _____ (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)

☐ A. ONLY SOURCE FOR DRINKING ☐ B. DRINKING (Other sources available) COMMERCIAL, INDUSTRIAL, IRRIGATION (No other water sources available) ☐ C. COMMERCIAL, INDUSTRIAL, IRRIGATION (Limited other sources available) XX ☒ D. NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUND WATER: 0

03 DISTANCE TO NEAREST DRINKING WATER WELL: > 3 (mi)

04 DEPTH TO GROUNDWATER	05 DIRECTION OF GROUNDWATER FLOW	06 DEPTH TO AQUIFER OF CONCERN	07 POTENTIAL YIELD OF AQUIFER	08 SOLE SOURCE AQUIFER
2 - 6 (ft)	Toward S.F. Bay.	N/A (ft)	N/A (gpd)	N/A ☐ YES ☐ NO

09 DESCRIPTION OF WELLS (Including usage, depth, and location relative to population and buildings)

NOTE: The site is on an island in San Francisco Bay. There are no water wells in use on the island. Water is piped to the island on the San Francisco-Oakland Bay Bridge.

10 RECHARGE AREA		11 DISCHARGE AREA	
☒ YES ☐ NO	COMMENTS: Infiltration is occurring but not recharging a usable aquifer.	☒ YES ☐ NO	COMMENTS: Discharge of groundwater is probably into San Francisco Bay.

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)

☐ A. RESERVOIR, RECREATION DRINKING WATER SOURCE ☐ B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES XX ☒ C. COMMERCIAL, INDUSTRIAL ☐ D. NOT CURRENTLY USED

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME:	AFFECTED	DISTANCE TO SITE
San Francisco Bay	☐	< 0.5 (mi)
	☐	(mi)
	☐	(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE
A. 3000 (NO OF PERSONS)	B. >3000 (NO OF PERSONS)	C. >10,000 (NO OF PERSONS)

02 DISTANCE TO NEAREST POPULATION: < 0.1 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE	04 DISTANCE TO NEAREST OFF-SITE BUILDING
200	< 0.1 (mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., rural, village, densely populated urban area)

NAVSTA TI contains residences for approximately 2500-3000 service personnel. The island is surrounded by San Francisco Bay. Across the Bay there are large cities including San Francisco and Oakland.

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 STATE: CA | 02 SITE NUMBER: 7170023330

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☐ A. $10^{-6} - 10^{-8}$ cm/sec ☐ B. $10^{-4} - 10^{-6}$ cm/sec ☒ C. $10^{-4} - 10^{-3}$ cm/sec ☐ D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☐ A. IMPERMEABLE (Less than 10^{-6} cm/sec) ☒ B. RELATIVELY IMPERMEABLE ($10^{-4} - 10^{-6}$ cm/sec) ☐ C. RELATIVELY PERMEABLE ($10^{-2} - 10^{-4}$ cm/sec) ☐ D. VERY PERMEABLE (Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK	04 DEPTH OF CONTAMINATED SOIL ZONE	05 SOIL pH	
300 (ft)	Unknown (ft)	Unknown	

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
-15 to -10 (in)	3.0 (in)	0-2 %	West	1 %

09 FLOOD POTENTIAL

SITE IS IN N/A YEAR FLOODPLAIN

10 ☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE	OTHER
A. > 2 (mi)	B. _____ (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)

> 2 (mi)

ENDANGERED SPECIES: _____

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL	RESIDENTIAL AREAS; NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS: PRIME AG LAND	AGRICULTURAL LANDS: AG LAND
A. 0.1 (mi)	B. > 2 (mi)	C. > 3 (mi)	D. > 3 (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

The site is located on Treasure Island, a man-made island on San Francisco Bay. Treasure Island is essentially flat with very little relief. Slopes in the vicinity of the site vary from 0 to 2%.

VII. SOURCES OF INFORMATION (Cite specific references e.g., state files, sample analysis, reports)

Personal Interviews
Observations
Harding Lawson Associates Report (1985).

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 6 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
CA	7170023330

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER			
SURFACE WATER			
WASTE			
AIR			
RUNOFF			
SPILL			
SOIL	2	IT Corporation (test for pH and silver)	11/6/87
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
None	None

IV. PHOTOGRAPHS AND MAPS

01 TYPE [X] GROUND [X] AERIAL

02 IN CUSTODY OF Naval Energy and Environmental Support Activity (NEESA). (Name of organization or individual)

03 MAPS [X] YES [ ] NO

04 LOCATION OF MAPS NEESA

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

None

VI. SOURCES OF INFORMATION (Cite specific references e.g., state files, sample analysis reports)

Personnel Interviews.
Analytical Results

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
CA	7170023330

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER
United States Navy	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
NAVSTA - Treasure Island	

05 CITY	06 STATE	07 ZIP CODE
San Francisco	CA	94130

PARENT COMPANY (if applicable)

08 NAME	09 D+B NUMBER

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

12 CITY	13 STATE	14 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 NAME	09 D+B NUMBER

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

12 CITY	13 STATE	14 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 NAME	09 D+B NUMBER

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

12 CITY	13 STATE	14 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 NAME	09 D+B NUMBER

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

12 CITY	13 STATE	14 ZIP CODE

III. PREVIOUS OWNER(S) (List most recent first)

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE
		—

IV. REALTY OWNER(S) (If applicable, list most recent first)

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sampling analysis, reports)

U.S. Navy

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

II. CURRENT OPERATOR (Provide if different from owner)

01 NAME	02 D+B NUMBER
United States Navy	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
NAVSTA Treasure Island	

05 CITY	06 STATE	07 ZIP CODE
San Francisco	CA	94130

08 YEARS OF OPERATION	09 NAME OF OWNER
45	U.S. Navy

OPERATOR'S PARENT COMPANY (if applicable)

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

III. PREVIOUS OPERATOR(S) (List most recent first; provide only if different from owner)

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

PREVIOUS OPERATORS' PARENT COMPANIES (if applicable)

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

IV. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

U.S. Navy and civilian Personnel Interviews

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER
U.S. Navy	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
NAVSTA Treasure Island	

05 CITY	06 STATE	07 ZIP CODE
San Francisco	CA	94130

III. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

IV. TRANSPORTER(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
U.S. Navy			

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
NAVSTA Treasure Island			

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE
San Francisco	CA	94130			

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

U.S. Navy

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. PAST RESPONSE ACTIVITIES (Continued)

01 ☐ R. BARRIER WALLS CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ S. CAPPING/COVERING — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ T. BULK TANKAGE REPAIRED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ U. GROUT CURTAIN CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ V. BOTTOM SEALED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ W. GAS CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ X. FIRE CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Y. LEACHATE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Z. AREA EVACUATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☒ 1. ACCESS TO SITE RESTRICTED — 02 DATE Unknown — 03 AGENCY U.S. Navy
04 DESCRIPTION Area fenced to deter access

01 ☐ 2. POPULATION RELOCATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 3. OTHER REMEDIAL ACTIVITIES — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Employee Interviews; Observations.

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 11 - ENFORCEMENT INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
CA	7170023330

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY ENFORCEMENT ACTION ☐ YES ☒ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY/ENFORCEMENT ACTION

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis reports)

Personnel Interview.

EPA FORM 2070-13 (7-81)

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POTENTIAL HAZARDOUS WASTE SITE
FINAL STRATEGY DETERMINATION

REGION	SITE NUMBER
IX	13-[illegible]3330

File this form in the regional Hazardous Waste Log File and submit a copy to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Task Force (*E.N-335*); 401 M St., SW; Washington, DC 20460.

I. SITE IDENTIFICATION

A. SITE NAME	B. STREET	
Site 1 - Medical Clinic	Naval Station (NAVSTA) Treasure Island	
C. CITY	**D. STATE**	**E. ZIP CODE**
San Francisco	CA	94130

II. FINAL DETERMINATION

Indicate the recommended action(s) and agency(ies) that should be involved by marking 'X' in the appropriate boxes.

RECOMMENDATION	MARK 'X'	ACTION AGENCY: EPA	STATE	LOCAL	PRIVATE
A. NO ACTION NEEDED					
B. REMEDIAL ACTION NEEDED, BUT NO RESOURCES AVAILABLE (*If yes, complete Section III.*)					
C. REMEDIAL ACTION (*If yes, complete Section IV.*)					
D. ENFORCEMENT ACTION (*If yes, specify in Part E whether the case will be primarily managed by the EPA or the State and what type of enforcement action is anticipated.*)					

E. RATIONALE FOR FINAL STRATEGY DETERMINATION

The site will continue to be evaluated and additional sampling will be performed. These results will be used to determine remedial actions. See report entitled Preliminary Assessment/Site Investigation of Naval Station, Treasure Island, CA.

F. IF A CASE DEVELOPMENT PLAN HAS BEEN PREPARED, SPECIFY THE DATE PREPARED (*mo., day, & yr.*)	G. IF AN ENFORCEMENT CASE HAS BEEN FILED, SPECIFY THE DATE FILED (*mo., day, & yr.*)

H. PREPARER INFORMATION

1. NAME	2. TELEPHONE NUMBER	3. DATE (*mo., day, & yr.*)

III. REMEDIAL ACTIONS TO BE TAKEN WHEN RESOURCES BECOME AVAILABLE

List all remedial actions, such as excavation, removal, etc. to be taken as soon as resources become available. See instructions for a list of Key Words for each of the actions to be used in the spaces below. Provide an estimate of the approximate cost of the remedy.

A. REMEDIAL ACTION	B. ESTIMATED COST	C. REMARKS
	$	
	$	
	$	
	$	
	$	
	$	
	$	
	$	
D. TOTAL ESTIMATED COST	$	

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Continued From Front

IV. REMEDIAL ACTIONS

A. SHORT TERM/EMERGENCY ACTIONS *(On Site and Off-Site)*: List all emergency actions taken or planned to bring the site under immediate control, e.g., restrict access, provide alternate water supply, etc. See instructions for a list of Key Words for each of the actions to be used in the spaces below.

1. ACTION	2. ACTION START DATE (mo.,day.,& yr.)	3. ACTION END DATE (mo.,day.,& yr.)	4. ACTION AGENCY (EPA, State, Private Party)	5. COST	6. SPECIFY 311 OR OTHER ACTION. INDICATE THE MAGNITUDE OF THE WORK REQUIRED.
				$	
				$	
				$	
				$	
				$	
				$	

B. LONG TERM STRATEGY *(On Site and Off-Site)*: List all long term solutions, e.g., excavation, removal, ground water monitoring wells, etc. See instructions for a list of Key Words for each of the actions to be used in the spaces below.

1. ACTION	2. ACTION START DATE (mo.,day.,& yr.)	3. ACTION END DATE (mo.,day.,& yr.)	4. ACTION AGENCY (EPA, State Private Party)	5. COST	6. SPECIFY 311 OR OTHER ACTION: INDICATE THE MAGNITUDE OF THE WORK REQUIRED.
				$	
				$	
				$	
				$	
				$	
				$	

C. MANHOURS AND COST BY ACTION AGENCY

1. ACTION AGENCY	2. TOTAL MAN-HOURS FOR REMEDIAL ACTIVITIES	3. TOTAL COST FOR REMEDIAL ACTIVITIES
a. EPA		$
b. STATE		$
c. PRIVATE PARTIES		$
d. OTHER *(specify)*:		$

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
Site 3 - PCB Equipment Storage Area	NAVSTA Treasure Island

03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
San Francisco	CA	94130	San Francisco	075	05

09 COORDINATES	10 TYPE OF OWNERSHIP (Check one)
LATITUDE 37° 49' 00" N; LONGITUDE 122° 22' 00" W	XX A. PRIVATE ☒ B. FEDERAL NAVY ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL ☐ F. OTHER ☐ G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION	02 SITE STATUS	03 YEARS OF OPERATION
10 / 06 / 87 (MONTH DAY YEAR)	XX ☒ ACTIVE ☐ INACTIVE	BEGINNING YEAR 1987 ENDING YEAR X UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)

☐ A. EPA ☐ B. EPA CONTRACTOR (Name of firm) ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR (Name of firm)
☐ E. STATE ☐ F. STATE CONTRACTOR (Name of firm) XX ☒ G. OTHER Dames & Moore (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
Ann M. Becker	Team Leader, Engineer	Dames & Moore	(415) 896-5858
09 OTHER INSPECTORS	10 TITLE	11 ORGANIZATION	12 TELEPHONE NO.
James G. Ritchie	Geologist	Dames & Moore	(415) 896-5858
Dale D. Shileikis	Biologist	Dames & Moore	(415) 896-5858
Carol L. Creasey	Hydrogeologist	Dames & Moore	(415) 896-5858
William H. Welsh	Engineer	Dames & Moore	(805) 685-4415
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
Not Applicable			( )
			( )
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
XX ☒ PERMISSION ☐ WARRANT	1000	Clear, mild

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO
Steve Hughes	NAVSTA Treasure Island	(415) 765-6114

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
Ann M. Becker	Contractor	Dames & Moore	(415)896-5858	11 / 25 / 87 (MONTH DAY YEAR)

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POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- ☐ A. SOLID
- ☐ B. POWDER, FINES
- ☐ C. SLUDGE
- ☐ D. OTHER _____ (Specify)
- ☐ E. SLURRY
- ☒ F. LIQUID
- ☐ G. GAS

02 WASTE QUANTITY AT SITE (Measures of waste quantities must be independent)

- TONS: Unknown
- CUBIC YARDS: _____
- NO. OF DRUMS: _____

03 WASTE CHARACTERISTICS (Check all that apply)

- ☒ A. TOXIC
- ☐ B. CORROSIVE
- ☐ C. RADIOACTIVE
- ☒ D. PERSISTENT
- ☐ E. SOLUBLE
- ☐ F. INFECTIOUS
- ☐ G. FLAMMABLE
- ☐ H. IGNITABLE
- ☐ I. HIGHLY VOLATILE
- ☐ J. EXPLOSIVE
- ☐ K. REACTIVE
- ☐ L. INCOMPATIBLE
- ☐ M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE	Unknown		PCB oils
SOL	SOLVENTS			
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS			

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently used CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
OLW	PCB Oils	1336-36-3	OD	Unknown	

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Employee Interviews

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POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☐ A. GROUNDWATER CONTAMINATION | **02 ☐ OBSERVED (DATE: _____)** | **X ☐ POTENTIAL** | **☐ ALLEGED**
03 POPULATION POTENTIALLY AFFECTED: < 100
04 NARRATIVE DESCRIPTION

PCBs can migrate through the asphalt surface to the groundwater table which is present at a depth of 2 - 6 feet.

01 ☐ B. SURFACE WATER CONTAMINATION | **02 ☐ OBSERVED (DATE: _____)** | **X ☐ POTENTIAL** | **☐ ALLEGED**
03 POPULATION POTENTIALLY AFFECTED: < 100
04 NARRATIVE DESCRIPTION

PCB oil releases to surface water could be conveyed to San Francisco Bay by stormwater runoff and/or groundwater migration.

01 ☐ C. CONTAMINATION OF AIR | **02 ☐ OBSERVED (DATE: _____)** | **☐ POTENTIAL** | **☐ ALLEGED**
03 POPULATION POTENTIALLY AFFECTED: 0
04 NARRATIVE DESCRIPTION

No data exists documenting any air contamination; extremely unlikely.

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS | **02 ☐ OBSERVED (DATE: _____)** | **☐ POTENTIAL** | **☐ ALLEGED**
03 POPULATION POTENTIALLY AFFECTED: 0
04 NARRATIVE DESCRIPTION

A fire marshall has not certified this area as representing a significant threat. No fire/explosive conditions present.

01 ☒ E. DIRECT CONTACT | **02 ☐ OBSERVED (DATE: _____)** | **X ☒ POTENTIAL** | **☐ ALLEGED**
03 POPULATION POTENTIALLY AFFECTED: Unknown
04 NARRATIVE DESCRIPTION

The storage area is open and accessible to human and animal passage.

01 ☐ F. CONTAMINATION OF SOIL | **02 ☐ OBSERVED (DATE: _____)** | **X ☒ POTENTIAL** | **☐ ALLEGED**
03 AREA POTENTIALLY AFFECTED: < 0.5 (Acres)
04 NARRATIVE DESCRIPTION

The storage area is covered by asphalt and concrete. This cover could be contaminated by PCB oil. Since PCBs could migrate through the asphalt, subsurface soils may be contaminated.

01 ☐ G. DRINKING WATER CONTAMINATION | **02 ☐ OBSERVED (DATE: _____)** | **☐ POTENTIAL** | **☐ ALLEGED**
03 POPULATION POTENTIALLY AFFECTED: 0
04 NARRATIVE DESCRIPTION

Drinking water is not impacted. Drinking water is piped from off the island.

01 ☐ H. WORKER EXPOSURE/INJURY | **02 ☐ OBSERVED (DATE: _____)** | **☒ POTENTIAL** | **☐ ALLEGED**
03 WORKERS POTENTIALLY AFFECTED: unknown
04 NARRATIVE DESCRIPTION

This is possible (though unlikely) since storage area is accessible and probably accessed by workers. However, no incidents have been observed.

01 ☐ I. POPULATION EXPOSURE/INJURY | **02 ☐ OBSERVED (DATE: _____)** | **☒ POTENTIAL** | **☐ ALLEGED**
03 POPULATION POTENTIALLY AFFECTED: Unknown
04 NARRATIVE DESCRIPTION

Although no incidents have been observed, population exposure/injury is possible since the storage area is open and accessible. However, its use by the general population is highly unlikely.

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE: CA	02 SITE NUMBER: 7170023330

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☐ J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE: 10/8/87) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Area covered by asphalt - flora not affected.

01 ☒ K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE: 10/8/87) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION (Include species of concern)
Contamination of San Francisco Bay may have occurred through surface water runoff and/or groundwater migration. Marine life (intertidal--located on pier pilings, docks) could have been damaged if exposed to this potential contamination.

01 ☒ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
PCB oil could be conveyed to San Francisco Bay by stormwater runoff and/or groundwater migration and be accumulated within marine life (benthic and intertidal species). Entry into the food chain could occur via predators such as waterfowl and fish.

01 ☒ M. UNSTABLE CONTAINMENT OF WASTES (Spills, runoff, standing liquids, leaking drums) — 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: < 100 — 04 NARRATIVE DESCRIPTION
The storage area is not curbed or sealed and released material may be conveyed off-site.

01 ☐ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
No damage has been identified and is unlikely except as noted above and below.

01 ☒ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
PCB oils may have been conveyed into the stormwater system.

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Release of PCB containing oil has occurred.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS
None

III. TOTAL POPULATION POTENTIALLY AFFECTED: < 100

IV. COMMENTS
None

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)
Employee interviews, observations.

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	717002333'0

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
☐ A. NPDES				
☐ B. UIC				
☐ C. AIR				
☐ D. RCRA				
☐ E. RCRA INTERIM STATUS				
☒ F. SPCC PLAN	---	Feb. 1988	---	Oil SPCC
☐ G. STATE (Specify)				
☐ H. LOCAL (Specify)				
☐ I. OTHER (Specify)				
☐ J. NONE				

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE
☐ A. SURFACE IMPOUNDMENT		
☐ B. PILES		
☐ C. DRUMS, ABOVE GROUND		
☐ D. TANK, ABOVE GROUND		
☐ E. TANK, BELOW GROUND		
☐ F. LANDFILL		
☐ G. LANDFARM		
☐ H. OPEN DUMP		
XX ☐ I. OTHER (Specify) transformers		

04 TREATMENT (Check all that apply)
- ☐ A. INCENERATION
- ☐ B. UNDERGROUND INJECTION
- ☐ C. CHEMICAL/PHYSICAL
- ☐ D. BIOLOGICAL
- ☐ E. WASTE OIL PROCESSING
- ☐ F. SOLVENT RECOVERY
- ☐ G. OTHER RECYCLING/RECOVERY
- ☐ H. OTHER (Specify)

None

05 OTHER
- ☐ A. BUILDINGS ON SITE

06 AREA OF SITE
0.2 (Acres)

07 COMMENTS

None

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

☐ A. ADEQUATE, SECURE ☐ B. MODERATE XX ☒ C. INADEQUATE, POOR ☐ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC.

Storage area is uncurbed and released material may be conveyed offsite by stormwater runoff.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE. XX ☒ YES ☐ NO

02 COMMENTS

The storage area is not fenced.

VI. SOURCES OF INFORMATION (Cite specific references, e.g. state files, sample analysis, reports)

Personnel Interviews
Observations

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as applicable): Pipeline from offsite

	SURFACE	WELL
COMMUNITY	A. ☐	B. ☐
NON-COMMUNITY	C. ☐	D. ☐

02 STATUS: not used

ENDANGERED	AFFECTED	MONITORED
A. ☐	B. ☐	C. ☐
D. ☐	E. ☐	F. ☐

03 DISTANCE TO SITE: N/A
A. _____ (mi)
B. _____ (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)

☐ A. ONLY SOURCE FOR DRINKING ☐ B. DRINKING (Other sources available) COMMERCIAL, INDUSTRIAL, IRRIGATION (No other water sources available) ☐ C. COMMERCIAL, INDUSTRIAL, IRRIGATION (Limited other sources available) ☒ D. NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUND WATER: 0

03 DISTANCE TO NEAREST DRINKING WATER WELL: > 3 (mi)

04 DEPTH TO GROUNDWATER	05 DIRECTION OF GROUNDWATER FLOW	06 DEPTH TO AQUIFER OF CONCERN	07 POTENTIAL YIELD OF AQUIFER	08 SOLE SOURCE AQUIFER
2 - 6 (ft)	Toward S.F. Bay.	N/A (ft)	N/A (gpd)	N/A ☐ YES ☐ NO

09 DESCRIPTION OF WELLS (Including useage, depth, and location relative to population and buildings)

NOTE: The site is on an island in San Francisco Bay. There are no water wells in use on the island. Water is piped to the island on the San Francisco-Oakland Bay Bridge.

10 RECHARGE AREA		11 DISCHARGE AREA	
☒ YES ☐ NO	COMMENTS: Infiltration is occurring but recharging an unusable aquifer.	☒ YES ☐ NO	COMMENTS: Discharge of groundwater is probably into San Francisco Bay.

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)

☐ A. RESERVOIR, RECREATION DRINKING WATER SOURCE ☐ B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES ☒ C. COMMERCIAL, INDUSTRIAL ☐ D. NOT CURRENTLY USED

02 AFFECTED, POTENTIALLY AFFECTED BODIES OF WATER

NAME:	AFFECTED	DISTANCE TO SITE
San Francisco Bay	☐	< 0.5 (mi)
	☐	(mi)
	☐	(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE
A. 3000 NO OF PERSONS	B. 3000 NO OF PERSONS	C. >10,000 NO OF PERSONS

02 DISTANCE TO NEAREST POPULATION: < 0.1 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE	04 DISTANCE TO NEAREST OFF-SITE BUILDING
200	< 0.1 (mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., rural, village, densely populated urban area)

NAVSTA TI contains residences for approximately 2500-3000 service personnel. The island is surrounded by San Francisco Bay. Across the Bay there are large cities including San Francisco and Oakland.

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☐ A. $10^{-6} - 10^{-8}$ cm/sec ☐ B. $10^{-4} - 10^{-6}$ cm/sec ☒ C. $10^{-4} - 10^{-3}$ cm/sec ☐ D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☐ A. IMPERMEABLE (Less than 10^{-6} cm/sec) ☒ B. RELATIVELY IMPERMEABLE ($10^{-4} - 10^{-6}$ cm/sec) ☐ C. RELATIVELY PERMEABLE ($10^{-2} - 10^{-4}$ cm/sec) ☐ D. VERY PERMEABLE (Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK	04 DEPTH OF CONTAMINATED SOIL ZONE	05 SOIL pH	
300 (ft)	Unknown (ft)	Unknown	

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
-15 to -10 (in)	3.0 (in)	0-2 %	West	1 %

09 FLOOD POTENTIAL

SITE IS IN N/A YEAR FLOODPLAIN

10 ☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE	OTHER
A. > 2 (mi)	B. _____ (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)

> 2 (mi)

ENDANGERED SPECIES: _____

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL	RESIDENTIAL AREAS; NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS: PRIME AG LAND	AGRICULTURAL LANDS: AG LAND
A. 0.1 (mi)	B. > 2 (mi)	C. > 3 (mi)	D. > 3 (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

The site is located on Treasure Island, a man-made island on San Francisco Bay. Treasure Island is essentially flat with very little relief. Slopes in the vicinity of the site vary from 0 to 2%.

VII. SOURCES OF INFORMATION (Cite specific references e.g., state files, sampling analysis, reports)

Personal interviews
Observations.
Harding Lawson Associates Report (1985)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 6 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER			
SURFACE WATER			
WASTE			
AIR			
RUNOFF			
SPILL			
SOIL			
VEGETATION			
OTHER Surface, Wipe	4	I T Corporation	11/6/87

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
None	None

IV. PHOTOGRAPHS AND MAPS

01 TYPE [X] GROUND [X] AERIAL

02 IN CUSTODY OF Naval Energy and Environmental Support Activity (NEESA). (Name of organization or individual)

03 MAPS [X] YES [ ] NO

04 LOCATION OF MAPS: NEESA

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

None

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis reports)

Personnel Interviews.

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
CA	7170023330

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER
United States Navy	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
NAVSTA Treasure Island	

05 CITY	06 STATE	07 ZIP CODE
San Francisco	CA	94130

PARENT COMPANY (if applicable)

08 NAME	09 D+B NUMBER

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

12 CITY	13 STATE	14 ZIP CODE

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

PARENT COMPANY (if applicable)

08 NAME	09 D+B NUMBER

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

12 CITY	13 STATE	14 ZIP CODE

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

PARENT COMPANY (if applicable)

08 NAME	09 D+B NUMBER

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

12 CITY	13 STATE	14 ZIP CODE

III. PREVIOUS OWNER(S) (List most recent first)

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

IV. REALTY OWNER(S) (if applicable, list most recent first)

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

III. PREVIOUS OWNER(S) (List most recent first)

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

IV. REALTY OWNER(S) (if applicable, list most recent first)

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

III. PREVIOUS OWNER(S) (List most recent first)

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

IV. REALTY OWNER(S) (if applicable, list most recent first)

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sampling analysis, reports)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
CA	7170023330

II. CURRENT OPERATOR (Provide if different from owner)

01 NAME: United States Navy
02 D+B NUMBER:
03 STREET ADDRESS (P.O. Box, RFD #, etc.): NAVSTA Treasure Island
04 SIC CODE:
05 CITY: San Francisco
06 STATE: CA
07 ZIP CODE: 94130
08 YEARS OF OPERATION: 45
09 NAME OF OWNER: U.S. Navy

OPERATOR'S PARENT COMPANY (If applicable)

10 NAME:
11 D+B NUMBER:
12 STREET ADDRESS (P.O. Box, RFD #, etc.):
13 SIC CODE:
14 CITY:
15 STATE:
16 ZIP CODE:

III. PREVIOUS OPERATOR(S) (List most recent first; provide only if different from owner)

01 NAME:
02 D+B NUMBER:
03 STREET ADDRESS (P.O. Box, RFD #, etc.):
04 SIC CODE:
05 CITY:
06 STATE:
07 ZIP CODE:
08 YEARS OF OPERATION:
09 NAME OF OWNER DURING THIS PERIOD:

PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)

10 NAME:
11 D+B NUMBER:
12 STREET ADDRESS (P.O. Box, RFD #, etc.):
13 SIC CODE:
14 CITY:
15 STATE:
16 ZIP CODE:

01 NAME:
02 D+B NUMBER:
03 STREET ADDRESS (P.O. Box, RFD #, etc.):
04 SIC CODE:
05 CITY:
06 STATE:
07 ZIP CODE:
08 YEARS OF OPERATION:
09 NAME OF OWNER DURING THIS PERIOD:

10 NAME:
11 D+B NUMBER:
12 STREET ADDRESS (P.O. Box, RFD #, etc.):
13 SIC CODE:
14 CITY:
15 STATE:
16 ZIP CODE:

01 NAME:
02 D+B NUMBER:
03 STREET ADDRESS (P.O. Box, RFD #, etc.):
04 SIC CODE:
05 CITY:
06 STATE:
07 ZIP CODE:
08 YEARS OF OPERATION:
09 NAME OF OWNER DURING THIS PERIOD:

10 NAME:
11 D+B NUMBER:
12 STREET ADDRESS (P.O. Box, RFD #, etc.):
13 SIC CODE:
14 CITY:
15 STATE:
16 ZIP CODE:

IV. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER
U.S. Navy	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
NAVSTA Treasure Island	

05 CITY	06 STATE	07 ZIP CODE
San Francisco	CA	94130

III. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

IV. TRANSPORTER(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
U.S. Navy			

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
NAVSTA Treasure Island			

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE
San Francisco	CA	94130			

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II PAST RESPONSE ACTIVITIES (Continued)

01 ☐ R. BARRIER WALLS CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ S. CAPPING/COVERING — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ T. BULK TANKAGE REPAIRED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ U. GROUT CURTAIN CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ V. BOTTOM SEALED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ W. GAS CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ X. FIRE CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Y. LEACHATE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Z. AREA EVACUATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 1. ACCESS TO SITE RESTRICTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 2. POPULATION RELOCATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 3. OTHER REMEDIAL ACTIVITIES — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Employee Interviews; Observations.

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 11 - ENFORCEMENT INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
CA	7170023330

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY ENFORCEMENT ACTION ☐ YES ☒ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY ENFORCEMENT ACTION

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Personnel Interview.

EPA

POTENTIAL HAZARDOUS WASTE SITE
FINAL STRATEGY DETERMINATION

REGION	SITE NUMBER
IX	7170023330

File this form in the regional Hazardous Waste Log File and submit a copy to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Task Force (E-N-335); 401 M St., SW; Washington, DC 20460.

I. SITE IDENTIFICATION

A. SITE NAME	B. STREET	
PCB Equipment Storage Area	Naval Station (NAVSTA) Treasure Island	
C. CITY	**D. STATE**	**E. ZIP CODE**
San Francisco	CA	94130

II. FINAL DETERMINATION

Indicate the recommended action(s) and agency(ies) that should be involved by marking 'X' in the appropriate boxes.

RECOMMENDATION	MARK 'X'	ACTION AGENCY: EPA	STATE	LOCAL	PRIVATE
A. NO ACTION NEEDED					
B. REMEDIAL ACTION NEEDED, BUT NO RESOURCES AVAILABLE *(If yes, complete Section III.)*					
C. REMEDIAL ACTION *(If yes, complete Section IV.)*					
D. ENFORCEMENT ACTION *(If yes, specify in Part E whether the case will be primarily managed by the EPA or the State and what type of enforcement action is anticipated.)*					

E. RATIONALE FOR FINAL STRATEGY DETERMINATION

The site will continue to be evaluated and additional sampling will be performed. These results will be used to determine remedial actions. See report entitled Preliminary Assessment/Site Investigation of Naval Station, Treasure Island, CA.

F. IF A CASE DEVELOPMENT PLAN HAS BEEN PREPARED, SPECIFY THE DATE PREPARED *(mo., day, & yr.)*	G. IF AN ENFORCEMENT CASE HAS BEEN FILED, SPECIFY THE DATE FILED *(mo., day, & yr.)*

H. PREPARER INFORMATION

1. NAME	2. TELEPHONE NUMBER	3. DATE *(mo., day, & yr.)*

III. REMEDIAL ACTIONS TO BE TAKEN WHEN RESOURCES BECOME AVAILABLE

List all remedial actions, such as excavation, removal, etc. to be taken as soon as resources become available. See instructions for a list of Key Words for each of the actions to be used in the spaces below. Provide an estimate of the approximate cost of the remedy.

A. REMEDIAL ACTION	B. ESTIMATED COST	C. REMARKS
	$	
	$	
	$	
	$	
	$	
	$	
	$	
	$	
D. TOTAL ESTIMATED COST	$	

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Continued From Front

IV. REMEDIAL ACTIONS

A. SHORT TERM/EMERGENCY ACTIONS *(On Site and Off-Site)*: List all emergency actions taken or planned to bring the site under immediate control, e.g., restrict access, provide alternate water supply, etc. See instructions for a list of Key Words for each of the actions to be used in the spaces below.

1. ACTION	2. ACTION START DATE (mo.,day.,& yr.)	3. ACTION END DATE (mo.,day.,& yr.)	4. ACTION AGENCY (EPA, State, Private Party)	5. COST	6. SPECIFY 311 OR OTHER ACTION. INDICATE THE MAGNITUDE OF THE WORK REQUIRED.
				$	
				$	
				$	
				$	
				$	
				$	

B. LONG TERM STRATEGY *(On Site and Off-Site)*: List all long term solutions, e.g., excavation, removal, ground water monitoring wells, etc. See instructions for a list of Key Words for each of the actions to be used in the spaces below.

1. ACTION	2. ACTION START DATE (mo.,day.,& yr.)	3. ACTION END DATE (mo.,day.,& yr.)	4. ACTION AGENCY (EPA, State Private Party)	5. COST	6. SPECIFY 311 OR OTHER ACTION: INDICATE THE MAGNITUDE OF THE WORK REQUIRED.
				$	
				$	
				$	
				$	
				$	
				$	

C. MANHOURS AND COST BY ACTION AGENCY

1. ACTION AGENCY	2. TOTAL MAN-HOURS FOR REMEDIAL ACTIVITIES	3. TOTAL COST FOR REMEDIAL ACTIVITIES
a. EPA		$
b. STATE		$
c. PRIVATE PARTIES		$
d. OTHER *(specify)*:		$

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

EPA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
Site 4-Hydraulic Training School(Bldg 342) Site 19- Refuse Transfer Area	NAVSTA Treasure Island

03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
San Francisco	CA	94130	San Francisco	075	05

09 COORDINATES	10 TYPE OF OWNERSHIP (Check one)
LATITUDE 37° 49 00 ON LONGITUDE 122° 22 00 OW	☐ A. PRIVATE ☒ B. FEDERAL NAVY ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL ☐ F. OTHER ☐ G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION	02 SITE STATUS	03 YEARS OF OPERATION
10, 8, 87 MONTH DAY YEAR	☒ ACTIVE ☐ INACTIVE	1987 (BEGINNING YEAR) (ENDING YEAR) X UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)

☐ A. EPA ☐ B. EPA CONTRACTOR _____ (Name of firm) ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR _____ (Name of firm)
☐ E. STATE ☐ F. STATE CONTRACTOR _____ (Name of firm) XX G. OTHER Dames & Moore (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
Ann M. Becker -	Team Leader, Engineer	Dames & Moore	(415) 896-5858
09 OTHER INSPECTORS	10 TITLE	11 ORGANIZATION	12 TELEPHONE NO.
James G. Ritchie	Geologist	Dames & Moore	(415) 896-5858
Dale D. Shileikis	Biologist	Dames & Moore	(415) 896-5858
Carol L. Creasey	Hydrogeologist	Dames & Moore	(415) 896-5858
William H. Welsh	Engineer	Dames & Moore	(805) 685-4415
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
Not Applicable			( )
			( )
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
☒ PERMISSION ☐ WARRANT	1030	Overcast, Mild

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO
Steve Hughes	NAVSTA Treasure Island	(415) 765-6114

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
Ann M. Becker	Contractor	Dames & Moore	(415)896-5858	11, 25, 87 MONTH DAY YEAR

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POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- ☒ A. SOLID
- ☐ B. POWDER, FINES
- ☐ C. SLUDGE
- ☐ D. OTHER _____ (Specify)
- ☐ E. SLURRY
- ☒ F. LIQUID
- ☐ G. GAS

02 WASTE QUANTITY AT SITE (Measures of waste quantities must be independent)

TONS: Unknown

CUBIC YARDS: _____

NO. OF DRUMS: _____

03 WASTE CHARACTERISTICS (Check all that apply)

- ☒ A. TOXIC
- ☐ B. CORROSIVE
- ☐ C. RADIOACTIVE
- ☐ D. PERSISTENT
- ☐ E. SOLUBLE
- ☒ F. INFECTIOUS
- ☒ G. FLAMMABLE
- ☒ H. IGNITABLE
- ☐ I. HIGHLY VOLATILE
- ☐ J. EXPLOSIVE
- ☐ K. REACTIVE
- ☐ L. INCOMPATIBLE
- ☐ M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE	20	DR	Drum Storage Area
SOL	SOLVENTS			
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS			

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
OLW	Hydraulic Oils	999	DR, OD (Soil)	7030-77300	mg/kg

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Employee Interviews

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EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☐ A. GROUNDWATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: < 100
02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Depth to groundwater is 2 to 6 feet. Contaminants may have passed through the vadose zone to the saturated zone, although it is not known to have occurred. Groundwater is unusable on the island.

01 ☒ B. SURFACE WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: <100
02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Released oil may have been conveyed on to offsite property or to San Francisco Bay by surface water runoff.

01 ☐ C. CONTAMINATION OF AIR
03 POPULATION POTENTIALLY AFFECTED: 0
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Not observed and very unlikely.

01 ☒ D. FIRE EXPLOSIVE CONDITIONS
03 POPULATION POTENTIALLY AFFECTED: < 100
02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Fluids stored in drums and released to the soil may be flammable although this has not been documented by a fire marshall or by monitoring equipment.

01 ☐ E. DIRECT CONTACT
03 POPULATION POTENTIALLY AFFECTED: 0
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Potential contamination would be in soils, surface water, and/or groundwater. Direct contact has not been observed and is very unlikely.

01 ☒ F. CONTAMINATION OF SOIL
03 AREA POTENTIALLY AFFECTED: 0.5
02 ☒ OBSERVED (DATE: 10/5/87) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Fluids released to underlying concrete pavement and adjacent soils. Miscellaneous trash on soil in refuse transfer area.

01 ☐ G. DRINKING WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: 0
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Drinking water is not impacted. Drinking water is piped in from off the island.

01 ☐ H. WORKER EXPOSURE/INJURY
03 WORKERS POTENTIALLY AFFECTED: _____
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Not observed and very unlikely, except during removal of contaminated soils.

01 ☐ I. POPULATION EXPOSURE/INJURY
03 POPULATION POTENTIALLY AFFECTED: _____
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Not observed; possible injury only to workers handling waste.

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☒ J. DAMAGE TO FLORA — 02 ☒ OBSERVED (DATE: 10-8-87) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Contamination of soils could potentially damage landscape and ruderal vegetation in a localized area. Damage would be restricted primarily to the vicinity of actual contamination.

01 ☒ K. DAMAGE TO FAUNA — 02 ☒ OBSERVED (DATE: 10-8-87) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Localized damage to soils is not expected to have damaged fauna in the immediate vicinity. No evidence of burrowing animals near facilities. Potential damage to marine fauna (benthic and intertidal) along shoreline may have occurred as a result of stormwater runoff to S.F. Bay

01 ☒ L. CONTAMINATION OF FOOD CHAIN — 02 ☒ OBSERVED (DATE: 10-8-87) XX ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Migration of contaminants from contaminated soils during rainfall could potentially accumulate in intertidal and benthic species and enter food chain via predator by waterfowl and fish.

01 XX M. UNSTABLE CONTAINMENT OF WASTES — 02 XX OBSERVED (DATE: 10/5/87) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: < 100
04 NARRATIVE DESCRIPTION
Oil spills in and around drum storage area were observed.
Trash outside of containers was observed on the ground.

01 ☐ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE:) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Surface runoff could potentially carry contaminants offsite but no evidence was observed except as noted above and below.

01 ☒ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE:) XX ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Released hydraulic oil may be conveyed into stormdrains by stormwater.

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE:) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Leakage of oils from drums has occurred.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS
None observed.

III. TOTAL POPULATION POTENTIALLY AFFECTED: < 100

IV. COMMENTS
None

V. SOURCES OF INFORMATION
Primarily employee interviews
Observations

EPA FORM 2070-12 (7-81)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
☐ A. NPDES				
☐ B. UIC				
☐ C. AIR				
☐ D. RCRA				
☐ E. RCRA INTERIM STATUS				
☑ F. SPCC PLAN	---	Feb. 1988	---	SPCC OTI
☐ G. STATE (Specify)				
☐ H. LOCAL (Specify)				
☐ I. OTHER (Specify)				
☐ J. NONE				

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE
☐ A. SURFACE IMPOUNDMENT		
☒ B. PILES	10	CY
☒ C. DRUMS, ABOVE GROUND	20	DR
☐ D. TANK, ABOVE GROUND		
☐ E. TANK, BELOW GROUND		
☐ F. LANDFILL		
☐ G. LANDFARM		
☐ H. OPEN DUMP		
☐ I. OTHER (Specify)		

04 TREATMENT (Check all that apply)
- ☐ A. INCINERATION
- ☐ B. UNDERGROUND INJECTION
- ☐ C. CHEMICAL/PHYSICAL
- ☐ D. BIOLOGICAL
- ☐ E. WASTE OIL PROCESSING
- ☐ F. SOLVENT RECOVERY
- ☐ G. OTHER RECYCLING/RECOVERY
- ☐ H. OTHER (Specify)

05 OTHER
- ☒ A. BUILDINGS ON SITE

06 AREA OF SITE
0.5 (Acres)

07 COMMENTS
None

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)
☐ A. ADEQUATE, SECURE ☐ B. MODERATE ☐ C. INADEQUATE, POOR ☐ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC.
Drums show evidence of release or spills. The drum storage area is paved but uncurbed. The area is fenced.
The refuse transfer area is a fenced earthen area with trash in containers and on the open ground.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE ☐ YES ☒ NO
02 COMMENTS The hydraulic oil storage area is fenced, but releases have flowed outside the fenced area.
The refuse transfer area is fenced, but gates remain open.

VI. SOURCES OF INFORMATION (Cite specific references, e.g. state files, sample analysis, reports)

Personnel Interviews
Observations

EPA FORM 2070-13 (7-81)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as applicable): Pipeline from offsite

	SURFACE	WELL
COMMUNITY	A. ☐	B. ☐
NON-COMMUNITY	C. ☐	D. ☐

02 STATUS: Not used

ENDANGERED	AFFECTED	MONITORED
A. ☐	B. ☐	C. ☐
D. ☐	E. ☐	F. ☐

03 DISTANCE TO SITE: A. N/A (mi); B. _____ (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)

☐ A. ONLY SOURCE FOR DRINKING ☐ B. DRINKING (Other source(s) available); COMMERCIAL, INDUSTRIAL, IRRIGATION (No other water sources available) ☐ C. COMMERCIAL, INDUSTRIAL, IRRIGATION (Limited other sources available) XX ☒ D. NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUND WATER: 0

03 DISTANCE TO NEAREST DRINKING WATER WELL: > 3 (mi)

04 DEPTH TO GROUNDWATER	05 DIRECTION OF GROUNDWATER FLOW	06 DEPTH TO AQUIFER OF CONCERN	07 POTENTIAL YIELD OF AQUIFER	08 SOLE SOURCE AQUIFER
2 - 6 (ft)	Toward S.F. Bay.	N/A (ft)	N/A (gpd)	N/A ☐ YES ☐ NO

09 DESCRIPTION OF WELLS (Including usage, depth, and location relative to population and buildings)

NOTE: The site is on an island in San Francisco Bay. There are no water wells in use on the island. Water is piped to the island on the San Francisco-Oakland Bay Bridge.

10 RECHARGE AREA		11 DISCHARGE AREA	
☒ YES ☐ NO	COMMENTS: Infiltration is occurring but recharging an unusable aquifer.	☒ YES ☐ NO	COMMENTS: Discharge of groundwater is probably to San Francisco Bay.

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)

☐ A. RESERVOIR, RECREATION DRINKING WATER SOURCE ☐ B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES XX ☒ C. COMMERCIAL, INDUSTRIAL ☐ D. NOT CURRENTLY USED

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME:	AFFECTED	DISTANCE TO SITE
San Francisco Bay	☐	< 0.5 (mi)
	☐	(mi)
	☐	(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE
A. 3000 (NO. OF PERSONS)	B. 3000 (NO. OF PERSONS)	C. ≥10,000 (NO. OF PERSONS)

02 DISTANCE TO NEAREST POPULATION: < 0.1 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE	04 DISTANCE TO NEAREST OFF-SITE BUILDING
200	< 0.1 (mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., rural, village, densely populated urban area)

NAVSTA TI contains residences for approximately 2500-3000 service personnel. The island is surrounded by San Francisco Bay. Across the Bay there are large cities including San Francisco and Oakland.

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☐ A. $10^{-6} - 10^{-8}$ cm/sec ☐ B. $10^{-4} - 10^{-6}$ cm/sec ☒ C. $10^{-4} - 10^{-3}$ cm/sec ☐ D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☐ A. IMPERMEABLE (Less than 10^{-6} cm/sec) ☒ B. RELATIVELY IMPERMEABLE ($10^{-4} - 10^{-6}$ cm/sec) ☐ C. RELATIVELY PERMEABLE ($10^{-2} - 10^{-4}$ cm/sec) ☐ D. VERY PERMEABLE (Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK	04 DEPTH OF CONTAMINATED SOIL ZONE	05 SOIL pH	
300 (ft)	Unknown (ft)	Unknown	

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
-15 to -10 (in)	3.0 (in)	0-2 %	West	1 %

09 FLOOD POTENTIAL

SITE IS IN N/A YEAR FLOODPLAIN

10 ☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE	OTHER
A. > 2 (mi)	B. _____ (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)

> 2 (mi)

ENDANGERED SPECIES: _____

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL	RESIDENTIAL AREAS; NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS: PRIME AG LAND	AGRICULTURAL LANDS: AG LAND
A. 0.1 (mi)	B. > 2 (mi)	C. > 3 (mi)	D. > 3 (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

The site is located on Treasure Island, a man-made island on San Francisco Bay. Treasure Island is essentially flat with very little relief. Slopes in the vicinity of the site vary from 0 to 2%.

VII. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sampling analysis, reports)

Personal inteviews.
Observations
Harding Lawson Associates Report (1985).

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 6 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
CA	7170023330

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER			
SURFACE WATER			
WASTE			
AIR			
RUNOFF			
SPILL			
SOIL	3	IT Corporation	11/6/87
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
None	None

IV. PHOTOGRAPHS AND MAPS

01 TYPE [ ] GROUND [X] AERIAL

02 IN CUSTODY OF Naval Energy and Environmental Support Activity (NEESA).
(Name of organization or individual)

03 MAPS [X] YES [ ] NO

04 LOCATION OF MAPS NEESA

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

None

VI. SOURCES OF INFORMATION (Cite specific references e.g., state files, sample analysis reports)

Personnel Interviews.

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
CA	7170023330

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER
United States Navy	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
NAVSTA Treasure Island	

05 CITY	06 STATE	07 ZIP CODE
San Francisco	CA	94130

PARENT COMPANY (if applicable)

08 NAME	09 D+B NUMBER

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

12 CITY	13 STATE	14 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 NAME	09 D+B NUMBER

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

12 CITY	13 STATE	14 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 NAME	09 D+B NUMBER

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

12 CITY	13 STATE	14 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 NAME	09 D+B NUMBER

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

12 CITY	13 STATE	14 ZIP CODE

III. PREVIOUS OWNER(S) (List most recent first)

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

IV. REALTY OWNER(S) (If applicable, list most recent first)

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sampling evaluation, reports)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

II. CURRENT OPERATOR (Provide if different from owner)

01 NAME: United States Navy	02 D+B NUMBER		
03 STREET ADDRESS (P.O. Box, RFD #, etc.): NAVSTA Treasure Island	04 SIC CODE		
05 CITY: San Francisco	06 STATE: CA	07 ZIP CODE: 94130	
08 YEARS OF OPERATION: 45	09 NAME OF OWNER: U.S. Navy		

OPERATOR'S PARENT COMPANY (If applicable)

10 NAME	11 D+B NUMBER		
12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE		
14 CITY	15 STATE	16 ZIP CODE	

III. PREVIOUS OPERATOR(S) (List most recent first; provide only if different from owner)

01 NAME	02 D+B NUMBER		
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE		
05 CITY	06 STATE	07 ZIP CODE	
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD		

PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)

10 NAME	11 D+B NUMBER		
12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE		
14 CITY	15 STATE	16 ZIP CODE	

01 NAME	02 D+B NUMBER		
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE		
05 CITY	06 STATE	07 ZIP CODE	
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD		

10 NAME	11 D+B NUMBER		
12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE		
14 CITY	15 STATE	16 ZIP CODE	

01 NAME	02 D+B NUMBER		
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE		
05 CITY	06 STATE	07 ZIP CODE	
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD		

10 NAME	11 D+B NUMBER		
12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE		
14 CITY	15 STATE	16 ZIP CODE	

IV. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
CA	7170023330

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER
U.S. Navy	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
NAVSTA Treasure Island	

05 CITY	06 STATE	07 ZIP CODE
San Francisco	CA	94130

III. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

IV. TRANSPORTER(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
U.S. Navy			

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
NAVSTA Treasure Island			

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE
San Francisco	CA	94130			

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. PAST RESPONSE ACTIVITIES (Continued)

01 ☐ R. BARRIER WALLS CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ S. CAPPING/COVERING — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ T. BULK TANKAGE REPAIRED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ U. GROUT CURTAIN CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ V. BOTTOM SEALED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ W. GAS CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ X. FIRE CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Y. LEACHATE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Z. AREA EVACUATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☒ 1. ACCESS TO SITE RESTRICTED — 02 DATE Unknown — 03 AGENCY U. S. Navy
04 DESCRIPTION Area fenced to deter access

01 ☐ 2. POPULATION RELOCATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 3. OTHER REMEDIAL ACTIVITIES — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Employee Interviews; Observations.

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 11 - ENFORCEMENT INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
CA	7170023330

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY ENFORCEMENT ACTION ☐ YES ☒ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY/ENFORCEMENT ACTION

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sampling analysis reports)

Personnel Interview.

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POTENTIAL HAZARDOUS WASTE SITE
FINAL STRATEGY DETERMINATION

REGION	SITE NUMBER
IX	7170023330

File this form in the regional Hazardous Waste Log File and submit a copy to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Task Force (*EN-335*); 401 M St., SW; Washington, DC 20460.

I. SITE IDENTIFICATION

A. SITE NAME	B. STREET
Hydraulic Training School/ Refuse Transfer Area	Naval Station (NAVSTA) Treasure Island

C. CITY	D. STATE	E. ZIP CODE
San Francisco	CA	94130

II. FINAL DETERMINATION

Indicate the recommended action(s) and agency(ies) that should be involved by marking 'X' in the appropriate boxes.

RECOMMENDATION	MARK 'X'	ACTION AGENCY			
		EPA	STATE	LOCAL	PRIVATE
A. NO ACTION NEEDED					
B. REMEDIAL ACTION NEEDED, BUT NO RESOURCES AVAILABLE *(If yes, complete Section III.)*					
C. REMEDIAL ACTION *(If yes, complete Section IV.)*					
D. ENFORCEMENT ACTION *(If yes, specify in Part E whether the case will be primarily managed by the EPA or the State and what type of enforcement action is anticipated.)*					

E. RATIONALE FOR FINAL STRATEGY DETERMINATION

The site will continue to be evaluated and additional sampling will be performed. These results will be used to determine remedial actions. See report entitled Preliminary Assessment/Site Investigation of Naval Station, Treasure Island, CA.

F. IF A CASE DEVELOPMENT PLAN HAS BEEN PREPARED, SPECIFY THE DATE PREPARED *(mo., day, & yr.)*	G. IF AN ENFORCEMENT CASE HAS BEEN FILED, SPECIFY THE DATE FILED *(mo., day, & yr.)*

H. PREPARER INFORMATION

1. NAME	2. TELEPHONE NUMBER	3. DATE *(mo., day, & yr.)*

III. REMEDIAL ACTIONS TO BE TAKEN WHEN RESOURCES BECOME AVAILABLE

List all remedial actions, such as excavation, removal, etc. to be taken as soon as resources become available. See instructions for a list of Key Words for each of the actions to be used in the spaces below. Provide an estimate of the approximate cost of the remedy.

A. REMEDIAL ACTION	B. ESTIMATED COST	C. REMARKS
	$	
	$	
	$	
	$	
	$	
	$	
	$	
	$	
D. TOTAL ESTIMATED COST	$	

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Continued From Front

IV. REMEDIAL ACTIONS

A. SHORT TERM/EMERGENCY ACTIONS *(On Site and Off-Site)*: List all emergency actions taken or planned to bring the site under immediate control, e.g., restrict access, provide alternate water supply, etc. See instructions for a list of Key Words for each of the actions to be used in the spaces below.

1. ACTION	2. ACTION START DATE (mo.,day.,& yr)	3. ACTION END DATE (mo.,day.,& yr)	4. ACTION AGENCY (EPA, State, Private Party)	5. COST	6. SPECIFY 311 OR OTHER ACTION. INDICATE THE MAGNITUDE OF THE WORK REQUIRED.
				$	
				$	
				$	
				$	
				$	
				$	

B. LONG TERM STRATEGY *(On Site and Off-Site)*: List all long term solutions, e.g., excavation, removal, ground water monitoring wells, etc. See instructions for a list of Key Words for each of the actions to be used in the spaces below.

1. ACTION	2. ACTION START DATE (mo.,day.,& yr)	3. ACTION END DATE (mo.,day.,& yr)	4. ACTION AGENCY (EPA, State Private Party)	5. COST	6. SPECIFY 311 OR OTHER ACTION: INDICATE THE MAGNITUDE OF THE WORK REQUIRED.
				$	
				$	
				$	
				$	
				$	
				$	

C. MANHOURS AND COST BY ACTION AGENCY

1. ACTION AGENCY	2. TOTAL MAN-HOURS FOR REMEDIAL ACTIVITIES	3. TOTAL COST FOR REMEDIAL ACTIVITIES
a. EPA		$
b. STATE		$
c. PRIVATE PARTIES		$
d. OTHER *(specify)*:		$

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

EPA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER				
Site 5 - Old Boiler Plant (Bldg. 102)	NAVSTA Treasure Island				
03 CITY	**04 STATE**	**05 ZIP CODE**	**06 COUNTY**	**07 COUNTY CODE**	**08 CONG DIST**
San Francisco	CA	94130	San Francisco	075	05

09 COORDINATES LATITUDE 37° 49 00 ON | LONGITUDE 122° 22 00 OW

10 TYPE OF OWNERSHIP (Check one)
☐ A. PRIVATE XX ☐ B. FEDERAL NAVY ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL
☐ F. OTHER _____ ☐ G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION	02 SITE STATUS	03 YEARS OF OPERATION
10 / 8 / 87 (MONTH DAY YEAR)	XX ACTIVE ☐ INACTIVE	Early 1940s (BEGINNING YEAR) / 1968 (ENDING YEAR) ___ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)
☐ A. EPA ☐ B. EPA CONTRACTOR _____ (Name of firm) ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR _____ (Name of firm)
☐ E. STATE ☐ F. STATE CONTRACTOR _____ (Name of firm) XX G. OTHER Dames & Moore (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
Ann M. Becker	Team Leader, Engineer	Dames & Moore	(415) 896-5858
09 OTHER INSPECTORS	**10 TITLE**	**11 ORGANIZATION**	**12 TELEPHONE NO.**
James G. Ritchie	Geologist	Dames & Moore	(415) 896-5858
Dale D. Shileikis	Biologist	Dames & Moore	(415) 896-5858
Carol L. Creasey	Hydrogeologist	Dames & Moore	(415) 896-5858
William H. Welsh	Engineer	Dames & Moore	(805) 685-4415
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
Not Applicable			( )
			( )
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
XX PERMISSION ☐ WARRANT	1500	Cloudy, mild

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO
Steve Hughes	NAVSTA Treasure Island	(415) 765-6114

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
Ann M. Becker	Contractor	Dames & Moore	(415)896-5858	11 / 25 / 87 (MONTH DAY YEAR)

EPA FORM 2070-13 (7-81)

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POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- ☐ A. SOLID
- ☐ B. POWDER, FINES
- ☐ C. SLUDGE
- ☐ D. OTHER _____ (Specify)
- ☐ E. SLURRY
- ☐ F. LIQUID
- ☐ G. GAS

02 WASTE QUANTITY AT SITE (Measures of waste quantities must be independent)

- TONS: Unknown
- CUBIC YARDS: _____
- NO. OF DRUMS: _____

03 WASTE CHARACTERISTICS (Check all that apply)

- ☒ A. TOXIC
- ☐ B. CORROSIVE
- ☐ C. RADIOACTIVE
- ☐ D. PERSISTENT
- ☐ E. SOLUBLE
- ☐ F. INFECTIOUS
- ☐ G. FLAMMABLE
- ☐ H. IGNITABLE
- ☐ I. HIGHLY VOLATILE
- ☐ J. EXPLOSIVE
- ☐ K. REACTIVE
- ☐ L. INCOMPATIBLE
- ☐ M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			
SOL	SOLVENTS			
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS	Unknown	N/A	Asbestos
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS			

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
IOC	Asbestos	999	LF	N/A	

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Employee Interviews

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EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☐ A. GROUNDWATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: 0
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Contamination of groundwater unlikely. Groundwater is unusable.

01 ☐ B. SURFACE WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: 0
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Contamination of surface water is unlikely.

01 ☒ C. CONTAMINATION OF AIR
03 POPULATION POTENTIALLY AFFECTED: < 1000
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☒ ALLEGED
04 NARRATIVE DESCRIPTION

Asbestos is reported to be buried under an asphalt paved area. Excavation in this area could result in airborne asbestos.

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS
03 POPULATION POTENTIALLY AFFECTED: 0
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

No fire/explosive conditions observed.

01 ☐ E. DIRECT CONTACT
03 POPULATION POTENTIALLY AFFECTED: < 1000
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☒ ALLEGED
04 NARRATIVE DESCRIPTION

No incidents have been reported. If excavation occurred, workers might breathe airborne asbestos.

01 ☒ F. CONTAMINATION OF SOIL
03 AREA POTENTIALLY AFFECTED: 0.5 (Acres)
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☒ ALLEGED
04 NARRATIVE DESCRIPTION

Asbestos is reported to be buried under a paved area where Building 102 was located

01 ☐ G. DRINKING WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: 0
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Drinking water is not impacted. Drinking water is supplied by pipeline from off the island.

01 ☐ H. WORKER EXPOSURE/INJURY
03 WORKERS POTENTIALLY AFFECTED: < 100
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☒ ALLEGED
04 NARRATIVE DESCRIPTION

No incidents have been reported. If excavation occurred, workers might breathe airborne asbestos.

01 ☐ I. POPULATION EXPOSURE/INJURY
03 POPULATION POTENTIALLY AFFECTED: < 1000
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☒ ALLEGED
04 NARRATIVE DESCRIPTION

No observed incidents have been reported. If excavation occurred, population might breathe airborne asbestos.

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☒ J. DAMAGE TO FLORA — 02 ☒ OBSERVED (DATE: 10-9-87) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Presence of asbestos in soil is not expected to damage flora

01 ☒ K. DAMAGE TO FAUNA — 02 ☒ OBSERVED (DATE: 10-9-87) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION (Include names of species)

Presence of asbestos in soil is not expected to damage fauna

01 ☐ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

N/A

01 ☐ M. UNSTABLE CONTAINMENT OF WASTES — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
(Spills, runoff, standing liquids, leaking drums)
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

Asbestos is buried under asphalt; not contained.

01 ☐ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Unlikely that asbestos would migrate unless excavated.

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Very unlikely

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Asbestos was reportedly uncovered during excavation. Quantity and character is unknown.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

None

III. TOTAL POPULATION POTENTIALLY AFFECTED: < 1000

IV. COMMENTS

None

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Employee Interviews

EPA FORM 2070-12 (7-81)

REPRODUCED BY GOVERNMENT EXPOSE

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
☐ A. NPDES				
☐ B. UIC				
☐ C. AIR				
☐ D. RCRA				
☐ E. RCRA INTERIM STATUS				
☐ F. SPCC PLAN				
☐ G. STATE (Specify)				
☐ H. LOCAL (Specify)				
☐ I. OTHER (Specify)				
☒ J. NONE				

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE
☐ A. SURFACE IMPOUNDMENT		
☐ B. PILES		
☐ C. DRUMS, ABOVE GROUND		
☐ D. TANK, ABOVE GROUND		
☐ E. TANK, BELOW GROUND		
☒ F. LANDFILL	Unknown	
☐ G. LANDFARM		
☐ H. OPEN DUMP		
☐ I. OTHER ___ (Specify)		

04 TREATMENT (Check all that apply)

- ☐ A. INCENERATION
- ☐ B. UNDERGROUND INJECTION
- ☐ C. CHEMICAL/PHYSICAL
- ☐ D. BIOLOGICAL
- ☐ E. WASTE OIL PROCESSING
- ☐ F. SOLVENT RECOVERY
- ☐ G. OTHER RECYCLING/RECOVERY
- ☐ H. OTHER ___ (Specify)

05 OTHER

☐ A. BUILDINGS ON SITE

06 AREA OF SITE

0.5 (Acres)

07 COMMENTS

None

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

☒ A. ADEQUATE, SECURE ☐ B. MODERATE ☐ C. INADEQUATE, POOR ☐ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC.

The asbestos is buried under a paved area and unless disturbed does not present a hazard.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE ☐ YES ☒ NO

02 COMMENTS

Material is buried under asphalt

VI. SOURCES OF INFORMATION (Cite specific references, e.g. state files, sample analysis, reports)

Employee Interviews

EPA FORM 2070-13 (7-81)

REPRODUCED AT GOVERNMENT EXPENSE

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as applicable): Piped in from offsite.

	SURFACE	WELL
COMMUNITY	A. ☐	B. ☐
NON-COMMUNITY	C. ☐	D. ☐

02 STATUS: Not used

ENDANGERED	AFFECTED	MONITORED
A. ☐	B. ☐	C. ☐
D. ☐	E. ☐	F. ☐

03 DISTANCE TO SITE: N/A
A. _____ (mi)
B. _____ (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)
☐ A. ONLY SOURCE FOR DRINKING ☐ B. DRINKING (Other sources available) COMMERCIAL, INDUSTRIAL, IRRIGATION (Other water sources available) ☐ C. COMMERCIAL, INDUSTRIAL, IRRIGATION (Limited other sources available) ☒ D. NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUND WATER: 0
03 DISTANCE TO NEAREST DRINKING WATER WELL: > 3 (mi)

04 DEPTH TO GROUNDWATER	05 DIRECTION OF GROUNDWATER FLOW	06 DEPTH TO AQUIFER OF CONCERN	07 POTENTIAL YIELD OF AQUIFER	08 SOLE SOURCE AQUIFER
2 - 6 (ft)	Toward S.F. Bay.	N/A (ft)	N/A (gpd)	☐ YES ☐ NO

09 DESCRIPTION OF WELLS (Including usage, depth, and location relative to population and buildings)

NOTE: The site is on an island in San Francisco Bay. There are no water wells in use on the island. Water is piped to the island on the San Francisco-Oakland Bay Bridge.

10 RECHARGE AREA		11 DISCHARGE AREA	
☒ YES ☐ NO	COMMENTS: Infiltration is occurring but recharging an unusable aquifer.	☒ YES ☐ NO	COMMENTS: Groundwater eventually flows to San Francisco.

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)
☐ A. RESERVOIR, RECREATION DRINKING WATER SOURCE ☐ B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES ☒ C. COMMERCIAL, INDUSTRIAL ☐ D. NOT CURRENTLY USED

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME:	AFFECTED	DISTANCE TO SITE
San Francisco Bay	☐	< 0.5 (mi)
	☐	(mi)
	☐	(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE
A. 3000 NO OF PERSONS	B. 3000 NO OF PERSONS	C. >10,000 NO OF PERSONS

02 DISTANCE TO NEAREST POPULATION: < 0.1 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE: 200

04 DISTANCE TO NEAREST OFF-SITE BUILDING: < 0.1 (mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., rural, village, densely populated urban area)

NAVSTA TI contains residences for approximately 2500-3000 service personnel. The island is surrounded by San Francisco Bay. Across the Bay there are large cities including San Francisco and Oakland.

REPRODUCED AT GOVERNMENT EXPENSE

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☐ A. $10^{-6} - 10^{-8}$ cm/sec ☐ B. $10^{-4} - 10^{-6}$ cm/sec ☒ C. $10^{-4} - 10^{-3}$ cm/sec ☐ D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☐ A. IMPERMEABLE (Less than 10^{-6} cm/sec) ☒ B. RELATIVELY IMPERMEABLE ($10^{-4} - 10^{-6}$ cm/sec) ☐ C. RELATIVELY PERMEABLE ($10^{-2} - 10^{-4}$ cm/sec) ☐ D. VERY PERMEABLE (Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK	04 DEPTH OF CONTAMINATED SOIL ZONE	05 SOIL pH	
300 (ft)	Unknown (ft)	Unknown	

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
-10 to -15 (in)	3.0 (in)	0-2 %	West	1 %

09 FLOOD POTENTIAL

SITE IS IN N/A YEAR FLOODPLAIN

10 ☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE	OTHER
A. >2 (mi)	B. _____ (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)

>2 (mi)

ENDANGERED SPECIES: _____

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL	RESIDENTIAL AREAS; NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS: PRIME AG LAND	AGRICULTURAL LANDS: AG LAND
A. 0.1 (mi)	B. >2 (mi)	C. >3 (mi)	D. >3 (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

The site is located on Treasure Island, a man-made island on San Francisco Bay. Treasure Island is essentially flat with very little relief. Slopes in the vicinity of the site vary from 0 to 2%.

VII. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sampling reports)

Personal inteviews.
Observations.
Harding Lawson Associates Report (1985).

REPRODUCED AT GOVERNMENT EXPENSE

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 6 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
CA	7170023330

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER			
SURFACE WATER			
WASTE			
AIR			
RUNOFF			
SPILL			
SOIL			
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
None	None

IV. PHOTOGRAPHS AND MAPS

01 TYPE [X] GROUND [X] AERIAL

02 IN CUSTODY OF Naval Energy and Environmental Support Activity (NEESA). (Name of organization or individual)

03 MAPS [X] YES [ ] NO

04 LOCATION OF MAPS: NEESA

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

None

VI. SOURCES OF INFORMATION (Cite specific references e.g., State files, sample analysis reports)

Personnel Interviews.

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
CA	7170023330

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER
United States Navy	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
NAVSTA Treasure Island	
05 CITY	06 STATE / 07 ZIP CODE
San Francisco	CA / 94130

PARENT COMPANY (if applicable)

08 NAME	09 D+B NUMBER
10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE
12 CITY	13 STATE / 14 ZIP CODE

II. CURRENT OWNER(S) (continued)

01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE

PARENT COMPANY (if applicable) (continued)

08 NAME	09 D+B NUMBER
10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE
12 CITY	13 STATE / 14 ZIP CODE

II. CURRENT OWNER(S) (continued)

01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE

PARENT COMPANY (if applicable) (continued)

08 NAME	09 D+B NUMBER
10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE
12 CITY	13 STATE / 14 ZIP CODE

II. CURRENT OWNER(S) (continued)

01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE

PARENT COMPANY (if applicable) (continued)

08 NAME	09 D+B NUMBER
10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE
12 CITY	13 STATE / 14 ZIP CODE

III. PREVIOUS OWNER(S) (List most recent first)

01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE

IV. REALTY OWNER(S) (If applicable, list most recent first)

01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE

III. PREVIOUS OWNER(S) (continued)

01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE

IV. REALTY OWNER(S) (continued)

01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE

III. PREVIOUS OWNER(S) (continued)

01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE

IV. REALTY OWNER(S) (continued)

01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sampling analysis, reports)

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EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

II. CURRENT OPERATOR (Provide if different from owner)

01 NAME: United States Navy	02 D+B NUMBER:
03 STREET ADDRESS (P.O. Box, RFD #, etc.): NAVSTA Treasure Island	04 SIC CODE:
05 CITY: San Francisco	06 STATE: CA / 07 ZIP CODE: 94130
08 YEARS OF OPERATION: 45	09 NAME OF OWNER: U.S. Navy

OPERATOR'S PARENT COMPANY (If applicable)

10 NAME:	11 D+B NUMBER:
12 STREET ADDRESS (P.O. Box, RFD #, etc.):	13 SIC CODE:
14 CITY:	15 STATE: / 16 ZIP CODE:

III. PREVIOUS OPERATOR(S) (List most recent first; provide only if different from owner)

01 NAME:	02 D+B NUMBER:
03 STREET ADDRESS (P.O. Box, RFD #, etc.):	04 SIC CODE:
05 CITY:	06 STATE: / 07 ZIP CODE:
08 YEARS OF OPERATION:	09 NAME OF OWNER DURING THIS PERIOD:

PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)

10 NAME:	11 D+B NUMBER:
12 STREET ADDRESS (P.O. Box, RFD #, etc.):	13 SIC CODE:
14 CITY:	15 STATE: / 16 ZIP CODE:

01 NAME:	02 D+B NUMBER:
03 STREET ADDRESS (P.O. Box, RFD #, etc.):	04 SIC CODE:
05 CITY:	06 STATE: / 07 ZIP CODE:
08 YEARS OF OPERATION:	09 NAME OF OWNER DURING THIS PERIOD:

10 NAME:	11 D+B NUMBER:
12 STREET ADDRESS (P.O. Box, RFD #, etc.):	13 SIC CODE:
14 CITY:	15 STATE: / 16 ZIP CODE:

01 NAME:	02 D+B NUMBER:
03 STREET ADDRESS (P.O. Box, RFD #, etc.):	04 SIC CODE:
05 CITY:	06 STATE: / 07 ZIP CODE:
08 YEARS OF OPERATION:	09 NAME OF OWNER DURING THIS PERIOD:

10 NAME:	11 D+B NUMBER:
12 STREET ADDRESS (P.O. Box, RFD #, etc.):	13 SIC CODE:
14 CITY:	15 STATE: / 16 ZIP CODE:

IV. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER
U.S. Navy	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
NAVSTA Treasure Island	

05 CITY	06 STATE	07 ZIP CODE
San Francisco	CA	94130

III. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

IV. TRANSPORTER(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
U.S. Navy			

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
NAVSTA Treasure Island			

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE
San Francisco	CA	94130			

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

EPA FORM 2070-13 (7-81)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II PAST RESPONSE ACTIVITIES (Continued)

01 ☐ R. BARRIER WALLS CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☒ S. CAPPING/COVERING — 02 DATE Unknown — 03 AGENCY U.S. Navy
04 DESCRIPTION
Area is asphalt paved.

01 ☐ T. BULK TANKAGE REPAIRED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ U. GROUT CURTAIN CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ V. BOTTOM SEALED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ W. GAS CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ X. FIRE CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Y. LEACHATE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Z. AREA EVACUATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 1. ACCESS TO SITE RESTRICTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 2. POPULATION RELOCATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 3. OTHER REMEDIAL ACTIVITIES — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Employee Interviews; Observations.

EPA FORM 2070-13 (7-81)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 11 - ENFORCEMENT INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
CA	7170023330

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY ENFORCEMENT ACTION ☐ YES ☒ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY ENFORCEMENT ACTION

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis reports)

Personnel Interview.

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
FINAL STRATEGY DETERMINATION

REGION	SITE NUMBER
IX	7170023330

File this form in the regional Hazardous Waste Log File and submit a copy to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Task Force (*EN-335*); 401 M St., SW; Washington, DC 20460.

I. SITE IDENTIFICATION

A. SITE NAME	B. STREET	
Old Boiler Plant (Bldg. 102)	Naval Station (NAVSTA) Treasure Island	
C. CITY	**D. STATE**	**E. ZIP CODE**
San Francisco	CA	94130

II. FINAL DETERMINATION

Indicate the recommended action(s) and agency(ies) that should be involved by marking 'X' in the appropriate boxes.

RECOMMENDATION	MARK 'X'	ACTION AGENCY: EPA	STATE	LOCAL	PRIVATE
A. NO ACTION NEEDED					
B. REMEDIAL ACTION NEEDED, BUT NO RESOURCES AVAILABLE *(If yes, complete Section III.)*					
C. REMEDIAL ACTION *(If yes, complete Section IV.)*					
D. ENFORCEMENT ACTION *(If yes, specify in Part E whether the case will be primarily managed by the EPA or the State and what type of enforcement action is anticipated.)*					

E. RATIONALE FOR FINAL STRATEGY DETERMINATION

The site will continue to be evaluated and additional sampling will be performed. These results will be used to determine remedial actions. See report entitled Preliminary Assessment/Site Investigation of Naval Station, Treasure Island, CA.

F. IF A CASE DEVELOPMENT PLAN HAS BEEN PREPARED, SPECIFY THE DATE PREPARED *(mo., day, & yr.)*	G. IF AN ENFORCEMENT CASE HAS BEEN FILED, SPECIFY THE DATE FILED *(mo., day, & yr.)*

H. PREPARER INFORMATION

1. NAME	2. TELEPHONE NUMBER	3. DATE *(mo., day, & yr.)*

III. REMEDIAL ACTIONS TO BE TAKEN WHEN RESOURCES BECOME AVAILABLE

List all remedial actions, such as excavation, removal, etc. to be taken as soon as resources become available. See instructions for a list of Key Words for each of the actions to be used in the spaces below. Provide an estimate of the approximate cost of the remedy.

A. REMEDIAL ACTION	B. ESTIMATED COST	C. REMARKS
	$	
	$	
	$	
	$	
	$	
	$	
	$	
	$	
D. TOTAL ESTIMATED COST	$	

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Continued From Front

IV. REMEDIAL ACTIONS

A. SHORT TERM/EMERGENCY ACTIONS *(On Site and Off-Site)*: List all emergency actions taken or planned to bring the site under immediate control, e.g., restrict access, provide alternate water supply, etc. See instructions for a list of Key Words for each of the actions to be used in the spaces below.

