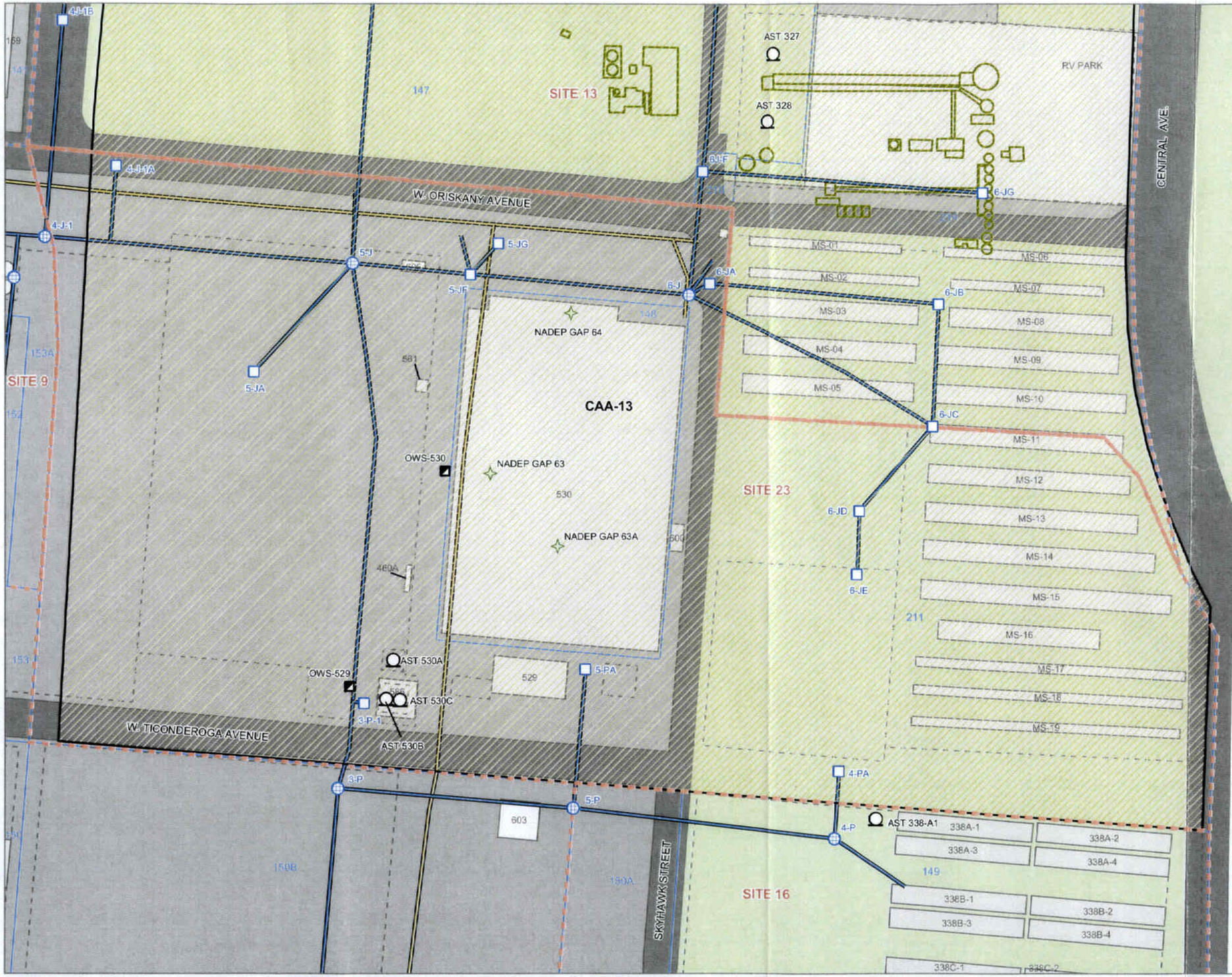
Previous



ABOVEGROUND STORAGE TANK (AST), REMOVED

CATCH BASIN

MANHOLE

OIL-WATER SEPARATOR (OWS)

GENERATOR ACCUMULATION POINT (GAP)

FENCE

SANITARY SEWER LINE

STORM SEWER LINE

CORRECTIVE ACTION AREA (CAA)

FORMER OIL REFINERY

CERCLA SITE BOUNDARY

ENVIRONMENTAL BASELINE SURVEY (EBS) PARCEL AND NUMBER

LAND COVER

Unpaved

Paved

Road

BUILDING

Present

Removed

Notes:

CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act of 1980
NADEP = Naval Aviation Depot Alameda

50 0 50 100 Feet

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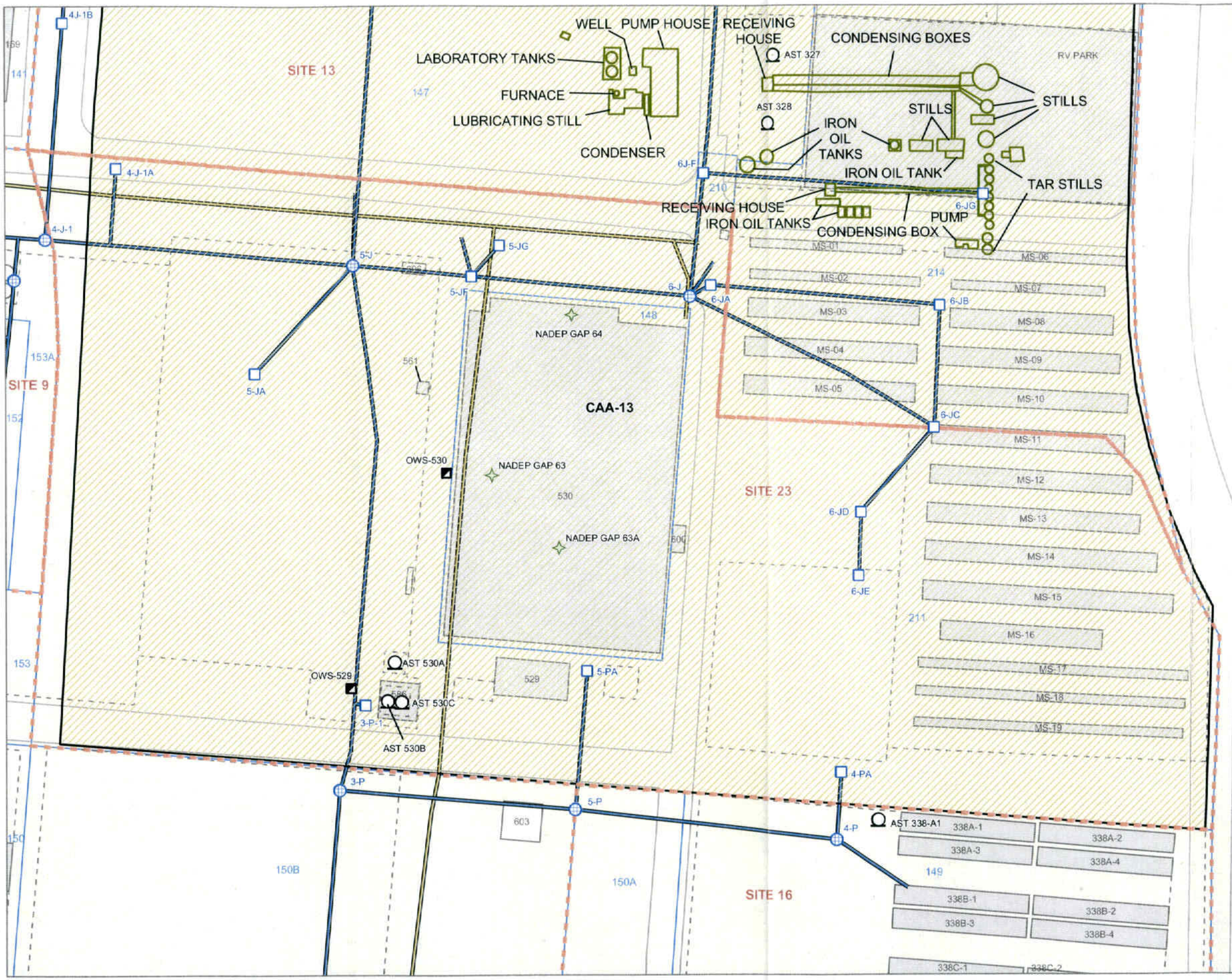
Alameda Point
U.S. Navy Southwest Division, NAVFAC, San Diego

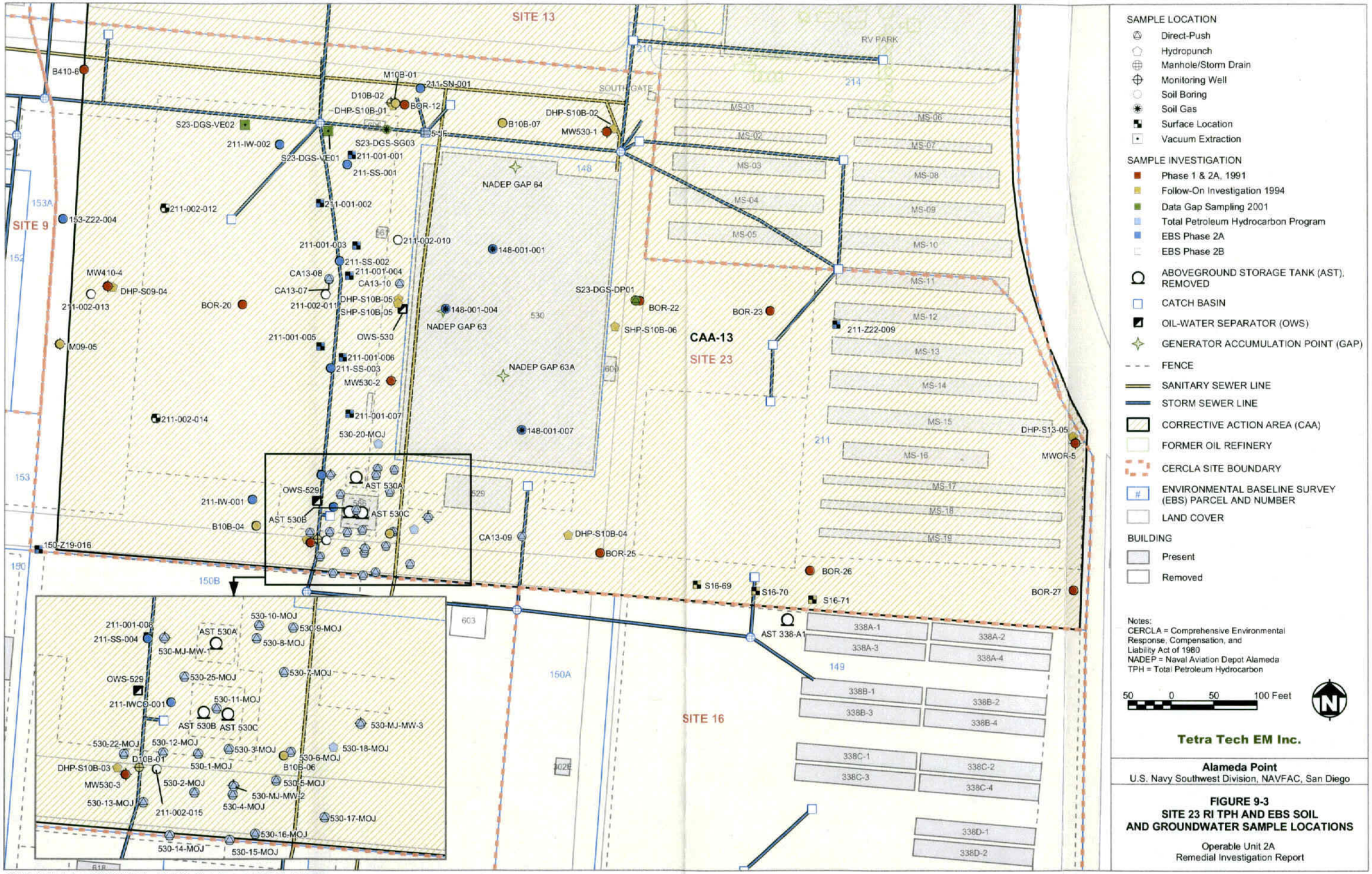
FIGURE 9-1
SITE 23 FEATURES

Operable Unit 2A
Remedial Investigation Report

2005-01-25 U:\almda_sa\DO028\OU2A\RI\mxd\fig09-01_s23_features.mxd T:EMI-SA K. Johnson



2005-01-06 U:\almda_sa\DO028\OU2A\RI\mxd\fig09-02_s23_refinery_features.mxd TtEMI-SA K. Johnson



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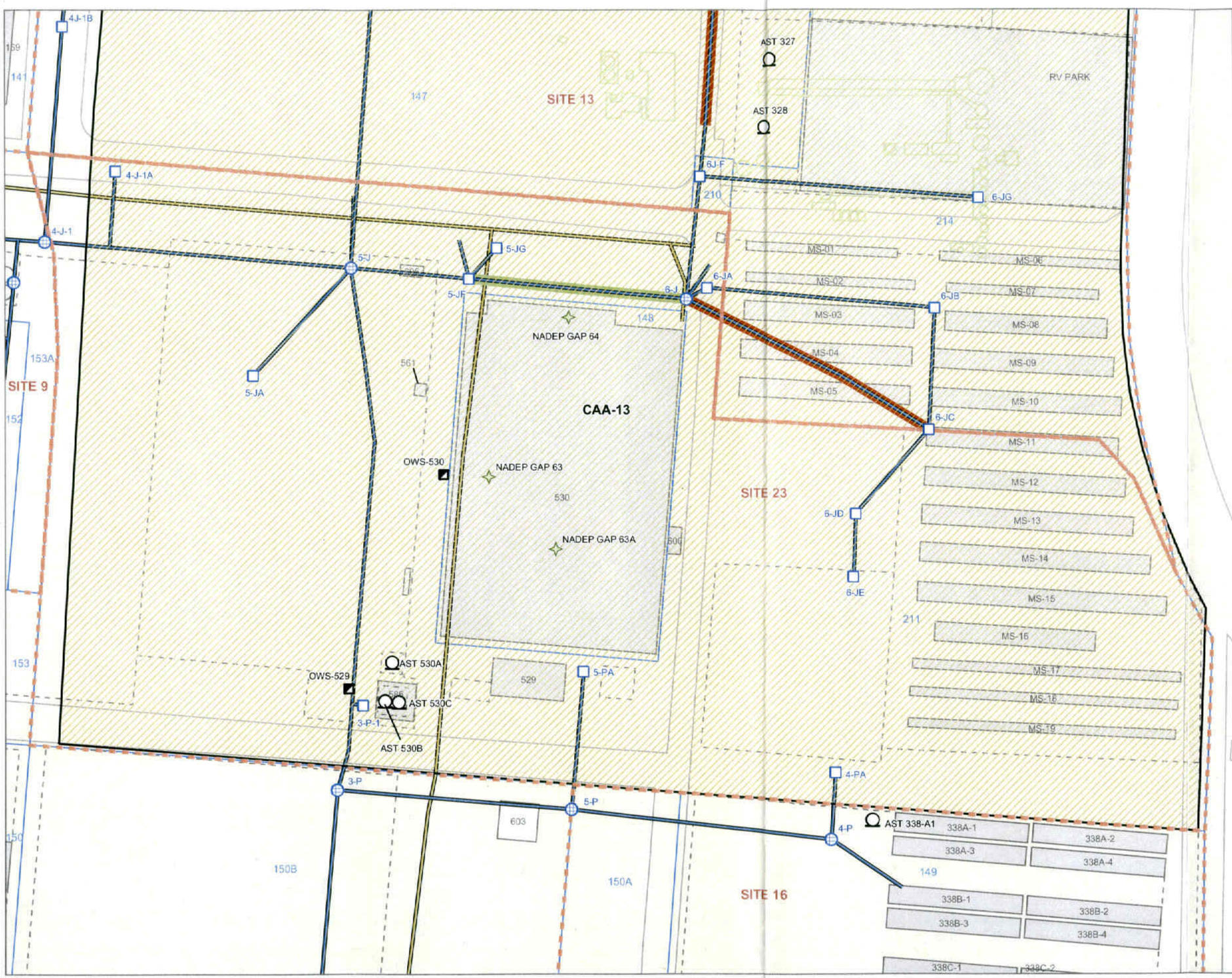