1. ACTION	2. ACTION START DATE *(mo.,day.,& yr.)*	3. ACTION END DATE *(mo.,day.,& yr.)*	4. ACTION AGENCY *(EPA, State, Private Party)*	5. COST	6. SPECIFY 311 OR OTHER ACTION. INDICATE THE MAGNITUDE OF THE WORK REQUIRED.
				$	
				$	
				$	
				$	
				$	
				$	

B. LONG TERM STRATEGY *(On Site and Off-Site)*: List all long term solutions, e.g., excavation, removal, ground water monitoring wells, etc. See instructions for a list of Key Words for each of the actions to be used in the spaces below.

1. ACTION	2. ACTION START DATE *(mo.,day.,& yr.)*	3. ACTION END DATE *(mo.,day.,& yr.)*	4. ACTION AGENCY *(EPA, State Private Party)*	5. COST	6. SPECIFY 311 OR OTHER ACTION; INDICATE THE MAGNITUDE OF THE WORK REQUIRED.
				$	
				$	
				$	
				$	
				$	
				$	

C. MANHOURS AND COST BY ACTION AGENCY

1. ACTION AGENCY	2. TOTAL MAN-HOURS FOR REMEDIAL ACTIVITIES	3. TOTAL COST FOR REMEDIAL ACTIVITIES
a. EPA		$
b. STATE		$
c. PRIVATE PARTIES		$
d. OTHER *(specify)*:		$

EPA REPRODUCTION OF GOVERNMENT DOCUMENTS

REPRODUCED AT GOVERNMENT EXPENSE

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER				
Site 7 - Building 62	NAVSTA Treasure Island				
03 CITY	**04 STATE**	**05 ZIP CODE**	**06 COUNTY**	**07 COUNTY CODE**	**08 CONG DIST**
San Francisco	CA	94130	San Francisco	075	05

09 COORDINATES LATITUDE 37° 49 00 ON | LONGITUDE 122° 22 00 OW

10 TYPE OF OWNERSHIP (Check one)
☐ A. PRIVATE ☒ B. FEDERAL NAVY ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL ☐ F. OTHER ☐ G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION	02 SITE STATUS	03 YEARS OF OPERATION
10 / 8 / 87 (MONTH DAY YEAR)	☒ ACTIVE ☐ INACTIVE	1987 (BEGINNING YEAR) — (ENDING YEAR) ☒ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)
☐ A. EPA ☐ B. EPA CONTRACTOR (Name of firm) ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR (Name of firm)
☐ E. STATE ☐ F. STATE CONTRACTOR (Name of firm) ☒ G. OTHER Dames & Moore (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
Ann M. Becker	Team Leader, Engineer	Dames & Moore	(415) 896-5858
09 OTHER INSPECTORS	**10 TITLE**	**11 ORGANIZATION**	**12 TELEPHONE NO.**
James G. Ritchie	Geologist	Dames & Moore	(415) 896-5858
Dale D. Shileikis	Biologist	Dames & Moore	(415) 896-5858
Carol L. Creasey	Hydrogeologist	Dames & Moore	(415) 896-5858
William H. Welsh	Engineer	Dames & Moore	(805) 685-4415
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
Not Applicable			( )
			( )
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
☒ PERMISSION ☐ WARRANT	1000	Mild with haze

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO
Steve Hughes	NAVSTA Treasure Island	415 765-6114

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
Ann M. Becker	Contractor	Dames & Moore	(415)896-5858	11 / 25 / 87 (MONTH DAY YEAR)

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POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- ☐ A. SOLID
- ☐ B. POWDER, FINES
- XX ☐ C. SLUDGE
- ☐ D. OTHER _____ (Specify)
- ☐ E. SLURRY
- XX ☐ F. LIQUID
- ☐ G. GAS

02 WASTE QUANTITY AT SITE (Measures of waste quantities must be independent)

- TONS: Unknown
- CUBIC YARDS: _____
- NO. OF DRUMS: _____

03 WASTE CHARACTERISTICS (Check all that apply)

- XX ☐ A. TOXIC
- ☐ B. CORROSIVE
- ☐ C. RADIOACTIVE
- XX ☐ D. PERSISTENT
- XX ☐ E. SOLUBLE
- ☐ F. INFECTIOUS
- XX ☐ G. FLAMMABLE
- ☐ H. IGNITABLE
- ☐ I. HIGHLY VOLATILE
- ☐ J. EXPLOSIVE
- ☐ K. REACTIVE
- ☐ L. INCOMPATIBLE
- ☐ M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			
SOL	SOLVENTS			
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS			

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
SLU	Wastewater Ttreatment Sludge	999	LM	Unknown	
PSD	Pesticides (Misc.)	999	OD	Unknown	
OCC	Herbicides (Misc.)	999	OD	Unknown	
SOL	Solvents (Misc.)	999	OD	Unknown	
SOL	Waste Paint	999	OD	Unknown	
SOL	Paint Thinner	999	OD	Unknown	
SOL	Lacquer Thinner	999	OD	Unknown	
OLW	Misc. Hydrocarbon	999	OD	Unknown	

V. FEEDSTOCKS (See Appendix for CAS numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., State files, sample analysis, reports)

Employee Interviews

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☐ A. GROUNDWATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: < 100
02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Groundwater contamination may have occurred by vertical migration of contaminants through the soils and sludge. (Depth of groundwater is 2 to 6 feet)

01 ☒ B. SURFACE WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: < 100
02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Reports indicate waste paint, solvents, pesticides, and herbicides were poured directly into San Francisco Bay. Contamination also may have occurred through horizontal migration of contaminated groundwater.

01 ☐ C. CONTAMINATION OF AIR
03 POPULATION POTENTIALLY AFFECTED: 0
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

No data exists showing any release of air contaminants nor is such contamination likely.

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS
03 POPULATION POTENTIALLY AFFECTED: 0
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

A fire marshall has not certified this area represents a significant threat.

01 ☐ E. DIRECT CONTACT
03 POPULATION POTENTIALLY AFFECTED: _____
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Contamination would be in soils, groundwater, and/or surface water. Direct contact has not been observed and is unlikely unless excavation occurs.

01 ☒ F. CONTAMINATION OF SOIL
03 AREA POTENTIALLY AFFECTED: 1 acre
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☒ ALLEGED
04 NARRATIVE DESCRIPTION

Reports indicate waste paint, solvents, pesticides, herbicides, and wastewater treatment sludge were placed on paved and open ground areas.

01 ☐ G. DRINKING WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: 0
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Since drinking water is supplied from off the island, drinking water is not impacted.

01 ☐ H. WORKER EXPOSURE/INJURY
03 WORKERS POTENTIALLY AFFECTED: _____
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☒ ALLEGED
04 NARRATIVE DESCRIPTION

No incidents have been reported in the past. Excavation of contaminated soils would expose workers to possible injury.

01 ☐ I. POPULATION EXPOSURE/INJURY
03 POPULATION POTENTIALLY AFFECTED: _____
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☒ ALLEGED
04 NARRATIVE DESCRIPTION

No incidents have been reported in the past. Exposure to contaminated soils could occur during excavation but would be very unlikely and would affect only the workers involved in the excavation.

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POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 [X] J. DAMAGE TO FLORA — 02 [ ] OBSERVED (DATE: 10/7/87) — [XX] POTENTIAL — [ ] ALLEGED
04 NARRATIVE DESCRIPTION
Contaminated soils could potentially damage landscape or ruderal vegetation in localized area. Damage would be restricted to the vicinity of actual contamination. Disposal of excess fluids to S.F. Bay could have damaged limited algae population present on TI shoreline (rip-rap)

01 [X] K. DAMAGE TO FAUNA — 02 [ ] OBSERVED (DATE: 10/7/87) — [X] POTENTIAL — [ ] ALLEGED
04 NARRATIVE DESCRIPTION (Include name(s) of species)
Localized contamination of soils is not expected to have damaged fauna in the vicinity. No evidence of burrowing animals near facility. Potential damage to marine fauna (intertidal and benthic) along TI shoreline may have occurred as a result of disposing of excess fluids to S.F. Bay, or the horizontal migration of groundwater into the Bay.

01 [X] L. CONTAMINATION OF FOOD CHAIN — 02 [ ] OBSERVED (DATE:) — [X] POTENTIAL — [ ] ALLEGED
04 NARRATIVE DESCRIPTION
Materials placed in San Francisco Bay may have accumulated in marine life, such as benthic and intertidal fauna (polychetes, barnacles) and accumulated in the food chain by predators such as waterfowl and fish.

01 [ ] M. UNSTABLE CONTAINMENT OF WASTES (Spills/runoff/standing liquids/leaking drums) — 02 [ ] OBSERVED (DATE:) — [ ] POTENTIAL — [X] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: < 100 — 04 NARRATIVE DESCRIPTION
The extent of residual contamination in the soils is unknown. If soils are contaminated, the contaminants are susceptible to horizontal and vertical migration into the groundwater and to San Francisco Bay.

01 [ ] N. DAMAGE TO OFFSITE PROPERTY — 02 [ ] OBSERVED (DATE:) — [ ] POTENTIAL — [ ] ALLEGED
04 NARRATIVE DESCRIPTION
Extremely unlikely unless significant groundwater migration occurs.

01 [X] O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 [ ] OBSERVED (DATE:) — [ ] POTENTIAL — [X] ALLEGED
04 NARRATIVE DESCRIPTION
Materials disposed may have been conveyed into storm drain system.

01 [ ] P. ILLEGAL/UNAUTHORIZED DUMPING — 02 [X] OBSERVED (DATE:) — [ ] POTENTIAL — [ ] ALLEGED
04 NARRATIVE DESCRIPTION
Dumping of hazardous liquids onto the ground and directly into San Francisco Bay is known to have occurred.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS
None

III. TOTAL POPULATION POTENTIALLY AFFECTED: < 100

IV. COMMENTS
None

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)
Primarily employee interviews

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
☐ A. NPDES				

white out

☐ J. NONE

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE
☐ A. SURFACE IMPOUNDMENT		
☐ B. PILES		
☐ C. DRUMS, ABOVE GROUND		
☐ D. TANK, ABOVE GROUND		
☐ E. TANK, BELOW GROUND		
☐ F. LANDFILL		
☐ G. LANDFARM		
☐ H. OPEN DUMP		
☐ I. OTHER (Specify)		

04 TREATMENT (Check all that apply)

- ☐ A. INCINERATION
- ☐ B. UNDERGROUND INJECTION
- ☐ C. CHEMICAL/PHYSICAL
- ☐ D. BIOLOGICAL
- ☐ E. WASTE OIL PROCESSING
- ☐ F. SOLVENT RECOVERY
- ☐ G. OTHER RECYCLING/RECOVERY
- ☐ H. OTHER (Specify)

05 OTHER

☒ A. BUILDINGS ON SITE

06 AREA OF SITE

1 (Acres)

07 COMMENTS

None

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

☐ A. ADEQUATE, SECURE ☐ B. MODERATE XX ☒ C. INADEQUATE, POOR ☐ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC.

The extent of contamination remaining in the area and the potential for migration is unknown. For remaining contamination, if any, there is no means of containment.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE. XX ☒ YES ☐ NO

02 COMMENTS

The area is not fenced and is accessible. The extent to which waste exists and the potential for contact are unknown.

VI. SOURCES OF INFORMATION (Cite specific references e.g. state files, sample analysis, reports)

Personnel Interviews
Observations.

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as appropriate): Piped in from offsite

	SURFACE	WELL
COMMUNITY	A. ☐	B. ☐
NON-COMMUNITY	C. ☐	D. ☐

02 STATUS: Not used

ENDANGERED	AFFECTED	MONITORED
A. ☐	B. ☐	C. ☐
D. ☐	E. ☐	F. ☐

03 DISTANCE TO SITE
A. N/A (mi)
B. _____ (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)
☐ A. ONLY SOURCE FOR DRINKING ☐ B. DRINKING (Other source(s) available) COMMERCIAL, INDUSTRIAL, IRRIGATION (No other water source(s) available) ☐ C. COMMERCIAL, INDUSTRIAL, IRRIGATION (Limited other source(s) available) ☒ D. NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUND WATER: 0

03 DISTANCE TO NEAREST DRINKING WATER WELL: >3 (mi)

04 DEPTH TO GROUNDWATER	05 DIRECTION OF GROUNDWATER FLOW	06 DEPTH TO AQUIFER OF CONCERN	07 POTENTIAL YIELD OF AQUIFER	08 SOLE SOURCE AQUIFER
2 - 6 (ft)	Toward S.F. Bay.	N/A (ft)	N/A (gpd)	☐ YES ☐ NO

09 DESCRIPTION OF WELLS (Including usage, depth, and location relative to population and buildings)

NOTE: The site is on an island in San Francisco Bay. There are no water wells in use on the island. Water is piped to the island on the San Francisco-Oakland Bay Bridge.

10 RECHARGE AREA		11 DISCHARGE AREA	
☒ YES ☐ NO	COMMENTS: Infiltration is occurring but recharging an unusable aquifer.	☒ YES ☐ NO	COMMENTS: Groundwater eventually flows to San Francisco Bay.

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)
☐ A. RESERVOIR, RECREATION DRINKING WATER SOURCE ☐ B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES ☒ C. COMMERCIAL, INDUSTRIAL ☐ D. NOT CURRENTLY USED

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME:	AFFECTED	DISTANCE TO SITE
San Francisco Bay	☐	< 0.5 (mi)
	☐	(mi)
	☐	(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE
A. 3000 NO OF PERSONS	B. 3000 NO OF PERSONS	C. >10,000 NO OF PERSONS

02 DISTANCE TO NEAREST POPULATION: < 0.1 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE: 200

04 DISTANCE TO NEAREST OFF-SITE BUILDING: < 0.1 (mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., rural, village, densely populated urban area)

NAVSTA TI contains residences for approximately 2500-3000 service personnel. The island is surrounded by San Francisco Bay. Across the Bay there are large cities including San Francisco and Oakland.

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☐ A. $10^{-6} - 10^{-8}$ cm/sec ☐ B. $10^{-4} - 10^{-6}$ cm/sec ☒ C. $10^{-4} - 10^{-3}$ cm/sec ☒ D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☐ A. IMPERMEABLE (Less than 10^{-6} cm/sec) ☒ B. RELATIVELY IMPERMEABLE ($10^{-4} - 10^{-6}$ cm/sec) ☐ C. RELATIVELY PERMEABLE ($10^{-2} - 10^{-4}$ cm/sec) ☐ D. VERY PERMEABLE (Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK	04 DEPTH OF CONTAMINATED SOIL ZONE	05 SOIL pH	
300 (ft)	Unknown (ft)	Unknown	

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
-10 to -15 (in)	3.0 (in)	0-2 %	West	1 %

09 FLOOD POTENTIAL

SITE IS IN N/A YEAR FLOODPLAIN

10 ☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE: A. > 2 (mi) OTHER: B. _____ (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)

> 2 (mi)

ENDANGERED SPECIES: _____

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL	RESIDENTIAL AREAS; NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS: PRIME AG LAND	AGRICULTURAL LANDS: AG LAND
A. 0.1 (mi)	B. > 2 (mi)	C. > 3 (mi)	D. > 3 (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

The site is located on Treasure Island, a man-made island on San Francisco Bay. Treasure Island is essentially flat with very little relief. Slopes in the vicinity of the site vary from 0 to 2%

VII. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Personal inteviews.
Observations
Harding Lawson Associates Report (1985).

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 6 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
CA	717023330

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER			
SURFACE WATER			
WASTE			
AIR			
RUNOFF			
SPILL			
SOIL			
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
None	None

IV. PHOTOGRAPHS AND MAPS

01 TYPE [X] GROUND [X] AERIAL

02 IN CUSTODY OF Naval Energy and Environmental Support Activity (NEESA). (Name of organization or individual)

03 MAPS [X] YES [ ] NO

04 LOCATION OF MAPS NEESA

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

None

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Personnel Interviews.

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
CA	7170023330

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER
United States Navy	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
NAVSTA Treasure Island	
05 CITY	06 STATE / 07 ZIP CODE
San Francisco	CA / 94130

PARENT COMPANY (if applicable)

08 NAME	09 D+B NUMBER
10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE
12 CITY	13 STATE / 14 ZIP CODE

II. CURRENT OWNER(S) (continued)

01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE

PARENT COMPANY (if applicable) (continued)

08 NAME	09 D+B NUMBER
10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE
12 CITY	13 STATE / 14 ZIP CODE

II. CURRENT OWNER(S) (continued)

01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE

PARENT COMPANY (if applicable) (continued)

08 NAME	09 D+B NUMBER
10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE
12 CITY	13 STATE / 14 ZIP CODE

III. PREVIOUS OWNER(S) (List most recent first)

01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE

IV. REALTY OWNER(S) (if applicable, list most recent first)

01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE

III. PREVIOUS OWNER(S) (continued)

01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE

IV. REALTY OWNER(S) (if applicable, list most recent first) (continued)

01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE

III. PREVIOUS OWNER(S) (continued)

01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE

IV. REALTY OWNER(S) (if applicable, list most recent first) (continued)

01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. CURRENT OPERATOR (Provide if different from owner)

01 NAME	02 D+B NUMBER
United States Navy	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
NAVSTA Treasure Island	

05 CITY	06 STATE	07 ZIP CODE
San Francisco	CA	94130

08 YEARS OF OPERATION	09 NAME OF OWNER
45	U.S. Navy

OPERATOR'S PARENT COMPANY (If applicable)

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

III. PREVIOUS OPERATOR(S) (List most recent first; provide only if different from owner)

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

IV. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

EPA FORM 2070-13 (7-81)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
CA	7170023330

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER
U.S. Navy	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
NAVSTA Treasure Island	

05 CITY	06 STATE	07 ZIP CODE
San Francisco	CA	94130

III. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE

IV. TRANSPORTER(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
U.S. Navy			
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
NAVSTA Treasure Island			
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE
San Francisco	CA / 94130		
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II PAST RESPONSE ACTIVITIES (Continued)

01 ☐ R. BARRIER WALLS CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ S. CAPPING/COVERING — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ T. BULK TANKAGE REPAIRED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ U. GROUT CURTAIN CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ V. BOTTOM SEALED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ W. GAS CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ X. FIRE CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Y. LEACHATE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Z. AREA EVACUATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 1. ACCESS TO SITE RESTRICTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 2. POPULATION RELOCATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 3. OTHER REMEDIAL ACTIVITIES — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

III. SOURCES OF INFORMATION (Cite specific references, e.g., State files, sample analysis, reports)

Employee Interviews; Observations.

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 11 - ENFORCEMENT INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
CA	7170023330

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY ENFORCEMENT ACTION ☐ YES ☒ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY ENFORCEMENT ACTION

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Personnel Interview.

EPA

POTENTIAL HAZARDOUS WASTE SITE
FINAL STRATEGY DETERMINATION

REGION	SITE NUMBER
IX	7170023330

File this form in the regional Hazardous Waste Log File and submit a copy to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Task Force (EN-335); 401 M St., SW; Washington, DC 20460.

I. SITE IDENTIFICATION

A. SITE NAME	B. STREET	
Building 62	Naval Station (NAVSTA) Treasure Island	
C. CITY	**D. STATE**	**E. ZIP CODE**
San Francisco	CA	94130

II. FINAL DETERMINATION

Indicate the recommended action(s) and agency(ies) that should be involved by marking 'X' in the appropriate boxes.

RECOMMENDATION	MARK 'X'	ACTION AGENCY			
		EPA	STATE	LOCAL	PRIVATE
A. NO ACTION NEEDED					
B. REMEDIAL ACTION NEEDED, BUT NO RESOURCES AVAILABLE (If yes, complete Section III.)					
C. REMEDIAL ACTION (If yes, complete Section IV.)					
D. ENFORCEMENT ACTION (If yes, specify in Part E whether the case will be primarily managed by the EPA or the State and what type of enforcement action is anticipated.)					

E. RATIONALE FOR FINAL STRATEGY DETERMINATION

The site will continue to be evaluated and additional sampling will be performed. These results will be used to determine remedial actions. See report entitled Preliminary Assessment/Site Investigation of Naval Station, Treasure Island, CA.

F. IF A CASE DEVELOPMENT PLAN HAS BEEN PREPARED, SPECIFY THE DATE PREPARED (mo., day, & yr.)	G. IF AN ENFORCEMENT CASE HAS BEEN FILED, SPECIFY THE DATE FILED (mo., day, & yr.)

H. PREPARER INFORMATION

1. NAME	2. TELEPHONE NUMBER	3. DATE (mo., day, & yr.)

III. REMEDIAL ACTIONS TO BE TAKEN WHEN RESOURCES BECOME AVAILABLE

List all remedial actions, such as excavation, removal, etc. to be taken as soon as resources become available. See instructions for a list of Key Words for each of the actions to be used in the spaces below. Provide an estimate of the approximate cost of the remedy.

A. REMEDIAL ACTION	B. ESTIMATED COST	C. REMARKS
	$	
	$	
	$	
	$	
	$	
	$	
	$	
	$	
D. TOTAL ESTIMATED COST	$	

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Continued From Front

IV. REMEDIAL ACTIONS

A. SHORT TERM/EMERGENCY ACTIONS *(On Site and Off-Site)*: List all emergency actions taken or planned to bring the site under immediate control, e.g., restrict access, provide alternate water supply, etc. See instructions for a list of Key Words for each of the actions to be used in the spaces below.

1. ACTION	2. ACTION START DATE (mo.,day.,& yr)	3. ACTION END DATE (mo.,day.,& yr)	4. ACTION AGENCY (EPA, State, Private Party)	5. COST	6. SPECIFY 311 OR OTHER ACTION. INDICATE THE MAGNITUDE OF THE WORK REQUIRED.
				$	
				$	
				$	
				$	
				$	
				$	

B. LONG TERM STRATEGY *(On Site and Off-Site)*: List all long term solutions, e.g., excavation, removal, ground water monitoring wells, etc. See instructions for a list of Key Words for each of the actions to be used in the spaces below.

1. ACTION	2. ACTION START DATE (mo.,day.,& yr)	3. ACTION END DATE (mo.,day.,& yr)	4. ACTION AGENCY (EPA, State Private Party)	5. COST	6. SPECIFY 311 OR OTHER ACTION: INDICATE THE MAGNITUDE OF THE WORK REQUIRED.
				$	
				$	
				$	
				$	
				$	
				$	

C. MANHOURS AND COST BY ACTION AGENCY

1. ACTION AGENCY	2. TOTAL MAN-HOURS FOR REMEDIAL ACTIVITIES	3. TOTAL COST FOR REMEDIAL ACTIVITIES
a. EPA		$
b. STATE		$
c. PRIVATE PARTIES		$
d. OTHER *(specify)*:		$

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

EPA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER				
Site 9 - Building 41	NAVSTA Treasure Island				
03 CITY	**04 STATE**	**05 ZIP CODE**	**06 COUNTY**	**07 COUNTY CODE**	**08 CONG DIST**
San Francisco	CA	94130	San Francisco	075	05

09 COORDINATES LATITUDE 37° 49 00 ON | LONGITUDE 122° 22 00 OW

10 TYPE OF OWNERSHIP (Check one)
☐ A. PRIVATE ☒ B. FEDERAL NAVY ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL
☐ F. OTHER _____ ☐ G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION	02 SITE STATUS	03 YEARS OF OPERATION
10 / 5 / 87 (MONTH DAY YEAR)	☒ ACTIVE ☐ INACTIVE	BEGINNING YEAR 1987 ENDING YEAR ☒ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)
☐ A. EPA ☐ B. EPA CONTRACTOR _____ (Name of firm) ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR _____ (Name of firm)
☐ E. STATE ☐ F. STATE CONTRACTOR _____ (Name of firm) ☒ G. OTHER Dames & Moore (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
Ann M. Becker -	Team Leader, Engineer	Dames & Moore	(415) 896-5858
09 OTHER INSPECTORS	**10 TITLE**	**11 ORGANIZATION**	**12 TELEPHONE NO.**
James G. Ritchie	Geologist	Dames & Moore	(415) 896-5858
Dale D. Shileikis	Biologist	Dames & Moore	(415) 896-5858
Carol L. Creasey	Hydrogeologist	Dames & Moore	(415) 896-5858
William H. Welsh	Engineer	Dames & Moore	(805) 685-4415
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
Not Applicable			( )
			( )
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
☒ PERMISSION ☐ WARRANT	1400	Clear, Mild

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO
Steve Hughes	NAVSTA Treasure Island	(415) 765-6114

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
Ann M. Becker	Contractor	Dames & Moore	(415)896-5858	11 / 25 / 87 (MONTH DAY YEAR)

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POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- [X] A. SOLID
- [ ] B. POWDER, FINES
- [ ] C. SLUDGE
- [ ] D. OTHER (Specify)
- [ ] E. SLURRY
- [ ] F. LIQUID
- [ ] G. GAS

02 WASTE QUANTITY AT SITE (Measures of waste quantities must be independent)

TONS: Unknown

CUBIC YARDS:

NO. OF DRUMS:

03 WASTE CHARACTERISTICS (Check all that apply)

- [X] A. TOXIC
- [ ] B. CORROSIVE
- [ ] C. RADIOACTIVE
- [X] D. PERSISTENT
- [X] E. SOLUBLE
- [ ] F. INFECTIOUS
- [X] G. FLAMMABLE
- [ ] H. IGNITABLE
- [ ] I. HIGHLY VOLATILE
- [ ] J. EXPLOSIVE
- [ ] K. REACTIVE
- [ ] L. INCOMPATIBLE
- [ ] M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			
SOL	SOLVENTS			
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS			Forge/Foundry activities

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
SOL	Paint Waste	999	OD	Unknown	
SOL	Paint Thinner	999	OD	Unknown	
SOL	Laquer Thinner	999	OD	Unknown	
SOL	Emission abatement effluent	999	OD	Unknown	

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Employee Interviews

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POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☐ A. GROUNDWATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: Unknown
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☒ ALLEGED
04 NARRATIVE DESCRIPTION

Groundwater contamination may have occurred on the site. The site is currently paved, so surface water and contaminant infiltration into the groundwater would be minimal. Contaminants may have reached the groundwater by infiltration of surface water through contaminated soils prior to paving.

01 ☒ B. SURFACE WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: < 100
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Waste paint, solvents, thinners, etc., may have been discharged to the Bay, either directly or via stormwater runoff. Spillage of these materials into the Bay also may have occurred.

01 ☐ C. CONTAMINATION OF AIR
03 POPULATION POTENTIALLY AFFECTED: 0
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

No data exists which documents any air contamination nor is it considered likely.

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS
03 POPULATION POTENTIALLY AFFECTED: 0
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

A fire marshall has not certified that this area represents a significant risk.

01 ☐ E. DIRECT CONTACT
03 POPULATION POTENTIALLY AFFECTED: 0
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Direct contact with potential contamination is extremely unlikely since contaminants would be in the soils and groundwater beneath the paved area.

01 ☒ F. CONTAMINATION OF SOIL
03 AREA POTENTIALLY AFFECTED: _____ (Acres)
02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Some wastes were reported to have been placed in areas outside the building, which is expected to have been covered with asphalt or concrete.

01 ☐ G. DRINKING WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: 0
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

No potential for drinking water contamination. Groundwater on the island is unusable as drinking water. Water is supplied off the island.

01 ☐ H. WORKER EXPOSURE/INJURY
03 WORKERS POTENTIALLY AFFECTED: < 100
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☒ ALLEGED
04 NARRATIVE DESCRIPTION

Worker injury could potentially occur if contaminated soils are excavated.

01 ☐ I. POPULATION EXPOSURE/INJURY
03 POPULATION POTENTIALLY AFFECTED: < 100
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☒ ALLEGED
04 NARRATIVE DESCRIPTION

Population potentially injured by exposure would be workers excavating contaminated soils.

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 170023330

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☐ J. DAMAGE TO FLORA — 02 ☒ OBSERVED (DATE: 10-9-87) — ☒ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION: Contamination of soils could potentially damage landscape and ruderal vegetation. Damage restricted primarily to vicinity of actual contamination. Disposal of excess materials to San Francisco Bay could have damaged algal community on Treasure Island shoreline (rip-rap).

01 ☒ K. DAMAGE TO FAUNA — 02 ☒ OBSERVED (DATE: 10-9-87) — ☒ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION (Include names of species): Localized contamination of soil is not expected to have damaged fauna in the vicinity. No evidence of burrowing animals near facility. Potential damage to marine fauna (intertidal and benthic) along T.I. shoreline may have occurred as a result of disposal of excess.

01 ☒ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE:) — ☒ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION: Wastes discharged to the Bay may have accumulated in marine life, such as benthic and intertidal fauna and entered food chain via predators such as waterfowl and fish.

01 ☒ M. UNSTABLE CONTAINMENT OF WASTES (Spills, runoff, standing liquids, leaking drums) — 02 ☐ OBSERVED (DATE:) — ☒ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: — 04 NARRATIVE DESCRIPTION: Waste residues which remain, if any, may migrate into the subsurface or be conveyed to the Bay with stormwater runoff.

01 ☐ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE:) — ☐ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION:
Very unlikely unless significant subsurface migration of groundwater has occurred.

01 ☒ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE:) — ☒ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION: Waste materials may have entered the stormwater system.

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE:) — ☐ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION:
Dumping of hazardous materials into San Francisco Bay may have occurred according to TI personnel.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

None

III. TOTAL POPULATION POTENTIALLY AFFECTED: < 100

IV. COMMENTS

None

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Primarily employee interviews

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
☐ A. NPDES				
☐ B. UIC				
☐ C. AIR				
☐ D. RCRA				
☐ E. RCRA INTERIM STATUS				
☐ F. SPCC PLAN				
☐ G. STATE (Specify)				
☐ H. LOCAL (Specify)				
☐ I. OTHER (Specify)				
☒ J. NONE				

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE
☐ A. SURFACE IMPOUNDMENT		
☐ B. PILES		
☐ C. DRUMS, ABOVE GROUND		
☐ D. TANK, ABOVE GROUND		
☐ E. TANK, BELOW GROUND		
☐ F. LANDFILL		
☐ G. LANDFARM		
☒ H. OPEN DUMP		
☐ I. OTHER (Specify)		

04 TREATMENT (Check all that apply)
- ☐ A. INCENERATION
- ☐ B. UNDERGROUND INJECTION
- ☐ C. CHEMICAL/PHYSICAL
- ☐ D. BIOLOGICAL
- ☐ E. WASTE OIL PROCESSING
- ☐ F. SOLVENT RECOVERY
- ☐ G. OTHER RECYCLING/RECOVERY
- ☐ H. OTHER (Specify)

05 OTHER
- ☐ A. BUILDINGS ON SITE

06 AREA OF SITE
1 (Acres)

07 COMMENTS

None

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

☐ A. ADEQUATE, SECURE ☐ B. MODERATE ☒ C. INADEQUATE, POOR ☐ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC.

Waste residues, if present, are uncontained and may migrate further

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE ☒ YES ☐ NO

02 COMMENTS Waste residues, if present, are not secured by a fence or other means to deter access to the potentially contaminated area.

VI. SOURCES OF INFORMATION (Cite specific references e.g. state files, sample analysis, reports)

Personnel Interviews
Observations

EPA FORM 2070-13 (7-81)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as appropriate): Piped in from offsite.

	SURFACE	WELL
COMMUNITY	A. ☐	B. ☐
NON-COMMUNITY	C. ☐	D. ☐

02 STATUS: Not used

ENDANGERED	AFFECTED	MONITORED
A. ☐	B. ☐	C. ☐
D. ☐	E. ☐	F. ☐

03 DISTANCE TO SITE: N/A
A. _____ (mi)
B. _____ (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)
☐ A. ONLY SOURCE FOR DRINKING ☐ B. DRINKING (Other sources available) COMMERCIAL, INDUSTRIAL, IRRIGATION (No other water sources available) ☐ C. COMMERCIAL, INDUSTRIAL, IRRIGATION (Limited other sources available) XX D. NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUND WATER: 0
03 DISTANCE TO NEAREST DRINKING WATER WELL: > 3 (mi)

04 DEPTH TO GROUNDWATER	05 DIRECTION OF GROUNDWATER FLOW	06 DEPTH TO AQUIFER OF CONCERN	07 POTENTIAL YIELD OF AQUIFER	08 SOLE SOURCE AQUIFER
2 - 6 (ft)	Toward S.F. Bay.	N/A (ft)	N/A (gpd)	☐ YES ☐ NO

09 DESCRIPTION OF WELLS (Including useage, depth, and location relative to population and buildings)

NOTE: The site is on an island in San Francisco Bay. There are no water wells in use on the island. Water is piped to the island on the San Francisco-Oakland Bay Bridge.

10 RECHARGE AREA		11 DISCHARGE AREA	
☒ YES ☐ NO	COMMENTS: Infiltration is occurring but not recharging a usable aquifer.	☒ YES ☐ NO	COMMENTS: Groundwater eventually flows to San Francisco Bay.

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)
☐ A. RESERVOIR, RECREATION DRINKING WATER SOURCE ☐ B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES XX C. COMMERCIAL, INDUSTRIAL ☐ D. NOT CURRENTLY USED

02 AFFECTED, POTENTIALLY AFFECTED BODIES OF WATER

NAME:	AFFECTED	DISTANCE TO SITE
San Francisco Bay	☐	< 0.5 (mi)
	☐	(mi)
	☐	(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN
A. ONE (1) MILE OF SITE: 3000 (NO OF PERSONS)
B. TWO (2) MILES OF SITE: 3000 (NO OF PERSONS)
C. THREE (3) MILES OF SITE: >10,000 (NO OF PERSONS)

02 DISTANCE TO NEAREST POPULATION: < 0.1 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE: 200

04 DISTANCE TO NEAREST OFF-SITE BUILDING: < 0.1 (mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., rural, village, densely populated urban area)

NAVSTA TI contains residences for approximately 2500-3000 service personnel. The island is surrounded by San Francisco Bay. Across the Bay there are large cities including San Francisco and Oakland.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
CA	7170023330

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☐ A. $10^{-6} - 10^{-8}$ cm/sec ☐ B. $10^{-4} - 10^{-6}$ cm/sec ☒ C. $10^{-4} - 10^{-3}$ cm/sec ☐ D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☐ A. IMPERMEABLE (Less than 10^{-6} cm/sec) ☒ B. RELATIVELY IMPERMEABLE ($10^{-4} - 10^{-6}$ cm/sec) ☐ C. RELATIVELY PERMEABLE ($10^{-2} - 10^{-4}$ cm/sec) ☐ D. VERY PERMEABLE (Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK	04 DEPTH OF CONTAMINATED SOIL ZONE	05 SOIL pH	
300 (ft)	Unknown (ft)	Unknown	

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
-10 to - 15 (in)	3.0 (in)	0-2 %	West	1 %

09 FLOOD POTENTIAL

SITE IS IN N/A YEAR FLOODPLAIN

10 ☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE	OTHER
A. > 2 (mi)	B. _____ (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)

> 2 (mi)

ENDANGERED SPECIES: _____

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL	RESIDENTIAL AREAS; NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS PRIME AG LAND	AG LAND
A. 0.1 (mi)	B. > 2 (mi)	C. > 3 (mi)	D. > 3 (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

The site is located on Treasure Island, a man-made island on San Francisco Bay. Treasure Island is essentially flat with very little relief. Slopes in the vicinity of the site vary from 0 to 2%

VII. SOURCES OF INFORMATION (Cite specific references e.g. state files, sample analysis, reports)

Personal inteviews.
Observations
Harding Lawson Associates Report (1985).

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 6 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER			
SURFACE WATER			
WASTE			
AIR			
RUNOFF			
SPILL			
SOIL			
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
None	None

IV. PHOTOGRAPHS AND MAPS

01 TYPE ☒ GROUND ☒ AERIAL

02 IN CUSTODY OF Naval Energy and Environmental Support Activity (NEESA). (Name of organization or individual)

03 MAPS ☒ YES ☐ NO

04 LOCATION OF MAPS NEESA

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

None

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis reports)

Personnel Interviews.

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER
United States Navy	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
NAVSTA Treasure Island	

05 CITY	06 STATE	07 ZIP CODE
San Francisco	CA	94130

PARENT COMPANY (if applicable)

08 NAME	09 D+B NUMBER

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

12 CITY	13 STATE	14 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 NAME	09 D+B NUMBER

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

12 CITY	13 STATE	14 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 NAME	09 D+B NUMBER

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

12 CITY	13 STATE	14 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 NAME	09 D+B NUMBER

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

12 CITY	13 STATE	14 ZIP CODE

III. PREVIOUS OWNER(S) (List most recent first)

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

IV. REALTY OWNER(S) (If applicable, list most recent first)

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sampling results, reports)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

II. CURRENT OPERATOR (Provide if different from owner)

01 NAME	02 D+B NUMBER
United States Navy	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	**04 SIC CODE**
NAVSTA Treasure Island	
05 CITY	**06 STATE** / **07 ZIP CODE**
San Francisco	CA / 94130
08 YEARS OF OPERATION	**09 NAME OF OWNER**
45	U.S. Navy

OPERATOR'S PARENT COMPANY (If applicable)

10 NAME	11 D+B NUMBER
12 STREET ADDRESS (P.O. Box, RFD #, etc.)	**13 SIC CODE**
14 CITY	**15 STATE** / **16 ZIP CODE**

III. PREVIOUS OPERATOR(S) (List most recent first; provide only if different from owner)

01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	**04 SIC CODE**
05 CITY	**06 STATE** / **07 ZIP CODE**
08 YEARS OF OPERATION	**09 NAME OF OWNER DURING THIS PERIOD**

PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)

10 NAME	11 D+B NUMBER
12 STREET ADDRESS (P.O. Box, RFD #, etc.)	**13 SIC CODE**
14 CITY	**15 STATE** / **16 ZIP CODE**

01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	**04 SIC CODE**
05 CITY	**06 STATE** / **07 ZIP CODE**
08 YEARS OF OPERATION	**09 NAME OF OWNER DURING THIS PERIOD**

10 NAME	11 D+B NUMBER
12 STREET ADDRESS (P.O. Box, RFD #, etc.)	**13 SIC CODE**
14 CITY	**15 STATE** / **16 ZIP CODE**

01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	**04 SIC CODE**
05 CITY	**06 STATE** / **07 ZIP CODE**
08 YEARS OF OPERATION	**09 NAME OF OWNER DURING THIS PERIOD**

10 NAME	11 D+B NUMBER
12 STREET ADDRESS (P.O. Box, RFD #, etc.)	**13 SIC CODE**
14 CITY	**15 STATE** / **16 ZIP CODE**

IV. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
CA	7170023330

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER
U.S. Navy	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
NAVSTA Treasure Island	

05 CITY	06 STATE	07 ZIP CODE
San Francisco	CA	94130

III. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

IV. TRANSPORTER(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
U.S. Navy			

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
NAVSTA Treasure Island			

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE
San Francisco	CA	94130			

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II PAST RESPONSE ACTIVITIES (Continued)

01 ☐ R. BARRIER WALLS CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ S. CAPPING/COVERING — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ T. BULK TANKAGE REPAIRED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ U. GROUT CURTAIN CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ V. BOTTOM SEALED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ W. GAS CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ X. FIRE CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Y. LEACHATE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Z. AREA EVACUATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 1. ACCESS TO SITE RESTRICTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 2. POPULATION RELOCATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 3. OTHER REMEDIAL ACTIVITIES — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Employee Interviews; Observations.

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 11 - ENFORCEMENT INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
CA	7170023330

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY ENFORCEMENT ACTION ☐ YES ☒ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY ENFORCEMENT ACTION

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis reports)

Personnel Interview.

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POTENTIAL HAZARDOUS WASTE SITE
FINAL STRATEGY DETERMINATION

REGION	SITE NUMBER
IX	7170023330

File this form in the regional Hazardous Waste Log File and submit a copy to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Task Force (*E.N-335*); 401 M St., SW; Washington, DC 20460.

I. SITE IDENTIFICATION

A. SITE NAME	B. STREET	
Building 41	Naval Station (NAVSTA) Treasure Island	
C. CITY	**D. STATE**	**E. ZIP CODE**
San Francisco	CA	94130

II. FINAL DETERMINATION

Indicate the recommended action(s) and agency(ies) that should be involved by marking 'X' in the appropriate boxes.

RECOMMENDATION	MARK 'X'	ACTION AGENCY			
		EPA	STATE	LOCAL	PRIVATE
A. NO ACTION NEEDED					
B. REMEDIAL ACTION NEEDED, BUT NO RESOURCES AVAILABLE *(If yes, complete Section III.)*					
C. REMEDIAL ACTION *(If yes, complete Section IV.)*					
D. ENFORCEMENT ACTION *(If yes, specify in Part E whether the case will be primarily managed by the EPA or the State and what type of enforcement action is anticipated.)*					

E. RATIONALE FOR FINAL STRATEGY DETERMINATION

The site will continue to be evaluated and additional sampling will be performed. These results will be used to determine remedial actions. See report entitled Preliminary Assessment/Site Investigation of Naval Station, Treasure Island, CA.

F. IF A CASE DEVELOPMENT PLAN HAS BEEN PREPARED, SPECIFY THE DATE PREPARED *(mo., day, & yr.)*	G. IF AN ENFORCEMENT CASE HAS BEEN FILED, SPECIFY THE DATE FILED *(mo., day, & yr.)*

H. PREPARER INFORMATION

1. NAME	2. TELEPHONE NUMBER	3. DATE *(mo., day, & yr.)*

III. REMEDIAL ACTIONS TO BE TAKEN WHEN RESOURCES BECOME AVAILABLE

List all remedial actions, such as excavation, removal, etc. to be taken as soon as resources become available. See instructions for a list of Key Words for each of the actions to be used in the spaces below. Provide an estimate of the approximate cost of the remedy.

A. REMEDIAL ACTION	B. ESTIMATED COST	C. REMARKS
	$	
	$	
	$	
	$	
	$	
	$	
	$	
	$	
D. TOTAL ESTIMATED COST	$	

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Continued From Front

IV. REMEDIAL ACTIONS

A. SHORT TERM/EMERGENCY ACTIONS *(On Site and Off-Site)*: List all emergency actions taken or planned to bring the site under immediate control, e.g., restrict access, provide alternate water supply, etc. See instructions for a list of Key Words for each of the actions to be used in the spaces below.

1. ACTION	2. ACTION START DATE (mo.,day.,& yr.)	3. ACTION END DATE (mo.,day.,& yr.)	4. ACTION AGENCY (EPA, State, Private Party)	5. COST	6. SPECIFY 311 OR OTHER ACTION. INDICATE THE MAGNITUDE OF THE WORK REQUIRED.
				$	
				$	
				$	
				$	
				$	
				$	

B. LONG TERM STRATEGY *(On Site and Off-Site)*: List all long term solutions, e.g., excavation, removal, ground water monitoring wells, etc. See instructions for a list of Key Words for each of the actions to be used in the spaces below.

1. ACTION	2. ACTION START DATE (mo.,day.,& yr.)	3. ACTION END DATE (mo.,day.,& yr.)	4. ACTION AGENCY (EPA, State Private Party)	5. COST	6. SPECIFY 311 OR OTHER ACTION: INDICATE THE MAGNITUDE OF THE WORK REQUIRED.
				$	
				$	
				$	
				$	
				$	
				$	

C. MANHOURS AND COST BY ACTION AGENCY

1. ACTION AGENCY	2. TOTAL MAN-HOURS FOR REMEDIAL ACTIVITIES	3. TOTAL COST FOR REMEDIAL ACTIVITIES
a. EPA		$
b. STATE		$
c. PRIVATE PARTIES		$
d. OTHER *(specify)*:		$

REPRODUCED AT GOVERNMENT EXPENSE

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

EPA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER				
Site 10 - Building 335-Bus Painting Shop	NAVSTA Treasure Island				
03 CITY	**04 STATE**	**05 ZIP CODE**	**06 COUNTY**	**07 COUNTY CODE**	**08 CONG DIST**
San Francisco	CA	94130	San Francisco	075	05

09 COORDINATES LATITUDE 37° 49 00 ON LONGITUDE 122° 22 00 OW

10 TYPE OF OWNERSHIP (Check one)
☐ A. PRIVATE ☒ B. FEDERAL NAVY ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL
☐ F. OTHER _____ ☐ G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION	02 SITE STATUS	03 YEARS OF OPERATION
10, 6, 87 (MONTH DAY YEAR)	☒ ACTIVE ☐ INACTIVE	1987 (BEGINNING YEAR) ENDING YEAR — X UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)
☐ A. EPA ☐ B. EPA CONTRACTOR _____ (Name of firm) ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR _____ (Name of firm)
☐ E. STATE ☐ F. STATE CONTRACTOR _____ (Name of firm) ☒ G. OTHER Dames & Moore (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
Ann M. Becker	Team Leader, Engineer	Dames & Moore	(415) 896-5858
09 OTHER INSPECTORS	**10 TITLE**	**11 ORGANIZATION**	**12 TELEPHONE NO.**
James G. Ritchie	Geologist	Dames & Moore	(415) 896-5858
Dale D. Shileikis	Biologist	Dames & Moore	(415) 896-5858
Carol L. Creasey	Hydrogeologist	Dames & Moore	(415) 896-5858
William H. Welsh	Engineer	Dames & Moore	(805) 685-4415
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
Not Applicable			( )
			( )
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
☒ PERMISSION ☐ WARRANT	1000	Hazy, Mild.

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO
Steve Hughes	NAVSTA Treasure Island	415, 765-6114

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
Ann M. Becker	Contractor	Dames & Moore	(415)896-5858	11, 25, 87 (MONTH DAY YEAR)

EPA FORM 2070-13 (7-81)

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POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- ☐ A. SOLID
- ☐ B. POWDER, FINES
- ☐ C. SLUDGE
- ☐ D. OTHER (Specify)
- ☐ E. SLURRY
- XX F. LIQUID
- ☐ G. GAS

02 WASTE QUANTITY AT SITE

(Measures of waste quantities must be independent)

TONS: Unknown

CUBIC YARDS:

NO. OF DRUMS:

03 WASTE CHARACTERISTICS (Check all that apply)

- XX ☐ A. TOXIC
- ☐ B. CORROSIVE
- ☐ C. RADIOACTIVE
- XX ☐ D. PERSISTENT
- ☐ E. SOLUBLE
- ☐ F. INFECTIOUS
- XX ☐ G. FLAMMABLE
- ☐ H. IGNITABLE
- ☐ I. HIGHLY VOLATILE
- ☐ J. EXPLOSIVE
- ☐ K. REACTIVE
- ☐ L. INCOMPATIBLE
- ☐ M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			
SOL	SOLVENTS			
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS			

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently used CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
SOL	Paint Waste	999	OD	Unknown	
SOL	Paint Thinner	999	OD	Unknown	
SOL	Lacquer Thinner	999	OD	Unknown	
SOL	Misc. Solvents	999	OD	Unknown	
PSD	Misc. Pesticides	999	OD	Unknown	
OLW	Misc. Hydrocarbons	999	OD	Unknown	

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Employee Interviews

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☐ A. GROUNDWATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: < 100
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Groundwater contamination may have occurred at this site by vertical migration of contaminants (paints, thinners, and solvents) through surface soils and into groundwater and/or the Bay. These contaminants were spread directly on ground surface. Depth to groundwater is 2 - 6 feet.

01 ☒ B. SURFACE WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: < 100
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☒ ALLEGED
04 NARRATIVE DESCRIPTION

Reports indicate waste paint, thinner, solvents and hydrocarbons were placed or washed into the Bay.

01 ☐ C. CONTAMINATION OF AIR
03 POPULATION POTENTIALLY AFFECTED: 0
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

No data exists showing any release of air contaminants. Air contamination is very unlikely.

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS
03 POPULATION POTENTIALLY AFFECTED: 0
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

A fire marshall has not certified that the facility presents a significant threat; therefore no fire or explosive conditions are considered to be present.

01 ☐ E. DIRECT CONTACT
03 POPULATION POTENTIALLY AFFECTED: < 100
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Direct contact with potential contaminants is extremely unlikely since contaminants would be in the soils and groundwater beneath the ground surface, which is currently covered by gravel.

01 ☒ F. CONTAMINATION OF SOIL
03 AREA POTENTIALLY AFFECTED: _____ (Acres)
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☒ ALLEGED
04 NARRATIVE DESCRIPTION

Reports indicate waste paint, thinner, solvents and hydrocarbons may have been placed on the covered or uncovered ground at the site.

01 ☐ G. DRINKING WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: 0
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

There is no potential for drinking water contamination because groundwater on the site is unusable as drinking water. Drinking water is supplied from off the island.

01 ☐ H. WORKER EXPOSURE/INJURY
03 WORKERS POTENTIALLY AFFECTED: < 100
02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Worker exposure injury could occur if contaminated soils are excavated.

01 ☐ I. POPULATION EXPOSURE/INJURY
03 POPULATION POTENTIALLY AFFECTED: < 100
02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Population potentially injured by exposure would be to workers excavating contaminated soils.

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POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☒ J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE: 10-8-87) — ☒ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION: Contaminated soils could potentially damage limited landscape or ruderal vegetation in localized area. Damage would be restricted to the vicinity of actual contamination. Disposal of excess fluids to San Francisco Bay could have potentially damaged marine flora (algae) or T.I. shoreline (rip-rap).

01 ☒ K. DAMAGE TO FAUNA — 02 ☒ OBSERVED (DATE: 10-8-87) — ☒ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION (Include number of species): Localized contamination of soil is not expected to have damaged fauna in vicinity. No evidence of burrowing animals near facility. Potential damage to marine fauna (intertidal and benthic) along Treasure Island shoreline may have occurred from disposal of fluids to shoreline of Treasure Island.

01 ☒ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE:) — ☒ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION: Materials discharged to the Bay may have accumulated in marine life (benthic and intertidal species) and entered food chain via predator by waterfowl and fish.

01 ☐ M. UNSTABLE CONTAINMENT OF WASTES (Spills, runoff, standing liquids, leaking drums) — 02 ☐ OBSERVED (DATE:) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: < 100 — 04 NARRATIVE DESCRIPTION
Waste materials which remain may have accumulated in soil and groundwater below the ground surface.

01 ☐ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE:) — ☐ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Extremely unlikely unless significant groundwater migration occurs.

01 ☒ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE:) — ☐ POTENTIAL — ☒ ALLEGED
04 NARRATIVE DESCRIPTION
Material is reported to have been washed into the storm drain system.

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE:) — ☐ POTENTIAL — ☒ ALLEGED
04 NARRATIVE DESCRIPTION
Dumping of hazardous liquids directly onto the ground surface and into the storm drain system is known to have occurred.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS
None

III. TOTAL POPULATION POTENTIALLY AFFECTED: < 100

IV. COMMENTS
None

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)
Employee Interviews; Observation

EPA FORM 2070-12 (7-81)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
☐ A. NPDES				
☐ B. UIC				
☐ C. AIR				
☐ D. RCRA				
☐ E. RCRA INTERIM STATUS				
☐ F. SPCC PLAN				
☐ G. STATE (Specify)				
☐ H. LOCAL (Specify)				
☐ I. OTHER (Specify)				
☒ J. NONE				

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE
☐ A. SURFACE IMPOUNDMENT		
☐ B. PILES		
☐ C. DRUMS, ABOVE GROUND		
☐ D. TANK, ABOVE GROUND		
☐ E. TANK, BELOW GROUND		
☐ F. LANDFILL		
☐ G. LANDFARM		
☒ H. OPEN DUMP		
☒ I. OTHER (Specify) Spills		

04 TREATMENT (Check all that apply)

- ☐ A. INCINERATION
- ☐ B. UNDERGROUND INJECTION
- ☐ C. CHEMICAL/PHYSICAL
- ☐ D. BIOLOGICAL
- ☐ E. WASTE OIL PROCESSING
- ☐ F. SOLVENT RECOVERY
- ☐ G. OTHER RECYCLING/RECOVERY
- ☐ H. OTHER (Specify)

05 OTHER

- ☐ A. BUILDINGS ON SITE

06 AREA OF SITE

1 (Acres)

07 COMMENTS

None

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

☐ A. ADEQUATE, SECURE ☐ B. MODERATE ☒ C. INADEQUATE, POOR ☐ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC.

Waste residues, if any, are not contained and may migrate to the Bay or deeper into the soil. Portions of the area are paved with asphalt.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE ☒ YES ☐ NO

02 COMMENTS

The site is not fenced or otherwise managed to deter access to areas where waste residues may be present.

VI. SOURCES OF INFORMATION (Cite specific references, e.g. state files, sample analysis, reports)

Personnel Interviews
Observation

EPA FORM 2070-13 (7-81)

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EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 717002330

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as applicable): Pipeline from off the usland

	SURFACE	WELL
COMMUNITY	A. ☐	B. ☐
NON-COMMUNITY	C. ☐	D. ☐

02 STATUS: Not used

ENDANGERED	AFFECTED	MONITORED
A. ☐	B. ☐	C. ☐
D. ☐	E. ☐	F. ☐

03 DISTANCE TO SITE: N/A
A. _____ (mi)
B. _____ (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)
☐ A. ONLY SOURCE FOR DRINKING ☐ B. DRINKING (Other sources available) COMMERCIAL, INDUSTRIAL, IRRIGATION (No other water sources available) ☐ C. COMMERCIAL, INDUSTRIAL, IRRIGATION (Limited other sources available) XX D. NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUND WATER: 0
03 DISTANCE TO NEAREST DRINKING WATER WELL: > 3 (mi)

04 DEPTH TO GROUNDWATER	05 DIRECTION OF GROUNDWATER FLOW	06 DEPTH TO AQUIFER OF CONCERN	07 POTENTIAL YIELD OF AQUIFER	08 SOLE SOURCE AQUIFER
2 - 6 (ft)	Toward S.F. Bay.	N/A (ft)	N/A (gpd)	☐ YES ☐ NO

09 DESCRIPTION OF WELLS (Including usage, depth, and location relative to population and buildings)

NOTE: The site is on an island in San Francisco Bay. There are no water wells in use on the island. Water is piped to the island on the San Francisco-Oakland Bay Bridge.

10 RECHARGE AREA		11 DISCHARGE AREA	
☒ YES ☐ NO	COMMENTS: Infiltration is occurring but recharging unusable aquifer.	☒ YES ☐ NO	COMMENTS: Discharge of groundwater eventually to San Francisco Bay.

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)
☐ A. RESERVOIR, RECREATION DRINKING WATER SOURCE ☐ B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES XX C. COMMERCIAL, INDUSTRIAL ☐ D. NOT CURRENTLY USED

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME:	AFFECTED	DISTANCE TO SITE
San Francisco Bay	☐	< 0.5 (mi)
	☐	(mi)
	☐	(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE
A. 3000 NO OF PERSONS	B. 3000 NO OF PERSONS	C. >10,000 NO OF PERSONS

02 DISTANCE TO NEAREST POPULATION: < 0.1 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE: 200

04 DISTANCE TO NEAREST OFF-SITE BUILDING: < 0.1 (mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., rural, village, densely populated urban area)

NAVSTA TI contains residences for approximately 2500-3000 service personnel. The island is surrounded by San Francisco Bay. Across the Bay there are large cities including San Francisco and Oakland.

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 STATE: CA | 02 SITE NUMBER: 7170023330

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☐ A. $10^{-6} - 10^{-9}$ cm/sec ☐ B. $10^{-4} - 10^{-6}$ cm/sec ☒ C. $10^{-4} - 10^{-3}$ cm/sec ☐ D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☐ A. IMPERMEABLE (Less than 10^{-6} cm/sec) ☒ B. RELATIVELY IMPERMEABLE ($10^{-4} - 10^{-6}$ cm/sec) ☐ C. RELATIVELY PERMEABLE ($10^{-2} - 10^{-4}$ cm/sec) ☐ D. VERY PERMEABLE (Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK	04 DEPTH OF CONTAMINATED SOIL ZONE	05 SOIL pH	
300 (ft)	Unknown (ft)	Unknown	

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
-15 to -10 (in)	3.0 (in)	0-2 %	West	1 %

09 FLOOD POTENTIAL

SITE IS IN N/A YEAR FLOODPLAIN

10 ☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE	OTHER
A. > 2 (mi)	B. _____ (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)

> 2 (mi)

ENDANGERED SPECIES: _____

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL	RESIDENTIAL AREAS; NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS: PRIME AG LAND	AGRICULTURAL LANDS: AG LAND
A. 0.1 (mi)	B. > 2 (mi)	C. > 3 (mi)	D. > 3 (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

The site is located on Treasure Island, a man-made island on San Francisco Bay. Treasure Island is essentially flat with very little relief. Slopes in the vicinity of the site vary from 0 to 2%

VII. SOURCES OF INFORMATION (Cite specific references e.g. state files, sample analysis, reports)

Personal inteviews.
Observations
Harding Lawson Associates Report (1985).

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REPRODUCED AT GOVERNMENT EXPENSE

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 6 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
CA	7170023330

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER			
SURFACE WATER			
WASTE			
AIR			
RUNOFF			
SPILL			
SOIL			
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS

IV. PHOTOGRAPHS AND MAPS

01 TYPE [X] GROUND [X] AERIAL

02 IN CUSTODY OF Naval Energy and Environmental Support Activity (NEESA). (Name of organization or individual)

03 MAPS [X] YES [ ] NO

04 LOCATION OF MAPS NEESA

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

VI. SOURCES OF INFORMATION (Cite specific references e.g., State files, sample analysis reports)

Personnel Interviews.

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER
United States Navy	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
NAVSTA Treasure Island	

05 CITY	06 STATE	07 ZIP CODE
San Francisco	CA	94130

PARENT COMPANY (if applicable)

08 NAME	09 D+B NUMBER

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

12 CITY	13 STATE	14 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 NAME	09 D+B NUMBER

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

12 CITY	13 STATE	14 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 NAME	09 D+B NUMBER

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

12 CITY	13 STATE	14 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 NAME	09 D+B NUMBER

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

12 CITY	13 STATE	14 ZIP CODE

III. PREVIOUS OWNER(S) (List most recent first)

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

IV. REALTY OWNER(S) (if applicable, list most recent first)

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sampling results, reports)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. CURRENT OPERATOR (Provide if different from owner)

01 NAME	02 D+B NUMBER
United States Navy	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
NAVSTA Treasure Island	

05 CITY	06 STATE	07 ZIP CODE
San Francisco	CA	94130

08 YEARS OF OPERATION	09 NAME OF OWNER
45	U.S. Navy

OPERATOR'S PARENT COMPANY (If applicable)

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

III. PREVIOUS OPERATOR(S) (List most recent first; provide only if different from owner)

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

IV. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
CA	7170023330

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER
U.S. Navy	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	**04 SIC CODE**
NAVSTA Treasure Island	
05 CITY	**06 STATE** / **07 ZIP CODE**
San Francisco	CA / 94130

III. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE

IV. TRANSPORTER(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
U.S. Navy			
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
NAVSTA Treasure Island			
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE
San Francisco	CA / 94130		
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II PAST RESPONSE ACTIVITIES (Continued)

01 ☐ R. BARRIER WALLS CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ S. CAPPING/COVERING — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ T. BULK TANKAGE REPAIRED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ U. GROUT CURTAIN CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ V. BOTTOM SEALED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ W. GAS CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ X. FIRE CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Y. LEACHATE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Z. AREA EVACUATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 1. ACCESS TO SITE RESTRICTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 2. POPULATION RELOCATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 3. OTHER REMEDIAL ACTIVITIES — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Employee Interviews; Observations.

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 11 - ENFORCEMENT INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
CA	7170023330

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY ENFORCEMENT ACTION ☐ YES ☒ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY/ENFORCEMENT ACTION

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis reports)

Personnel Interview.

EPA

POTENTIAL HAZARDOUS WASTE SITE
FINAL STRATEGY DETERMINATION

REGION	SITE NUMBER
IX	7170023330

File this form in the regional Hazardous Waste Log File and submit a copy to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Task Force (*E.N-335*); 401 M St., SW; Washington, DC 20460.

I. SITE IDENTIFICATION

A. SITE NAME	B. STREET	
Building 335 - Bus Painting Shop "site 10"	Naval Station (NAVSTA) Treasure Island	
C. CITY	**D. STATE**	**E. ZIP CODE**
San Francisco	CA	94130

II. FINAL DETERMINATION

Indicate the recommended action(s) and agency(ies) that should be involved by marking 'X' in the appropriate boxes.

RECOMMENDATION	MARK 'X'	ACTION AGENCY			
		EPA	STATE	LOCAL	PRIVATE
A. NO ACTION NEEDED					
B. REMEDIAL ACTION NEEDED, BUT NO RESOURCES AVAILABLE *(If yes, complete Section III.)*					
C. REMEDIAL ACTION *(If yes, complete Section IV.)*					
D. ENFORCEMENT ACTION *(If yes, specify in Part E whether the case will be primarily managed by the EPA or the State and what type of enforcement action is anticipated.)*					

E. RATIONALE FOR FINAL STRATEGY DETERMINATION

The site will continue to be evaluated and additional sampling will be performed. These results will be used to determine remedial actions. See report entitled Preliminary Assessment/Site Investigation of Naval Station, Treasure Island, CA.

F. IF A CASE DEVELOPMENT PLAN HAS BEEN PREPARED, SPECIFY THE DATE PREPARED *(mo., day, & yr.)*	G. IF AN ENFORCEMENT CASE HAS BEEN FILED, SPECIFY THE DATE FILED *(mo., day, & yr.)*

H. PREPARER INFORMATION

1. NAME	2. TELEPHONE NUMBER	3. DATE (mo., day, & yr.)

III. REMEDIAL ACTIONS TO BE TAKEN WHEN RESOURCES BECOME AVAILABLE

List all remedial actions, such as excavation, removal, etc. to be taken as soon as resources become available. See instructions for a list of Key Words for each of the actions to be used in the spaces below. Provide an estimate of the approximate cost of the remedy.

A. REMEDIAL ACTION	B. ESTIMATED COST	C. REMARKS
	$	
	$	
	$	
	$	
	$	
	$	
	$	
	$	
D. TOTAL ESTIMATED COST	$	

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Continued From Front

IV. REMEDIAL ACTIONS

A. SHORT TERM/EMERGENCY ACTIONS *(On Site and Off-Site)*: List all emergency actions taken or planned to bring the site under immediate control, e.g., restrict access, provide alternate water supply, etc. See instructions for a list of Key Words for each of the actions to be used in the spaces below.

1. ACTION	2. ACTION START DATE (mo.,day.,& yr.)	3. ACTION END DATE (mo.,day.,& yr.)	4. ACTION AGENCY (EPA, State, Private Party)	5. COST	6. SPECIFY 311 OR OTHER ACTION. INDICATE THE MAGNITUDE OF THE WORK REQUIRED.
				$	
				$	
				$	
				$	
				$	
				$	

B. LONG TERM STRATEGY *(On Site and Off-Site)*: List all long term solutions, e.g., excavation, removal, ground water monitoring wells, etc. See instructions for a list of Key Words for each of the actions to be used in the spaces below.

1. ACTION	2. ACTION START DATE (mo.,day.,& yr.)	3. ACTION END DATE (mo.,day.,& yr.)	4. ACTION AGENCY (EPA, State Private Party)	5. COST	6. SPECIFY 311 OR OTHER ACTION: INDICATE THE MAGNITUDE OF THE WORK REQUIRED.
				$	
				$	
				$	
				$	
				$	
				$	

C. MANHOURS AND COST BY ACTION AGENCY

1. ACTION AGENCY	2. TOTAL MAN-HOURS FOR REMEDIAL ACTIVITIES	3. TOTAL COST FOR REMEDIAL ACTIVITIES
a. EPA		$
b. STATE		$
c. PRIVATE PARTIES		$
d. OTHER *(specify)*:		$

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

EPA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER				
Site 11 - YBI Landfill	NAVSTA Treasure Island				
03 CITY	**04 STATE**	**05 ZIP CODE**	**06 COUNTY**	**07 COUNTY CODE**	**08 CONG DIST**
San Francisco	CA	94130	San Francisco	075	05

09 COORDINATES LATITUDE 37° 49 00 ON | LONGITUDE 122° 22 00 OW

10 TYPE OF OWNERSHIP (Check one)
☐ A. PRIVATE ☒ B. FEDERAL NAVY ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL
☐ F. OTHER _____ ☐ G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION	02 SITE STATUS	03 YEARS OF OPERATION
10 / 6 / 87 (MONTH DAY YEAR)	☐ ACTIVE ☒ INACTIVE	BEGINNING YEAR _____ ENDING YEAR _____ X UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)
☐ A. EPA ☐ B. EPA CONTRACTOR _____ (Name of firm) ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR _____ (Name of firm)
☐ E. STATE ☐ F. STATE CONTRACTOR _____ (Name of firm) XX G. OTHER Dames & Moore (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
Ann M. Becker	Team Leader, Engineer	Dames & Moore	(415) 896-5858
09 OTHER INSPECTORS	**10 TITLE**	**11 ORGANIZATION**	**12 TELEPHONE NO.**
James G. Ritchie	Geologist	Dames & Moore	(415) 896-5858
Dale D. Shileikis	Biologist	Dames & Moore	(415) 896-5858
Carol L. Creasey	Hydrogeologist	Dames & Moore	(415) 896-5858
William H. Welsh	Engineer	Dames & Moore	(805) 685-4415
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
Not Applicable			( )
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
X PERMISSION ☐ WARRANT	1100	Hazy, Mild.

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO
Steve Hughes	NAVSTA Treasure Island	(415) 765-6114

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
Ann M. Becker	Contractor	Dames & Moore	(415)896-5858	11 / 25 / 87 (MONTH DAY YEAR)

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
CA	7170023330

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- ☐ A. SOLID
- ☐ B. POWDER, FINES
- ☐ C. SLUDGE
- ☐ D. OTHER _____ (Specify)
- ☐ E. SLURRY
- ☐ F. LIQUID
- ☐ G. GAS

02 WASTE QUANTITY AT SITE (Measures of waste quantities must be independent)

- TONS: Unknown
- CUBIC YARDS: _____
- NO. OF DRUMS: _____

03 WASTE CHARACTERISTICS (Check all that apply)

- ☐ A. TOXIC
- ☐ B. CORROSIVE
- ☐ C. RADIOACTIVE
- ☐ D. PERSISTENT
- ☐ E. SOLUBLE
- ☐ F. INFECTIOUS
- ☐ G. FLAMMABLE
- ☐ H. IGNITABLE
- ☐ I. HIGHLY VOLATILE
- ☐ J. EXPLOSIVE
- ☐ K. REACTIVE
- ☐ L. INCOMPATIBLE
- ☐ M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			
SOL	SOLVENTS			
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS			

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently used CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
--	Unknown	999	LF	Unknown	

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., State files, sample analysis, reports)

Employee Interviews

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POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
CA	7170023330

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☐ A. GROUNDWATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: Unknown — 04 NARRATIVE DESCRIPTION

Groundwater contamination may have occurred at this site by vertical migration of contaminants through soils to the groundwater. This site was used as a dumping ground although volume and type of material disposed of is unknown. Contaminants may have been discharged to San Francisco Bay.

01 ☒ B. SURFACE WATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: < 100 — 04 NARRATIVE DESCRIPTION

Materials deposited in the landfill may have been conveyed into the Bay.

01 ☐ C. CONTAMINATION OF AIR — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 0 — 04 NARRATIVE DESCRIPTION

No data exists showing any release of air contaminants. Air contamination is very unlikely.

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 0 — 04 NARRATIVE DESCRIPTION

A fire marshall has not certified that this area presents a significant threat; therefore, no fire or explosive conditions are considered to be present.

01 ☐ E. DIRECT CONTACT — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 0 — 04 NARRATIVE DESCRIPTION

Direct contact with contaminants is extremely unlikely since potential contaminants would be buried in the landfill or in the groundwater.

01 ☒ F. CONTAMINATION OF SOIL — 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED: 2 (Acres) — 04 NARRATIVE DESCRIPTION

Material placed in the landfill may have contaminated the soil at the site.

01 ☐ G. DRINKING WATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 0 — 04 NARRATIVE DESCRIPTION

There is no potential for drinking water contamination because groundwater at the site is unusable as drinking water. Drinking water is supplied from off the island.

01 ☐ H. WORKER EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: < 100 — 04 NARRATIVE DESCRIPTION

Worker exposure injury could occur if potentially contaminated soils are excavated.

01 ☐ I. POPULATION EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: < 100 — 04 NARRATIVE DESCRIPTION

Population potentially injured by exposure would be workers excavating potentially contaminated soils.

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE: CA	02 SITE NUMBER: 7170023330

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☒ J. DAMAGE TO FLORA — 02 ☒ OBSERVED (DATE: 10/8/87) — ☒ POTENTIAL — ☐ ALLEGED

04 NARRATIVE DESCRIPTION: Substances potentially released from wastes deposited at the landfill may have damaged native flora in a localized area.

01 ☒ K. DAMAGE TO FAUNA — 02 ☒ OBSERVED (DATE: 10/8/87) — ☒ POTENTIAL — ☐ ALLEGED

04 NARRATIVE DESCRIPTION (Include number of individuals): Contaminated soils at the landfill could potentially damage fauna (burrowing species-ground squirrels). Contamination of groundwater could damage fauna elsewhere such as waterfowl, fish and benthic species in San Francisco Bay.

01 ☒ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE: _____) — ☒ POTENTIAL — ☐ ALLEGED

04 NARRATIVE DESCRIPTION: Material potentially released by landfill wastes may have been accumulated by marine life (benthic and intertidal species) and entered food chain via predator by other species such waterfowl and fish.

01 ☒ M. UNSTABLE CONTAINMENT OF WASTES (Spills, runoff, standing liquids, leaking drums) — 02 ☐ OBSERVED (DATE: _____) — ☒ POTENTIAL — ☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: < 100

04 NARRATIVE DESCRIPTION: Records on landfill closure were not located to evaluate whether the site was properly closed.

01 ☐ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☒ ALLEGED

04 NARRATIVE DESCRIPTION: Extremely unlikely unless significant groundwater migration occurs. It is unknown if soils or groundwater are contaminated.

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED

04 NARRATIVE DESCRIPTION: Very unlikely. No contamination of this type has been reported.

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED

04 NARRATIVE DESCRIPTION: Unauthorized dumping is known to have occurred for several years since 1935.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

None

III. TOTAL POPULATION POTENTIALLY AFFECTED: < 100

IV. COMMENTS

None

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Primarily employee interviews

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
☐ A. NPDES				
☐ B. UIC				
☐ C. AIR				
☐ D. RCRA				
☐ E. RCRA INTERIM STATUS				
☐ F. SPCC PLAN				
☐ G. STATE (Specify)				
☐ H. LOCAL (Specify)				
☐ I. OTHER (Specify)				
☒ J. NONE				

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE
☐ A. SURFACE IMPOUNDMENT		
☐ B. PILES		
☐ C. DRUMS, ABOVE GROUND		
☐ D. TANK, ABOVE GROUND		
☐ E. TANK, BELOW GROUND		
☐ F. LANDFILL		
☐ G. LANDFARM		
☐ H. OPEN DUMP		
☐ I. OTHER (Specify)		

04 TREATMENT (Check all that apply)

- ☐ A. INCENERATION
- ☐ B. UNDERGROUND INJECTION
- ☐ C. CHEMICAL/PHYSICAL
- ☐ D. BIOLOGICAL
- ☐ E. WASTE OIL PROCESSING
- ☐ F. SOLVENT RECOVERY
- ☐ G. OTHER RECYCLING/RECOVERY
- ☐ H. OTHER (Specify)

05 OTHER

- ☐ A. BUILDINGS ON SITE

06 AREA OF SITE

2 (Acres)

07 COMMENTS

None

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

☐ A. ADEQUATE, SECURE ☐ B. MODERATE ☒ C. INADEQUATE, POOR ☐ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC.

Records were not located to evaluate how the landfill was closed.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: ☐ YES ☒ NO

02 COMMENTS

The site is not fenced or otherwise monitored to deter access. Waste materials were not observed during the review and are thought to have been covered.

VI. SOURCES OF INFORMATION (Cite specific references, e.g. state files, sample analysis, reports)

Personnel Interviews
Site Visit.

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as applicable): Pipeline from off the island

	SURFACE	WELL
COMMUNITY	A. ☐	B. ☐
NON-COMMUNITY	C. ☐	D. ☐

02 STATUS: Not used.

ENDANGERED	AFFECTED	MONITORED
A. ☐	B. ☐	C. ☐
D. ☐	E. ☐	F. ☐

03 DISTANCE TO SITE: N/A
A. _____ (mi)
B. _____ (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)
☐ A. ONLY SOURCE FOR DRINKING ☐ B. DRINKING (Other sources available) COMMERCIAL, INDUSTRIAL, IRRIGATION (No other water sources available) ☐ C. COMMERCIAL, INDUSTRIAL, IRRIGATION (Limited other sources available) ☒ D. NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUND WATER: 0
03 DISTANCE TO NEAREST DRINKING WATER WELL: > 3 (mi)

04 DEPTH TO GROUNDWATER	05 DIRECTION OF GROUNDWATER FLOW	06 DEPTH TO AQUIFER OF CONCERN	07 POTENTIAL YIELD OF AQUIFER	08 SOLE SOURCE AQUIFER
2 - 6 (ft)	Toward S.F. Bay.	N/A (ft)	N/A (gpd)	☐ YES ☐ NO

09 DESCRIPTION OF WELLS (Including usage, depth, and location relative to population and buildings)

NOTE: The site is on an island in San Francisco Bay. There are no water wells in use on the island. Water is piped to the island on the San Francisco-Oakland Bay Bridge.

10 RECHARGE AREA		11 DISCHARGE AREA	
☒ YES ☐ NO	COMMENTS: Infiltration is occurring but recharging unusable aquifer.	☒ YES ☐ NO	COMMENTS: Discharge of groundwater eventually to San Francisco Bay.

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)
☐ A. RESERVOIR, RECREATION DRINKING WATER SOURCE ☐ B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES ☒ C. COMMERCIAL, INDUSTRIAL ☐ D. NOT CURRENTLY USED

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME:	AFFECTED	DISTANCE TO SITE
San Francisco Bay	☐	< 0.5 (mi)
	☐	(mi)
	☐	(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE
A. 3000 NO OF PERSONS	B. 3000 NO OF PERSONS	C. >10,000 NO OF PERSONS

02 DISTANCE TO NEAREST POPULATION: < 0.1 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE: 200

04 DISTANCE TO NEAREST OFF-SITE BUILDING: < 0.1 (mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., rural, village, densely populated urban area)

NAVSTA TI contains residences for approximately 2500-3000 service personnel. The island is surrounded by San Francisco Bay. Across the Bay there are large cities including San Francisco and Oakland.

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☐ A. $10^{-6} - 10^{-8}$ cm/sec ☐ B. $10^{-4} - 10^{-6}$ cm/sec ☒ C. $10^{-4} - 10^{-3}$ cm/sec ☐ D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☐ A. IMPERMEABLE (Less than 10^{-6} cm/sec) ☒ B. RELATIVELY IMPERMEABLE ($10^{-4} - 10^{-6}$ cm/sec) ☐ C. RELATIVELY PERMEABLE ($10^{-2} - 10^{-4}$ cm/sec) ☐ D. VERY PERMEABLE (Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK	04 DEPTH OF CONTAMINATED SOIL ZONE	05 SOIL pH	
300 (ft)	Unknown (ft)	Unknown	

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
-15 to -10 (in)	3.0 (in)	0-2 %	West	1 %

09 FLOOD POTENTIAL
SITE IS IN N/A YEAR FLOODPLAIN

10
☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE	OTHER
A. >2 (mi)	B. (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)
>2 (mi)
ENDANGERED SPECIES:

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL	RESIDENTIAL AREAS; NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS: PRIME AG LAND	AGRICULTURAL LANDS: AG LAND
A. 0.1 (mi)	B. >2 (mi)	C. >3 (mi)	D. >3 (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

Yerba Buena Island is a natural island with gently rolling to very steep slopes (5 to 95%).

VII. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Personal inteviews.
Observations.
Harding Lawson Associates Report (1985).

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 6 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
CA	7170023330

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER			
SURFACE WATER			
WASTE			
AIR			
RUNOFF			
SPILL			
SOIL			
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS

IV. PHOTOGRAPHS AND MAPS

01 TYPE [X] GROUND [X] AERIAL

02 IN CUSTODY OF Naval Energy and Environmental Support Activity (NEESA). (Name of organization or individual)

03 MAPS [X] YES [ ] NO

04 LOCATION OF MAPS NEESA

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

VI. SOURCES OF INFORMATION (Cite specific references e.g., state files, sample analysis reports)

Personnel Interviews.

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
CA	7170023330

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER	04 SIC CODE
United States Navy		
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		
NAVSTA Treasure Island		
05 CITY	06 STATE	07 ZIP CODE
San Francisco	CA	94130

PARENT COMPANY (if applicable)

08 NAME	09 D+B NUMBER	11 SIC CODE
10 STREET ADDRESS (P.O. Box, RFD #, etc.)		
12 CITY	13 STATE	14 ZIP CODE

01 NAME	02 D+B NUMBER	04 SIC CODE
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		
05 CITY	06 STATE	07 ZIP CODE

08 NAME	09 D+B NUMBER	11 SIC CODE
10 STREET ADDRESS (P.O. Box, RFD #, etc.)		
12 CITY	13 STATE	14 ZIP CODE

01 NAME	02 D+B NUMBER	04 SIC CODE
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		
05 CITY	06 STATE	07 ZIP CODE

08 NAME	09 D+B NUMBER	11 SIC CODE
10 STREET ADDRESS (P.O. Box, RFD #, etc.)		
12 CITY	13 STATE	14 ZIP CODE

01 NAME	02 D+B NUMBER	04 SIC CODE
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		
05 CITY	06 STATE	07 ZIP CODE

08 NAME	09 D+B NUMBER	11 SIC CODE
10 STREET ADDRESS (P.O. Box, RFD #, etc.)		
12 CITY	13 STATE	14 ZIP CODE

III. PREVIOUS OWNER(S) (List most recent first)

01 NAME	02 D+B NUMBER	04 SIC CODE
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		
05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER	04 SIC CODE
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		
05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER	04 SIC CODE
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		
05 CITY	06 STATE	07 ZIP CODE

IV. REALTY OWNER(S) (If applicable, list most recent first)

01 NAME	02 D+B NUMBER	04 SIC CODE
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		
05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER	04 SIC CODE
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		
05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER	04 SIC CODE
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		
05 CITY	06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. CURRENT OPERATOR (Provide if different from owner)

01 NAME	02 D+B NUMBER
United States Navy	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
NAVSTA Treasure Island	

05 CITY	06 STATE	07 ZIP CODE
San Francisco	CA	94130

08 YEARS OF OPERATION	09 NAME OF OWNER
45	U.S. Navy

OPERATOR'S PARENT COMPANY (If applicable)

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

III. PREVIOUS OPERATOR(S) (List most recent first; provide only if different from owner)

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

IV. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER
U.S. Navy	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
NAVSTA Treasure Island	

05 CITY	06 STATE	07 ZIP CODE
San Francisco	CA	94130

III. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

IV. TRANSPORTER(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
U.S. Navy			

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
NAVSTA Treasure Island			

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE
San Francisco	CA	94130			

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II PAST RESPONSE ACTIVITIES (Continued)

01 ☐ R. BARRIER WALLS CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☒ S. CAPPING/COVERING — 02 DATE Unknown — 03 AGENCY U. S. Navy
04 DESCRIPTION
Waste materials were not visible and are expected to have been covered. Cover details were not located.

01 ☐ T. BULK TANKAGE REPAIRED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ U. GROUT CURTAIN CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ V. BOTTOM SEALED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ W. GAS CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ X. FIRE CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Y. LEACHATE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Z. AREA EVACUATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 1. ACCESS TO SITE RESTRICTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 2. POPULATION RELOCATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 3. OTHER REMEDIAL ACTIVITIES — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Employee Interviews; Observations.

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 11 - ENFORCEMENT INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
CA	7170023330

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY ENFORCEMENT ACTION ☐ YES ☒ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY ENFORCEMENT ACTION

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Personnel Interview.

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POTENTIAL HAZARDOUS WASTE SITE
FINAL STRATEGY DETERMINATION

REGION	SITE NUMBER
IX	7170023330

File this form in the regional Hazardous Waste Log File and submit a copy to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Task Force (*E.N-335*); 401 M St., SW, Washington, DC 20460.

I. SITE IDENTIFICATION

A. SITE NAME	B. STREET
YBI Landfill Site 11	Naval Station (NAVSTA) Treasure Island

C. CITY	D. STATE	E. ZIP CODE
San Francis	CA	94130

Add Site 11

NAL DETERMINATION

Indicate the recomm… should be involved by marking 'X' in the appropriate boxes.

	MARK 'X'	ACTION AGENCY			
		EPA	STATE	LOCAL	PRIVATE
A. NO ACTION NEED…					
B. REMEDIAL ACTIO… *(If yes, complete S…* …ILABLE					
C. REMEDIAL ACTION *(If yes, complete Section IV.)*					
D. ENFORCEMENT ACTION *(If yes, specify in Part E whether the case will be primarily managed by the EPA or the State and what type of enforcement action is anticipated.)*					

E. RATIONALE FOR FINAL STRATEGY DETERMINATION

The site will continue to be evaluated and additional sampling will be performed. These results will be used to determine remedial actions. See report entitled Preliminary Assessment/Site Investigation of Naval Station, Treasure Island, CA.

F. IF A CASE DEVELOPMENT PLAN HAS BEEN PREPARED, SPECIFY THE DATE PREPARED *(mo., day, & yr.)*	G. IF AN ENFORCEMENT CASE HAS BEEN FILED, SPECIFY THE DATE FILED *(mo., day, & yr.)*

H. PREPARER INFORMATION

1. NAME	2. TELEPHONE NUMBER	3. DATE *(mo., day, & yr.)*

III. REMEDIAL ACTIONS TO BE TAKEN WHEN RESOURCES BECOME AVAILABLE

List all remedial actions, such as excavation, removal, etc. to be taken as soon as resources become available. See instructions for a list of Key Words for each of the actions to be used in the spaces below. Provide an estimate of the approximate cost of the remedy.

A. REMEDIAL ACTION	B. ESTIMATED COST	C. REMARKS
	$	
	$	
	$	
	$	
	$	
	$	
	$	
	$	
D. TOTAL ESTIMATED COST	$	

REPRODUCED AT GOVERNMENT EXPENSE

Continued From Front

IV. REMEDIAL ACTIONS

A. SHORT TERM/EMERGENCY ACTIONS *(On Site and Off-Site)*: List all emergency actions taken or planned to bring the site under immediate control, e.g., restrict access, provide alternate water supply, etc. See instructions for a list of Key Words for each of the actions to be used in the spaces below.

1. ACTION	2. ACTION START DATE (mo, day, & yr)	3. ACTION END DATE (mo, day, & yr)	4. ACTION AGENCY (EPA, State, Private Party)	5. COST	6. SPECIFY 311 OR OTHER ACTION. INDICATE THE MAGNITUDE OF THE WORK REQUIRED.
				$	
				$	
				$	
				$	
				$	
				$	

B. LONG TERM STRATEGY *(On Site and Off-Site)*: List all long term solutions, e.g., excavation, removal, ground water monitoring wells, etc. See instructions for a list of Key Words for each of the actions to be used in the spaces below.

1. ACTION	2. ACTION START DATE (mo, day, & yr)	3. ACTION END DATE (mo, day, & yr)	4. ACTION AGENCY (EPA, State Private Party)	5. COST	6. SPECIFY 311 OR OTHER ACTION: INDICATE THE MAGNITUDE OF THE WORK REQUIRED.
				$	
				$	
				$	
				$	
				$	
				$	

C. MANHOURS AND COST BY ACTION AGENCY

1. ACTION AGENCY	2. TOTAL MAN-HOURS FOR REMEDIAL ACTIVITIES	3. TOTAL COST FOR REMEDIAL ACTIVITIES
a. EPA		$
b. STATE		$
c. PRIVATE PARTIES		$
d. OTHER *(specify)*:		$

REPRODUCED BY GOVERNMENT EXPENSE

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

EPA

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER				
Site 12 - Old Bunker Area	NAVSTA Treasure Island				
03 CITY	**04 STATE**	**05 ZIP CODE**	**06 COUNTY**	**07 COUNTY CODE**	**08 CONG DIST**
San Francisco	CA	94130	San Francisco	075	05

09 COORDINATES: LATITUDE 37° 49 00 ON | LONGITUDE 122° 22 00 OW

10 TYPE OF OWNERSHIP (Check one): ☐ A. PRIVATE ☒ B. FEDERAL NAVY ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL ☐ F. OTHER ☐ G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION	02 SITE STATUS	03 YEARS OF OPERATION
10, 5, 87 (MONTH DAY YEAR)	XX ☒ ACTIVE ☐ INACTIVE	early 1940s (BEGINNING YEAR) late 1960s (ENDING YEAR) ☐ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)
☐ A. EPA ☐ B. EPA CONTRACTOR _____ (Name of firm) ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR _____ (Name of firm)
☐ E. STATE ☐ F. STATE CONTRACTOR _____ (Name of firm) XXX ☒ G. OTHER Dames & Moore (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
Ann M. Becker -	Team Leader, Engineer	Dames & Moore	(415) 896-5858
09 OTHER INSPECTORS	**10 TITLE**	**11 ORGANIZATION**	**12 TELEPHONE NO.**
James G. Ritchie	Geologist	Dames & Moore	(415) 896-5858
Dale D. Shileikis	Biologist	Dames & Moore	(415) 896-5858
Carol L. Creasey	Hydrogeologist	Dames & Moore	(415) 896-5858
William H. Welsh	Engineer	Dames & Moore	805, 685-4415
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
Not Applicable			( )
			( )
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
XX ☒ PERMISSION ☐ WARRANT	1300	Clear, Mild.

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO
Steve Hughes	NAVSTA Treasure Island	(415) 765-6114

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
Ann M. Becker	Contractor	Dames & Moore	(415)896-5858	11, 25, 87 (MONTH DAY YEAR)

EPA FORM 2070-13 (7-81)

REPRODUCED AT GOVERNMENT EXPENSE

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

EPA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- ☒ A. SOLID
- ☐ B. POWDER, FINES
- ☐ C. SLUDGE
- ☐ D. OTHER (Specify)
- ☐ E. SLURRY
- ☐ F. LIQUID
- ☐ G. GAS

02 WASTE QUANTITY AT SITE (Measures of waste quantities must be independent)

- TONS: Unknown
- CUBIC YARDS:
- NO OF DRUMS:

03 WASTE CHARACTERISTICS (Check all that apply)

- ☐ A. TOXIC
- ☐ B. CORROSIVE
- ☐ C. RADIOACTIVE
- ☐ D. PERSISTENT
- ☐ E. SOLUBLE
- ☐ F. INFECTIOUS
- ☐ G. FLAMMABLE
- ☐ H. IGNITABLE
- ☐ I. HIGHLY VOLATILE
- ☐ J. EXPLOSIVE
- ☐ K. REACTIVE
- ☐ L. INCOMPATIBLE
- ☐ M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			
SOL	SOLVENTS			
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS	Unknown		

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently used CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
	Trash/Garbage	999			
	Incinerator Ash				
	Heavy Metals				

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Employee Interviews

EPA FORM 2070-12 (7-81)

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POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☐ A. GROUNDWATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: < 100
02 ☐ OBSERVED (DATE: _____) XX POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Groundwater contamination may have occurred by vertical migration through fill and debris materials to groundwater and the Bay. Depth to groundwater is 2-6 feet.

01 ☐ B. SURFACE WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: < 100
02 ☐ OBSERVED (DATE: _____) XX POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Reports indicate trash and debris were buried at this site; therefore, potential for surface water contamination is extremely unlikely, unless contamination occurs from groundwater migration to the Bay.

01 ☐ C. CONTAMINATION OF AIR
03 POPULATION POTENTIALLY AFFECTED: 0
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

No data exists showing any release of air contaminants. Air contamination is extremely unlikely.

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS
03 POPULATION POTENTIALLY AFFECTED: 0
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

A fire marshall has not certified that this area presents a significant threat; therefore no fire or explosive conditions are considered to be present.

01 ☐ E. DIRECT CONTACT
03 POPULATION POTENTIALLY AFFECTED: 0
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Direct contact with potential contaminants is extremely unlikely since contaminants would be in soils and groundwater below this area.

01 XX F. CONTAMINATION OF SOIL
03 AREA POTENTIALLY AFFECTED: _____ (Acres)
02 ☐ OBSERVED (DATE: _____) XX POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION Material disposed of in the bunker area may cause contamination of the soil. The material was deposited in this area in trenches. Some of the material may have been excavated and removed during construction of the housing project.

01 ☐ G. DRINKING WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: 0
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

There is no potential for drinking water contamination. Groundwater on the island is unusable as drinking water. Drinking water is supplied from off the island.

01 ☐ H. WORKER EXPOSURE/INJURY
03 WORKERS POTENTIALLY AFFECTED: < 100
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Worker exposure injury could potentially occur if contaminated soils are excavated.

01 ☐ I. POPULATION EXPOSURE/INJURY
03 POPULATION POTENTIALLY AFFECTED: _____
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Population potentially injured would be workers excavating contaminated soils and residents of military housing in this area.

EPA FORM 2070-12 (7-81)

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POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☒ J. DAMAGE TO FLORA — 02 ☒ OBSERVED (DATE: 10-7-87) — x☒ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Damage to vegetation not expected to occur due to disturbed nature of area.

01 ☐ K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE: 10-7-87) — x☒ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION (Include names of species)
Damage to fauna not expected due to disturbed nature of area.

01 ☒ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION
N/A

01 ☐ M. UNSTABLE CONTAINMENT OF WASTES (Spills/runoff/standing liquids/leaking drums) — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 0
04 NARRATIVE DESCRIPTION
Waste materials which remain are buried below this area and contamination could migrate to groundwater and or San Francisco Bay.

01 ☐ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Very unlikely unless significant groundwater migration occurs.

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Very unlikely. No contamination of this type has been reported.

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Debris and trash is known to have been disposed of in this area. Although some has been removed, it is likely that much of this material remains buried.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS
None

III. TOTAL POPULATION POTENTIALLY AFFECTED: 2500-3000

IV. COMMENTS
Various waste material was disposed of in this area. Some or all of the material may have been excavated and removed during construction of the housing facility. Quality records describing the material were not located.

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)
Employee Interviews
Contractor reports

EPA FORM 2070-12 (7-81)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
☐ A. NPDES				
☐ B. UIC				
☐ C. AIR				
☐ D. RCRA				
☐ E. RCRA INTERIM STATUS				
☐ F. SPCC PLAN				
☐ G. STATE (Specify)				
☐ H. LOCAL (Specify)				
☐ I. OTHER (Specify)				
☒ J. NONE				

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE
☐ A. SURFACE IMPOUNDMENT		
☐ B. PILES		
☐ C. DRUMS, ABOVE GROUND		
☐ D. TANK, ABOVE GROUND		
☐ E. TANK, BELOW GROUND		
☐ F. LANDFILL		
☐ G. LANDFARM		
☐ H. OPEN DUMP		
☐ I. OTHER (Specify)		

04 TREATMENT (Check all that apply)

- ☐ A. INCENERATION
- ☐ B. UNDERGROUND INJECTION
- ☐ C. CHEMICAL/PHYSICAL
- ☐ D. BIOLOGICAL
- ☐ E. WASTE OIL PROCESSING
- ☐ F. SOLVENT RECOVERY
- ☐ G. OTHER RECYCLING/RECOVERY
- ☐ H. OTHER (Specify)

05 OTHER

- ☐ A. BUILDINGS ON SITE

06 AREA OF SITE

_____ (Acres)

07 COMMENTS

None

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

☐ A. ADEQUATE, SECURE ☒ B. MODERATE ☐ C. INADEQUATE, POOR ☐ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC.

Materials disposed of in this area are capped with an earthen cover.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE ☐ YES ☒ NO

02 COMMENTS Materials disposed of in this area are capped with an earthen cover. Some or all of the material is believed to have been removed.

VI. SOURCES OF INFORMATION (Cite specific references e.g. state files, sample analysis, reports)

Personnel Interviews

Contractor reports

EPA FORM 2070-13 (7-81)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as applicable): Pipeline from off the island

	SURFACE	WELL
COMMUNITY	A. ☐	B. ☐
NON-COMMUNITY	C. ☐	D. ☐

02 STATUS: Not used

ENDANGERED	AFFECTED	MONITORED
A. ☐	B. ☐	C. ☐
D. ☐	E. ☐	F. ☐

03 DISTANCE TO SITE: N/A
A. _____ (mi)
B. _____ (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)
☐ A. ONLY SOURCE FOR DRINKING ☐ B. DRINKING (Other sources available) COMMERCIAL, INDUSTRIAL, IRRIGATION (Also other water sources available) ☐ C. COMMERCIAL, INDUSTRIAL, IRRIGATION (Limited other sources available) ☒ D. NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUND WATER: 0
03 DISTANCE TO NEAREST DRINKING WATER WELL: > 3 (mi)

04 DEPTH TO GROUNDWATER	05 DIRECTION OF GROUNDWATER FLOW	06 DEPTH TO AQUIFER OF CONCERN	07 POTENTIAL YIELD OF AQUIFER	08 SOLE SOURCE AQUIFER
2 - 6 (ft)	Toward S.F. Bay.	N/A (ft)	N/A (gpd)	☐ YES ☐ NO

09 DESCRIPTION OF WELLS (Including usage, depth, and location relative to population and buildings)
NOTE: The site is on an island in San Francisco Bay. There are no water wells in use on the island. Water is piped to the island on the San Francisco-Oakland Bay Bridge.

10 RECHARGE AREA		11 DISCHARGE AREA	
☒ YES ☐ NO	COMMENTS: Infiltration is occurring but recharging unusable aquifer.	☒ YES ☐ NO	COMMENTS: Discharge of groundwater eventually to San Francisco Bay.

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)
☐ A. RESERVOIR, RECREATION DRINKING WATER SOURCE ☐ B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES ☒ C. COMMERCIAL, INDUSTRIAL ☐ D. NOT CURRENTLY USED

02 AFFECTED, POTENTIALLY AFFECTED BODIES OF WATER

NAME:	AFFECTED	DISTANCE TO SITE
San Francisco Bay	☐	< 0.5 (mi)
	☐	(mi)
	☐	(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE
A. 3000 NO OF PERSONS	B. 3000 NO OF PERSONS	C. >10,000 NO OF PERSONS

02 DISTANCE TO NEAREST POPULATION: < 0.1 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE: 200

04 DISTANCE TO NEAREST OFF-SITE BUILDING: < 0.1 (mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., rural, village, densely populated urban area)
NAVSTA TI contains residences for approximately 2500-3000 service personnel. The island is surrounded by San Francisco Bay. Across the Bay there are large cities including San Francisco and Oakland.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☐ A. $10^{-6} - 10^{-8}$ cm/sec ☐ B. $10^{-4} - 10^{-6}$ cm/sec ☒ C. $10^{-4} - 10^{-3}$ cm/sec ☐ D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☐ A. IMPERMEABLE (Less than 10^{-6} cm/sec) ☒ B. RELATIVELY IMPERMEABLE ($10^{-4} - 10^{-6}$ cm/sec) ☐ C. RELATIVELY PERMEABLE ($10^{-2} - 10^{-4}$ cm/sec) ☐ D. VERY PERMEABLE (Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK	04 DEPTH OF CONTAMINATED SOIL ZONE	05 SOIL pH	
300 (ft)	Unknown (ft)	Unknown	

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
-10 to -15 (in)	3.0 (in)	0-2 %	West	1 %

09 FLOOD POTENTIAL
SITE IS IN N/A YEAR FLOODPLAIN

10 ☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)
ESTUARINE: A. >2 (mi) OTHER: B. _____ (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)
>2 (mi)
ENDANGERED SPECIES: _____

13 LAND USE IN VICINITY

DISTANCE TO: COMMERCIAL/INDUSTRIAL	RESIDENTIAL AREAS; NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS PRIME AG LAND	AG LAND
A. 0.1 (mi)	B. >2 (mi)	C. >3 (mi)	D. >3 (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

The site is located on Treasure Island, a man-made island on San Francisco Bay. Treasure Island is essentially flat with very little relief. Slopes in the vicinity of the site vary from 0 to 2%.

VII. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Personal inteviews.
Observations.
Harding Lawson Associates Report (1985).

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 6 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
CA	7170023330

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER			
SURFACE WATER			
WASTE			
AIR			
RUNOFF			
SPILL			
SOIL			
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
None	None

IV. PHOTOGRAPHS AND MAPS

01 TYPE [X] GROUND [X] AERIAL

02 IN CUSTODY OF Naval Energy and Environmental Support Activity (NEESA). (Name of organization or individual)

03 MAPS [X] YES [ ] NO

04 LOCATION OF MAPS NEESA

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

None

VI. SOURCES OF INFORMATION (Cite specific references, e.g., State files, sample analysis reports)

Personnel Interviews.

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
CA	7170023330

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER	04 SIC CODE
United States Navy		
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		
NAVSTA Treasure Island		
05 CITY	06 STATE	07 ZIP CODE
San Francisco	CA	94130

PARENT COMPANY (if applicable)

08 NAME	09 D+B NUMBER	11 SIC CODE
10 STREET ADDRESS (P.O. Box, RFD #, etc.)		
12 CITY	13 STATE	14 ZIP CODE

01 NAME	02 D+B NUMBER	04 SIC CODE
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		
05 CITY	06 STATE	07 ZIP CODE

08 NAME	09 D+B NUMBER	11 SIC CODE
10 STREET ADDRESS (P.O. Box, RFD #, etc.)		
12 CITY	13 STATE	14 ZIP CODE

01 NAME	02 D+B NUMBER	04 SIC CODE
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		
05 CITY	06 STATE	07 ZIP CODE

08 NAME	09 D+B NUMBER	11 SIC CODE
10 STREET ADDRESS (P.O. Box, RFD #, etc.)		
12 CITY	13 STATE	14 ZIP CODE

01 NAME	02 D+B NUMBER	04 SIC CODE
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		
05 CITY	06 STATE	07 ZIP CODE

08 NAME	09 D+B NUMBER	11 SIC CODE
10 STREET ADDRESS (P.O. Box, RFD #, etc.)		
12 CITY	13 STATE	14 ZIP CODE

III. PREVIOUS OWNER(S) (List most recent first)

01 NAME	02 D+B NUMBER	04 SIC CODE
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		
05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER	04 SIC CODE
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		
05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER	04 SIC CODE
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		
05 CITY	06 STATE	07 ZIP CODE

IV. REALTY OWNER(S) (If applicable, list most recent first)

01 NAME	02 D+B NUMBER	04 SIC CODE
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		
05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER	04 SIC CODE
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		
05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER	04 SIC CODE
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		
05 CITY	06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

II. CURRENT OPERATOR (Provide if different from owner)

01 NAME	02 D+B NUMBER
United States Navy	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
NAVSTA Treasure Island	
05 CITY	06 STATE / 07 ZIP CODE
San Francisco	CA / 94130
08 YEARS OF OPERATION	09 NAME OF OWNER
45	U.S. Navy

OPERATOR'S PARENT COMPANY (If applicable)

10 NAME	11 D+B NUMBER
12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE
14 CITY	15 STATE / 16 ZIP CODE

III. PREVIOUS OPERATOR(S) (List most recent first; provide only if different from owner)

01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)

10 NAME	11 D+B NUMBER
12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE
14 CITY	15 STATE / 16 ZIP CODE

01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

10 NAME	11 D+B NUMBER
12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE
14 CITY	15 STATE / 16 ZIP CODE

01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

10 NAME	11 D+B NUMBER
12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE
14 CITY	15 STATE / 16 ZIP CODE

IV. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER
U.S. Navy	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
NAVSTA Treasure Island	

05 CITY	06 STATE	07 ZIP CODE
San Francisco	CA	94130

III. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

IV. TRANSPORTER(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
U.S. Navy			

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
NAVSTA Treasure Island			

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE
San Francisco	CA	94130			

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

II PAST RESPONSE ACTIVITIES (Continued)

01 ☐ R. BARRIER WALLS CONSTRUCTED
02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☒ S. CAPPING/COVERING
02 DATE 1960's 03 AGENCY U.S. Navy
04 DESCRIPTION Materials remaining in this area, if any, have been capped with an earthen cover.

01 ☐ T. BULK TANKAGE REPAIRED
02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ U. GROUT CURTAIN CONSTRUCTED
02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ V. BOTTOM SEALED
02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ W. GAS CONTROL
02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ X. FIRE CONTROL
02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ Y. LEACHATE TREATMENT
02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ Z. AREA EVACUATED
02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ 1. ACCESS TO SITE RESTRICTED
02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ 2. POPULATION RELOCATED
02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ 3. OTHER REMEDIAL ACTIVITIES
02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Employee Interviews; Observations.
Contractor Reports

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 11 - ENFORCEMENT INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
CA	7170023330

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY ENFORCEMENT ACTION ☐ YES ☒ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY/ENFORCEMENT ACTION

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis reports)

Personnel Interview.

EPA

POTENTIAL HAZARDOUS WASTE SITE
FINAL STRATEGY DETERMINATION

REGION	SITE NUMBER
IX	7170023330

File this form in the regional Hazardous Waste Log File and submit a copy to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Task Force (*EN-335*); 401 M St., SW; Washington, DC 20460.

I. SITE IDENTIFICATION

A. SITE NAME	B. STREET	
Old Bunker Area	Naval Station (NAVSTA) Treasure Island	
C. CITY	**D. STATE**	**E. ZIP CODE**
San Francisco	CA	94130

II. FINAL DETERMINATION

Indicate the recommended action(s) and agency(ies) that should be involved by marking 'X' in the appropriate boxes.

RECOMMENDATION	MARK 'X'	ACTION AGENCY			
		EPA	STATE	LOCAL	PRIVATE
A. NO ACTION NEEDED					
B. REMEDIAL ACTION NEEDED, BUT NO RESOURCES AVAILABLE *(If yes, complete Section III.)*					
C. REMEDIAL ACTION *(If yes, complete Section IV.)*					
D. ENFORCEMENT ACTION *(If yes, specify in Part E whether the case will be primarily managed by the EPA or the State and what type of enforcement action is anticipated.)*					

E. RATIONALE FOR FINAL STRATEGY DETERMINATION

The site will continue to be evaluated and additional sampling will be performed. These results will be used to determine remedial actions. See report entitled Preliminary Assessment/Site Investigation of Naval Station, Treasure Island, CA.

F. IF A CASE DEVELOPMENT PLAN HAS BEEN PREPARED, SPECIFY THE DATE PREPARED *(mo., day, & yr.)*	G. IF AN ENFORCEMENT CASE HAS BEEN FILED, SPECIFY THE DATE FILED *(mo., day, & yr.)*

H. PREPARER INFORMATION

1. NAME	2. TELEPHONE NUMBER	3. DATE *(mo., day, & yr.)*

III. REMEDIAL ACTIONS TO BE TAKEN WHEN RESOURCES BECOME AVAILABLE

List all remedial actions, such as excavation, removal, etc. to be taken as soon as resources become available. See instructions for a list of Key Words for each of the actions to be used in the spaces below. Provide an estimate of the approximate cost of the remedy.

A. REMEDIAL ACTION	B. ESTIMATED COST	C. REMARKS
	$	
	$	
	$	
	$	
	$	
	$	
	$	
	$	
D. TOTAL ESTIMATED COST	$	

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Continued From Front

IV. REMEDIAL ACTIONS

A. SHORT TERM/EMERGENCY ACTIONS *(On Site and Off-Site)*: List all emergency actions taken or planned to bring the site under immediate control, e.g., restrict access, provide alternate water supply, etc. See instructions for a list of Key Words for each of the actions to be used in the spaces below.

1. ACTION	2. ACTION START DATE (mo,day,& yr)	3. ACTION END DATE (mo,day,& yr)	4. ACTION AGENCY (EPA, State, Private Party)	5. COST	6. SPECIFY 311 OR OTHER ACTION. INDICATE THE MAGNITUDE OF THE WORK REQUIRED.
				$	
				$	
				$	
				$	
				$	
				$	=

B. LONG TERM STRATEGY *(On Site and Off-Site)*: List all long term solutions, e.g., excavation, removal, ground water monitoring wells, etc. See instructions for a list of Key Words for each of the actions to be used in the spaces below.

1. ACTION	2. ACTION START DATE (mo,day,& yr)	3. ACTION END DATE (mo,day,& yr)	4. ACTION AGENCY (EPA, State Private Party)	5. COST	6. SPECIFY 311 OR OTHER ACTION: INDICATE THE MAGNITUDE OF THE WORK REQUIRED.
				$	
				$	
				$	
				$	
				$	
				$	

C. MANHOURS AND COST BY ACTION AGENCY

1. ACTION AGENCY	2. TOTAL MAN-HOURS FOR REMEDIAL ACTIVITIES	3. TOTAL COST FOR REMEDIAL ACTIVITIES
a. EPA		$
b. STATE		$
c. PRIVATE PARTIES		$
d. OTHER *(specify)*:		$

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

EPA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
Site 13 - Stormwater Outfalls.	NAVSTA Treasure Island

03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
San Francisco	CA	94130	San Francisco	075	05

09 COORDINATES	10 TYPE OF OWNERSHIP (Check one)
LATITUDE 37° 49' 00" ON; LONGITUDE 122° 22' 00" OW	☐ A. PRIVATE ☒ B. FEDERAL NAVY ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL ☐ F. OTHER ☐ G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION	02 SITE STATUS	03 YEARS OF OPERATION
10, 5, 87 (MONTH DAY YEAR)	☒ ACTIVE ☐ INACTIVE	1937? (BEGINNING YEAR) 1987 (ENDING YEAR) x UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)

☐ A. EPA ☐ B. EPA CONTRACTOR _____ (Name of firm) ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR _____ (Name of firm)
☐ E. STATE ☐ F. STATE CONTRACTOR _____ (Name of firm) XXX G. OTHER Dames & Moore (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
Ann M. Becker	Team Leader, Engineer	Dames & Moore	(415) 896-5858
09 OTHER INSPECTORS	**10 TITLE**	**11 ORGANIZATION**	**12 TELEPHONE NO.**
James G. Ritchie	Geologist	Dames & Moore	(415) 896-5858
Dale D. Shileikis	Biologist	Dames & Moore	(415) 896-5858
Carol L. Creasey	Hydrogeologist	Dames & Moore	(415) 896-5858
William H. Welsh	Engineer	Dames & Moore	(805) 685-4415
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
Not Applicable			( )
			( )
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
☒ PERMISSION ☐ WARRANT	1300	clear, mild

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO
Steve Hughes	NAVSTA Treasure Island	(415) 765-6114

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
Ann M. Becker	Contractor	Dames & Moore	(415)896-5858	11, 25, 87 (MONTH DAY YEAR)

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POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION
01 STATE | 02 SITE NUMBER
CA | 7170023330

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- ☐ A. SOLID
- ☐ B. POWDER, FINES
- ☐ C. SLUDGE
- ☐ D. OTHER _____ (Specify)
- ☐ E. SLURRY
- ☒ F. LIQUID
- ☐ G. GAS

02 WASTE QUANTITY AT SITE (Measures of waste quantities must be independent)

TONS: Unknown
CUBIC YARDS: _____
NO. OF DRUMS: _____

03 WASTE CHARACTERISTICS (Check all that apply)

- ☒ A. TOXIC
- ☐ B. CORROSIVE
- ☐ C. RADIOACTIVE
- ☒ D. PERSISTENT
- ☒ E. SOLUBLE
- ☐ F. INFECTIOUS
- ☒ G. FLAMMABLE
- ☐ H. IGNITABLE
- ☐ I. HIGHLY VOLATILE
- ☐ J. EXPLOSIVE
- ☐ K. REACTIVE
- ☐ L. INCOMPATIBLE
- ☐ M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			
SOL	SOLVENTS			
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS			

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently used CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
OLW	Misc. Hydrocarbons (F.O.)	999	OD	Unknown	
SOL	Misc. Solvents	999	OD	Unknown	
SOL	Misc. Paints	999	OD	Unknown	
SOL	Misc. Thinners	999	OD	Unknown	
PSD	Misc. Pesticides	999	OD	Unknown	
PSD	Misc. Herbicides	999	OD	Unknown	
ACD	Misc. Acids	999	OD	Unknown	
BAS	Misc. Bases	999	OD	Unknown	
MES	Misc. Metals	999	OD	Unknown	

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Employee Interviews

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POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☐ A. GROUNDWATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: 0
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Groundwater contamination from stormwater outfalls is unlikely since water collected in these drains is discharged directly into San Francisco Bay. Groundwater contamination is possible if these sewers leaked, but this has not been reported.

01 ☒ B. SURFACE WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: < 100
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☒ ALLEGED
04 NARRATIVE DESCRIPTION

Materials from stormwater system discharged to Bay.

01 ☐ C. CONTAMINATION OF AIR
03 POPULATION POTENTIALLY AFFECTED: 0
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

No data exists showing any release of air contaminants. Air contamination is extremely unlikely.

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS
03 POPULATION POTENTIALLY AFFECTED: _____
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

A fire marshall has not certified that this area presents a significant threat; therefore, no fire or explosive conditions are considered to be present.

01 ☐ E. DIRECT CONTACT
03 POPULATION POTENTIALLY AFFECTED: _____
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Direct contact with contaminants is extremely unlikely since ptentially contaminated fluids were carried in pipelines underground.

01 ☒ F. CONTAMINATION OF SOIL
03 AREA POTENTIALLY AFFECTED: Unknown (Acres)
02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Miscellaneous wastes discharged to Bay may have contributed to the contamination of large areas of subsurface muds.

01 ☐ G. DRINKING WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: 0
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

There is no potential for drinking water contamination. Groundwater on the island is unusable as drinking water. Drinking water is supplied from off the island.

01 ☐ H. WORKER EXPOSURE/INJURY
03 WORKERS POTENTIALLY AFFECTED: < 100
02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Worker exposure injury could potentially occur if the storm and wastewater sewer systems are excavated.

01 ☐ I. POPULATION EXPOSURE/INJURY
03 POPULATION POTENTIALLY AFFECTED: < 100
02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Population potentially injured would be workers excavating sewer lines and potentially contaminated soil surrounding those lines.

EPA

POTENTIAL HAZARDOUS WASTE SITE PRELIMINARY ASSESSMENT

PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE: CA | 02 SITE NUMBER: 7170023330

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☒ J. DAMAGE TO FLORA — 02 ☒ OBSERVED (DATE: 10/8/87) ☒ POTENTIAL ☐ ALLEGED

04 NARRATIVE DESCRIPTION: Stormwater discharges and spilled fuel could have potentially damaged algal species such as eelgrass beds on YBI and limited algal communities on the shores (rip-rap) of TI. Damage would be limited to the immediate mixing zone near the stormwater outfalls and the immediate vicinity of the fuel spill.

01 ☒ K. DAMAGE TO FAUNA — 02 ☒ OBSERVED (DATE: 10/8/87) ☒ POTENTIAL ☐ ALLEGED

04 NARRATIVE DESCRIPTION (Include name(s) of species): The fuel spill could have potentially damaged waterfowl, fish and benthic organisms present in the immediate vicinity of the spill.

01 ☒ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED

04 NARRATIVE DESCRIPTION: Fuel and materials in stormwater discharges could have been accumulated by marine life such as benthic and intertidal fauna and accumulated in the food chain by predators such as waterfowl and fish.

01 ☐ M. UNSTABLE CONTAINMENT OF WASTES (Spills, runoff, standing liquids, leaking drums) — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

Potentially contaminated waste is located primarily in the sediments surrounding the stormwater outfalls and San Francisco Bay waters.

01 ☐ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED

04 NARRATIVE DESCRIPTION

Very unlikely since contaminated waters are discharged directly into San Francisco Bay.

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☒ ALLEGED

04 NARRATIVE DESCRIPTION

Contamination of sewers and storm drains is known to have occurred. Discharge of these systems was directly into San Francisco Bay.

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☒ ALLEGED

04 NARRATIVE DESCRIPTION

Contaminated fluids were likely discharged directly into the waste and storm-water sewer systems.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

None

III. TOTAL POPULATION POTENTIALLY AFFECTED: _____

IV. COMMENTS

Materials discharged to the Bay through the stormwater outfalls are expected to be rapidly diluted and dispersed because of the large volume of water and strong currents.

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Employee interviews
Observations

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
☐ A. NPDES	CA 0110116		5/15/90	
☐ B. UIC				
☐ C. AIR				
☐ D. RCRA				
☐ E. RCRA INTERIM STATUS				
XX F. SPCC PLAN	---	Feb. 1988	---	SPCC OIL
☐ G. STATE (Specify)				
☐ H. LOCAL (Specify)				
☐ I. OTHER (Specify)				
☐ J. NONE				

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE
☐ A. SURFACE IMPOUNDMENT		
☐ B. PILES		
☐ C. DRUMS, ABOVE GROUND		
☐ D. TANK, ABOVE GROUND		
☐ E. TANK, BELOW GROUND		
☐ F. LANDFILL		
☐ G. LANDFARM		
☐ H. OPEN DUMP		
XX I. OTHER (Specify) Ocean Disposal		

04 TREATMENT (Check all that apply)

- ☐ A. INCINERATION
- ☐ B. UNDERGROUND INJECTION
- ☐ C. CHEMICAL/PHYSICAL
- ☐ D. BIOLOGICAL
- ☐ E. WASTE OIL PROCESSING
- ☐ F. SOLVENT RECOVERY
- ☐ G. OTHER RECYCLING/RECOVERY
- ☐ H. OTHER _____ (Specify)

05 OTHER

- ☐ A. BUILDINGS ON SITE

06 AREA OF SITE

Unknown (Acres)

07 COMMENTS

None

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

☐ A. ADEQUATE, SECURE XX B. MODERATE ☐ C. INADEQUATE, POOR ☐ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC.

Materials discharged are expected to have been rapidly diluted and dispersed to below levels of concern (most pollutants for most locations - some hot-spots may exist.)

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE ☐ YES ☐ NO

02 COMMENTS

Potential waste areas are easily accessible to marine life.

VI. SOURCES OF INFORMATION (Cite specific references e.g. state files, sample analysis, reports)

Personnel Interviews

/

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION
01 STATE: CA
02 SITE NUMBER: 7170023330

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as applicable): Pipeline from off the island

	SURFACE	WELL
COMMUNITY	A. ☐	B. ☐
NON-COMMUNITY	C. ☐	D. ☐

02 STATUS: Not used

ENDANGERED	AFFECTED	MONITORED
A. ☐	B. ☐	C. ☐
D. ☐	E. ☐	F. ☐

03 DISTANCE TO SITE: N/A
A. _____ (mi)
B. _____ (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)
☐ A. ONLY SOURCE FOR DRINKING ☐ B. DRINKING (Other sources available) COMMERCIAL, INDUSTRIAL, IRRIGATION (No other water sources available) ☐ C. COMMERCIAL, INDUSTRIAL, IRRIGATION (Limited other sources available) ☒ D. NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUND WATER: 0
03 DISTANCE TO NEAREST DRINKING WATER WELL: >3 (mi)

04 DEPTH TO GROUNDWATER	05 DIRECTION OF GROUNDWATER FLOW	06 DEPTH TO AQUIFER OF CONCERN	07 POTENTIAL YIELD OF AQUIFER	08 SOLE SOURCE AQUIFER
2 - 6 (ft)	Toward S.F. Bay.	N/A (ft)	N/A (gpd)	☐ YES ☐ NO

09 DESCRIPTION OF WELLS (including usage, depth, and location relative to population and buildings)
NOTE: The site is on an island in San Francisco Bay. There are no water wells in use on the island. Water is piped to the island on the San Francisco-Oakland Bay Bridge.

10 RECHARGE AREA		11 DISCHARGE AREA	
☒ YES ☐ NO	COMMENTS: Infiltration is occurring but recharging unusable aquifer.	☒ YES ☐ NO	COMMENTS: Discharge of groundwater eventually to San Francisco Bay.

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)
☐ A. RESERVOIR, RECREATION DRINKING WATER SOURCE ☐ B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES ☒ C. COMMERCIAL, INDUSTRIAL ☐ D. NOT CURRENTLY USED

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME:	AFFECTED	DISTANCE TO SITE
San Francisco Bay	☐	< 0.5 (mi)
	☐	(mi)
	☐	(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN
ONE (1) MILE OF SITE: A. 3000 NO OF PERSONS
TWO (2) MILES OF SITE: B. 3000 NO OF PERSONS
THREE (3) MILES OF SITE: C. >10,000 NO OF PERSONS

02 DISTANCE TO NEAREST POPULATION: < 0.1 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE: 200

04 DISTANCE TO NEAREST OFF-SITE BUILDING: < 0.1 (mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., rural, village, densely populated urban area)
NAVSTA TI contains residences for approximately 2500-3000 service personnel. The island is surrounded by San Francisco Bay. Across the Bay there are large cities including San Francisco and Oakland.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION
01 STATE 02 SITE NUMBER
CA 7170023330

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)
☐ A. $10^{-6} - 10^{-8}$ cm/sec ☐ B. $10^{-4} - 10^{-6}$ cm/sec ☒ C. $10^{-4} - 10^{-3}$ cm/sec ☐ D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)
☐ A. IMPERMEABLE (Less than 10^{-6} cm/sec) ☒ B. RELATIVELY IMPERMEABLE ($10^{-4} - 10^{-6}$ cm/sec) ☐ C. RELATIVELY PERMEABLE ($10^{-2} - 10^{-4}$ cm/sec) ☐ D. VERY PERMEABLE (Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK	04 DEPTH OF CONTAMINATED SOIL ZONE	05 SOIL pH	
300 (ft)	Unknown (ft)	Unknown	

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
-15 to -10 (in)	3.0 (in)	0-2 %	West	1 %

09 FLOOD POTENTIAL
SITE IS IN N/A YEAR FLOODPLAIN

10
☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)
ESTUARINE: A. > 2 (mi)
OTHER: B. _____ (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)
> 2 (mi)
ENDANGERED SPECIES: _____

13 LAND USE IN VICINITY
DISTANCE TO:

COMMERCIAL/INDUSTRIAL	RESIDENTIAL AREAS; NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS PRIME AG LAND	AGRICULTURAL LANDS AG LAND
A. 0.1 (mi)	B. > 2 (mi)	C. > 3 (mi)	D. > 3 (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

The site is located on Treasure Island, a man-made island on San Francisco Bay. Treasure Island is essentially flat with very little relief. Slopes in the vicinity of the site vary from 0 to 2%.

Yerba Buena Island is a natural island with gently rolling to very steep slopes (5 to 95%).

VII. SOURCES OF INFORMATION (Cite specific references e.g., state files, sample analysis, reports)

Personal inteviews.
Observations
Harding Lawson Associates Report (1985).

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 6 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
CA	7170023330

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER			
SURFACE WATER			
WASTE			
AIR			
RUNOFF			
SPILL			
SOIL			
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS

IV. PHOTOGRAPHS AND MAPS

01 TYPE [X] GROUND [X] AERIAL

02 IN CUSTODY OF Naval Energy and Environmental Support Activity (NEESA). (Name of organization or individual)

03 MAPS [X] YES [ ] NO

04 LOCATION OF MAPS NEESA

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis reports)

Personnel Interviews.

EPA FORM 2070-13 (7-81)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER	04 SIC CODE
United States Navy		

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	05 CITY	06 STATE	07 ZIP CODE
NAVSTA Treasure Island	San Francisco	CA	94130

PARENT COMPANY (if applicable)

08 NAME	09 D+B NUMBER	10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE	12 CITY	13 STATE	14 ZIP CODE

II. CURRENT OWNER(S) (continued)

01 NAME	02 D+B NUMBER	04 SIC CODE

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	05 CITY	06 STATE	07 ZIP CODE

PARENT COMPANY (if applicable) (continued)

08 NAME	09 D+B NUMBER	10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE	12 CITY	13 STATE	14 ZIP CODE

II. CURRENT OWNER(S) (continued)

01 NAME	02 D+B NUMBER	04 SIC CODE

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	05 CITY	06 STATE	07 ZIP CODE

PARENT COMPANY (if applicable) (continued)

08 NAME	09 D+B NUMBER	10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE	12 CITY	13 STATE	14 ZIP CODE

II. CURRENT OWNER(S) (continued)

01 NAME	02 D+B NUMBER	04 SIC CODE

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	05 CITY	06 STATE	07 ZIP CODE

PARENT COMPANY (if applicable) (continued)

08 NAME	09 D+B NUMBER	10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE	12 CITY	13 STATE	14 ZIP CODE

III. PREVIOUS OWNER(S) (List most recent first)

01 NAME	02 D+B NUMBER	04 SIC CODE

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	05 CITY	06 STATE	07 ZIP CODE

IV. REALTY OWNER(S) (If applicable, list most recent first)

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE

III. PREVIOUS OWNER(S) (continued)

01 NAME	02 D+B NUMBER	04 SIC CODE

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	05 CITY	06 STATE	07 ZIP CODE

IV. REALTY OWNER(S) (If applicable, list most recent first) (continued)

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE

III. PREVIOUS OWNER(S) (continued)

01 NAME	02 D+B NUMBER	04 SIC CODE

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	05 CITY	06 STATE	07 ZIP CODE

IV. REALTY OWNER(S) (If applicable, list most recent first) (continued)

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sampling analysis, reports)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

II. CURRENT OPERATOR (Provide if different from owner)

01 NAME: United States Navy	02 D+B NUMBER:
03 STREET ADDRESS (P.O. Box, RFD #, etc.): NAVSTA Treasure Island	04 SIC CODE:
05 CITY: San Francisco	06 STATE: CA / 07 ZIP CODE: 94130
08 YEARS OF OPERATION: 45	09 NAME OF OWNER: U.S. Navy

OPERATOR'S PARENT COMPANY (If applicable)

10 NAME:	11 D+B NUMBER:
12 STREET ADDRESS (P.O. Box, RFD #, etc.):	13 SIC CODE:
14 CITY:	15 STATE: / 16 ZIP CODE:

III. PREVIOUS OPERATOR(S) (List most recent first; provide only if different from owner)

01 NAME:	02 D+B NUMBER:
03 STREET ADDRESS (P.O. Box, RFD #, etc.):	04 SIC CODE:
05 CITY:	06 STATE: / 07 ZIP CODE:
08 YEARS OF OPERATION:	09 NAME OF OWNER DURING THIS PERIOD:

PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)

10 NAME:	11 D+B NUMBER:
12 STREET ADDRESS (P.O. Box, RFD #, etc.):	13 SIC CODE:
14 CITY:	15 STATE: / 16 ZIP CODE:

01 NAME:	02 D+B NUMBER:
03 STREET ADDRESS (P.O. Box, RFD #, etc.):	04 SIC CODE:
05 CITY:	06 STATE: / 07 ZIP CODE:
08 YEARS OF OPERATION:	09 NAME OF OWNER DURING THIS PERIOD:

10 NAME:	11 D+B NUMBER:
12 STREET ADDRESS (P.O. Box, RFD #, etc.):	13 SIC CODE:
14 CITY:	15 STATE: / 16 ZIP CODE:

01 NAME:	02 D+B NUMBER:
03 STREET ADDRESS (P.O. Box, RFD #, etc.):	04 SIC CODE:
05 CITY:	06 STATE: / 07 ZIP CODE:
08 YEARS OF OPERATION:	09 NAME OF OWNER DURING THIS PERIOD:

10 NAME:	11 D+B NUMBER:
12 STREET ADDRESS (P.O. Box, RFD #, etc.):	13 SIC CODE:
14 CITY:	15 STATE: / 16 ZIP CODE:

IV. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER
U.S. Navy	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
NAVSTA Treasure Island	

05 CITY	06 STATE	07 ZIP CODE
San Francisco	CA	94130

III. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

IV. TRANSPORTER(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
U.S. Navy			

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
NAVSTA Treasure Island			

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE
San Francisco	CA	94130			

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II PAST RESPONSE ACTIVITIES (Continued)

01 ☐ R. BARRIER WALLS CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ S. CAPPING/COVERING — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ T. BULK TANKAGE REPAIRED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ U. GROUT CURTAIN CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ V. BOTTOM SEALED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ W. GAS CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ X. FIRE CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Y. LEACHATE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Z. AREA EVACUATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 1. ACCESS TO SITE RESTRICTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 2. POPULATION RELOCATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 3. OTHER REMEDIAL ACTIVITIES — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Employee Interviews; Observations.

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 11 - ENFORCEMENT INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
CA	7170023330

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY ENFORCEMENT ACTION ☐ YES ☒ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY ENFORCEMENT ACTION

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis reports)

1 Personnel Interview.

EPA

POTENTIAL HAZARDOUS WASTE SITE
FINAL STRATEGY DETERMINATION

REGION	SITE NUMBER
IX	7170023330

File this form in the regional Hazardous Waste Log File and submit a copy to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Task Force (*EN-335*); 401 M St., SW; Washington, DC 20460.

I. SITE IDENTIFICATION

A. SITE NAME	B. STREET	
Areas of Suspected Underground Tanks	Naval Station (NAVSTA) Treasure Island	
C. CITY	**D. STATE**	**E. ZIP CODE**
San Francisco	CA	94130

II. FINAL DETERMINATION

Indicate the recommended action(s) and agency(ies) that should be involved by marking 'X' in the appropriate boxes.

RECOMMENDATION	MARK 'X'	ACTION AGENCY			
		EPA	STATE	LOCAL	PRIVATE
A. NO ACTION NEEDED					
B. REMEDIAL ACTION NEEDED, BUT NO RESOURCES AVAILABLE *(If yes, complete Section III.)*					
C. REMEDIAL ACTION *(If yes, complete Section IV.)*					
D. ENFORCEMENT ACTION *(If yes, specify in Part E whether the case will be primarily managed by the EPA or the State and what type of enforcement action is anticipated.)*					

E. RATIONALE FOR FINAL STRATEGY DETERMINATION

The site will continue to be evaluated and additional sampling will be performed. These results will be used to determine remedial actions. See report entitled Preliminary Assessment/Site Investigation of Naval Station, Treasure Island, CA.

F. IF A CASE DEVELOPMENT PLAN HAS BEEN PREPARED, SPECIFY THE DATE PREPARED *(mo., day, & yr.)*	G. IF AN ENFORCEMENT CASE HAS BEEN FILED, SPECIFY THE DATE FILED *(mo., day, & yr.)*

H. PREPARER INFORMATION

1. NAME	2. TELEPHONE NUMBER	3. DATE *(mo., day, & yr.)*

III. REMEDIAL ACTIONS TO BE TAKEN WHEN RESOURCES BECOME AVAILABLE

List all remedial actions, such as excavation, removal, etc. to be taken as soon as resources become available. See instructions for a list of Key Words for each of the actions to be used in the spaces below. Provide an estimate of the approximate cost of the remedy.

A. REMEDIAL ACTION	B. ESTIMATED COST	C. REMARKS
	$	
	$	
	$	
	$	
	$	
	$	
	$	
	$	
D. TOTAL ESTIMATED COST	$	

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Continued From Front

IV. REMEDIAL ACTIONS

A. SHORT TERM/EMERGENCY ACTIONS *(On Site and Off-Site)*: List all emergency actions taken or planned to bring the site under immediate control, e.g., restrict access, provide alternate water supply, etc. See instructions for a list of Key Words for each of the actions to be used in the spaces below.

1. ACTION	2. ACTION START DATE (mo, day, & yr)	3. ACTION END DATE (mo, day, & yr)	4. ACTION AGENCY (EPA, State, Private Party)	5. COST	6. SPECIFY 311 OR OTHER ACTION. INDICATE THE MAGNITUDE OF THE WORK REQUIRED.
				$	
				$	
				$	
				$	
				$	
				$	

B. LONG TERM STRATEGY *(On Site and Off-Site)*: List all long term solutions, e.g., excavation, removal, ground water monitoring wells, etc. See instructions for a list of Key Words for each of the actions to be used in the spaces below.

1. ACTION	2. ACTION START DATE (mo, day, & yr)	3. ACTION END DATE (mo, day, & yr)	4. ACTION AGENCY (EPA, State Private Party)	5. COST	6. SPECIFY 311 OR OTHER ACTION: INDICATE THE MAGNITUDE OF THE WORK REQUIRED.
				$	
				$	
				$	
				$	
				$	
				$	

C. MANHOURS AND COST BY ACTION AGENCY

1. ACTION AGENCY	2. TOTAL MAN-HOURS FOR REMEDIAL ACTIVITIES	3. TOTAL COST FOR REMEDIAL ACTIVITIES
a. EPA		$
b. STATE		$
c. PRIVATE PARTIES		$
d. OTHER *(specify)*:		$

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

EPA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
Site 15 - Old Fuel Farm	NAVSTA Treasure Island

03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
San Francisco	CA	94130	San Francisco	075	05

09 COORDINATES	10 TYPE OF OWNERSHIP (Check one)
LATITUDE 37° 49 00 ON / LONGITUDE 122° 22 00 OW	☐ A. PRIVATE ☒ B. FEDERAL NAVY ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL ☐ F. OTHER _____ ☐ G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION	02 SITE STATUS	03 YEARS OF OPERATION
10 / 5 / 87 (MONTH DAY YEAR)	☐ ACTIVE ☒ INACTIVE	Late 1930's (BEGINNING YEAR) / Early 1940's (ENDING YEAR) ___ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)

☐ A. EPA ☐ B. EPA CONTRACTOR _____ (Name of firm) ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR _____ (Name of firm)
☐ E. STATE ☐ F. STATE CONTRACTOR _____ (Name of firm) ☒ G. OTHER Dames & Moore (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
Ann M. Becker	Team Leader, Engineer	Dames & Moore	(415) 896-5858
09 OTHER INSPECTORS	**10 TITLE**	**11 ORGANIZATION**	**12 TELEPHONE NO.**
James G. Ritchie	Geologist	Dames & Moore	(415) 896-5858
Dale D. Shileikis	Biologist	Dames & Moore	(415) 896-5858
Carol L. Creasey	Hydrogeologist	Dames & Moore	(415) 896-5858
William H. Welsh	Engineer	Dames & Moore	(805) 685-4415
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
Not Applicable			( )
			( )
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
☒ PERMISSION ☐ WARRANT	1300	clear

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO
Steve Hughes	NAVSTA Treasure Island	(415) 765-6114

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
Ann M. Becker	Contractor	Dames & Moore	(415)896-5858	11 / 25 / 87 (MONTH DAY YEAR)

EPA FORM 2070-13 (7-81)

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POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- ☐ A. SOLID
- ☐ B. POWDER, FINES
- ☐ C. SLUDGE
- ☐ D. OTHER _____ (Specify)
- ☐ E. SLURRY
- XX F. LIQUID
- ☐ G. GAS

02 WASTE QUANTITY AT SITE

(Measures of waste quantities must be independent)

TONS: Unknown

CUBIC YARDS: _____

NO. OF DRUMS: _____

03 WASTE CHARACTERISTICS (Check all that apply)

- XX A. TOXIC
- ☐ B. CORROSIVE
- ☐ C. RADIOACTIVE
- ☐ D. PERSISTENT
- ☐ E. SOLUBLE
- ☐ F. INFECTIOUS
- XX G. FLAMMABLE
- ☐ H. IGNITABLE
- ☐ I. HIGHLY VOLATILE
- ☐ J. EXPLOSIVE
- ☐ K. REACTIVE
- ☐ L. INCOMPATIBLE
- ☐ M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE	Unknown		
SOL	SOLVENTS			
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS			

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
OLW	Gasoline	999	TK, OD	Unknown	
OLW	Diesel	999	TK, OD	Unknown	
OLW	Fuel Oil	999	TK, OD	Unknown	

V. FEEDSTOCKS (See Appendix for CAS numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Employee Interviews
Naval internal reports

REPRODUCTION OF GOVERNMENT

REPRODUCED AT GOVERNMENT EXPENSE

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: CA | 02: 7170023330

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 [X] A. GROUNDWATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: < 100
02 [ ] OBSERVED (DATE: _____) [X] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

Fuel releases may have migrated to groundwater and caused contamination.

01 [X] B. SURFACE WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: < 100
02 [ ] OBSERVED (DATE: _____) [X] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

Fuel releases may have migrated to waters of the Bay.

01 [ ] C. CONTAMINATION OF AIR
03 POPULATION POTENTIALLY AFFECTED: _____
02 [ ] OBSERVED (DATE: _____) [ ] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

No data exists showing any release of air contaminants. Air contamination is extremely unlikely.

01 [X] D. FIRE/EXPLOSIVE CONDITIONS
03 POPULATION POTENTIALLY AFFECTED: < 100
02 [ ] OBSERVED (DATE: _____) [X] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

Released fuel may lead to potential for fire when work is in close proximity to contaminated soil.

01 [ ] E. DIRECT CONTACT
03 POPULATION POTENTIALLY AFFECTED: _____
02 [ ] OBSERVED (DATE: _____) [ ] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

Direct contact with contaminants is extremely unlikely because potential contamination is in subsurface soils and groundwater.

01 [X] F. CONTAMINATION OF SOIL
03 AREA POTENTIALLY AFFECTED: 5 (Acres)
02 [ ] OBSERVED (DATE: _____) [ ] POTENTIAL [X] ALLEGED
04 NARRATIVE DESCRIPTION

Internal Navy correspondence reports hydrocarbon contaminated soil was encountered in this area during construction of Berthing Pier P-503.

01 [ ] G. DRINKING WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: 0
02 [ ] OBSERVED (DATE: _____) [ ] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

There is no potential for drinking water contamination. Water for drinking is piped in from across the Bay Bridge.

01 [X] H. WORKER EXPOSURE/INJURY
03 WORKERS POTENTIALLY AFFECTED: < 100
02 [ ] OBSERVED (DATE: _____) [X] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

See F, above. Worker exposure injury could potentially occur if contaminated soil and abandoned pipelines are excavated.

01 [ ] I. POPULATION EXPOSURE/INJURY
03 POPULATION POTENTIALLY AFFECTED: < 100
02 [ ] OBSERVED (DATE: _____) [ ] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

Population potentially injured from exposure would be workers excavating contaminated soil and abandoned pipelines.

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☒ J. DAMAGE TO FLORA — 02 ☒ OBSERVED (DATE: 10/8/87) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION: Contamination of soils could potentially damage landscape flora in localized area. Damage would be restricted to the vicinity of actual contamination.

01 ☒ K. DAMAGE TO FAUNA — 02 ☒ OBSERVED (DATE: 10/8/87) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION (Include names of species): Contamination of soils could potentially damage burrowing species (ground squirrels) in the immediate vicinity. Contaminated groundwater would damage fauna and other locations including San Francisco Bay (benthic species).

01 ☒ L. CONTAMINATION OF FOOD CHAIN — 02 ☒ OBSERVED (DATE: 10/8/87) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION: Contaminants reaching San Francisco Bay via groundwater may have accumulated in marine life such as benthic and intertidal fauna and entered food chain via predator by waterfowl or fish.

01 ☐ M. UNSTABLE CONTAINMENT OF WASTES (Spills, runoff, standing liquids, leaking drums) — 02 ☐ OBSERVED (DATE:) ☒ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: < 100 — 04 NARRATIVE DESCRIPTION
Released material is not adequately contained and can migrate to groundwater and waters of the Bay.

01 ☐ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE:) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Very unlikely unless significant groundwater migration occurs.

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE:) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Very unlikely. There is no history of spills of fuel associated with operation of the fuel storage tanks.

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE:) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
None has been reported.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS
None

III. TOTAL POPULATION POTENTIALLY AFFECTED:

IV. COMMENTS
Hydrocarbon was encountered during trenching activities in this area associated with construction of Berthing Pier P.503 in 1985.

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)
Primarily employee interviews
Internal Navy correspondence.

EPA FORM 2070-12 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
☐ A. NPDES				
☐ B. UIC				
☐ C. AIR				
☐ D. RCRA				
☐ E. RCRA INTERIM STATUS				
XX ☐ F. SPCC PLAN	---	Feb. 1988	---	SPCC OIL
☐ G. STATE (Specify)				
☐ H. LOCAL (Specify)				
☐ I. OTHER (Specify)				
☐ J. NONE				

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE
☐ A. SURFACE IMPOUNDMENT		
☐ B. PILES		
☐ C. DRUMS, ABOVE GROUND		
☐ D. TANK, ABOVE GROUND		
☐ E. TANK, BELOW GROUND		
☐ F. LANDFILL		
☐ G. LANDFARM		
☐ H. OPEN DUMP		
XX ☐ I. OTHER (Specify) Release		

04 TREATMENT (Check all that apply)

- ☐ A. INCINERATION
- ☐ B. UNDERGROUND INJECTION
- ☐ C. CHEMICAL/PHYSICAL
- ☐ D. BIOLOGICAL
- ☐ E. WASTE OIL PROCESSING
- ☐ F. SOLVENT RECOVERY
- ☐ G. OTHER RECYCLING/RECOVERY
- ☐ H. OTHER (Specify)

05 OTHER

X☒ A. BUILDINGS ON SITE

06 AREA OF SITE

5 (Acres)

07 COMMENTS

None

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

☐ A. ADEQUATE, SECURE ☐ B. MODERATE X☒ C. INADEQUATE, POOR ☐ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC.

Released material is not well contained and can migrate to groundwater and waters of the Bay.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE ☐ YES XX☒ NO

02 COMMENTS

Released material is underground and not easily accessible.

VI. SOURCES OF INFORMATION (Cite specific references, e.g. state files, sample analysis, reports)

Personnel Interviews
Internal Navy correspondence
Observation.

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as applicable): Pipeline from off the island

	SURFACE	WELL
COMMUNITY	A. ☐	B. ☐
NON-COMMUNITY	C. ☐	D. ☐

02 STATUS: Not used

ENDANGERED	AFFECTED	MONITORED
A. ☐	B. ☐	C. ☐
D. ☐	E. ☐	F. ☐

03 DISTANCE TO SITE: N/A
A. _____ (mi)
B. _____ (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)
☐ A. ONLY SOURCE FOR DRINKING ☐ B. DRINKING (Other sources available) COMMERCIAL, INDUSTRIAL, IRRIGATION (No other water sources available) ☐ C. COMMERCIAL, INDUSTRIAL, IRRIGATION (Limited other sources available) XX ☒ D. NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUND WATER: 0
03 DISTANCE TO NEAREST DRINKING WATER WELL: > 3 (mi)

04 DEPTH TO GROUNDWATER	05 DIRECTION OF GROUNDWATER FLOW	06 DEPTH TO AQUIFER OF CONCERN	07 POTENTIAL YIELD OF AQUIFER	08 SOLE SOURCE AQUIFER
2 - 6 (ft)	Toward S.F. Bay.	N/A (ft)	N/A (gpd)	☐ YES ☐ NO

09 DESCRIPTION OF WELLS (Including usage, depth, and location relative to population and buildings)

NOTE: The site is on an island in San Francisco Bay. There are no water wells in use on the island. Water is piped to the island on the San Francisco-Oakland Bay Bridge.

10 RECHARGE AREA		11 DISCHARGE AREA	
XX ☒ YES ☐ NO	COMMENTS: Infiltration occurring but recharging unusable aquifer.	XX ☒ YES ☐ NO	COMMENTS: Discharge of groundwater eventually to San Francisco Bay.

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)
☐ A. RESERVOIR, RECREATION DRINKING WATER SOURCE ☐ B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES XX ☒ C. COMMERCIAL, INDUSTRIAL ☐ D. NOT CURRENTLY USED

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME:	AFFECTED	DISTANCE TO SITE
San Francisco Bay	☐	< 0.5 (mi)
	☐	(mi)
	☐	(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN
ONE (1) MILE OF SITE: A. 3000 NO OF PERSONS
TWO (2) MILES OF SITE: B. 3000 NO OF PERSONS
THREE (3) MILES OF SITE: C. >10,000 NO OF PERSONS

02 DISTANCE TO NEAREST POPULATION: < 0.1 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE: 200

04 DISTANCE TO NEAREST OFF-SITE BUILDING: < 0.1 (mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., rural, village, densely populated urban area)

NAVSTA TI contains residences for approximately 2500-3000 service personnel. The island is surrounded by San Francisco Bay. Across the Bay there are large cities including San Francisco and Oakland.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION
01 STATE 02 SITE NUMBER
CA 7170023330

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☐ A. $10^{-6} - 10^{-8}$ cm/sec ☐ B. $10^{-4} - 10^{-6}$ cm/sec ☒ C. $10^{-4} - 10^{-3}$ cm/sec ☐ D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☐ A. IMPERMEABLE (Less than 10^{-6} cm/sec) ☒ B. RELATIVELY IMPERMEABLE ($10^{-4} - 10^{-6}$ cm/sec) ☐ C. RELATIVELY PERMEABLE ($10^{-2} - 10^{-4}$ cm/sec) ☐ D. VERY PERMEABLE (Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK	04 DEPTH OF CONTAMINATED SOIL ZONE	05 SOIL pH	
300 (ft)	Unknown (ft)	Unknown	

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
-15 to -10 (in)	3.0 (in)	0-2 %	West	1 %

09 FLOOD POTENTIAL
SITE IS IN N/A YEAR FLOODPLAIN

10
☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE	OTHER
A. > 2 (mi)	B. (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)
> 2 (mi)
ENDANGERED SPECIES:

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL	RESIDENTIAL AREAS; NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS PRIME AG LAND	AG LAND
A. 0.1 (mi)	B. > 2 (mi)	C. > 3 (mi)	D. > 3 (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

The site is located on Treasure Island, a man-made island on San Francisco Bay. Treasure Island is essentially flat with very little relief. Slopes in the vicinity of the site vary from 0 to 2%.

VII. SOURCES OF INFORMATION (Cite specific references e.g., state files, sample analysis, reports)

Personal inteviews.
Observations
Harding Lawson Associates Report (1985).

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 6 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
CA	7170023330

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER			
SURFACE WATER			
WASTE			
AIR			
RUNOFF			
SPILL			
SOIL			
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS

IV. PHOTOGRAPHS AND MAPS

01 TYPE [X] GROUND [X] AERIAL

02 IN CUSTODY OF Naval Energy and Environmental Support Activity (NEESA). (Name of organization or individual)

03 MAPS [X] YES [ ] NO

04 LOCATION OF MAPS NEESA

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis reports)

Personnel Interviews.

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER
United States Navy	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
NAVSTA Treasure Island	

05 CITY	06 STATE	07 ZIP CODE
San Francisco	CA	94130

PARENT COMPANY (If applicable)

08 NAME	09 D+B NUMBER

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

12 CITY	13 STATE	14 ZIP CODE

III. PREVIOUS OWNER(S) (List most recent first)

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

IV. REALTY OWNER(S) (If applicable, list most recent first)

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

II. CURRENT OPERATOR (Provide if different from owner)

01 NAME: United States Navy	02 D+B NUMBER:
03 STREET ADDRESS (P.O. Box, RFD #, etc.): NAVSTA Treasure Island	04 SIC CODE:
05 CITY: San Francisco	06 STATE: CA / 07 ZIP CODE: 94130
08 YEARS OF OPERATION: 45	09 NAME OF OWNER: U.S. Navy

OPERATOR'S PARENT COMPANY (If applicable)

10 NAME:	11 D+B NUMBER:
12 STREET ADDRESS (P.O. Box, RFD #, etc.):	13 SIC CODE:
14 CITY:	15 STATE: / 16 ZIP CODE:

III. PREVIOUS OPERATOR(S) (List most recent first; provide only if different from owner)

01 NAME:	02 D+B NUMBER:
03 STREET ADDRESS (P.O. Box, RFD #, etc.):	04 SIC CODE:
05 CITY:	06 STATE: / 07 ZIP CODE:
08 YEARS OF OPERATION:	09 NAME OF OWNER DURING THIS PERIOD:

PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)

10 NAME:	11 D+B NUMBER:
12 STREET ADDRESS (P.O. Box, RFD #, etc.):	13 SIC CODE:
14 CITY:	15 STATE: / 16 ZIP CODE:

01 NAME:	02 D+B NUMBER:
03 STREET ADDRESS (P.O. Box, RFD #, etc.):	04 SIC CODE:
05 CITY:	06 STATE: / 07 ZIP CODE:
08 YEARS OF OPERATION:	09 NAME OF OWNER DURING THIS PERIOD:

10 NAME:	11 D+B NUMBER:
12 STREET ADDRESS (P.O. Box, RFD #, etc.):	13 SIC CODE:
14 CITY:	15 STATE: / 16 ZIP CODE:

01 NAME:	02 D+B NUMBER:
03 STREET ADDRESS (P.O. Box, RFD #, etc.):	04 SIC CODE:
05 CITY:	06 STATE: / 07 ZIP CODE:
08 YEARS OF OPERATION:	09 NAME OF OWNER DURING THIS PERIOD:

10 NAME:	11 D+B NUMBER:
12 STREET ADDRESS (P.O. Box, RFD #, etc.):	13 SIC CODE:
14 CITY:	15 STATE: / 16 ZIP CODE:

IV. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

EPA FORM 2070-13 (7-81)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
CA	7170023330

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER
U.S. Navy	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
NAVSTA Treasure Island	

05 CITY	06 STATE	07 ZIP CODE
San Francisco	CA	94130

III. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE

IV. TRANSPORTER(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
U.S. Navy			
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
NAVSTA Treasure Island			
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE
San Francisco	CA 94130		
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II PAST RESPONSE ACTIVITIES (Continued)

01 ☐ R. BARRIER WALLS CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ S. CAPPING/COVERING — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ T. BULK TANKAGE REPAIRED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ U. GROUT CURTAIN CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ V. BOTTOM SEALED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ W. GAS CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ X. FIRE CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Y. LEACHATE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Z. AREA EVACUATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 1. ACCESS TO SITE RESTRICTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 2. POPULATION RELOCATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 3. OTHER REMEDIAL ACTIVITIES — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

III. SOURCES OF INFORMATION (Cite specific references, e.g., State files, sample analysis, reports)

Employee Interviews; Observations.

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 11 - ENFORCEMENT INFORMATION

I. IDENTIFICATION	
01 STATE CA	02 SITE NUMBER 7170023330

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY ENFORCEMENT ACTION ☐ YES ☒ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY/ENFORCEMENT ACTION

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis reports)

Personnel Interview.

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POTENTIAL HAZARDOUS WASTE SITE
FINAL STRATEGY DETERMINATION

REGION	SITE NUMBER
IX	7170023330

File this form in the regional Hazardous Waste Log File and submit a copy to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Task Force (*EN-335*); 401 M St., SW; Washington, DC 20460.