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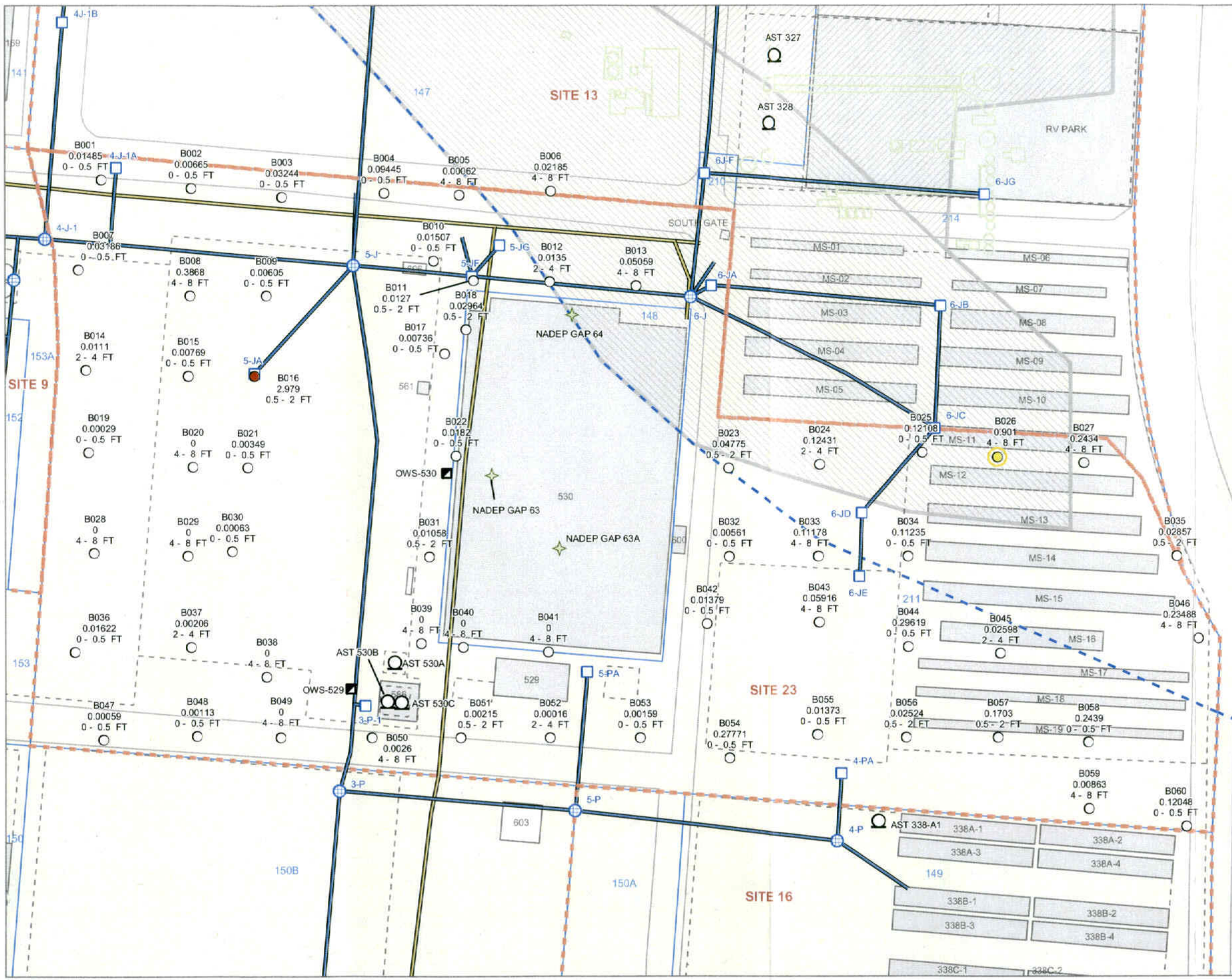

PAH SAMPLE LOCATION

- BaP < 0.6 mg/kg
- 0.6 mg/kg > BaP < 1 mg/kg
- BaP >= 1 mg/kg
- Black Soil Identified
- ABOVEGROUND STORAGE TANK (AST), REMOVED
- CATCH BASIN
- MANHOLE
- OIL-WATER SEPARATOR (OWS)
- GENERATOR ACCUMULATION POINT (GAP)
- FENCE
- HISTORIC SHORELINE
- SANITARY SEWER LINE
- STORM SEWER LINE
- FORMER OIL REFINERY
- CERCLA SITE BOUNDARY
- AREA IMPACTED BY TRW
- AREA POTENTIALLY IMPACTED BY TRW
- ENVIRONMENTAL BASELINE SURVEY (EBS) PARCEL AND NUMBER
- LAND COVER

BUILDING

- Present
- Removed

Notes:
BaP = Benzo(a)pyrene equivalent
CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act of 1980
FT= Feet
mg/kg = Milligrams per kilogram
NADEP = Naval Aviation Depot Alameda
PAH = Polynuclear aromatic hydrocarbon
TRW = Tarry Refinery Waste

Concentrations presented are in milligrams per kilogram and are either most recent monitoring well data or highest concentration detected in grab groundwater samples from a single point.

50 0 50 100 Feet

N

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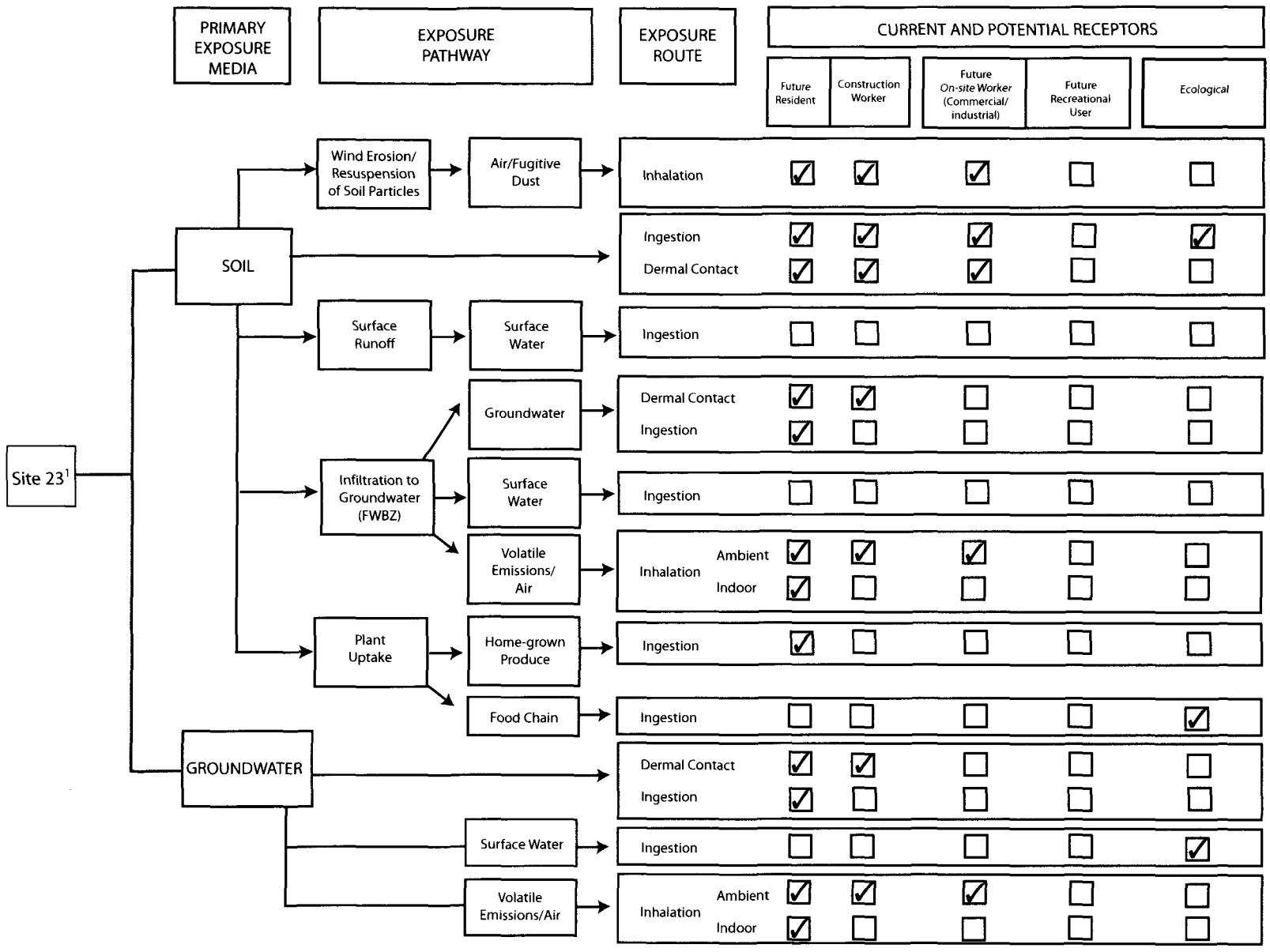
FIGURE 9-5
SITE 23 SOIL BaP EQUIVALENT VALUES AND AREA IMPACTED BY TARRY REFINERY WASTE

Operable Unit 2A
Remedial Investigation Report

2005-01-13 U:\almda_sa\DO028\OU2A\RI\mxd\fig09-05_s23_bap.mxd TtEMI-SA K. Johnson



[1]Defueling area and associated OWSs 529 through 530, and ASTs 530A through 530C, former oil refinery activities

☑ Potentially Complete Exposure Pathway

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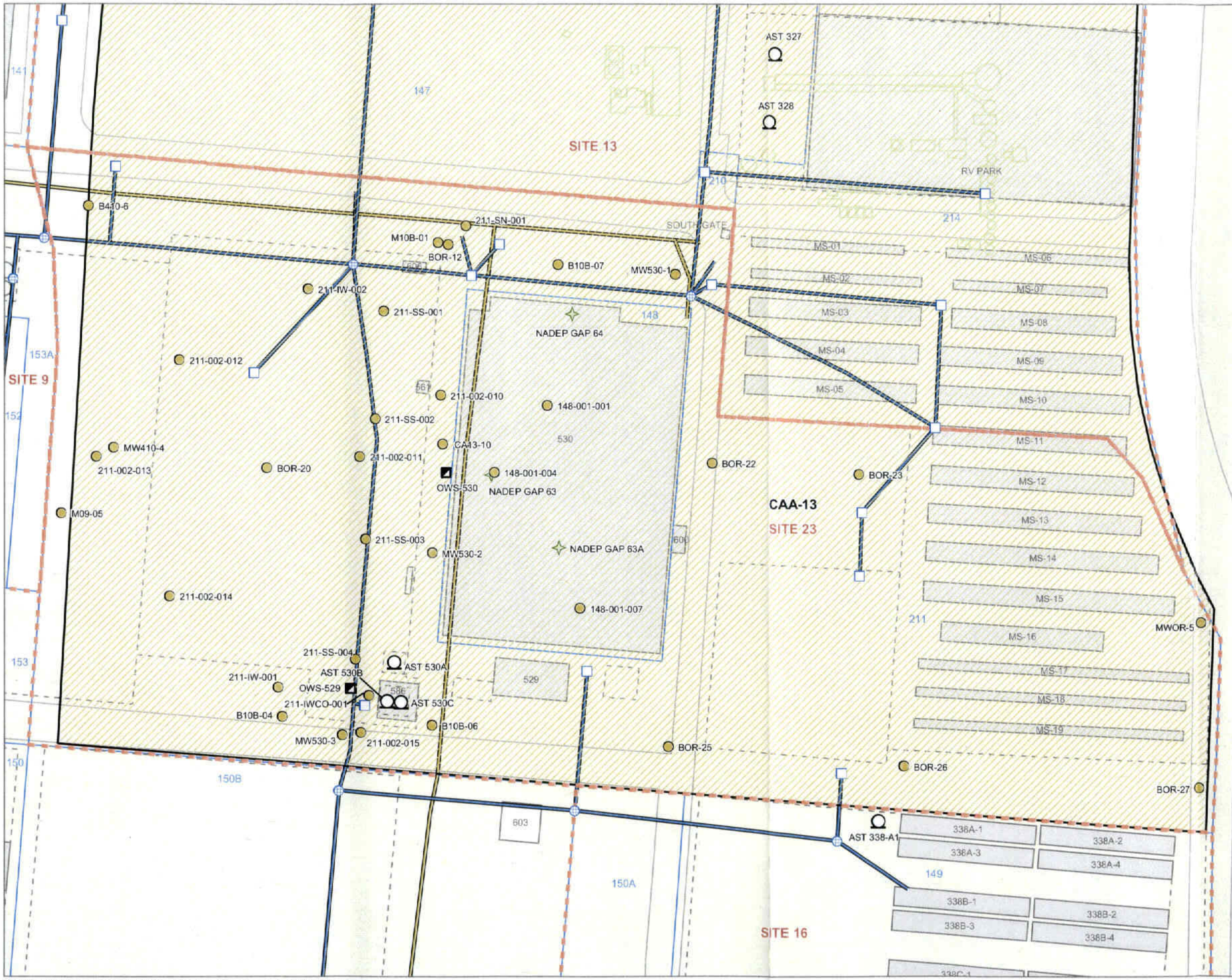
FIGURE 9-6
CONCEPTUAL SITE MODEL
Remedial Investigation Report for Sites 9, 13, 19, 22, and 23



SAMPLING LOCATION

- Soil Boring
- ABOVEGROUND STORAGE TANK (AST), REMOVED
- CATCH BASIN
- OIL-WATER SEPARATOR (OWS)
- GENERATOR ACCUMULATION POINT (GAP)
- FENCE
- SANITARY SEWER LINE
- STORM SEWER LINE
- CORRECTIVE ACTION AREA (CAA)
- FORMER OIL REFINERY
- CERCLA SITE BOUNDARY
- ENVIRONMENTAL BASELINE SURVEY (EBS) PARCEL AND NUMBER
- LAND COVER

BUILDING

- Present
- Removed

Notes:
CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act of 1980
NADEP = Naval Aviation Depot Alameda
VOC = Volatile Organic Compound

50 0 50 100 Feet

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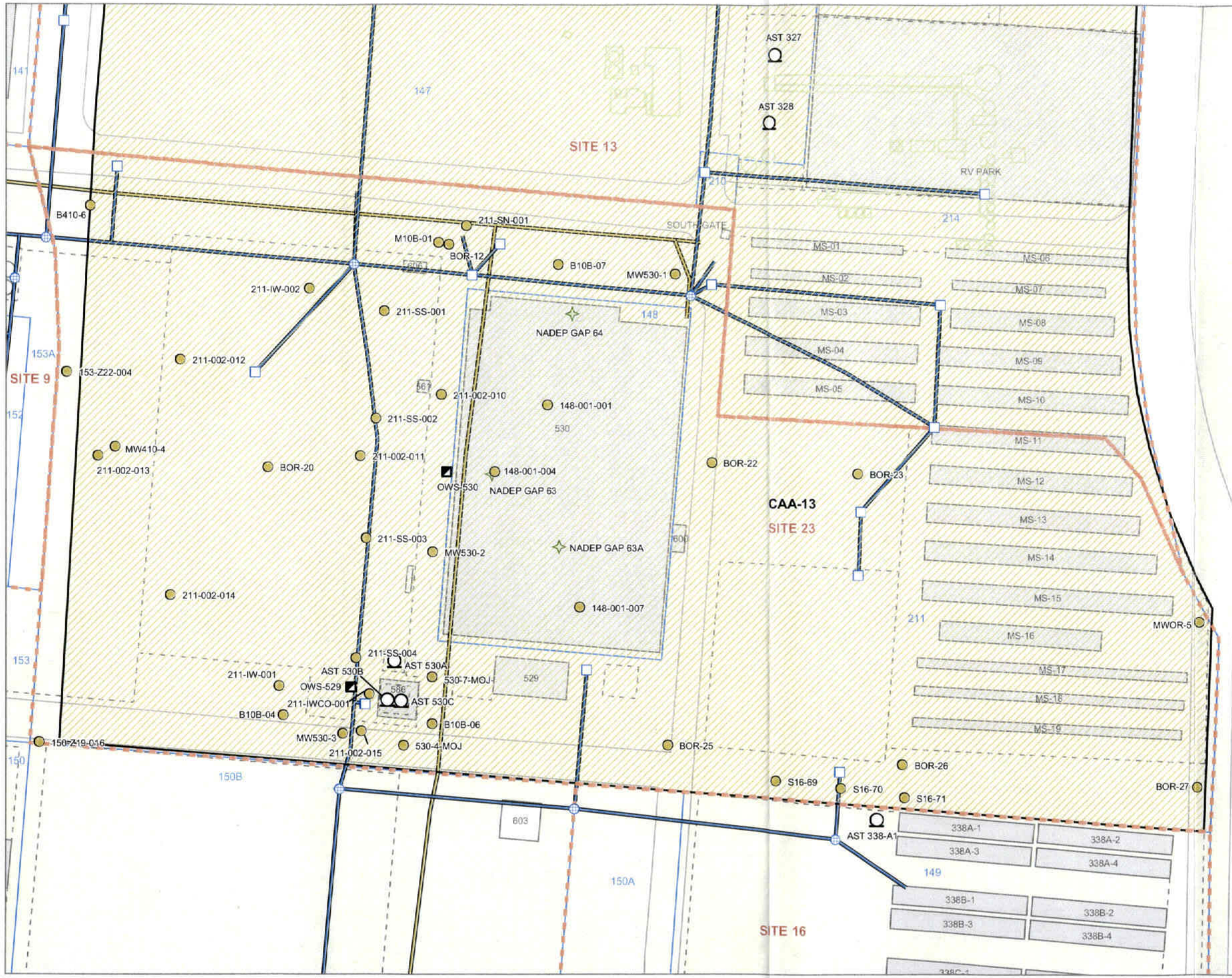
U.S. Navy Southwest Division, NAVFAC, San Diego

FIGURE 9-7A
SITE 23 SAMPLING LOCATIONS FOR VOCs IN SOIL

Operable Unit 2A
Remedial Investigation Report

2005-01-13 U:\almda_sa\DO028\OU2A\RI\mxd\fig09-7A_s23_soil_voc.mxd TtEMI-SA K. Johnson



SAMPLING LOCATION

- Soil Boring
- ABOVEGROUND STORAGE TANK (AST), REMOVED
- CATCH BASIN
- OIL-WATER SEPARATOR (OWS)
- GENERATOR ACCUMULATION POINT (GAP)
- FENCE
- SANITARY SEWER LINE
- STORM SEWER LINE
- CORRECTIVE ACTION AREA (CAA)
- FORMER OIL REFINERY
- CERCLA SITE BOUNDARY
- ENVIRONMENTAL BASELINE SURVEY (EBS) PARCEL AND NUMBER
- LAND COVER