I. SITE IDENTIFICATION

A. SITE NAME	B. STREET
Stormwater Outfalls/Pier 21 Fuel Release	Naval Station (NAVSTA) Treasure Island

C. CITY	D. STATE	E. ZIP CODE
San Francisco	CA	94130

II. FINAL DETERMINATION

Indicate the recommended action(s) and agency(ies) that should be involved by marking 'X' in the appropriate boxes.

RECOMMENDATION	MARK 'X'	ACTION AGENCY: EPA	STATE	LOCAL	PRIVATE
A. NO ACTION NEEDED					
B. REMEDIAL ACTION NEEDED, BUT NO RESOURCES AVAILABLE *(If yes, complete Section III.)*					
C. REMEDIAL ACTION *(If yes, complete Section IV.)*					
D. ENFORCEMENT ACTION *(If yes, specify in Part E whether the case will be primarily managed by the EPA or the State and what type of enforcement action is anticipated.)*					

E. RATIONALE FOR FINAL STRATEGY DETERMINATION

The site will continue to be evaluated and additional sampling will be performed. These results will be used to determine remedial actions. See report entitled Preliminary Assessment/Site Investigation of Naval Station, Treasure Island, CA.

F. IF A CASE DEVELOPMENT PLAN HAS BEEN PREPARED, SPECIFY THE DATE PREPARED *(mo., day, & yr.)*	G. IF AN ENFORCEMENT CASE HAS BEEN FILED, SPECIFY THE DATE FILED *(mo., day, & yr.)*

H. PREPARER INFORMATION

1. NAME	2. TELEPHONE NUMBER	3. DATE *(mo., day, & yr.)*

III. REMEDIAL ACTIONS TO BE TAKEN WHEN RESOURCES BECOME AVAILABLE

List all remedial actions, such as excavation, removal, etc. to be taken as soon as resources become available. See instructions for a list of Key Words for each of the actions to be used in the spaces below. Provide an estimate of the approximate cost of the remedy.

A. REMEDIAL ACTION	B. ESTIMATED COST	C. REMARKS
	$	
	$	
	$	
	$	
	$	
	$	
	$	
	$	
D. TOTAL ESTIMATED COST	$	

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Continued From Front

IV. REMEDIAL ACTIONS

A. SHORT TERM/EMERGENCY ACTIONS *(On Site and Off-Site)*: List all emergency actions taken or planned to bring the site under immediate control, e.g., restrict access, provide alternate water supply, etc. See instructions for a list of Key Words for each of the actions to be used in the spaces below.

1. ACTION	2. ACTION START DATE (mo.,day.,& yr.)	3. ACTION END DATE (mo.,day.,& yr.)	4. ACTION AGENCY (EPA, State, Private Party)	5. COST	6. SPECIFY 311 OR OTHER ACTION. INDICATE THE MAGNITUDE OF THE WORK REQUIRED.
				$	
				$	
				$	
				$	
				$	
				$	

B. LONG TERM STRATEGY *(On Site and Off-Site)*: List all long term solutions, e.g., excavation, removal, ground water monitoring wells, etc. See instructions for a list of Key Words for each of the actions to be used in the spaces below.

1. ACTION	2. ACTION START DATE (mo.,day.,& yr.)	3. ACTION END DATE (mo.,day.,& yr.)	4. ACTION AGENCY (EPA, State Private Party)	5. COST	6. SPECIFY 311 OR OTHER ACTION: INDICATE THE MAGNITUDE OF THE WORK REQUIRED.
				$	
				$	
				$	
				$	
				$	
				$	

C. MANHOURS AND COST BY ACTION AGENCY

1. ACTION AGENCY	2. TOTAL MAN-HOURS FOR REMEDIAL ACTIVITIES	3. TOTAL COST FOR REMEDIAL ACTIVITIES
a. EPA		$
b. STATE		$
c. PRIVATE PARTIES		$
d. OTHER *(specify)*:		$

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

EPA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER				
Site 16 - Clipper Cove Tank Farm	NAVSTA Treasure Island				
03 CITY	**04 STATE**	**05 ZIP CODE**	**06 COUNTY**	**07 COUNTY CODE**	**08 CONG DIST**
San Francisco	CA	94130	San Francisco	075	05

09 COORDINATES	10 TYPE OF OWNERSHIP (Check one)
LATITUDE 37° 49' 00" ON; LONGITUDE 122° 22' 00" OW	☐ A. PRIVATE ☒ B. FEDERAL NAVY ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL ☐ F. OTHER ☐ G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION	02 SITE STATUS	03 YEARS OF OPERATION
10, 5, 87 (MONTH DAY YEAR)	☐ ACTIVE ☒ INACTIVE	Early 1940's (BEGINNING YEAR) Early 1960's (ENDING YEAR) ☐ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)

☐ A. EPA ☐ B. EPA CONTRACTOR _____ (Name of firm) ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR _____ (Name of firm)
☐ E. STATE ☐ F. STATE CONTRACTOR _____ (Name of firm) ☒ G. OTHER Dames & Moore (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
Ann M. Becker -	Team Leader, Engineer	Dames & Moore	(415) 896-5858
09 OTHER INSPECTORS	**10 TITLE**	**11 ORGANIZATION**	**12 TELEPHONE NO.**
James G. Ritchie	Geologist	Dames & Moore	(415) 896-5858
Dale D. Shileikis	Biologist	Dames & Moore	(415) 896-5858
Carol L. Creasey	Hydrogeologist	Dames & Moore	(415) 896-5858
William H. Welsh	Engineer	Dames & Moore	(805) 685-4415
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
Not Applicable			( )
			( )
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
☒ PERMISSION ☐ WARRANT	1300	clear, mild

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO
Steve Hughes	NAVSTA Treasure Island	(415) 765-6114

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
Ann M. Becker	Contractor	Dames & Moore	(415)896-5858	11, 25, 87 (MONTH DAY YEAR)

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POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- ☐ A. SOLID
- ☐ B. POWDER, FINES
- XX ☐ C. SLUDGE
- ☐ D. OTHER _____ (Specify)
- ☐ E. SLURRY
- XX ☐ F. LIQUID
- ☐ G. GAS

02 WASTE QUANTITY AT SITE (Measures of waste quantities must be independent)

TONS: Unknown

CUBIC YARDS: _____

NO. OF DRUMS: _____

03 WASTE CHARACTERISTICS (Check all that apply)

- XX ☐ A. TOXIC
- ☐ B. CORROSIVE
- ☐ C. RADIOACTIVE
- XX ☐ D. PERSISTENT
- ☐ E. SOLUBLE
- ☐ F. INFECTIOUS
- XX ☐ G. FLAMMABLE
- ☐ H. IGNITABLE
- ☐ I. HIGHLY VOLATILE
- ☐ J. EXPLOSIVE
- ☐ K. REACTIVE
- ☐ L. INCOMPATIBLE
- ☐ M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			
SOL	SOLVENTS			
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS			

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently used CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
OLW	Aviation gasoline	999	TK,OD	Unknown	
OLW	Aviation diesel	999	TK,OD	Unknown	
OLW	Tank bottom sludge	999	TK,OD	Unknown	

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Employee Interviews

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☒ A. GROUNDWATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: < 100
02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Material released in this area may migrate to groundwater and into San Francisco Bay.

01 ☒ B. SURFACE WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: < 100
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☒ ALLEGED
04 NARRATIVE DESCRIPTION

Reports indicate liquid and sludge material was released to the Bay on several occasions.

01 ☐ C. CONTAMINATION OF AIR
03 POPULATION POTENTIALLY AFFECTED: 0
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Very unlikely. No data exists showing any release of air contamination.

01 ☐ D. FIRE EXPLOSIVE CONDITIONS
03 POPULATION POTENTIALLY AFFECTED: _____
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

A fire marshall has not certified that this area presents a significant threat; therefore, no fire or explosive conditions are considered to be present.

01 ☐ E. DIRECT CONTACT
03 POPULATION POTENTIALLY AFFECTED: _____
02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Direct contact with contaminants is possible, as contaminated sludge and heavier material was placed directly on ground surface.

01 ☐ F. CONTAMINATION OF SOIL
03 AREA POTENTIALLY AFFECTED: 2 (Acres)
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☒ ALLEGED
04 NARRATIVE DESCRIPTION

Reports of released material on the ground resulting in contaminated soil.

01 ☐ G. DRINKING WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: 0
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

There is no potential for drinking water contamination. Drinking water is piped in from across the Bay Bridge.

01 ☐ H. WORKER EXPOSURE/INJURY
03 WORKERS POTENTIALLY AFFECTED: < 100
02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Worker exposure injury could potentially occur if contaminated soil is excavated.

01 ☐ I. POPULATION EXPOSURE/INJURY
03 POPULATION POTENTIALLY AFFECTED: _____
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Population potentially injured would be workers excavating contaminated soil and patrons who use this area as a picnic site.

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POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☒ J. DAMAGE TO FLORA — 02 ☒ OBSERVED (DATE: 10-9-87) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Contamination of soils could potentially damage landscape or ruderal vegetation in localized area. Damage would be restricted primarily to the vicinity of actual contamination.

01 ☐ K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE: 10-9-87) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION (Include number of species)
Contamination of soils could potentially damage fauna (burrowing species; ground squirrels) by direct contact with soil. Potential damage to marine fauna (benthic and intertidal species) via migration of contaminated material or direct disposal could have occurred.

01 ☒ L. CONTAMINATION OF FOOD CHAIN — 02 ☒ OBSERVED (DATE: 10-9-87) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Materials released to the Bay may have accumulated in marine life and entered the food chain via predator by waterfowl and fish.

01 ☒ M. UNSTABLE CONTAINMENT OF WASTES (Spills, runoff, standing liquids, leaking drums) — 02 ☐ OBSERVED (DATE:) ☒ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: < 100 — 04 NARRATIVE DESCRIPTION
Material discharged to surface or subsurface was not contained and may have migrated.

01 ☐ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE:) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Very unlikely unless significant groundwater migration has occurred.

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE:) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Very unlikely. Contamination from erosion and infiltration of contaminants from sludge and other materials would enter the soil and groundwater/San Francisco Bay directly.

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE:) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Sludge and material removed from ten storage tanks was placed directly on ground surface.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS
Possible underground piping location is unknown.

III. TOTAL POPULATION POTENTIALLY AFFECTED: < 100

IV. COMMENTS
Fuel and tank bottom sludges were reported to have been discharged to the surface soil and waters of the Bay at the site.

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)
Primarily employee interviews

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
☐ A. NPDES				
☐ B. UIC				
☐ C. AIR				
☐ D. RCRA				
☐ E. RCRA INTERIM STATUS				
XX ☒ F. SPCC PLAN	---	Feb. 1988	---	SPCC Oil
☐ G. STATE (Specify)				
☐ H. LOCAL (Specify)				
☐ I. OTHER (Specify)				
☐ J. NONE				

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE
☐ A. SURFACE IMPOUNDMENT		
☐ B. PILES		
☐ C. DRUMS, ABOVE GROUND		
XX ☒ D. TANK, ABOVE GROUND		
☐ E. TANK, BELOW GROUND		
☐ F. LANDFILL		
☐ G. LANDFARM		
☐ H. OPEN DUMP		
XX ☒ I. OTHER (Specify) Releases		

04 TREATMENT (Check all that apply)
- ☐ A. INCINERATION
- ☐ B. UNDERGROUND INJECTION
- ☐ C. CHEMICAL/PHYSICAL
- ☐ D. BIOLOGICAL
- ☐ E. WASTE OIL PROCESSING
- ☐ F. SOLVENT RECOVERY
- ☐ G. OTHER RECYCLING/RECOVERY
- ☐ H. OTHER (Specify)

05 OTHER
- ☐ A. BUILDINGS ON SITE

06 AREA OF SITE
2 (Acres)

07 COMMENTS

None

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

☐ A. ADEQUATE, SECURE ☐ B. MODERATE XX ☒ C. INADEQUATE, POOR ☐ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC.

Released materials were not contained and could migrate to groundwater or to waters of the Bay.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE ☐ YES XX ☐ NO

02 COMMENTS

Released material has migrated into the ground or been washed into the Bay and so wastes are not easily accessible.

VI. SOURCES OF INFORMATION (Cite specific references, e.g. state files, sample analysis, reports)

Personnel Interviews
Observations.

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 71700233.30

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as appropriate): Pipeline from off the island

	SURFACE	WELL
COMMUNITY	A. ☐	B. ☐
NON-COMMUNITY	C. ☐	D. ☐

02 STATUS: Not used

ENDANGERED	AFFECTED	MONITORED
A. ☐	B. ☐	C. ☐
D. ☐	E. ☐	F. ☐

03 DISTANCE TO SITE
A. N/A (mi)
B. _____ (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)
☐ A. ONLY SOURCE FOR DRINKING ☐ B. DRINKING (Other sources available) COMMERCIAL, INDUSTRIAL, IRRIGATION (No other water sources available) ☐ C. COMMERCIAL, INDUSTRIAL, IRRIGATION (Limited other sources available) XX D. NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUND WATER: 0
03 DISTANCE TO NEAREST DRINKING WATER WELL: > 3 (mi)

04 DEPTH TO GROUNDWATER	05 DIRECTION OF GROUNDWATER FLOW	06 DEPTH TO AQUIFER OF CONCERN	07 POTENTIAL YIELD OF AQUIFER	08 SOLE SOURCE AQUIFER
2 - 6 (ft)	Toward S.F. Bay.	N/A (ft)	N/A (gpd)	☐ YES ☐ NO

09 DESCRIPTION OF WELLS (Including useage, depth, and location relative to population and buildings)
NOTE: The site is on an island in San Francisco Bay. There are no water wells in use on the island. Water is piped to the island on the San Francisco-Oakland Bay Bridge.

10 RECHARGE AREA		11 DISCHARGE AREA	
XX YES ☐ NO	COMMENTS: Infiltration is occurring but recharging unusable aquifer.	XX YES ☐ NO	COMMENTS: Discharge of groundwater eventually to San Francisco Bay.

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)
☐ A. RESERVOIR, RECREATION DRINKING WATER SOURCE ☐ B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES XX C. COMMERCIAL, INDUSTRIAL ☐ D. NOT CURRENTLY USED

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME:	AFFECTED	DISTANCE TO SITE
San Francisco Bay	☐	< 0.5 (mi)
	☐	(mi)
	☐	(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN
ONE (1) MILE OF SITE: A. 3000 NO OF PERSONS
TWO (2) MILES OF SITE: B. 3000 NO OF PERSONS
THREE (3) MILES OF SITE: ≥10,000 NO OF PERSONS

02 DISTANCE TO NEAREST POPULATION: < 0.1 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE: 200

04 DISTANCE TO NEAREST OFF-SITE BUILDING: < 0.1 (mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., rural, village, densely populated urban area)
NAVSTA TI contains residences for approximately 2500-3000 service personnel. The island is surrounded by San Francisco Bay. Across the Bay there are large cities including San Francisco and Oakland.

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION
01 STATE | 02 SITE NUMBER
CA | 7170023330

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☐ A. $10^{-6} - 10^{-8}$ cm/sec ☐ B. $10^{-4} - 10^{-6}$ cm/sec ☒ C. $10^{-4} - 10^{-3}$ cm/sec ☐ D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☐ A. IMPERMEABLE (Less than 10^{-6} cm/sec) ☒ B. RELATIVELY IMPERMEABLE ($10^{-4} - 10^{-6}$ cm/sec) ☐ C. RELATIVELY PERMEABLE ($10^{-2} - 10^{-4}$ cm/sec) ☐ D. VERY PERMEABLE (Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK	04 DEPTH OF CONTAMINATED SOIL ZONE	05 SOIL pH	
300 (ft)	Unknown (ft)	Unknown	

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
-15 to -10 (in)	3.0 (in)	0-2 %	West	1 %

09 FLOOD POTENTIAL
SITE IS IN N/A YEAR FLOODPLAIN

10 ☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE	OTHER
A. > 2 (mi)	B. _____ (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)
> 2 (mi)
ENDANGERED SPECIES: _____

13 LAND USE IN VICINITY

DISTANCE TO: COMMERCIAL/INDUSTRIAL	RESIDENTIAL AREAS; NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS: PRIME AG LAND	AG LAND
A. 0.1 (mi)	B. > 2 (mi)	C. > 3 (mi)	D. > 3 (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

The site is located on Treasure Island, a man-made island on San Francisco Bay. Treasure Island is essentially flat with very little relief. Slopes in the vicinity of the site vary from 0 to 2%.

VII. SOURCES OF INFORMATION (Cite specific references e.g., state files, sample analysis, reports)

Personal inteviews.
Observations.
Harding Lawson Associates Report (1985).

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 6 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
CA	7170023330

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER			
SURFACE WATER			
WASTE			
AIR			
RUNOFF			
SPILL			
SOIL	3	I T Corporation	11/6/87
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS

IV. PHOTOGRAPHS AND MAPS

01 TYPE [X] GROUND [X] AERIAL

02 IN CUSTODY OF Naval Energy and Environmental Support Activity (NEESA). (Name of organization or individual)

03 MAPS [X] YES [ ] NO

04 LOCATION OF MAPS NEESA

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis reports)

Personnel Interviews.

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER
United States Navy	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
NAVSTA Treasure Island	

05 CITY	06 STATE	07 ZIP CODE
San Francisco	CA	94130

PARENT COMPANY (if applicable)

08 NAME	09 D+B NUMBER

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

12 CITY	13 STATE	14 ZIP CODE

III. PREVIOUS OWNER(S) (List most recent first)

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

IV. REALTY OWNER(S) (if applicable, list most recent first)

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. CURRENT OPERATOR (Provide if different from owner)

01 NAME	02 D+B NUMBER
United States Navy	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
NAVSTA Treasure Island	

05 CITY	06 STATE	07 ZIP CODE
San Francisco	CA	94130

08 YEARS OF OPERATION	09 NAME OF OWNER
45	U.S. Navy

OPERATOR'S PARENT COMPANY (If applicable)

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

III. PREVIOUS OPERATOR(S) (List most recent first; provide only if different from owner)

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

IV. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

EPA FORM 2070-13 (7-81)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER
U.S. Navy	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
NAVSTA Treasure Island	

05 CITY	06 STATE	07 ZIP CODE
San Francisco	CA	94130

III. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

IV. TRANSPORTER(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
U.S. Navy			

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
NAVSTA Treasure Island			

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE
San Francisco	CA	94130			

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION

01 STATE: CA | 02 SITE NUMBER: 7170023330

II PAST RESPONSE ACTIVITIES (Continued)

01 ☐ R. BARRIER WALLS CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ S. CAPPING/COVERING — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ T. BULK TANKAGE REPAIRED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ U. GROUT CURTAIN CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ V. BOTTOM SEALED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ W. GAS CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ X. FIRE CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Y. LEACHATE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Z. AREA EVACUATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 1. ACCESS TO SITE RESTRICTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 2. POPULATION RELOCATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 3. OTHER REMEDIAL ACTIVITIES — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Employee Interviews; Observations.

EPA FORM 2070-13 (7-81)

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EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 11 - ENFORCEMENT INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
CA	7170023330

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY ENFORCEMENT ACTION ☐ YES ☒ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY/ENFORCEMENT ACTION

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis reports)

Personnel Interview.

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
FINAL STRATEGY DETERMINATION

REGION	SITE NUMBER
IX	7170023330

File this form in the regional Hazardous Waste Log File and submit a copy to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Task Force (*EN-335*); 401 M St., SW; Washington, DC 20460.

I. SITE IDENTIFICATION

A. SITE NAME	B. STREET	
Old Fuel Farm	Naval Station (NAVSTA) Treasure Island	
C. CITY	**D. STATE**	**E. ZIP CODE**
San Francisco	CA	94130

II. FINAL DETERMINATION

Indicate the recommended action(s) and agency(ies) that should be involved by marking 'X' in the appropriate boxes.

RECOMMENDATION	MARK 'X'	ACTION AGENCY			
		EPA	STATE	LOCAL	PRIVATE
A. NO ACTION NEEDED					
B. REMEDIAL ACTION NEEDED, BUT NO RESOURCES AVAILABLE *(If yes, complete Section III.)*					
C. REMEDIAL ACTION *(If yes, complete Section IV.)*					
D. ENFORCEMENT ACTION *(If yes, specify in Part E whether the case will be primarily managed by the EPA or the State and what type of enforcement action is anticipated.)*					

E. RATIONALE FOR FINAL STRATEGY DETERMINATION

The site will continue to be evaluated and additional sampling will be performed. These results will be used to determine remedial actions. See report entitled Preliminary Assessment/Site Investigation of Naval Station, Treasure Island, CA.

F. IF A CASE DEVELOPMENT PLAN HAS BEEN PREPARED, SPECIFY THE DATE PREPARED *(mo., day, & yr.)*	G. IF AN ENFORCEMENT CASE HAS BEEN FILED, SPECIFY THE DATE FILED *(mo., day, & yr.)*

H. PREPARER INFORMATION

1. NAME	2. TELEPHONE NUMBER	3. DATE *(mo., day, & yr.)*

III. REMEDIAL ACTIONS TO BE TAKEN WHEN RESOURCES BECOME AVAILABLE

List all remedial actions, such as excavation, removal, etc. to be taken as soon as resources become available. See instructions for a list of Key Words for each of the actions to be used in the spaces below. Provide an estimate of the approximate cost of the remedy.

A. REMEDIAL ACTION	B. ESTIMATED COST	C. REMARKS
	$	
	$	
	$	
	$	
	$	
	$	
	$	
	$	
D. TOTAL ESTIMATED COST	$	

REPRODUCED AT GOVERNMENT EXPENSE

Continued From Front

IV. REMEDIAL ACTIONS

A. SHORT TERM/EMERGENCY ACTIONS *(On Site and Off-Site)*: List all emergency actions taken or planned to bring the site under immediate control, e.g., restrict access, provide alternate water supply, etc. See instructions for a list of Key Words for each of the actions to be used in the spaces below.

1. ACTION	2. ACTION START DATE (mo,day,& yr)	3. ACTION END DATE (mo,day,& yr)	4. ACTION AGENCY (EPA, State, Private Party)	5. COST	6. SPECIFY 311 OR OTHER ACTION. INDICATE THE MAGNITUDE OF THE WORK REQUIRED.
				$	
				$	
				$	
				$	
				$	
				$	

B. LONG TERM STRATEGY *(On Site and Off-Site)*: List all long term solutions, e.g., excavation, removal, ground water monitoring wells, etc. See instructions for a list of Key Words for each of the actions to be used in the spaces below.

1. ACTION	2. ACTION START DATE (mo,day,& yr)	3. ACTION END DATE (mo,day,& yr)	4. ACTION AGENCY (EPA, State Private Party)	5. COST	6. SPECIFY 311 OR OTHER ACTION: INDICATE THE MAGNITUDE OF THE WORK REQUIRED.
				$	
				$	
				$	
				$	
				$	
				$	

C. MANHOURS AND COST BY ACTION AGENCY

1. ACTION AGENCY	2. TOTAL MAN-HOURS FOR REMEDIAL ACTIVITIES	3. TOTAL COST FOR REMEDIAL ACTIVITIES
a. EPA		$
b. STATE		$
c. PRIVATE PARTIES		$
d. OTHER *(specify)*:		$

REPRODUCED AT GOVERNMENT EXPENSE

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

EPA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER				
Site 17 - Tank 103/104 area	NAVSTA Treasure Island				
03 CITY	**04 STATE**	**05 ZIP CODE**	**06 COUNTY**	**07 COUNTY CODE**	**08 CONG DIST**
San Francisco	CA	94130	San Francisco	075	05

09 COORDINATES LATITUDE 37° 49' 00" ON LONGITUDE 122° 22' 00" OW

10 TYPE OF OWNERSHIP (Check one)
☐ A. PRIVATE ☒ B. FEDERAL NAVY ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL
☐ F. OTHER _____ ☐ G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION	02 SITE STATUS	03 YEARS OF OPERATION	
10 / 27 / 87 (MONTH DAY YEAR)	☒ ACTIVE ☐ INACTIVE	1943 (BEGINNING YEAR)	1987 (ENDING YEAR) ☐ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)
☐ A. EPA ☐ B. EPA CONTRACTOR _____ (Name of firm) ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR _____ (Name of firm)
☐ E. STATE ☐ F. STATE CONTRACTOR _____ (Name of firm) ☒ G. OTHER Dames & Moore (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
Ann M. Becker	Team Leader, Engineer	Dames & Moore	(415) 896-5858
09 OTHER INSPECTORS	**10 TITLE**	**11 ORGANIZATION**	**12 TELEPHONE NO.**
James G. Ritchie	Geologist	Dames & Moore	(415) 896-5858
Dale D. Shileikis	Biologist	Dames & Moore	(415) 896-5858
Carol L. Creasey	Hydrogeologist	Dames & Moore	(415) 896-5858
William H. Welsh	Engineer	Dames & Moore	(805) 685-4415
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
Not Applicable			( )
			( )
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
☒ PERMISSION ☐ WARRANT	1630	Cloudy - Raining, Mild - Cool.

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO
Steve Hughes	NAVSTA Treasure Island	(415) 765-6114

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
Ann M. Becker	Contractor	Dames & Moore	(415)896-5858	11 / 25 / 87 (MONTH DAY YEAR)

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POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
CA	7170023330

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- ☐ A. SOLID
- ☐ B. POWDER, FINES
- ☐ C. SLUDGE
- ☐ D. OTHER (Specify)
- ☐ E. SLURRY
- ☒ F. LIQUID
- ☐ G. GAS

02 WASTE QUANTITY AT SITE (Measures of waste quantities must be independent)

TONS: Unknown

CUBIC YARDS: _____

NO. OF DRUMS: _____

03 WASTE CHARACTERISTICS (Check all that apply)

- ☒ A. TOXIC
- ☐ B. CORROSIVE
- ☐ C. RADIOACTIVE
- ☒ D. PERSISTENT
- ☐ E. SOLUBLE
- ☐ F. INFECTIOUS
- ☒ G. FLAMMABLE
- ☐ H. IGNITABLE
- ☐ I. HIGHLY VOLATILE
- ☐ J. EXPLOSIVE
- ☐ K. REACTIVE
- ☐ L. INCOMPATIBLE
- ☐ M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			
SOL	SOLVENTS			
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS			

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently used CAS numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
OLW	Fuel Oil	999	TK, OD	Unknown	
OLW	Waste Oil	999	OD	Unknown	

V. FEEDSTOCKS (See Appendix for CAS numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sampling analysis, reports)

Employee Interviews

EPA FORM 2070-12 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☐ A. GROUNDWATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: < 100
02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Released material may migrate to groundwater at the site.

01 ☐ B. SURFACE WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: < 100
02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Released material may migrate to the water of the Bay

01 ☐ C. CONTAMINATION OF AIR
03 POPULATION POTENTIALLY AFFECTED: 0
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Very unlikely. No data exists showing any release of air contamination.

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS
03 POPULATION POTENTIALLY AFFECTED: 0
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
A fire marshall has not certified that this area presents a significant threat; therefore, no fire or explosive conditions are considered to be present.

01 ☐ E. DIRECT CONTACT
03 POPULATION POTENTIALLY AFFECTED: 0
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Potential for direct contact is minimal since contaminated material has been paved.

01 ☒ F. CONTAMINATION OF SOIL
03 AREA POTENTIALLY AFFECTED: 2
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☒ ALLEGED
04 NARRATIVE DESCRIPTION
Reports indicate material released and intentionally applied to the soil which could result in contamination.

01 ☐ G. DRINKING WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: 0
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
There is no potential for drinking water contamination since drinking water is piped in from across the Bay Bridge.

01 ☐ H. WORKER EXPOSURE/INJURY
03 WORKERS POTENTIALLY AFFECTED: < 100
02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Worker exposure injury could potentially occur if contaminated soil is excavated.

01 ☐ I. POPULATION EXPOSURE/INJURY
03 POPULATION POTENTIALLY AFFECTED: _____
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Population potentially injured would be workers excavating the contaminated soil.

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☒ J. DAMAGE TO FLORA — 02 ☒ OBSERVED (DATE: 10-9-87) — ☒ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION: Contamination of soils could potentially damage landscape and ruderal vegetation in localized area. Damage would be restricted primarily to the vicinity of actual contamanation.

01 ☒ K. DAMAGE TO FAUNA — 02 ☒ OBSERVED (DATE: 10-9-87) — ☒ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION (Include names of species): Contamination of soils could potentially damage fauna (burrowing species; ground squirrels) by direct contact with soil. Potential damage to marine fauna (benthic and intertidal species) via contaminated groundwater could occurr.

01 ☒ L. CONTAMINATION OF FOOD CHAIN — 02 ☒ OBSERVED (DATE: 10-9-87) — ☒ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION: Migration of contaminatants from groundwater into San Francisco Bay could potentially accumulate in food chain through invertebrates and fish.

01 ☒ M. UNSTABLE CONTAINMENT OF WASTES (Spills, runoff, standing liquids, leaking drums) — 02 ☐ OBSERVED (DATE:) — ☒ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 100 — 04 NARRATIVE DESCRIPTION: Material released is not well contained and may migrate to groundwater or water of the Bay. Reports indicate one or both of the tanks have leaked in the past and it is assumed repairs were made to provide secure containment.

01 ☐ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE:) — ☐ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Very unlikely unless significant groundwater migration has occurred.

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE:) — ☒ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Contamination of sewers and storm drains is possible since a reported 20,000 gallons of diesel fuel were released directly onto ground surface.

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE:) — ☒ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Reports indicate 20,000 gallons of diesel fuel were released directly onto ground surface.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

None

III. TOTAL POPULATION POTENTIALLY AFFECTED: 100

IV. COMMENTS

The site has been occupied by storage tanks since 1943. Reports indicate one or both have leaked in the past. Reports also indicate that oil was spread on the soil around the tanks for dust control on at least one occasion.

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

employee interviews

EPA FORM 2070-12 (7-81)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
☐ A. NPDES				
☐ B. UIC				
☐ C. AIR				
☐ D. RCRA				
☐ E. RCRA INTERIM STATUS				
☒ F. SPCC PLAN	---	Feb. 1988	---	SPCC Oil
☐ G. STATE (Specify)				
☐ H. LOCAL (Specify)				
☐ I. OTHER (Specify)				
☐ J. NONE				

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE
☐ A. SURFACE IMPOUNDMENT		
☐ B. PILES		
☐ C. DRUMS, ABOVE GROUND		
☒ D. TANK, ABOVE GROUND		
☐ E. TANK, BELOW GROUND		
☐ F. LANDFILL		
☐ G. LANDFARM		
☒ H. OPEN DUMP		
☒ I. OTHER (Specify) Release		

04 TREATMENT (Check all that apply)

- ☐ A. INCINERATION
- ☐ B. UNDERGROUND INJECTION
- ☐ C. CHEMICAL/PHYSICAL
- ☐ D. BIOLOGICAL
- ☐ E. WASTE OIL PROCESSING
- ☐ F. SOLVENT RECOVERY
- ☐ G. OTHER RECYCLING/RECOVERY
- ☐ H. OTHER (Specify)

05 OTHER

- ☒ A. BUILDINGS ON SITE

06 AREA OF SITE

2 - (Acres)

07 COMMENTS

None

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

☐ A. ADEQUATE, SECURE ☒ B. MODERATE ☐ C. INADEQUATE, POOR ☐ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC.

The tanks appear to provide adequate containment, but past releases were reported to have occurred. Released material is not well contained and may migrate.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE ☐ YES ☒ NO

02 COMMENTS

The area around the tanks has been covered with concrete.

VI. SOURCES OF INFORMATION (Cite specific references e.g. state files, sample analysis, reports)

Personnel Interviews
Observations

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

EPA

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as applicable): Pipeline from off the island

	SURFACE	WELL
COMMUNITY	A. ☐	B. ☐
NON-COMMUNITY	C. ☐	D. ☐

02 STATUS: Not used

ENDANGERED	AFFECTED	MONITORED
A. ☐	B. ☐	C. ☐
D. ☐	E. ☐	F. ☐

03 DISTANCE TO SITE: A. N/A (mi) B. _____ (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)
☐ A. ONLY SOURCE FOR DRINKING ☐ B. DRINKING (Other source(s) available) COMMERCIAL, INDUSTRIAL, IRRIGATION (Other water source(s) available) ☐ C. COMMERCIAL, INDUSTRIAL, IRRIGATION (Limited other source(s) available) ☒ D. NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUND WATER: 0

03 DISTANCE TO NEAREST DRINKING WATER WELL: > 3 (mi)

04 DEPTH TO GROUNDWATER	05 DIRECTION OF GROUNDWATER FLOW	06 DEPTH TO AQUIFER OF CONCERN	07 POTENTIAL YIELD OF AQUIFER	08 SOLE SOURCE AQUIFER
2 - 6 (ft)	Toward S.F. Bay.	N/A (ft)	N/A (gpd)	☐ YES ☐ NO

09 DESCRIPTION OF WELLS (Including usage, depth, and location relative to population and buildings)

NOTE: The site is on an island in San Francisco Bay. There are no water wells in use on the island. Water is piped to the island on the San Francisco-Oakland Bay Bridge.

10 RECHARGE AREA		11 DISCHARGE AREA	
☒ YES ☐ NO	COMMENTS: Infiltration is occurring but recharging unusable aquifer.	☒ YES ☐ NO	COMMENTS: Discharge of groundwater eventually to San Francisco Bay.

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)
☐ A. RESERVOIR, RECREATION DRINKING WATER SOURCE ☐ B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES ☒ C. COMMERCIAL, INDUSTRIAL ☐ D. NOT CURRENTLY USED

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME:	AFFECTED	DISTANCE TO SITE
San Francisco Bay	☐	< 0.5 (mi)
	☐	(mi)
	☐	(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE
A. 3000 NO OF PERSONS	B. 3000 NO OF PERSONS	C. >10,000 NO OF PERSONS

02 DISTANCE TO NEAREST POPULATION: < 0.1 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE: 200

04 DISTANCE TO NEAREST OFF-SITE BUILDING: < 0.1 (mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., rural, village, densely populated urban area)

NAVSTA TI contains residences for approximately 2500-3000 service personnel. The island is surrounded by San Francisco Bay. Across the Bay there are large cities including San Francisco and Oakland.

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☐ A. $10^{-6} - 10^{-8}$ cm/sec ☐ B. $10^{-4} - 10^{-6}$ cm/sec ☒ C. $10^{-4} - 10^{-3}$ cm/sec ☐ D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☐ A. IMPERMEABLE (Less than 10^{-6} cm/sec) ☒ B. RELATIVELY IMPERMEABLE ($10^{-4} - 10^{-6}$ cm/sec) ☐ C. RELATIVELY PERMEABLE ($10^{-2} - 10^{-4}$ cm/sec) ☐ D. VERY PERMEABLE (Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK	04 DEPTH OF CONTAMINATED SOIL ZONE	05 SOIL pH	
300 (ft)	Unknown (ft)	Unknown	

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
-10 to -15 (in)	3.0 (in)	0-2 %	West	1 %

09 FLOOD POTENTIAL
SITE IS IN N/A YEAR FLOODPLAIN

10 ☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE	OTHER
A. > 2 (mi)	B. (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)
> 2 (mi)
ENDANGERED SPECIES:

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL	RESIDENTIAL AREAS; NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS: PRIME AG LAND	AGRICULTURAL LANDS: AG LAND
A. 0.1 (mi)	B. > 2 (mi)	C. > 3 (mi)	D. > 3 (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

The site is located on Treasure Island, a man-made island on San Francisco Bay. Treasure Island is essentially flat with very little relief. Slopes in the vicinity of the site vary from 0 to 2%.

VII. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sampling analysis, reports)

Personal inteviews.
Observations
Harding Lawson Associates Report (1985).

EPA FORM 2070-13(7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 6 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER			
SURFACE WATER			
WASTE			
AIR			
RUNOFF			
SPILL			
SOIL			
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS

IV. PHOTOGRAPHS AND MAPS

01 TYPE [X] GROUND [X] AERIAL

02 IN CUSTODY OF Naval Energy and Environmental Support Activity (NEESA). (Name of organization or individual)

03 MAPS [X] YES [ ] NO

04 LOCATION OF MAPS NEESA

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

VI. SOURCES OF INFORMATION (Cite specific references, e.g., State files, sample analysis reports)

Personnel Interviews.

EPA FORM 2070-13 (7-81)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER	04 SIC CODE
United States Navy		

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	05 CITY	06 STATE	07 ZIP CODE
NAVSTA Treasure Island	San Francisco	CA	94130

PARENT COMPANY (if applicable)

08 NAME	09 D+B NUMBER	11 SIC CODE

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	12 CITY	13 STATE	14 ZIP CODE

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER	04 SIC CODE

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	05 CITY	06 STATE	07 ZIP CODE

PARENT COMPANY (if applicable)

08 NAME	09 D+B NUMBER	11 SIC CODE

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	12 CITY	13 STATE	14 ZIP CODE

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER	04 SIC CODE

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	05 CITY	06 STATE	07 ZIP CODE

PARENT COMPANY (if applicable)

08 NAME	09 D+B NUMBER	11 SIC CODE

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	12 CITY	13 STATE	14 ZIP CODE

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER	04 SIC CODE

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	05 CITY	06 STATE	07 ZIP CODE

PARENT COMPANY (if applicable)

08 NAME	09 D+B NUMBER	11 SIC CODE

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	12 CITY	13 STATE	14 ZIP CODE

III. PREVIOUS OWNER(S) (List most recent first)

01 NAME	02 D+B NUMBER	04 SIC CODE

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	05 CITY	06 STATE	07 ZIP CODE

IV. REALTY OWNER(S) (if applicable, list most recent first)

01 NAME	02 D+B NUMBER	04 SIC CODE

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	05 CITY	06 STATE	07 ZIP CODE

III. PREVIOUS OWNER(S) (List most recent first)

01 NAME	02 D+B NUMBER	04 SIC CODE

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	05 CITY	06 STATE	07 ZIP CODE

IV. REALTY OWNER(S) (if applicable, list most recent first)

01 NAME	02 D+B NUMBER	04 SIC CODE

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	05 CITY	06 STATE	07 ZIP CODE

III. PREVIOUS OWNER(S) (List most recent first)

01 NAME	02 D+B NUMBER	04 SIC CODE

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	05 CITY	06 STATE	07 ZIP CODE

IV. REALTY OWNER(S) (if applicable, list most recent first)

01 NAME	02 D+B NUMBER	04 SIC CODE

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	05 CITY	06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sampling analysis, reports)

EPA FORM 2070-13 (7-81)

REPRODUCED AT GOVERNMENT EXPENSE

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

II. CURRENT OPERATOR (Provide if different from owner)

01 NAME: United States Navy	02 D+B NUMBER:
03 STREET ADDRESS (P.O. Box, RFD #, etc.): NAVSTA Treasure Island	04 SIC CODE:
05 CITY: San Francisco	06 STATE: CA / 07 ZIP CODE: 94130
08 YEARS OF OPERATION: 45	09 NAME OF OWNER: U.S. Navy

OPERATOR'S PARENT COMPANY (If applicable)

10 NAME:	11 D+B NUMBER:
12 STREET ADDRESS (P.O. Box, RFD #, etc.):	13 SIC CODE:
14 CITY:	15 STATE: / 16 ZIP CODE:

III. PREVIOUS OPERATOR(S) (List most recent first; provide only if different from owner)

01 NAME:	02 D+B NUMBER:
03 STREET ADDRESS (P.O. Box, RFD #, etc.):	04 SIC CODE:
05 CITY:	06 STATE: / 07 ZIP CODE:
08 YEARS OF OPERATION:	09 NAME OF OWNER DURING THIS PERIOD:

PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)

10 NAME:	11 D+B NUMBER:
12 STREET ADDRESS (P.O. Box, RFD #, etc.):	13 SIC CODE:
14 CITY:	15 STATE: / 16 ZIP CODE:

01 NAME:	02 D+B NUMBER:
03 STREET ADDRESS (P.O. Box, RFD #, etc.):	04 SIC CODE:
05 CITY:	06 STATE: / 07 ZIP CODE:
08 YEARS OF OPERATION:	09 NAME OF OWNER DURING THIS PERIOD:

10 NAME:	11 D+B NUMBER:
12 STREET ADDRESS (P.O. Box, RFD #, etc.):	13 SIC CODE:
14 CITY:	15 STATE: / 16 ZIP CODE:

01 NAME:	02 D+B NUMBER:
03 STREET ADDRESS (P.O. Box, RFD #, etc.):	04 SIC CODE:
05 CITY:	06 STATE: / 07 ZIP CODE:
08 YEARS OF OPERATION:	09 NAME OF OWNER DURING THIS PERIOD:

10 NAME:	11 D+B NUMBER:
12 STREET ADDRESS (P.O. Box, RFD #, etc.):	13 SIC CODE:
14 CITY:	15 STATE: / 16 ZIP CODE:

IV. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

EPA FORM 2070-13 (7-81)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
CA	7170023330

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER
U.S. Navy	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
NAVSTA Treasure Island	

05 CITY	06 STATE	07 ZIP CODE
San Francisco	CA	94130

III. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

IV. TRANSPORTER(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
U.S. Navy			

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
NAVSTA Treasure Island			

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE
San Francisco	CA	94130			

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

EPA FORM 2070-13 (7-81)

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EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

II PAST RESPONSE ACTIVITIES (Continued)

01 ☐ R. BARRIER WALLS CONSTRUCTED
02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ S. CAPPING/COVERING
02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☒ T. BULK TANKAGE REPAIRED
02 DATE Unknown 03 AGENCY U.S. Navy
04 DESCRIPTION The area around the tanks has been covered with concrete.

01 ☐ U. GROUT CURTAIN CONSTRUCTED
02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ V. BOTTOM SEALED
02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ W. GAS CONTROL
02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ X. FIRE CONTROL
02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ Y. LEACHATE TREATMENT
02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ Z. AREA EVACUATED
02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ 1. ACCESS TO SITE RESTRICTED
02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ 2. POPULATION RELOCATED
02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ 3. OTHER REMEDIAL ACTIVITIES
02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Observations

EPA FORM 2070-13 (7-81)

REPRODUCED AT GOVERNMENT EXPENSE

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 11 - ENFORCEMENT INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
CA	7170023330

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY ENFORCEMENT ACTION ☐ YES ☒ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY ENFORCEMENT ACTION

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis reports)

Personnel Interview.

EPA FORM 2070-13 (7-81)

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EPA

POTENTIAL HAZARDOUS WASTE SITE
FINAL STRATEGY DETERMINATION

REGION	SITE NUMBER
IX	7170023330

File this form in the regional Hazardous Waste Log File and submit a copy to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Task Force (*E.N-335*); 401 M St., SW, Washington, DC 20460.

I. SITE IDENTIFICATION

A. SITE NAME	B. STREET	
Tank 103/104 area	Naval Station (NAVSTA) Treasure Island	
C. CITY	**D. STATE**	**E. ZIP CODE**
San Francisco	CA	94130

II. FINAL DETERMINATION

Indicate the recommended action(*s*) and agency(*ies*) that should be involved by marking 'X' in the appropriate boxes.

RECOMMENDATION	MARK 'X'	ACTION AGENCY			
		EPA	STATE	LOCAL	PRIVATE
A. NO ACTION NEEDED					
B. REMEDIAL ACTION NEEDED, BUT NO RESOURCES AVAILABLE (*If yes, complete Section III.*)					
C. REMEDIAL ACTION (*If yes, complete Section IV.*)					
D. ENFORCEMENT ACTION (*If yes, specify in Part E whether the case will be primarily managed by the EPA or the State and what type of enforcement action is anticipated.*)					

E. RATIONALE FOR FINAL STRATEGY DETERMINATION

The site will continue to be evaluated and additional sampling will be performed. These results will be used to determine remedial actions. See report entitled Preliminary Assessment/Site Investigation of Naval Station, Treasure Island, CA.

F. IF A CASE DEVELOPMENT PLAN HAS BEEN PREPARED, SPECIFY THE DATE PREPARED (*mo., day, & yr.*)	G. IF AN ENFORCEMENT CASE HAS BEEN FILED, SPECIFY THE DATE FILED (*mo., day, & yr.*)

H. PREPARER INFORMATION

1. NAME	2. TELEPHONE NUMBER	3. DATE (*mo., day, & yr.*)

III. REMEDIAL ACTIONS TO BE TAKEN WHEN RESOURCES BECOME AVAILABLE

List all remedial actions, such as excavation, removal, etc. to be taken as soon as resources become available. See instructions for a list of Key Words for each of the actions to be used in the spaces below. Provide an estimate of the approximate cost of the remedy.

A. REMEDIAL ACTION	B. ESTIMATED COST	C. REMARKS
	$	
	$	
	$	
	$	
	$	
	$	
	$	
	$	
D. TOTAL ESTIMATED COST	$	

REPRODUCED AT GOVERNMENT EXPENSE

Continued From Front

IV. REMEDIAL ACTIONS

A. SHORT TERM/EMERGENCY ACTIONS *(On Site and Off-Site)*: List all emergency actions taken or planned to bring the site under immediate control, e.g., restrict access, provide alternate water supply, etc. See instructions for a list of Key Words for each of the actions to be used in the spaces below.

1. ACTION	2. ACTION START DATE (mo,day,& yr)	3. ACTION END DATE (mo,day,& yr)	4. ACTION AGENCY (EPA, State, Private Party)	5. COST	6. SPECIFY 311 OR OTHER ACTION. INDICATE THE MAGNITUDE OF THE WORK REQUIRED.
				$	
				$	
				$	
				$	
				$	
				$	

B. LONG TERM STRATEGY *(On Site and Off-Site)*: List all long term solutions, e.g., excavation, removal, ground water monitoring wells, etc. See instructions for a list of Key Words for each of the actions to be used in the spaces below.

1. ACTION	2. ACTION START DATE (mo,day,& yr)	3. ACTION END DATE (mo,day,& yr)	4. ACTION AGENCY (EPA, State Private Party)	5. COST	6. SPECIFY 311 OR OTHER ACTION: INDICATE THE MAGNITUDE OF THE WORK REQUIRED.
				$	
				$	
				$	
				$	
				$	
				$	

C. MANHOURS AND COST BY ACTION AGENCY

1. ACTION AGENCY	2. TOTAL MAN-HOURS FOR REMEDIAL ACTIVITIES	3. TOTAL COST FOR REMEDIAL ACTIVITIES
a. EPA		$
b. STATE		$
c. PRIVATE PARTIES		$
d. OTHER *(specify)*:		$

REPRODUCED AT GOVERNMENT EXPENSE

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

EPA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
Site 20 - Auto Hobby Shop/Transportation Cente	NAVSTA Treasure Island

03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
San Francisco	CA	94130	San Francisco	075	05

09 COORDINATES	10 TYPE OF OWNERSHIP (Check one)
LATITUDE 37° 49 00 ON LONGITUDE 122° 22 00 OW	☐ A. PRIVATE ☒ B. FEDERAL NAVY ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL ☐ F. OTHER ☐ G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION	02 SITE STATUS	03 YEARS OF OPERATION
10, 7, 87 (MONTH DAY YEAR)	☒ ACTIVE ☐ INACTIVE	1943 (BEGINNING YEAR) 1987 (ENDING YEAR) ☐ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)

☐ A. EPA ☐ B. EPA CONTRACTOR _____ (Name of firm) ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR _____ (Name of firm)
☐ E. STATE ☐ F. STATE CONTRACTOR _____ (Name of firm) ☒ G. OTHER Dames & Moore (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
Ann M. Becker	Team Leader, Engineer	Dames & Moore	(415) 896-5858
09 OTHER INSPECTORS	**10 TITLE**	**11 ORGANIZATION**	**12 TELEPHONE NO.**
James G. Ritchie	Geologist	Dames & Moore	(415) 896-5858
Dale D. Shileikis	Biologist	Dames & Moore	(415) 896-5858
Carol L. Creasey	Hydrogeologist	Dames & Moore	(415) 896-5858
William H. Welsh	Engineer	Dames & Moore	(805) 685-4415
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
Not Applicable			( )
			( )
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
☒ PERMISSION ☐ WARRANT	1300	Clear, mild

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO
Steve Hughes	NAVSTA Treasure Island	(415) 765-6114

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
Ann M. Becker	Contractor	Dames & Moore	(415)896-5858	11 / 25 / 87 (MONTH DAY YEAR)

EPA FORM 2070-13 (7-81)

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EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- ☐ A. SOLID
- ☐ B. POWDER, FINES
- ☐ C. SLUDGE
- ☐ D. OTHER _____ (Specify)
- ☐ E. SLURRY
- ☒ F. LIQUID
- ☐ G. GAS

02 WASTE QUANTITY AT SITE (Measures of waste quantities must be independent)

TONS: Unknown

CUBIC YARDS: _____

NO. OF DRUMS: _____

03 WASTE CHARACTERISTICS (Check all that apply)

- ☒ A. TOXIC
- ☐ B. CORROSIVE
- ☐ C. RADIOACTIVE
- ☒ D. PERSISTENT
- ☒ E. SOLUBLE
- ☐ F. INFECTIOUS
- ☒ G. FLAMMABLE
- ☐ H. IGNITABLE
- ☐ I. HIGHLY VOLATILE
- ☐ J. EXPLOSIVE
- ☐ K. REACTIVE
- ☐ L. INCOMPATIBLE
- ☐ M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			
SOL	SOLVENTS			
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS			

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
SOL	Misc. Solvents	999	DR,OD	Unknown	
OLW	Misc. Motor Fuels	999	TK, DR, DD	Unknown	
OLW	Ethylene Glycol	999	DR, OD	Unknown	
SOL	Misc. Paint Wastes	999	DR, OD	Unknown	
SOL	Misc. Paint Thinner	999	DR, OD	Unknown	
OLW	Misc. Engine Fluids	999	DR, OD	Unknown	
OLW	Waste Oil	999	TK, DR, OD	Unknown	

V. FEEDSTOCKS (See Appendix for CAS numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sampling analysis, reports)

Employee Interviews.

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☒ A. GROUNDWATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) — ☒ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: < 100
04 NARRATIVE DESCRIPTION
Released material may migrate to groundwater.

01 ☒ B. SURFACE WATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____
04 NARRATIVE DESCRIPTION
Released material may migrate to waters of the Bay

01 ☐ C. CONTAMINATION OF AIR — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____
04 NARRATIVE DESCRIPTION
Very unlikely. No data exists showing any release of air contamination.

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____
04 NARRATIVE DESCRIPTION
A fire marshall has not certified that this area presents a significant threat; therefore, no fire or explosive conditions are considered to be present.

01 ☒ E. DIRECT CONTACT — 02 ☐ OBSERVED (DATE: _____) — ☒ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____
04 NARRATIVE DESCRIPTION
Possible direct contact during handling of waste prior to disposal

01 ☒ F. CONTAMINATION OF SOIL — 02 ☒ OBSERVED (DATE: 10/5/87) — ☒ POTENTIAL — ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED: 10
04 NARRATIVE DESCRIPTION
Materials released have resulted in soil contamination. We actually have results and have confirmed the oil contamination with soil sample analyses. Some soil staining was observed during site review.

01 ☐ G. DRINKING WATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____
04 NARRATIVE DESCRIPTION
There is no potential for drinking water contamination. Drinking water is piped in from across the Bay Bridge.

01 ☒ H. WORKER EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE: _____) — ☒ POTENTIAL — ☐ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: Unknown
04 NARRATIVE DESCRIPTION
See E. Worker exposure injury could occur during excavation of contaminated soil.

01 ☐ I. POPULATION EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____
04 NARRATIVE DESCRIPTION
Population exposure injury would be from workers handling contaminated soils.

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POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 [X] J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE: 10/7) — [X] POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Contamination of soils could potentially damage landscape or ruderal vegetation in a localized area. Damage would be restricted to the immediate vicinity of the contamination unless migration to groundwater draining to S.F. Bay occurs. Contaminated groundwater could damage S.F. Bay flora (algae).

01 [X] K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE: 10/7) — [X] POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION (Include name(s) of species)

Localized soil contamination could have damaged fauna (ground squirrels). Potential damage to marine fauna (intertidal and benthic) at stormwater outfalls could have occurred as a result of disposal of fluids to storm drains.

01 [X] L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE: 10/7) — [X] POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Substances entering S.F. Bay via groundwater or stormwater sewer system may have accumulated in benthic or intertidal organisms and entered food chain via predation by waterfowl and fish.

01 [X] M. UNSTABLE CONTAINMENT OF WASTES (Spills/runoff/standing liquids/leaking containers) — 02 ☐ OBSERVED (DATE:) — [X] POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: < 100 — 04 NARRATIVE DESCRIPTION

Released material is not well contained and may migrate to groundwater or to waters of the Bay.

01 ☐ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE:) — ☐ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Very unlikely unless significant groundwater migration has occurred.

01 [X] O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE:) — [X] POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Released materials may enter and potentially conmaminate the stormwater system and the industrial wastewater treatment system.

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE:) — ☐ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Waste fluids were reportedly allowed to discharge directly into storm water sewer.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

Possible unlocated underground storage tanks.

III. TOTAL POPULATION POTENTIALLY AFFECTED: < 100

IV. COMMENTS

The site has been used for motor vehicle related activities for many years. Records in the volumes and disposal methods of wastes generated were not located.

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Primarily employee interviews
Observations

EPA FORM 2070-12 (7-81)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

EPA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
☐ A. NPDES				
☐ B. UIC				
☐ C. AIR				
☐ D. RCRA				
☐ E. RCRA INTERIM STATUS				
☒ F. SPCC PLAN	---	Feb. 1988	---	SPCC Oil
☐ G. STATE (Specify)				
☐ H. LOCAL (Specify)				
☐ I. OTHER (Specify)				
☐ J. NONE				

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE
☐ A. SURFACE IMPOUNDMENT		
☐ B. PILES		
☒ C. DRUMS, ABOVE GROUND		
☐ D. TANK, ABOVE GROUND		
☒ E. TANK, BELOW GROUND		
☐ F. LANDFILL		
☐ G. LANDFARM		
☐ H. OPEN DUMP		
☒ I. OTHER (Specify) release		

04 TREATMENT (Check all that apply)

- ☐ A. INCINERATION
- ☐ B. UNDERGROUND INJECTION
- ☐ C. CHEMICAL/PHYSICAL
- ☐ D. BIOLOGICAL
- ☐ E. WASTE OIL PROCESSING
- ☐ F. SOLVENT RECOVERY
- ☐ G. OTHER RECYCLING/RECOVERY
- ☐ H. OTHER (Specify) _____

05 OTHER

- ☒ A. BUILDINGS ON SITE

06 AREA OF SITE

2 (Acres)

07 COMMENTS

None

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

☐ A. ADEQUATE, SECURE ☒ B. MODERATE ☐ C. INADEQUATE, POOR ☐ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC.

Material in tanks or drums is adequately contained. Released material is not contained and may migrate into groundwater or waters of the Bay.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE ☒ YES ☐ NO

02 COMMENTS Portions of the released material are underground and not easily accessible. Some surface staining was observed in accessible areas. Other portions of the area are fenced to deter access.

VI. SOURCES OF INFORMATION (Cite specific references, e.g. state files, sampling analysis, reports)

Personnel Interviews

EPA FORM 2070-13 (7-81)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

EPA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as applicable): Pipeline from off the island

	SURFACE	WELL
COMMUNITY	A. ☐	B. ☐
NON-COMMUNITY	C. ☐	D. ☐

02 STATUS: Not used

ENDANGERED	AFFECTED	MONITORED
A. ☐	B. ☐	C. ☐
D. ☐	E. ☐	F. ☐

03 DISTANCE TO SITE: A. N/A (mi) B. _____ (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)

☐ A. ONLY SOURCE FOR DRINKING ☐ B. DRINKING (Other sources available) COMMERCIAL, INDUSTRIAL, IRRIGATION (No other water sources available) ☐ C. COMMERCIAL, INDUSTRIAL, IRRIGATION (Limited other sources available) ☒ D. NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUND WATER: 0

03 DISTANCE TO NEAREST DRINKING WATER WELL: > 3 (mi)

04 DEPTH TO GROUNDWATER	05 DIRECTION OF GROUNDWATER FLOW	06 DEPTH TO AQUIFER OF CONCERN	07 POTENTIAL YIELD OF AQUIFER	08 SOLE SOURCE AQUIFER
2 - 6 (ft)	Toward S.F. Bay.	N/A (ft)	N/A (gpd)	☐ YES ☐ NO

09 DESCRIPTION OF WELLS (Including usage, depth, and location relative to population and buildings)

NOTE: The site is on an island in San Francisco Bay. There are no water wells in use on the island. Water is piped to the island on the San Francisco-Oakland Bay Bridge.

10 RECHARGE AREA		11 DISCHARGE AREA	
☒ YES ☐ NO	COMMENTS: Infiltration is occuring but recharging unusable aquifer.	☒ YES ☐ NO	COMMENTS: Discharge of groundwater eventually to San Francisco Bay.

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)

☐ A. RESERVOIR, RECREATION DRINKING WATER SOURCE ☐ B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES ☒ C. COMMERCIAL, INDUSTRIAL ☐ D. NOT CURRENTLY USED

02 AFFECTED, POTENTIALLY AFFECTED BODIES OF WATER

NAME:	AFFECTED	DISTANCE TO SITE
San Francisco Bay	☐	< 0.5 (mi)
	☐	(mi)
	☐	(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE
A. 3000 (NO OF PERSONS)	B. 3000 (NO OF PERSONS)	C. >10,000 (NO OF PERSONS)

02 DISTANCE TO NEAREST POPULATION: < 0.1 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE: 200

04 DISTANCE TO NEAREST OFF-SITE BUILDING: < 0.1 (mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., rural, village, densely populated urban area)

NAVSTA TI contains residences for approximately 2500-3000 service personnel. The island is surrounded by San Francisco Bay. Across the Bay there are large cities including San Francisco and Oakland.

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☐ A. $10^{-6} - 10^{-8}$ cm/sec ☐ B. $10^{-4} - 10^{-6}$ cm/sec ☒ C. $10^{-3} - 10^{-4}$ cm/sec ☐ D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☐ A. IMPERMEABLE (Less than 10^{-6} cm/sec) ☒ B. RELATIVELY IMPERMEABLE ($10^{-4} - 10^{-6}$ cm/sec) ☐ C. RELATIVELY PERMEABLE ($10^{-2} - 10^{-4}$ cm/sec) ☐ D. VERY PERMEABLE (Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK	04 DEPTH OF CONTAMINATED SOIL ZONE	05 SOIL pH	
300 (ft)	Unknown (ft)	Unknown	

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
-10 to -15 (in)	3.0 (in)	0-2 %	West	1 %

09 FLOOD POTENTIAL
SITE IS IN N/A YEAR FLOODPLAIN

10
☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)
ESTUARINE: A. > 2 (mi) OTHER: B. _____ (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)
> 2 (mi)
ENDANGERED SPECIES: _____

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL	RESIDENTIAL AREAS; NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS: PRIME AG LAND	AGRICULTURAL LANDS: AG LAND
A. 0.1 (mi)	B. > 2 (mi)	C. > 3 (mi)	D. > 3 (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

The site is located on Treasure Island, a man-made island on San Francisco Bay. Treasure Island is essentially flat with very little relief. Slopes in the vicinity of the site vary from 0 to 2%.

VII. SOURCES OF INFORMATION (Cite specific references e.g., state files, sample analysis, reports)

Personal Interviews.
Observations.
Harding Lawson Associates Report (1985).

REPRODUCED AT GOVERNMENT EXPENSE

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 6 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
CA	7170023330

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER			
SURFACE WATER			
WASTE			
AIR			
RUNOFF			
SPILL			
SOIL	3	I T	
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS

IV. PHOTOGRAPHS AND MAPS

01 TYPE [X] GROUND [X] AERIAL

02 IN CUSTODY OF Naval Energy and Environmental Support Activity (NEESA). (Name of organization or individual)

03 MAPS [X] YES [ ] NO

04 LOCATION OF MAPS NEESA

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis reports)

Personnel Interviews.

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER	04 SIC CODE
United States Navy		
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		
NAVSTA Treasure Island		
05 CITY	06 STATE	07 ZIP CODE
San Francisco	CA	94130

PARENT COMPANY (if applicable)

08 NAME	09 D+B NUMBER	11 SIC CODE
10 STREET ADDRESS (P.O. Box, RFD #, etc.)		
12 CITY	13 STATE	14 ZIP CODE

01 NAME	02 D+B NUMBER	04 SIC CODE
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		
05 CITY	06 STATE	07 ZIP CODE

08 NAME	09 D+B NUMBER	11 SIC CODE
10 STREET ADDRESS (P.O. Box, RFD #, etc.)		
12 CITY	13 STATE	14 ZIP CODE

01 NAME	02 D+B NUMBER	04 SIC CODE
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		
05 CITY	06 STATE	07 ZIP CODE

08 NAME	09 D+B NUMBER	11 SIC CODE
10 STREET ADDRESS (P.O. Box, RFD #, etc.)		
12 CITY	13 STATE	14 ZIP CODE

01 NAME	02 D+B NUMBER	04 SIC CODE
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		
05 CITY	06 STATE	07 ZIP CODE

08 NAME	09 D+B NUMBER	11 SIC CODE
10 STREET ADDRESS (P.O. Box, RFD #, etc.)		
12 CITY	13 STATE	14 ZIP CODE

III. PREVIOUS OWNER(S) (List most recent first)

01 NAME	02 D+B NUMBER	04 SIC CODE
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		
05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER	04 SIC CODE
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		
05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER	04 SIC CODE
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		
05 CITY	06 STATE	07 ZIP CODE

IV. REALTY OWNER(S) (if applicable, list most recent first)

01 NAME	02 D+B NUMBER	04 SIC CODE
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		
05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER	04 SIC CODE
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		
05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER	04 SIC CODE
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		
05 CITY	06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

II. CURRENT OPERATOR (Provide if different from owner)

01 NAME	02 D+B NUMBER
United States Navy	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
NAVSTA Treasure Island	
05 CITY	06 STATE / 07 ZIP CODE
San Francisco	CA / 94130
08 YEARS OF OPERATION	09 NAME OF OWNER
45	U.S. Navy

OPERATOR'S PARENT COMPANY (If applicable)

10 NAME	11 D+B NUMBER
12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE
14 CITY	15 STATE / 16 ZIP CODE

III. PREVIOUS OPERATOR(S) (List most recent first; provide only if different from owner)

01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)

10 NAME	11 D+B NUMBER
12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE
14 CITY	15 STATE / 16 ZIP CODE

01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

10 NAME	11 D+B NUMBER
12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE
14 CITY	15 STATE / 16 ZIP CODE

01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

10 NAME	11 D+B NUMBER
12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE
14 CITY	15 STATE / 16 ZIP CODE

IV. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER
U.S. Navy	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
NAVSTA Treasure Island	

05 CITY	06 STATE	07 ZIP CODE
San Francisco	CA	94130

III. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

IV. TRANSPORTER(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
U.S. Navy			

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
NAVSTA Treasure Island			

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE
San Francisco	CA	94130			

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

EPA FORM 2070-13 (7-81)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. PAST RESPONSE ACTIVITIES (Continued)

01 ☐ R. BARRIER WALLS CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ S. CAPPING/COVERING — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ T. BULK TANKAGE REPAIRED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ U. GROUT CURTAIN CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ V. BOTTOM SEALED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ W. GAS CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ X. FIRE CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Y. LEACHATE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Z. AREA EVACUATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 1. ACCESS TO SITE RESTRICTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 2. POPULATION RELOCATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 3. OTHER REMEDIAL ACTIVITIES — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

III. SOURCES OF INFORMATION (Cite specific references, e.g., State files, sample analysis, reports)

Employee Interviews; Observations.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 11 - ENFORCEMENT INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
CA	7170023330

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY ENFORCEMENT ACTION ☐ YES ☒ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY ENFORCEMENT ACTION

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Personnel Interview.

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
FINAL STRATEGY DETERMINATION

REGION	SITE NUMBER
IX	7170023330

File this form in the regional Hazardous Waste Log File and submit a copy to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Task Force (*EN-335*); 401 M St., SW, Washington, DC 20460.

I. SITE IDENTIFICATION

A. SITE NAME	B. STREET	
Auto Hobby Shop/Transportation	Naval Station (NAVSTA) Treasure Island	
C. CITY	**D. STATE**	**E. ZIP CODE**
San Francisco	CA	94130

II. FINAL DETERMINATION

Indicate the recommended action(s) and agency(ies) that should be involved by marking 'X' in the appropriate boxes.

RECOMMENDATION	MARK 'X'	ACTION AGENCY			
		EPA	STATE	LOCAL	PRIVATE
A. NO ACTION NEEDED					
B. REMEDIAL ACTION NEEDED, BUT NO RESOURCES AVAILABLE *(If yes, complete Section III.)*					
C. REMEDIAL ACTION *(If yes, complete Section IV.)*					
D. ENFORCEMENT ACTION *(If yes, specify in Part E whether the case will be primarily managed by the EPA or the State and what type of enforcement action is anticipated.)*					

E. RATIONALE FOR FINAL STRATEGY DETERMINATION

The site will continue to be evaluated and additional sampling will be performed. These results will be used to determine remedial actions. See report entitled Preliminary Assessment/Site Investigation of Naval Station, Treasure Island, CA.

F. IF A CASE DEVELOPMENT PLAN HAS BEEN PREPARED, SPECIFY THE DATE PREPARED *(mo., day, & yr.)*	G. IF AN ENFORCEMENT CASE HAS BEEN FILED, SPECIFY THE DATE FILED *(mo., day, & yr.)*

H. PREPARER INFORMATION

1. NAME	2. TELEPHONE NUMBER	3. DATE *(mo., day, & yr.)*

III. REMEDIAL ACTIONS TO BE TAKEN WHEN RESOURCES BECOME AVAILABLE

List all remedial actions, such as excavation, removal, etc. to be taken as soon as resources become available. See instructions for a list of Key Words for each of the actions to be used in the spaces below. Provide an estimate of the approximate cost of the remedy.

A. REMEDIAL ACTION	B. ESTIMATED COST	C. REMARKS
	$	
	$	
	$	
	$	
	$	
	$	
	$	
	$	
D. TOTAL ESTIMATED COST	$	

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Continued From Front

IV. REMEDIAL ACTIONS

A. SHORT TERM/EMERGENCY ACTIONS *(On Site and Off-Site)*: List all emergency actions taken or planned to bring the site under immediate control, e.g., restrict access, provide alternate water supply, etc. See instructions for a list of Key Words for each of the actions to be used in the spaces below.

1. ACTION	2. ACTION START DATE (mo.,day.,& yr.)	3. ACTION END DATE (mo.,day.,& yr.)	4. ACTION AGENCY (EPA, State, Private Party)	5. COST	6. SPECIFY 311 OR OTHER ACTION. INDICATE THE MAGNITUDE OF THE WORK REQUIRED.
				$	
				$	
				$	
				$	
				$	
				$	

B. LONG TERM STRATEGY *(On Site and Off-Site)*: List all long term solutions, e.g., excavation, removal, ground water monitoring wells, etc. See instructions for a list of Key Words for each of the actions to be used in the spaces below.

1. ACTION	2. ACTION START DATE (mo.,day.,& yr.)	3. ACTION END DATE (mo.,day.,& yr.)	4. ACTION AGENCY (EPA, State Private Party)	5. COST	6. SPECIFY 311 OR OTHER ACTION: INDICATE THE MAGNITUDE OF THE WORK REQUIRED.
				$	
				$	
				$	
				$	
				$	
				$	

C. MANHOURS AND COST BY ACTION AGENCY

1. ACTION AGENCY	2. TOTAL MAN-HOURS FOR REMEDIAL ACTIVITIES	3. TOTAL COST FOR REMEDIAL ACTIVITIES
a. EPA		$
b. STATE		$
c. PRIVATE PARTIES		$
d. OTHER *(specify)*:		$

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
Site 21 - Vessel Waste Oil Recovery Site 25 - Seaplane Maintenance	NAVSTA Treasure Island

03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
San Francisco	CA	94130	San Francisco	075	05

09 COORDINATES: LATITUDE 37° 49' 00 ON | LONGITUDE 122° 22' 00 OW

10 TYPE OF OWNERSHIP (Check one): ☐ A. PRIVATE ☒ B. FEDERAL NAVY ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL ☐ F. OTHER ☐ G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION	02 SITE STATUS	03 YEARS OF OPERATION
10 / 7 / 87 (MONTH DAY YEAR)	☒ ACTIVE -21 ☒ INACTIVE -25	21 / 25 1943 / 1958 (BEGINNING YEAR / ENDING YEAR) 1987 ___ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)

☐ A. EPA ☐ B. EPA CONTRACTOR _____ (Name of firm) ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR _____ (Name of firm)

☐ E. STATE ☐ F. STATE CONTRACTOR _____ (Name of firm) XXX G. OTHER Dames & Moore (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
Ann M. Becker	Team Leader, Engineer	Dames & Moore	(415) 896-5858

09 OTHER INSPECTORS	10 TITLE	11 ORGANIZATION	12 TELEPHONE NO.
James G. Ritchie	Geologist	Dames & Moore	(415) 896-5858
Dale D. Shileikis	Biologist	Dames & Moore	(415) 896-5858
Carol L. Creasey	Hydrogeologist	Dames & Moore	(415) 896-5858
William H. Welsh	Engineer	Dames & Moore	(805) 685-4415
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO.
Not Applicable			( )
			( )
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
☒ PERMISSION ☐ WARRANT	1100	Clear, Mild.

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO.
Steve Hughes	NAVSTA Treasure Island	(415) 765-6114

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
Ann M. Becker	Contractor	Dames & Moore	(415)896-5858	11 / 25 / 87 (MONTH DAY YEAR)

EPA FORM 2070-13 (7-81)

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POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- ☐ A. SOLID
- ☐ B. POWDER, FINES
- ☐ C. SLUDGE
- ☐ D. OTHER _____ (Specify)
- ☐ E. SLURRY
- ☒ F. LIQUID
- ☐ G. GAS

02 WASTE QUANTITY AT SITE (Measures of waste quantities must be independent)

TONS Unknown

CUBIC YARDS _____

NO. OF DRUMS _____

03 WASTE CHARACTERISTICS (Check all that apply)

- ☒ A. TOXIC
- ☐ B. CORROSIVE
- ☐ C. RADIOACTIVE
- ☒ D. PERSISTENT
- ☒ E. SOLUBLE
- ☐ F. INFECTIOUS
- ☒ G. FLAMMABLE
- ☐ H. IGNITABLE
- ☐ I. HIGHLY VOLATILE
- ☐ J. EXPLOSIVE
- ☐ K. REACTIVE
- ☐ L. INCOMPATIBLE
- ☐ M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE	Unknown		
SOL	SOLVENTS			
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS			

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently used CAS numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
SOL	Misc. Solvents	999	DR,OD	Unknown	
OLW	Waste Oil	999	TK,DR,OD	Unknown	
OLW	Aviation Fuel	999	TK,OD	Unknown	
OLW	Aviation Fluids	999	DR,OD	Unknown	

V. FEEDSTOCKS (See Appendix for CAS numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Employee Interviews

EPA FORM 2070-12 (7-81)

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POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 [X] A. GROUNDWATER CONTAMINATION
02 [ ] OBSERVED (DATE: _____) x[X] POTENTIAL [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____
04 NARRATIVE DESCRIPTION

Materials released at the ground surface could migrate through the vadose zone to the groundwater table.

01 [X] B. SURFACE WATER CONTAMINATION
02 [ ] OBSERVED (DATE: _____) x[X] POTENTIAL [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____
04 NARRATIVE DESCRIPTION

Materials released at the site may be conveyed to the Bay through the storm-water system or by surface funoff.

01 [ ] C. CONTAMINATION OF AIR
02 [ ] OBSERVED (DATE: _____) [ ] POTENTIAL [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____
04 NARRATIVE DESCRIPTION

Very unlikely. No data exists showing any release of air contamination.

01 [ ] D. FIRE EXPLOSIVE CONDITIONS
02 [ ] OBSERVED (DATE: _____) [ ] POTENTIAL [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____
04 NARRATIVE DESCRIPTION

A fire marshall has not certified that this area presents a significant threat; therefore, no fire or explosive conditions are considered to be present.

01 [ ] E. DIRECT CONTACT
02 [ ] OBSERVED (DATE: _____) x[X] POTENTIAL [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____
04 NARRATIVE DESCRIPTION

Possible direct contact during handling of waste prior to disposal.

01 [X] F. CONTAMINATION OF SOIL
02 [ ] OBSERVED (DATE: _____) x[X] POTENTIAL [ ] ALLEGED
03 AREA POTENTIALLY AFFECTED: _____ (Acres)
04 NARRATIVE DESCRIPTION

The area is currently asphalt paved, but released materials may have migrated through the paving into the subsurface soil. Potential releases from under-ground tanks in the area may have resulted in soil contamination.

01 [ ] G. DRINKING WATER CONTAMINATION
02 [ ] OBSERVED (DATE: _____) [ ] POTENTIAL [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____
04 NARRATIVE DESCRIPTION

There is no potential for drinking water contamination. Drinking water is pumped in from across the Bay Bridge.

01 [ ] H. WORKER EXPOSURE/INJURY
02 [ ] OBSERVED (DATE: _____) [ ] POTENTIAL [ ] ALLEGED
03 WORKERS POTENTIALLY AFFECTED: _____
04 NARRATIVE DESCRIPTION

Worker exposure injury could occur during removal and handling of waste materials.

01 [ ] I. POPULATION EXPOSURE/INJURY
02 [ ] OBSERVED (DATE: _____) [ ] POTENTIAL [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____
04 NARRATIVE DESCRIPTION

Population exposure injury would be from workers handling waste materials.

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POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☒ J. DAMAGE TO FLORA — 02 ☒ OBSERVED (DATE: 10/7/87) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION: Contact with waste oil from use of donuts of old design and from possible minor spills during transfer could have potentially damaged algal species such as eelgrass beds on eastern shore of YBI. Damage would have occurred only if spilled waste oil was carried by currents to location of eelgrass beds.

01 ☒ K. DAMAGE TO FAUNA — 02 ☒ OBSERVED (DATE: 10/7/87) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION (include names of species): Spillage of waste oil could have potentially damaged waterfowl present in the immediate vicinity of the spill, benthic fauna (polychetes) along shoreline of Treasure Island and Yerba Buena Island and intertidal fauna (barnacles) on pier pilings.

01 ☒ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE:) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Released materials discharged to the Bay may have accumulated in marine life, such as benthic and intertidal fuana and accumulated in the food chain by predators such as waterfowl and fish.

01 ☐ M. UNSTABLE CONTAINMENT OF WASTES (Spills, runoff, standing liquids, leaking drums) — 02 ☐ OBSERVED (DATE:) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: — 04 NARRATIVE DESCRIPTION
Contaminated liquids were reportedly allowed to enter storm and waste water drain system and directly into San Francisco Bay.

01 ☐ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE:) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Very unlikely unless significant groundwater migration has occurred.

01 ☒ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE:) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Materials released may have entered and contaminated either the stormwater or industrial wastewater system.

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE:) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
None has been reported.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

Ten reported aviation tanks have not been located nor is there a record of their abandonments.

III. TOTAL POPULATION POTENTIALLY AFFECTED: <100

IV. COMMENTS

Staining of paved areas near the vessel waste oil recovery system was observed.

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Employee interviews
Observations.

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
☐ A. NPDES				
☐ B. UIC				
☐ C. AIR				
☐ D. RCRA				
☐ E. RCRA INTERIM STATUS				
☒ F. SPCC PLAN	---	Feb. 1988	---	SPCC Oil
☐ G. STATE (Specify)				
☐ H. LOCAL (Specify)				
☐ I. OTHER (Specify)				
☐ J. NONE				

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE
☐ A. SURFACE IMPOUNDMENT		
☐ B. PILES		
☒ C. DRUMS, ABOVE GROUND		
☒ D. TANK, ABOVE GROUND		
☐ E. TANK, BELOW GROUND		
☐ F. LANDFILL		
☐ G. LANDFARM		
☐ H. OPEN DUMP		
☒ I. OTHER Releases (Specify)		

04 TREATMENT (Check all that apply)

- ☐ A. INCINERATION
- ☐ B. UNDERGROUND INJECTION
- ☐ C. CHEMICAL/PHYSICAL
- ☐ D. BIOLOGICAL
- ☒ E. WASTE OIL PROCESSING
- ☐ F. SOLVENT RECOVERY
- ☐ G. OTHER RECYCLING/RECOVERY
- ☐ H. OTHER _____ (Specify)

05 OTHER

☒ A. BUILDINGS ON SITE

10

06 AREA OF SITE

_____ (Acres)

07 COMMENTS

None

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

☐ A. ADEQUATE, SECURE ☒ B. MODERATE ☐ C. INADEQUATE, POOR ☐ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC.

Vessel waste oil recovery system tanks provide adequate containment, but releases from these tanks would not be contained.

Residues associated with past releases may migrate to groundwater or to waters of the Bay.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE ☒ YES ☐ NO

02 COMMENTS Portions of the waste are underground and are not easily accessible. Surface stain areas near the vessel waste oil recovery system are easily accessible.

VI. SOURCES OF INFORMATION (Cite specific references e.g. state files, sample analysis, reports)

Employee interviews
Observations.

EPA FORM 2070-13 (7-81)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as applicable): Pipeline from off the island

	SURFACE	WELL
COMMUNITY	A. ☐	B. ☐
NON-COMMUNITY	C. ☐	D. ☐

02 STATUS: Not used

ENDANGERED	AFFECTED	MONITORED
A. ☐	B. ☐	C. ☐
D. ☐	E. ☐	F. ☐

03 DISTANCE TO SITE: N/A
A. _____ (mi)
B. _____ (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)

☐ A. ONLY SOURCE FOR DRINKING ☐ B. DRINKING (Other sources available) COMMERCIAL, INDUSTRIAL, IRRIGATION (No other water sources available) ☐ C. COMMERCIAL, INDUSTRIAL, IRRIGATION (Limited other sources available) XX D. NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUND WATER: 0

03 DISTANCE TO NEAREST DRINKING WATER WELL: > 3 (mi)

04 DEPTH TO GROUNDWATER	05 DIRECTION OF GROUNDWATER FLOW	06 DEPTH TO AQUIFER OF CONCERN	07 POTENTIAL YIELD OF AQUIFER	08 SOLE SOURCE AQUIFER
2 - 6 (ft)	Toward S.F. Bay.	N/A (ft)	N/A (gpd)	☐ YES ☐ NO

09 DESCRIPTION OF WELLS (Including usage, depth, and location relative to population and buildings)

NOTE: The site is on an island in San Francisco Bay. There are no water wells in use on the island. Water is piped to the island on the San Francisco-Oakland Bay Bridge.

10 RECHARGE AREA		11 DISCHARGE AREA	
XX ☐ YES ☐ NO	COMMENTS: Infiltration is occurring but recharging unusable aquifer.	XX ☐ YES ☐ NO	COMMENTS: Discharge of groundwater eventually to San Francisco Bay.

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)

☐ A. RESERVOIR, RECREATION DRINKING WATER SOURCE ☐ B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES XX ☐ C. COMMERCIAL, INDUSTRIAL ☐ D. NOT CURRENTLY USED

02 AFFECTED, POTENTIALLY AFFECTED BODIES OF WATER

NAME:	AFFECTED	DISTANCE TO SITE
San Francisco Bay	☐	< 0.5 (mi)
	☐	(mi)
	☐	(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE
A. 3000 (NO OF PERSONS)	B. 3000 (NO OF PERSONS)	C. >10,000 (NO OF PERSONS)

02 DISTANCE TO NEAREST POPULATION: < 0.1 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE: 200

04 DISTANCE TO NEAREST OFF-SITE BUILDING: < 0.1 (mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., rural, village, densely populated urban area)

NAVSTA TI contains residences for approximately 2500-3000 service personnel. The island is surrounded by San Francisco Bay. Across the Bay there are large cities including San Francisco and Oakland.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☐ A. $10^{-6} - 10^{-8}$ cm/sec ☐ B. $10^{-4} - 10^{-6}$ cm/sec XX C. $10^{-4} - 10^{-3}$ cm/sec ☒ D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☐ A. IMPERMEABLE (Less than 10^{-6} cm/sec) XX ☒ B. RELATIVELY IMPERMEABLE ($10^{-4} - 10^{-6}$ cm/sec) ☐ C. RELATIVELY PERMEABLE ($10^{-2} - 10^{-4}$ cm/sec) ☐ D. VERY PERMEABLE (Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK	04 DEPTH OF CONTAMINATED SOIL ZONE	05 SOIL pH	
300 (ft)	Unknown (ft)	Unknown	

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
-10 to -15 (in)	3.0 (in)	0-2 %	West	1 %

09 FLOOD POTENTIAL
SITE IS IN N/A YEAR FLOODPLAIN

10 ☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE	OTHER
A. > 2 (mi)	B. (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)
> 2 (mi)
ENDANGERED SPECIES:

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL	RESIDENTIAL AREAS; NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS: PRIME AG LAND	AGRICULTURAL LANDS: AG LAND
A. < 0.1 (mi)	B. > 2 (mi)	C. > 3 (mi)	D. > 3 (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

The site is located on Treasure Island, a man-made island on San Francisco Bay. Treasure Island is essentially flat with very little relief. Slopes in the vicinity of the site vary from 0 to 2%.

VII. SOURCES OF INFORMATION (Cite specific references e.g., state files, sample analysis, reports)

Personal Interviews.
Observations.
Harding Lawson Associates Report (1985).

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER	04 SIC CODE
United States Navy		

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	05 CITY	06 STATE	07 ZIP CODE
NAVSTA Treasure Island	San Francisco	CA	94130

PARENT COMPANY (if applicable)

08 NAME	09 D+B NUMBER	11 SIC CODE

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	12 CITY	13 STATE	14 ZIP CODE

01 NAME	02 D+B NUMBER	04 SIC CODE

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	05 CITY	06 STATE	07 ZIP CODE

08 NAME	09 D+B NUMBER	11 SIC CODE

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	12 CITY	13 STATE	14 ZIP CODE

01 NAME	02 D+B NUMBER	04 SIC CODE

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	05 CITY	06 STATE	07 ZIP CODE

08 NAME	09 D+B NUMBER	11 SIC CODE

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	12 CITY	13 STATE	14 ZIP CODE

01 NAME	02 D+B NUMBER	04 SIC CODE

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	05 CITY	06 STATE	07 ZIP CODE

08 NAME	09 D+B NUMBER	11 SIC CODE

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	12 CITY	13 STATE	14 ZIP CODE

III. PREVIOUS OWNER(S) (List most recent first)

01 NAME	02 D+B NUMBER	04 SIC CODE

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	05 CITY	06 STATE	07 ZIP CODE

IV. REALTY OWNER(S) (If applicable, list most recent first)

01 NAME	02 D+B NUMBER	04 SIC CODE

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER	04 SIC CODE

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER	04 SIC CODE

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER	04 SIC CODE

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	05 CITY	06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 6 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
CA	7170023330

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER			
SURFACE WATER			
WASTE			
AIR			
RUNOFF			
SPILL			
SOIL			
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS

IV. PHOTOGRAPHS AND MAPS

01 TYPE [X] GROUND [X] AERIAL

02 IN CUSTODY OF Naval Energy and Environmental Support Activity (NEESA). (Name of organization or individual)

03 MAPS [X] YES [ ] NO

04 LOCATION OF MAPS NEESA

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis reports)

Personnel Interviews.

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

II. CURRENT OPERATOR (Provide if different from owner)

01 NAME: United States Navy	02 D+B NUMBER:
03 STREET ADDRESS (P.O. Box, RFD #, etc.): NAVSTA Treasure Island	04 SIC CODE:
05 CITY: San Francisco	06 STATE: CA / 07 ZIP CODE: 94130
08 YEARS OF OPERATION: 45	09 NAME OF OWNER: U.S. Navy

OPERATOR'S PARENT COMPANY (If applicable)

10 NAME:	11 D+B NUMBER:
12 STREET ADDRESS (P.O. Box, RFD #, etc.):	13 SIC CODE:
14 CITY:	15 STATE: / 16 ZIP CODE:

III. PREVIOUS OPERATOR(S) (List most recent first; provide only if different from owner)

01 NAME:	02 D+B NUMBER:
03 STREET ADDRESS (P.O. Box, RFD #, etc.):	04 SIC CODE:
05 CITY:	06 STATE: / 07 ZIP CODE:
08 YEARS OF OPERATION:	09 NAME OF OWNER DURING THIS PERIOD:

PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)

10 NAME:	11 D+B NUMBER:
12 STREET ADDRESS (P.O. Box, RFD #, etc.):	13 SIC CODE:
14 CITY:	15 STATE: / 16 ZIP CODE:

01 NAME:	02 D+B NUMBER:
03 STREET ADDRESS (P.O. Box, RFD #, etc.):	04 SIC CODE:
05 CITY:	06 STATE: / 07 ZIP CODE:
08 YEARS OF OPERATION:	09 NAME OF OWNER DURING THIS PERIOD:

10 NAME:	11 D+B NUMBER:
12 STREET ADDRESS (P.O. Box, RFD #, etc.):	13 SIC CODE:
14 CITY:	15 STATE: / 16 ZIP CODE:

01 NAME:	02 D+B NUMBER:
03 STREET ADDRESS (P.O. Box, RFD #, etc.):	04 SIC CODE:
05 CITY:	06 STATE: / 07 ZIP CODE:
08 YEARS OF OPERATION:	09 NAME OF OWNER DURING THIS PERIOD:

10 NAME:	11 D+B NUMBER:
12 STREET ADDRESS (P.O. Box, RFD #, etc.):	13 SIC CODE:
14 CITY:	15 STATE: / 16 ZIP CODE:

IV. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

EPA FORM 2070-13 (7-81)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
CA	7170023330

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER
U.S. Navy	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
NAVSTA Treasure Island	

05 CITY	06 STATE	07 ZIP CODE
San Francisco	CA	94130

III. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

IV. TRANSPORTER(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
U.S. Navy			

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
NAVSTA Treasure Island			

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE
San Francisco	CA	94130			

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

EPA FORM 2070-13 (7-81)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. PAST RESPONSE ACTIVITIES (Continued)

01 ☐ R. BARRIER WALLS CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ S. CAPPING/COVERING — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ T. BULK TANKAGE REPAIRED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ U. GROUT CURTAIN CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ V. BOTTOM SEALED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ W. GAS CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ X. FIRE CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Y. LEACHATE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Z. AREA EVACUATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 1. ACCESS TO SITE RESTRICTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 2. POPULATION RELOCATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 3. OTHER REMEDIAL ACTIVITIES — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Employee Interviews; Observations.

EPA FORM 2070-13 (7-81)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 11 - ENFORCEMENT INFORMATION

I. IDENTIFICATION	
01 STATE CA	02 SITE NUMBER 7170023330

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY ENFORCEMENT ACTION ☐ YES ☒ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY/ENFORCEMENT ACTION

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis reports)

Personnel Interview.

EPA FORM 2070-13 (7-81)

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POTENTIAL HAZARDOUS WASTE SITE
FINAL STRATEGY DETERMINATION

REGION	SITE NUMBER
IX	7170023330

File this form in the regional Hazardous Waste Log File and submit a copy to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Task Force (*EN-335*); 401 M St., SW; Washington, DC 20460.

I. SITE IDENTIFICATION

A. SITE NAME	B. STREET	
	Naval Station (NAVSTA) Treasure Island	
C. CITY	D. STATE	E. ZIP CODE
San Francisco	CA	94130

II. FINAL DETERMINATION

Indicate the recommended action(s) and agency(ies) that should be involved by marking 'X' in the appropriate boxes.

RECOMMENDATION	MARK 'X'	ACTION AGENCY			
		EPA	STATE	LOCAL	PRIVATE
A. NO ACTION NEEDED					
B. REMEDIAL ACTION NEEDED, BUT NO RESOURCES AVAILABLE (*If yes, complete Section III.*)					
C. REMEDIAL ACTION (*If yes, complete Section IV.*)					
D. ENFORCEMENT ACTION (*If yes, specify in Part E whether the case will be primarily managed by the EPA or the State and what type of enforcement action is anticipated.*)					

E. RATIONALE FOR FINAL STRATEGY DETERMINATION

The site will continue to be evaluated and additional sampling will be performed. These results will be used to determine remedial actions. See report entitled Preliminary Assessment/Site Investigation of Naval Station, Treasure Island, CA.

F. IF A CASE DEVELOPMENT PLAN HAS BEEN PREPARED, SPECIFY THE DATE PREPARED (*mo., day, & yr.*)	G. IF AN ENFORCEMENT CASE HAS BEEN FILED, SPECIFY THE DATE FILED (*mo., day, & yr.*)

H. PREPARER INFORMATION

1. NAME	2. TELEPHONE NUMBER	3. DATE (*mo., day, & yr.*)

III. REMEDIAL ACTIONS TO BE TAKEN WHEN RESOURCES BECOME AVAILABLE

List all remedial actions, such as excavation, removal, etc. to be taken as soon as resources become available. See instructions for a list of Key Words for each of the actions to be used in the spaces below. Provide an estimate of the approximate cost of the remedy.

A. REMEDIAL ACTION	B. ESTIMATED COST	C. REMARKS
	$	
	$	
	$	
	$	
	$	
	$	
	$	
	$	
D. TOTAL ESTIMATED COST	$	

REPRODUCED AT GOVERNMENT EXPENSE

Continued From Front

IV. REMEDIAL ACTIONS

A. SHORT TERM/EMERGENCY ACTIONS *(On Site and Off-Site)*: List all emergency actions taken or planned to bring the site under immediate control, e.g., restrict access, provide alternate water supply, etc. See instructions for a list of Key Words for each of the actions to be used in the spaces below.

1. ACTION	2. ACTION START DATE (mo.,day.,& yr.)	3. ACTION END DATE (mo.,day.,& yr.)	4. ACTION AGENCY (EPA, State, Private Party)	5. COST	6. SPECIFY 311 OR OTHER ACTION. INDICATE THE MAGNITUDE OF THE WORK REQUIRED.
				$	
				$	
				$	
				$	
				$	
				$	

B. LONG TERM STRATEGY *(On Site and Off-Site)*: List all long term solutions, e.g., excavation, removal, ground water monitoring wells, etc. See instructions for a list of Key Words for each of the actions to be used in the spaces below.

1. ACTION	2. ACTION START DATE (mo.,day.,& yr.)	3. ACTION END DATE (mo.,day.,& yr.)	4. ACTION AGENCY (EPA, State Private Party)	5. COST	6. SPECIFY 311 OR OTHER ACTION: INDICATE THE MAGNITUDE OF THE WORK REQUIRED.
				$	
				$	
				$	
				$	
				$	
				$	

C. MANHOURS AND COST BY ACTION AGENCY

1. ACTION AGENCY	2. TOTAL MAN-HOURS FOR REMEDIAL ACTIVITIES	3. TOTAL COST FOR REMEDIAL ACTIVITIES
a. EPA		$
b. STATE		$
c. PRIVATE PARTIES		$
d. OTHER *(specify)*:		$

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REPRODUCED AT GOVERNMENT EXPENSE

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
Site 22 -Navy Exchange Gas Sta.(Bldg.330)	NAVSTA Treasure Island

03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
San Francisco	CA	94130	San Francisco	075	05

09 COORDINATES: 37° 49 00 ON (LATITUDE) 122° 22 00 OW (LONGITUDE)

10 TYPE OF OWNERSHIP (Check one)
☐ A. PRIVATE ☒ B. FEDERAL NAVY ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL ☐ F. OTHER _____ ☐ G UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION	02 SITE STATUS	03 YEARS OF OPERATION
10 / 5 / 87 (MONTH DAY YEAR)	☒ ACTIVE ☐ INACTIVE	mid 1940's (BEGINNING YEAR) 1987 (ENDING YEAR) ☐ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)
☐ A. EPA ☐ B. EPA CONTRACTOR _____ (Name of firm) ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR _____ (Name of firm)
☐ E. STATE ☐ F. STATE CONTRACTOR _____ (Name of firm) ☒ G. OTHER Dames & Moore (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
Ann M. Becker	Team Leader, Engineer	Dames & Moore	(415) 896-5858
09 OTHER INSPECTORS	**10 TITLE**	**11 ORGANIZATION**	**12 TELEPHONE NO.**
James G. Ritchie	Geologist	Dames & Moore	(415) 896-5858
Dale D. Shileikis	Biologist	Dames & Moore	(415) 896-5858
Carol L. Creasey	Hydrogeologist	Dames & Moore	(415) 896-5858
William H. Welsh	Engineer	Dames & Moore	805, 685-4415
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
Not Applicable			( )
			( )
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
☒ PERMISSION ☐ WARRANT	1100	clear, mild, no wind

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO
Steve Hughes	NAVSTA Treasure Island	(415) 765-6114

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
Ann M. Becker	Contractor	Dames & Moore	(415)896-5858	11 / 25 / 87 (MONTH DAY YEAR)

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- ☐ A. SOLID
- ☐ B. POWDER, FINES
- ☐ C. SLUDGE
- ☐ D. OTHER (Specify)
- ☐ E. SLURRY
- XX F. LIQUID
- ☐ G. GAS

02 WASTE QUANTITY AT SITE (Measures of waste quantities must be independent)

- TONS: _____
- CUBIC YARDS: _____
- NO. OF DRUMS: 50

03 WASTE CHARACTERISTICS (Check all that apply)

- XX A. TOXIC
- ☐ B. CORROSIVE
- ☐ C. RADIOACTIVE
- XX D. PERSISTENT
- XX E. SOLUBLE
- ☐ F. INFECTIOUS
- XX G. FLAMMABLE
- ☐ H. IGNITABLE
- ☐ I. HIGHLY VOLATILE
- ☐ J. EXPLOSIVE
- ☐ K. REACTIVE
- ☐ L. INCOMPATIBLE
- ☐ M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			
SOL	SOLVENTS			
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS			

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently used CAS numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
OLW	Diesel	999	TK,OD	Unknown	
OLW	Gasoline	999	TK,OD	Unknown	
OLW	Waste Oil	999	DR,OD	Unknown	
OCC	Ethylene Glycol	999	DR,OD	Unknown	
OLW	Engine Fluids	999	DR,OD	Unknown	

V. FEEDSTOCKS (See Appendix for CAS numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Employee Interviews

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POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☐ A. GROUNDWATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: 0
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Groundwater contamination is unlikely since waste materials were released into the stormwater system.

01 ☒ B. SURFACE WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: 100.
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☒ ALLEGED
04 NARRATIVE DESCRIPTION

Reports indicate waste fluids were discharged to the stormwater system which discharged to the Bay.

01 ☐ C. CONTAMINATION OF AIR
03 POPULATION POTENTIALLY AFFECTED: _____
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Very unlikely. No data exists which shows any release of air contamination.

01 ☐ D. FIRE EXPLOSIVE CONDITIONS
03 POPULATION POTENTIALLY AFFECTED: _____
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

A fire marshall has not certified that this area represents a significant threat; therefore, no fire or explosive conditions are considered to exist.

01 ☐ E. DIRECT CONTACT
03 POPULATION POTENTIALLY AFFECTED: _____
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Direct contact is possible during removal of contaminated materials.

01 ☒ F. CONTAMINATION OF SOIL
03 AREA POTENTIALLY AFFECTED: 1 (Acres)
02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Although this area is currently asphalt paved, the area may have been bare earth during early operation. Material may have been released directly to the surface of to the subsurface from underground tanks.

01 ☐ G. DRINKING WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: _____
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

There is no potential for drinking water contamination. Drinking water is piped in from across the Bay Bridge.

01 ☐ H. WORKER EXPOSURE/INJURY
03 WORKERS POTENTIALLY AFFECTED: Unknown
02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Exposure potential during handling of wastes for disposal.

01 ☐ I. POPULATION EXPOSURE/INJURY
03 POPULATION POTENTIALLY AFFECTED: _____
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Population exposure injury would be from workers handling wastes.

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POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 [X] J. DAMAGE TO FLORA — 02 [X] OBSERVED (DATE: 10-8-87) — [X] POTENTIAL — [ ] ALLEGED
04 NARRATIVE DESCRIPTION: Contamination of soils could potentially damage landscape and ruderal vegetation in localized area. Damage restricted primarily to vicinity of actual contamination. Disposal of fluids to stormwater drain could have potentially damaged algae near stromdrain outfall.

01 [X] K. DAMAGE TO FAUNA — 02 [X] OBSERVED (DATE: 10-8-87) — [X] POTENTIAL — [ ] ALLEGED
04 NARRATIVE DESCRIPTION (include names of species): Contamination of soils could potentially damage fauna (burrowing species; ground squirrels) by direct contact with soil. Potential damage to marine fauna near stormdrain outfall (benthic and intertidal) from disposal of fluids to stormdrain system.

01 [X] L. CONTAMINATION OF FOOD CHAIN — 02 [ ] OBSERVED (DATE: _____) — [X] POTENTIAL — [ ] ALLEGED
04 NARRATIVE DESCRIPTION
Materials discharged to Bay may have been accumulated marine life and entered food chain via predator by waterfowl and fish.

01 [ ] M. UNSTABLE CONTAINMENT OF WASTES (Spills, runoff, standing liquids, leaking drums) — 02 [ ] OBSERVED (DATE: _____) — [ ] POTENTIAL — [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: — 04 NARRATIVE DESCRIPTION
Materials are contained in storm and waste water systems and water and sediment of San Francisco Bay.

01 [ ] N. DAMAGE TO OFFSITE PROPERTY — 02 [ ] OBSERVED (DATE: _____) — [ ] POTENTIAL — [ ] ALLEGED
04 NARRATIVE DESCRIPTION
Very unlikely unless significant groundwater migration has occurred.

01 [X] O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 [ ] OBSERVED (DATE: _____) — [X] POTENTIAL — [ ] ALLEGED
04 NARRATIVE DESCRIPTION
Materials discharged to the storm sewer may have resulted in contamination of the system.

01 [ ] P. ILLEGAL/UNAUTHORIZED DUMPING — 02 [ ] OBSERVED (DATE: _____) — [ ] POTENTIAL — [ ] ALLEGED
04 NARRATIVE DESCRIPTION
None has been reported.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS
None

III. TOTAL POPULATION POTENTIALLY AFFECTED: < 100

IV. COMMENTS

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)
Employee Interviews
Observations

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
☐ A. NPDES				
☐ B. UIC				
☐ C. AIR				
☐ D. RCRA				
☐ E. RCRA INTERIM STATUS				
☒ F. SPCC PLAN	---	Feb. 1988	---	SPCC Oil
☐ G. STATE (Specify)				
☐ H. LOCAL (Specify)				
☐ I. OTHER (Specify)				
☐ J. NONE				

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE
☐ A. SURFACE IMPOUNDMENT		
☐ B. PILES		
☒ C. DRUMS, ABOVE GROUND		
☐ D. TANK, ABOVE GROUND		
☒ E. TANK, BELOW GROUND		
☐ F. LANDFILL		
☐ G. LANDFARM		
☐ H. OPEN DUMP		
☒ I. OTHER (Specify) Releases		

04 TREATMENT (Check all that apply)
- ☐ A. INCINERATION
- ☐ B. UNDERGROUND INJECTION
- ☐ C. CHEMICAL/PHYSICAL
- ☐ D. BIOLOGICAL
- ☐ E. WASTE OIL PROCESSING
- ☐ F. SOLVENT RECOVERY
- ☐ G. OTHER RECYCLING/RECOVERY
- ☐ H. OTHER (Specify)

05 OTHER

☒ A. BUILDINGS ON SITE

06 AREA OF SITE

1 (Acres)

07 COMMENTS

None

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

☐ A. ADEQUATE, SECURE ☐ B. MODERATE ☒ C. INADEQUATE, POOR ☐ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC.

Materials discharged to drain system are conveyed to the Bay.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE. ☒ YES ☐ NO

02 COMMENTS

Portions of the waste in the storm water sump are easily accessible.

VI. SOURCES OF INFORMATION (Cite specific references, e.g. state files, sample analysis, reports)

Personnel Interviews
Observations

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION
01 STATE | 02 SITE NUMBER
CA 7170023330

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☐ A. $10^{-6} - 10^{-8}$ cm/sec ☐ B. $10^{-4} - 10^{-6}$ cm/sec ☒ C. $10^{-4} - 10^{-3}$ cm/sec ☐ D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☐ A. IMPERMEABLE (Less than 10^{-6} cm/sec) ☒ B. RELATIVELY IMPERMEABLE ($10^{-4} - 10^{-6}$ cm/sec) ☐ C. RELATIVELY PERMEABLE ($10^{-2} - 10^{-4}$ cm/sec) ☐ D. VERY PERMEABLE (Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK	04 DEPTH OF CONTAMINATED SOIL ZONE	05 SOIL pH	
300 (ft)	Unknown (ft)	Unknown	

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
-10 to -15 (in)	3.0 (in)	0-2 %	West	1 %

09 FLOOD POTENTIAL
SITE IS IN N/A YEAR FLOODPLAIN

10 ☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)
ESTUARINE: A. >2 (mi) OTHER: B. _____ (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)
>2 (mi)
ENDANGERED SPECIES: _____

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL	RESIDENTIAL AREAS; NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS: PRIME AG LAND	AGRICULTURAL LANDS: AG LAND
A. 0.1 (mi)	B. >2 (mi)	C. >3 (mi)	D. >3 (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

The site is located on Treasure Island, a man-made island on San Francisco Bay. Treasure Island is essentially flat with very little relief. Slopes in the vicinity of the site vary from 0 to 2%.

VII. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Personal inteviews.
Observations
Harding Lawson Associates Report (1985).

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as appropriate): Pipeline from off the island

	SURFACE	WELL
COMMUNITY	A. ☐	B. ☐
NON-COMMUNITY	C. ☐	D. ☐

02 STATUS: Not used

ENDANGERED	AFFECTED	MONITORED
A. ☐	B. ☐	C. ☐
D. ☐	E. ☐	F. ☐

03 DISTANCE TO SITE
A. N/A (mi)
B. _____ (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)
☐ A. ONLY SOURCE FOR DRINKING ☐ B. DRINKING (Other source(s) available) COMMERCIAL, INDUSTRIAL, IRRIGATION (No other water sources available) ☐ C. COMMERCIAL, INDUSTRIAL, IRRIGATION (Limited other sources available) ☒ D. NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUND WATER: 0

03 DISTANCE TO NEAREST DRINKING WATER WELL: > 3 (mi)

04 DEPTH TO GROUNDWATER	05 DIRECTION OF GROUNDWATER FLOW	06 DEPTH TO AQUIFER OF CONCERN	07 POTENTIAL YIELD OF AQUIFER	08 SOLE SOURCE AQUIFER
2 - 6 (ft)	Toward S.F. Bay.	N/A (ft)	N/A (gpd)	☐ YES ☐ NO

09 DESCRIPTION OF WELLS (Including usage, depth, and location relative to population and buildings)

NOTE: The site is on an island in San Francisco Bay. There are no water wells in use on the island. Water is piped to the island on the San Francisco-Oakland Bay Bridge.

10 RECHARGE AREA		11 DISCHARGE AREA	
☒ YES ☐ NO	COMMENTS: Infiltration is occurring but recharging unusable aquifer.	☒ YES ☐ NO	COMMENTS: Discharge of groundwater eventually to San Francisco Bay.

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)
☐ A. RESERVOIR, RECREATION DRINKING WATER SOURCE ☐ B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES ☒ C. COMMERCIAL, INDUSTRIAL ☐ D. NOT CURRENTLY USED

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME:	AFFECTED	DISTANCE TO SITE
San Francisco Bay	☐	< 0.5 (mi)
	☐	(mi)
	☐	(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE
A. 3000 (NO OF PERSONS)	B. 3000 (NO OF PERSONS)	≥10,000 (NO OF PERSONS)

02 DISTANCE TO NEAREST POPULATION: < 0.1 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE: 200

04 DISTANCE TO NEAREST OFF-SITE BUILDING: < 0.1 (mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., rural, village, densely populated urban area)

NAVSTA TI contains residences for approximately 2500-3000 service personnel. The island is surrounded by San Francisco Bay. Across the Bay there are large cities including San Francisco and Oakland.

REPRODUCED AT GOVERNMENT EXPENSE

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 6 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER			
SURFACE WATER			
WASTE			
AIR			
RUNOFF			
SPILL			
SOIL			
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS

IV. PHOTOGRAPHS AND MAPS

01 TYPE ☒ GROUND ☒ AERIAL

02 IN CUSTODY OF Naval Energy and Environmental Support Activity (NEESA). (Name of organization or individual)

03 MAPS ☒ YES ☐ NO

04 LOCATION OF MAPS NEESA

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Personnel Interviews.

EPA FORM 2070-13 (7-81)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER	04 SIC CODE
United States Navy		

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	05 CITY	06 STATE	07 ZIP CODE
NAVSTA Treasure Island	San Francisco	CA	94130

PARENT COMPANY (if applicable)

08 NAME	09 D+B NUMBER	11 SIC CODE

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	12 CITY	13 STATE	14 ZIP CODE

II. CURRENT OWNER(S) (continued)

01 NAME	02 D+B NUMBER	04 SIC CODE

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	05 CITY	06 STATE	07 ZIP CODE

PARENT COMPANY (if applicable) (continued)

08 NAME	09 D+B NUMBER	11 SIC CODE

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	12 CITY	13 STATE	14 ZIP CODE

II. CURRENT OWNER(S) (continued)

01 NAME	02 D+B NUMBER	04 SIC CODE

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	05 CITY	06 STATE	07 ZIP CODE

PARENT COMPANY (if applicable) (continued)

08 NAME	09 D+B NUMBER	11 SIC CODE

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	12 CITY	13 STATE	14 ZIP CODE

III. PREVIOUS OWNER(S) (List most recent first)

01 NAME	02 D+B NUMBER	04 SIC CODE

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	05 CITY	06 STATE	07 ZIP CODE

IV. REALTY OWNER(S) (if applicable, list most recent first)

01 NAME	02 D+B NUMBER	04 SIC CODE

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	05 CITY	06 STATE	07 ZIP CODE

III. PREVIOUS OWNER(S) (continued)

01 NAME	02 D+B NUMBER	04 SIC CODE

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	05 CITY	06 STATE	07 ZIP CODE

IV. REALTY OWNER(S) (if applicable, list most recent first) (continued)

01 NAME	02 D+B NUMBER	04 SIC CODE

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	05 CITY	06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

EPA FORM 2070-13 (7-81)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

II. CURRENT OPERATOR (Provide if different from owner)

01 NAME	02 D+B NUMBER
United States Navy	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
NAVSTA Treasure Island	
05 CITY	06 STATE / 07 ZIP CODE
San Francisco	CA / 94130
08 YEARS OF OPERATION	09 NAME OF OWNER
45	U.S. Navy

OPERATOR'S PARENT COMPANY (If applicable)

10 NAME	11 D+B NUMBER
12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE
14 CITY	15 STATE / 16 ZIP CODE

III. PREVIOUS OPERATOR(S) (List most recent first; provide only if different from owner)

01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)

10 NAME	11 D+B NUMBER
12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE
14 CITY	15 STATE / 16 ZIP CODE

01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

10 NAME	11 D+B NUMBER
12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE
14 CITY	15 STATE / 16 ZIP CODE

01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

10 NAME	11 D+B NUMBER
12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE
14 CITY	15 STATE / 16 ZIP CODE

IV. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER
U.S. Navy	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
NAVSTA Treasure Island	

05 CITY	06 STATE	07 ZIP CODE
San Francisco	CA	94130

III. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

IV. TRANSPORTER(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
U.S. Navy			

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
NAVSTA Treasure Island			

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE
San Francisco	CA	94130			

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

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EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

II PAST RESPONSE ACTIVITIES (Continued)

01 ☐ R. BARRIER WALLS CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ S. CAPPING/COVERING — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ T. BULK TANKAGE REPAIRED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ U. GROUT CURTAIN CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ V. BOTTOM SEALED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ W. GAS CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ X. FIRE CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Y. LEACHATE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Z. AREA EVACUATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 1. ACCESS TO SITE RESTRICTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 2. POPULATION RELOCATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 3. OTHER REMEDIAL ACTIVITIES — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Employee Interviews; Observations.

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 11 - ENFORCEMENT INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
CA	7170023330

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY ENFORCEMENT ACTION ☐ YES ☒ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY ENFORCEMENT ACTION

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Personnel Interview.

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
FINAL STRATEGY DETERMINATION

REGION	SITE NUMBER
IX	7170023330

File this form in the regional Hazardous Waste Log File and submit a copy to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Task Force (*EN-335*); 401 M St., SW, Washington, DC 20460.

I. SITE IDENTIFICATION

A. SITE NAME	B. STREET	
Navy Exchange Gas Station (Bldg-330)	Naval Station (NAVSTA) Treasure Island	
C. CITY	**D. STATE**	**E. ZIP CODE**
San Francisco	CA	94130

II. FINAL DETERMINATION

Indicate the recommended action(s) and agency(ies) that should be involved by marking 'X' in the appropriate boxes.

RECOMMENDATION	MARK 'X'	ACTION AGENCY			
		EPA	STATE	LOCAL	PRIVATE
A. NO ACTION NEEDED					
B. REMEDIAL ACTION NEEDED, BUT NO RESOURCES AVAILABLE *(If yes, complete Section III.)*					
C. REMEDIAL ACTION *(If yes, complete Section IV.)*					
D. ENFORCEMENT ACTION *(If yes, specify in Part E whether the case will be primarily managed by the EPA or the State and what type of enforcement action is anticipated.)*					

E. RATIONALE FOR FINAL STRATEGY DETERMINATION

The site will continue to be evaluated and additional sampling will be performed. These results will be used to determine remedial actions. See report entitled Preliminary Assessment/Site Investigation of Naval Station, Treasure Island, CA.

F. IF A CASE DEVELOPMENT PLAN HAS BEEN PREPARED, SPECIFY THE DATE PREPARED *(mo., day, & yr.)*	G. IF AN ENFORCEMENT CASE HAS BEEN FILED, SPECIFY THE DATE FILED *(mo., day, & yr.)*

H. PREPARER INFORMATION

1. NAME	2. TELEPHONE NUMBER	3. DATE *(mo., day, & yr.)*

III. REMEDIAL ACTIONS TO BE TAKEN WHEN RESOURCES BECOME AVAILABLE

List all remedial actions, such as excavation, removal, etc. to be taken as soon as resources become available. See instructions for a list of Key Words for each of the actions to be used in the spaces below. Provide an estimate of the approximate cost of the remedy.

A. REMEDIAL ACTION	B. ESTIMATED COST	C. REMARKS
	$	
	$	
	$	
	$	
	$	
	$	
	$	
	$	
D. TOTAL ESTIMATED COST	$	

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IV. REMEDIAL ACTIONS

A. SHORT TERM/EMERGENCY ACTIONS *(On Site and Off-Site)*: List all emergency actions taken or planned to bring the site under immediate control, e.g., restrict access, provide alternate water supply, etc. See instructions for a list of Key Words for each of the actions to be used in the spaces below.

1. ACTION	2. ACTION START DATE (mo, day, & yr)	3. ACTION END DATE (mo, day, & yr)	4. ACTION AGENCY (EPA, State, Private Party)	5. COST	6. SPECIFY 311 OR OTHER ACTION. INDICATE THE MAGNITUDE OF THE WORK REQUIRED.
				$	
				$	
				$	
				$	
				$	
				$	

B. LONG TERM STRATEGY *(On Site and Off-Site)*: List all long term solutions, e.g., excavation, removal, ground water monitoring wells, etc. See instructions for a list of Key Words for each of the actions to be used in the spaces below.

1. ACTION	2. ACTION START DATE (mo, day, & yr)	3. ACTION END DATE (mo, day, & yr)	4. ACTION AGENCY (EPA, State Private Party)	5. COST	6. SPECIFY 311 OR OTHER ACTION: INDICATE THE MAGNITUDE OF THE WORK REQUIRED.
				$	
				$	
				$	
				$	
				$	
				$	

C. MANHOURS AND COST BY ACTION AGENCY

1. ACTION AGENCY	2. TOTAL MAN-HOURS FOR REMEDIAL ACTIVITIES	3. TOTAL COST FOR REMEDIAL ACTIVITIES
a. EPA		$
b. STATE		$
c. PRIVATE PARTIES		$
d. OTHER *(specify)*:		$

REPRODUCED AT GOVERNMENT EXPENSE

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

EPA

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
CA	7170023330

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER				
Site 24 - 5th Street Fuel Releases	NAVSTA Treasure Island				
03 CITY	**04 STATE**	**05 ZIP CODE**	**06 COUNTY**	**07 COUNTY CODE**	**08 CONG DIST**
San Francisco	CA	94130	San Francisco	075	05

09 COORDINATES LATITUDE 37° 49' 00" N LONGITUDE 122° 22' 00" W

10 TYPE OF OWNERSHIP (Check one)
☐ A. PRIVATE ☒ B. FEDERAL NAVY ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL ☐ F. OTHER _____ ☐ G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION	02 SITE STATUS	03 YEARS OF OPERATION
10, 8, 87 (MONTH DAY YEAR)	☒ ACTIVE ☐ INACTIVE	BEGINNING YEAR _____ ENDING YEAR _____ X UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)
☐ A. EPA ☐ B. EPA CONTRACTOR _____ (Name of firm) ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR _____ (Name of firm)
☐ E. STATE ☐ F. STATE CONTRACTOR _____ (Name of firm) XXX G. OTHER Dames & Moore (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
Ann M. Becker	Team Leader, Engineer	Dames & Moore	(415) 896-5858
09 OTHER INSPECTORS	**10 TITLE**	**11 ORGANIZATION**	**12 TELEPHONE NO.**
James G. Ritchie	Geologist	Dames & Moore	(415) 896-5858
Dale D. Shileikis	Biologist	Dames & Moore	(415) 896-5858
Carol L. Creasey	Hydrogeologist	Dames & Moore	(415) 896-5858
William H. Welsh	Engineer	Dames & Moore	(805) 685-4415
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
Not Applicable			( )
			( )
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
☒ PERMISSION ☐ WARRANT	1300	Cloudy, Mild

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO
Steve Hughes	NAVSTA Treasure Island	415, 765-6114

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
Ann M. Becker	Contractor	Dames & Moore	(415)896-5858	11, 25, 87 (MONTH DAY YEAR)

EPA FORM 2070-13 (7-81)

REPRODUCED AT GOVERNMENT EXPENSE

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- ☐ A. SOLID
- ☐ B. POWDER, FINES
- ☐ C. SLUDGE
- ☐ D. OTHER _____ (Specify)
- ☐ E. SLURRY
- X F. LIQUID
- ☐ G. GAS

02 WASTE QUANTITY AT SITE

(Measures of waste quantities must be independent)

TONS: Unknown

CUBIC YARDS: _____

NO OF DRUMS: _____

03 WASTE CHARACTERISTICS (Check all that apply)

- X A. TOXIC
- ☐ B. CORROSIVE
- ☐ C. RADIOACTIVE
- X D. PERSISTENT
- ☐ E. SOLUBLE
- ☐ F. INFECTIOUS
- X G. FLAMMABLE
- ☐ H. IGNITABLE
- ☐ I. HIGHLY VOLATILE
- ☐ J. EXPLOSIVE
- ☐ K. REACTIVE
- ☐ L. INCOMPATIBLE
- ☐ M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE	Unknown		
SOL	SOLVENTS			
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS			

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
OLW	Fuel Oil	999	OD	Unknown	

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Employee Interviews

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EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 [X] A. GROUNDWATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: <100
02 [ ] OBSERVED (DATE: _____) [X] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

Material released from underground piping may migrate to groundwater.

01 [X] B. SURFACE WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: <100
02 [ ] OBSERVED (DATE: _____) [X] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

Material released from underground piping may migrate to waters of the Bay.

01 [ ] C. CONTAMINATION OF AIR
03 POPULATION POTENTIALLY AFFECTED: _____
02 [ ] OBSERVED (DATE: _____) [ ] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

Very unlikely. No data exists which shows any release of air contamination.

01 [ ] D. FIRE EXPLOSIVE CONDITIONS
03 POPULATION POTENTIALLY AFFECTED: _____
02 [ ] OBSERVED (DATE: _____) [ ] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

A fire marshall has not certified that this area represents a significant threat; therefore, no fire or explosive conditions are considered to exist.

01 [ ] E. DIRECT CONTACT
03 POPULATION POTENTIALLY AFFECTED: _____
02 [ ] OBSERVED (DATE: _____) [ ] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

Direct contact may occur to workers handling contaminated materials.

01 [X] F. CONTAMINATION OF SOIL
03 AREA POTENTIALLY AFFECTED: 5 (Acres)
02 [ ] OBSERVED (DATE: _____) [ ] POTENTIAL [X] ALLEGED
04 NARRATIVE DESCRIPTION

Underground pipeline releases were reported to have caused hydrocarbon contaminated soil.

01 [ ] G. DRINKING WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: _____
02 [ ] OBSERVED (DATE: _____) [ ] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

There is no potential for drinking water contamination. Drinking water is piped in from across the Bay Bridge.

01 [ ] H. WORKER EXPOSURE/INJURY
03 WORKERS POTENTIALLY AFFECTED: _____
02 [ ] OBSERVED (DATE: _____) [ ] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

Exposure potential during handling of wastes for disposal.

01 [ ] I. POPULATION EXPOSURE/INJURY
03 POPULATION POTENTIALLY AFFECTED: _____
02 [ ] OBSERVED (DATE: _____) [ ] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

Population exposure would be from workers handling wastes.

EPA FORM 2070-12 (7-81)

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POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☐ J. DAMAGE TO FLORA | 02 ☐ OBSERVED (DATE: 10/7/87) | XX ☐ POTENTIAL | ☐ ALLEGED
04 NARRATIVE DESCRIPTION: Contaminated soils could potentially damage landscape flora in a localized area. Damage would be restricted primarily to the vicinity of actual contamination.

01 ☒ K. DAMAGE TO FAUNA | XX ☐ OBSERVED (DATE: 10.7/87) | XX ☐ POTENTIAL | ☐ ALLEGED
04 NARRATIVE DESCRIPTION: Contamination of soils could potentially damage fauna by decreasing numbers of species (burrowing animals-ground squirrels). Contamination of groundwater could damage fauna in San Francisco Bay (waterfowl, fish) via migration to the Bay.

01 ☐ L. CONTAMINATION OF FOOD CHAIN | 02 ☐ OBSERVED (DATE:) | ☐ POTENTIAL | ☐ ALLEGED
04 NARRATIVE DESCRIPTION: Materials discharged to Bay may have been accumulated in marine life and entered food chain via predator by waterfowl and fish.

XX 01 ☐ M. UNSTABLE CONTAINMENT OF WASTES | 02 ☐ OBSERVED (DATE:) | ☒ POTENTIAL | ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: < 100 | 04 NARRATIVE DESCRIPTION: Material released from piping is not contained and may migrate to groundwater or waters of the Bay.

01 ☐ N. DAMAGE TO OFFSITE PROPERTY | 02 ☐ OBSERVED (DATE:) | ☐ POTENTIAL | ☐ ALLEGED
04 NARRATIVE DESCRIPTION: Very unlikely unless significant groundwater migration has occurred.

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs | 02 ☐ OBSERVED (DATE:) | ☐ POTENTIAL | ☐ ALLEGED
04 NARRATIVE DESCRIPTION: Waste material was allowed to flow directly in to storm and waste water systems.

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING | 02 ☐ OBSERVED (DATE:) | ☐ POTENTIAL | ☐ ALLEGED
04 NARRATIVE DESCRIPTION: None reported.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS
Locations of segments of underground piping containing oils and fuels are unknown

III. TOTAL POPULATION POTENTIALLY AFFECTED: < 100

IV. COMMENTS
Several underground pipe releases have been identified in the site area.

V. SOURCES OF INFORMATION
Employee interviews
Observations
General Development maps showing fuel line locations.

EPA FORM 2070-12 (7-81)

DEPARTMENT OF GOVERNMENT EXPENSE

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
☐ A. NPDES				
☐ B. UIC				
☐ C. AIR				
☐ D. RCRA				
☐ E. RCRA INTERIM STATUS				
XX ☒ F. SPCC PLAN	---	Feb. 1988	---	SPCC Oil
☐ G. STATE (Specify)				
☐ H. LOCAL (Specify)				
☐ I. OTHER (Specify)				
☐ J. NONE				

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE
☐ A. SURFACE IMPOUNDMENT		
☐ B. PILES		
☐ C. DRUMS, ABOVE GROUND		
☐ D. TANK, ABOVE GROUND		
☐ E. TANK, BELOW GROUND		
☐ F. LANDFILL		
☐ G. LANDFARM		
☐ H. OPEN DUMP		
XX ☐ I. OTHER (Specify) Pipe release		

04 TREATMENT (Check all that apply)
- ☐ A. INCINERATION
- ☐ B. UNDERGROUND INJECTION
- ☐ C. CHEMICAL/PHYSICAL
- ☐ D. BIOLOGICAL
- ☐ E. WASTE OIL PROCESSING
- ☐ F. SOLVENT RECOVERY
- ☐ G. OTHER RECYCLING/RECOVERY
- ☐ H. OTHER (Specify)

05 OTHER
- XX ☐ A. BUILDINGS ON SITE

06 AREA OF SITE: 5 (Acres)

07 COMMENTS

None

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

☐ A. ADEQUATE, SECURE ☐ B. MODERATE XX ☒ C. INADEQUATE, POOR ☐ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC.

Material released from piping may migrate.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE ☐ YES XX ☒ NO

02 COMMENTS

Contaminated material is underground.

VI. SOURCES OF INFORMATION (Cite specific references, e.g. state files, sample analysis, reports)

Personnel Interviews

EPA FORM 2070-13 (7-81)

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EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as appropriate)

	SURFACE	WELL
COMMUNITY	A. ☐	B. ☐
NON-COMMUNITY	C. ☐	D. ☐

Pipeline from off the island

02 STATUS: Not used

ENDANGERED	AFFECTED	MONITORED
A. ☐	B. ☐	C. ☐
D. ☐	E. ☐	F. ☐

03 DISTANCE TO SITE: N/A
A. _____ (mi)
B. _____ (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)
☐ A. ONLY SOURCE FOR DRINKING ☐ B. DRINKING (Other sources available) COMMERCIAL, INDUSTRIAL, IRRIGATION (No other water sources available) ☐ C. COMMERCIAL, INDUSTRIAL, IRRIGATION (Limited other sources available) ☒ D. NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUND WATER: 0

03 DISTANCE TO NEAREST DRINKING WATER WELL: > 3 (mi)

04 DEPTH TO GROUNDWATER	05 DIRECTION OF GROUNDWATER FLOW	06 DEPTH TO AQUIFER OF CONCERN	07 POTENTIAL YIELD OF AQUIFER	08 SOLE SOURCE AQUIFER
2 - 6 (ft)	Toward S.F. Bay.	N/A (ft)	N/A (gpd)	☐ YES ☐ NO

09 DESCRIPTION OF WELLS (Including usage, depth, and location relative to population and buildings)

NOTE: The site is on an island in San Francisco Bay. There are no water wells in use on the island. Water is piped to the island on the San Francisco-Oakland Bay Bridge.

10 RECHARGE AREA: ☒ YES ☐ NO
COMMENTS: Infiltration is occurring but recharging unusable aquifer.

11 DISCHARGE AREA: ☒ YES ☐ NO
COMMENTS: Discharge of groundwater eventually to San Francisco Bay.

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)
☐ A. RESERVOIR, RECREATION DRINKING WATER SOURCE ☐ B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES ☒ C. COMMERCIAL, INDUSTRIAL ☐ D. NOT CURRENTLY USED

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME:	AFFECTED	DISTANCE TO SITE
San Francisco Bay	☐	< 0.5 (mi)
	☐	(mi)
	☐	(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN
ONE (1) MILE OF SITE: A. 3000 (NO OF PERSONS)
TWO (2) MILES OF SITE: B. 3000 (NO OF PERSONS)
THREE (3) MILES OF SITE: C. >10,000 (NO OF PERSONS)

02 DISTANCE TO NEAREST POPULATION: < 0.1 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE: 200

04 DISTANCE TO NEAREST OFF-SITE BUILDING: < 0.1 (mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., rural, village, densely populated urban area)

NAVSTA TI contains residences for approximately 2500-3000 service personnel. The island is surrounded by San Francisco Bay. Across the Bay there are large cities including San Francisco and Oakland.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION
01 STATE (02) SITE NUMBER
CA 7170023330

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☐ A. $10^{-6} - 10^{-8}$ cm/sec ☐ B. $10^{-4} - 10^{-6}$ cm/sec ☒ C. $10^{-4} - 10^{-3}$ cm/sec ☐ D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☐ A. IMPERMEABLE (Less than 10^{-6} cm/sec) ☒ B. RELATIVELY IMPERMEABLE ($10^{-4} - 10^{-6}$ cm/sec) ☐ C. RELATIVELY PERMEABLE ($10^{-2} - 10^{-4}$ cm/sec) ☐ D. VERY PERMEABLE (Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK	04 DEPTH OF CONTAMINATED SOIL ZONE	05 SOIL pH	
300 (ft)	Unknown (ft)	Unknown	

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
-10 to -15 (in)	3.0 (in)	0-2 %	West	1 %

09 FLOOD POTENTIAL
SITE IS IN N/A YEAR FLOODPLAIN

10 ☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE: A. >2 (mi) OTHER: B. _____ (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)
>2 (mi)
ENDANGERED SPECIES: _____

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL	RESIDENTIAL AREAS; NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS PRIME AG LAND	AGRICULTURAL LANDS AG LAND
A. 0.1 (mi)	B. >2 (mi)	C. >3 (mi)	D. >3 (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

The site is located on Treasure Island, a man-made island on San Francisco Bay. Treasure Island is essentially flat with very little relief. Slopes in the vicinity of the site vary from 0 to 2%.

VII. SOURCES OF INFORMATION (Cite specific references e.g., State files, sampling evaluation, reports)

Personal Interviews.
Observations.
Harding Lawson Associates Report (1985).

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 6 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER			
SURFACE WATER			
WASTE			
AIR			
RUNOFF			
SPILL			
SOIL	4	I T Corporation	11/6/87
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS

IV. PHOTOGRAPHS AND MAPS

01 TYPE [X] GROUND [X] AERIAL

02 IN CUSTODY OF Naval Energy and Environmental Support Activity (NEESA).
(Name of organization or individual)

03 MAPS [X] YES [ ] NO

04 LOCATION OF MAPS NEESA

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

VI. SOURCES OF INFORMATION (Cite specific references, e.g., State files, sample analysis reports)

Personnel Interviews.

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER
United States Navy	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
NAVSTA Treasure Island	

05 CITY	06 STATE	07 ZIP CODE
San Francisco	CA	94130

PARENT COMPANY (if applicable)

08 NAME	09 D+B NUMBER

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

12 CITY	13 STATE	14 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 NAME	09 D+B NUMBER

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

12 CITY	13 STATE	14 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 NAME	09 D+B NUMBER

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

12 CITY	13 STATE	14 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 NAME	09 D+B NUMBER

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

12 CITY	13 STATE	14 ZIP CODE

III. PREVIOUS OWNER(S) (List most recent first)

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

IV. REALTY OWNER(S) (If applicable, list most recent first)

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sampling results, reports)

EPA FORM 2070-13 (7-81)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

II. CURRENT OPERATOR (Provide if different from owner)

01 NAME: United States Navy	02 D+B NUMBER:
03 STREET ADDRESS (P.O. Box, RFD #, etc.): NAVSTA Treasure Island	04 SIC CODE:
05 CITY: San Francisco	06 STATE: CA / 07 ZIP CODE: 94130
08 YEARS OF OPERATION: 45	09 NAME OF OWNER: U.S. Navy

OPERATOR'S PARENT COMPANY (If applicable)

10 NAME:	11 D+B NUMBER:
12 STREET ADDRESS (P.O. Box, RFD #, etc.):	13 SIC CODE:
14 CITY:	15 STATE: / 16 ZIP CODE:

III. PREVIOUS OPERATOR(S) (List most recent first; provide only if different from owner)

01 NAME:	02 D+B NUMBER:
03 STREET ADDRESS (P.O. Box, RFD #, etc.):	04 SIC CODE:
05 CITY:	06 STATE: / 07 ZIP CODE:
08 YEARS OF OPERATION:	09 NAME OF OWNER DURING THIS PERIOD:

PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)

10 NAME:	11 D+B NUMBER:
12 STREET ADDRESS (P.O. Box, RFD #, etc.):	13 SIC CODE:
14 CITY:	15 STATE: / 16 ZIP CODE:

01 NAME:	02 D+B NUMBER:
03 STREET ADDRESS (P.O. Box, RFD #, etc.):	04 SIC CODE:
05 CITY:	06 STATE: / 07 ZIP CODE:
08 YEARS OF OPERATION:	09 NAME OF OWNER DURING THIS PERIOD:

10 NAME:	11 D+B NUMBER:
12 STREET ADDRESS (P.O. Box, RFD #, etc.):	13 SIC CODE:
14 CITY:	15 STATE: / 16 ZIP CODE:

01 NAME:	02 D+B NUMBER:
03 STREET ADDRESS (P.O. Box, RFD #, etc.):	04 SIC CODE:
05 CITY:	06 STATE: / 07 ZIP CODE:
08 YEARS OF OPERATION:	09 NAME OF OWNER DURING THIS PERIOD:

10 NAME:	11 D+B NUMBER:
12 STREET ADDRESS (P.O. Box, RFD #, etc.):	13 SIC CODE:
14 CITY:	15 STATE: / 16 ZIP CODE:

IV. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
CA	7170023330

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER
U.S. Navy	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	**04 SIC CODE**
NAVSTA Treasure Island	
05 CITY	**06 STATE** / **07 ZIP CODE**
San Francisco	CA / 94130

III. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE

IV. TRANSPORTER(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
U.S. Navy			
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
NAVSTA Treasure Island			
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE
San Francisco	CA / 94130		
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

EPA FORM 2070-13 (7-81)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. PAST RESPONSE ACTIVITIES (Continued)

01 ☐ R. BARRIER WALLS CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ S. CAPPING/COVERING — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ T. BULK TANKAGE REPAIRED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ U. GROUT CURTAIN CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ V. BOTTOM SEALED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ W. GAS CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ X. FIRE CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Y. LEACHATE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Z. AREA EVACUATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 1. ACCESS TO SITE RESTRICTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 2. POPULATION RELOCATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 3. OTHER REMEDIAL ACTIVITIES — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Employee Interviews; Observations.

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 11 - ENFORCEMENT INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
CA	7170023330

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY ENFORCEMENT ACTION ☐ YES ☒ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY ENFORCEMENT ACTION

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis reports)

Personnel Interview.

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
FINAL STRATEGY DETERMINATION

REGION	SITE NUMBER
IX	7170023330

File this form in the regional Hazardous Waste Log File and submit a copy to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Task Force (E.N-335); 401 M St., SW, Washington, DC 20460.

I. SITE IDENTIFICATION

A. SITE NAME	B. STREET	
5th Street Fuel Releases	Naval Station (NAVSTA) Treasure Island	
C. CITY	**D. STATE**	**E. ZIP CODE**
San Francisco	CA	94130

II. FINAL DETERMINATION

Indicate the recommended action(s) and agency(ies) that should be involved by marking 'X' in the appropriate boxes.

RECOMMENDATION	MARK 'X'	ACTION AGENCY			
		EPA	STATE	LOCAL	PRIVATE
A. NO ACTION NEEDED					
B. REMEDIAL ACTION NEEDED, BUT NO RESOURCES AVAILABLE (If yes, complete Section III.)					
C. REMEDIAL ACTION (If yes, complete Section IV.)					
D. ENFORCEMENT ACTION (If yes, specify in Part E whether the case will be primarily managed by the EPA or the State and what type of enforcement action is anticipated.)					

E. RATIONALE FOR FINAL STRATEGY DETERMINATION

The site will continue to be evaluated and additional sampling will be performed. These results will be used to determine remedial actions. See report entitled Preliminary Assessment/Site Investigation of Naval Station, Treasure Island, CA.

F. IF A CASE DEVELOPMENT PLAN HAS BEEN PREPARED, SPECIFY THE DATE PREPARED (mo., day, & yr.)	G. IF AN ENFORCEMENT CASE HAS BEEN FILED, SPECIFY THE DATE FILED (mo., day, & yr.)

H. PREPARER INFORMATION

1. NAME	2. TELEPHONE NUMBER	3. DATE (mo., day, & yr.)

III. REMEDIAL ACTIONS TO BE TAKEN WHEN RESOURCES BECOME AVAILABLE

List all remedial actions, such as excavation, removal, etc. to be taken as soon as resources become available. See instructions for a list of Key Words for each of the actions to be used in the spaces below. Provide an estimate of the approximate cost of the remedy.

A. REMEDIAL ACTION	B. ESTIMATED COST	C. REMARKS
	$	
	$	
	$	
	$	
	$	
	$	
	$	
	$	
D. TOTAL ESTIMATED COST	$	

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IV. REMEDIAL ACTIONS

A. SHORT TERM/EMERGENCY ACTIONS *(On Site and Off-Site)*: List all emergency actions taken or planned to bring the site under immediate control, e.g., restrict access, provide alternate water supply, etc. See instructions for a list of Key Words for each of the actions to be used in the spaces below.

1. ACTION	2. ACTION START DATE (mo.,day.,& yr)	3. ACTION END DATE (mo.,day.,& yr)	4. ACTION AGENCY (EPA, State, Private Party)	5. COST	6. SPECIFY 311 OR OTHER ACTION. INDICATE THE MAGNITUDE OF THE WORK REQUIRED.
				$	
				$	
				$	
				$	
				$	
				$	

B. LONG TERM STRATEGY *(On Site and Off-Site)*: List all long term solutions, e.g., excavation, removal, ground water monitoring wells, etc. See instructions for a list of Key Words for each of the actions to be used in the spaces below.

1. ACTION	2. ACTION START DATE (mo.,day.,& yr)	3. ACTION END DATE (mo.,day.,& yr)	4. ACTION AGENCY (EPA, State Private Party)	5. COST	6. SPECIFY 311 OR OTHER ACTION: INDICATE THE MAGNITUDE OF THE WORK REQUIRED.
				$	
				$	
				$	
				$	
				$	
				$	

C. MANHOURS AND COST BY ACTION AGENCY

1. ACTION AGENCY	2. TOTAL MAN-HOURS FOR REMEDIAL ACTIVITIES	3. TOTAL COST FOR REMEDIAL ACTIVITIES
a. EPA		$
b. STATE		$
c. PRIVATE PARTIES		$
d. OTHER *(specify)*:		$

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER				
Site 26 -Areas of suspected underground tanks	NAVSTA Treasure Island				
03 CITY	**04 STATE**	**05 ZIP CODE**	**06 COUNTY**	**07 COUNTY CODE**	**08 CONG DIST**
San Francisco	CA	94130	San Francisco	075	05

09 COORDINATES LATITUDE 37° 49 00 ON | LONGITUDE 122° 22 00 OW

10 TYPE OF OWNERSHIP (Check one)
☐ A. PRIVATE ☒ B. FEDERAL NAVY ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL ☐ F. OTHER _____ ☐ G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION	02 SITE STATUS	03 YEARS OF OPERATION
10 / 5 / 87 (MONTH DAY YEAR)	☒ ACTIVE ☐ INACTIVE	_____ BEGINNING YEAR _____ ENDING YEAR X UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)
☐ A. EPA ☐ B. EPA CONTRACTOR _____ (Name of firm) ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR _____ (Name of firm)
☐ E. STATE ☐ F. STATE CONTRACTOR _____ (Name of firm) ☒ G. OTHER Dames & Moore (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
Ann M. Becker	Team Leader, Engineer	Dames & Moore	(415) 896-5858
09 OTHER INSPECTORS	**10 TITLE**	**11 ORGANIZATION**	**12 TELEPHONE NO.**
James G. Ritchie	Geologist	Dames & Moore	(415) 896-5858
Dale D. Shileikis	Biologist	Dames & Moore	(415) 896-5858
Carol L. Creasey	Hydrogeologist	Dames & Moore	(415) 896-5858
William H. Welsh	Engineer	Dames & Moore	(805) 685-4415
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
Not Applicable			( )
			( )
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
☒ PERMISSION ☐ WARRANT	1300	clear, mild

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO
Steve Hughes	NAVSTA Treasure Island	(415) 765-6114

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
Ann M. Becker	Contractor	Dames & Moore	(415)896-5858	11 / 25 / 87 (MONTH DAY YEAR)

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POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
CA	7170023330

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- ☐ A. SOLID
- ☐ B. POWDER, FINES
- ☐ C. SLUDGE
- ☐ D. OTHER (Specify)
- ☐ E. SLURRY
- ☐ F. LIQUID
- ☐ G. GAS

02 WASTE QUANTITY AT SITE (Measures of waste quantities must be independent)

- TONS: Unknown
- CUBIC YARDS:
- NO. OF DRUMS:

03 WASTE CHARACTERISTICS (Check all that apply)

- XX ☐ A. TOXIC
- ☐ B. CORROSIVE
- ☐ C. RADIOACTIVE
- XX ☐ D. PERSISTENT
- ☐ E. SOLUBLE
- ☐ F. INFECTIOUS
- ☐ G. FLAMMABLE
- ☐ H. IGNITABLE
- ☐ I. HIGHLY VOLATILE
- ☐ J. EXPLOSIVE
- ☐ K. REACTIVE
- ☐ L. INCOMPATIBLE
- ☐ M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE	Unknown		
SOL	SOLVENTS			
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS			

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
OLW	Petroleum hydrocarbons	999	TK	Unknown	
	(gasoline, heating oil	etc.)			

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., State files, sample analysis, reports)

Employee Interviews

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POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☒ A. GROUNDWATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: 0
02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
If leaks have occurred, migration of contaminents to the groundwater table may have taken place.

01 ☒ B. SURFACE WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: 400
02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
If leaks have occurred, migration via groundwater to the waters of the Bay may have taken place.

01 ☐ C. CONTAMINATION OF AIR
03 POPULATION POTENTIALLY AFFECTED: _____
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Very unlikely. No data exists which shows any release of air contamination.

01 ☐ D. FIRE EXPLOSIVE CONDITIONS
03 POPULATION POTENTIALLY AFFECTED: _____
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
A fire marshall has not certified that this area represents a significant threat; therefore, no fire or explosive conditions are considered to exist.

01 ☐ E. DIRECT CONTACT
03 POPULATION POTENTIALLY AFFECTED: _____
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Direct contact may occur to workers during tank removal.

01 ☒ F. CONTAMINATION OF SOIL
03 AREA POTENTIALLY AFFECTED: < 100
02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
If leaks have occurred, migration of contaminants into the surrounding soil would have taken place.

01 ☐ G. DRINKING WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: 0
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
There is no potential for drinking water contamination. Drinking water is piped in from across the Bay Bridge.

01 ☐ H. WORKER EXPOSURE/INJURY
03 WORKERS POTENTIALLY AFFECTED: < 100
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Exposure potential during excavation of underground tanks.

01 ☐ I. POPULATION EXPOSURE/INJURY
03 POPULATION POTENTIALLY AFFECTED: < 100
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Population exposure would be from worker activity.

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POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☒ J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE: 10/5) — ☒ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Contamination of soils could potentially damage native flora in a localized area. Damage would be restricted primarily to the vicinity of actual contamination.

01 ☒ K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE: 10/5) — ☒ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Contamination of soils could potentially damage fauna (burrowing species - ground squirrels) by direct contact with soil. Potential damage to marine fauna may have occured via contaminated groundwater entering San Francisco Bay.

01 ☒ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE: 10/5) — ☒ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Migration of contaminants via ground water entering San Francisco Bay could have accumulated in marine life, such as benthic and intertidal fauna and entered food chain via predation by waterfowl and fish.

01 ☐ M. UNSTABLE CONTAINMENT OF WASTES — 02 ☐ OBSERVED (DATE:) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: — 04 NARRATIVE DESCRIPTION

Wastes, if any, will have resulted from tank leakage and would be confined to soil and groundwater.

01 ☐ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE:) — ☐ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Very unlikely unless significant groundwater migration has occurred.

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE:) — ☐ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Very unlikely. Leakage of tanks would be to soil and groundwater.

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE:) — ☐ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION

None reported.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

None.

III. TOTAL POPULATION POTENTIALLY AFFECTED: < 100

IV. COMMENTS

Sixteen locations where abandoned underground tanks may be present. The nature and contents of these tanks is unknown. Twelve are on Yerba Buena Island. Four are on Treasure Island.

V. SOURCES OF INFORMATION

Primarily employee interviews

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
☐ A. NPDES				
☐ B. UIC				
☐ C. AIR				
☐ D. RCRA				
☐ E. RCRA INTERIM STATUS				
☒ F. SPCC PLAN	---	Feb. 1988	---	SPCC Oil
☐ G. STATE (Specify)				
☐ H. LOCAL (Specify)				
☐ I. OTHER (Specify)				
☐ J. NONE				

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE
☐ A. SURFACE IMPOUNDMENT		
☐ B. PILES		
☐ C. DRUMS, ABOVE GROUND		
☐ D. TANK, ABOVE GROUND		
☐ E. TANK, BELOW GROUND		
☐ F. LANDFILL		
☐ G. LANDFARM		
☐ H. OPEN DUMP		
☐ I. OTHER ___ (Specify)		

04 TREATMENT (Check all that apply)

- ☐ A. INCENERATION
- ☐ B. UNDERGROUND INJECTION
- ☐ C. CHEMICAL/PHYSICAL
- ☐ D. BIOLOGICAL
- ☐ E. WASTE OIL PROCESSING
- ☐ F. SOLVENT RECOVERY
- ☐ G. OTHER RECYCLING/RECOVERY
- ☐ H. OTHER ___ (Specify)

05 OTHER

- ☐ A. BUILDINGS ON SITE

06 AREA OF SITE

N/A (Acres)

07 COMMENTS

The sites are situated in scattered locations on the two sites

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

☐ A. ADEQUATE, SECURE ☐ B. MODERATE ☒ C. INADEQUATE, POOR ☐ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC.

The condition of these tanks is unknown at the present time.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE ☐ YES ☒ NO

02 COMMENTS If waste is present in the tanks, it is underground and contained, unless leakage has occurred.

VI. SOURCES OF INFORMATION (Cite specific references e.g. state files, sample analysis, reports)

Personnel Interviews

/

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as applicable): Pipeline from off the island

	SURFACE	WELL
COMMUNITY	A. ☐	B. ☐
NON-COMMUNITY	C. ☐	D. ☐

02 STATUS: Not used

ENDANGERED	AFFECTED	MONITORED
A. ☐	B. ☐	C. ☐
D. ☐	E. ☐	F. ☐

03 DISTANCE TO SITE: N/A
A. _____ (mi)
B. _____ (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)
☐ A. ONLY SOURCE FOR DRINKING ☐ B. DRINKING (Other source(s) available) COMMERCIAL, INDUSTRIAL, IRRIGATION (No other water sources available) ☐ C. COMMERCIAL, INDUSTRIAL, IRRIGATION (Limited other sources available) ☒ D. NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUND WATER: 0

03 DISTANCE TO NEAREST DRINKING WATER WELL: > 3 (mi)

04 DEPTH TO GROUNDWATER	05 DIRECTION OF GROUNDWATER FLOW	06 DEPTH TO AQUIFER OF CONCERN	07 POTENTIAL YIELD OF AQUIFER	08 SOLE SOURCE AQUIFER
2 - 6 (ft)	Toward S.F. Bay.	N/A (ft)	N/A (gpd)	☐ YES ☐ NO

09 DESCRIPTION OF WELLS (Including useage, depth, and location relative to population and buildings)

NOTE: The site is on an island in San Francisco Bay. There are no water wells in use on the island. Water is piped to the island on the San Francisco-Oakland Bay Bridge.

10 RECHARGE AREA		11 DISCHARGE AREA	
☒ YES ☐ NO	COMMENTS: Infiltration is occurring but recharging unusable aquifer.	☒ YES ☐ NO	COMMENTS: Discharge of groundwater eventually to San Francisco Bay.

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)
☐ A. RESERVOIR, RECREATION DRINKING WATER SOURCE ☐ B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES ☒ C. COMMERCIAL, INDUSTRIAL ☐ D. NOT CURRENTLY USED

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME:	AFFECTED	DISTANCE TO SITE
San Francisco Bay	☐	< 0.5 (mi)
	☐	(mi)
	☐	(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE
A. 3000 NO OF PERSONS	B. 3000 NO OF PERSONS	C. >10,000 NO OF PERSONS

02 DISTANCE TO NEAREST POPULATION: < 0.1 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE: 200

04 DISTANCE TO NEAREST OFF-SITE BUILDING: < 0.1 (mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., rural, village, densely populated urban area)

NAVSTA TI contains residences for approximately 2500-3000 service personnel. The island is surrounded by San Francisco Bay. Across the Bay there are large cities including San Francisco and Oakland.

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☐ A. $10^{-6} - 10^{-8}$ cm/sec ☐ B. $10^{-4} - 10^{-6}$ cm/sec ☒ C. $10^{-4} - 10^{-3}$ cm/sec ☐ D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☐ A. IMPERMEABLE (Less than 10^{-6} cm/sec) ☒ B. RELATIVELY IMPERMEABLE ($10^{-4} - 10^{-6}$ cm/sec) ☐ C. RELATIVELY PERMEABLE ($10^{-2} - 10^{-4}$ cm/sec) ☐ D. VERY PERMEABLE (Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK	04 DEPTH OF CONTAMINATED SOIL ZONE	05 SOIL pH	
300 (ft)	Unknown (ft)	Unknown	

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
-10 to -15 (in)	3.0 (in)	0-2 %	West	1 %

09 FLOOD POTENTIAL

SITE IS IN N/A YEAR FLOODPLAIN

10 ☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE: A. > 2 (mi) OTHER: B. _____ (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)

> 2 (mi)

ENDANGERED SPECIES: _____

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL	RESIDENTIAL AREAS; NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS: PRIME AG LAND	AGRICULTURAL LANDS: AG LAND
A. 0.1 (mi)	B. > 2 (mi)	C. > 3 (mi)	D. > 3 (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

The site is located on Treasure Island, a man-made island on San Francisco Bay. Treasure Island is essentially flat with very little relief. Slopes in the vicinity of the site vary from 0 to 2%.

Yerba Buena Island is a natural island with gently rolling to very steep slopes (5 to 95%).

VII. SOURCES OF INFORMATION (Cite specific references e.g., state files, sampling analysis, reports)

Personal inteviews.
Observations
Harding Lawson Associates Report (1985).

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 6 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
CA	7170023330

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER			
SURFACE WATER			
WASTE			
AIR			
RUNOFF			
SPILL			
SOIL			
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS

IV. PHOTOGRAPHS AND MAPS

01 TYPE [X] GROUND [X] AERIAL

02 IN CUSTODY OF Naval Energy and Environmental Support Activity (NEESA). (Name of organization or individual)

03 MAPS [X] YES [ ] NO

04 LOCATION OF MAPS NEESA

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis reports)

Personnel Interviews.