BUILDING

- Present
- Removed

Notes:
CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act of 1980
NADEP = Naval Aviation Depot Alameda
SVOC = Semivolatile Organic Compound

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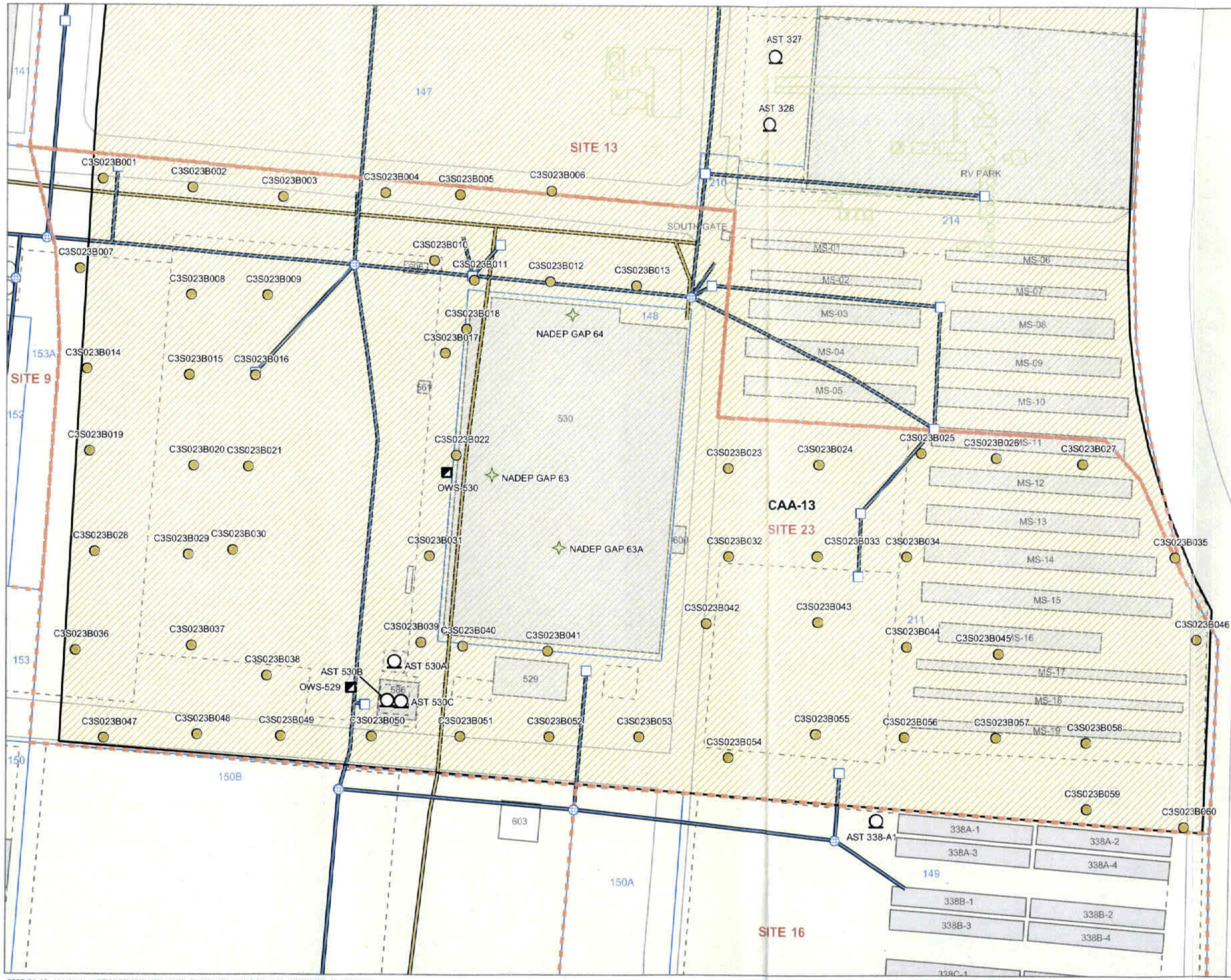
FIGURE 9-7B
SITE 23 SAMPLING LOCATIONS FOR SVOCs IN SOIL

Operable Unit 2A
Remedial Investigation Report

2005-01-13 U:\almda_sa\DO028\OU2A\RI\mxd\fig09-7B_s23_soil_svoc.mxd TtEMI-SA K. Johnson



SAMPLING LOCATION

- Soil Boring
- ABOVEGROUND STORAGE TANK (AST), REMOVED
- CATCH BASIN
- OIL-WATER SEPARATOR (OWS)
- GENERATOR ACCUMULATION POINT (GAP)
- FENCE
- SANITARY SEWER LINE
- STORM SEWER LINE
- CORRECTIVE ACTION AREA (CAA)
- FORMER OIL REFINERY
- CERCLA SITE BOUNDARY
- ENVIRONMENTAL BASELINE SURVEY (EBS) PARCEL AND NUMBER
- LAND COVER

BUILDING

- Present
- Removed

Notes:
CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act of 1980
NADEP = Naval Aviation Depot Alameda
PAH = Polynuclear Aromatic Hydrocarbon

N

50 0 50 100 Feet

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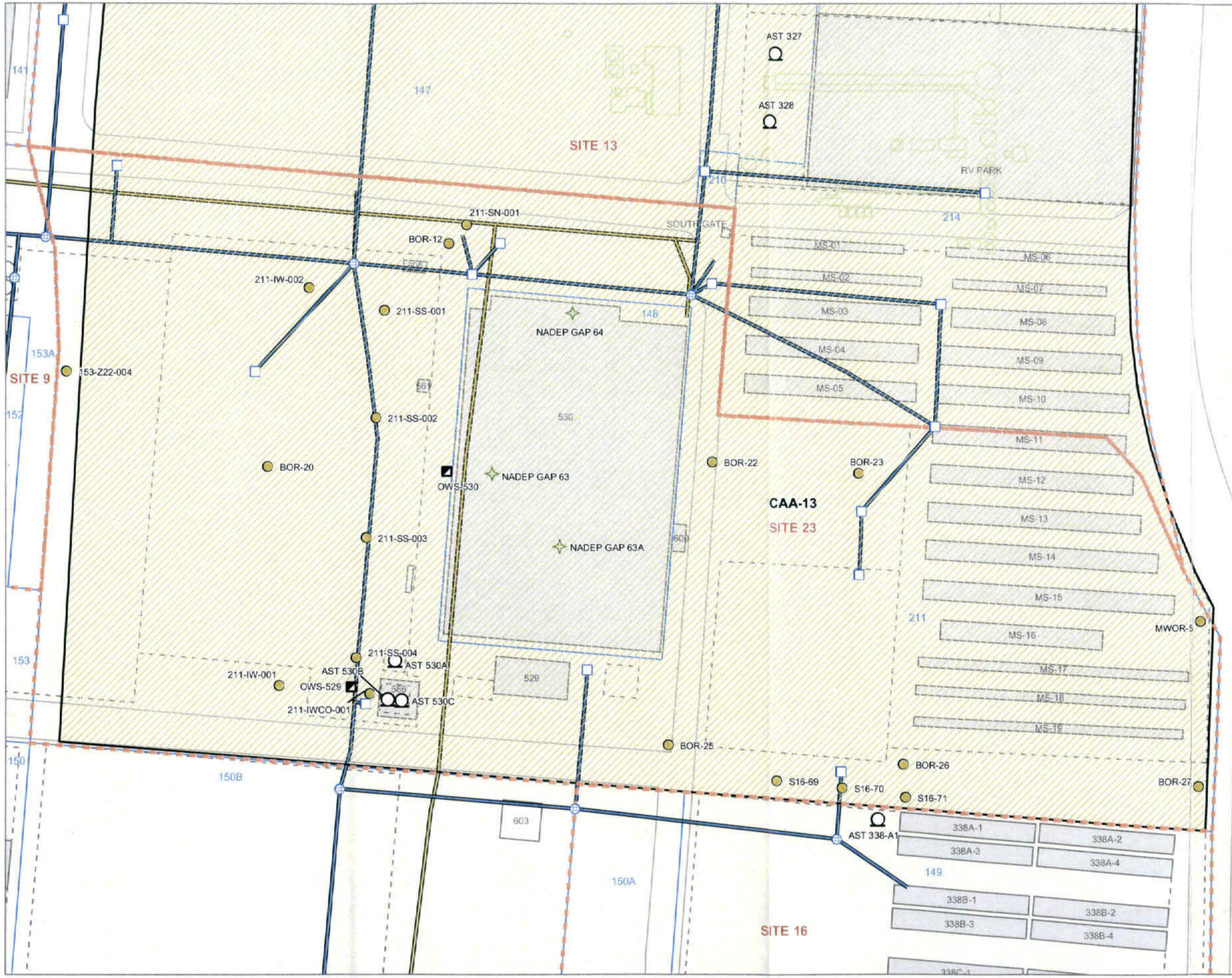
FIGURE 9-7C
SITE 23 SAMPLING LOCATIONS FOR PAH IN SOIL

Operable Unit 2A
Remedial Investigation Report

2005-01-13 U:\almda_sa\DO028\OU2A\RI\mxd\fig09-7C_s23_soil_PAH.mxd TtEMI-SA K. Johnson



SAMPLING LOCATION

- Soil Boring
- ABOVEGROUND STORAGE TANK (AST), REMOVED
- CATCH BASIN
- OIL-WATER SEPARATOR (OWS)
- GENERATOR ACCUMULATION POINT (GAP)
- FENCE
- SANITARY SEWER LINE
- STORM SEWER LINE
- CORRECTIVE ACTION AREA (CAA)
- FORMER OIL REFINERY
- CERCLA SITE BOUNDARY
- ENVIRONMENTAL BASELINE SURVEY (EBS) PARCEL AND NUMBER
- LAND COVER

BUILDING

- Present
- Removed

Notes:
CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act of 1980
NADEP = Naval Aviation Depot Alameda

50 0 50 100 Feet

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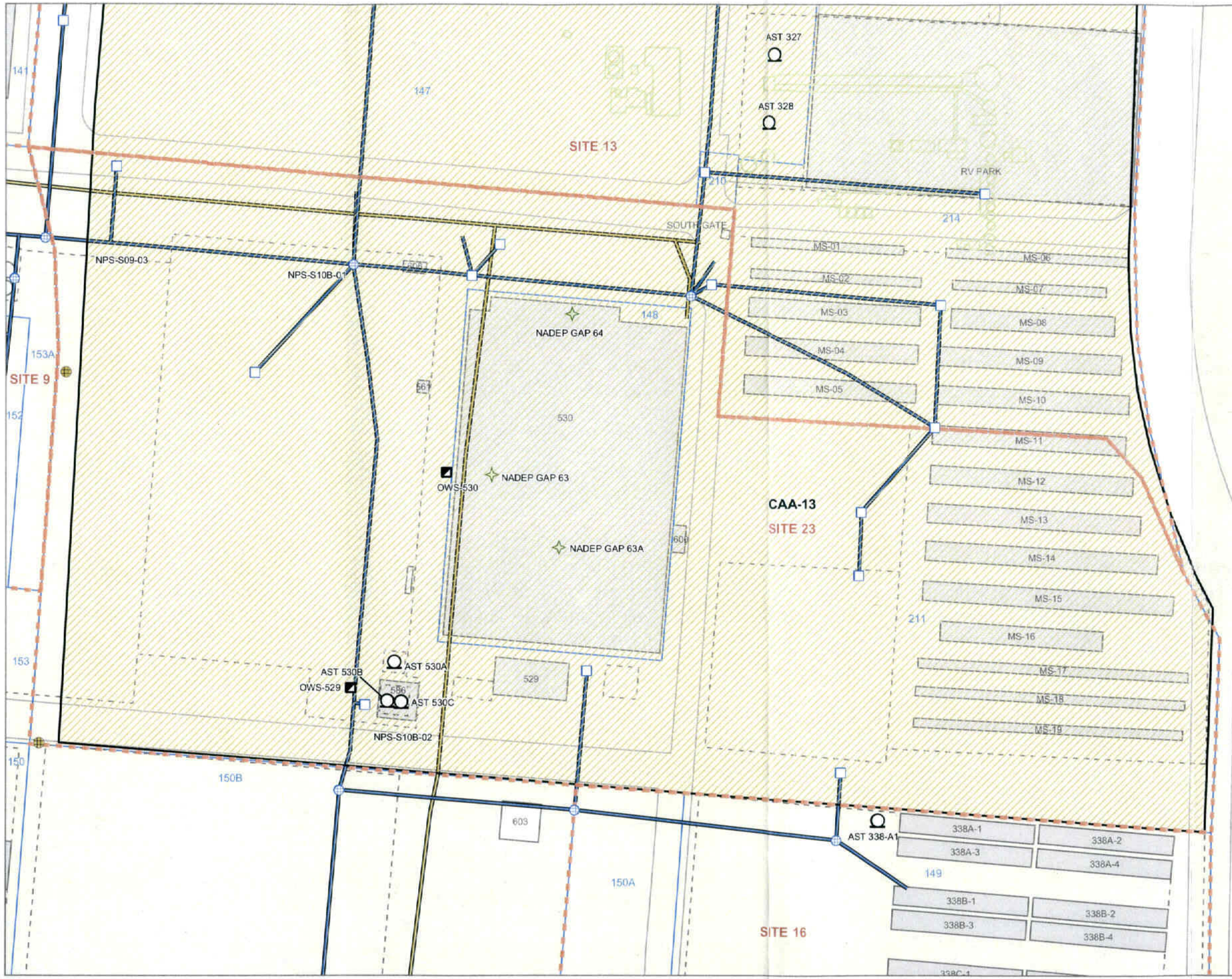
U.S. Navy Southwest Division, NAVFAC, San Diego

FIGURE 9-7D
SITE 23 SAMPLING LOCATIONS FOR PESTICIDES IN SOIL

Operable Unit 2A
Remedial Investigation Report

2005-01-13 U:\almda_sa\DO028\OU2A\RI\mxd\fig09-7D_s23_soil_pest.mxd TtEMI-SA K. Johnson



SAMPLING LOCATION

- Soil Boring
- ABOVEGROUND STORAGE TANK (AST), REMOVED
- CATCH BASIN
- OIL-WATER SEPARATOR (OWS)
- GENERATOR ACCUMULATION POINT (GAP)
- FENCE
- SANITARY SEWER LINE
- STORM SEWER LINE
- CORRECTIVE ACTION AREA (CAA)
- FORMER OIL REFINERY
- CERCLA SITE BOUNDARY
- ENVIRONMENTAL BASELINE SURVEY (EBS) PARCEL AND NUMBER
- LAND COVER

BUILDING

- Present
- Removed

Notes:
CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act of 1980
NADEP = Naval Aviation Depot Alameda
PCB = Polychlorinated Biphenyl

50 0 50 100 Feet

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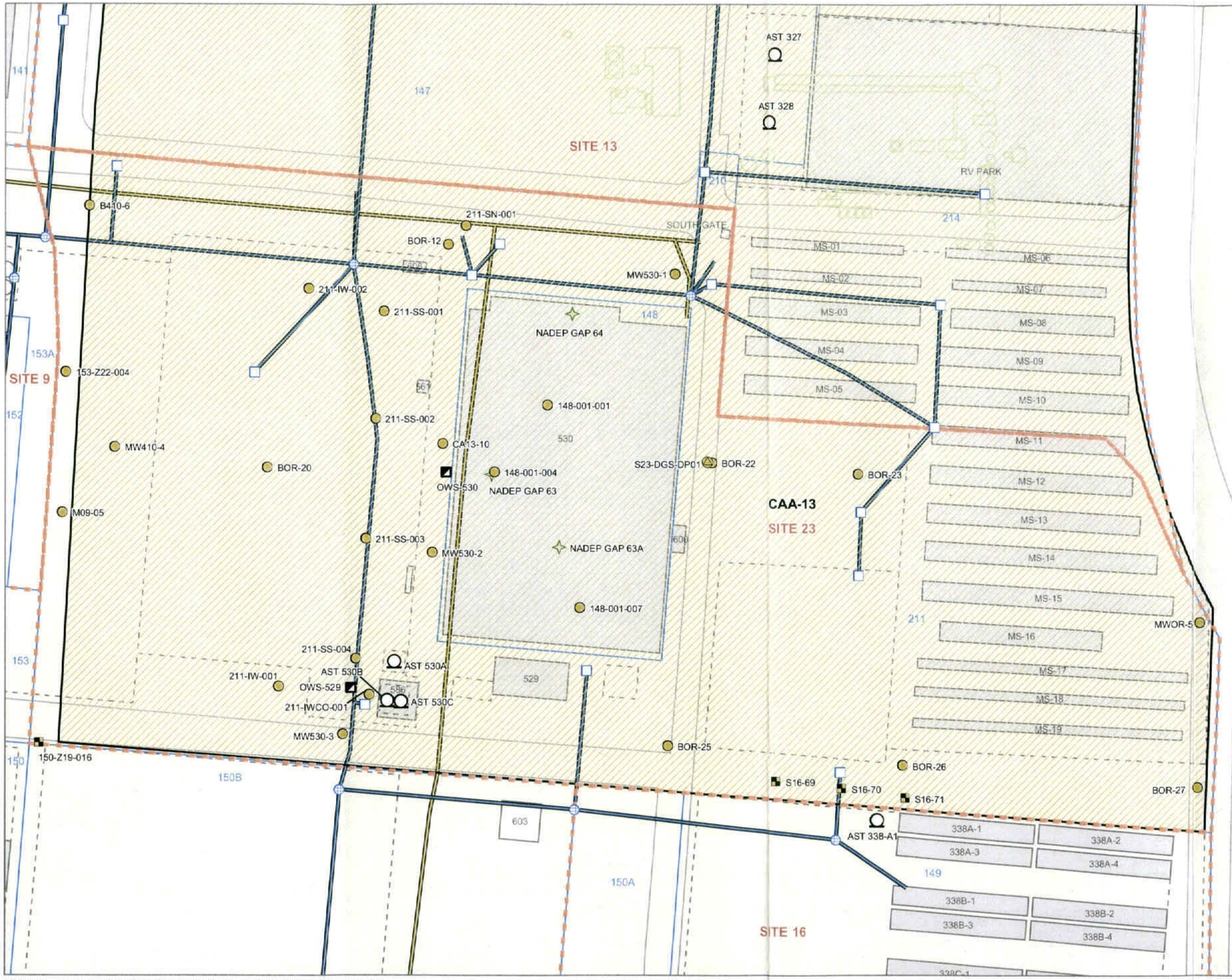
U.S. Navy Southwest Division, NAVFAC, San Diego