EPA FORM 2070-13 (7-81)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER	04 SIC CODE
United States Navy		

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	05 CITY	06 STATE	07 ZIP CODE
NAVSTA Treasure Island	San Francisco	CA	94130

PARENT COMPANY (if applicable)

08 NAME	09 D+B NUMBER	11 SIC CODE

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	12 CITY	13 STATE	14 ZIP CODE

01 NAME	02 D+B NUMBER	04 SIC CODE

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	05 CITY	06 STATE	07 ZIP CODE

08 NAME	09 D+B NUMBER	11 SIC CODE

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	12 CITY	13 STATE	14 ZIP CODE

01 NAME	02 D+B NUMBER	04 SIC CODE

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	05 CITY	06 STATE	07 ZIP CODE

08 NAME	09 D+B NUMBER	11 SIC CODE

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	12 CITY	13 STATE	14 ZIP CODE

01 NAME	02 D+B NUMBER	04 SIC CODE

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	05 CITY	06 STATE	07 ZIP CODE

08 NAME	09 D+B NUMBER	11 SIC CODE

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	12 CITY	13 STATE	14 ZIP CODE

III. PREVIOUS OWNER(S) (List most recent first)

01 NAME	02 D+B NUMBER	04 SIC CODE

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	05 CITY	06 STATE	07 ZIP CODE

IV. REALTY OWNER(S) (If applicable, list most recent first)

01 NAME	02 D+B NUMBER	04 SIC CODE

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER	04 SIC CODE

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER	04 SIC CODE

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	05 CITY	06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sampling results, reports)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION

I. IDENTIFICATION
01 STATE: CA | 02 SITE NUMBER: 7170023330

II. CURRENT OPERATOR (Provide if different from owner)

01 NAME: United States Navy	02 D+B NUMBER:
03 STREET ADDRESS (P.O. Box, RFD #, etc.): NAVSTA Treasure Island	04 SIC CODE:
05 CITY: San Francisco	06 STATE: CA / 07 ZIP CODE: 94130
08 YEARS OF OPERATION: 45	09 NAME OF OWNER: U.S. Navy

OPERATOR'S PARENT COMPANY (If applicable)

10 NAME:	11 D+B NUMBER:
12 STREET ADDRESS (P.O. Box, RFD #, etc.):	13 SIC CODE:
14 CITY:	15 STATE: / 16 ZIP CODE:

III. PREVIOUS OPERATOR(S) (List most recent first; provide only if different from owner)

01 NAME:	02 D+B NUMBER:
03 STREET ADDRESS (P.O. Box, RFD #, etc.):	04 SIC CODE:
05 CITY:	06 STATE: / 07 ZIP CODE:
08 YEARS OF OPERATION:	09 NAME OF OWNER DURING THIS PERIOD:

PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)

10 NAME:	11 D+B NUMBER:
12 STREET ADDRESS (P.O. Box, RFD #, etc.):	13 SIC CODE:
14 CITY:	15 STATE: / 16 ZIP CODE:

01 NAME:	02 D+B NUMBER:
03 STREET ADDRESS (P.O. Box, RFD #, etc.):	04 SIC CODE:
05 CITY:	06 STATE: / 07 ZIP CODE:
08 YEARS OF OPERATION:	09 NAME OF OWNER DURING THIS PERIOD:

10 NAME:	11 D+B NUMBER:
12 STREET ADDRESS (P.O. Box, RFD #, etc.):	13 SIC CODE:
14 CITY:	15 STATE: / 16 ZIP CODE:

01 NAME:	02 D+B NUMBER:
03 STREET ADDRESS (P.O. Box, RFD #, etc.):	04 SIC CODE:
05 CITY:	06 STATE: / 07 ZIP CODE:
08 YEARS OF OPERATION:	09 NAME OF OWNER DURING THIS PERIOD:

10 NAME:	11 D+B NUMBER:
12 STREET ADDRESS (P.O. Box, RFD #, etc.):	13 SIC CODE:
14 CITY:	15 STATE: / 16 ZIP CODE:

IV. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
CA	7170023330

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER
U.S. Navy	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	**04 SIC CODE**
NAVSTA Treasure Island	
05 CITY	**06 STATE** / **07 ZIP CODE**
San Francisco	CA / 94130

III. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	**04 SIC CODE**	**03 STREET ADDRESS (P.O. Box, RFD #, etc.)**	**04 SIC CODE**
05 CITY	**06 STATE** / **07 ZIP CODE**	**05 CITY**	**06 STATE** / **07 ZIP CODE**
01 NAME	**02 D+B NUMBER**	**01 NAME**	**02 D+B NUMBER**
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	**04 SIC CODE**	**03 STREET ADDRESS (P.O. Box, RFD #, etc.)**	**04 SIC CODE**
05 CITY	**06 STATE** / **07 ZIP CODE**	**05 CITY**	**06 STATE** / **07 ZIP CODE**

IV. TRANSPORTER(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
U.S. Navy			
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	**04 SIC CODE**	**03 STREET ADDRESS (P.O. Box, RFD #, etc.)**	**04 SIC CODE**
NAVSTA Treasure Island			
05 CITY	**06 STATE** / **07 ZIP CODE**	**05 CITY**	**06 STATE** / **07 ZIP CODE**
San Francisco	CA / 94130		
01 NAME	**02 D+B NUMBER**	**01 NAME**	**02 D+B NUMBER**
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	**04 SIC CODE**	**03 STREET ADDRESS (P.O. Box, RFD #, etc.)**	**04 SIC CODE**
05 CITY	**06 STATE** / **07 ZIP CODE**	**05 CITY**	**06 STATE** / **07 ZIP CODE**

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
CA	7170023330

II PAST RESPONSE ACTIVITIES (Continued)

01 ☐ R. BARRIER WALLS CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ S. CAPPING/COVERING — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ T. BULK TANKAGE REPAIRED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ U. GROUT CURTAIN CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ V. BOTTOM SEALED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ W. GAS CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ X. FIRE CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Y. LEACHATE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Z. AREA EVACUATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 1. ACCESS TO SITE RESTRICTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 2. POPULATION RELOCATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 3. OTHER REMEDIAL ACTIVITIES — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Employee Interviews; Observations.

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 11 - ENFORCEMENT INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
CA	7170023330

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY ENFORCEMENT ACTION ☐ YES ☒ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY ENFORCEMENT ACTION

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis reports)

Personnel Interview.

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POTENTIAL HAZARDOUS WASTE SITE
FINAL STRATEGY DETERMINATION

REGION	SITE NUMBER
IX	7170023330

File this form in the regional Hazardous Waste Log File and submit a copy to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Task Force (*EN-335*); 401 M St., SW; Washington, DC 20460.

I. SITE IDENTIFICATION

A. SITE NAME	B. STREET	
Areas of Suspected Underground Tanks	Naval Station (NAVSTA) Treasure Island	
C. CITY	**D. STATE**	**E. ZIP CODE**
San Francisco	CA	94130

II. FINAL DETERMINATION

Indicate the recommended action(s) and agency(ies) that should be involved by marking 'X' in the appropriate boxes.

RECOMMENDATION	MARK 'X'	ACTION AGENCY			
		EPA	STATE	LOCAL	PRIVATE
A. NO ACTION NEEDED					
B. REMEDIAL ACTION NEEDED, BUT NO RESOURCES AVAILABLE *(If yes, complete Section III.)*					
C. REMEDIAL ACTION *(If yes, complete Section IV.)*					
D. ENFORCEMENT ACTION *(If yes, specify in Part E whether the case will be primarily managed by the EPA or the State and what type of enforcement action is anticipated.)*					

E. RATIONALE FOR FINAL STRATEGY DETERMINATION

The site will continue to be evaluated and additional sampling will be performed. These results will be used to determine remedial actions. See report entitled Preliminary Assessment/Site Investigation of Naval Station, Treasure Island, CA.

F. IF A CASE DEVELOPMENT PLAN HAS BEEN PREPARED, SPECIFY THE DATE PREPARED *(mo., day, & yr.)*	G. IF AN ENFORCEMENT CASE HAS BEEN FILED, SPECIFY THE DATE FILED *(mo., day, & yr.)*

H. PREPARER INFORMATION

1. NAME	2. TELEPHONE NUMBER	3. DATE *(mo., day, & yr.)*

III. REMEDIAL ACTIONS TO BE TAKEN WHEN RESOURCES BECOME AVAILABLE

List all remedial actions, such as excavation, removal, etc. to be taken as soon as resources become available. See instructions for a list of Key Words for each of the actions to be used in the spaces below. Provide an estimate of the approximate cost of the remedy.

A. REMEDIAL ACTION	B. ESTIMATED COST	C. REMARKS
	$	
	$	
	$	
	$	
	$	
	$	
	$	
	$	
D. TOTAL ESTIMATED COST	$	

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Continued From Front

IV. REMEDIAL ACTIONS

A. SHORT TERM/EMERGENCY ACTIONS *(On Site and Off-Site)*: List all emergency actions taken or planned to bring the site under immediate control, e.g., restrict access, provide alternate water supply, etc. See instructions for a list of Key Words for each of the actions to be used in the spaces below.

1. ACTION	2. ACTION START DATE *(mo,day,&yr)*	3. ACTION END DATE *(mo,day,&yr)*	4. ACTION AGENCY *(EPA, State, Private Party)*	5. COST	6. SPECIFY 311 OR OTHER ACTION. INDICATE THE MAGNITUDE OF THE WORK REQUIRED.
				$	
				$	
				$	
				$	
				$	
				$	

B. LONG TERM STRATEGY *(On Site and Off-Site)*: List all long term solutions, e.g., excavation, removal, ground water monitoring wells, etc. See instructions for a list of Key Words for each of the actions to be used in the spaces below.

1. ACTION	2. ACTION START DATE *(mo,day,&yr)*	3. ACTION END DATE *(mo,day,&yr)*	4. ACTION AGENCY *(EPA, State Private Party)*	5. COST	6. SPECIFY 311 OR OTHER ACTION: INDICATE THE MAGNITUDE OF THE WORK REQUIRED.
				$	
				$	
				$	
				$	
				$	
				$	

C. MANHOURS AND COST BY ACTION AGENCY

1. ACTION AGENCY	2. TOTAL MAN-HOURS FOR REMEDIAL ACTIVITIES	3. TOTAL COST FOR REMEDIAL ACTIVITIES
a. EPA		$
b. STATE		$
c. PRIVATE PARTIES		$
d. OTHER *(specify)*:		$

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3128-Vol.2

SUPERFUND RECORDS CENTER
DOC. [redacted] VOL. [redacted]

APRIL 1988

PRELIMINARY ASSESSMENT/ SITE INSPECTION OF NAVAL STATION TREASURE ISLAND, CA.

DOCUMENTATION RECORDS FOR
HAZARD RANKING SYSTEM (HRS)

NEESA 13-092

NAVAL ENERGY AND ENVIRONMENTAL SUPPORT ACTIVITY
Port Hueneme, California 93043

RELEASE OF THIS DOCUMENT REQUIRES PRIOR NOTIFICATION OF THE CHIEF OFFICIAL OF THE STUDIED ACTIVITY

DOCUMENTATION RECORDS
FOR HAZARD RANKING SYSTEM (HRS)
NAVAL STATION, TREASURE ISLAND, CA

Site 1 - Medical Clinic
Site 3 - PCB Equipment Storage Area
Site 4 - Hydraulic Training School (Bldg. 342)
Site 19 - Refuse Transfer Area
Site 5 - Old Boiler Plant - Building 102
Site 7 - Building 62 - Pesticide Storage
Site 9 - Building 42 - Forge/Foundry
Site 10 - Building 335 - Bus Painting Shop
Site 12 - Old Bunker Area
Site 13 - Stormwater Outfalls
Site 15 - Old Fuel Farm
Site 16 - Clipper Cove Tank Farm
Site 17 - Tanks 103/14
Site 20 - Auto Hobby Shop/Transportation Center
Site 21 - Vessel Waste Oil Recovery
Site 25 - Seaplane Maintenance
Site 22 - Navy Exchange Gas Station
Site 24 - 5th Street Fuel Release
Site 26 - Areas of Suspected Underground Tanks

DOCUMENTATION RECORDS
FOR
HAZARD RANKING SYSTEM

INSTRUCTIONS: As briefly as possible summarize the information you used to assign the score for each factor (e.g., "Waste quantity = 4,230 drums plus 800 cubic yards of sludges"). The source of information should be provided for each entry and should be a bibliographic-type reference. Include the location of the document.

FACILITY NAME: Site 1 - Medical Clinic

LOCATION: Naval Station (NAVSTA) Treasure Island

DATE SCORED: 1/8/88

PERSON SCORING: B.F. Aubry

PRIMARY SOURCE(S) OF INFORMATION (e.g., EPA region, state, FIT, etc.):

Personal Interviews
References Listed on Page 20.

FACTORS NOT SCORED DUE TO INSUFFICIENT INFORMATION:

Air, Fire and Explosion

COMMENTS OR QUALIFICATIONS: Fire and explosion not scored since fire hazard not certified by a fire marshall or field observations.

Encl (9)

GROUND WATER ROUTE

1 OBSERVED RELEASE

Contaminants detected (5 maximum):

No observed releases. No groundwater testing performed.

(Reference: Personal communication)

Score = 0

Rationale for attributing the contaminants to the facility:

No observed release.

* * *

2 ROUTE CHARACTERISTICS

Depth to Aquifer of Concern

Name/description of aquifers(s) of concern:

Groundwater is unusable due to high salinity.

Depth to groundwater is 2-6 feet. Groundwater is saline and unusable. Whether groundwater affected is unknown.

(Reference: #3)

Depth(s) from the ground surface to the highest seasonal level of the saturated zone [water table(s)] of the aquifer of concern:

Score = 3

2 - 6 Feet.

(Reference: #3)

Depth from the ground surface to the lowest point of waste disposal/ storage:

Unknown

Net Precipitation

Mean annual or seasonal precipitation (list months for seasonal):

25 - 30 inches.
(Reference: #1)

Mean annual lake or seasonal evaporation (list months for seasonal):

40 inches.
(Reference: #1)

Net precipitation (subtract the above figures):

-15 to -10 inches.

Score = 0

Permeability of Unsaturated Zone

Soil type in unsaturated zone:

Treasure Island is a man-made island composed of reclaimed soil generally composed of poorly-graded fine sand with occasional lenses of silt and clay.
(Reference: #5 & 6)

Permeability associated with soil type:

10^{-3} to 10^{-4} cm/sec
(Reference: #3)

Score = 2

Physical State

Physical state of substances at time of disposal (or at present time for generated gases):

liquid
(Reference: Personal communication)

Score = 3

* * *

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

Material which leaked into soil is uncontained, but there is minimal threat of exposure.

(Reference: Personal communication)

Method with highest score:

Uncontained material
Score = 3

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated:

Silver
pH
(Reference: Personal communication)

Compound with highest score:

Silver

Toxicity = 3 Persistence = 3

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

Unknown, but small
Score = 0

(Reference: Personal communication)

Basis of estimating and/or computing waste quantity:

Not estimated because unknown but quantity is believed small.

* * *

5 TARGETS

Ground Water Use

Use(s) of aquifer(s) of concern within a 3-mile radius of the facility:

Groundwater is not used within a 3-mile radius, and is not usable due to its high salinity.

(Reference: Personal communication)

Score = 0

Distance to Nearest Well

Location of nearest well drawing from aquifer of concern or occupied building not served by a public water supply:

Across San Francisco Bay, not on the island.

Score = 0

Distance to above well or building:

> 3 miles

Population Served by Ground Water Wells Within a 3-Mile Radius

Identified water-supply well(s) drawing from aquifer(s) of concern within a 3-mile radius and populations served by each:

No wells are present on Treasure or Yerba Buena Islands.

Computation of land area irrigated by supply well(s) drawing from aquifer(s) of concern within a 3-mile radius, and conversion to population (1.5 people per acre):

N/A

Total population served by ground water within a 3-mile radius:

None.

(Reference: #7)

Score = 0

SURFACE WATER ROUTE

1 OBSERVED RELEASE

Contaminants detected in surface water at the facility or downhill from it (5 maximum):

No observed release
(Reference: Personal communication) Score = 0

Rationale for attributing the contaminants to the facility:

N/A

* * *

2 ROUTE CHARACTERISTICS

Facility Slope and Intervening Terrain

Average slope of facility in percent:

Range: 0 - 2%

Average: about 1%. Score = 0

(Reference: #7)

Name/description of nearest downslope surface water:

San Francisco Bay

(Reference: #7)

Average slope of terrain between facility and above-cited surface water body in percent:

1%

(Reference: #7)

Is the facility located either totally or partially in surface water?

No

(Reference: #7)

Is the facility completely surrounded by areas of higher elevation?

No

(Reference: #7)

1-Year 24-Hour Rainfall in Inches

3 inches.

(Reference: #7)

Score = 2

Distance to Nearest Downslope Surface Water

< 0.5 mile.

(Reference: #7)

Score = 2

Physical State of Waste

liquid

Score = 3

(Reference: Personal communication)

* * *

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:
Chemicals leaked into soil under building - no nearby surface water pathway; could possibly reach San Francisco Bay via groundwater route.
(Reference: Personal communication)

Method with highest score:

Material is uncontained.

Score = 3

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated

Silver
pH

Compound with highest score:

Silver

Toxicity = 3 Persistence = 3

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

Unknown, but small

Score = 0

Basis of estimating and/or computing waste quantity:

Not estimated because unknown

* * *

5 TARGETS

Surface Water Use

Use(s) of surface water within 3 miles downstream of the hazardous substance:

Uses of San Francisco Bay are manifold
but include: Boating/shipping
Fishing/
Swimming
Animal Habitat

Other than San Francisco Bay, surface water on Treasure Island and Yerba Buena Island is not used.

(Reference: #9) Score = 6

Is there tidal influence?

Yes
(Reference: #8)

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

> 2 miles Score = 0

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:

> 1 mile

Distance to critical habitat of an endangered species or national wildlife refuge, if 1 mile or less:

> 1 miles

Population Served by Surface Water

Location(s) of water-supply intake(s) within 3 miles (free-flowing bodies) or 1 mile (static water bodies) downstream of the hazardous substance and population served by each intake:

The site is surrounded on all sides by the Bay within 0.5 miles. Population served by the Bay is > 10,000. Surface water is not used on the island.

(Reference: #7) Score = 0

Computation of land area irrigated by above-cited intake(s) and conversion to population (1.5 people per acre):

0 acreage

Total population served:

>10,000
(Reference: #7)

Name/description of nearest of above water bodies:

San Francisco Bay.
(Reference: #7)

Distance to above-cited intakes, measured in stream miles.

<0.5 miles.
(Reference: #7) Score = 0

AIR ROUTE

1 OBSERVED RELEASE

Contaminants detected:

No data exists showing any releases of air contaminants.

(Reference: Personal communication) Score = 0

Date and location of detection of contaminants

Methods used to detect the contaminants:

Rationale for attributing the contaminants to the site:

* * *

2 WASTE CHARACTERISTICS

Reactivity and Incompatibility

Most reactive compound:

Most incompatible pair of compounds:

Toxicity

Most toxic compound:

Hazardous Waste Quantity

Total quantity of hazardous waste:

Basis of estimating and/or computing waste quantity:

* * *

3 TARGETS

Population Within 4-Mile Radius

Circle radius used, give population, and indicate how determined:

0 to 4 mi 0 to 1 mi 0 to 1/2 mi 0 to 1/4 mi

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:

Distance to critical habitat of an endangered species, if 1 mile or less:

Land Use

Distance to commercial/industrial area, if 1 mile or less:

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less:

Distance to residential area, if 2 miles or less:

Distance to agricultural land in production within past 5 years, if 1 mile or less:

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:

Is a historic or landmark site (National Register or Historic Places and National Natural Landmarks) within the view of the site?

FIRE AND EXPLOSION

1 CONTAINMENT

Hazardous substances present:

A fire marshall has not certified that the facility presents a significant threat.

Type of containment, if applicable:

* * *

2 WASTE CHARACTERISTICS

Direct Evidence

Type of instrument and measurements:

Ignitability

Compound used:

Reactivity

Most reactive compound:

Incompatibility

Most incompatible pair of compounds:

* * *

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility:

Basis of estimating and/or computing waste quantity:

* * *

3 TARGETS

Distance to Nearest Population

Distance to Nearest Building

Distance to Sensitive Environment

Distance to wetlands:

Distance to critical habitat:

Land Use

Distance to commercial/industrial area, if 1 mile or less:

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less:

Distance to residential area, if 2 miles or less:

Distance to agricultural land in production within past 5 years, if 1 mile or less:

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:

Is a historic or landmark site (National Register or Historic Places and National Natural Landmarks) within the view of the site?

Population Within 2-Mile Radius

Buildings Within 2-Mile Radius

DIRECT CONTACT

1 OBSERVED INCIDENT

Date, location, and pertinent details of incident:

No observed incident.
(Reference: Personal communication)

Score = 0

* * *

2 ACCESSIBILITY

Describe type of barrier(s):

Perimeter of Building is fenced to deter access under building.
(Reference: Personal communication)

Score = 2

* * *

3 CONTAINMENT

Type of containment, if applicable:

Contained within surface soils under the building. Could be contacted if a person were there.
(Reference: Personal communication) Score = 15

* * *

4 WASTE CHARACTERISTICS

Toxicity

Compounds evaluated:

Silver
pH

(Reference: Personal communication)

Compound with highest score:

Silver Toxicity = 3

* * *

5 TARGETS

Population within one-mile radius

3,000

Score = 12

Distance to critical habitat (of endangered species)

>1 mile Score = 0

(Reference: Personal communication)

REFERENCES

If the entire reference is not available for public review in the EPA regional files on this site, indicate where the reference may be found:

Reference Number	Description of the Reference
1	**Uncontrolled Hazardous Waste Site Ranking System; A Users Manual.** **National Oil and Hazardous Substances Contingency Plan, Appendix A (40 CFR 300)(47 FR 31219), July 16, 1982.**
2	Preliminary Assessment/Site Inspection of Naval Station Treasure Island, CA. Naval Energy and Environmental Support Activity (NEESA), November 1987.
3	Dewatering Recommendations, Repair of Steam Distribution System, Contract N-62472-82-C-6384. Harding Lawson Associates, July 1, 1985.
4.	Environmental Impact Statement: Homeporting Battleship/Battle group/ Cruiser Destroyer Group. U.S. Department of the Navy. January 1987.
5.	Blake, Jr., M.C., Barton, J.A., Frizzell Jr., V.A., Schlocker, J., Sorg, D., Wentworth, C.M., and Wright, R.H., 1974. Preliminary Geologic Map of Marin and San Francisco Counties and Parts of Alameda, Contra Costa and Sonoma Counties, California, U.S. Geological Survey, Miscellaneous Field Studies Map MF 574.
6.	Radbruch, Dorothy H., 1957. Areal and Engineering Geology of the Oakland West Quadrangle, California, U.S. Geological Survey, Miscellaneous Geologic Investigations Map I-239.
7.	U.S. Navy, Western Division, Naval Facilities Engineering Command, 1986. Natural Resources Management Plan, Treasure Island Naval Station, San Francisco, California.
8.	McCreary-Koretsky Engineers. 1965. Soils and Foundation Investigations for Appropriated Fund Quarters at U.S. Naval Station, Treasure Island, San Francisco, California. A&E Contract No. NBy NBy-078. Report dated 11 January.
9.	California Regional Water Quality Control Board, San Francisco Bay Region, 1982, Water Quality Control Plan, San Francisco Bay Basin (2).
10.	NAVSHIPS/NAVSEL. 1972. Shipboard Oily Waste Generation Rates for Nine Port Complexes.

DOCUMENTATION RECORDS
FOR
HAZARD RANKING SYSTEM

INSTRUCTIONS: As briefly as possible summarize the information you used to assign the score for each factor (e.g., "Waste quantity = 4,230 drums plus 800 cubic yards of sludges"). The source of information should be provided for each entry and should be a bibliographic-type reference. Include the location of the document.

FACILITY NAME: Site 3 - PCB Equipment Storage Area.

LOCATION: Naval Station (NAVSTA) Treasure Island

DATE SCORED: 1/8/88

PERSON SCORING: B.F. Aubry

PRIMARY SOURCE(S) OF INFORMATION (e.g., EPA region, state, FIT, etc.):

Personal Interviews
References Listed on Page 20.

FACTORS NOT SCORED DUE TO INSUFFICIENT INFORMATION:

Air, Fire and Explosion

COMMENTS OR QUALIFICATIONS: Fire and explosion not scored since fire hazard not certified by a fire marshall or field observation.

Encl (9)

GROUND WATER ROUTE

1 OBSERVED RELEASE

Contaminants detected (5 maximum):

No observed releases. No groundwater testing performed.

(Reference: Personal communication)

Score = 0

Rationale for attributing the contaminants to the facility:

No observed release

* * *

2 ROUTE CHARACTERISTICS

Depth to Aquifer of Concern

Name/description of aquifers(s) of concern:

Groundwater is unusable due to high salinity.

(Reference: #3)

Depth(s) from the ground surface to the highest seasonal level of the saturated zone [water table(s)] of the aquifer of concern:

2 - 6 Feet. Score = 3

(Reference: #3)

Depth from the ground surface to the lowest point of waste disposal/ storage:

Unknown, but spill was at the surface.

Net Precipitation

Mean annual or seasonal precipitation (list months for seasonal):

25 - 30 inches.

(Reference: #1)

Mean annual lake or seasonal evaporation (list months for seasonal):

40 inches.

(Reference: #1)

Net precipitation (subtract the above figures):

-15 to -10 inches. Score = 0

Permeability of Unsaturated Zone

Soil type in unsaturated zone:

Treasure Island is a man-made island composed of reclaimed soil generally composed of poorly-graded fine sand with occasional lenses of silt and clay.

(Reference: #5 & 6)

Permeability associated with soil type:

10^{-3} to 10^{-4} cm/sec

(Reference: #3) Score = 2

Physical State

Physical state of substances at time of disposal (or at present time for generated gases):

Liquid

(Reference: Personal communication)

Score = 3

* * *

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

No subsurface containment system; the site is paved.
(Reference: Personal communication)

Method with highest score:

Uncontained except for asphalt.

Score = 3

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated:

PCB
Oily waste
(Reference: Personal communication)

Compound with highest score:

PCB
(Reference: #1) Toxicity Score = 3 Persistence Score = 3

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

Unknown, but small

Score = 0

Basis of estimating and/or computing waste quantity:

Quantity unknown but small

* * *

5 TARGETS

Ground Water Use

Use(s) of aquifer(s) of concern within a 3-mile radius of the facility:

Groundwater is not used within a 3-mile radius, and is not usable due to its high salinity.

(Reference: Personal communication)

Score = 0

Distance to Nearest Well

Location of nearest well drawing from aquifer of concern or occupied building not served by a public water supply:

Across San Francisco Bay, not on the island.

Score = 0

Distance to above well or building:

> 3 miles

Population Served by Ground Water Wells Within a 3-Mile Radius

Identified water-supply well(s) drawing from aquifer(s) of concern within a 3-mile radius and populations served by each:

No wells are present on Treasure or Yerba Buena Islands.

Computation of land area irrigated by supply well(s) drawing from aquifer(s) of concern within a 3-mile radius, and conversion to population (1.5 people per acre):

N/A

Total population served by ground water within a 3-mile radius:

None.

(Reference: #7)

Score = 0

SURFACE WATER ROUTE

1 OBSERVED RELEASE

Contaminants detected in surface water at the facility or downhill from it (5 maximum):

No observed release; no testing of water
(Reference: Personal communication)

Score = 0

Rationale for attributing the contaminants to the facility:

No observed release

* * *

2 ROUTE CHARACTERISTICS

Facility Slope and Intervening Terrain

Average slope of facility in percent:

Range: 0 - 2%

Average: about 1%. Score = 0

(Reference: #7)

Name/description of nearest downslope surface water:

San Francisco Bay

(Reference: #7)

Average slope of terrain between facility and above-cited surface water body in percent:

1%

(Reference: #7)

Is the facility located either totally or partially in surface water?

No

(Reference: #7)

Is the facility completely surrounded by areas of higher elevation?

No
(Reference: #3)

1-Year 24-Hour Rainfall in Inches

3 inches. Score = 2
(Reference: #1)

Distance to Nearest Downslope Surface Water

$\leq$ 0.5 mile.

(Reference: #7) Score = 2

Physical State of Waste

liquid
(Reference: Personal communication)

Score = 3

* * *

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

No containment system; the site is paved.
(Reference: Personal communication)

Method with highest score:

Uncontained except for asphalt.

Score = 3

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated

PCB
Waste Oil
(Reference: Personal Communication)

Compound with highest score:

PCB
(Reference : #1)

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

Unknown, but small Score = 0

Basis of estimating and/or computing waste quantity:

Quantity unknown

* * *

5 TARGETS

Surface Water Use

Use(s) of surface water within 3 miles downstream of the hazardous substance:

Uses of San Francisco Bay are manifold
but include: Boating/shipping
Fishing/
Swimming
Animal Habitat

Other than San Francisco Bay, surface water on Treasure Island and Yerba Buena Island is not used.

(Reference: #9) Score = 6

Is there tidal influence?

Yes
(Reference: #8)

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

> 2 miles Score = 0

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:

> 1 mile

Distance to critical habitat of an endangered species or national wildlife refuge, if 1 mile or less:

> 1 miles

Population Served by Surface Water

Location(s) of water-supply intake(s) within 3 miles (free-flowing bodies) or 1 mile (static water bodies) downstream of the hazardous substance and population served by each intake:

The site is surrounded on all sides by the Bay within 0.5 miles. Population served by the Bay is > 10,000. Surface water is not used on the island.

(Reference: #7) Score = 0

Computation of land area irrigated by above-cited intake(s) and conversion to population (1.5 people per acre):

0 acreage

Total population served:

>10,000
(Reference: #7)

Name/description of nearest of above water bodies:

San Francisco Bay.
(Reference: #7)

Distance to above-cited intakes, measured in stream miles.

<0.5 miles.
(Reference: #7) Score = 0

1 OBSERVED RELEASE

Contaminants detected:

No data exists showing any releases of air contaminants.

(Reference: Personal communication) Score = 0

Date and location of detection of contaminants

Methods used to detect the contaminants:

Rationale for attributing the contaminants to the site:

* * *

2 WASTE CHARACTERISTICS

Reactivity and Incompatibility

Most reactive compound:

Most incompatible pair of compounds:

Toxicity

Most toxic compound:

Hazardous Waste Quantity

Total quantity of hazardous waste:

Basis of estimating and/or computing waste quantity:

* * *

3 TARGETS

Population Within 4-Mile Radius

Circle radius used, give population, and indicate how determined:

0 to 4 mi 0 to 1 mi 0 to 1/2 mi 0 to 1/4 mi

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:

Distance to critical habitat of an endangered species, if 1 mile or less:

Land Use

Distance to commercial/industrial area, if 1 mile or less:

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less:

Distance to residential area, if 2 miles or less:

Distance to agricultural land in production within past 5 years, if 1 mile or less:

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:

Is a historic or landmark site (National Register or Historic Places and National Natural Landmarks) within the view of the site?

1 CONTAINMENT

Hazardous substances present:

A fire marshall has not certified that the facility presents a significant threat.

Type of containment, if applicable:

* * *

2 WASTE CHARACTERISTICS

Direct Evidence

Type of instrument and measurements:

Ignitability

Compound used:

Reactivity

Most reactive compound:

Incompatibility

Most incompatible pair of compounds:

* * *

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility:

Basis of estimating and/or computing waste quantity:

* * *

3 TARGETS

Distance to Nearest Population

Distance to Nearest Building

Distance to Sensitive Environment

Distance to wetlands:

Distance to critical habitat:

Land Use

Distance to commercial/industrial area, if 1 mile or less:

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less:

Distance to residential area, if 2 miles or less:

Distance to agricultural land in production within past 5 years, if 1 mile or less:

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:

Is a historic or landmark site (National Register or Historic Places and National Natural Landmarks) within the view of the site?

Population Within 2-Mile Radius

Buildings Within 2-Mile Radius

DIRECT CONTACT

1 OBSERVED INCIDENT

Date, location, and pertinent details of incident:

No observed incident.
(Reference: Personal communication) Score = 0

* * *

2 ACCESSIBILITY

Describe type of barrier(s):

No barrier. Site is paved, wipe sample indicated presence of PCB at surface in low concentration.
(Reference: Personal communication) Score = 3

* * *

3 CONTAINMENT

Type of containment, if applicable:

None
(Reference: Personal communication) Score = 15

* * *

4 WASTE CHARACTERISTICS

<u>Toxicity</u>

Compounds evaluated:

PCB
Oily waste
(Reference: Personal communication)

Compound with highest score:

PCB Toxicity = 3
(Reference: #1)

* * *

5 TARGETS

Population within one-mile radius

3,000

Score = 12

Distance to critical habitat (of endangered species)

>1 mile Score = 0

(Reference: Personal communication)

REFERENCES

If the entire reference is not available for public review in the EPA regional files on this site, indicate where the reference may be found:

Reference Number	Description of the Reference
1	**Uncontrolled Hazardous Waste Site Ranking System; A Users Manual.** **National Oil and Hazardous Substances Contingency Plan, Appendix A (40 CFR 300)(47 FR 31219), July 16, 1982.**
2	Preliminary Assessment/Site Inspection of Naval Station Treasure Island, CA. Naval Energy and Environmental Support Activity (NEESA), November 1987.
3	Dewatering Recommendations, Repair of Steam Distribution System, Contract N-62472-82-C-6384. Harding Lawson Associates, July 1, 1985.
4.	Environmental Impact Statement: Homeporting Battleship/Battle group/ Cruiser Destroyer Group. U.S. Department of the Navy. January 1987.
5.	Blake, Jr., M.C., Barton, J.A., Frizzell Jr., V.A., Schlocker, J., Sorg, D., Wentworth, C.M., and Wright, R.H., 1974. Preliminary Geologic Map of Marin and San Francisco Counties and Parts of Alameda, Contra Costa and Sonoma Counties, California, U.S. Geological Survey, Miscellaneous Field Studies Map MF 574.
6.	Radbruch, Dorothy H., 1957. Areal and Engineering Geology of the Oakland West Quadrangle, California, U.S. Geological Survey, Miscellaneous Geologic Investigations Map I-239.
7.	U.S. Navy, Western Division, Naval Facilities Engineering Command, 1986. Natural Resources Management Plan, Treasure Island Naval Station, San Francisco, California.
8.	McCreary-Koretsky Engineers. 1965. Soils and Foundation Investigations for Appropriated Fund Quarters at U.S. Naval Station, Treasure Island, San Francisco, California. A&E Contract No. NBy NBy-078. Report dated 11 January.
9.	California Regional Water Quality Control Board, San Francisco Bay Region, 1982, Water Quality Control Plan, San Francisco Bay Basin (2).
10.	NAVSHIPS/NAVSEL. 1972. Shipboard Oily Waste Generation Rates for Nine Port Complexes.

DOCUMENTATION RECORDS
FOR
HAZARD RANKING SYSTEM

INSTRUCTIONS: As briefly as possible summarize the information you used to assign the score for each factor (e.g., "Waste quantity = 4,230 drums plus 800 cubic yards of sludges"). The source of information should be provided for each entry and should be a bibliographic-type reference. Include the location of the document.

FACILITY NAME: Site 4 - Hydraulic Training School (Bldg 342)
Site 19 - Refuse Transfer Area

LOCATION: Naval Station (NAVSTA) Treasure Island

DATE SCORED: 1/8/88

PERSON SCORING: B.F. Aubry

PRIMARY SOURCE(S) OF INFORMATION (e.g., EPA region, state, FIT, etc.):

Personal Interviews
References Listed on Page 20.

FACTORS NOT SCORED DUE TO INSUFFICIENT INFORMATION:

Air, Fire and Explosion

COMMENTS OR QUALIFICATIONS: Fire and explosion not scored since fire hazard not certified by a fire marshall or field observation.

Encl (9)

GROUND WATER ROUTE

1 OBSERVED RELEASE

Contaminants detected (5 maximum):

No observed releases. No groundwater testing performed.
(Reference: Personal communication)

Score = 0

Rationale for attributing the contaminants to the facility:

No observed release.

* * *

2 ROUTE CHARACTERISTICS

Depth to Aquifer of Concern

Name/description of aquifers(s) of concern:

Groundwater is unusable due to high salinity.
(Reference: #3)

Score = 3

Depth(s) from the ground surface to the highest seasonal level of the saturated zone [water table(s)] of the aquifer of concern:

2 - 6 Feet.

(Reference: #3)

Depth from the ground surface to the lowest point of waste disposal/ storage:

Unknown

Net Precipitation

Mean annual or seasonal precipitation (list months for seasonal):

25 - 30 inches.

(Reference: #1)

Mean annual lake or seasonal evaporation (list months for seasonal):

40 inches.

(Reference: #1)

Net precipitation (subtract the above figures):

-15 to -10 inches.

Score = 0

Permeability of Unsaturated Zone

Soil type in unsaturated zone:

Treasure Island is a man-made island composed of reclaimed soil generally composed of poorly-graded fine sand with occasional lenses of silt and clay.

(Reference: #5 & 6)

Permeability associated with soil type:

10^{-3} to 10^{-4} cm/sec

(Reference: #3 Score = 2

Physical State

Physical state of substances at time of disposal (or at present time for generated gases):

Liquid Score = 3

* * *

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

Drums, materials including hydraulic fluid have been released onto ground.
(Reference: Personal communication)

Method with highest score:

No containment Score = 3

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated:

Hydraulic fluids
Motor Oil
(Reference: Personal communication)

Compound with highest score:

Oils
(Reference: #1) Toxicity = 3 Persistence = 1

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

Unknown, but small

Basis of estimating and/or computing waste quantity:

Unknown Score = 0

* * *

5 TARGETS

Ground Water Use

Use(s) of aquifer(s) of concern within a 3-mile radius of the facility:

Groundwater is not used within a 3-mile radius, and is not usable due to its high salinity.

(Reference: Personal communication)

Score = 0

Distance to Nearest Well

Location of nearest well drawing from aquifer of concern or occupied building not served by a public water supply:

Across San Francisco Bay, not on the island.

Score = 0

Distance to above well or building:

> 3 miles

Population Served by Ground Water Wells Within a 3-Mile Radius

Identified water-supply well(s) drawing from aquifer(s) of concern within a 3-mile radius and populations served by each:

No wells are present on Treasure or Yerba Buena Islands.

Computation of land area irrigated by supply well(s) drawing from aquifer(s) of concern within a 3-mile radius, and conversion to population (1.5 people per acre):

N/A

Total population served by ground water within a 3-mile radius:

None.

(Reference: #7)

Score = 0

SURFACE WATER ROUTE

1 OBSERVED RELEASE

Contaminants detected in surface water at the facility or downhill from it (5 maximum):

(Reference: Personal communication)

None; no testing to-date

Score = 0

Rationale for attributing the contaminants to the facility:

No known release.

* * *

2 ROUTE CHARACTERISTICS

Facility Slope and Intervening Terrain

Average slope of facility in percent:

Range: 0 - 2%

Average: about 1%. Score = 0

(Reference: #7)

Name/description of nearest downslope surface water:

San Francisco Bay

(Reference: #7)

Average slope of terrain between facility and above-cited surface water body in percent:

1%

(Reference: #7)

Is the facility located either totally or partially in surface water?

No

(Reference: #3)

Is the facility completely surrounded by areas of higher elevation?

No

(Reference: #3)

1-Year 24-Hour Rainfall in Inches

3 inches.

(Reference: #7) Score = 2

Distance to Nearest Downslope Surface Water

$\leq$ 0.5 mile.

(Reference: #7) Score = 2

Physical State of Waste

liquid Score = 3

(Reference: Personal communication)

* * *

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

(Reference: Personal communication)

drums, materials including hydraulic fluid have been released onto the ground.

Method with highest score:

(above) Score = 3

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated

Hydraulic fluids
Motor oil

(Reference: Personal communication)

Compound with highest score:

oils

(Reference: #1) Toxicity = 3 Persistence = 1

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

Unknown, but small.

Basis of estimating and/or computing waste quantity:

Unknown Score = 0

* * *

5 TARGETS

Surface Water Use

Use(s) of surface water within 3 miles downstream of the hazardous substance:

Uses of San Francisco Bay are manifold but include: Boating/shipping
Fishing/
Swimming
Animal Habitat

Other than San Francisco Bay, surface water on Treasure Island and Yerba Buena Island is not used.

(Reference: #9) Score = 6

Is there tidal influence?

Yes
(Reference: #8)

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

> 2 miles Score = 0

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:

> 1 mile

Distance to critical habitat of an endangered species or national wildlife refuge, if 1 mile or less:

> 1 miles

Population Served by Surface Water

Location(s) of water-supply intake(s) within 3 miles (free-flowing bodies) or 1 mile (static water bodies) downstream of the hazardous substance and population served by each intake:

The site is surrounded on all sides by the Bay within 0.5 miles. Population served by the Bay is > 10,000. Surface water is not used on the island.

(Reference: #7) Score = 0

Computation of land area irrigated by above-cited intake(s) and conversion to population (1.5 people per acre):

0 acreage

Total population served:

>10,000
(Reference: #7)

Name/description of nearest of above water bodies:

San Francisco Bay.
(Reference: #7)

Distance to above-cited intakes, measured in stream miles.

<0.5 miles.
(Reference: #7) Score = 0

1 OBSERVED RELEASE

Contaminants detected:

No data exists showing any releases of air contaminants.

(Reference: Personal communication) Score = 0

Date and location of detection of contaminants

Methods used to detect the contaminants:

Rationale for attributing the contaminants to the site:

* * *

2 WASTE CHARACTERISTICS

<u>Reactivity and Incompatibility</u>

Most reactive compound:

Most incompatible pair of compounds:

Toxicity

Most toxic compound:

Hazardous Waste Quantity

Total quantity of hazardous waste:

Basis of estimating and/or computing waste quantity:

* * *

3 TARGETS

Population Within 4-Mile Radius

Circle radius used, give population, and indicate how determined:

0 to 4 mi 0 to 1 mi 0 to 1/2 mi 0 to 1/4 mi

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:

Distance to critical habitat of an endangered species, if 1 mile or less:

Land Use

Distance to commercial/industrial area, if 1 mile or less:

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less:

Distance to residential area, if 2 miles or less:

Distance to agricultural land in production within past 5 years, if 1 mile or less:

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:

Is a historic or landmark site (National Register or Historic Places and National Natural Landmarks) within the view of the site?

1 CONTAINMENT

Hazardous substances present:

A fire marshall has not certified that the facility presents a significant threat.

Type of containment, if applicable:

* * *

2 WASTE CHARACTERISTICS

Direct Evidence

Type of instrument and measurements:

Ignitability

Compound used:

Reactivity

Most reactive compound:

Incompatibility

Most incompatible pair of compounds:

* * *

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility:

Basis of estimating and/or computing waste quantity:

* * *

3 TARGETS

Distance to Nearest Population

Distance to Nearest Building

Distance to Sensitive Environment

Distance to wetlands:

Distance to critical habitat:

Land Use

Distance to commercial/industrial area, if 1 mile or less:

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less:

Distance to residential area, if 2 miles or less:

Distance to agricultural land in production within past 5 years, if 1 mile or less:

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:

Is a historic or landmark site (National Register or Historic Places and National Natural Landmarks) within the view of the site?

Population Within 2-Mile Radius

Buildings Within 2-Mile Radius

DIRECT CONTACT

1 OBSERVED INCIDENT

Date, location, and pertinent details of incident:

No observed incident.
(Reference: Personal communication) Score = 0

* * *

2 ACCESSIBILITY

Describe type of barrier(s):

Hydraulic oil storage area is fenced, but releases have flowed outside the fenced area. Refuse transfer area is fenced but gates are open.
(Reference: Personal communication) Score = 3

* * *

3 CONTAINMENT

Type of containment, if applicable:

Releases are on ground.
(Reference: Personal communication) Score = 15

* * *

4 WASTE CHARACTERISTICS

Toxicity

Compounds evaluated:

Hydraulic fluids
Motor oils
(Reference: Personal communication)

Compound with highest score:

oils Toxicity = 3

* * *

(Reference: #1)

5 TARGETS

Population within one-mile radius

3,000

Score = 12

Distance to critical habitat (of endangered species)

>1 mile Score = 0

(Reference: Personal communication)

REFERENCES

If the entire reference is not available for public review in the EPA regional files on this site, indicate where the reference may be found:

Reference Number	Description of the Reference
1	**Uncontrolled Hazardous Waste Site Ranking System; A Users Manual.** **National Oil and Hazardous Substances Contingency Plan, Appendix A (40 CFR 300)(47 FR 31219), July 16, 1982.**
2	Preliminary Assessment/Site Inspection of Naval Station Treasure Island, CA. Naval Energy and Environmental Support Activity (NEESA), November 1987.
3	Dewatering Recommendations, Repair of Steam Distribution System, Contract N-62472-82-C-6384. Harding Lawson Associates, July 1, 1985.
4.	Environmental Impact Statement: Homeporting Battleship/Battle group/ Cruiser Destroyer Group. U.S. Department of the Navy. January 1987.
5.	Blake, Jr., M.C., Barton, J.A., Frizzell Jr., V.A., Schlocker, J., Sorg, D., Wentworth, C.M., and Wright, R.H., 1974. Preliminary Geologic Map of Marin and San Francisco Counties and Parts of Alameda, Contra Costa and Sonoma Counties, California, U.S. Geological Survey, Miscellaneous Field Studies Map MF 574.
6.	Radbruch, Dorothy H., 1957. Areal and Engineering Geology of the Oakland West Quadrangle, California, U.S. Geological Survey, Miscellaneous Geologic Investigations Map I-239.
7.	U.S. Navy, Western Division, Naval Facilities Engineering Command, 1986. Natural Resources Management Plan, Treasure Island Naval Station, San Francisco, California.
8.	McCreary-Koretsky Engineers. 1965. Soils and Foundation Investigations for Appropriated Fund Quarters at U.S. Naval Station, Treasure Island, San Francisco, California. A&E Contract No. NBy NBy-078. Report dated 11 January.
9.	California Regional Water Quality Control Board, San Francisco Bay Region, 1982, Water Quality Control Plan, San Francisco Bay Basin (2).
10.	NAVSHIPS/NAVSEL. 1972. Shipboard Oily Waste Generation Rates for Nine Port Complexes.

DOCUMENTATION RECORDS
FOR
HAZARD RANKING SYSTEM

INSTRUCTIONS: As briefly as possible summarize the information you used to assign the score for each factor (e.g., "Waste quantity = 4,230 drums plus 800 cubic yards of sludges"). The source of information should be provided for each entry and should be a bibliographic-type reference. Include the location of the document.

FACILITY NAME: Site 5 - Old Boiler Plant - Building 102

LOCATION: Naval Station (NAVSTA) Treasure Island

DATE SCORED: 1/8/88

PERSON SCORING: B.F. Aubry

PRIMARY SOURCE(S) OF INFORMATION (e.g., EPA region, state, FIT, etc.):

Personal Interviews
References Listed on Page 20.

FACTORS NOT SCORED DUE TO INSUFFICIENT INFORMATION:

Air, Fire and Explosion.

COMMENTS OR QUALIFICATIONS:

Fire and explosion not scored since fire hazard not certified by a fire marshall or field observation.

Encl (4)

GROUND WATER ROUTE

1 OBSERVED RELEASE

Contaminants detected (5 maximum):

No observed releases. No groundwater testing performed.
(Reference: Personal communication)

Score = 0

Rationale for attributing the contaminants to the facility:

No observed releases.

* * *

2 ROUTE CHARACTERISTICS

Depth to Aquifer of Concern

Name/description of aquifers(s) of concern:

Groundwater is unusable due to high salinity.
(Reference: #3)

Depth(s) from the ground surface to the highest seasonal level of the saturated zone [water table(s)] of the aquifer of concern:

2 - 6 Feet. Score = 3

(Reference: #3)

Depth from the ground surface to the lowest point of waste disposal/ storage:

Unknown

Net Precipitation

Mean annual or seasonal precipitation (list months for seasonal):

25 - 30 inches.

(Reference: #7)

Mean annual lake or seasonal evaporation (list months for seasonal):

40 inches.

(Reference: #7)

Net precipitation (subtract the above figures):

-15 to -10 inches. Score = 0

Permeability of Unsaturated Zone

Soil type in unsaturated zone:

Treasure Island is a man-made island composed of reclaimed soil generally composed of poorly-graded fine sand with occasional lenses of silt and clay.

(Reference: #5 & 6)

Permeability associated with soil type:

10^{-3} to 10^{-4} cm/sec

(Reference: #3) Score = 2

Physical State

Physical state of substances at time of disposal (or at present time for generated gases):

Asbestos may present as a powder.

(Reference: Personal communication)

Score = 2

* * *

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

Buried in soil. No containment otherwise.
(Reference: Personal communication)

Method with highest score:

No containment. Score = 3

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated:

Asbestos
(Reference: Personal communication)

Compound with highest score:

Asbestos
(Reference: #1) Toxicity = 3 Persistence = 2

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

Unknown Score = 0

Basis of estimating and/or computing waste quantity:

Unknown

* * *

5 TARGETS

Ground Water Use

Use(s) of aquifer(s) of concern within a 3-mile radius of the facility:

Groundwater is not used within a 3-mile radius, and is not usable due to its high salinity.

(Reference: Personal communication)

Score = 0

Distance to Nearest Well

Location of nearest well drawing from aquifer of concern or occupied building not served by a public water supply:

Across San Francisco Bay, not on the island.

Score = 0

Distance to above well or building:

> 3 miles

Population Served by Ground Water Wells Within a 3-Mile Radius

Identified water-supply well(s) drawing from aquifer(s) of concern within a 3-mile radius and populations served by each:

No wells are present on Treasure or Yerba Buena Islands.

Computation of land area irrigated by supply well(s) drawing from aquifer(s) of concern within a 3-mile radius, and conversion to population (1.5 people per acre):

N/A

Total population served by ground water within a 3-mile radius:

None.

(Reference: #7)

Score = 0

SURFACE WATER ROUTE

1 OBSERVED RELEASE

Contaminants detected in surface water at the facility or downhill from it (5 maximum):

(Reference: Personal communication)

None; no testing to-date Score = 0

Rationale for attributing the contaminants to the facility:

No known releases.

* * *

2 ROUTE CHARACTERISTICS

Facility Slope and Intervening Terrain

Average slope of facility in percent:

Range: 0 - 2%

Average: about 1%. Score = 0

(Reference: #7)

Name/description of nearest downslope surface water:

San Francisco Bay

(Reference: #7)

Average slope of terrain between facility and above-cited surface water body in percent:

1%

(Reference: #7)

Is the facility located either totally or partially in surface water?

No

(Reference: #3)

Is the facility completely surrounded by areas of higher elevation?

No
(Reference: #3)

1-Year 24-Hour Rainfall in Inches

3 inches.
(Reference: #1) Score = 2

Distance to Nearest Downslope Surface Water

< 0.5 mile.
(Reference: #7) Score = 2

Physical State of Waste

Material is asbestos; physical state of deteriorated asbestos could be a powder.
(Reference: Personal communication) Score = 2

* * *

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

Asbestos is buried underground
(Reference: Personal communication)

Method with highest score:

Asbestos is buried underground.

Score = 3

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated

asbestos

Toxicity = 3 Persistence = 2

(Reference: Personal communications and Reference #1)

Compound with highest score:

Asbestos

Toxicity = 3 Persistence = 2

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

Unknown

Basis of estimating and/or computing waste quantity:

Unknown Score = 0

* * *

5 TARGETS

Surface Water Use

Use(s) of surface water within 3 miles downstream of the hazardous substance:

Uses of San Francisco Bay are manifold but include: Boating/shipping
Fishing/
Swimming
Animal Habitat

Other than San Francisco Bay, surface water on Treasure Island and Yerba Buena Island is not used.

(Reference: #9) Score = 6

Is there tidal influence?

Yes
(Reference: #8)

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

> 2 miles Score = 0

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:

> 1 mile

Distance to critical habitat of an endangered species or national wildlife refuge, if 1 mile or less:

> 1 miles

Population Served by Surface Water

Location(s) of water-supply intake(s) within 3 miles (free-flowing bodies) or 1 mile (static water bodies) downstream of the hazardous substance and population served by each intake:

The site is surrounded on all sides by the Bay within 0.5 miles. Population served by the Bay is > 10,000. Surface water is not used on the island.

(Reference: #7) Score = 0

Computation of land area irrigated by above-cited intake(s) and conversion to population (1.5 people per acre):

0 acreage

Total population served:

>10,000
(Reference: #7)

Name/description of nearest of above water bodies:

San Francisco Bay.
(Reference: #7)

Distance to above-cited intakes, measured in stream miles.

<0.5 miles.
(Reference: #7) Score = 0

AIR ROUTE

1 OBSERVED RELEASE

Contaminants detected:

No data exists showing any releases of air contaminants.

(Reference: Personal communication) Score = 0

Date and location of detection of contaminants

Methods used to detect the contaminants:

Rationale for attributing the contaminants to the site:

* * *

2 WASTE CHARACTERISTICS

Reactivity and Incompatibility

Most reactive compound:

Most incompatible pair of compounds:

Toxicity

Most toxic compound:

Hazardous Waste Quantity

Total quantity of hazardous waste:

Basis of estimating and/or computing waste quantity:

* * *

3 TARGETS

Population Within 4-Mile Radius

Circle radius used, give population, and indicate how determined:

0 to 4 mi 0 to 1 mi 0 to 1/2 mi 0 to 1/4 mi

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:

Distance to critical habitat of an endangered species, if 1 mile or less:

Land Use

Distance to commercial/industrial area, if 1 mile or less:

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less:

Distance to residential area, if 2 miles or less:

Distance to agricultural land in production within past 5 years, if 1 mile or less:

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:

Is a historic or landmark site (National Register or Historic Places and National Natural Landmarks) within the view of the site?

1 CONTAINMENT

Hazardous substances present:

A fire marshall has not certified that the facility presents a significant threat.

Type of containment, if applicable:

* * *

2 WASTE CHARACTERISTICS

Direct Evidence

Type of instrument and measurements:

Ignitability

Compound used:

Reactivity

Most reactive compound:

Incompatibility

Most incompatible pair of compounds:

* * *

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility:

Basis of estimating and/or computing waste quantity:

* * *

3 TARGETS

Distance to Nearest Population

Distance to Nearest Building

Distance to Sensitive Environment

Distance to wetlands:

Distance to critical habitat:

Land Use

Distance to commercial/industrial area, if 1 mile or less:

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less:

Distance to residential area, if 2 miles or less:

Distance to agricultural land in production within past 5 years, if 1 mile or less:

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:

Is a historic or landmark site (National Register or Historic Places and National Natural Landmarks) within the view of the site?

Population Within 2-Mile Radius

Buildings Within 2-Mile Radius

DIRECT CONTACT

1 OBSERVED INCIDENT

Date, location, and pertinent details of incident:

No observed incident.
(Reference: Personal communication) Score = 0

* * *

2 ACCESSIBILITY

Describe type of barrier(s):

Asbestos is buried underground
(Reference: Personal communication) Score = 1

* * *

3 CONTAINMENT

Type of containment, if applicable:

Asbestos is buried underground.
(Reference: Personal communication)

Score = 15

* * *

4 WASTE CHARACTERISTICS

Toxicity

Compounds evaluated:

Asbestos; condition of fibers unknown
(Reference: Personal communication)

Compound with highest score:

Asbestos Toxicity = 3

* * *

5 TARGETS

Population within one-mile radius

3,000

Score = 12

Distance to critical habitat (of endangered species)

>1 mile Score = 0

(Reference: Personal communication)

REFERENCES

If the entire reference is not available for public review in the EPA regional files on this site, indicate where the reference may be found:

Reference Number	Description of the Reference
1	**Uncontrolled Hazardous Waste Site Ranking System; A Users Manual.** **National Oil and Hazardous Substances Contingency Plan, Appendix A (40 CFR 300)(47 FR 31219), July 16, 1982.**
2	Preliminary Assessment/Site Inspection of Naval Station Treasure Island, CA. Naval Energy and Environmental Support Activity (NEESA), November 1987.
3	Dewatering Recommendations, Repair of Steam Distribution System, Contract N-62472-82-C-6384. Harding Lawson Associates, July 1, 1985.
4.	Environmental Impact Statement: Homeporting Battleship/Battle group/ Cruiser Destroyer Group. U.S. Department of the Navy. January 1987.
5.	Blake, Jr., M.C., Barton, J.A., Frizzell Jr., V.A., Schlocker, J., Sorg, D., Wentworth, C.M., and Wright, R.H., 1974. Preliminary Geologic Map of Marin and San Francisco Counties and Parts of Alameda, Contra Costa and Sonoma Counties, California, U.S. Geological Survey, Miscellaneous Field Studies Map MF 574.
6.	Radbruch, Dorothy H., 1957. Areal and Engineering Geology of the Oakland West Quadrangle, California, U.S. Geological Survey, Miscellaneous Geologic Investigations Map I-239.
7.	U.S. Navy, Western Division, Naval Facilities Engineering Command, 1986. Natural Resources Management Plan, Treasure Island Naval Station, San Francisco, California.
8.	McCreary-Koretsky Engineers. 1965. Soils and Foundation Investigations for Appropriated Fund Quarters at U.S. Naval Station, Treasure Island, San Francisco, California. A&E Contract No. NBy NBy-078. Report dated 11 January.
9.	California Regional Water Quality Control Board, San Francisco Bay Region, 1982, Water Quality Control Plan, San Francisco Bay Basin (2).
10.	NAVSHIPS/NAVSEL. 1972. Shipboard Oily Waste Generation Rates for Nine Port Complexes.

DOCUMENTATION RECORDS
FOR
HAZARD RANKING SYSTEM

INSTRUCTIONS: As briefly as possible summarize the information you used to assign the score for each factor (e.g., "Waste quantity = 4,230 drums plus 800 cubic yards of sludges"). The source of information should be provided for each entry and should be a bibliographic-type reference. Include the location of the document.

FACILITY NAME: Site 7 - Building-62 - Pesticide Storage

LOCATION: Naval Station (NAVSTA) Treasure Island

DATE SCORED: 1/8/88

PERSON SCORING: B.F. Aubry

PRIMARY SOURCE(S) OF INFORMATION (e.g., EPA region, state, FIT, etc.):

Personal Interviews
References Listed on Page 20.

FACTORS NOT SCORED DUE TO INSUFFICIENT INFORMATION:

Air, Fire and Explosion

COMMENTS OR QUALIFICATIONS: Fire and explosion not scored since fire hazard not certified by a fire marshall or field observation.

Encl (9)

GROUND WATER ROUTE

1 OBSERVED RELEASE

Contaminants detected (5 maximum):

No observed releases. No groundwater testing performed.
(Reference: Personal communication)

Score = 0

Rationale for attributing the contaminants to the facility:

No observed releases.

* * *

2 ROUTE CHARACTERISTICS

Depth to Aquifer of Concern

Name/description of aquifers(s) of concern:

Groundwater is unusable due to high salinity.
(Reference: #3)

Depth(s) from the ground surface to the highest seasonal level of the saturated zone (water table(s)) of the aquifer of concern:

2 - 6 Feet.
(Reference: #3)

Score = 3

Depth from the ground surface to the lowest point of waste disposal/ storage:

Unknown

Net Precipitation

Mean annual or seasonal precipitation (list months for seasonal):

25 - 30 inches.

(Reference: #1)

Mean annual lake or seasonal evaporation (list months for seasonal):

40 inches.

(Reference: #1)

Net precipitation (subtract the above figures):

-15 to -10 inches.

Score = 0

Permeability of Unsaturated Zone

Soil type in unsaturated zone:

Treasure Island is a man-made island composed of reclaimed soil generally composed of poorly-graded fine sand with occasional lenses of silt and clay.

(Reference: #5 & 6)

Permeability associated with soil type:

10^{-3} to 10^{-4} cm/sec

(Reference: #3

Score = 2

Physical State

Physical state of substances at time of disposal (or at present time for generated gases):

Probably liquid

(Reference: Personal communication)

Score = 3

* * *

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

Practices involved direct application of wastes to ground. (Reference: Personal communication)

Method with highest score:

Practices involved direct application of wastes to ground. (Reference: Personal communication)

Score = 3

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated:

Misc. pesticides and herbicides
Misc. solvents
Paint thinner and lacquer thinner
Waste paint
Misc. Hydrocarbons
(Reference: Personal communication and Reference #1)

Compound with highest score:

Pesticides
Metals (in waste paint, thinners and solvents)
(Reference: Personal communication)
Toxicity = 3 Persistence = 3

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

Unknown Score = 0

Basis of estimating and/or computing waste quantity:

Unknown

* * *

5 TARGETS

Ground Water Use

Use(s) of aquifer(s) of concern within a 3-mile radius of the facility:

Groundwater is not used within a 3-mile radius, and is not usable due to its high salinity.

(Reference: Personal communication)

Score = 0

Distance to Nearest Well

Location of nearest well drawing from aquifer of concern or occupied building not served by a public water supply:

Across San Francisco Bay, not on the island.

Score = 0

Distance to above well or building:

> 3 miles

Population Served by Ground Water Wells Within a 3-Mile Radius

Identified water-supply well(s) drawing from aquifer(s) of concern within a 3-mile radius and populations served by each:

No wells are present on Treasure or Yerba Buena Islands.

Computation of land area irrigated by supply well(s) drawing from aquifer(s) of concern within a 3-mile radius, and conversion to population (1.5 people per acre):

N/A

Total population served by ground water within a 3-mile radius:

None.

(Reference: #7)

Score = 0

SURFACE WATER ROUTE

1 OBSERVED RELEASE

Contaminants detected in surface water at the facility or downhill from it (5 maximum):

(Reference: Personal communication)

None; no testing to-date Score = 0

Rationale for attributing the contaminants to the facility:

No observed releases.

* * *

2 ROUTE CHARACTERISTICS

Facility Slope and Intervening Terrain

Average slope of facility in percent:

Range: 0 - 2%

Average: about 1%. Score = 0

(Reference: #7)

Name/description of nearest downslope surface water:

San Francisco Bay

(Reference: #7)

Average slope of terrain between facility and above-cited surface water body in percent:

1%

(Reference: #7)

Is the facility located either totally or partially in surface water?

No

(Reference: #3)

Is the facility completely surrounded by areas of higher elevation?

No

(Reference: #3)

1-Year 24-Hour Rainfall in Inches

3 inches.

(Reference: #1) Score = 2

Distance to Nearest Downslope Surface Water

< 0.5 mile.

(Reference: #7) Score = 2

Physical State of Waste

Liquids/sludges

(Reference: Personal communication) Score = 3

* * *

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

Practices involved direct application of wastes to ground.

(Reference: Personal communication)

Method with highest score:

Practices involved direct application of wastes to ground.

(Reference: Personal communication) Score = 3

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated

Misc. pesticides and herbicides
Misc. solvents
Paint thinner and lacquer thinner
Waste paint
Misc. hydrocarbons
(Reference: Personal communication and Reference #1)

Compound with highest score:

Pesticides
Metals (in waste paint, thinners and solvents)
(Reference: Personal communication)

Toxicity = 3 Persistence = 3

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

Unknown Score = 0

Basis of estimating and/or computing waste quantity:

Unknown Score = 0

* * *

5 TARGETS

Surface Water Use

Use(s) of surface water within 3 miles downstream of the hazardous substance:

Uses of San Francisco Bay are manifold but include: Boating/shipping
Fishing/
Swimming
Animal Habitat

Other than San Francisco Bay, surface water on Treasure Island and Yerba Buena Island is not used.

(Reference: #9) Score = 6

Is there tidal influence?

Yes
(Reference: #8)

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

> 2 miles Score = 0

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:

> 1 mile

Distance to critical habitat of an endangered species or national wildlife refuge, if 1 mile or less:

> 1 miles

Population Served by Surface Water

Location(s) of water-supply intake(s) within 3 miles (free-flowing bodies) or 1 mile (static water bodies) downstream of the hazardous substance and population served by each intake:

The site is surrounded on all sides by the Bay within 0.5 miles. Population served by the Bay is > 10,000. Surface water is not used on the island.

(Reference: #7) Score = 0

Computation of land area irrigated by above-cited intake(s) and conversion to population (1.5 people per acre):

0 acreage

Total population served:

>10,000
(Reference: #7)

Name/description of nearest of above water bodies:

San Francisco Bay.
(Reference: #7)

Distance to above-cited intakes, measured in stream miles.

<0.5 miles.
(Reference: #7) Score = 0

1 OBSERVED RELEASE

Contaminants detected:

No data exists showing any releases of air contaminants.

(Reference: Personal communication) Score = 0

Date and location of detection of contaminants

Methods used to detect the contaminants:

Rationale for attributing the contaminants to the site:

* * *

2 WASTE CHARACTERISTICS

Reactivity and Incompatibility

Most reactive compound:

Most incompatible pair of compounds:

Toxicity

Most toxic compound:

Hazardous Waste Quantity

Total quantity of hazardous waste:

Basis of estimating and/or computing waste quantity:

* * *

3 TARGETS

Population Within 4-Mile Radius

Circle radius used, give population, and indicate how determined:

0 to 4 mi 0 to 1 mi 0 to 1/2 mi 0 to 1/4 mi

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:

Distance to critical habitat of an endangered species, if 1 mile or less:

Land Use

Distance to commercial/industrial area, if 1 mile or less:

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less:

Distance to residential area, if 2 miles or less:

Distance to agricultural land in production within past 5 years, if 1 mile or less:

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:

Is a historic or landmark site (National Register or Historic Places and National Natural Landmarks) within the view of the site?

1 CONTAINMENT

Hazardous substances present:

A fire marshall has not certified that the facility presents a significant threat.

Type of containment, if applicable:

* * *

2 WASTE CHARACTERISTICS

Direct Evidence

Type of instrument and measurements:

Ignitability

Compound used:

Reactivity

Most reactive compound:

Incompatibility

Most incompatible pair of compounds:

* * *

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility:

Basis of estimating and/or computing waste quantity:

* * *

3 TARGETS

Distance to Nearest Population

Distance to Nearest Building

Distance to Sensitive Environment

Distance to wetlands:

Distance to critical habitat:

Land Use

Distance to commercial/industrial area, if 1 mile or less:

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less:

Distance to residential area, if 2 miles or less:

Distance to agricultural land in production within past 5 years, if 1 mile or less:

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:

Is a historic or landmark site (National Register or Historic Places and National Natural Landmarks) within the view of the site?

Population Within 2-Mile Radius

Buildings Within 2-Mile Radius

DIRECT CONTACT

1 OBSERVED INCIDENT

Date, location, and pertinent details of incident:

No observed incident.
(Reference: Personal communication) Score = 0

* * *

2 ACCESSIBILITY

Describe type of barrier(s):

None
(Reference: Personal communication) Score = 3

* * *

3 CONTAINMENT

Type of containment, if applicable:

Practices involved direct application of wastes to ground.
(Reference: Personal communication)
Score = 15

* * *

4 WASTE CHARACTERISTICS

Toxicity

Compounds evaluated:

Misc. pesticides and herbicides
Misc. solvents
Paint thinner and lacquer thinner
Waste paint
Misc. hydrocarbons
(Reference: Personal communications and Reference #1)

Compound with highest score:

Pesticides
Metals (in waste paint, thinners and solvents)
(Reference: Personal communication) Toxicity = 3

* * *

5 TARGETS

Population within one-mile radius

3,000

Score = 12

Distance to critical habitat (of endangered species)

>1 mile Score = 0

(Reference: Personal communication)

REFERENCES

If the entire reference is not available for public review in the EPA regional files on this site, indicate where the reference may be found:

Reference Number	Description of the Reference
1	**Uncontrolled Hazardous Waste Site Ranking System; A Users Manual.** **National Oil and Hazardous Substances Contingency Plan, Appendix A (40 CFR 300)(47 FR 31219), July 16, 1982.**
2	Preliminary Assessment/Site Inspection of Naval Station Treasure Island, CA. Naval Energy and Environmental Support Activity (NEESA), November 1987.
3	Dewatering Recommendations, Repair of Steam Distribution System, Contract N-62472-82-C-6384. Harding Lawson Associates, July 1, 1985.
4.	Environmental Impact Statement: Homeporting Battleship/Battle group/ Cruiser Destroyer Group. U.S. Department of the Navy. January 1987.
5.	Blake, Jr., M.C., Barton, J.A., Frizzell Jr., V.A., Schlocker, J., Sorg, D., Wentworth, C.M., and Wright, R.H., 1974. Preliminary Geologic Map of Marin and San Francisco Counties and Parts of Alameda, Contra Costa and Sonoma Counties, California, U.S. Geological Survey, Miscellaneous Field Studies Map MF 574.
6.	Radbruch, Dorothy H., 1957. Areal and Engineering Geology of the Oakland West Quadrangle, California, U.S. Geological Survey, Miscellaneous Geologic Investigations Map I-239.
7.	U.S. Navy, Western Division, Naval Facilities Engineering Command, 1986. Natural Resources Management Plan, Treasure Island Naval Station, San Francisco, California.
8.	McCreary-Koretsky Engineers. 1965. Soils and Foundation Investigations for Appropriated Fund Quarters at U.S. Naval Station, Treasure Island, San Francisco, California. A&E Contract No. NBy NBy-078. Report dated 11 January.
9.	California Regional Water Quality Control Board, San Francisco Bay Region, 1982, Water Quality Control Plan, San Francisco Bay Basin (2).
10.	NAVSHIPS/NAVSEL. 1972. Shipboard Oily Waste Generation Rates for Nine Port Complexes.

DOCUMENTATION RECORDS
FOR
HAZARD RANKING SYSTEM

INSTRUCTIONS: As briefly as possible summarize the information you used to assign the score for each factor (e.g., "Waste quantity = 4,230 drums plus 800 cubic yards of sludges"). The source of information should be provided for each entry and should be a bibliographic-type reference. Include the location of the document.

FACILITY NAME: Site 9 - Building 41 - Forge/Foundry

LOCATION: Naval Station (NAVSTA) Treasure Island

DATE SCORED: 1/8/88

PERSON SCORING: B.F. Aubry

PRIMARY SOURCE(S) OF INFORMATION (e.g., EPA region, state, FIT, etc.):

Personal Interviews
References Listed on Page 20.

FACTORS NOT SCORED DUE TO INSUFFICIENT INFORMATION:

Air, Fire and Explosion

COMMENTS OR QUALIFICATIONS: Fire and explosion not scored since fire hazard not certified by a fire marshall or field observation.

Encl (4)

GROUND WATER ROUTE

1 OBSERVED RELEASE

Contaminants detected (5 maximum):

No observed releases. No groundwater testing performed.
(Reference: Personal communication)

Score = 0

Rationale for attributing the contaminants to the facility:

No observed releases.

* * *

2 ROUTE CHARACTERISTICS

Depth to Aquifer of Concern

Name/description of aquifers(s) of concern:

Groundwater is unusable due to high salinity.
(Reference: #3)

Depth(s) from the ground surface to the highest seasonal level of the saturated zone [water table(s)] of the aquifer of concern:

2 - 6 Feet.
(Reference: #3)

Score = 3

Depth from the ground surface to the lowest point of waste disposal/ storage:

Unknown

Net Precipitation

Mean annual or seasonal precipitation (list months for seasonal):

25 - 30 inches.

(Reference: #1)

Mean annual lake or seasonal evaporation (list months for seasonal):

40 inches.

(Reference: #1)

Net precipitation (subtract the above figures):

-15 to -10 inches. Score = 0

Permeability of Unsaturated Zone

Soil type in unsaturated zone:

Treasure Island is a man-made island composed of reclaimed soil generally composed of poorly-graded fine sand with occasional lenses of silt and clay.

(Reference: #5 & 6)

Permeability associated with soil type:

10^{-3} to 10^{-4} cm/sec

(Reference: #3 Score = 2

Physical State

Physical state of substances at time of disposal (or at present time for generated gases):

Liquid Score = 3

(Reference: Personal communication)

* * *

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

Spillage of waste paints, thinners, and solvents possible; if so, wastes would already be in soil.

(Reference: Personal communication)

Method with highest score:

Since materials may already be in the soil, a score of 3 was assigned.

(Reference: #1)

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated:

- metals including lead, zinc, chromium
- solvents and paint thinners

(Reference: Personal communication)

Compound with highest score:

metals - persistence = 3

metals - toxicity = 3 (Reference: #1)

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

Unknown

Basis of estimating and/or computing waste quantity:

Unknown Score = 0

* * *

5 TARGETS

Ground Water Use

Use(s) of aquifer(s) of concern within a 3-mile radius of the facility:

Groundwater is not used within a 3-mile radius, and is not usable due to its high salinity.

(Reference: Personal communication)

Score = 0

Distance to Nearest Well

Location of nearest well drawing from aquifer of concern or occupied building not served by a public water supply:

Across San Francisco Bay, not on the island.

Score = 0

Distance to above well or building:

> 3 miles

Population Served by Ground Water Wells Within a 3-Mile Radius

Identified water-supply well(s) drawing from aquifer(s) of concern within a 3-mile radius and populations served by each:

No wells are present on Treasure or Yerba Buena Islands.

Computation of land area irrigated by supply well(s) drawing from aquifer(s) of concern within a 3-mile radius, and conversion to population (1.5 people per acre):

N/A

Total population served by ground water within a 3-mile radius:

None.

(Reference: #7)

Score = 0

SURFACE WATER ROUTE

1 OBSERVED RELEASE

Contaminants detected in surface water at the facility or downhill from it (5 maximum):

(Reference: Personal communication)

None; no testing to-date Score = 0

Rationale for attributing the contaminants to the facility:

Reported discharge of materials to San Francisco Bay

(Reference: Personal communication)

* * *

2 ROUTE CHARACTERISTICS

Facility Slope and Intervening Terrain

Average slope of facility in percent:

Range: 0 - 2% Score = 0

Average: about 1%.

(Reference: #7)

Name/description of nearest downslope surface water:

San Francisco Bay

(Reference: #7)

Average slope of terrain between facility and above-cited surface water body in percent:

1%

(Reference: #7)

Is the facility located either totally or partially in surface water?

No, although waste may have been discharged to the Bay.

(Reference: #3)

Is the facility completely surrounded by areas of higher elevation?

No

(Reference: #3)

1-Year 24-Hour Rainfall in Inches

3 inches. Score = 2

(Reference: #7)

Distance to Nearest Downslope Surface Water

< 0.5 mile.

(Reference: #7) Score = 2

Physical State of Waste

liquid Score = 3

(Reference: Personal communication)

* * *

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

(Reference: Personal communication)

Former practices may have involved direct application of paint shop waste to San Francisco Bay

Method with highest score:

Since materials may already be in the water, a score of 3 was assigned

(Reference: #1)

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated
- metals including lead, zinc, chromium
- solvents and paint thinners

(Reference: Personal communication)

Compound with highest score:

metals Toxicity = 3 Persistence = 3

(Reference: #1)

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

Unknown

Basis of estimating and/or computing waste quantity:

Unknown Score = 0

* * *

5 TARGETS

Surface Water Use

Use(s) of surface water within 3 miles downstream of the hazardous substance:

Uses of San Francisco Bay are manifold but include: Boating/shipping
Fishing/
Swimming
Animal Habitat

Other than San Francisco Bay, surface water on Treasure Island and Yerba Buena Island is not used.

(Reference: #9)

Score = 6

Is there tidal influence?

Yes
(Reference: #8)

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

> 2 miles Score = 0

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:

> 1 mile

Distance to critical habitat of an endangered species or national wildlife refuge, if 1 mile or less:

> 1 miles

Population Served by Surface Water

Location(s) of water-supply intake(s) within 3 miles (free-flowing bodies) or 1 mile (static water bodies) downstream of the hazardous substance and population served by each intake:

The site is surrounded on all sides by the Bay within 0.5 miles. Population served by the Bay is > 10,000. Surface water is not used on the island.

(Reference: #7) Score = 0

Computation of land area irrigated by above-cited intake(s) and conversion to population (1.5 people per acre):

0 acreage

Total population served:

>10,000
(Reference: #7)

Name/description of nearest of above water bodies:

San Francisco Bay.
(Reference: #7)

Distance to above-cited intakes, measured in stream miles.

<0.5 miles.
(Reference: #7) Score = 0

1 OBSERVED RELEASE

Contaminants detected:

No data exists showing any releases of air contaminants.

(Reference: Personal communication) Score = 0

Date and location of detection of contaminants

Methods used to detect the contaminants:

Rationale for attributing the contaminants to the site:

* * *

2 WASTE CHARACTERISTICS

Reactivity and Incompatibility

Most reactive compound:

Most incompatible pair of compounds:

Toxicity

Most toxic compound:

Hazardous Waste Quantity

Total quantity of hazardous waste:

Basis of estimating and/or computing waste quantity:

* * *

3 TARGETS

Population Within 4-Mile Radius

Circle radius used, give population, and indicate how determined:

0 to 4 mi 0 to 1 mi 0 to 1/2 mi 0 to 1/4 mi

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:

Distance to critical habitat of an endangered species, if 1 mile or less:

Land Use

Distance to commercial/industrial area, if 1 mile or less:

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less:

Distance to residential area, if 2 miles or less:

Distance to agricultural land in production within past 5 years, if 1 mile or less:

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:

Is a historic or landmark site (National Register or Historic Places and National Natural Landmarks) within the view of the site?

1 CONTAINMENT

Hazardous substances present:

A fire marshall has not certified that the facility presents a significant threat.

Type of containment, if applicable:

* * *

2 WASTE CHARACTERISTICS

Direct Evidence

Type of instrument and measurements:

Ignitability

Compound used:

Reactivity

Most reactive compound:

Incompatibility

Most incompatible pair of compounds:

* * *

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility:

Basis of estimating and/or computing waste quantity:

* * *

3 TARGETS

Distance to Nearest Population

Distance to Nearest Building

Distance to Sensitive Environment

Distance to wetlands:

Distance to critical habitat:

Land Use

Distance to commercial/industrial area, if 1 mile or less:

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less:

Distance to residential area, if 2 miles or less:

Distance to agricultural land in production within past 5 years, if 1 mile or less:

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:

Is a historic or landmark site (National Register or Historic Places and National Natural Landmarks) within the view of the site?

Population Within 2-Mile Radius

Buildings Within 2-Mile Radius

DIRECT CONTACT

1 OBSERVED INCIDENT

Date, location, and pertinent details of incident:

No observed incident.
(Reference: Personal communication)

* * *

Score = 0

2 ACCESSIBILITY

Describe type of barrier(s):

None
(Reference: Personal communication)

* * *

Score = 2

3 CONTAINMENT

Type of containment, if applicable:

None
(Reference: Personal communication)

* * *

Score = 15

4 WASTE CHARACTERISTICS

<u>Toxicity</u>

Compounds evaluated:

Metals including lead, zinc, chromium
Solvents, and paint thinners

Compound with highest score:

Metals Toxicity = 3

* * *

5 TARGETS

Population within one-mile radius

3,000

Score = 12

Distance to critical habitat (of endangered species)

>1 mile Score = 0

(Reference: Personal communication)

REFERENCES

If the entire reference is not available for public review in the EPA regional files on this site, indicate where the reference may be found:

Reference Number	Description of the Reference
1	**Uncontrolled Hazardous Waste Site Ranking System; A Users Manual.** **National Oil and Hazardous Substances Contingency Plan, Appendix A (40 CFR 300)(47 FR 31219), July 16, 1982.**
2	Preliminary Assessment/Site Inspection of Naval Station Treasure Island, CA. Naval Energy and Environmental Support Activity (NEESA), November 1987.
3	Dewatering Recommendations, Repair of Steam Distribution System, Contract N-62472-82-C-6384. Harding Lawson Associates, July 1, 1985.
4.	Environmental Impact Statement: Homeporting Battleship/Battle group/ Cruiser Destroyer Group. U.S. Department of the Navy. January 1987.
5.	Blake, Jr., M.C., Barton, J.A., Frizzell Jr., V.A., Schlocker, J., Sorg, D., Wentworth, C.M., and Wright, R.H., 1974. Preliminary Geologic Map of Marin and San Francisco Counties and Parts of Alameda, Contra Costa and Sonoma Counties, California, U.S. Geological Survey, Miscellaneous Field Studies Map MF 574.
6.	Radbruch, Dorothy H., 1957. Areal and Engineering Geology of the Oakland West Quadrangle, California, U.S. Geological Survey, Miscellaneous Geologic Investigations Map I-239.
7.	U.S. Navy, Western Division, Naval Facilities Engineering Command, 1986. Natural Resources Management Plan, Treasure Island Naval Station, San Francisco, California.
8.	McCreary-Koretsky Engineers. 1965. Soils and Foundation Investigations for Appropriated Fund Quarters at U.S. Naval Station, Treasure Island, San Francisco, California. A&E Contract No. NBy NBy-078. Report dated 11 January.
9.	California Regional Water Quality Control Board, San Francisco Bay Region, 1982, Water Quality Control Plan, San Francisco Bay Basin (2).
10.	NAVSHIPS/NAVSEL. 1972. Shipboard Oily Waste Generation Rates for Nine Port Complexes.

DOCUMENTATION RECORDS
FOR
HAZARD RANKING SYSTEM

INSTRUCTIONS: As briefly as possible summarize the information you used to assign the score for each factor (e.g., "Waste quantity = 4,230 drums plus 800 cubic yards of sludges"). The source of information should be provided for each entry and should be a bibliographic-type reference. Include the location of the document.

FACILITY NAME: Site 10 - Building 335 - Bus Painting Shop.

LOCATION: Naval Station (NAVSTA) Treasure Island

DATE SCORED: 1/8/88

PERSON SCORING: B.F. Aubry

PRIMARY SOURCE(S) OF INFORMATION (e.g., EPA region, state, FIT, etc.):

Personal Interviews
References Listed on Page 20.

FACTORS NOT SCORED DUE TO INSUFFICIENT INFORMATION:

Air, Fire and Explosion

COMMENTS OR QUALIFICATIONS: Fire and explosion not scored since fire hazard not certified by a fire marshall or field observation.

Encl (9)

GROUND WATER ROUTE

1 OBSERVED RELEASE

Contaminants detected (5 maximum):

No observed releases. No groundwater testing performed.

(Reference: Personal Communication)

Score = 0

Rationale for attributing the contaminants to the facility:

No observed releases.

* * *

2 ROUTE CHARACTERISTICS

Depth to Aquifer of Concern

Name/description of aquifers(s) of concern:

Groundwater is unusable due to high salinity.

(Reference: #3)

Depth(s) from the ground surface to the highest seasonal level of the saturated zone [water table(s)] of the aquifer of concern:

2 - 6 Feet.

(Reference: #3) Score = 3

Depth from the ground surface to the lowest point of waste disposal/ storage:

Unknown

Net Precipitation

Mean annual or seasonal precipitation (list months for seasonal):

25 - 30 inches.

(Reference: #1)

Mean annual lake or seasonal evaporation (list months for seasonal):

40 inches.

(Reference: #1)

Net precipitation (subtract the above figures):

-15 to -10 inches. Score = 0

Permeability of Unsaturated Zone

Soil type in unsaturated zone:

Treasure Island is a man-made island composed of reclaimed soil generally composed of poorly-graded fine sand with occasional lenses of silt and clay.

(Reference: #5 & #6)

Permeability associated with soil type:

10^{-3} to 10^{-4} cm/sec

(Reference: #3) Score = 2

Physical State

Physical state of substances at time of disposal (or at present time for generated gases):

Liquid Score = 3

* * *

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

Wastes reportedly released onto the ground and into San Francisco Bay.

(Reference: Personal communication)

Method with highest score:

Wastes reportedly released onto the ground and into San Francisco Bay.

(Reference: Personal communication)

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated:
Misc. solvents
Misc. pesticides
Misc. hydrocarbons
Paint and lacquer thinner
Paint waste
(Reference: Personal communication)

Compound with highest score:

Pesticides
Metals (including lead) from paint wastes
(Reference: #1)

Toxicity = 3 Persistence = 3

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

Unknown

Basis of estimating and/or computing waste quantity:

Unknown Score = 0

* * *

5 TARGETS

Ground Water Use

Use(s) of aquifer(s) of concern within a 3-mile radius of the facility:

Groundwater is not used within a 3-mile radius, and is not usable due to its high salinity.

(Reference: Personal communication)

Score = 0

Distance to Nearest Well

Location of nearest well drawing from aquifer of concern or occupied building not served by a public water supply:

Across San Francisco Bay, not on the island.

Score = 0

Distance to above well or building:

> 3 miles

Population Served by Ground Water Wells Within a 3-Mile Radius

Identified water-supply well(s) drawing from aquifer(s) of concern within a 3-mile radius and populations served by each:

No wells are present on Treasure or Yerba Buena Islands.

Computation of land area irrigated by supply well(s) drawing from aquifer(s) of concern within a 3-mile radius, and conversion to population (1.5 people per acre):

N/A

Total population served by ground water within a 3-mile radius:

None.

(Reference: #7)

Score = 0

SURFACE WATER ROUTE

1 OBSERVED RELEASE

Contaminants detected in surface water at the facility or downhill from it (5 maximum):

None; no testing to-date.

(Reference: Personal Communication)

Score = 0

Rationale for attributing the contaminants to the facility:

Reported discharge of materials to San Francisco Bay.

(Reference: Personal Communication)

* * *

2 ROUTE CHARACTERISTICS

Facility Slope and Intervening Terrain

Average slope of facility in percent:

Range: 0 - 2%

Average: about 1%.

(Reference: #7) Score = 0

Name/description of nearest downslope surface water:

San Francisco Bay

(Reference: #7)

Average slope of terrain between facility and above-cited surface water body in percent:

1%

(Reference: #7)

Is the facility located either totally or partially in surface water?

No

(Reference: #3)

Is the facility completely surrounded by areas of higher elevation?

No
(Reference: #3)

1-Year 24-Hour Rainfall in Inches

3 inches.
(Reference: #7) Score = 2

Distance to Nearest Downslope Surface Water

$<$0.5 mile.
(Reference: #7) Score = 2

Physical State of Waste

Liquid
(Reference: Personal communication)

Score = 3

* * *

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

Wastes reportedly released onto the ground and into San Francisco Bay.
(Reference: Personal Communication)

Method with highest score:

Wastes reportedly released onto the ground and into San Francisco Bay.
(Reference: Personal Interview)

Score = 3

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated
misc. solvents
misc. pesticide
misc. hydrocarbons
paint and lacquer thinner
paint waste
(Reference: Personal Communication)

Compound with highest score:
pesticides
metals (including lead) from paint wastes
(Reference: #1)

Toxicity = 3 Persistence = 3

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

Unknown

Basis of estimating and/or computing waste quantity:

Unknown Score = 0

* * *

5 TARGETS

Surface Water Use

Use(s) of surface water within 3 miles downstream of the hazardous substance:

Uses of San Francisco Bay are manifold but include: Boating/shipping
Fishing/
Swimming
Animal Habitat

Other than San Francisco Bay, surface water on Treasure Island and Yerba Buena Island is not used.
(Reference: #9)

Score = 2

Is there tidal influence?

Yes
(Reference: #8)

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

> 2 miles Score = 0

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:

> 1 mile

Distance to critical habitat of an endangered species or national wildlife refuge, if 1 mile or less:

> 1 miles

Population Served by Surface Water

Location(s) of water-supply intake(s) within 3 miles (free-flowing bodies) or 1 mile (static water bodies) downstream of the hazardous substance and population served by each intake:

The site is surrounded on all sides by the Bay within 0.5 miles. Population served by the Bay is > 10,000. Surface water is not used on the island.

(Reference: #7) Score = 0

Computation of land area irrigated by above-cited intake(s) and conversion to population (1.5 people per acre):

0 acreage

Total population served:

>10,000
(Reference: #7)

Name/description of nearest of above water bodies:

San Francisco Bay.
(Reference: #7)

Distance to above-cited intakes, measured in stream miles.

<0.5 miles.
(Reference: #7) Score = 0

AIR ROUTE

1 OBSERVED RELEASE

Contaminants detected:

No data exists showing any releases of air contaminants.

(Reference: Personal communication) Score = 0

Date and location of detection of contaminants

Methods used to detect the contaminants:

Rationale for attributing the contaminants to the site:

* * *

2 WASTE CHARACTERISTICS

Reactivity and Incompatibility

Most reactive compound:

Most incompatible pair of compounds:

Toxicity

Most toxic compound:

Hazardous Waste Quantity

Total quantity of hazardous waste:

Basis of estimating and/or computing waste quantity:

* * *

3 TARGETS

Population Within 4-Mile Radius

Circle radius used, give population, and indicate how determined:

0 to 4 mi 0 to 1 mi 0 to 1/2 mi 0 to 1/4 mi

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:

Distance to critical habitat of an endangered species, if 1 mile or less:

Land Use

Distance to commercial/industrial area, if 1 mile or less:

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less:

Distance to residential area, if 2 miles or less:

Distance to agricultural land in production within past 5 years, if 1 mile or less:

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:

Is a historic or landmark site (National Register or Historic Places and National Natural Landmarks) within the view of the site?

1 CONTAINMENT

Hazardous substances present:

A fire marshall has not certified that the facility presents a significant threat.

Type of containment, if applicable:

* * *

2 WASTE CHARACTERISTICS

Direct Evidence

Type of instrument and measurements:

Ignitability

Compound used:

Reactivity

Most reactive compound:

Incompatibility

Most incompatible pair of compounds:

* * *

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility:

Basis of estimating and/or computing waste quantity:

* * *

3 TARGETS

Distance to Nearest Population

Distance to Nearest Building

Distance to Sensitive Environment

Distance to wetlands:

Distance to critical habitat:

Land Use

Distance to commercial/industrial area, if 1 mile or less:

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less:

Distance to residential area, if 2 miles or less:

Distance to agricultural land in production within past 5 years, if 1 mile or less:

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:

Is a historic or landmark site (National Register or Historic Places and National Natural Landmarks) within the view of the site?

Population Within 2-Mile Radius

Buildings Within 2-Mile Radius

DIRECT CONTACT

1 OBSERVED INCIDENT

Date, location, and pertinent details of incident:

No observed incident.

(Reference: Personal Communication) Score = 0

* * *

2 ACCESSIBILITY

Describe type of barrier(s):

None

(Reference: Personal Communication)

Score = 3

* * *

3 CONTAINMENT

Type of containment, if applicable:

Storage drums present; however, former practices included direct application of materials onto ground.

(Reference: Personal Communication)

* * *

Score = 15

4 WASTE CHARACTERISTICS

<u>Toxicity</u>

Compounds evaluated:

misc. solvents
misc. pesticides
misc. hydrocarbons
lacquer thinner and paint thinner
paint waste (Reference: Personal Communication)

Compound with highest score:

pesticides
metals from paint waste

(Reference: #1)

* * *

Score = 3

5 TARGETS

Population within one-mile radius

3,000

Score = 12

Distance to critical habitat (of endangered species)

>1 mile Score = 0

(Reference: Personal communication)

REFERENCES

If the entire reference is not available for public review in the EPA regional files on this site, indicate where the reference may be found:

Reference Number	Description of the Reference
1	**Uncontrolled Hazardous Waste Site Ranking System; A Users Manual.** **National Oil and Hazardous Substances Contingency Plan, Appendix A (40 CFR 300)(47 FR 31219), July 16, 1982.**
2	Preliminary Assessment/Site Inspection of Naval Station Treasure Island, CA. Naval Energy and Environmental Support Activity (NEESA), November 1987.
3	Dewatering Recommendations, Repair of Steam Distribution System, Contract N-62472-82-C-6384. Harding Lawson Associates, July 1, 1985.
4.	Environmental Impact Statement: Homeporting Battleship/Battle group/ Cruiser Destroyer Group. U.S. Department of the Navy. January 1987.
5.	Blake, Jr., M.C., Barton, J.A., Frizzell Jr., V.A., Schlocker, J., Sorg, D., Wentworth, C.M., and Wright, R.H., 1974. Preliminary Geologic Map of Marin and San Francisco Counties and Parts of Alameda, Contra Costa and Sonoma Counties, California, U.S. Geological Survey, Miscellaneous Field Studies Map MF 574.
6.	Radbruch, Dorothy H., 1957. Areal and Engineering Geology of the Oakland West Quadrangle, California, U.S. Geological Survey, Miscellaneous Geologic Investigations Map I-239.
7.	U.S. Navy, Western Division, Naval Facilities Engineering Command, 1986. Natural Resources Management Plan, Treasure Island Naval Station, San Francisco, California.
8.	McCreary-Koretsky Engineers. 1965. Soils and Foundation Investigations for Appropriated Fund Quarters at U.S. Naval Station, Treasure Island, San Francisco, California. A&E Contract No. NBy NBy-078. Report dated 11 January.
9.	California Regional Water Quality Control Board, San Francisco Bay Region, 1982, Water Quality Control Plan, San Francisco Bay Basin (2).
10.	NAVSHIPS/NAVSEL. 1972. Shipboard Oily Waste Generation Rates for Nine Port Complexes.

DOCUMENTATION RECORDS
FOR
HAZARD RANKING SYSTEM

INSTRUCTIONS: As briefly as possible summarize the information you used to assign the score for each factor (e.g., "Waste quantity = 4,230 drums plus 800 cubic yards of sludges"). The source of information should be provided for each entry and should be a bibliographic-type reference. Include the location of the document.

FACILITY NAME: Site 11 - YBI Landfill.

LOCATION: Yerba Buena Island

DATE SCORED: 1/8/88

PERSON SCORING: B.F. Aubry

PRIMARY SOURCE(S) OF INFORMATION (e.g., EPA region, state, FIT, etc.):

Personal Interviews
References Listed on Page 20.

FACTORS NOT SCORED DUE TO INSUFFICIENT INFORMATION:

Air, Fire and Explosion

COMMENTS OR QUALIFICATIONS: Fire and explosion not scored since fire hazard not certified by a fire marshall or field observation.

Encl (9)

GROUND WATER ROUTE

1 OBSERVED RELEASE

Contaminants detected (5 maximum):

No observed releases. No groundwater testing performed.

(Reference: Personal Communication)

Score = 0

Rationale for attributing the contaminants to the facility:

No observed releases.

* * *

2 ROUTE CHARACTERISTICS

Depth to Aquifer of Concern

Name/description of aquifers(s) of concern:

Groundwater is probably unusable due to high salinity. The groundwater is unused.

(Reference: #3)

Depth(s) from the ground surface to the highest seasonal level of the saturated zone [water table(s)] of the aquifer of concern:

Unknown.

Score = 0

Depth from the ground surface to the lowest point of waste disposal/ storage:

Unknown.

Net Precipitation

Mean annual or seasonal precipitation (list months for seasonal):

25 - 30 inches.

(Reference: #1)

Mean annual lake or seasonal evaporation (list months for seasonal):

40 inches.

(Reference: #1)

Net precipitation (subtract the above figures):

-15 to -10 inches. Score = 0

Permeability of Unsaturated Zone

Soil type in unsaturated zone:

Yerba Buena Island is a natural island consisting of a thin soil covering sandstone and shale bedrock of the Franciscan Formation. The soil varies in thickness from 10 to 40 inches and usually consists of clayey silty sands. These soils are subject to landslides.

(Reference: #5)

Permeability associated with soil type:

10^{-3} to 10^{-4} cm/sec

(Reference: #3) Score = 2

Physical State

Physical state of substances at time of disposal (or at present time for generated gases):

Probably solid.

(Reference: Personal Communication)

Score = 1

* * *

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

None - Material would have been dumped on bare ground.

(Reference: Personal Communication)

Method with highest score:

No containment Score = 3

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated:

Unknown

Compound with highest score:

Unknown Score = 0

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

Unknown.

Basis of estimating and/or computing waste quantity:

Unknown. Score = 0

* * *

5 TARGETS

Ground Water Use

Use(s) of aquifer(s) of concern within a 3-mile radius of the facility:

Groundwater is not used within a 3-mile radius, and is not usable due to its high salinity.

(Reference: Personal communication)

Score = 0

Distance to Nearest Well

Location of nearest well drawing from aquifer of concern or occupied building not served by a public water supply:

Across San Francisco Bay, not on the island.

Score = 0

Distance to above well or building:

> 3 miles

Population Served by Ground Water Wells Within a 3-Mile Radius

Identified water-supply well(s) drawing from aquifer(s) of concern within a 3-mile radius and populations served by each:

No wells are present on Treasure or Yerba Buena Islands.

Computation of land area irrigated by supply well(s) drawing from aquifer(s) of concern within a 3-mile radius, and conversion to population (1.5 people per acre):

N/A

Total population served by ground water within a 3-mile radius:

None.

(Reference: #7)

Score = 0

SURFACE WATER ROUTE

1 OBSERVED RELEASE

Contaminants detected in surface water at the facility or downhill from it (5 maximum):

No release observed.
(Reference: Personal Communication)
Score = 0

Rationale for attributing the contaminants to the facility:

No known releases.

* * *

2 ROUTE CHARACTERISTICS

Facility Slope and Intervening Terrain

Average slope of facility in percent:

Range: 2% - 10%
(Reference: #7)
Average: 5% Score = 2

Name/description of nearest downslope surface water:

San Francisco Bay
(Reference: #7)

Average slope of terrain between facility and above-cited surface water body in percent:

Unknown

Is the facility located either totally or partially in surface water?

No
(Reference: #3)

Is the facility completely surrounded by areas of higher elevation?

No

(Reference: #3)

1-Year 24-Hour Rainfall in Inches

3 inches.

(Reference: #1) Score = 2

Distance to Nearest Downslope Surface Water

< 0.5 mile.

(Reference: #7) Score = 2

Physical State of Waste

Solid

(Reference: Personal Communication)

Score = 1

* * *

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

None

(Reference: Personal communication)

Method with highest score:

No containment Score = 3

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated

Unknown

Compound with highest score:

Unknown

Toxicity = 0 Persistence = 0

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

Unknown

Basis of estimating and/or computing waste quantity:

Unknown Score = 0

* * *

5 TARGETS

Surface Water Use

Use(s) of surface water within 3 miles downstream of the hazardous substance:

Uses of San Francisco Bay are manifold
but include: Boating/shipping
Fishing/
Swimming
Animal Habitat

Other than San Francisco Bay, surface water on Treasure Island and Yerba Buena Island is not used.

(Reference: #9) Score = 6

Is there tidal influence?

Yes
(Reference: #8)

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

> 2 miles Score = 0

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:

> 1 mile

Distance to critical habitat of an endangered species or national wildlife refuge, if 1 mile or less:

> 1 miles

Population Served by Surface Water

Location(s) of water-supply intake(s) within 3 miles (free-flowing bodies) or 1 mile (static water bodies) downstream of the hazardous substance and population served by each intake:

The site is surrounded on all sides by the Bay within 0.5 miles. Population served by the Bay is > 10,000. Surface water is not used on the island.

(Reference: #7) Score = 0

Computation of land area irrigated by above-cited intake(s) and conversion to population (1.5 people per acre):

0 acreage

Total population served:

>10,000
(Reference: #7)

Name/description of nearest of above water bodies:

San Francisco Bay.
(Reference: #7)

Distance to above-cited intakes, measured in stream miles.

<0.5 miles.
(Reference: #7) Score = 0

AIR ROUTE

1 OBSERVED RELEASE

Contaminants detected:

No data exists showing any releases of air contaminants.

(Reference: Personal communication) Score = 0

Date and location of detection of contaminants

Methods used to detect the contaminants:

Rationale for attributing the contaminants to the site:

* * *

2 WASTE CHARACTERISTICS

Reactivity and Incompatibility

Most reactive compound:

Most incompatible pair of compounds:

Toxicity

Most toxic compound:

Hazardous Waste Quantity

Total quantity of hazardous waste:

Basis of estimating and/or computing waste quantity:

* * *

3 TARGETS

Population Within 4-Mile Radius

Circle radius used, give population, and indicate how determined:

0 to 4 mi 0 to 1 mi 0 to 1/2 mi 0 to 1/4 mi

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:

Distance to critical habitat of an endangered species, if 1 mile or less:

Land Use

Distance to commercial/industrial area, if 1 mile or less:

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less:

Distance to residential area, if 2 miles or less:

Distance to agricultural land in production within past 5 years, if 1 mile or less:

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:

Is a historic or landmark site (National Register or Historic Places and National Natural Landmarks) within the view of the site?

FIRE AND EXPLOSION

1 CONTAINMENT

Hazardous substances present:

A fire marshall has not certified that the facility presents a significant threat.

Type of containment, if applicable:

* * *

2 WASTE CHARACTERISTICS

Direct Evidence

Type of instrument and measurements:

Ignitability

Compound used:

Reactivity

Most reactive compound:

Incompatibility

Most incompatible pair of compounds:

* * *

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility:

Basis of estimating and/or computing waste quantity:

* * *

3 TARGETS

Distance to Nearest Population

Distance to Nearest Building

Distance to Sensitive Environment

Distance to wetlands:

Distance to critical habitat:

Land Use

Distance to commercial/industrial area, if 1 mile or less:

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less:

Distance to residential area, if 2 miles or less:

Distance to agricultural land in production within past 5 years, if 1 mile or less:

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:

Is a historic or landmark site (National Register or Historic Places and National Natural Landmarks) within the view of the site?

Population Within 2-Mile Radius

Buildings Within 2-Mile Radius

DIRECT CONTACT

1 OBSERVED INCIDENT

Date, location, and pertinent details of incident:

No observed incident.

(Reference: Personal Communication)

* * *

Score = 0

2 ACCESSIBILITY

Describe type of barrier(s):

Area is accessible.

(Reference: Personal Communication)

* * *

Score = 3

3 CONTAINMENT

Type of containment, if applicable:

None.

(Reference: Personal Communication)

* * *

Score = 15

4 WASTE CHARACTERISTICS

Toxicity

Compounds evaluated:

Unknown.

Compound with highest score:

Unknown.

Score = 0

* * *

5 TARGETS

Population within one-mile radius

3,000

Score = 12

Distance to critical habitat (of endangered species)

>1 mile Score = 0

(Reference: Personal communication)

REFERENCES

If the entire reference is not available for public review in the EPA regional files on this site, indicate where the reference may be found:

Reference Number	Description of the Reference
1	**Uncontrolled Hazardous Waste Site Ranking System; A Users Manual.** **National Oil and Hazardous Substances Contingency Plan, Appendix A (40 CFR 300)(47 FR 31219), July 16, 1982.**
2	Preliminary Assessment/Site Inspection of Naval Station Treasure Island, CA. Naval Energy and Environmental Support Activity (NEESA), November 1987.
3	Dewatering Recommendations, Repair of Steam Distribution System, Contract N-62472-82-C-6384. Harding Lawson Associates, July 1, 1985.
4.	Environmental Impact Statement: Homeporting Battleship/Battle group/ Cruiser Destroyer Group. U.S. Department of the Navy. January 1987.
5.	Blake, Jr., M.C., Barton, J.A., Frizzell Jr., V.A., Schlocker, J., Sorg, D., Wentworth, C.M., and Wright, R.H., 1974. Preliminary Geologic Map of Marin and San Francisco Counties and Parts of Alameda, Contra Costa and Sonoma Counties, California, U.S. Geological Survey, Miscellaneous Field Studies Map MF 574.
6.	Radbruch, Dorothy H., 1957. Areal and Engineering Geology of the Oakland West Quadrangle, California, U.S. Geological Survey, Miscellaneous Geologic Investigations Map I-239.
7.	U.S. Navy, Western Division, Naval Facilities Engineering Command, 1986. Natural Resources Management Plan, Treasure Island Naval Station, San Francisco, California.
8.	McCreary-Koretsky Engineers. 1965. Soils and Foundation Investigations for Appropriated Fund Quarters at U.S. Naval Station, Treasure Island, San Francisco, California. A&E Contract No. NBy NBy-078. Report dated 11 January.
9.	California Regional Water Quality Control Board, San Francisco Bay Region, 1982, Water Quality Control Plan, San Francisco Bay Basin (2).
10.	NAVSHIPS/NAVSEL. 1972. Shipboard Oily Waste Generation Rates for Nine Port Complexes.

DOCUMENTATION RECORDS
FOR
HAZARD RANKING SYSTEM

INSTRUCTIONS: As briefly as possible summarize the information you used to assign the score for each factor (e.g., "Waste quantity = 4,230 drums plus 800 cubic yards of sludges"). The source of information should be provided for each entry and should be a bibliographic-type reference. Include the location of the document.

FACILITY NAME: Site 12 - Old Bunker Area

LOCATION: Naval Station (NAVSTA) Treasure Island

DATE SCORED: 1/8/88

PERSON SCORING: B.F. Aubry

PRIMARY SOURCE(S) OF INFORMATION (e.g., EPA region, state, FIT, etc.):

Personal Interviews
References Listed on Page 20.

FACTORS NOT SCORED DUE TO INSUFFICIENT INFORMATION:

Air, Fire and Explosion

COMMENTS OR QUALIFICATIONS: Fire and explosion not scored since fire hazard not certified by a fire marshall or field observation.

Encl (9)

GROUND WATER ROUTE

1 OBSERVED RELEASE

Contaminants detected (5 maximum):

No observed releases. No groundwater testing performed.

(Reference: Personal Communication)

Score = 0

Rationale for attributing the contaminants to the facility:

No observed releases.

* * *

2 ROUTE CHARACTERISTICS

Depth to Aquifer of Concern

Name/description of aquifers(s) of concern:

Groundwater is unusable due to high salinity.

(Reference: #3)

Depth(s) from the ground surface to the highest seasonal level of the saturated zone [water table(s)] of the aquifer of concern:

2 - 6 Feet.

(Reference: #3) Score = 3

Depth from the ground surface to the lowest point of waste disposal/ storage:

Unknown

Net Precipitation

Mean annual or seasonal precipitation (list months for seasonal):

25 - 30 inches.

(Reference: #1)

Mean annual lake or seasonal evaporation (list months for seasonal):

40 inches.

(Reference: #1)

Net precipitation (subtract the above figures):

-15 to -10 inches. Score = 0

Permeability of Unsaturated Zone

Soil type in unsaturated zone:

Treasure Island is a man-made island composed of reclaimed soil generally composed of poorly-graded fine sand with occasional lenses of silt and clay.

(Reference: #5 & #6)

Permeability associated with soil type:

10^{-3} to 10^{-4} cm/sec

(Reference: #3) Score = 2

Physical State

Physical state of substances at time of disposal (or at present time for generated gases):

Mostly unknown solids Score = 1

* * *

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

Landfill, no liner.

Method with highest score:

No containment Score = 3

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated:

Known material is debris/rubbish; chemical components are unknown.

(Reference: Personal communication)

Compound with highest score:

Unknown Score = 0

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

Unknown

Basis of estimating and/or computing waste quantity:

Unknown Score = 0

* * *

5 TARGETS

Ground Water Use

Use(s) of aquifer(s) of concern within a 3-mile radius of the facility:

Groundwater is not used within a 3-mile radius, and is not usable due to its high salinity.

(Reference: Personal communication)

Score = 0

Distance to Nearest Well

Location of nearest well drawing from aquifer of concern or occupied building not served by a public water supply:

Across San Francisco Bay, not on the island.

Score = 0

Distance to above well or building:

> 3 miles

Population Served by Ground Water Wells Within a 3-Mile Radius

Identified water-supply well(s) drawing from aquifer(s) of concern within a 3-mile radius and populations served by each:

No wells are present on Treasure or Yerba Buena Islands.

Computation of land area irrigated by supply well(s) drawing from aquifer(s) of concern within a 3-mile radius, and conversion to population (1.5 people per acre):

N/A

Total population served by ground water within a 3-mile radius:

None.

(Reference: #7)

Score = 0

SURFACE WATER ROUTE

1 OBSERVED RELEASE

Contaminants detected in surface water at the facility or downhill from it (5 maximum):

None; No testing to date

(Reference: Personal Communication) Score = 0

Rationale for attributing the contaminants to the facility:

No observed releases.

* * *

2 ROUTE CHARACTERISTICS

Facility Slope and Intervening Terrain

Average slope of facility in percent:

Range: 0 - 2%

Average: about 1%. Score = 0

(Reference: #7)

Name/description of nearest downslope surface water:

San Francisco Bay

(Reference: #7)

Average slope of terrain between facility and above-cited surface water body in percent:

1%

(Reference: #7)

Is the facility located either totally or partially in surface water?

No

(Reference: #3)

Is the facility completely surrounded by areas of higher elevation?

No

(Reference: #7)

1-Year 24-Hour Rainfall in Inches

3 inches.

(Reference: #1) Score = 2

Distance to Nearest Downslope Surface Water

$\angle$ 0.5 mile.

(Reference: #7) Score = 2

Physical State of Waste

Solid; during foundation excavations in area, debris including bottles, wire rope, steel drums, and loose rubbish was found. It is unknown whether or not liquids and/or powders exist.

(Reference: Personal Communication)

* * *

Score = 1

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

None; debris is buried underground

(Reference: Personal Communication)

Method with highest score:

No containment Score = 3

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated

known material is debris/rubbish; chemical components are unknown.

(Reference: Personal Communication)

Compound with highest score:

Unknown Score = 0

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

Unknown

Basis of estimating and/or computing waste quantity:

Score = 0

* * *

5 TARGETS

Surface Water Use

Use(s) of surface water within 3 miles downstream of the hazardous substance:

Uses of San Francisco Bay are manifold
but include: Boating/shipping
Fishing/
Swimming
Animal Habitat

Other than San Francisco Bay, surface water on Treasure Island and Yerba Buena Island is not used.

(Reference: #9) Score = 6

Is there tidal influence?

Yes
(Reference: #8)

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

> 2 miles Score = 0

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:

> 1 mile

Distance to critical habitat of an endangered species or national wildlife refuge, if 1 mile or less:

> 1 miles

Population Served by Surface Water

Location(s) of water-supply intake(s) within 3 miles (free-flowing bodies) or 1 mile (static water bodies) downstream of the hazardous substance and population served by each intake:

The site is surrounded on all sides by the Bay within 0.5 miles. Population served by the Bay is > 10,000. Surface water is not used on the island.

(Reference: #7) Score = 0

Computation of land area irrigated by above-cited intake(s) and conversion to population (1.5 people per acre):

0 acreage

Total population served:

>10,000
(Reference: #7)

Name/description of nearest of above water bodies:

San Francisco Bay.
(Reference: #7)

Distance to above-cited intakes, measured in stream miles.

<0.5 miles.
(Reference: #7) Score = 0

1 OBSERVED RELEASE

Contaminants detected:

No data exists showing any releases of air contaminants.

(Reference: Personal communication) Score = 0

Date and location of detection of contaminants

Methods used to detect the contaminants:

Rationale for attributing the contaminants to the site:

* * *

2 WASTE CHARACTERISTICS

Reactivity and Incompatibility

Most reactive compound:

Most incompatible pair of compounds:

Toxicity

Most toxic compound:

Hazardous Waste Quantity

Total quantity of hazardous waste:

Basis of estimating and/or computing waste quantity:

* * *

3 TARGETS

Population Within 4-Mile Radius

Circle radius used, give population, and indicate how determined:

0 to 4 mi 0 to 1 mi 0 to 1/2 mi 0 to 1/4 mi

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:

Distance to critical habitat of an endangered species, if 1 mile or less:

Land Use

Distance to commercial/industrial area, if 1 mile or less:

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less:

Distance to residential area, if 2 miles or less:

Distance to agricultural land in production within past 5 years, if 1 mile or less:

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:

Is a historic or landmark site (National Register or Historic Places and National Natural Landmarks) within the view of the site?

FIRE AND EXPLOSION

1 CONTAINMENT

Hazardous substances present:

A fire marshall has not certified that the facility presents a significant threat.

Type of containment, if applicable:

* * *

2 WASTE CHARACTERISTICS

Direct Evidence

Type of instrument and measurements:

Ignitability

Compound used:

Reactivity

Most reactive compound:

Incompatibility

Most incompatible pair of compounds:

* * *

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility:

Basis of estimating and/or computing waste quantity:

* * *

3 TARGETS

Distance to Nearest Population

Distance to Nearest Building

Distance to Sensitive Environment

Distance to wetlands:

Distance to critical habitat:

Land Use

Distance to commercial/industrial area, if 1 mile or less:

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less:

Distance to residential area, if 2 miles or less:

Distance to agricultural land in production within past 5 years, if 1 mile or less:

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:

Is a historic or landmark site (National Register or Historic Places and National Natural Landmarks) within the view of the site?

Population Within 2-Mile Radius

Buildings Within 2-Mile Radius

DIRECT CONTACT

1 OBSERVED INCIDENT

Date, location, and pertinent details of incident:

No observed incident.

(Reference: Personal Communication)

* * *

Score = 0

2 ACCESSIBILITY

Describe type of barrier(s):

A cap of soil covers the material

(Reference: Personal Communication)

* * *

Score = 2

3 CONTAINMENT

Type of containment, if applicable:

None ; material is buried

(Reference: Personal Communication)

* * *

Score = 15

4 WASTE CHARACTERISTICS

Toxicity

Compounds evaluated:

Unknown.

Compound with highest score:

Unknown

Score = 0

* * *

5 TARGETS

Population within one-mile radius

3,000

Score = 12

Distance to critical habitat (of endangered species)

>1 mile Score = 0

(Reference: Personal communication)

REFERENCES

If the entire reference is not available for public review in the EPA regional files on this site, indicate where the reference may be found:

Reference Number	Description of the Reference
1	**Uncontrolled Hazardous Waste Site Ranking System; A Users Manual.** **National Oil and Hazardous Substances Contingency Plan, Appendix A (40 CFR 300)(47 FR 31219), July 16, 1982.**
2	Preliminary Assessment/Site Inspection of Naval Station Treasure Island, CA. Naval Energy and Environmental Support Activity (NEESA), November 1987.
3	Dewatering Recommendations, Repair of Steam Distribution System, Contract N-62472-82-C-6384. Harding Lawson Associates, July 1, 1985.
4.	Environmental Impact Statement: Homeporting Battleship/Battle group/ Cruiser Destroyer Group. U.S. Department of the Navy. January 1987.
5.	Blake, Jr., M.C., Barton, J.A., Frizzell Jr., V.A., Schlocker, J., Sorg, D., Wentworth, C.M., and Wright, R.H., 1974. Preliminary Geologic Map of Marin and San Francisco Counties and Parts of Alameda, Contra Costa and Sonoma Counties, California, U.S. Geological Survey, Miscellaneous Field Studies Map MF 574.
6.	Radbruch, Dorothy H., 1957. Areal and Engineering Geology of the Oakland West Quadrangle, California, U.S. Geological Survey, Miscellaneous Geologic Investigations Map I-239.
7.	U.S. Navy, Western Division, Naval Facilities Engineering Command, 1986. Natural Resources Management Plan, Treasure Island Naval Station, San Francisco, California.
8.	McCreary-Koretsky Engineers. 1965. Soils and Foundation Investigations for Appropriated Fund Quarters at U.S. Naval Station, Treasure Island, San Francisco, California. A&E Contract No. NBy NBy-078. Report dated 11 January.
9.	California Regional Water Quality Control Board, San Francisco Bay Region, 1982, Water Quality Control Plan, San Francisco Bay Basin (2).
10.	NAVSHIPS/NAVSEL. 1972. Shipboard Oily Waste Generation Rates for Nine Port Complexes.

DOCUMENTATION RECORDS
FOR
HAZARD RANKING SYSTEM

INSTRUCTIONS: As briefly as possible summarize the information you used to assign the score for each factor (e.g., "Waste quantity = 4,230 drums plus 800 cubic yards of sludges"). The source of information should be provided for each entry and should be a bibliographic-type reference. Include the location of the document.

Site 13 - Stormwater Outfalls.

FACILITY NAME: _____

LOCATION: Naval Station (NAVSTA) Treasure Island

DATE SCORED: 1/8/88

PERSON SCORING: B.F. Aubry

PRIMARY SOURCE(S) OF INFORMATION (e.g., EPA region, state, FIT, etc.):

Personal Interviews
References Listed on Page 20.

FACTORS NOT SCORED DUE TO INSUFFICIENT INFORMATION:

Air, Fire and Explosion

COMMENTS OR QUALIFICATIONS: Fire and explosion not scored since fire hazard not certified by a fire marshall or field observation.

Encl (4)

GROUND WATER ROUTE

1 OBSERVED RELEASE

Contaminants detected (5 maximum):

No observed releases. No groundwater testing performed.

(Reference: Personal Communication)

Score = 0

Rationale for attributing the contaminants to the facility:

No observed releases

* * *

2 ROUTE CHARACTERISTICS

Depth to Aquifer of Concern

Name/description of aquifers(s) of concern:

Groundwater is unusable due to high salinity.

(Reference: #3)

Depth(s) from the ground surface to the highest seasonal level of the saturated zone [water table(s)] of the aquifer of concern:

2 - 6 Feet on Treasure Island.

(Reference: #3) Score = 3

Depth from the ground surface to the lowest point of waste disposal/ storage:

Unknown.

Net Precipitation

Mean annual or seasonal precipitation (list months for seasonal):

25 - 30 inches.

(Reference: #1)

Mean annual lake or seasonal evaporation (list months for seasonal):

40 inches.

(Reference: #1)

Net precipitation (subtract the above figures):

-15 to -10 inches. Score = 0

Permeability of Unsaturated Zone

Soil type in unsaturated zone:

Treasure Island is a man-made island composed of reclaimed soil generally composed of poorly-graded fine sand with occasional lenses of silt and clay.
(Reference: #5 & #6)

Permeability associated with soil type:

10^{-3} to 10^{-4} cm/sec on Treasure Island.
(Reference: #3) Score = 2

Physical State

Physical state of substances at time of disposal (or at present time for generated gases):

liquid

(Reference: Personal Communication)

Score = 3

* * *

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

None
(Reference: Personal Communication)

Method with highest score:

No containment Score = 3

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated:

Misc. Hydrocarbons
Misc. Solvents
Misc. Paints
Misc. Thinners
Misc. Pesticides
Misc. Herbicides
Misc. Acids
Misc. Bases
Misc. Metals

(Reference: Personal Communication)

Compound with highest score:

Pesticides
(Reference: #1)
Toxicity = 3 Persistence = 3

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

Unknown

Basis of estimating and/or computing waste quantity:

Unknown Score = 0

* * *

5 TARGETS

Ground Water Use

Use(s) of aquifer(s) of concern within a 3-mile radius of the facility:

Groundwater is not used within a 3-mile radius, and is not usable due to its high salinity.

(Reference: Personal communication)

Score = 0

Distance to Nearest Well

Location of nearest well drawing from aquifer of concern or occupied building not served by a public water supply:

Across San Francisco Bay, not on the island.

Score = 0

Distance to above well or building:

> 3 miles

Population Served by Ground Water Wells Within a 3-Mile Radius

Identified water-supply well(s) drawing from aquifer(s) of concern within a 3-mile radius and populations served by each:

No wells are present on Treasure or Yerba Buena Islands.

Computation of land area irrigated by supply well(s) drawing from aquifer(s) of concern within a 3-mile radius, and conversion to population (1.5 people per acre):

N/A

Total population served by ground water within a 3-mile radius:

None.

(Reference: #7)

Score = 0

SURFACE WATER ROUTE

1 OBSERVED RELEASE

Contaminants detected in surface water at the facility or downhill from it (5 maximum):

Known releases to the Bay, but no chemical tests performed.

(Reference: Personal Communication)

Score = 0

Rationale for attributing the contaminants to the facility:

Stormwater sewer discharges to Bay.

(Reference: Personal Communication)

* * *

2 ROUTE CHARACTERISTICS

<u>Facility Slope and Intervening Terrain</u>

Average slope of facility in percent:

Range: 0 - 2%

Average: about 1%. Score = 0

(Reference: #7)

Name/description of nearest downslope surface water:

San Francisco Bay

(Reference: #7)

Average slope of terrain between facility and above-cited surface water body in percent:

1%

(Reference: #7)

Is the facility located either totally or partially in surface water?

No

(Reference: #3)

Is the facility completely surrounded by areas of higher elevation?

No

(Reference: #3)

1-Year 24-Hour Rainfall in Inches

3 inches.

(Reference: #1) Score = 2

Distance to Nearest Downslope Surface Water

< 0.5 mile.

(Reference: #7) Score = 2

Physical State of Waste

liquid

(Reference: Personal Communication)

* * *

Score = 3

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

None
(Reference: Personal communication)

Method with highest score:

No containment Score = 3

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated

Misc. Hydrocarbons
Misc. Solvents
Misc. Paints
Misc Thinners
Misc. Pesticides
Misc. Herbicides
Misc. Acids
Misc. Bases
Misc. Metals

(Reference: Personal communication)

Compound with highest score:

Pesticides
(Reference: #1)

Toxicity = 3 Persistence = 3

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

Unknown

Basis of estimating and/or computing waste quantity:

Unknown Score = 0

* * *

5 TARGETS

Surface Water Use

Use(s) of surface water within 3 miles downstream of the hazardous substance:

Uses of San Francisco Bay are manifold but include: Boating/shipping
Fishing/
Swimming
Animal Habitat

Other than San Francisco Bay, surface water on Treasure Island and Yerba Buena Island is not used.

(Reference: #9) Score = 6

Is there tidal influence?

Yes
(Reference: #8)

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

>2 miles Score = 0

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:

>1 mile

Distance to critical habitat of an endangered species or national wildlife refuge, if 1 mile or less:

>1 miles

Population Served by Surface Water

Location(s) of water-supply intake(s) within 3 miles (free-flowing bodies) or 1 mile (static water bodies) downstream of the hazardous substance and population served by each intake:

The site is surrounded on all sides by the Bay within 0.5 miles. Population served by the Bay is > 10,000. Surface water is not used on the island.

(Reference: #7) Score = 0

Computation of land area irrigated by above-cited intake(s) and conversion to population (1.5 people per acre):

0 acreage

Total population served:

>10,000
(Reference: #7)

Name/description of nearest of above water bodies:

San Francisco Bay.
(Reference: #7)

Distance to above-cited intakes, measured in stream miles.

<0.5 miles.
(Reference: #7) Score = 0

1 OBSERVED RELEASE

Contaminants detected:

No data exists showing any releases of air contaminants.

(Reference: Personal communication) Score = 0

Date and location of detection of contaminants

Methods used to detect the contaminants:

Rationale for attributing the contaminants to the site:

* * *

2 WASTE CHARACTERISTICS

Reactivity and Incompatibility

Most reactive compound:

Most incompatible pair of compounds:

Toxicity

Most toxic compound:

Hazardous Waste Quantity

Total quantity of hazardous waste:

Basis of estimating and/or computing waste quantity:

* * *

3 TARGETS

Population Within 4-Mile Radius

Circle radius used, give population, and indicate how determined:

0 to 4 mi 0 to 1 mi 0 to 1/2 mi 0 to 1/4 mi

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:

Distance to critical habitat of an endangered species, if 1 mile or less:

Land Use

Distance to commercial/industrial area, if 1 mile or less:

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less:

Distance to residential area, if 2 miles or less:

Distance to agricultural land in production within past 5 years, if 1 mile or less:

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:

Is a historic or landmark site (National Register or Historic Places and National Natural Landmarks) within the view of the site?

1 CONTAINMENT

Hazardous substances present:

A fire marshall has not certified that the facility presents a significant threat.

Type of containment, if applicable:

* * *

2 WASTE CHARACTERISTICS

Direct Evidence

Type of instrument and measurements:

Ignitability

Compound used:

Reactivity

Most reactive compound:

Incompatibility

Most incompatible pair of compounds:

* * *

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility:

Basis of estimating and/or computing waste quantity:

* * *

3 TARGETS

Distance to Nearest Population

Distance to Nearest Building

Distance to Sensitive Environment

Distance to wetlands:

Distance to critical habitat:

Land Use

Distance to commercial/industrial area, if 1 mile or less:

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less:

Distance to residential area, if 2 miles or less:

Distance to agricultural land in production within past 5 years, if 1 mile or less:

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:

Is a historic or landmark site (National Register or Historic Places and National Natural Landmarks) within the view of the site?

Population Within 2-Mile Radius

Buildings Within 2-Mile Radius

DIRECT CONTACT

1 OBSERVED INCIDENT

Date, location, and pertinent details of incident:

No observed incident.
(Reference: Personal communication)

* * *

Score = 0

2 ACCESSIBILITY

Describe type of barrier(s):

No barriers preventing access, however dilution by the waters of the bay would render direct contact effects to be minimal. Direct contact by marine life could occur.

* * *

(Reference: Personal communication)

Score = 2

3 CONTAINMENT

Type of containment, if applicable:

None

(Reference: Personal communication)

Score = 15

* * *

4 WASTE CHARACTERISTICS

<u>Toxicity</u>

Compounds evaluated:

Miscellaneous hydrocarbons, solvents, paints, thinners, pesticides, herbicides, acids, bases, metals.
(Reference: Personal Communication)

Compound with highest score:

Pesticides (among others)
(Reference: #1)

* * *

Score = 15

5 TARGETS

Population within one-mile radius

3,000

Score = 12

Distance to critical habitat (of endangered species)

>1 mile Score = 0

(Reference: Personal communication)

REFERENCES

If the entire reference is not available for public review in the EPA regional files on this site, indicate where the reference may be found:

Reference Number	Description of the Reference
1	**Uncontrolled Hazardous Waste Site Ranking System; A Users Manual.** **National Oil and Hazardous Substances Contingency Plan, Appendix A (40 CFR 300)(47 FR 31219), July 16, 1982.**
2	Preliminary Assessment/Site Inspection of Naval Station Treasure Island, CA. Naval Energy and Environmental Support Activity (NEESA), November 1987.
3	Dewatering Recommendations, Repair of Steam Distribution System, Contract N-62472-82-C-6384. Harding Lawson Associates, July 1, 1985.
4.	Environmental Impact Statement: Homeporting Battleship/Battle group/ Cruiser Destroyer Group. U.S. Department of the Navy. January 1987.
5.	Blake, Jr., M.C., Barton, J.A., Frizzell Jr., V.A., Schlocker, J., Sorg, D., Wentworth, C.M., and Wright, R.H., 1974. Preliminary Geologic Map of Marin and San Francisco Counties and Parts of Alameda, Contra Costa and Sonoma Counties, California, U.S. Geological Survey, Miscellaneous Field Studies Map MF 574.
6.	Radbruch, Dorothy H., 1957. Areal and Engineering Geology of the Oakland West Quadrangle, California, U.S. Geological Survey, Miscellaneous Geologic Investigations Map I-239.
7.	U.S. Navy, Western Division, Naval Facilities Engineering Command, 1986. Natural Resources Management Plan, Treasure Island Naval Station, San Francisco, California.
8.	McCreary-Koretsky Engineers. 1965. Soils and Foundation Investigations for Appropriated Fund Quarters at U.S. Naval Station, Treasure Island, San Francisco, California. A&E Contract No. NBy NBy-078. Report dated 11 January.
9.	California Regional Water Quality Control Board, San Francisco Bay Region, 1982, Water Quality Control Plan, San Francisco Bay Basin (2).
10.	NAVSHIPS/NAVSEL. 1972. Shipboard Oily Waste Generation Rates for Nine Port Complexes.

DOCUMENTATION RECORDS
FOR
HAZARD RANKING SYSTEM

INSTRUCTIONS: As briefly as possible summarize the information you used to assign the score for each factor (e.g., "Waste quantity = 4,230 drums plus 800 cubic yards of sludges"). The source of information should be provided for each entry and should be a bibliographic-type reference. Include the location of the document.

FACILITY NAME: Site 15 - Old Fuel Farm

LOCATION: Naval Station (NAVSTA) Treasure Island

DATE SCORED: 1/8/88

PERSON SCORING: B.F. Aubry

PRIMARY SOURCE(S) OF INFORMATION (e.g., EPA region, state, FIT, etc.):

Personal Interviews
References Listed on Page 20.

FACTORS NOT SCORED DUE TO INSUFFICIENT INFORMATION:

Air, Fire and Explosion

COMMENTS OR QUALIFICATIONS: Fire and explosion not scored since fire hazard not certified by a fire marshall or field observation.

Encl (4)

GROUND WATER ROUTE

1 OBSERVED RELEASE

Contaminants detected (5 maximum):

No observed releases. No groundwater testing performed.

(Reference: Personal Communication)
Score = 0

Rationale for attributing the contaminants to the facility:

No observed releases.

* * *

2 ROUTE CHARACTERISTICS

Depth to Aquifer of Concern

Name/description of aquifers(s) of concern:

Groundwater is unusable due to high salinity.

(Reference: #3)

Depth(s) from the ground surface to the highest seasonal level of the saturated zone [water table(s)] of the aquifer of concern:

2 - 6 Feet.

(Reference: #3) Score = 3

Depth from the ground surface to the lowest point of waste disposal/ storage:

Unknown

Net Precipitation

Mean annual or seasonal precipitation (list months for seasonal):

25 - 30 inches.

(Reference: #1)

Mean annual lake or seasonal evaporation (list months for seasonal):

40 inches.

(Reference: #1)

Net precipitation (subtract the above figures):

-15 to -10 inches. Score = 0

Permeability of Unsaturated Zone

Soil type in unsaturated zone:

Treasure Island is a man-made island composed of reclaimed soil generally composed of poorly-graded fine sand with occasional lenses of silt and clay.

(Reference: #5 & #6)

Permeability associated with soil type:

10^{-3} to 10^{-4} cm/sec

(Reference: #3) Score = 2

Physical State

Physical state of substances at time of disposal (or at present time for generated gases):

Liquid

(Reference: Personal Communication)

Score = 3

* * *

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

Waste is present in soils;
No other containment.

(Reference: Personal Communication)

Method with highest score:

No containment Score = 3

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated:

Petroleum Hydrocarbon

(Reference: Personal Communication)

Compound with highest score:

Petroleum Hydrocarbon

Toxicity = 3 Persistence = 1

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

Unknown

Basis of estimating and/or computing waste quantity:

Unknown Score = 0

* * *

5 TARGETS

Ground Water Use

Use(s) of aquifer(s) of concern within a 3-mile radius of the facility:

Groundwater is not used within a 3-mile radius, and is not usable due to its high salinity.

(Reference: Personal communication)

Score = 0

Distance to Nearest Well

Location of nearest well drawing from aquifer of concern or occupied building not served by a public water supply:

Across San Francisco Bay, not on the island.

Score = 0

Distance to above well or building:

> 3 miles

Population Served by Ground Water Wells Within a 3-Mile Radius

Identified water-supply well(s) drawing from aquifer(s) of concern within a 3-mile radius and populations served by each:

No wells are present on Treasure or Yerba Buena Islands.

Computation of land area irrigated by supply well(s) drawing from aquifer(s) of concern within a 3-mile radius, and conversion to population (1.5 people per acre):

N/A

Total population served by ground water within a 3-mile radius:

None.

(Reference: #7)

Score = 0

SURFACE WATER ROUTE

1 OBSERVED RELEASE

Contaminants detected in surface water at the facility or downhill from it (5 maximum):

No observed release. Score = 0
(Reference: Personal Communication)

Rationale for attributing the contaminants to the facility:

No observed release.

* * *

2 ROUTE CHARACTERISTICS

Facility Slope and Intervening Terrain

Average slope of facility in percent:

Range: 0 - 2%

Average: about 1%. Score = 0

(Reference: #7)

Name/description of nearest downslope surface water:

San Francisco Bay

(Reference: #7)

Average slope of terrain between facility and above-cited surface water body in percent:

1%

(Reference: #7)

Is the facility located either totally or partially in surface water?

No

(Reference: #3)

Is the facility completely surrounded by areas of higher elevation?

No

(Reference: #3) Score = 2

1-Year 24-Hour Rainfall in Inches

3 inches.

(Reference: #1) Score = 2

Distance to Nearest Downslope Surface Water

$\leq$ 0.5 mile.

(Reference: #7) Score = 2

Physical State of Waste

Liquid

(Reference: Personal Communication)

* * *

Score = 3

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

Waste is present in soils;
no containment.

Method with highest score:

No containment Score = 3

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated

Pertroleum Hydrocarbons
(Reference: Personal communication)

Compound with highest score:

Petroleum Hydrocarbon

Toxicity = 3 Persistence = 1

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

Unknown

Basis of estimating and/or computing waste quantity:

Unknown Score = 0

* * *

5 TARGETS

Surface Water Use

Use(s) of surface water within 3 miles downstream of the hazardous substance:

Uses of San Francisco Bay are manifold
but include: Boating/shipping
Fishing/
Swimming
Animal Habitat

Other than San Francisco Bay, surface water on Treasure Island and Yerba Buena Island is not used.
(Reference: #9) Score = 6

Is there tidal influence?

Yes
(Reference: #8)

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

> 2 miles Score = 0

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:

> 1 mile

Distance to critical habitat of an endangered species or national wildlife refuge, if 1 mile or less:

> 1 miles

Population Served by Surface Water

Location(s) of water-supply intake(s) within 3 miles (free-flowing bodies) or 1 mile (static water bodies) downstream of the hazardous substance and population served by each intake:

The site is surrounded on all sides by the Bay within 0.5 miles. Population served by the Bay is > 10,000. Surface water is not used on the island.

(Reference: #7) Score = 0

Computation of land area irrigated by above-cited intake(s) and conversion to population (1.5 people per acre):

0 acreage

Total population served:

>10,000
(Reference: #7)

Name/description of nearest of above water bodies:

San Francisco Bay.
(Reference: #7)

Distance to above-cited intakes, measured in stream miles.

<0.5 miles.
(Reference: #7) Score = 0

AIR ROUTE

1 OBSERVED RELEASE

Contaminants detected:

No data exists showing any releases of air contaminants.

(Reference: Personal communication) Score = 0

Date and location of detection of contaminants

Methods used to detect the contaminants:

Rationale for attributing the contaminants to the site:

* * *

2 WASTE CHARACTERISTICS

Reactivity and Incompatibility

Most reactive compound:

Most incompatible pair of compounds:

Toxicity

Most toxic compound:

Hazardous Waste Quantity

Total quantity of hazardous waste:

Basis of estimating and/or computing waste quantity:

* * *

3 TARGETS

Population Within 4-Mile Radius

Circle radius used, give population, and indicate how determined:

0 to 4 mi 0 to 1 mi 0 to 1/2 mi 0 to 1/4 mi

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:

Distance to critical habitat of an endangered species, if 1 mile or less:

Land Use

Distance to commercial/industrial area, if 1 mile or less:

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less:

Distance to residential area, if 2 miles or less:

Distance to agricultural land in production within past 5 years, if 1 mile or less:

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:

Is a historic or landmark site (National Register or Historic Places and National Natural Landmarks) within the view of the site?

FIRE AND EXPLOSION

1 CONTAINMENT

Hazardous substances present:

A fire marshall has not certified that the facility presents a significant threat.

Type of containment, if applicable:

* * *

2 WASTE CHARACTERISTICS

Direct Evidence

Type of instrument and measurements:

Ignitability

Compound used:

Reactivity

Most reactive compound:

Incompatibility

Most incompatible pair of compounds:

* * *

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility:

Basis of estimating and/or computing waste quantity:

* * *

3 TARGETS

Distance to Nearest Population

Distance to Nearest Building

Distance to Sensitive Environment

Distance to wetlands:

Distance to critical habitat:

Land Use

Distance to commercial/industrial area, if 1 mile or less:

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less:

Distance to residential area, if 2 miles or less:

Distance to agricultural land in production within past 5 years, if 1 mile or less:

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:

Is a historic or landmark site (National Register or Historic Places and National Natural Landmarks) within the view of the site?

Population Within 2-Mile Radius

Buildings Within 2-Mile Radius

DIRECT CONTACT

1 OBSERVED INCIDENT

Date, location, and pertinent details of incident:

No observed incident.

(Reference: Personal Communication)

* * *

Score = 0

2 ACCESSIBILITY

Describe type of barrier(s):

Contaminated soil is buried.

(Reference: Personal Communication)

* * *

Score = 2

3 CONTAINMENT

Type of containment, if applicable:

Within subsurface material.

(Reference: Personal Communication)

Score = 15

* * *

4 WASTE CHARACTERISTICS

<u>Toxicity</u>

Compounds evaluated:

Petroleum Hydrocarbon

(Reference: Personal Communication)

Score = 15

Compound with highest score:

Petroleum Hydrocarbon

* * *

5 TARGETS

Population within one-mile radius

3,000

Score = 12

Distance to critical habitat (of endangered species)

>1 mile Score = 0

(Reference: Personal communication)

REFERENCES

If the entire reference is not available for public review in the EPA regional files on this site, indicate where the reference may be found:

Reference Number	Description of the Reference
1	**Uncontrolled Hazardous Waste Site Ranking System; A Users Manual.** **National Oil and Hazardous Substances Contingency Plan, Appendix A (40 CFR 300)(47 FR 31219), July 16, 1982.**
2	Preliminary Assessment/Site Inspection of Naval Station Treasure Island, CA. Naval Energy and Environmental Support Activity (NEESA), November 1987.
3	Dewatering Recommendations, Repair of Steam Distribution System, Contract N-62472-82-C-6384. Harding Lawson Associates, July 1, 1985.
4.	Environmental Impact Statement: Homeporting Battleship/Battle group/ Cruiser Destroyer Group. U.S. Department of the Navy. January 1987.
5.	Blake, Jr., M.C., Barton, J.A., Frizzell Jr., V.A., Schlocker, J., Sorg, D., Wentworth, C.M., and Wright, R.H., 1974. Preliminary Geologic Map of Marin and San Francisco Counties and Parts of Alameda, Contra Costa and Sonoma Counties, California, U.S. Geological Survey, Miscellaneous Field Studies Map MF 574.
6.	Radbruch, Dorothy H., 1957. Areal and Engineering Geology of the Oakland West Quadrangle, California, U.S. Geological Survey, Miscellaneous Geologic Investigations Map I-239.
7.	U.S. Navy, Western Division, Naval Facilities Engineering Command, 1986. Natural Resources Management Plan, Treasure Island Naval Station, San Francisco, California.
8.	McCreary-Koretsky Engineers. 1965. Soils and Foundation Investigations for Appropriated Fund Quarters at U.S. Naval Station, Treasure Island, San Francisco, California. A&E Contract No. NBy NBy-078. Report dated 11 January.
9.	California Regional Water Quality Control Board, San Francisco Bay Region, 1982, Water Quality Control Plan, San Francisco Bay Basin (2).
10.	NAVSHIPS/NAVSEL. 1972. Shipboard Oily Waste Generation Rates for Nine Port Complexes.

DOCUMENTATION RECORDS
FOR
HAZARD RANKING SYSTEM

INSTRUCTIONS: As briefly as possible summarize the information you used to assign the score for each factor (e.g., "Waste quantity = 4,230 drums plus 800 cubic yards of sludges"). The source of information should be provided for each entry and should be a bibliographic-type reference. Include the location of the document.

FACILITY NAME: Site 16 - Clipper Cove Tank Farm

LOCATION: Yerba Buena Island

DATE SCORED: 1/8/88

PERSON SCORING: B.F. Aubry

PRIMARY SOURCE(S) OF INFORMATION (e.g., EPA region, state, FIT, etc.):

Personal Interviews
References Listed on Page 20.

FACTORS NOT SCORED DUE TO INSUFFICIENT INFORMATION:

Air, Fire and Explosion

COMMENTS OR QUALIFICATIONS: Fire and explosion not scored since fire hazard not certified by a fire marshall or field observation.

Encl (4)

GROUND WATER ROUTE

1 OBSERVED RELEASE

Contaminants detected (5 maximum):

No observed releases. No groundwater testing performed.

(Reference: Personal Communication)

Score = 0

Rationale for attributing the contaminants to the facility:

No observed releases.

* * *

2 ROUTE CHARACTERISTICS

Depth to Aquifer of Concern

Name/description of aquifers(s) of concern:

Groundwater is probably unuseable due to high salinity.
(Reference #3)

Depth(s) from the ground surface to the highest seasonal level of the saturated zone [water table(s)] of the aquifer of concern:

Unknown. Score = 0

Depth from the ground surface to the lowest point of waste disposal/ storage:

Unknown

Net Precipitation

Mean annual or seasonal precipitation (list months for seasonal):

25 - 30 inches.

(Reference: #1)

Mean annual lake or seasonal evaporation (list months for seasonal):

40 inches.

(Reference: #1)

Net precipitation (subtract the above figures):

-15 to -10 inches. Score = 0

Permeability of Unsaturated Zone

Soil type in unsaturated zone:

Yerba Buena Island is a natural island consisting of a thin soil covering sandstone and shale bedrock of the Franciscan Formation. The soil varies in thickness from 10 to 40 inches and usually consists of clayey silty sands. The soils are subject to land slides. (Reference #5)

Permeability associated with soil type:

10^{-3} to 10^{-4} cm/sec
(Reference: #3) Score = 2

Physical State

Physical state of substances at time of disposal (or at present time for generated gases):

Sludge and Liquid
(Reference: Personal Communication)
Score = 3

* * *

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

Waste left on surface soils

(Reference: Personal Communication)

Method with highest score:

No containment Score = 3

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated:

Petroleum Hydrocarbons
Lead (Reference: Personal Communication)

Compound with highest score:

Lead

Toxicity = 3 Persistence = 3

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

Unknown

Basis of estimating and/or computing waste quantity:

Unknown Score = 0

* * *

5 TARGETS

Ground Water Use

Use(s) of aquifer(s) of concern within a 3-mile radius of the facility:

Groundwater is not used within a 3-mile radius, and is not usable due to its high salinity.

(Reference: Personal communication)

Score = 0

Distance to Nearest Well

Location of nearest well drawing from aquifer of concern or occupied building not served by a public water supply:

Across San Francisco Bay, not on the island.

Score = 0

Distance to above well or building:

> 3 miles

Population Served by Ground Water Wells Within a 3-Mile Radius

Identified water-supply well(s) drawing from aquifer(s) of concern within a 3-mile radius and populations served by each:

No wells are present on Treasure or Yerba Buena Islands.

Computation of land area irrigated by supply well(s) drawing from aquifer(s) of concern within a 3-mile radius, and conversion to population (1.5 people per acre):

N/A

Total population served by ground water within a 3-mile radius:

None.

(Reference: #7)

Score = 0

SURFACE WATER ROUTE

1 OBSERVED RELEASE

Contaminants detected in surface water at the facility or downhill from it (5 maximum):

Reports indicate that liquid and sludge material was released to the bay on several occasions. Nothing has been detected. Score = 0

(Reference: Personal Communication)

Rationale for attributing the contaminants to the facility:

Personnel Communication

* * *

2 ROUTE CHARACTERISTICS

Facility Slope and Intervening Terrain

Average slope of facility in percent:

Average: 2% Score = 0

(Reference: #7)

Name/description of nearest downslope surface water:

San Francisco Bay

(Reference: #7)

Average slope of terrain between facility and above-cited surface water body in percent:

Unknown.

Is the facility located either totally or partially in surface water?

No

(Reference: #3)

Is the facility completely surrounded by areas of higher elevation?

No

(Reference: #3)

1-Year 24-Hour Rainfall in Inches

3 inches.

(Reference: #1) Score = 2

Distance to Nearest Downslope Surface Water

$\leq$ 0.5 mile.

(Reference: #7) Score = 2

Physical State of Waste

Liquid
Sludge

Score = 3

(Reference: Personal Communication)

* * *

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

Waste left on surface soils. (Reference: Personal Communication)

Method with highest score:

No containment Score = 3

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated

Petroleum Hydrocarbons (Reference: Personal Communications)
Lead

Compound with highest score:

Lead

Toxicity = 3 Persistence = 3

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

Unknown

Basis of estimating and/or computing waste quantity:

Unknown Score = 0

* * *

5 TARGETS

Surface Water Use

Use(s) of surface water within 3 miles downstream of the hazardous substance:

Uses of San Francisco Bay are manifold
but include: Boating/shipping
Fishing/
Swimming
Animal Habitat

Other than San Francisco Bay, surface water on Treasure Island and Yerba Buena Island is not used.
(Reference: #9)

Score = 6

Is there tidal influence?

Yes
(Reference: #8)

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

>2 miles Score = 0

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:

>1 mile

Distance to critical habitat of an endangered species or national wildlife refuge, if 1 mile or less:

>1 miles

Population Served by Surface Water

Location(s) of water-supply intake(s) within 3 miles (free-flowing bodies) or 1 mile (static water bodies) downstream of the hazardous substance and population served by each intake:

The site is surrounded on all sides by the Bay within 0.5 miles. Population served by the Bay is > 10.000. Surface water is not used on the island.

(Reference: #7) Score = 0

Computation of land area irrigated by above-cited intake(s) and conversion to population (1.5 people per acre):

0 acreage

Total population served:

>10,000
(Reference: #7)

Name/description of nearest of above water bodies:

San Francisco Bay.
(Reference: #7)

Distance to above-cited intakes, measured in stream miles.

<0.5 miles.
(Reference: #7) Score = 0

AIR ROUTE

1 OBSERVED RELEASE

Contaminants detected:

No data exists showing any releases of air contaminants.

(Reference: Personal communication) Score = 0

Date and location of detection of contaminants

Methods used to detect the contaminants:

Rationale for attributing the contaminants to the site:

* * *

2 WASTE CHARACTERISTICS

Reactivity and Incompatibility

Most reactive compound:

Most incompatible pair of compounds:

Toxicity

Most toxic compound:

Hazardous Waste Quantity

Total quantity of hazardous waste:

Basis of estimating and/or computing waste quantity:

* * *

3 TARGETS

Population Within 4-Mile Radius

Circle radius used, give population, and indicate how determined:

0 to 4 mi 0 to 1 mi 0 to 1/2 mi 0 to 1/4 mi

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:

Distance to critical habitat of an endangered species, if 1 mile or less:

Land Use

Distance to commercial/industrial area, if 1 mile or less:

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less:

Distance to residential area, if 2 miles or less:

Distance to agricultural land in production within past 5 years, if 1 mile or less:

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:

Is a historic or landmark site (National Register or Historic Places and National Natural Landmarks) within the view of the site?

1 CONTAINMENT

Hazardous substances present:

A fire marshall has not certified that the facility presents a significant threat.

Type of containment, if applicable:

* * *

2 WASTE CHARACTERISTICS

Direct Evidence

Type of instrument and measurements:

Ignitability

Compound used:

Reactivity

Most reactive compound:

Incompatibility

Most incompatible pair of compounds:

* * *

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility:

Basis of estimating and/or computing waste quantity:

* * *

3 TARGETS

Distance to Nearest Population

Distance to Nearest Building

Distance to Sensitive Environment

Distance to wetlands:

Distance to critical habitat:

Land Use

Distance to commercial/industrial area, if 1 mile or less:

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less:

Distance to residential area, if 2 miles or less:

Distance to agricultural land in production within past 5 years, if 1 mile or less:

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:

Is a historic or landmark site (National Register or Historic Places and National Natural Landmarks) within the view of the site?