FIGURE 9-7E
SITE 23 SAMPLING LOCATIONS FOR PCBs IN SOIL

Operable Unit 2A
Remedial Investigation Report

2005-01-13 U:\almda_sa\DO028\OU2A\RI\mxd\fig09-7E_s23_soil_pcb.mxd TtEMI-SA K. Johnson



SAMPLING LOCATION

- Soil Boring
- Surface location
- ABOVEGROUND STORAGE TANK (AST), REMOVED
- CATCH BASIN
- OIL-WATER SEPARATOR (OWS)
- GENERATOR ACCUMULATION POINT (GAP)
- FENCE
- SANITARY SEWER LINE
- STORM SEWER LINE
- CORRECTIVE ACTION AREA (CAA)
- FORMER OIL REFINERY
- CERCLA SITE BOUNDARY
- ENVIRONMENTAL BASELINE SURVEY (EBS) PARCEL AND NUMBER
- LAND COVER

BUILDING

- Present
- Removed

Notes:
CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act of 1980
NADEP = Naval Aviation Depot Alameda

50 0 50 100 Feet

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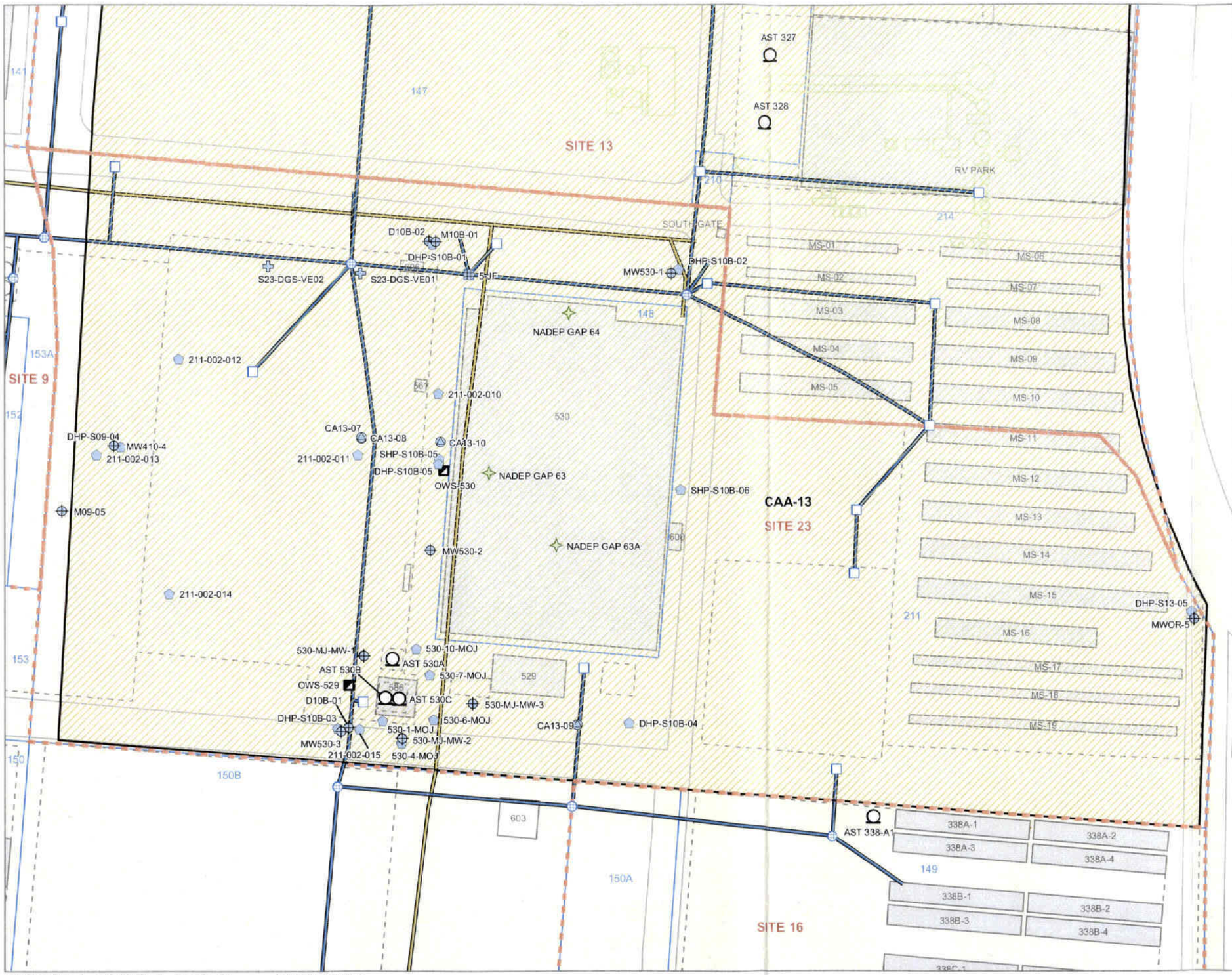
U.S. Navy Southwest Division, NAVFAC, San Diego

FIGURE 9-7F
SITE 23 SAMPLING LOCATIONS FOR TOTAL METALS IN SOIL

Operable Unit 2A
Remedial Investigation Report

2005-01-13 U:\almda_sa\DO028\OU2A\RI\mxd\fig09-7FC_s23_soil_tmetal.mxd TtEMI-SA K. Johnson



SAMPLING LOCATION

- Monitoring Well
- Hydropunch
- Vacuum Extraction
- Direct-Push
- Manhole/Storm Drain
- ABOVEGROUND STORAGE TANK (AST), REMOVED
- CATCH BASIN
- OIL-WATER SEPARATOR (OWS)
- GENERATOR ACCUMULATION POINT (GAP)
- FENCE
- SANITARY SEWER LINE
- STORM SEWER LINE
- CORRECTIVE ACTION AREA (CAA)
- FORMER OIL REFINERY
- CERCLA SITE BOUNDARY
- ENVIRONMENTAL BASELINE SURVEY (EBS) PARCEL AND NUMBER
- LAND COVER

BUILDING

- Present
- Removed

Notes:
CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act of 1980
NADEP = Naval Aviation Depot Alameda
VOC = Volatile Organic Compound

N

50 0 50 100 Feet

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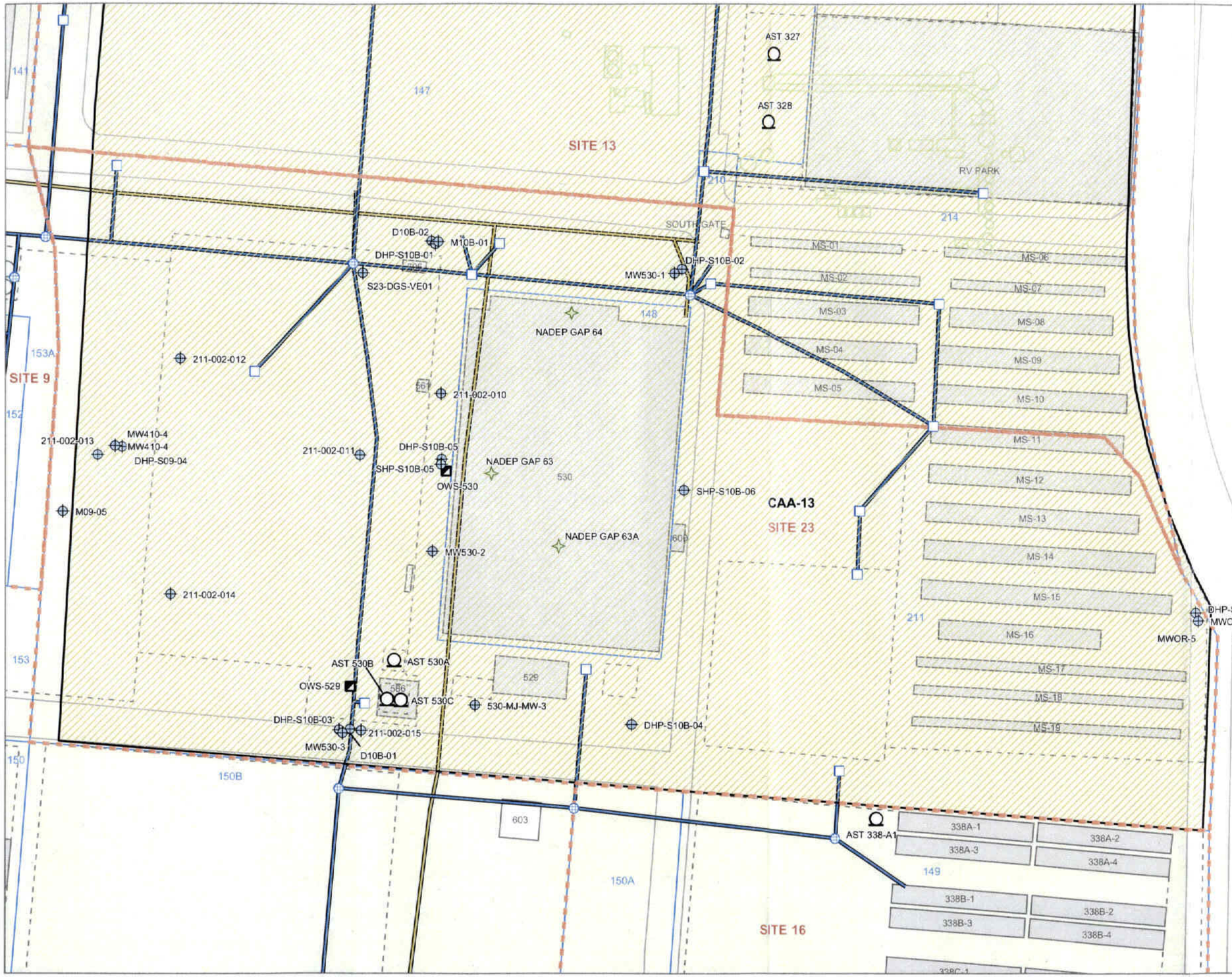
U.S. Navy Southwest Division, NAVFAC, San Diego

FIGURE 9-7G
SITE 23 SAMPLING LOCATIONS FOR VOCs IN GROUNDWATER

Operable Unit 2A
Remedial Investigation Report

2005-01-13 U:\almda_sa\DO028\OU2A\RI\mxd\fig09-7G_s23_gw_voc.mxd TtEMI-SA K. Johnson



SAMPLING LOCATION

- Monitoring Well
- ABOVEGROUND STORAGE TANK (AST), REMOVED
- CATCH BASIN
- OIL-WATER SEPARATOR (OWS)
- GENERATOR ACCUMULATION POINT (GAP)
- FENCE
- SANITARY SEWER LINE
- STORM SEWER LINE
- CORRECTIVE ACTION AREA (CAA)
- FORMER OIL REFINERY
- CERCLA SITE BOUNDARY
- ENVIRONMENTAL BASELINE SURVEY (EBS) PARCEL AND NUMBER
- LAND COVER

BUILDING

- Present
- Removed

Notes:
CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act of 1980
NADEP = Naval Aviation Depot Alameda
SVOC = Semivolatile Organic Compound

50 0 50 100 Feet

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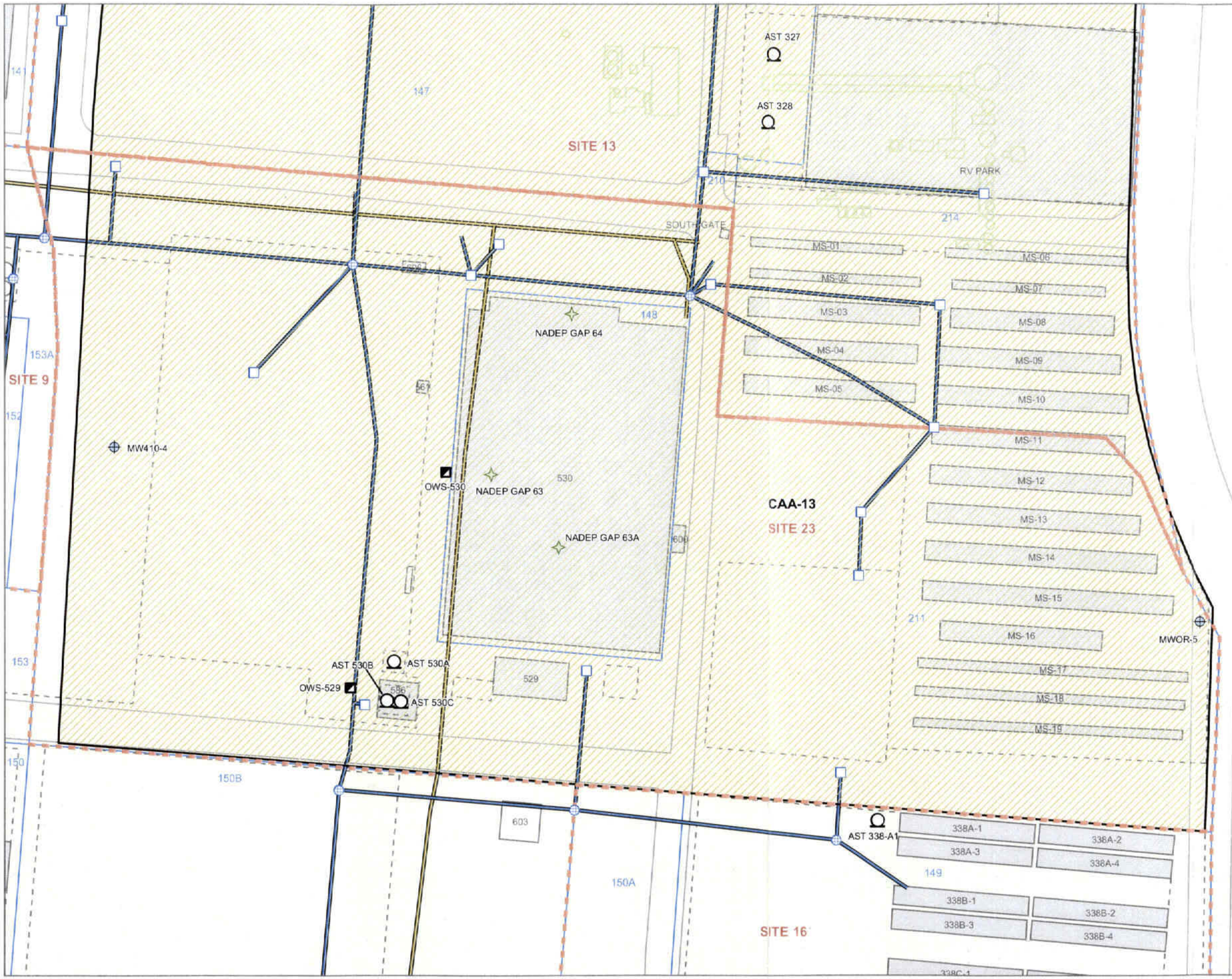
U.S. Navy Southwest Division, NAVFAC, San Diego

FIGURE 9-7H
SITE 23 SAMPLING LOCATIONS FOR SVOCs IN GROUNDWATER

Operable Unit 2A
Remedial Investigation Report

2005-01-13 U:\almda_sa\DO028\OU2A\RI\mxd\fig09-7H_s23_gw_svoc.mxd TtEMI-SA K. Johnson



SAMPLING LOCATION

- Monitoring Well
- ABOVEGROUND STORAGE TANK (AST), REMOVED
- CATCH BASIN
- OIL-WATER SEPARATOR (OWS)
- GENERATOR ACCUMULATION POINT (GAP)
- FENCE
- SANITARY SEWER LINE
- STORM SEWER LINE
- CORRECTIVE ACTION AREA (CAA)
- FORMER OIL REFINERY
- CERCLA SITE BOUNDARY
- ENVIRONMENTAL BASELINE SURVEY (EBS) PARCEL AND NUMBER
- LAND COVER

BUILDING

- Present
- Removed

Notes:
CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act of 1980
NADEP = Naval Aviation Depot Alameda

N

50 0 50 100 Feet

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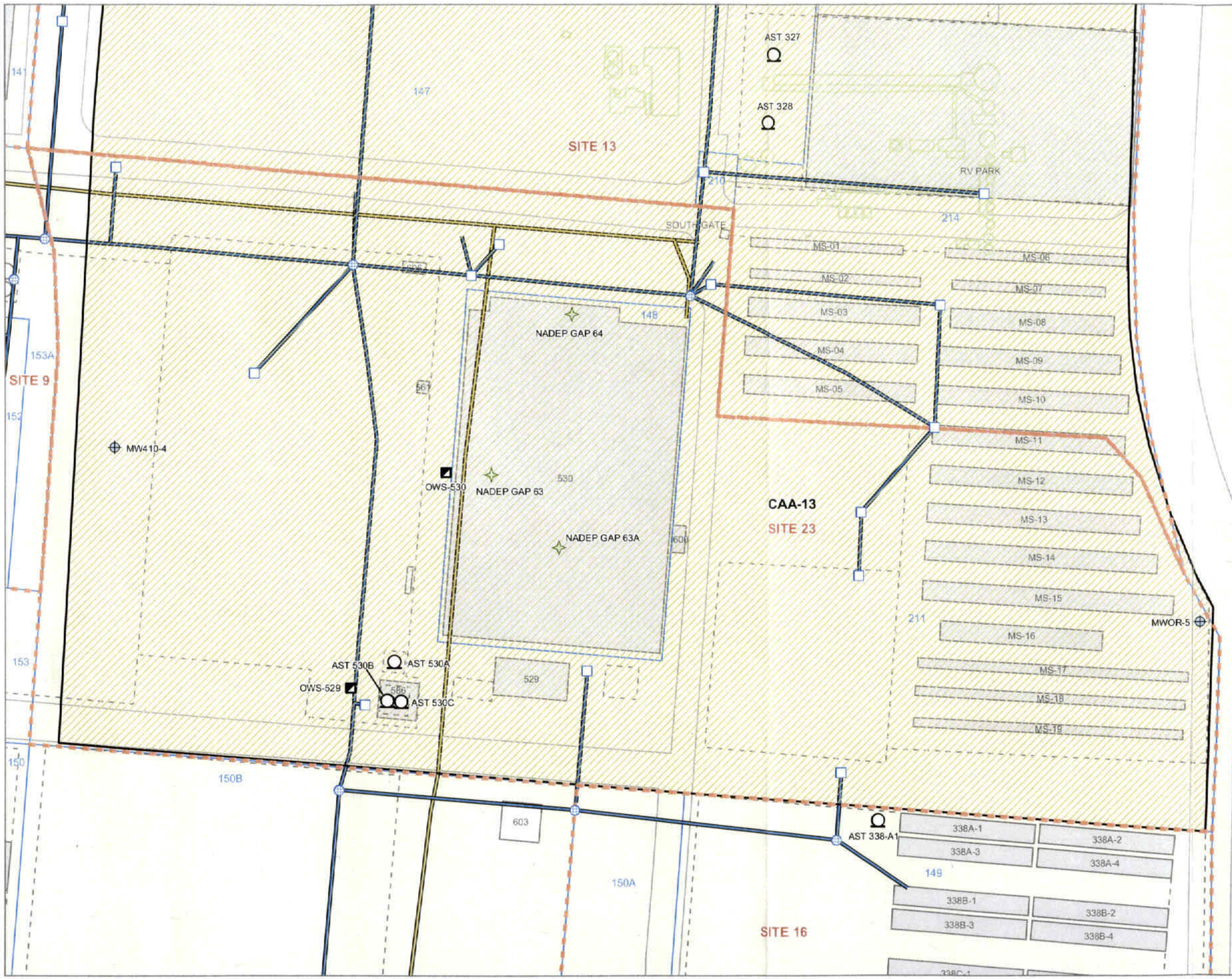
Alameda Point
U.S. Navy Southwest Division, NAVFAC, San Diego

FIGURE 9-7I
SITE 23 SAMPLING LOCATIONS FOR PESTICIDES IN GROUNDWATER

Operable Unit 2A
Remedial Investigation Report

2005-01-13 U:\almda_sa\DO028\OU2A\RI\mxd\fig09-7I_s23_gw_pest.mxd TtEMI-SA K. Johnson



SAMPLING LOCATION

- Monitoring Well
- ABOVEGROUND STORAGE TANK (AST), REMOVED
- CATCH BASIN
- OIL-WATER SEPARATOR (OWS)
- GENERATOR ACCUMULATION POINT (GAP)
- FENCE
- SANITARY SEWER LINE
- STORM SEWER LINE
- CORRECTIVE ACTION AREA (CAA)
- FORMER OIL REFINERY
- CERCLA SITE BOUNDARY
- ENVIRONMENTAL BASELINE SURVEY (EBS) PARCEL AND NUMBER
- LAND COVER

BUILDING

- Present
- Removed

Notes:
CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act of 1980
NADEP = Naval Aviation Depot Alameda
PCB = Polychlorinated biphenyl

50 0 50 100 Feet

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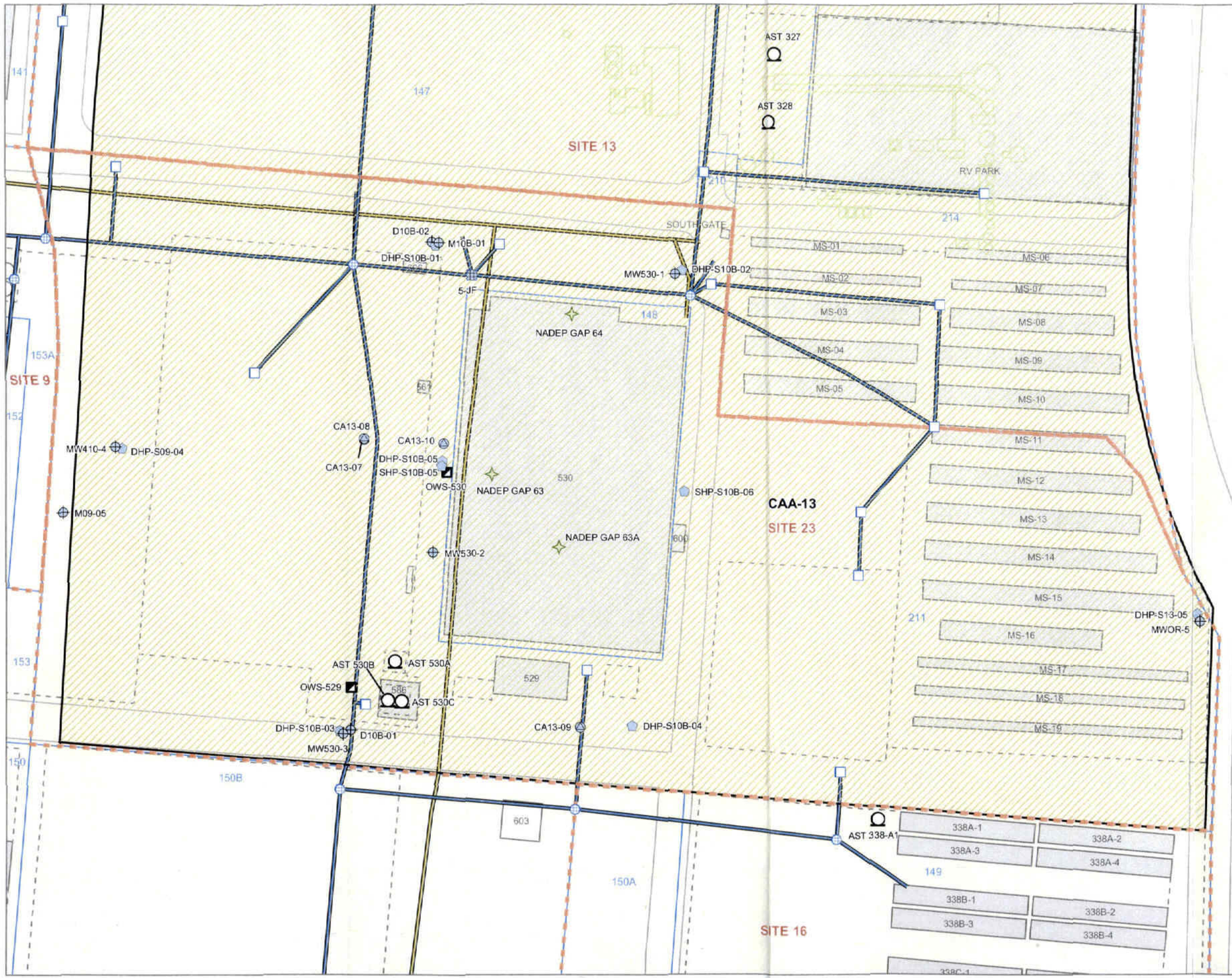
U.S. Navy Southwest Division, NAVFAC, San Diego

FIGURE 9-7J
SITE 23 SAMPLING LOCATIONS FOR PCBs IN GROUNDWATER

Operable Unit 2A
Remedial Investigation Report

2005-01-13 U:\almda_sa\DO028\OU2A\RI\mxd\fig09-7J_s23_gw_pest.mxd TtEMI-SA K. Johnson



SAMPLING LOCATION

- Direct-Push
- Hydropunch
- Manhole/Stormdrain
- Monitoring Well
- ABOVEGROUND STORAGE TANK (AST), REMOVED
- CATCH BASIN
- OIL-WATER SEPARATOR (OWS)
- GENERATOR ACCUMULATION POINT (GAP)
- FENCE
- SANITARY SEWER LINE
- STORM SEWER LINE
- CORRECTIVE ACTION AREA (CAA)
- FORMER OIL REFINERY
- CERCLA SITE BOUNDARY
- ENVIRONMENTAL BASELINE SURVEY (EBS) PARCEL AND NUMBER
- LAND COVER

BUILDING

- Present
- Removed

Notes:
CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act of 1980
NADEP = Naval Aviation Depot Alameda

50 0 50 100 Feet

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Alameda Point
U.S. Navy Southwest Division, NAVFAC, San Diego

FIGURE 9-7K
SITE 23 SAMPLING LOCATIONS FOR METALS IN GROUNDWATER

Operable Unit 2A
Remedial Investigation Report

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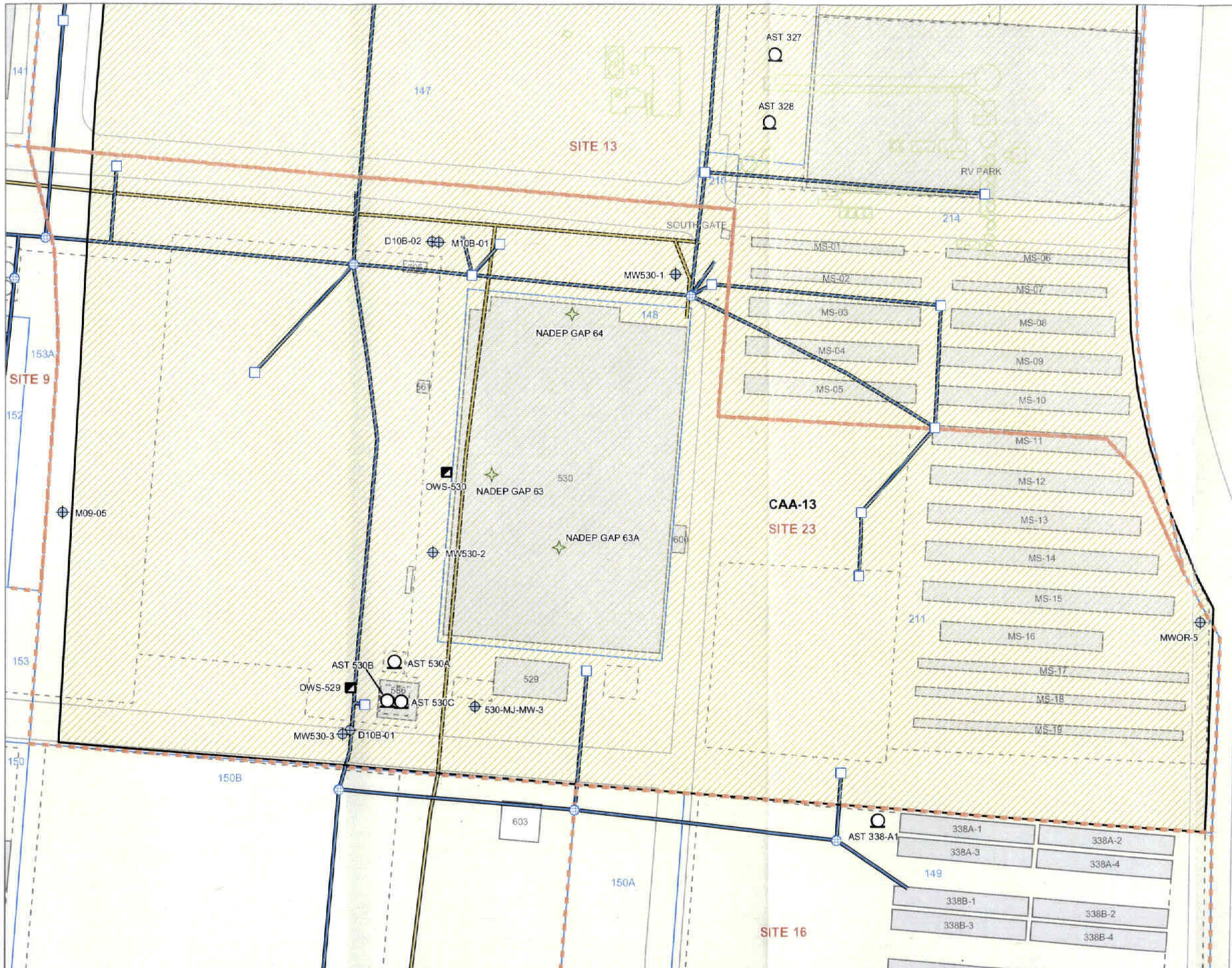

SAMPLING LOCATION

- Monitoring Well
- ABOVEGROUND STORAGE TANK (AST), REMOVED
- CATCH BASIN
- OIL-WATER SEPARATOR (OWS)
- GENERATOR ACCUMULATION POINT (GAP)
- FENCE
- SANITARY SEWER LINE
- STORM SEWER LINE
- CORRECTIVE ACTION AREA (CAA)
- FORMER OIL REFINERY
- CERCLA SITE BOUNDARY
- ENVIRONMENTAL BASELINE SURVEY (EBS) PARCEL AND NUMBER
- LAND COVER

BUILDING

- Present
- Removed

Notes:
CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act of 1980
NADEP = Naval Aviation Depot Alameda
PAH = Polynuclear Aromatic Hydrocarbon

N

50 0 50 100 Feet

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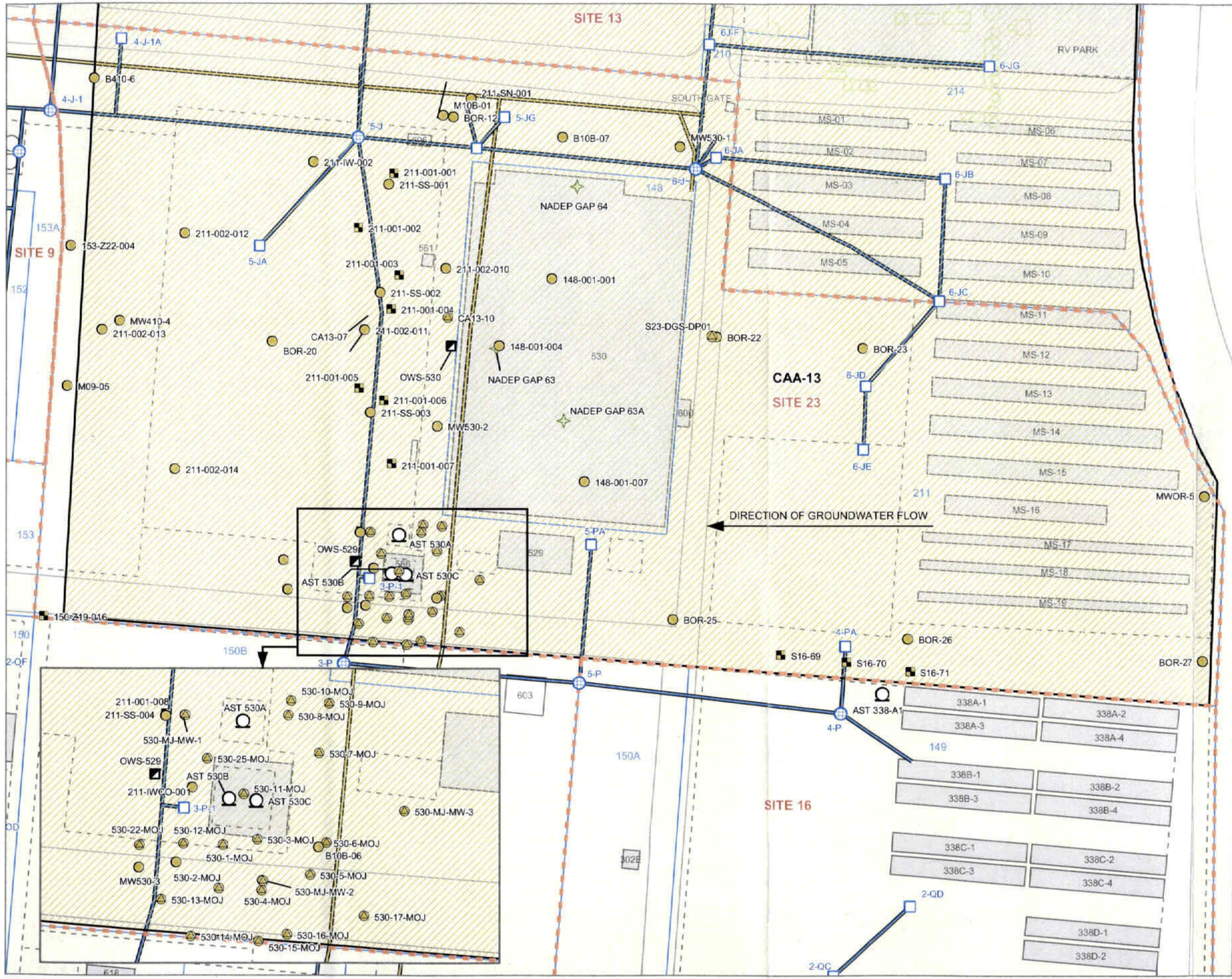
FIGURE 9-7L
SITE 23 SAMPLING LOCATIONS FOR PAHs IN GROUNDWATER

Operable Unit 2A
Remedial Investigation Report

2005-01-13 U:\almda_sa\DO028\OU2A\RI\mxd\fig09-7L_s23_gw_pah.mxd T:EMI-SA K. Johnson



SAMPLING LOCATION

- Direct-Push
- Soil Boring
- Surface Location
- ABOVEGROUND STORAGE TANK (AST), REMOVED
- CATCH BASIN
- MANHOLE
- OIL-WATER SEPARATOR (OWS)
- GENERATOR ACCUMULATION POINT (GAP)
- FENCE
- SANITARY SEWER LINE
- STORM SEWER LINE
- CORRECTIVE ACTION AREA (CAA)
- FORMER OIL REFINERY
- CERCLA SITE BOUNDARY
- ENVIRONMENTAL BASELINE SURVEY (EBS) PARCEL AND NUMBER
- LAND COVER

BUILDING

- Present
- Removed

Notes:
CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act of 1980
NADEP = Naval Aviation Depot Alameda
TTPH = Total total petroleum hydrocarbon
µg/L = Micrograms per liter

Groundwater data used in the RI were collected between 1990 and April 2003.
Remedial activity is on-going at this site.