Population Within 2-Mile Radius

Buildings Within 2-Mile Radius

DIRECT CONTACT

1 OBSERVED INCIDENT

Date, location, and pertinent details of incident:

No observed incident.

(Reference: Personal Communication)

* * *

Score = 0

2 ACCESSIBILITY

Describe type of barrier(s):

No barriers - material was left at the surface. Area is accessible.

(Reference: Personal Communication)

* * *

Score = 3

3 CONTAINMENT

Type of containment, if applicable:

None

(Reference: Personal Communication)

* * *

Score = 15

4 WASTE CHARACTERISTICS

Toxicity

Compounds evaluated:

Petroleum Hydrocarbons
Lead

(Reference: Personal Communication)

Compound with highest score:

Lead

(Reference: #1)

* * *

Score = 15

5 TARGETS

Population within one-mile radius

3,000

Score = 12

Distance to critical habitat (of endangered species)

>1 mile Score = 0

(Reference: Personal communication)

REFERENCES

If the entire reference is not available for public review in the EPA regional files on this site, indicate where the reference may be found:

Reference Number	Description of the Reference
1	**Uncontrolled Hazardous Waste Site Ranking System; A Users Manual.** **National Oil and Hazardous Substances Contingency Plan, Appendix A (40 CFR 300)(47 FR 31219), July 16, 1982.**
2	Preliminary Assessment/Site Inspection of Naval Station Treasure Island, CA. Naval Energy and Environmental Support Activity (NEESA), November 1987.
3	Dewatering Recommendations, Repair of Steam Distribution System, Contract N-62472-82-C-6384. Harding Lawson Associates, July 1, 1985.
4.	Environmental Impact Statement: Homeporting Battleship/Battle group/ Cruiser Destroyer Group. U.S. Department of the Navy. January 1987.
5.	Blake, Jr., M.C., Barton, J.A., Frizzell Jr., V.A., Schlocker, J., Sorg, D., Wentworth, C.M., and Wright, R.H., 1974. Preliminary Geologic Map of Marin and San Francisco Counties and Parts of Alameda, Contra Costa and Sonoma Counties, California, U.S. Geological Survey, Miscellaneous Field Studies Map MF 574.
6.	Radbruch, Dorothy H., 1957. Areal and Engineering Geology of the Oakland West Quadrangle, California, U.S. Geological Survey, Miscellaneous Geologic Investigations Map I-239.
7.	U.S. Navy, Western Division, Naval Facilities Engineering Command, 1986. Natural Resources Management Plan, Treasure Island Naval Station, San Francisco, California.
8.	McCreary-Koretsky Engineers. 1965. Soils and Foundation Investigations for Appropriated Fund Quarters at U.S. Naval Station, Treasure Island, San Francisco, California. A&E Contract No. NBy NBy-078. Report dated 11 January.
9.	California Regional Water Quality Control Board, San Francisco Bay Region, 1982, Water Quality Control Plan, San Francisco Bay Basin (2).
10.	NAVSHIPS/NAVSEL. 1972. Shipboard Oily Waste Generation Rates for Nine Port Complexes.

DOCUMENTATION RECORDS
FOR
HAZARD RANKING SYSTEM

INSTRUCTIONS: As briefly as possible summarize the information you used to assign the score for each factor (e.g., "Waste quantity = 4,230 drums plus 800 cubic yards of sludges"). The source of information should be provided for each entry and should be a bibliographic-type reference. Include the location of the document.

FACILITY NAME: Site 17 - Tanks 103/104

LOCATION: Naval Station (NAVSTA) Treasure Island

DATE SCORED: 1/8/88

PERSON SCORING: B.F. Aubry

PRIMARY SOURCE(S) OF INFORMATION (e.g., EPA region, state, FIT, etc.):

Personal Interviews
References Listed on Page 20.

FACTORS NOT SCORED DUE TO INSUFFICIENT INFORMATION:

Air, Fire and Explosion

COMMENTS OR QUALIFICATIONS: Fire and explosion not scored since fire hazard not certified by a fire marshall or field observation.

Encl (4)

GROUND WATER ROUTE

1 OBSERVED RELEASE

Contaminants detected (5 maximum):

No observed releases. No groundwater testing performed.

(Reference: Personal Communication)

Score = 0

Rationale for attributing the contaminants to the facility:

No observed releases

* * *

2 ROUTE CHARACTERISTICS

Depth to Aquifer of Concern

Name/description of aquifers(s) of concern:

Groundwater is unusable due to high salinity.

(Reference: #3)

Depth(s) from the ground surface to the highest seasonal level of the saturated zone [water table(s)] of the aquifer of concern:

2 - 6 Feet.

(Reference: #3) Score = 3

Depth from the ground surface to the lowest point of waste disposal/ storage:

Unknown

Net Precipitation

Mean annual or seasonal precipitation (list months for seasonal):

25 - 30 inches.

(Reference: #1)

Mean annual lake or seasonal evaporation (list months for seasonal):

40 inches.

(Reference: #1)

Net precipitation (subtract the above figures):

-15 to -10 inches. Score = 0

Permeability of Unsaturated Zone

Soil type in unsaturated zone:

Treasure Island is a man-made island composed of reclaimed soil generally composed of poorly-graded fine sand with occasional lenses of silt and clay.

(Reference: #5 & #6)

Permeability associated with soil type:

10^{-3} to 10^{-4} cm/sec

(Reference: #3) Score = 2

Physical State

Physical state of substances at time of disposal (or at present time for generated gases):

liquid Score = 3

(Reference: Personal Communication)

* * *

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

Fuel spill onto bare ground.
Oil poured on ground to keep down weeds
(Reference: Personal Communication)

Method with highest score:

No containment Score = 3

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated:

Petroleum hydrocarbons
(Reference: Personal Communication)

Compound with highest score:

Petroleum Hydrocarbons

Toxicity = 3 Persistence = 1

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

20,000 gallons
Quantity of waste oil is unknown
(Reference: Personal Communication)

Basis of estimating and/or computing waste quantity:

Personnel Communication Score = 4

* * *

5 TARGETS

Ground Water Use

Use(s) of aquifer(s) of concern within a 3-mile radius of the facility:

Groundwater is not used within a 3-mile radius, and is not usable due to its high salinity.

(Reference: Personal communication)

Score = 0

Distance to Nearest Well

Location of nearest well drawing from aquifer of concern or occupied building not served by a public water supply:

Across San Francisco Bay, not on the island.

Score = 0

Distance to above well or building:

> 3 miles

Population Served by Ground Water Wells Within a 3-Mile Radius

Identified water-supply well(s) drawing from aquifer(s) of concern within a 3-mile radius and populations served by each:

No wells are present on Treasure or Yerba Buena Islands.

Computation of land area irrigated by supply well(s) drawing from aquifer(s) of concern within a 3-mile radius, and conversion to population (1.5 people per acre):

N/A

Total population served by ground water within a 3-mile radius:

None.

(Reference: #7)

Score = 0

SURFACE WATER ROUTE

1 OBSERVED RELEASE

Contaminants detected in surface water at the facility or downhill from it (5 maximum):

None detected

(Reference: Personal Communication)

Score = 0

Rationale for attributing the contaminants to the facility:

None detected

* * *

2 ROUTE CHARACTERISTICS

Facility Slope and Intervening Terrain

Average slope of facility in percent:

Range: 0 - 2%

Average: about 1%.

(Reference: #7) Score = 0

Name/description of nearest downslope surface water:

San Francisco Bay

(Reference: #7)

Average slope of terrain between facility and above-cited surface water body in percent:

1%

(Reference: #7)

Is the facility located either totally or partially in surface water?

No

(Reference: #3)

Is the facility completely surrounded by areas of higher elevation?

No

(Reference: #3)

1-Year 24-Hour Rainfall in Inches

3 inches. Score = 2

(Reference: #1)

Distance to Nearest Downslope Surface Water

$\leq$ 0.5 mile.

(Reference: #7) Score = 2

Physical State of Waste

Liquid

(Reference: Personal Communication)

* * *

Score = 3

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

Fuel spill on bare ground, oil poured on ground to control weeds. (Reference: Personal Communication)

Method with highest score:

No containment Score = 3

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated

Petroleum Hydrocarbons (Reference: Personal Communication)

Compound with highest score:

Petroleum Hydrocarbons

Toxicity = 3 Persistence = 1

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

20,000 gallons. Quantity of waste oil unknown.
(Reference: Personal Communications)

Basis of estimating and/or computing waste quantity:

Personal communications.

Score = 4

* * *

5 TARGETS

Surface Water Use

Use(s) of surface water within 3 miles downstream of the hazardous substance:

Uses of San Francisco Bay are manifold
but include: Boating/shipping
Fishing/
Swimming
Animal Habitat

Other than San Francisco Bay, surface water on Treasure Island and Yerba Buena Island is not used.

(Reference: #9) Score = 6

Is there tidal influence?

Yes
(Reference: #8)

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

> 2 miles Score = 0

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:

> 1 mile

Distance to critical habitat of an endangered species or national wildlife refuge, if 1 mile or less:

> 1 miles

Population Served by Surface Water

Location(s) of water-supply intake(s) within 3 miles (free-flowing bodies) or 1 mile (static water bodies) downstream of the hazardous substance and population served by each intake:

The site is surrounded on all sides by the Bay within 0.5 miles. Population served by the Bay is > 10,000. Surface water is not used on the island.

(Reference: #7) Score = 0

Computation of land area irrigated by above-cited intake(s) and conversion to population (1.5 people per acre):

0 acreage

Total population served:

>10,000
(Reference: #7)

Name/description of nearest of above water bodies:

San Francisco Bay.
(Reference: #7)

Distance to above-cited intakes, measured in stream miles.

<0.5 miles.
(Reference: #7) Score = 0

1 OBSERVED RELEASE

Contaminants detected:

No data exists showing any releases of air contaminants.

(Reference: Personal communication) Score = 0

Date and location of detection of contaminants

Methods used to detect the contaminants:

Rationale for attributing the contaminants to the site:

* * *

2 WASTE CHARACTERISTICS

Reactivity and Incompatibility

Most reactive compound:

Most incompatible pair of compounds:

Toxicity

Most toxic compound:

Hazardous Waste Quantity

Total quantity of hazardous waste:

Basis of estimating and/or computing waste quantity:

* * *

3 TARGETS

Population Within 4-Mile Radius

Circle radius used, give population, and indicate how determined:

0 to 4 mi 0 to 1 mi 0 to 1/2 mi 0 to 1/4 mi

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:

Distance to critical habitat of an endangered species, if 1 mile or less:

Land Use

Distance to commercial/industrial area, if 1 mile or less:

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less:

Distance to residential area, if 2 miles or less:

Distance to agricultural land in production within past 5 years, if 1 mile or less:

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:

Is a historic or landmark site (National Register or Historic Places and National Natural Landmarks) within the view of the site?

FIRE AND EXPLOSION

1 CONTAINMENT

Hazardous substances present:

A fire marshall has not certified that the facility presents a significant threat.

Type of containment, if applicable:

* * *

2 WASTE CHARACTERISTICS

Direct Evidence

Type of instrument and measurements:

Ignitability

Compound used:

Reactivity

Most reactive compound:

Incompatibility

Most incompatible pair of compounds:

* * *

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility:

Basis of estimating and/or computing waste quantity:

* * *

3 TARGETS

Distance to Nearest Population

Distance to Nearest Building

Distance to Sensitive Environment

Distance to wetlands:

Distance to critical habitat:

Land Use

Distance to commercial/industrial area, if 1 mile or less:

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less:

Distance to residential area, if 2 miles or less:

Distance to agricultural land in production within past 5 years, if 1 mile or less:

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:

Is a historic or landmark site (National Register or Historic Places and National Natural Landmarks) within the view of the site?

Population Within 2-Mile Radius

Buildings Within 2-Mile Radius

DIRECT CONTACT

1 OBSERVED INCIDENT

Date, location, and pertinent details of incident:

No observed incident.

Score = 0

* * *

2 ACCESSIBILITY

Describe type of barrier(s):

Area has been paved since spillage

Score = 2

* * *

3 CONTAINMENT

Type of containment, if applicable:

None

Score = 15

* * *

4 WASTE CHARACTERISTICS

Toxicity

Compounds evaluated:

Petroleum hydrocarbons

Compound with highest score:

Petroleum Hydrocarbons Score = 15

* * *

5 TARGETS

Population within one-mile radius

3,000

Score = 12

Distance to critical habitat (of endangered species)

>1 mile Score = 0

(Reference: Personal communication)

REFERENCES

If the entire reference is not available for public review in the EPA regional files on this site, indicate where the reference may be found:

Reference Number	Description of the Reference
1	**Uncontrolled Hazardous Waste Site Ranking System; A Users Manual.** **National Oil and Hazardous Substances Contingency Plan, Appendix A (40 CFR 300)(47 FR 31219), July 16, 1982.**
2	Preliminary Assessment/Site Inspection of Naval Station Treasure Island, CA. Naval Energy and Environmental Support Activity (NEESA), November 1987.
3	Dewatering Recommendations, Repair of Steam Distribution System, Contract N-62472-82-C-6384. Harding Lawson Associates, July 1, 1985.
4.	Environmental Impact Statement: Homeporting Battleship/Battle group/ Cruiser Destroyer Group. U.S. Department of the Navy. January 1987.
5.	Blake, Jr., M.C., Barton, J.A., Frizzell Jr., V.A., Schlocker, J., Sorg, D., Wentworth, C.M., and Wright, R.H., 1974. Preliminary Geologic Map of Marin and San Francisco Counties and Parts of Alameda, Contra Costa and Sonoma Counties, California, U.S. Geological Survey, Miscellaneous Field Studies Map MF 574.
6.	Radbruch, Dorothy H., 1957. Areal and Engineering Geology of the Oakland West Quadrangle, California, U.S. Geological Survey, Miscellaneous Geologic Investigations Map I-239.
7.	U.S. Navy, Western Division, Naval Facilities Engineering Command, 1986. Natural Resources Management Plan, Treasure Island Naval Station, San Francisco, California.
8.	McCreary-Koretsky Engineers. 1965. Soils and Foundation Investigations for Appropriated Fund Quarters at U.S. Naval Station, Treasure Island, San Francisco, California. A&E Contract No. NBy NBy-078. Report dated 11 January.
9.	California Regional Water Quality Control Board, San Francisco Bay Region, 1982, Water Quality Control Plan, San Francisco Bay Basin (2).
10.	NAVSHIPS/NAVSEL. 1972. Shipboard Oily Waste Generation Rates for Nine Port Complexes.

DOCUMENTATION RECORDS
FOR
HAZARD RANKING SYSTEM

INSTRUCTIONS: As briefly as possible summarize the information you used to assign the score for each factor (e.g., "Waste quantity = 4,230 drums plus 800 cubic yards of sludges"). The source of information should be provided for each entry and should be a bibliographic-type reference. Include the location of the document.

FACILITY NAME: Site 20-Auto Hobby Shop/Transportation Center

LOCATION: Naval Station (NAVSTA) Treasure Island

DATE SCORED: 1/8/88

PERSON SCORING: B.F. Aubry

PRIMARY SOURCE(S) OF INFORMATION (e.g., EPA region, state, FIT, etc.):

Personal Interviews
References Listed on Page 20.

FACTORS NOT SCORED DUE TO INSUFFICIENT INFORMATION:

Air, Fire and Explosion

COMMENTS OR QUALIFICATIONS: Fire and explosion not scored since fire hazard not certified by a fire marshall or field observation.

Encl (9)

GROUND WATER ROUTE

1 OBSERVED RELEASE

Contaminants detected (5 maximum):

No observed releases. No groundwater testing performed.

(Reference: Personal Communication)

Score = 0

Rationale for attributing the contaminants to the facility:

No releases

* * *

2 ROUTE CHARACTERISTICS

Depth to Aquifer of Concern

Name/description of aquifers(s) of concern:

Groundwater is unusable due to high salinity.

(Reference: #3)

Depth(s) from the ground surface to the highest seasonal level of the saturated zone [water table(s)] of the aquifer of concern:

2 - 6 Feet.

(Reference: #3) Score = 3

Depth from the ground surface to the lowest point of waste disposal/ storage:

Unknown

Net Precipitation

Mean annual or seasonal precipitation (list months for seasonal):

25 - 30 inches.

(Reference: #1)

Mean annual lake or seasonal evaporation (list months for seasonal):

40 inches.

(Reference: #1)

Net precipitation (subtract the above figures):

-15 to -10 inches. Score = 0

Permeability of Unsaturated Zone

Soil type in unsaturated zone:

Treasure Island is a man-made island composed of reclaimed soil generally composed of poorly-graded fine sand with occasional lenses of silt and clay.

(Reference: #5 & #6)

Permeability associated with soil type:

10^{-3} to 10^{-4} cm/sec

(Reference: #3) Score = 2

Physical State

Physical state of substances at time of disposal (or at present time for generated gases):

Liquid Score = 3

* * *

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

None
(Reference: Personal Communication)

Method with highest score:

No containment Score = 3

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated:

Metals
Petroleum Hydrocarbons
(Reference: Personal communication)

Compound with highest score:

Metals

Toxicity = 3 Persistence = 3

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

Unknown

Basis of estimating and/or computing waste quantity:

Unknown Score = 0

* * *

5 TARGETS

Ground Water Use

Use(s) of aquifer(s) of concern within a 3-mile radius of the facility:

Groundwater is not used within a 3-mile radius, and is not usable due to its high salinity.

(Reference: Personal communication)

Score = 0

Distance to Nearest Well

Location of nearest well drawing from aquifer of concern or occupied building not served by a public water supply:

Across San Francisco Bay, not on the island.

Score = 0

Distance to above well or building:

> 3 miles

Population Served by Ground Water Wells Within a 3-Mile Radius

Identified water-supply well(s) drawing from aquifer(s) of concern within a 3-mile radius and populations served by each:

No wells are present on Treasure or Yerba Buena Islands.

Computation of land area irrigated by supply well(s) drawing from aquifer(s) of concern within a 3-mile radius, and conversion to population (1.5 people per acre):

N/A

Total population served by ground water within a 3-mile radius:

None.

(Reference: #7)

Score = 0

SURFACE WATER ROUTE

1 OBSERVED RELEASE

Contaminants detected in surface water at the facility or downhill from it (5 maximum):

None; no testing of surface water to-date

(Reference: Personal Communication)

Rationale for attributing the contaminants to the facility:

None Score = 0

* * *

2 ROUTE CHARACTERISTICS

Facility Slope and Intervening Terrain

Average slope of facility in percent:

Range: 0 - 2%

Average: about 1%. Score = 0

(Reference: #7)

Name/description of nearest downslope surface water:

San Francisco Bay

(Reference: #7)

Average slope of terrain between facility and above-cited surface water body in percent:

1%

(Reference: #7)

Is the facility located either totally or partially in surface water?

No

(Reference: #3)

Is the facility completely surrounded by areas of higher elevation?

No

(Reference: #3)

1-Year 24-Hour Rainfall in Inches

3 inches.

(Reference: #1) Score = 2

Distance to Nearest Downslope Surface Water

< 0.5 mile.

(Reference: #7) Score = 2

Physical State of Waste

liquid

(Reference: Personal Communication)

* * * Score = 3

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

Stains observed on the ground and concrete beneath storage drums

(Reference: Personal Communication)

Method with highest score:

Contamination of soil evident; score of 3 assigned

(Reference: Personal Communication)

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated

metals - chromium, lead, nickel, zinc

Misc solvents; misc. motor fuels and waste oil; misc engine fluids; misc paint thinner; ethylene glycol

(Reference: Personal Communication)

Compound with highest score:

Metals

Toxicity = 3 Persistence = 3

(Reference: #1)

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

Unknown

Basis of estimating and/or computing waste quantity:

Unknown Score = 0

* * *

5 TARGETS

Surface Water Use

Use(s) of surface water within 3 miles downstream of the hazardous substance:

Uses of San Francisco Bay are manifold but include: Boating/shipping
Fishing/
Swimming
Animal Habitat

Other than San Francisco Bay, surface water on Treasure Island and Yerba Buena Island is not used.

(Reference: #9) Score = 6

Is there tidal influence?

Yes
(Reference: #8)

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

> 2 miles Score = 0

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:

> 1 mile

Distance to critical habitat of an endangered species or national wildlife refuge, if 1 mile or less:

> 1 miles

Population Served by Surface Water

Location(s) of water-supply intake(s) within 3 miles (free-flowing bodies) or 1 mile (static water bodies) downstream of the hazardous substance and population served by each intake:

The site is surrounded on all sides by the Bay within 0.5 miles. Population served by the Bay is > 10,000. Surface water is not used on the island.

(Reference: #7) Score = 0

Computation of land area irrigated by above-cited intake(s) and conversion to population (1.5 people per acre):

0 acreage

Total population served:

>10,000
(Reference: #7)

Name/description of nearest of above water bodies:

San Francisco Bay.
(Reference: #7)

Distance to above-cited intakes, measured in stream miles.

<0.5 miles.
(Reference: #7) Score = 0

AIR ROUTE

1 OBSERVED RELEASE

Contaminants detected:

No data exists showing any releases of air contaminants.

(Reference: Personal communication) Score = 0

Date and location of detection of contaminants

Methods used to detect the contaminants:

Rationale for attributing the contaminants to the site:

* * *

2 WASTE CHARACTERISTICS

Reactivity and Incompatibility

Most reactive compound:

Most incompatible pair of compounds:

Toxicity

Most toxic compound:

Hazardous Waste Quantity

Total quantity of hazardous waste:

Basis of estimating and/or computing waste quantity:

* * *

3 TARGETS

Population Within 4-Mile Radius

Circle radius used, give population, and indicate how determined:

0 to 4 mi 0 to 1 mi 0 to 1/2 mi 0 to 1/4 mi

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:

Distance to critical habitat of an endangered species, if 1 mile or less:

Land Use

Distance to commercial/industrial area, if 1 mile or less:

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less:

Distance to residential area, if 2 miles or less:

Distance to agricultural land in production within past 5 years, if 1 mile or less:

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:

Is a historic or landmark site (National Register or Historic Places and National Natural Landmarks) within the view of the site?

1 CONTAINMENT

Hazardous substances present:

A fire marshall has not certified that the facility presents a significant threat.

Type of containment, if applicable:

* * *

2 WASTE CHARACTERISTICS

Direct Evidence

Type of instrument and measurements:

Ignitability

Compound used:

Reactivity

Most reactive compound:

Incompatibility

Most incompatible pair of compounds:

* * *

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility:

Basis of estimating and/or computing waste quantity:

* * *

3 TARGETS

Distance to Nearest Population

Distance to Nearest Building

Distance to Sensitive Environment

Distance to wetlands:

Distance to critical habitat:

Land Use

Distance to commercial/industrial area, if 1 mile or less:

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less:

Distance to residential area, if 2 miles or less:

Distance to agricultural land in production within past 5 years, if 1 mile or less:

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:

Is a historic or landmark site (National Register or Historic Places and National Natural Landmarks) within the view of the site?

Population Within 2-Mile Radius

Buildings Within 2-Mile Radius

DIRECT CONTACT

1 OBSERVED INCIDENT

Date, location, and pertinent details of incident:

No observed incident.

(Reference: Personal Communication)

* * *

Score = 0

2 ACCESSIBILITY

Describe type of barrier(s):

Rear of Auto Hobby Ship is fenced. Transportation Center no longer exists and area is not enclosed.
(Reference: Personal communication)

Score = 2

3 CONTAINMENT

Type of containment, if applicable:

Material stored in tanks and drums. Staining of ground beneath drums is evident.

(Reference: Personal Communication)

* * *

Score = 15

4 WASTE CHARACTERISTICS

<u>Toxicity</u>

Compounds evaluated:

metals - chromium, lead, nickel, zinc

Misc. solvents; misc. motor fuels and waste oil; misc. engine fluids; misc. paint thinner; ethylene glycol (Reference: Personal Communication)

Compound with highest score:

Metals (Reference: #1)

Score = 15

* * *

5 TARGETS

Population within one-mile radius

3,000

Score = 12

Distance to critical habitat (of endangered species)

>1 mile Score = 0

(Reference: Personal communication)

REFERENCES

If the entire reference is not available for public review in the EPA regional files on this site, indicate where the reference may be found:

Reference Number	Description of the Reference
1	**Uncontrolled Hazardous Waste Site Ranking System; A Users Manual.** **National Oil and Hazardous Substances Contingency Plan, Appendix A (40 CFR 300)(47 FR 31219), July 16, 1982.**
2	Preliminary Assessment/Site Inspection of Naval Station Treasure Island, CA. Naval Energy and Environmental Support Activity (NEESA), November 1987.
3	Dewatering Recommendations, Repair of Steam Distribution System, Contract N-62472-82-C-6384. Harding Lawson Associates, July 1, 1985.
4.	Environmental Impact Statement: Homeporting Battleship/Battle group/ Cruiser Destroyer Group. U.S. Department of the Navy. January 1987.
5.	Blake, Jr., M.C., Barton, J.A., Frizzell Jr., V.A., Schlocker, J., Sorg, D., Wentworth, C.M., and Wright, R.H., 1974. Preliminary Geologic Map of Marin and San Francisco Counties and Parts of Alameda, Contra Costa and Sonoma Counties, California, U.S. Geological Survey, Miscellaneous Field Studies Map MF 574.
6.	Radbruch, Dorothy H., 1957. Areal and Engineering Geology of the Oakland West Quadrangle, California, U.S. Geological Survey, Miscellaneous Geologic Investigations Map I-239.
7.	U.S. Navy, Western Division, Naval Facilities Engineering Command, 1986. Natural Resources Management Plan, Treasure Island Naval Station, San Francisco, California.
8.	McCreary-Koretsky Engineers. 1965. Soils and Foundation Investigations for Appropriated Fund Quarters at U.S. Naval Station, Treasure Island, San Francisco, California. A&E Contract No. NBy NBy-078. Report dated 11 January.
9.	California Regional Water Quality Control Board, San Francisco Bay Region, 1982, Water Quality Control Plan, San Francisco Bay Basin (2).
10.	NAVSHIPS/NAVSEL. 1972. Shipboard Oily Waste Generation Rates for Nine Port Complexes.

DOCUMENTATION RECORDS
FOR
HAZARD RANKING SYSTEM

INSTRUCTIONS: As briefly as possible summarize the information you used to assign the score for each factor (e.g., "Waste quantity = 4,230 drums plus 800 cubic yards of sludges"). The source of information should be provided for each entry and should be a bibliographic-type reference. Include the location of the document.

FACILITY NAME: Site 21 - Vessel Waste Oil Recovery.
Site 25 - Seaplane Maintenance.

LOCATION: Naval Station (NAVSTA) Treasure Island

DATE SCORED: 1/8/88

PERSON SCORING: B.F. Aubry

PRIMARY SOURCE(S) OF INFORMATION (e.g., EPA region, state, FIT, etc.):

Personal Interviews
References Listed on Page 20.

FACTORS NOT SCORED DUE TO INSUFFICIENT INFORMATION:

Air, Fire and explosion

COMMENTS OR QUALIFICATIONS: Fire and explosion not scored since fire hazard not certified by a fire marshall or field observations.

Encl (9)

GROUND WATER ROUTE

1 OBSERVED RELEASE

Contaminants detected (5 maximum):

No observed releases. No groundwater testing performed.

(Reference: personal communication)

Rationale for attributing the contaminants to the facility:

No known groundwater releases Score = 0

* * *

2 ROUTE CHARACTERISTICS

Depth to Aquifer of Concern

Name/description of aquifers(s) of concern:

Groundwater is unusable due to high salinity.

(Reference: #3)

Depth(s) from the ground surface to the highest seasonal level of the saturated zone [water table(s)] of the aquifer of concern:

2 - 6 Feet. Score = 3

(Reference: #3)

Depth from the ground surface to the lowest point of waste disposal/ storage:

Unknown

Net Precipitation

Mean annual or seasonal precipitation (list months for seasonal):

25 - 30 inches.

(Reference: #1)

Mean annual lake or seasonal evaporation (list months for seasonal):

40 inches.

(Reference: #1)

Net precipitation (subtract the above figures):

-15 to -10 inches. Score = 0

Permeability of Unsaturated Zone

Soil type in unsaturated zone:

Treasure Island is a man-made island composed of reclaimed soil generally composed of poorly-graded fine sand with occasional lenses of silt and clay.

(References: #5 and #6)

Permeability associated with soil type:

10^{-3} to 10^{-4} cm/sec Score = 2

(Reference #3)

Physical State

Physical state of substances at time of disposal (or at present time for generated gases):

Liquid Score = 3

(Reference: personal communication)

* * *

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

None (Possible Spillage)
Underground Tanks
Oil/Water Separator System
(Reference: personal communication)

Method with highest score:

No containment Score = 3

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated:

Petroleum Hydrocarbon
Solvents
(Reference: Personal communication)

Compound with highest score:

Petroleum Hydrocarbon
Toxicity = 3 Persistence = 1
(Reference: personal communication)

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

Unknown

Basis of estimating and/or computing waste quantity:

Unknown Score = 0

* * *

5 TARGETS

Ground Water Use

Use(s) of aquifer(s) of concern within a 3-mile radius of the facility:

Groundwater is not used within a 3-mile radius, and is not usable due to its high salinity.

(Reference: Personal communication)

Score = 0

Distance to Nearest Well

Location of nearest well drawing from aquifer of concern or occupied building not served by a public water supply:

Across San Francisco Bay, not on the island.

Score = 0

Distance to above well or building:

> 3 miles

Population Served by Ground Water Wells Within a 3-Mile Radius

Identified water-supply well(s) drawing from aquifer(s) of concern within a 3-mile radius and populations served by each:

No wells are present on Treasure or Yerba Buena Islands.

Computation of land area irrigated by supply well(s) drawing from aquifer(s) of concern within a 3-mile radius, and conversion to population (1.5 people per acre):

N/A

Total population served by ground water within a 3-mile radius:

None.

(Reference: #7)

Score = 0

SURFACE WATER ROUTE

1 OBSERVED RELEASE

Contaminants detected in surface water at the facility or downhill from it (5 maximum):

None detected

(Reference: personal communication)

Rationale for attributing the contaminants to the facility:

None detected Score = 0

* * *

2 ROUTE CHARACTERISTICS

Facility Slope and Intervening Terrain

Average slope of facility in percent:

Range: 0 - 2%

Average: about 1%.
(Reference:#7) Score = 0

Name/description of nearest downslope surface water:

San Francisco Bay

(Reference #7)

Average slope of terrain between facility and above-cited surface water body in percent:

1%

(Reference #7)

Is the facility located either totally or partially in surface water?

No

(Reference #3)

Is the facility completely surrounded by areas of higher elevation?

No

(Reference: #3)

1-Year 24-Hour Rainfall in Inches

(Reference #1)

3 inches. Score = 2

Distance to Nearest Downslope Surface Water

< 0.5 mile.

(Reference #7) Score = 2

Physical State of Waste

Liquid Score = 3

(Reference: personal communication)

* * *

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

None (possibly spillage)
Underground tanks
Oil/Water Separator System
(Reference: Personal communication)

Method with highest score:

No containment Score = 3

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated

Petroleum Hydrocarbons
Solvents
(Reference: Personal communication)

Compound with highest score:

Petroleum Hydrocarbons

Toxicity = 3 Persistence = 1

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

Unknown

Basis of estimating and/or computing waste quantity:

Unknown Score = 0

* * *

5 TARGETS

Surface Water Use

Use(s) of surface water within 3 miles downstream of the hazardous substance:

Uses of San Francisco Bay are manifold but include: Boating/shipping
Fishing/
Swimming
Animal Habitat

Other than San Francisco Bay, surface water on Treasure Island and Yerba Buena Island is not used.

(Reference: #9) Score = 6

Is there tidal influence?

Yes
(Reference: #8)

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

> 2 miles Score = 0

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:

> 1 mile

Distance to critical habitat of an endangered species or national wildlife refuge, if 1 mile or less:

> 1 miles

Population Served by Surface Water

Location(s) of water-supply intake(s) within 3 miles (free-flowing bodies) or 1 mile (static water bodies) downstream of the hazardous substance and population served by each intake:

The site is surrounded on all sides by the Bay within 0.5 miles. Population served by the Bay is > 10,000. Surface water is not used on the island.

(Reference: #7) Score = 0

Computation of land area irrigated by above-cited intake(s) and conversion to population (1.5 people per acre):

0 acreage

Total population served:

>10,000
(Reference: #7)

Name/description of nearest of above water bodies:

San Francisco Bay.
(Reference: #7)

Distance to above-cited intakes, measured in stream miles.

<0.5 miles.
(Reference: #7) Score = 0

1 OBSERVED RELEASE

Contaminants detected:

No data exists showing any releases of air contaminants.

(Reference: Personal communication) Score = 0

Date and location of detection of contaminants

Methods used to detect the contaminants:

Rationale for attributing the contaminants to the site:

* * *

2 WASTE CHARACTERISTICS

Reactivity and Incompatibility

Most reactive compound:

Most incompatible pair of compounds:

Toxicity

Most toxic compound:

Hazardous Waste Quantity

Total quantity of hazardous waste:

Basis of estimating and/or computing waste quantity:

* * *

3 TARGETS

Population Within 4-Mile Radius

Circle radius used, give population, and indicate how determined:

0 to 4 mi 0 to 1 mi 0 to 1/2 mi 0 to 1/4 mi

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:

Distance to critical habitat of an endangered species, if 1 mile or less:

Land Use

Distance to commercial/industrial area, if 1 mile or less:

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less:

Distance to residential area, if 2 miles or less:

Distance to agricultural land in production within past 5 years, if 1 mile or less:

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:

Is a historic or landmark site (National Register or Historic Places and National Natural Landmarks) within the view of the site?

1 CONTAINMENT

Hazardous substances present:

A fire marshall has not certified that the facility presents a significant threat.

Type of containment, if applicable:

* * *

2 WASTE CHARACTERISTICS

Direct Evidence

Type of instrument and measurements:

Ignitability

Compound used:

Reactivity

Most reactive compound:

Incompatibility

Most incompatible pair of compounds:

* * *

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility:

Basis of estimating and/or computing waste quantity:

* * *

3 TARGETS

Distance to Nearest Population

Distance to Nearest Building

Distance to Sensitive Environment

Distance to wetlands:

Distance to critical habitat:

Land Use

Distance to commercial/industrial area, if 1 mile or less:

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less:

Distance to residential area, if 2 miles or less:

Distance to agricultural land in production within past 5 years, if 1 mile or less:

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:

Is a historic or landmark site (National Register or Historic Places and National Natural Landmarks) within the view of the site?

Population Within 2-Mile Radius

Buildings Within 2-Mile Radius

DIRECT CONTACT

1 OBSERVED INCIDENT

Date, location, and pertinent details of incident:

No observed incident.

(Reference: personal communication)

* * *

Score = 0

2 ACCESSIBILITY

Describe type of barrier(s):

No barrier in potential spill areas.
Areas are accessible.

(Reference: personal communication)

* * *

Score = 2

3 CONTAINMENT

Type of containment, if applicable:

None
Underground tanks
Oil/Water Separator
(Reference: personal communication)

* * *

Score = 15

4 WASTE CHARACTERISTICS

Toxicity

Compounds evaluated:

Petroleum Hydrocarbon
Solvents
(Reference: personal communication)

Compound with highest score:

Petroleum Hydrocarbon (Reference: #1)

* * *

Score = 15

5 TARGETS

Population within one-mile radius

3,000

Score = 12

Distance to critical habitat (of endangered species)

>1 mile Score = 0

(Reference: Personal communication)

REFERENCES

If the entire reference is not available for public review in the EPA regional files on this site, indicate where the reference may be found:

Reference Number	Description of the Reference
1	**Uncontrolled Hazardous Waste Site Ranking System; A Users Manual.** **National Oil and Hazardous Substances Contingency Plan, Appendix A (40 CFR 300)(47 FR 31219), July 16, 1982.**
2	Preliminary Assessment/Site Inspection of Naval Station Treasure Island, CA. Naval Energy and Environmental Support Activity (NEESA), November 1987.
3	Dewatering Recommendations, Repair of Steam Distribution System, Contract N-62472-82-C-6384. Harding Lawson Associates, July 1, 1985.
4.	Environmental Impact Statement: Homeporting Battleship/Battle group/ Cruiser Destroyer Group. U.S. Department of the Navy. January 1987.
5.	Blake, Jr., M.C., Barton, J.A., Frizzell Jr., V.A., Schlocker, J., Sorg, D., Wentworth, C.M., and Wright, R.H., 1974. Preliminary Geologic Map of Marin and San Francisco Counties and Parts of Alameda, Contra Costa and Sonoma Counties, California, U.S. Geological Survey, Miscellaneous Field Studies Map MF 574.
6.	Radbruch, Dorothy H., 1957. Areal and Engineering Geology of the Oakland West Quadrangle, California, U.S. Geological Survey, Miscellaneous Geologic Investigations Map I-239.
7.	U.S. Navy, Western Division, Naval Facilities Engineering Command, 1986. Natural Resources Management Plan, Treasure Island Naval Station, San Francisco, California.
8.	McCreary-Koretsky Engineers. 1965. Soils and Foundation Investigations for Appropriated Fund Quarters at U.S. Naval Station, Treasure Island, San Francisco, California. A&E Contract No. NBy NBy-078. Report dated 11 January.
9.	California Regional Water Quality Control Board, San Francisco Bay Region, 1982, Water Quality Control Plan, San Francisco Bay Basin (2).
10.	NAVSHIPS/NAVSEL. 1972. Shipboard Oily Waste Generation Rates for Nine Port Complexes.

DOCUMENTATION RECORDS
FOR
HAZARD RANKING SYSTEM

INSTRUCTIONS: As briefly as possible summarize the information you used to assign the score for each factor (e.g., "Waste quantity = 4,230 drums plus 800 cubic yards of sludges"). The source of information should be provided for each entry and should be a bibliographic-type reference. Include the location of the document.

FACILITY NAME: Site 22 - Navy Exchange Gas Station

LOCATION: Naval Station (NAVSTA) Treasure Island

DATE SCORED: 1/8/88

PERSON SCORING: B.F. Aubry

PRIMARY SOURCE(S) OF INFORMATION (e.g., EPA region, state, FIT, etc.):

Personal Interviews
References Listed on Page 20.

FACTORS NOT SCORED DUE TO INSUFFICIENT INFORMATION:

Air, Fire and Explosion

COMMENTS OR QUALIFICATIONS: Fire and explosion not scored since fire hazard not certified by a fire marshall or field observation.

Encl (4)

GROUND WATER ROUTE

1 OBSERVED RELEASE

Contaminants detected (5 maximum):

No observed releases. No groundwater testing performed.

(Reference: Personal Communication)

Score = 0

Rationale for attributing the contaminants to the facility:

No known groundwater releases

* * *

2 ROUTE CHARACTERISTICS

Depth to Aquifer of Concern

Name/description of aquifers(s) of concern:

Groundwater is unusable due to high salinity.

(Reference: #3)

Depth(s) from the ground surface to the highest seasonal level of the saturated zone [water table(s)] of the aquifer of concern:

2 - 6 Feet.

(Reference: #3) Score = 3

Depth from the ground surface to the lowest point of waste disposal/ storage:

Unknown

Net Precipitation

Mean annual or seasonal precipitation (list months for seasonal):

25 - 30 inches.
(Reference: #1)

Mean annual lake or seasonal evaporation (list months for seasonal):

40 inches.

(Reference: #1)

Net precipitation (subtract the above figures):

-15 to -10 inches. Score = 0

Permeability of Unsaturated Zone

Soil type in unsaturated zone:

Treasure Island is a man-made island composed of reclaimed soil generally composed of poorly-graded fine sand with occasional lenses of silt and clay.
(Reference: #5 & #6)

Permeability associated with soil type:

10^{-3} to 10^{-4} cm/sec
(Reference: #3) Score = 2

Physical State

Physical state of substances at time of disposal (or at present time for generated gases):

liquid
(Reference: Personal Communication)
Score = 3

* * *

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

No containment system in place. Fluids would be discharged to Bay by storm sewer.

(Reference: Personal Communication)

Method with highest score:

No containment Score = 3

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated:

Diesel
Gasoline
Waste Oil
Ethylene glycol
Engine fluids

(Reference: Personal Communication)

Compound with highest score:

Gasoline Toxicity = 3 Persistence = 1

(Reference: #1)

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

Estimated releases of 80 drums/year between 1972 and 1975. Whether this would all go to sewer is unknown. Also unknown is long-term waste generation.
Existing fuel tanks have a combined capacity of 2,500 gallons.

(Reference: Personal Communication)

Basis of estimating and/or computing waste quantity:

A 1972 NAVSHIPS/NAVSEC report estimated that by 1975, 12,000 gallons of waste oils and fluids would be generated by the gas station.

$$12{,}000 \text{ gallons} \times \frac{1 \text{ drum}}{50 \text{ gallons}} \times \frac{1}{3 \text{ years}} = 80 \frac{\text{drums}}{\text{year}}$$

* * *

Existing fuel tanks: 2,500 gallons ÷ 50 gallons per drum = 50 drums.

4

(Reference: #10) Score = 2

5 TARGETS

Ground Water Use

Use(s) of aquifer(s) of concern within a 3-mile radius of the facility:

Groundwater is not used within a 3-mile radius, and is not usable due to its high salinity.

(Reference: Personal communication)

Score = 0

Distance to Nearest Well

Location of nearest well drawing from aquifer of concern or occupied building not served by a public water supply:

Across San Francisco Bay, not on the island.

Score = 0

Distance to above well or building:

> 3 miles

Population Served by Ground Water Wells Within a 3-Mile Radius

Identified water-supply well(s) drawing from aquifer(s) of concern within a 3-mile radius and populations served by each:

No wells are present on Treasure or Yerba Buena Islands.

Computation of land area irrigated by supply well(s) drawing from aquifer(s) of concern within a 3-mile radius, and conversion to population (1.5 people per acre):

N/A

Total population served by ground water within a 3-mile radius:

None.

(Reference: #7)

Score = 0

SURFACE WATER ROUTE

1 OBSERVED RELEASE

Contaminants detected in surface water at the facility or downhill from it (5 maximum):

Release is known, but tests have not been performed.

(Reference: Personal Communication)

Score = 0

Rationale for attributing the contaminants to the facility:

Personnel Communication

* * *

2 ROUTE CHARACTERISTICS

Facility Slope and Intervening Terrain

Average slope of facility in percent:

Range: 0 - 2%

Average: about 1%.

(Reference: #7) Score = 0

Name/description of nearest downslope surface water:

San Francisco Bay

(Reference: #7)

Average slope of terrain between facility and above-cited surface water body in percent:

1%

(Reference: #7)

Is the facility located either totally or partially in surface water?

No

(Reference: #3)

Is the facility completely surrounded by areas of higher elevation?

No

(Reference: #3)

1-Year 24-Hour Rainfall in Inches

3 inches.

(Reference: #1) Score = 2

Distance to Nearest Downslope Surface Water

$\leq$ 0.5 mile.

(Reference: #7) Score = 2

Physical State of Waste

liquid

(Reference: Personal Communication)

Score = 3

* * *

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

No containment system in place. Fluids would be discharged to Bay by storm sewer.

(Reference: Personal Communication)

Method with highest score:

No containment Score = 3

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated

Diesel
Gasoline (Reference: Personal Communication)
Waste Oil
Ethylene glycol
Engine Fluids

Compound with highest score:

Gasoline (Reference: #1)

Toxicity = 3 Persistence = 1

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

Estimated releases of 80 drums/year between 1972 and 1975. Whether this would all go to sewer is unknown. Also unknown is long-term waste generation.
Existing fuel tanks have a combined capacity of 2,500 gallons. (Reference: Personal communication)

Basis of estimating and/or computing waste quantity:

A 1972 NAVSHIPS/NAVSEC report estimated that by 1975, 12,000 gallons of waste oils and fluids would be generated by the gas station.

$$12{,}000 \text{ gallons} \times \frac{1 \text{ drum}}{50 \text{ gallons}} \times \frac{1}{3 \text{ years}} = 80 \frac{\text{drums}}{\text{year}}$$

Existing fuel tanks: 2,500 gallons ÷ 50 gallons per drum = 50 drums.
(Reference: #10) Score = 2

5 TARGETS

Surface Water Use

Use(s) of surface water within 3 miles downstream of the hazardous substance:

Uses of San Francisco Bay are manifold but include: Boating/shipping
Fishing/
Swimming
Animal Habitat

Other than San Francisco Bay, surface water on Treasure Island and Yerba Buena Island is not used.
(Reference: #9) Score = 6

Is there tidal influence?

Yes
(Reference: #8)

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

> 2 miles Score = 0

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:

> 1 mile

Distance to critical habitat of an endangered species or national wildlife refuge, if 1 mile or less:

> 1 miles

Population Served by Surface Water

Location(s) of water-supply intake(s) within 3 miles (free-flowing bodies) or 1 mile (static water bodies) downstream of the hazardous substance and population served by each intake:

The site is surrounded on all sides by the Bay within 0.5 miles. Population served by the Bay is > 10,000. Surface water is not used on the island.

(Reference: #7) Score = 0

Computation of land area irrigated by above-cited intake(s) and conversion to population (1.5 people per acre):

0 acreage

Total population served:

>10,000
(Reference: #7)

Name/description of nearest of above water bodies:

San Francisco Bay.
(Reference: #7)

Distance to above-cited intakes, measured in stream miles.

<0.5 miles.
(Reference: #7) Score = 0

1 OBSERVED RELEASE

Contaminants detected:

No data exists showing any releases of air contaminants.

(Reference: Personal communication) Score = 0

Date and location of detection of contaminants

Methods used to detect the contaminants:

Rationale for attributing the contaminants to the site:

* * *

2 WASTE CHARACTERISTICS

Reactivity and Incompatibility

Most reactive compound:

Most incompatible pair of compounds:

Toxicity

Most toxic compound:

Hazardous Waste Quantity

Total quantity of hazardous waste:

Basis of estimating and/or computing waste quantity:

* * *

3 TARGETS

Population Within 4-Mile Radius

Circle radius used, give population, and indicate how determined:

0 to 4 mi 0 to 1 mi 0 to 1/2 mi 0 to 1/4 mi

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:

Distance to critical habitat of an endangered species, if 1 mile or less:

Land Use

Distance to commercial/industrial area, if 1 mile or less:

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less:

Distance to residential area, if 2 miles or less:

Distance to agricultural land in production within past 5 years, if 1 mile or less:

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:

Is a historic or landmark site (National Register or Historic Places and National Natural Landmarks) within the view of the site?

1 CONTAINMENT

Hazardous substances present:

A fire marshall has not certified that the facility presents a significant threat.

Type of containment, if applicable:

* * *

2 WASTE CHARACTERISTICS

Direct Evidence

Type of instrument and measurements:

Ignitability

Compound used:

Reactivity

Most reactive compound:

Incompatibility

Most incompatible pair of compounds:

* * *

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility:

Basis of estimating and/or computing waste quantity:

* * *

3 TARGETS

Distance to Nearest Population

Distance to Nearest Building

Distance to Sensitive Environment

Distance to wetlands:

Distance to critical habitat:

Land Use

Distance to commercial/industrial area, if 1 mile or less:

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less:

Distance to residential area, if 2 miles or less:

Distance to agricultural land in production within past 5 years, if 1 mile or less:

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:

Is a historic or landmark site (National Register or Historic Places and National Natural Landmarks) within the view of the site?

Population Within 2-Mile Radius

Buildings Within 2-Mile Radius

DIRECT CONTACT

1 OBSERVED INCIDENT

Date, location, and pertinent details of incident:

No observed incident.

(Reference: Personal Communication)

* * *

Score = 0

2 ACCESSIBILITY

Describe type of barrier(s):

No barriers, but materials have gone into sewer. Materials in the Bay are probably diluted to insignificant levels.

(Reference: Personal communication)

* * *

Score = 1

3 CONTAINMENT

Type of containment, if applicable:

Materials are routed through storm sewer.

(Reference: Personal Communication)

* * *

Score = 15

4 WASTE CHARACTERISTICS

<u>Toxicity</u>

Compounds evaluated:

Diesel Engine Fluids
Gasoline
Waste Oil (Reference: Personal Communication)
Ethylene glycol

Compound with highest score:

Gasoline (Reference: #1) Score = 15

* * *

5 TARGETS

Population within one-mile radius

3,000

Score = 12

Distance to critical habitat (of endangered species)

>1 mile Score = 0

(Reference: Personal communication)

REFERENCES

If the entire reference is not available for public review in the EPA regional files on this site, indicate where the reference may be found:

Reference Number	Description of the Reference
1	**Uncontrolled Hazardous Waste Site Ranking System; A Users Manual.** **National Oil and Hazardous Substances Contingency Plan, Appendix A (40 CFR 300)(47 FR 31219), July 16, 1982.**
2	Preliminary Assessment/Site Inspection of Naval Station Treasure Island, CA. Naval Energy and Environmental Support Activity (NEESA), November 1987.
3	Dewatering Recommendations, Repair of Steam Distribution System, Contract N-62472-82-C-6384. Harding Lawson Associates, July 1, 1985.
4.	Environmental Impact Statement: Homeporting Battleship/Battle group/ Cruiser Destroyer Group. U.S. Department of the Navy. January 1987.
5.	Blake, Jr., M.C., Barton, J.A., Frizzell Jr., V.A., Schlocker, J., Sorg, D., Wentworth, C.M., and Wright, R.H., 1974. Preliminary Geologic Map of Marin and San Francisco Counties and Parts of Alameda, Contra Costa and Sonoma Counties, California, U.S. Geological Survey, Miscellaneous Field Studies Map MF 574.
6.	Radbruch, Dorothy H., 1957. Areal and Engineering Geology of the Oakland West Quadrangle, California, U.S. Geological Survey, Miscellaneous Geologic Investigations Map I-239.
7.	U.S. Navy, Western Division, Naval Facilities Engineering Command, 1986. Natural Resources Management Plan, Treasure Island Naval Station, San Francisco, California.
8.	McCreary-Koretsky Engineers. 1965. Soils and Foundation Investigations for Appropriated Fund Quarters at U.S. Naval Station, Treasure Island, San Francisco, California. A&E Contract No. NBy NBy-078. Report dated 11 January.
9.	California Regional Water Quality Control Board, San Francisco Bay Region, 1982, Water Quality Control Plan, San Francisco Bay Basin (2).
10.	NAVSHIPS/NAVSEL. 1972. Shipboard Oily Waste Generation Rates for Nine Port Complexes.

DOCUMENTATION RECORDS
FOR
HAZARD RANKING SYSTEM

INSTRUCTIONS: As briefly as possible summarize the information you used to assign the score for each factor (e.g., "Waste quantity = 4,230 drums plus 800 cubic yards of sludges"). The source of information should be provided for each entry and should be a bibliographic-type reference. Include the location of the document.

FACILITY NAME: Site 24 - 5th Street Fuel Releases.

LOCATION: Naval Station (NAVSTA) Treasure Island

DATE SCORED: 1/8/88

PERSON SCORING: B.F. Aubry

PRIMARY SOURCE(S) OF INFORMATION (e.g., EPA region, state, FIT, etc.):

Personal Interviews
References Listed on Page 20.

FACTORS NOT SCORED DUE TO INSUFFICIENT INFORMATION:

Air, Fire and Explosion

COMMENTS OR QUALIFICATIONS: Fire and explosion not scored since fire hazard not certified by a fire marshall or field observation.

Encl (9)

GROUND WATER ROUTE

1 OBSERVED RELEASE

Contaminants detected (5 maximum):

No observed releases. No groundwater testing performed.
(Reference: Personal Communication)
Score = 0

Rationale for attributing the contaminants to the facility:

No groundwater releases detected.

* * *

2 ROUTE CHARACTERISTICS

Depth to Aquifer of Concern

Name/description of aquifers(s) of concern:

Groundwater is unusable due to high salinity.
(Reference: #3)

Depth(s) from the ground surface to the highest seasonal level of the saturated zone [water table(s)] of the aquifer of concern:

2 - 6 Feet.
(Reference: #3) Score = 3

Depth from the ground surface to the lowest point of waste disposal/ storage:

Unknown

Net Precipitation

Mean annual or seasonal precipitation (list months for seasonal):

25 - 30 inches.

(Reference: #1)

Mean annual lake or seasonal evaporation (list months for seasonal):

40 inches.
(Reference: #1)

Net precipitation (subtract the above figures):

-15 to -10 inches.

Score = 0

Permeability of Unsaturated Zone

Soil type in unsaturated zone:

Treasure Island is a man-made island composed of reclaimed soil generally composed of poorly-graded fine sand with occasional lenses of silt and clay.
(Reference: #5 & #6)

Permeability associated with soil type:

10^{-3} to 10^{-4} cm/sec
(Reference: #3)

Score = 2

Physical State

Physical state of substances at time of disposal (or at present time for generated gases):

Liquid

(Reference: Personal Communication)

Score = 3

* * *

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

No containment is present
for materials which have leaked.
(Reference: Personal Communication)

Method with highest score:

No containment Score = 3

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated:

Petroleum Hydrocarbon
Toxicity = 3 Persistence = 1
(Reference: Personal Communication)

Compound with highest score:

Petroleum Hydrocarbon

(Reference: #1)

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

Unknown

Basis of estimating and/or computing waste quantity:

Unknown Score = 0

* * *

5 TARGETS

Ground Water Use

Use(s) of aquifer(s) of concern within a 3-mile radius of the facility:

Groundwater is not used within a 3-mile radius, and is not usable due to its high salinity.

(Reference: Personal communication)

Score = 0

Distance to Nearest Well

Location of nearest well drawing from aquifer of concern or occupied building not served by a public water supply:

Across San Francisco Bay, not on the island.

Score = 0

Distance to above well or building:

> 3 miles

Population Served by Ground Water Wells Within a 3-Mile Radius

Identified water-supply well(s) drawing from aquifer(s) of concern within a 3-mile radius and populations served by each:

No wells are present on Treasure or Yerba Buena Islands.

Computation of land area irrigated by supply well(s) drawing from aquifer(s) of concern within a 3-mile radius, and conversion to population (1.5 people per acre):

N/A

Total population served by ground water within a 3-mile radius:

None.

(Reference: #7)

Score = 0

SURFACE WATER ROUTE

1 OBSERVED RELEASE

Contaminants detected in surface water at the facility or downhill from it (5 maximum):

No contamination detected. No tests performed.

(Reference: Personal Communication)

Score = 0

Rationale for attributing the contaminants to the facility:

No contamination detected.

* * *

2 ROUTE CHARACTERISTICS

Facility Slope and Intervening Terrain

Average slope of facility in percent:

Range: 0 - 2%

Average: about 1%.

(Reference: #7) Score = 0

Name/description of nearest downslope surface water:

San Francisco Bay

(Reference: #7)

Average slope of terrain between facility and above-cited surface water body in percent:

1%

(Reference: #7)

Is the facility located either totally or partially in surface water?

No

(Reference: #3)

Is the facility completely surrounded by areas of higher elevation?

No

1-Year 24-Hour Rainfall in Inches

3 inches.
(Reference: #1) Score = 2

Distance to Nearest Downslope Surface Water

$\leq$ 0.5 mile.

(Reference: #7) Score = 2

Physical State of Waste

liquid

(Reference: Personal Communication)

* * * Score = 3

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

No containment is present for materials which have leaked.
(Reference: Personal Communication)

Method with highest score:

No containment Score = 3

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated

Petroleum Hydrocarbon
(Reference: Personal Communication)

Compound with highest score:

Petroleum Hydrocarbon
(Reference: #1)
Toxicity = 3 Persistence = 1

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

Unknown

Basis of estimating and/or computing waste quantity:

Unknown Score = 0

* * *

5 TARGETS

Surface Water Use

Use(s) of surface water within 3 miles downstream of the hazardous substance:

Uses of San Francisco Bay are manifold but include: Boating/shipping
Fishing/
Swimming
Animal Habitat

Other than San Francisco Bay, surface water on Treasure Island and Yerba Buena Island is not used.
(Reference: #9)
Score = 6

Is there tidal influence?

Yes
(Reference: #8)

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

> 2 miles Score = 0

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:

> 1 mile

Distance to critical habitat of an endangered species or national wildlife refuge, if 1 mile or less:

> 1 miles

Population Served by Surface Water

Location(s) of water-supply intake(s) within 3 miles (free-flowing bodies) or 1 mile (static water bodies) downstream of the hazardous substance and population served by each intake:

The site is surrounded on all sides by the Bay within 0.5 miles. Population served by the Bay is > 10,000. Surface water is not used on the island.

(Reference: #7) Score = 0

Computation of land area irrigated by above-cited intake(s) and conversion to population (1.5 people per acre):

0 acreage

Total population served:

>10,000
(Reference: #7)

Name/description of nearest of above water bodies:

San Francisco Bay.
(Reference: #7)

Distance to above-cited intakes, measured in stream miles.

<0.5 miles.
(Reference: #7) Score = 0

AIR ROUTE

1 OBSERVED RELEASE

Contaminants detected:

No data exists showing any releases of air contaminants.

(Reference: Personal communication) Score = 0

Date and location of detection of contaminants

Methods used to detect the contaminants:

Rationale for attributing the contaminants to the site:

* * *

2 WASTE CHARACTERISTICS

Reactivity and Incompatibility

Most reactive compound:

Most incompatible pair of compounds:

Toxicity

Most toxic compound:

Hazardous Waste Quantity

Total quantity of hazardous waste:

Basis of estimating and/or computing waste quantity:

* * *

3 TARGETS

Population Within 4-Mile Radius

Circle radius used, give population, and indicate how determined:

0 to 4 mi 0 to 1 mi 0 to 1/2 mi 0 to 1/4 mi

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:

Distance to critical habitat of an endangered species, if 1 mile or less:

Land Use

Distance to commercial/industrial area, if 1 mile or less:

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less:

Distance to residential area, if 2 miles or less:

Distance to agricultural land in production within past 5 years, if 1 mile or less:

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:

Is a historic or landmark site (National Register or Historic Places and National Natural Landmarks) within the view of the site?

1 CONTAINMENT

Hazardous substances present:

A fire marshall has not certified that the facility presents a significant threat.

Type of containment, if applicable:

* * *

2 WASTE CHARACTERISTICS

Direct Evidence

Type of instrument and measurements:

Ignitability

Compound used:

Reactivity

Most reactive compound:

Incompatibility

Most incompatible pair of compounds:

* * *

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility:

Basis of estimating and/or computing waste quantity:

* * *

3 TARGETS

Distance to Nearest Population

Distance to Nearest Building

Distance to Sensitive Environment

Distance to wetlands:

Distance to critical habitat:

Land Use

Distance to commercial/industrial area, if 1 mile or less:

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less:

Distance to residential area, if 2 miles or less:

Distance to agricultural land in production within past 5 years, if 1 mile or less:

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:

Is a historic or landmark site (National Register or Historic Places and National Natural Landmarks) within the view of the site?

Population Within 2-Mile Radius

Buildings Within 2-Mile Radius

DIRECT CONTACT

1 OBSERVED INCIDENT

Date, location, and pertinent details of incident:

No observed incident.

(Reference: Personal Communication)

* * *

Score = 0

2 ACCESSIBILITY

Describe type of barrier(s):

No barriers, although waste is buried.
Access to the soil requires excavation.

(Reference: Personal Communication)

* * *

Score = 2

3 CONTAINMENT

Type of containment, if applicable:

None

(Reference: Personal Communication)

* * *

Score = 15

4 WASTE CHARACTERISTICS

Toxicity

Compounds evaluated:

Petroleum Hydrocarbon

(Reference: Personal Communication)

Compound with highest score:

Petroleum Hydrocarbon (Reference: #1) Score = 15

* * *

5 TARGETS

Population within one-mile radius

3,000

Score = 12

Distance to critical habitat (of endangered species)

>1 mile Score = 0

(Reference: Personal communication)

REFERENCES

If the entire reference is not available for public review in the EPA regional files on this site, indicate where the reference may be found:

Reference Number	Description of the Reference
1	**Uncontrolled Hazardous Waste Site Ranking System; A Users Manual.** **National Oil and Hazardous Substances Contingency Plan, Appendix A (40 CFR 300)(47 FR 31219), July 16, 1982.**
2	Preliminary Assessment/Site Inspection of Naval Station Treasure Island, CA. Naval Energy and Environmental Support Activity (NEESA), November 1987.
3	Dewatering Recommendations, Repair of Steam Distribution System, Contract N-62472-82-C-6384. Harding Lawson Associates, July 1, 1985.
4.	Environmental Impact Statement: Homeporting Battleship/Battle group/ Cruiser Destroyer Group. U.S. Department of the Navy. January 1987.
5.	Blake, Jr., M.C., Barton, J.A., Frizzell Jr., V.A., Schlocker, J., Sorg, D., Wentworth, C.M., and Wright, R.H., 1974. Preliminary Geologic Map of Marin and San Francisco Counties and Parts of Alameda, Contra Costa and Sonoma Counties, California, U.S. Geological Survey, Miscellaneous Field Studies Map MF 574.
6.	Radbruch, Dorothy H., 1957. Areal and Engineering Geology of the Oakland West Quadrangle, California, U.S. Geological Survey, Miscellaneous Geologic Investigations Map I-239.
7.	U.S. Navy, Western Division, Naval Facilities Engineering Command, 1986. Natural Resources Management Plan, Treasure Island Naval Station, San Francisco, California.
8.	McCreary-Koretsky Engineers. 1965. Soils and Foundation Investigations for Appropriated Fund Quarters at U.S. Naval Station, Treasure Island, San Francisco, California. A&E Contract No. NBy NBy-078. Report dated 11 January.
9.	California Regional Water Quality Control Board, San Francisco Bay Region, 1982, Water Quality Control Plan, San Francisco Bay Basin (2).
10.	NAVSHIPS/NAVSEL. 1972. Shipboard Oily Waste Generation Rates for Nine Port Complexes.

DOCUMENTATION RECORDS
FOR
HAZARD RANKING SYSTEM

INSTRUCTIONS: As briefly as possible summarize the information you used to assign the score for each factor (e.g., "Waste quantity = 4,230 drums plus 800 cubic yards of sludges"). The source of information should be provided for each entry and should be a bibliographic-type reference. Include the location of the document.

FACILITY NAME: Site 26 - Areas of Suspected Underground Tanks

LOCATION: Naval Station (NAVSTA) Treasure Island, Yerba Buena Island

DATE SCORED: 1/8/88

PERSON SCORING: B.F. Aubry

PRIMARY SOURCE(S) OF INFORMATION (e.g., EPA region, state, FIT, etc.):

Personal Interviews
References Listed on Page 20.

FACTORS NOT SCORED DUE TO INSUFFICIENT INFORMATION:

Air, Fire and Explosion

COMMENTS OR QUALIFICATIONS: Fire and explosion not scored since fire hazard not certified by a fire marshall or field observation.

Encl (4)

GROUND WATER ROUTE

1 OBSERVED RELEASE

Contaminants detected (5 maximum):

No observed releases. No groundwater testing performed.
(Reference: Personal Communication)

Score = 0

Rationale for attributing the contaminants to the facility:

No known releases

* * *

2 ROUTE CHARACTERISTICS

Depth to Aquifer of Concern

Name/description of aquifers(s) of concern:

Groundwater is unusable due to high salinity.
(Reference: #3)

Depth(s) from the ground surface to the highest seasonal level of the saturated zone [water table(s)] of the aquifer of concern:

2 - 6 Feet.
(Reference: #3)

Score = 3

Depth from the ground surface to the lowest point of waste disposal/ storage:

Unknown

Net Precipitation

Mean annual or seasonal precipitation (list months for seasonal):

25 - 30 inches.
(Reference: #1)

Mean annual lake or seasonal evaporation (list months for seasonal):

40 inches.
(Reference: #1)

Net precipitation (subtract the above figures):

-15 to -10 inches. Score = 0

Permeability of Unsaturated Zone

Soil type in unsaturated zone:

Treasure Island is a man-made island composed of reclaimed soil generally composed of poorly-graded fine sand with occasional lenses of silt and clay.
Yerba Buena Island is a natural island consisting of a thin (10-40 in.) veneer of soil over Franciscan basement rock. Soil consists of clayey silty sands.
(Reference: #5 & #6)

Permeability associated with soil type:

10^{-3} to 10^{-4} cm/sec
(Reference: #3) Score = 2

Physical State

Physical state of substances at time of disposal (or at present time for generated gases):

liquid
(Reference: Personal Communication)
Score = 3

* * *

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

Underground storage tanks
(Reference: Personal Communication)

Method with highest score:

Underground tanks Score = 1

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated:

Petroleum Hydrocarbon
(Reference: Personal Communication)

Compound with highest score:

Petroleum Hydrocarbon
(Reference: Personal Communication)
Toxicity = 3 Persistence = 1

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

Unknown

Basis of estimating and/or computing waste quantity:

Unknown Score = 0

* * *

5 TARGETS

Ground Water Use

Use(s) of aquifer(s) of concern within a 3-mile radius of the facility:

Groundwater is not used within a 3-mile radius, and is not usable due to its high salinity.

(Reference: Personal communication)

Score = 0

Distance to Nearest Well

Location of nearest well drawing from aquifer of concern or occupied building not served by a public water supply:

Across San Francisco Bay, not on the island.

Score = 0

Distance to above well or building:

> 3 miles

Population Served by Ground Water Wells Within a 3-Mile Radius

Identified water-supply well(s) drawing from aquifer(s) of concern within a 3-mile radius and populations served by each:

No wells are present on Treasure or Yerba Buena Islands.

Computation of land area irrigated by supply well(s) drawing from aquifer(s) of concern within a 3-mile radius, and conversion to population (1.5 people per acre):

N/A

Total population served by ground water within a 3-mile radius:

None.

(Reference: #7)

Score = 0

SURFACE WATER ROUTE

1 OBSERVED RELEASE

Contaminants detected in surface water at the facility or downhill from it (5 maximum):

No observed releases

(Reference: Personal Communication)

Rationale for attributing the contaminants to the facility:

No known releases Score = 0

* * *

2 ROUTE CHARACTERISTICS

Facility Slope and Intervening Terrain

Average slope of facility in percent:

Variable or unknown

Score = 0

(Reference: #7)

Name/description of nearest downslope surface water:

San Francisco Bay

(Reference: #7)

Average slope of terrain between facility and above-cited surface water body in percent:

1%

(Reference: #7)

Is the facility located either totally or partially in surface water?

No

(Reference: #3)

Is the facility completely surrounded by areas of higher elevation?

No

(Reference: #3)

1-Year 24-Hour Rainfall in Inches

3 inches.

(Reference: #1) Score = 2

Distance to Nearest Downslope Surface Water

< 0.5 mile.

(Reference: #7) Score = 2

Physical State of Waste

liquid

(Reference: Personal Communication)

Score = 3

* * *

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

Underground storage tanks. (Reference: Personal Communication)

Method with highest score:

Underground storage tanks Score = 1

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated

Petroleum Hydrocarbon
(Reference: Personal Communication)

Compound with highest score:

Petroleum Hydrocarbon (Reference: Personal Communication)

Toxicity = 3 Persistence = 1

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

Unknown

Basis of estimating and/or computing waste quantity:

Unknown Score = 0

* * *

5 TARGETS

Surface Water Use

Use(s) of surface water within 3 miles downstream of the hazardous substance:

Uses of San Francisco Bay are manifold
but include: Boating/shipping
Fishing/
Swimming
Animal Habitat

Other than San Francisco Bay, surface water on Treasure Island and Yerba Buena Island is not used.
(Reference: #9)

Score = 6

Is there tidal influence?

Yes
(Reference: #8)

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

> 2 miles Score = 0

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:

> 1 mile

Distance to critical habitat of an endangered species or national wildlife refuge, if 1 mile or less:

> 1 miles

Population Served by Surface Water

Location(s) of water-supply intake(s) within 3 miles (free-flowing bodies) or 1 mile (static water bodies) downstream of the hazardous substance and population served by each intake:

The site is surrounded on all sides by the Bay within 0.5 miles. Population served by the Bay is > 10,000. Surface water is not used on the island.

(Reference: #7) Score = 0

Computation of land area irrigated by above-cited intake(s) and conversion to population (1.5 people per acre):

0 acreage

Total population served:

>10,000
(Reference: #7)

Name/description of nearest of above water bodies:

San Francisco Bay.
(Reference: #7)

Distance to above-cited intakes, measured in stream miles.

<0.5 miles.
(Reference: #7) Score = 0

AIR ROUTE

1 OBSERVED RELEASE

Contaminants detected:

No data exists showing any releases of air contaminants.

(Reference: Personal communication) Score = 0

Date and location of detection of contaminants

Methods used to detect the contaminants:

Rationale for attributing the contaminants to the site:

* * *

2 WASTE CHARACTERISTICS

Reactivity and Incompatibility

Most reactive compound:

Most incompatible pair of compounds:

Toxicity

Most toxic compound:

Hazardous Waste Quantity

Total quantity of hazardous waste:

Basis of estimating and/or computing waste quantity:

* * *

3 TARGETS

Population Within 4-Mile Radius

Circle radius used, give population, and indicate how determined:

0 to 4 mi 0 to 1 mi 0 to 1/2 mi 0 to 1/4 mi

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:

Distance to critical habitat of an endangered species, if 1 mile or less:

Land Use

Distance to commercial/industrial area, if 1 mile or less:

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less:

Distance to residential area, if 2 miles or less:

Distance to agricultural land in production within past 5 years, if 1 mile or less:

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:

Is a historic or landmark site (National Register or Historic Places and National Natural Landmarks) within the view of the site?

1 CONTAINMENT

Hazardous substances present:

A fire marshall has not certified that the facility presents a significant threat.

Type of containment, if applicable:

* * *

2 WASTE CHARACTERISTICS

Direct Evidence

Type of instrument and measurements:

Ignitability

Compound used:

Reactivity

Most reactive compound:

Incompatibility

Most incompatible pair of compounds:

* * *

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility:

Basis of estimating and/or computing waste quantity:

* * *

3 TARGETS

Distance to Nearest Population

Distance to Nearest Building

Distance to Sensitive Environment

Distance to wetlands:

Distance to critical habitat:

Land Use

Distance to commercial/industrial area, if 1 mile or less:

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less:

Distance to residential area, if 2 miles or less:

Distance to agricultural land in production within past 5 years, if 1 mile or less:

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:

Is a historic or landmark site (National Register or Historic Places and National Natural Landmarks) within the view of the site?

Population Within 2-Mile Radius

Buildings Within 2-Mile Radius

DIRECT CONTACT

1 OBSERVED INCIDENT

Date, location, and pertinent details of incident:

No observed incident.

(Reference: Personal Communication)

* * *

Score = 0

2 ACCESSIBILITY

Describe type of barrier(s):

Substances are contained within underground storage tanks. Access to the materials would require pumping or excavation.

(Reference: Personal Communication)

* * *

Score = 1

3 CONTAINMENT

Type of containment, if applicable:

Underground storage tanks

(Reference: Personal Communication)

* * *

Score = 0

4 WASTE CHARACTERISTICS

Toxicity

Compounds evaluated:

petroleum hydrocarbons

(Reference: Personal Communication)

Compound with highest score:

petroleum hydrocarbons

* * *

(Reference: #1)

Score = 15

5 TARGETS

Population within one-mile radius

3,000

Score = 12

Distance to critical habitat (of endangered species)

>1 mile Score = 0

(Reference: Personal communication)

REFERENCES

If the entire reference is not available for public review in the EPA regional files on this site, indicate where the reference may be found:

Reference Number	Description of the Reference
1	**Uncontrolled Hazardous Waste Site Ranking System; A Users Manual.** **National Oil and Hazardous Substances Contingency Plan, Appendix A (40 CFR 300)(47 FR 31219), July 16, 1982.**
2	Preliminary Assessment/Site Inspection of Naval Station Treasure Island, CA. Naval Energy and Environmental Support Activity (NEESA), November 1987.
3	Dewatering Recommendations, Repair of Steam Distribution System, Contract N-62472-82-C-6384. Harding Lawson Associates, July 1, 1985.
4.	Environmental Impact Statement: Homeporting Battleship/Battle group/ Cruiser Destroyer Group. U.S. Department of the Navy. January 1987.
5.	Blake, Jr., M.C., Barton, J.A., Frizzell Jr., V.A., Schlocker, J., Sorg, D., Wentworth, C.M., and Wright, R.H., 1974. Preliminary Geologic Map of Marin and San Francisco Counties and Parts of Alameda, Contra Costa and Sonoma Counties, California, U.S. Geological Survey, Miscellaneous Field Studies Map MF 574.
6.	Radbruch, Dorothy H., 1957. Areal and Engineering Geology of the Oakland West Quadrangle, California, U.S. Geological Survey, Miscellaneous Geologic Investigations Map I-239.
7.	U.S. Navy, Western Division, Naval Facilities Engineering Command, 1986. Natural Resources Management Plan, Treasure Island Naval Station, San Francisco, California.
8.	McCreary-Koretsky Engineers. 1965. Soils and Foundation Investigations for Appropriated Fund Quarters at U.S. Naval Station, Treasure Island, San Francisco, California. A&E Contract No. NBy NBy-078. Report dated 11 January.
9.	California Regional Water Quality Control Board, San Francisco Bay Region, 1982, Water Quality Control Plan, San Francisco Bay Basin (2).
10.	NAVSHIPS/NAVSEL. 1972. Shipboard Oily Waste Generation Rates for Nine Port Complexes.