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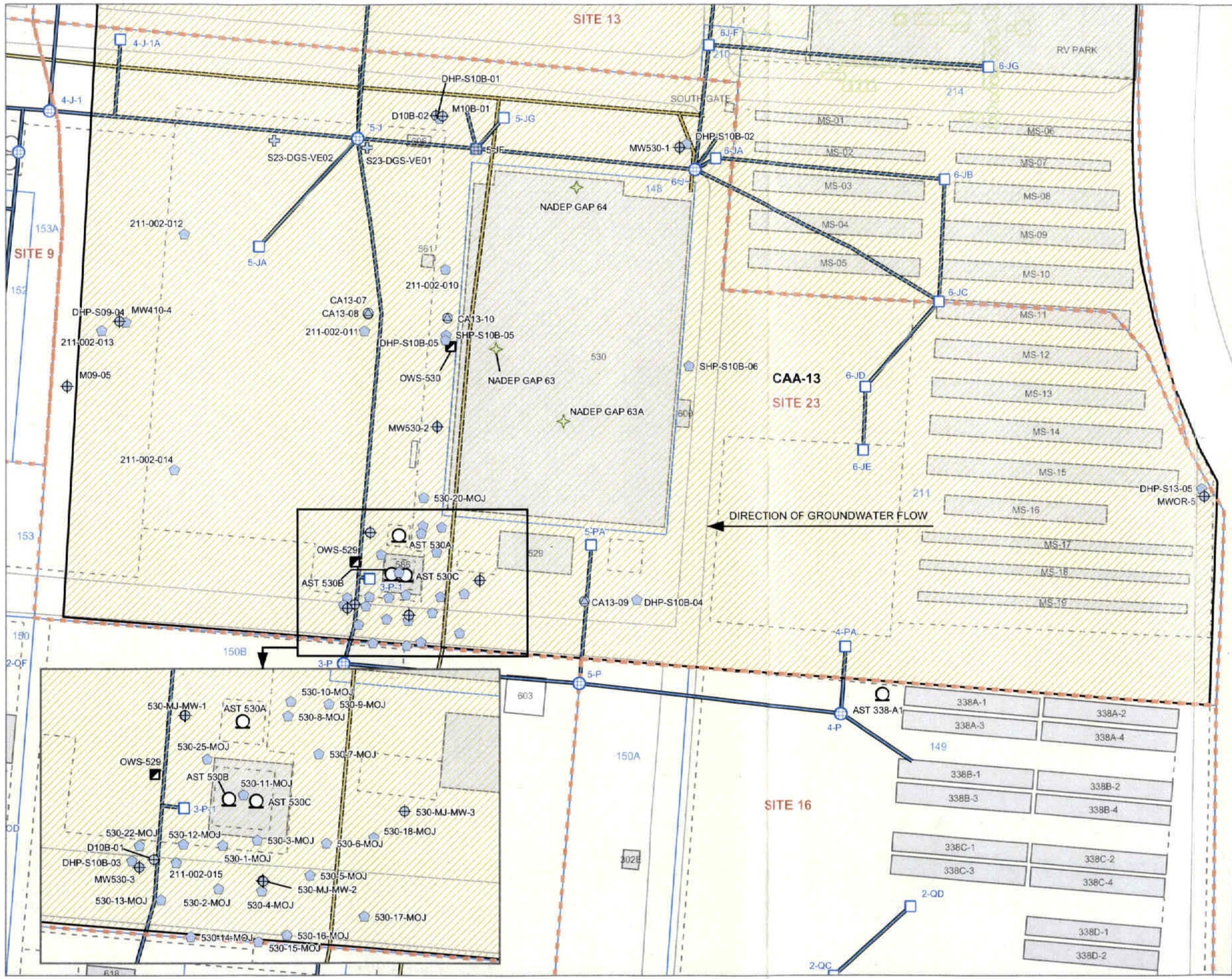
U.S. Navy Southwest Division, NAVFAC, San Diego

FIGURE 9-8
SITE 23
SAMPLING LOCATIONS FOR TPH IN SOIL

Operable Unit 2A
Remedial Investigation Report

2005-01-13 U:\alameda_sa\do028\OU2A\RI\mxd\fig09-08_s23_soil_tph.mxd TtEMI-SA K. Johnson



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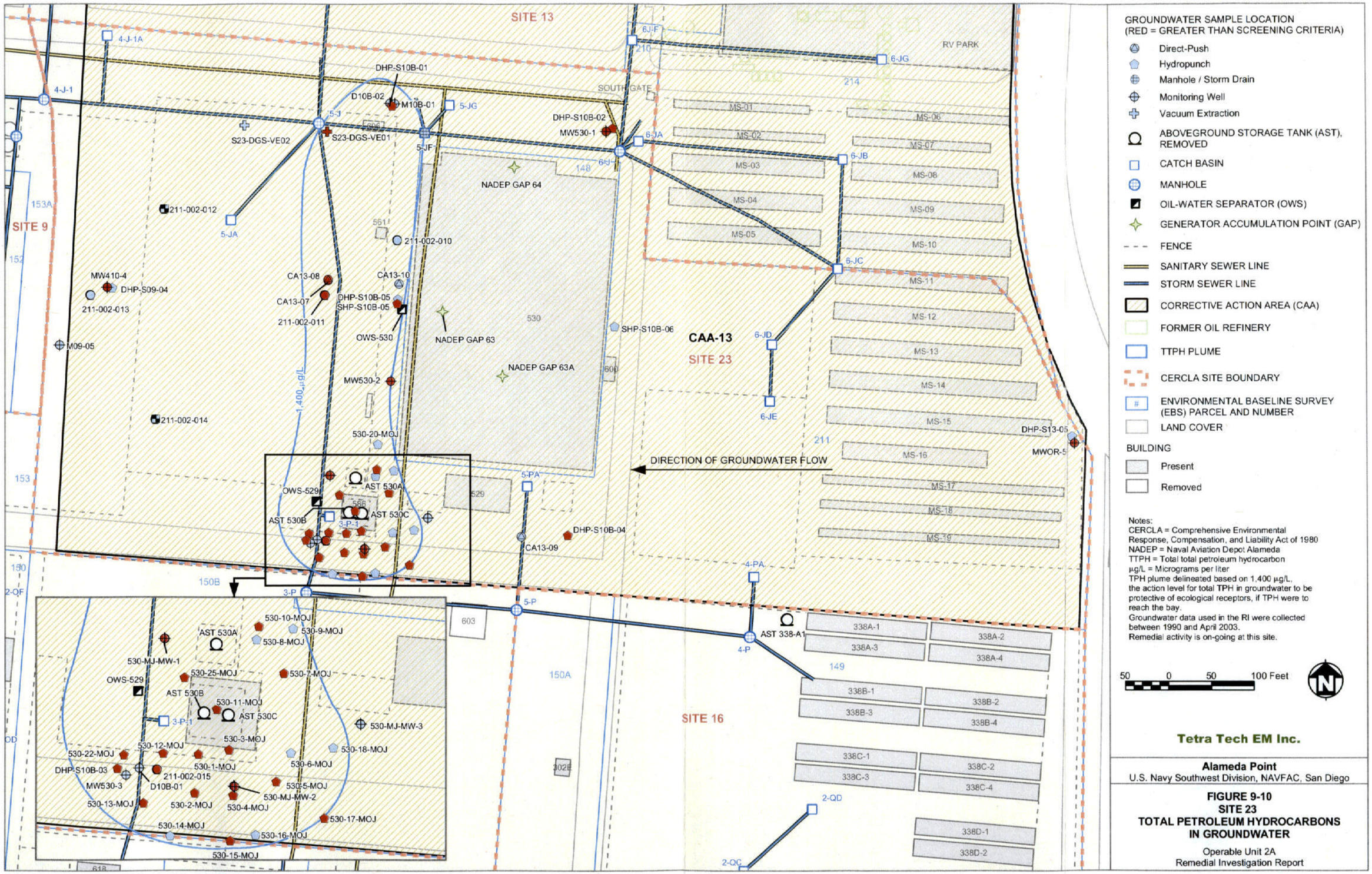

GROUNDWATER SAMPLE LOCATION
(RED = GREATER THAN SCREENING CRITERIA)

- Direct-Push
- Hydropunch
- Manhole / Storm Drain
- Monitoring Well
- Vacuum Extraction
- ABOVEGROUND STORAGE TANK (AST), REMOVED
- CATCH BASIN
- MANHOLE
- OIL-WATER SEPARATOR (OWS)
- GENERATOR ACCUMULATION POINT (GAP)
- FENCE
- SANITARY SEWER LINE
- STORM SEWER LINE
- CORRECTIVE ACTION AREA (CAA)
- FORMER OIL REFINERY
- TTPH PLUME
- CERCLA SITE BOUNDARY
- ENVIRONMENTAL BASELINE SURVEY (EBS) PARCEL AND NUMBER
- LAND COVER

BUILDING

- Present
- Removed

Notes:
CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act of 1980
NADEP = Naval Aviation Depot Alameda
TTPH = Total total petroleum hydrocarbon
µg/L = Micrograms per liter
TPH plume delineated based on 1,400 µg/L, the action level for total TPH in groundwater to be protective of ecological receptors, if TPH were to reach the bay.
Groundwater data used in the RI were collected between 1990 and April 2003.
Remedial activity is on-going at this site.

50 0 50 100 Feet

N

Tetra Tech EM Inc.

Alameda Point
U.S. Navy Southwest Division, NAVFAC, San Diego

FIGURE 9-10
SITE 23
TOTAL PETROLEUM HYDROCARBONS IN GROUNDWATER

Operable Unit 2A
Remedial Investigation Report

2005-01-13 U:\almda_sa\do028\OU2A\RI\mxd\fig09-10_s23_tph_gw.mxd TtEMI-SA K. Johnson

TABLE 9-1: SITE 23 SOIL SAMPLING SUMMARY

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

				ANALYSES PERFORMED												
SAMPLE LOCATION	SAMPLE IDENTIFICATION	DATE SAMPLED	DEPTH (ft bgs)	SVOC	VOC	PAH	Pesticides/ PCB	Total Metals	General Chemistry	TPH	Cyanide	Herbicides	Oil & Grease	Tin	Organic Lead	Dioxins
REMEDIAL INVESTIGATION																
Phases 1 & 2A Investigation, 1991																
B410-6	B410-6 [0.5-1.0]	07/08/1990	0.5 - 1	X	--	--	--	X	--	--	--	--	--	--	--	--
	B410-6 [1.0-1.5]	07/11/1990	1 - 1.5	--	--	--	--	--	--	--	--	--	--	--	--	--
	B410-6 [2.0-2.5]	07/08/1990	2 - 2.5	X	X	--	--	--	--	--	--	--	--	--	--	--
	B410-6 [3.5-4.0]	07/11/1990	3.5 - 4	--	--	--	--	X	X	--	--	--	--	--	--	--
	B410-6 [4.0-4.5]	07/08/1990	4 - 4.5	--	--	--	--	X	--	--	--	--	--	--	--	--
	B410-6 [5.5-6.0]	07/08/1990	5.5 - 6	X	X	--	--	--	--	--	--	--	--	--	--	--
	B410-6 [8.0-8.5]	07/08/1990	8 - 8.5	--	--	--	--	X	--	--	--	--	--	--	--	--
	B410-6 [8.5-9.0]	07/08/1990	8.5 - 9	X	X	--	--	--	--	--	--	--	--	--	--	--
	B410-6 [10.0-10.5]	07/08/1990	10 - 10.5	--	--	--	--	X	--	--	--	--	--	--	--	--
	B410-6 [11.0-11.5]	07/08/1990	11 - 11.5	X	X	--	--	--	--	--	--	--	--	--	--	--
	B410-6 [11.5-12.0]	07/08/1990	11.5 - 12	X	--	--	--	--	--	--	--	--	--	--	--	--
	B410-6 [12.5-13.0]	07/08/1990	12.5 - 13	--	--	--	--	X	--	--	--	--	--	--	--	--
	B410-6 [13.0-13.5]	07/08/1990	13 - 13.5	X	X	--	--	--	--	--	--	--	--	--	--	--
	B410-6 [14.5-15.0]	07/08/1990	14.5 - 15	--	--	--	--	X	--	--	--	--	--	--	--	--
BOR-12	BOR-12 [0.5-1.0]	07/18/1990	0.5 - 1	X	--	--	X	X	--	--	--	--	--	--	--	--
	BOR-12 [3.5-4.0]	07/18/1990	3.5 - 4	X	X	--	--	--	--	X	--	--	--	--	--	--
	BOR-12 [4.0-4.5]	07/18/1990	4 - 4.5	--	--	--	X	X	X	--	--	--	--	--	--	--
	BOR-12 [8.0-8.5]	07/18/1990	8 - 8.5	--	--	--	--	--	--	--	--	--	--	--	--	--
	BOR-12 [8.5-9.0]	07/18/1990	8.5 - 9	X	X	--	--	--	--	X	--	--	--	--	--	--
	BOR-12 [10.0-10.5]	07/18/1990	10 - 10.5	--	--	--	X	X	--	--	--	--	--	--	--	--
	BOR-12 [11.0-11.5]	07/18/1990	11 - 11.5	X	X	--	--	--	--	X	--	--	--	--	--	--
	BOR-12 [11.5-12.0]	07/18/1990	11.5 - 12	--	--	--	X	X	--	--	--	--	--	--	--	--
	BOR-12 [14.0-14.5]	07/18/1990	14 - 14.5	X	X	--	--	--	--	X	--	--	--	--	--	--
	BOR-12 [14.5-15.0]	07/18/1990	14.5 - 15	--	--	--	X	X	--	--	--	--	--	--	--	--
BOR-20	BOR-20 [2.5-3.0]	07/17/1990	2.5 - 3	X	--	--	X	X	--	--	--	--	--	--	--	--
	BOR-20 [3.0-3.5]	07/17/1990	3 - 3.5	X	X	--	--	--	--	X	--	--	--	--	--	--
	BOR-20 [4.5-5.0]	07/17/1990	4.5 - 5	--	--	--	--	--	--	--	--	--	--	--	--	--
	BOR-20 [5.0-5.5]	07/17/1990	5 - 5.5	--	--	--	X	X	X	--	--	--	--	--	--	--
	BOR-20 [6.0-6.5]	07/17/1990	6 - 6.5	X	X	--	--	--	--	X	--	--	--	--	--	--
	BOR-20 [7.0-7.5]	07/17/1990	7 - 7.5	--	--	--	X	X	--	--	--	--	--	--	--	--
	BOR-20 [10.0-10.5]	07/17/1990	10 - 10.5	X	X	--	--	--	--	X	--	--	--	--	--	--
	BOR-20 [10.5-11.0]	07/17/1990	10.5 - 11	--	--	--	X	--	--	--	--	--	--	--	--	--
	BOR-20 [11.5-12.0]	07/17/1990	11.5 - 12	X	X	--	--	X	--	--	--	--	--	--	--	--
	BOR-20 [14.5-15.0]	07/17/1990	14.5 - 15	--	--	--	X	X	--	--	--	--	--	--	--	--
BOR-22	BOR-22 [0.5-1.0]	07/23/1990	0.5 - 1	X	--	--	X	X	--	--	--	--	--	--	--	--
	BOR-22 [2.5-3.0]	07/23/1990	2.5 - 3	X	X	--	--	--	--	X	--	--	--	--	--	--
	BOR-22 [3.5-4.0]	07/23/1990	3.5 - 4	--	--	--	X	X	X	--	--	--	--	--	--	--
	BOR-22 [4.0-4.5]	07/23/1990	4 - 4.5	--	--	--	--	--	--	--	--	--	--	--	--	--
	BOR-22 [7.5-8.0]	07/23/1990	7.5 - 8	X	X	--	--	--	--	X	--	--	--	--	--	--

TABLE 9-1: SITE 23 SOIL SAMPLING SUMMARY

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

SAMPLE LOCATION	SAMPLE IDENTIFICATION	DATE SAMPLED	DEPTH (ft bgs)	ANALYSES PERFORMED												
				SVOC	VOC	PAH	Pesticides/ PCB	Total Metals	General Chemistry	TPH	Cyanide	Herbicides	Oil & Grease	Tin	Organic Lead	Dioxins
Phases 1 & 2A Investigation, 1991 (Continued)																
BOR-22	BOR-22 [8.0-8.5]	07/23/1990	8 - 8.5	--	--	--	X	X	--	--	--	--	--	--	--	--
(Continued)	BOR-22 [11.0-11.5]	07/23/1990	11 - 11.5	X	X	--	--	--	--	X	--	--	--	--	--	--
	BOR-22 [11.5-12.0]	07/23/1990	11.5 - 12	--	--	--	X	X	--	--	--	--	--	--	--	--
	BOR-22 [14.0-14.5]	07/23/1990	14 - 14.5	X	X	--	--	--	--	X	--	--	--	--	--	--
	BOR-22 [14.5-15.0]	07/23/1990	14.5 - 15	--	--	--	X	X	--	--	--	--	--	--	--	--
BOR-23	BOR-23 [1.0-1.5]	07/20/1990	1 - 1.5	X	--	--	X	X	--	--	--	--	--	--	--	--
	BOR-23 [3.0-3.5]	07/20/1990	3 - 3.5	X	X	--	--	--	--	X	--	--	--	--	--	--
	BOR-23 [3.5-4.0]	07/20/1990	3.5 - 4	--	--	--	X	X	X	--	--	--	--	--	--	--
	BOR-23 [4.0-4.5]	07/23/1990	4 - 4.5	--	--	--	--	--	--	--	--	--	--	--	--	--
	BOR-23 [8.5-9.0]	07/20/1990	8.5 - 9	X	X	--	--	--	--	X	--	--	--	--	--	--
	BOR-23 [9.0-9.5]	07/20/1990	9 - 9.5	--	--	--	X	X	--	--	--	--	--	--	--	--
	BOR-23 [11.0-11.5]	07/20/1990	11 - 11.5	X	X	--	--	--	--	X	--	--	--	--	--	--
	BOR-23 [11.5-12.0]	07/20/1990	11.5 - 12	--	--	--	X	X	--	--	--	--	--	--	--	--
	BOR-23 [14.5-15.0]	07/20/1990	14.5 - 15	X	X	--	--	--	--	X	--	--	--	--	--	--
	BOR-23 [15.0-15.5]	07/20/1990	15 - 15.5	--	--	--	X	X	--	--	--	--	--	--	--	--
BOR-25	BOR-25 [0.5-1.0]	07/20/1990	0.5 - 1	X	--	--	X	X	--	--	--	--	--	--	--	--
	BOR-25 [2.5-3.0]	07/20/1990	2.5 - 3	X	X	--	--	--	--	X	--	--	--	--	--	--
	BOR-25 [3.5-4.0]	07/20/1990	3.5 - 4	--	--	--	X	X	X	--	--	--	--	--	--	--
	BOR-25 [4.0-4.5]	07/20/1990	4 - 4.5	--	--	--	--	--	--	--	--	--	--	--	--	--
	BOR-25 [6.5-7.0]	07/20/1990	6.5 - 7	X	X	--	--	--	--	X	--	--	--	--	--	--
	BOR-25 [7.0-7.5]	07/20/1990	7 - 7.5	--	--	--	X	X	--	--	--	--	--	--	--	--
	BOR-25 [11.0-11.5]	07/20/1990	11 - 11.5	X	X	--	--	--	--	X	--	--	--	--	--	--
	BOR-25 [11.5-12.0]	07/20/1990	11.5 - 12	--	--	--	X	X	--	--	--	--	--	--	--	--
	BOR-25 [14.0-14.5]	07/20/1990	14 - 14.5	X	X	--	--	--	--	X	--	--	--	--	--	--
	BOR-25 [14.5-15.0]	07/20/1990	14.5 - 15	--	--	--	X	X	--	--	--	--	--	--	--	--
BOR-26	BOR-26 [1.0-1.5]	07/24/1990	1 - 1.5	X	--	--	X	X	--	--	--	--	--	--	--	--
	BOR-26 [1.5-2.0]	07/24/1990	1.5 - 2	--	--	--	--	--	--	X	--	--	--	--	--	--
	BOR-26 [2.5-3.0]	07/24/1990	2.5 - 3	--	--	--	X	X	X	--	--	--	--	--	--	--
	BOR-26 [4.0-4.5]	07/24/1990	4 - 4.5	--	--	--	--	--	--	--	--	--	--	--	--	--
	BOR-26 [5.5-6.0]	07/24/1990	5.5 - 6	X	X	--	--	--	--	X	--	--	--	--	--	--
	BOR-26 [6.0-6.5]	07/24/1990	6 - 6.5	--	--	--	X	X	--	--	--	--	--	--	--	--
	BOR-26 [10.0-10.5]	07/24/1990	10 - 10.5	X	X	--	--	--	--	X	--	--	--	--	--	--
	BOR-26 [10.5-11.0]	07/24/1990	10.5 - 11	--	--	--	X	X	--	--	--	--	--	--	--	--
	BOR-26 [13.0-13.5]	07/24/1990	13 - 13.5	X	X	--	--	--	--	X	--	--	--	--	--	--
	BOR-26 [13.5-14.0]	07/24/1990	13.5 -14	--	--	--	X	X	--	--	--	--	--	--	--	--
BOR-27	BOR-27 [1.0-1.5]	07/20/1990	1 - 1.5	X	--	--	X	X	--	--	--	--	--	--	--	--
	BOR-27 [2.5-3.0]	07/20/1990	2.5 - 3	X	X	--	--	--	--	X	--	--	--	--	--	--
	BOR-27 [3.0-3.5]	07/20/1990	3 - 3.5	--	--	--	X	X	X	--	--	--	--	--	--	--
	BOR-27 [4.0-4.5]	07/20/1990	4 - 4.5	--	--	--	--	--	--	--	--	--	--	--	--	--
	BOR-27 [7.0-7.5]	07/20/1990	7 - 7.5	X	X	--	--	--	--	X	--	--	--	--	--	--
	BOR-27 [7.5-8.0]	07/20/1990	7.5 - 8	--	--	--	X	X	--	--	--	--	--	--	--	--

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				ANALYSES PERFORMED												
SAMPLE LOCATION	SAMPLE IDENTIFICATION	DATE SAMPLED	DEPTH (ft bgs)	SVOC	VOC	PAH	Pesticides/ PCB	Total Metals	General Chemistry	TPH	Cyanide	Herbicides	Oil & Grease	Tin	Organic Lead	Dioxins
Phases 1 & 2A Investigation, 1991 (Continued)																
BOR-27	BOR-27 [10.0-10.5]	07/20/1990	10 - 10.5	X	X	--	--	--	--	X	--	--	--	--	--	--
(Continued)	BOR-27 [10.5-11.0]	07/20/1990	10.5 - 11	--	--	--	X	X	--	--	--	--	--	--	--	--
	BOR-27 [12.5-13.0]	07/20/1990	12.5 - 13	X	X	--	--	--	--	X	--	--	--	--	--	--
	BOR-27 [13.0-13.5]	07/20/1990	13 - 13.5	--	--	--	X	X	--	--	--	--	--	--	--	--
MW410-4	MW410-4 [1.0-1.5]	07/12/1990	1 - 1.5	X	--	--	--	X	--	--	--	--	--	--	--	--
	MW410-4 [2.5-3.0]	07/12/1990	2.5 - 3	--	--	--	--	--	X	--	--	--	--	--	--	--
	MW410-4 [3.0-3.5]	07/16/1990	3 - 3.5	X	X	--	--	--	--	--	--	--	--	--	--	--
	MW410-4 [4.0-4.5]	07/12/1990	4 - 4.5	--	--	--	--	X	X	--	--	--	--	--	--	--
	MW410-4 [5.5-6.0]	07/16/1990	5.5 - 6	X	X	--	--	--	--	--	--	--	--	--	--	--
	MW410-4 [6.0-6.5]	07/12/1990	6 - 6.5	--	--	--	--	X	--	--	--	--	--	--	--	--
	MW410-4 [8.5-9.0]	07/16/1990	8.5 - 9	X	X	--	--	--	--	--	--	--	--	--	--	--
	MW410-4 [9.0-9.5]	07/12/1990	9 - 9.5	--	--	--	--	X	--	--	--	--	--	--	--	--
	MW410-4 [11.5-12.0]	07/16/1990	11.5 - 12	X	X	--	--	--	--	--	--	--	--	--	--	--
	MW410-4 [12.0-12.5]	07/12/1990	12 - 12.5	--	--	--	--	X	--	--	--	--	--	--	--	--
	MW410-4 [14.5-15.0]	07/16/1990	14.5 - 15	X	X	--	--	--	--	--	--	--	--	--	--	--
	MW410-4 [15.0-15.5]	07/12/1990	15 - 15.5	--	--	--	--	X	--	--	--	--	--	--	--	--
MW530-1	MW530-1 [1.0-1.5]	07/13/1990	1 - 1.5	X	--	--	--	X	--	--	--	--	--	--	--	--
	MW530-1 [2.5-3.0]	07/13/1990	2.5 - 3	--	X	--	--	--	--	X	--	--	--	--	--	--
	MW530-1 [3.0-3.5]	07/13/1990	3 - 3.5	X	--	--	--	X	X	--	--	--	--	--	--	--
	MW530-1 [5.5-6.0]	07/13/1990	5.5 - 6	--	--	--	--	--	--	X	--	--	--	--	--	--
	MW530-1 [6.0-6.5]	07/13/1990	6 - 6.5	--	X	--	--	--	--	X	--	--	--	--	--	--
	MW530-1 [6.5-7.0]	07/13/1990	6.5 - 7	X	--	--	--	X	--	--	--	--	--	--	--	--
	MW530-1 [7.5-8.0]	07/13/1990	7.5 - 8	X	--	--	--	X	--	--	--	--	--	--	--	--
	MW530-1 [8.5-9.0]	07/13/1990	8.5 - 9	--	X	--	--	--	--	X	--	--	--	--	--	--
	MW530-1 [9.0-9.5]	07/13/1990	9 - 9.5	X	--	--	--	X	--	--	--	--	--	--	--	--
	MW530-1 [11.5-12.0]	07/13/1990	11.5 - 12	--	X	--	--	--	--	X	--	--	--	--	--	--
	MW530-1 [12.0-12.5]	07/13/1990	12 - 12.5	X	--	--	--	X	--	--	--	--	--	--	--	--
	MW530-1 [13.5-14.0]	07/13/1990	13.5 - 14	--	X	--	--	--	--	X	--	--	--	--	--	--
	MW530-1 [14.0-14.5]	07/13/1990	14 - 14.5	X	--	--	--	X	--	--	--	--	--	--	--	--
MW530-2	MW530-2 [0.5-1.0]	07/13/1990	0.5 - 1	X	--	--	--	X	--	--	--	--	--	--	--	--
	MW530-2 [2.0-2.5]	07/13/1990	2 - 2.5	--	X	--	--	--	--	X	--	--	--	--	--	--
	MW530-2 [2.5-3.0]	07/13/1990	2.5 - 3	X	--	--	--	X	X	--	--	--	--	--	--	--
	MW530-2 [5.0-5.5]	07/13/1990	5 - 5.5	--	X	--	--	--	--	X	--	--	--	--	--	--
	MW530-2 [5.5-6.0]	07/13/1990	5.5 - 6	X	--	--	--	X	--	--	--	--	--	--	--	--
	MW530-2 [8.0-8.5]	07/13/1990	8 - 8.5	--	X	--	--	--	--	X	--	--	--	--	--	--
	MW530-2 [8.5-9.0]	07/13/1990	8.5 - 9	X	--	--	--	X	--	--	--	--	--	--	--	--
	MW530-2 [11.0-11.5]	07/13/1990	11 - 11.5	--	X	--	--	--	--	X	--	--	--	--	--	--
	MW530-2 [11.5-12.0]	07/13/1990	11.5 - 12	X	--	--	--	X	--	--	--	--	--	--	--	--
	MW530-2 [14.0-14.5]	07/13/1990	14 - 14.5	--	X	--	--	--	--	X	--	--	--	--	--	--
	MW530-2 [14.5-15.0]	07/13/1990	14.5 - 15	X	--	--	--	X	--	--	--	--	--	--	--	--
	MW530-2R [6.0-6.5]	07/13/1990	6 - 6.5	X	--	--	--	X	--	--	--	--	--	--	--	--

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				ANALYSES PERFORMED												
SAMPLE LOCATION	SAMPLE IDENTIFICATION	DATE SAMPLED	DEPTH (ft bgs)	SVOC	VOC	PAH	Pesticides/ PCB	Total Metals	General Chemistry	TPH	Cyanide	Herbicides	Oil & Grease	Tin	Organic Lead	Dioxins
Phases 1 & 2A Investigation, 1991 (Continued)																
MW530-3	MW530-3 [0.5-1.0]	07/13/1990	0.5 - 1	X	--	--	--	X	--	--	--	--	--	--	--	--
	MW530-3 [2.0-2.5]	07/13/1990	2 - 2.5	--	X	--	--	--	--	X	--	--	--	--	--	--
	MW530-3 [2.5-3.0]	07/13/1990	2.5 - 3	X	--	--	--	X	X	--	--	--	--	--	--	--
	MW530-3 [4.0-4.5]	07/13/1990	4 - 4.5	--	X	--	--	--	--	X	--	--	--	--	--	--
	MW530-3 [5.0-5.5]	07/13/1990	5 - 5.5	X	--	--	--	X	--	--	--	--	--	--	--	--
	MW530-3 [7.0-7.5]	07/13/1990	7 - 7.5	--	X	--	--	--	--	X	--	--	--	--	--	--
	MW530-3 [8.0-8.5]	07/13/1990	8 - 8.5	X	--	--	--	X	--	--	--	--	--	--	--	--
	MW530-3 [10.0-10.5]	07/13/1990	10 - 10.5	--	X	--	--	--	--	X	--	--	--	--	--	--
	MW530-3 [10.5-11.0]	07/13/1990	10.5 - 11	X	--	--	--	X	--	--	--	--	--	--	--	--
	MW530-3 [11.5-12.0]	07/13/1990	11.5 - 12	--	X	--	--	--	--	X	--	--	--	--	--	--
	MW530-3 [12.5-13.0]	07/13/1990	12.5 - 13	X	--	--	--	X	--	--	--	--	--	--	--	--
	MW530-3R [8.5-9.0]	07/13/1990	8.5 - 9	X	--	--	--	X	--	--	--	--	--	--	--	--
MWOR-5	MWOR-5 [1.0-1.5]	07/19/1990	1 - 1.5	X	--	--	X	X	--	--	--	--	--	--	--	--
	MWOR-5 [1.5-2.0]	07/19/1990	1.5 - 2	--	--	--	--	--	X	--	--	--	--	--	--	--
	MWOR-5 [7.0-7.5]	07/18/1990	7 - 7.5	X	X	--	--	--	--	X	--	--	--	--	--	--
	MWOR-5 [8.5-9.0]	07/19/1990	8.5 - 9	--	--	--	X	X	X	--	--	--	--	--	--	--
	MWOR-5 [10.0-10.5]	07/18/1990	10 - 10.5	X	X	--	--	--	--	X	--	--	--	--	--	--
	MWOR-5 [10.5-11.0]	07/19/1990	10.5 - 11	--	--	--	X	X	--	--	--	--	--	--	--	--
	MWOR-5 [12.5-13.0]	07/18/1990	12.5 - 13	X	X	--	--	--	--	X	--	--	--	--	--	--
	MWOR-5 [13.0-13.5]	07/19/1990	13 - 13.5	--	--	--	X	X	--	--	--	--	--	--	--	--
	MWOR-5 [14.5-15.0]	07/18/1990	14.5 - 15	X	X	--	--	--	--	X	--	--	--	--	--	--
	MWOR-5 [15.0-15.5]	07/19/1990	15 - 15.5	--	--	--	X	X	--	--	--	--	--	--	--	--
Follow-on Investigation, 1994																
B10B-04	280-S10B-001	08/19/1994	0.5 - 1.5	X	X	--	--	--	X	--	--	--	--	--	--	--
	280-S10B-002	08/19/1994	2 - 3	X	X	--	--	--	X	--	--	--	--	--	--	--
	280-S10B-003	08/19/1994	5 - 6	X	X	--	--	--	X	--	--	--	--	--	--	--
B10B-06	280-S10B-008	08/19/1994	0.5 - 1.5	X	X	--	--	--	X	--	--	--	--	--	--	--
	280-S10B-009	08/19/1994	2.5 - 3.5	X	X	--	--	--	X	--	--	--	--	--	--	--
	280-S10B-010	08/19/1994	5 - 6	X	X	--	--	--	X	--	--	--	--	--	--	--
B10B-07	280-S10B-011	08/19/1994	0.5 - 1.5	X	X	--	--	--	X	X	--	--	--	--	--	--
	280-S10B-012	08/19/1994	2.5 - 3.5	X	X	--	--	--	X	X	--	--	--	--	--	--
	280-S10B-013	08/19/1994	5 - 6	X	X	--	--	--	X	X	--	--	--	--	--	--
M09-05	280-S09-001	11/05/1994	1.5 - 2.5	--	X	--	--	X	X	--	--	--	--	--	--	--
	280-S09-002	11/05/1994	3 - 4	--	X	--	--	X	X	--	--	--	--	--	--	--
	280-S09-003	11/05/1994	5 - 6	--	X	--	--	X	X	--	--	--	--	--	--	--
M10B-01	280-S10B-134	11/05/1994	1 - 2	X	X	--	--	--	X	X	--	--	--	--	--	--
	280-S10B-135	11/05/1994	2 - 3	X	X	--	--	--	X	X	--	--	--	--	--	--
	280-S10B-136	11/05/1994	3 - 4	X	X	--	--	--	X	X	--	--	--	--	--	--
NPS-S09-03	280-S09-025	08/24/1994	0	X	X	--	--	X	X	X	--	--	--	--	--	--
NPS-S10B-01	280-S10B-094	07/20/1994		X	X	--	--	X	X	X	--	--	--	--	--	--

TABLE 9-1: SITE 23 SOIL SAMPLING SUMMARY

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

				ANALYSES PERFORMED												
SAMPLE LOCATION	SAMPLE IDENTIFICATION	DATE SAMPLED	DEPTH (ft bgs)	SVOC	VOC	PAH	Pesticides/ PCB	Total Metals	General Chemistry	TPH	Cyanide	Herbicides	Oil & Grease	Tin	Organic Lead	Dioxins
Follow-on Investigation, 1994 (Continued)																
NPS-S10B-02	280-S10B-096	07/20/1994		X	X	--	--	X	X	X	--	--	--	--	--	--
S16-69	280-S16-015	07/15/1994	0 - 0	X	--	--	X	X	X	--	X	--	--	--	--	--
S16-70	280-S16-016	07/15/1994	0 - 0	X	--	--	X	X	X	--	X	--	--	--	--	--
S16-71	280-S16-017	07/14/1994	0 - 0	X	--	--	X	X	X	--	X	--	--	--	--	--
Supplemental Remedial Investigation Data Gap Sampling, 2001																
S23-DGS-DP01	385-S23-001	08/01/2001	1 - 1.5	--	--	--	--	X	X	--	--	--	--	--	--	--
PAH Study, 2003																
C3S023B001	C0591103	8/6/2003	0 - 0.5	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591104	8/6/2003	0.5 - 2	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591105	8/6/2003	2 - 4	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591106	8/6/2003	4 - 8	--	--	X	--	--	--	--	--	--	--	--	--	--
C3S023B002	C0591107	8/6/2003	0 - 0.5	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591108	8/6/2003	0.5 - 2	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591109	8/6/2003	2 - 4	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591110	8/6/2003	4 - 8	--	--	X	--	--	--	--	--	--	--	--	--	--
C3S023B003	C0591111	8/6/2003	0 - 0.5	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591113	8/6/2003	0.5 - 2	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591114	8/6/2003	2 - 4	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591115	8/6/2003	4 - 8	--	--	X	--	--	--	--	--	--	--	--	--	--
C3S023B004	C0591116	8/7/2003	0 - 0.5	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591117	8/7/2003	0.5 - 2	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591118	8/7/2003	2 - 4	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591119	8/7/2003	4 - 8	--	--	X	--	--	--	--	--	--	--	--	--	--
C3S023B005	C0591120	8/5/2003	0 - 0.5	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591121	8/5/2003	0.5 - 2	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591123	8/5/2003	2 - 4	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591124	8/5/2003	4 - 8	--	--	X	--	--	--	--	--	--	--	--	--	--
C3S023B006	C0591125	8/5/2003	0 - 0.5	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591126	8/5/2003	0.5 - 2	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591127	8/5/2003	2 - 4	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591128	8/5/2003	4 - 8	--	--	X	--	--	--	--	--	--	--	--	--	--
C3S023B007	C0590551	8/7/2003	0 - 0.5	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0590552	8/7/2003	0.5 - 2	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0590553	8/7/2003	2 - 4	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0590555	8/7/2003	4 - 8	--	--	X	--	--	--	--	--	--	--	--	--	--
C3S023B008	C0591134	8/6/2003	0 - 0.5	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591135	8/6/2003	0.5 - 2	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591136	8/6/2003	2 - 4	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591137	8/6/2003	4 - 8	--	--	X	--	--	--	--	--	--	--	--	--	--

TABLE 9-1: SITE 23 SOIL SAMPLING SUMMARY

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

SAMPLE LOCATION	SAMPLE IDENTIFICATION	DATE SAMPLED	DEPTH (ft bgs)	ANALYSES PERFORMED												
				SVOC	VOC	PAH	Pesticides/ PCB	Total Metals	General Chemistry	TPH	Cyanide	Herbicides	Oil & Grease	Tin	Organic Lead	Dioxins
PAH Study, 2003, continued																
C3S023B009	C0591138	8/6/2003	0 - 0.5	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591139	8/6/2003	0.5 - 2	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591140	8/6/2003	2 - 4	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591141	8/6/2003	4 - 8	--	--	X	--	--	--	--	--	--	--	--	--	--
C3S023B010	C0591143	8/5/2003	0 - 0.5	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591144	8/5/2003	0.5 - 2	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591145	8/5/2003	2 - 4	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591146	8/5/2003	4 - 8	--	--	X	--	--	--	--	--	--	--	--	--	--
C3S023B011	C0591147	8/5/2003	0 - 0.5	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591148	8/5/2003	0.5 - 2	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591149	8/5/2003	2 - 4	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591150	8/5/2003	4 - 8	--	--	X	--	--	--	--	--	--	--	--	--	--
C3S023B012	C0591151	8/5/2003	0 - 0.5	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591153	8/5/2003	0.5 - 2	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591154	8/5/2003	2 - 4	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591155	8/5/2003	4 - 8	--	--	X	--	--	--	--	--	--	--	--	--	--
C3S023B013	C0591156	8/5/2003	0 - 0.5	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591157	8/5/2003	0.5 - 2	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591158	8/5/2003	2 - 4	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591159	8/5/2003	4 - 8	--	--	X	--	--	--	--	--	--	--	--	--	--
C3S023B014	C0591160	8/6/2003	0 - 0.5	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591161	8/6/2003	0.5 - 2	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591163	8/6/2003	2 - 4	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591164	8/6/2003	4 - 8	--	--	X	--	--	--	--	--	--	--	--	--	--
C3S023B015	C0591165	8/6/2003	0 - 0.5	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591166	8/6/2003	0.5 - 2	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591167	8/6/2003	2 - 4	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591168	8/6/2003	4 - 8	--	--	X	--	--	--	--	--	--	--	--	--	--
C3S023B016	C0591169	8/6/2003	0 - 0.5	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591170	8/6/2003	0.5 - 2	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591171	8/6/2003	2 - 4	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591173	8/6/2003	4 - 8	--	--	X	--	--	--	--	--	--	--	--	--	--
C3S023B017	C0591174	8/5/2003	0 - 0.5	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591175	8/5/2003	0.5 - 2	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591176	8/5/2003	2 - 4	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591177	8/5/2003	4 - 8	--	--	X	--	--	--	--	--	--	--	--	--	--
C3S023B018	C0591178	8/5/2003	0 - 0.5	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591179	8/5/2003	0.5 - 2	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591180	8/5/2003	2 - 4	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591181	8/5/2003	4 - 8	--	--	X	--	--	--	--	--	--	--	--	--	--

TABLE 9-1: SITE 23 SOIL SAMPLING SUMMARY

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

				ANALYSES PERFORMED												
SAMPLE LOCATION	SAMPLE IDENTIFICATION	DATE SAMPLED	DEPTH (ft bgs)	SVOC	VOC	PAH	Pesticides/ PCB	Total Metals	General Chemistry	TPH	Cyanide	Herbicides	Oil & Grease	Tin	Organic Lead	Dioxins
PAH Study, 2003 (Continued)																
C3S023B019	C0591183	8/6/2003	0 - 0.5	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591184	8/6/2003	0.5 - 2	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591185	8/6/2003	2 - 4	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591186	8/6/2003	4 - 8	--	--	X	--	--	--	--	--	--	--	--	--	--
C3S023B020	C0591187	8/6/2003	0 - 0.5	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591188	8/6/2003	0.5 - 2	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591189	8/6/2003	2 - 4	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591190	8/6/2003	4 - 8	--	--	X	--	--	--	--	--	--	--	--	--	--
C3S023B021	C0591191	8/6/2003	0 - 0.5	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591193	8/6/2003	0.5 - 2	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591194	8/6/2003	2 - 4	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591195	8/6/2003	4 - 8	--	--	X	--	--	--	--	--	--	--	--	--	--
C3S023B022	C0591196	8/5/2003	0 - 0.5	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591197	8/5/2003	0.5 - 2	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591198	8/5/2003	2 - 4	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591199	8/5/2003	4 - 8	--	--	X	--	--	--	--	--	--	--	--	--	--
C3S023B023	C0591200	8/5/2003	0 - 0.5	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591201	8/5/2003	0.5 - 2	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591203	8/5/2003	2 - 4	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591204	8/5/2003	4 - 8	--	--	X	--	--	--	--	--	--	--	--	--	--
C3S023B024	C0591205	8/5/2003	0 - 0.5	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591206	8/5/2003	0.5 - 2	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591207	8/5/2003	2 - 4	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591208	8/5/2003	4 - 8	--	--	X	--	--	--	--	--	--	--	--	--	--
C3S023B025	C0591209	8/1/2003	0 - 0.5	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591210	8/1/2003	0.5 - 2	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591211	8/1/2003	2 - 4	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591213	8/1/2003	4 - 8	--	--	X	--	--	--	--	--	--	--	--	--	--
C3S023B026	C0591214	8/1/2003	0 - 0.5	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591215	8/1/2003	0.5 - 2	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591216	8/1/2003	2 - 4	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591217	8/1/2003	4 - 8	--	--	X	--	--	--	--	--	--	--	--	--	--
C3S023B027	C0591218	8/1/2003	0 - 0.5	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591219	8/1/2003	0.5 - 2	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591220	8/1/2003	2 - 4	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591221	8/1/2003	4 - 8	--	--	X	--	--	--	--	--	--	--	--	--	--
C3S023B028	C0591223	8/6/2003	0 - 0.5	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591224	8/6/2003	0.5 - 2	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591225	8/6/2003	2 - 4	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591226	8/6/2003	4 - 8	--	--	X	--	--	--	--	--	--	--	--	--	--

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Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

				ANALYSES PERFORMED												
SAMPLE LOCATION	SAMPLE IDENTIFICATION	DATE SAMPLED	DEPTH (ft bgs)	SVOC	VOC	PAH	Pesticides/ PCB	Total Metals	General Chemistry	TPH	Cyanide	Herbicides	Oil & Grease	Tin	Organic Lead	Dioxins
PAH Study, 2003 (Continued)																
C3S023B029	C0591227	8/6/2003	0 - 0.5	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591228	8/6/2003	0.5 - 2	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591229	8/6/2003	2 - 4	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591230	8/6/2003	4 - 8	--	--	X	--	--	--	--	--	--	--	--	--	--
C3S023B030	C0591231	8/6/2003	0 - 0.5	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591233	8/6/2003	0.5 - 2	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591234	8/6/2003	2 - 4	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591235	8/6/2003	4 - 8	--	--	X	--	--	--	--	--	--	--	--	--	--
C3S023B031	C0591236	8/5/2003	0 - 0.5	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591237	8/5/2003	0.5 - 2	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591238	8/5/2003	2 - 4	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591239	8/5/2003	4 - 8	--	--	X	--	--	--	--	--	--	--	--	--	--
C3S023B032	C0591240	8/5/2003	0 - 0.5	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591241	8/5/2003	0.5 - 2	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591243	8/5/2003	2 - 4	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591244	8/5/2003	4 - 8	--	--	X	--	--	--	--	--	--	--	--	--	--
C3S023B033	C0591245	8/5/2003	0 - 0.5	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591246	8/5/2003	0.5 - 2	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591247	8/5/2003	2 - 4	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591248	8/5/2003	4 - 8	--	--	X	--	--	--	--	--	--	--	--	--	--
C3S023B034	C0591249	8/1/2003	0 - 0.5	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591250	8/1/2003	0.5 - 2	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591251	8/1/2003	2 - 4	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591253	8/1/2003	4 - 8	--	--	X	--	--	--	--	--	--	--	--	--	--
C3S023B035	C0591254	8/5/2003	0 - 0.5	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591255	8/5/2003	0.5 - 2	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591256	8/5/2003	2 - 4	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591257	8/5/2003	4 - 8	--	--	X	--	--	--	--	--	--	--	--	--	--
C3S023B036	C0591258	8/7/2003	0 - 0.5	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591259	8/7/2003	0.5 - 2	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591260	8/7/2003	2 - 4	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591261	8/7/2003	4 - 8	--	--	X	--	--	--	--	--	--	--	--	--	--
C3S023B037	C0591263	8/6/2003	0 - 0.5	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591264	8/6/2003	0.5 - 2	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591265	8/6/2003	2 - 4	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591266	8/6/2003	4 - 8	--	--	X	--	--	--	--	--	--	--	--	--	--
C3S023B038	C0591267	8/5/2003	0 - 0.5	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591268	8/5/2003	0.5 - 2	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591269	8/5/2003	2 - 4	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591270	8/5/2003	4 - 8	--	--	X	--	--	--	--	--	--	--	--	--	--

TABLE 9-1: SITE 23 SOIL SAMPLING SUMMARY

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

SAMPLE LOCATION	SAMPLE IDENTIFICATION	DATE SAMPLED	DEPTH (ft bgs)	ANALYSES PERFORMED												
				SVOC	VOC	PAH	Pesticides/ PCB	Total Metals	General Chemistry	TPH	Cyanide	Herbicides	Oil & Grease	Tin	Organic Lead	Dioxins
PAH Study, 2003 (Continued)																
C3S023B039	C0591271	8/5/2003	0 - 0.5	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591273	8/5/2003	0.5 - 2	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591274	8/5/2003	2 - 4	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591275	8/5/2003	4 - 8	--	--	X	--	--	--	--	--	--	--	--	--	--
C3S023B040	C0591276	8/5/2003	0 - 0.5	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591277	8/5/2003	0.5 - 2	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591278	8/5/2003	2 - 4	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591279	8/5/2003	4 - 8	--	--	X	--	--	--	--	--	--	--	--	--	--
C3S023B041	C0591280	8/5/2003	0 - 0.5	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591281	8/5/2003	0.5 - 2	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591283	8/5/2003	2 - 4	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591284	8/5/2003	4 - 8	--	--	X	--	--	--	--	--	--	--	--	--	--
C3S023B042	C0591285	8/5/2003	0 - 0.5	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591286	8/5/2003	0.5 - 2	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591287	8/5/2003	2 - 4	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591288	8/5/2003	4 - 8	--	--	X	--	--	--	--	--	--	--	--	--	--
C3S023B043	C0591289	8/5/2003	0 - 0.5	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591290	8/5/2003	0.5 - 2	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591291	8/5/2003	2 - 4	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591293	8/5/2003	4 - 8	--	--	X	--	--	--	--	--	--	--	--	--	--
C3S023B044	C0591294	8/1/2003	0 - 0.5	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591295	8/1/2003	0.5 - 2	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591296	8/1/2003	2 - 4	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591297	8/1/2003	4 - 8	--	--	X	--	--	--	--	--	--	--	--	--	--
C3S023B045	C0591298	8/1/2003	0 - 0.5	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591299	8/1/2003	0.5 - 2	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591300	8/1/2003	2 - 4	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591301	8/1/2003	4 - 8	--	--	X	--	--	--	--	--	--	--	--	--	--
C3S023B046	C0591303	8/1/2003	0 - 0.5	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591304	8/1/2003	0.5 - 2	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591305	8/1/2003	2 - 4	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591306	8/1/2003	4 - 8	--	--	X	--	--	--	--	--	--	--	--	--	--
C3S023B047	C0591307	8/7/2003	0 - 0.5	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591308	8/7/2003	0.5 - 2	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591309	8/7/2003	2 - 4	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591310	8/7/2003	4 - 8	--	--	X	--	--	--	--	--	--	--	--	--	--
C3S023B048	C0591311	8/7/2003	0 - 0.5	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591313	8/7/2003	0.5 - 2	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591314	8/7/2003	2 - 4	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591315	8/7/2003	4 - 8	--	--	X	--	--	--	--	--	--	--	--	--	--

TABLE 9-1: SITE 23 SOIL SAMPLING SUMMARY

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

				ANALYSES PERFORMED												
SAMPLE LOCATION	SAMPLE IDENTIFICATION	DATE SAMPLED	DEPTH (ft bgs)	SVOC	VOC	PAH	Pesticides/ PCB	Total Metals	General Chemistry	TPH	Cyanide	Herbicides	Oil & Grease	Tin	Organic Lead	Dioxins
PAH Study, 2003 (Continued)																
C3S023B049	C0591316	8/5/2003	0 - 0.5	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591317	8/5/2003	0.5 - 2	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591318	8/5/2003	2 - 4	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591319	8/5/2003	4 - 8	--	--	X	--	--	--	--	--	--	--	--	--	--
C3S023B050	C0591320	8/5/2003	0 - 0.5	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591321	8/5/2003	0.5 - 2	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591323	8/5/2003	2 - 4	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591324	8/5/2003	4 - 8	--	--	X	--	--	--	--	--	--	--	--	--	--
C3S023B051	C0591325	8/5/2003	0 - 0.5	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591326	8/5/2003	0.5 - 2	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591327	8/5/2003	2 - 4	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591328	8/5/2003	4 - 8	--	--	X	--	--	--	--	--	--	--	--	--	--
C3S023B052	C0591329	8/5/2003	0 - 0.5	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591330	8/5/2003	0.5 - 2	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591331	8/5/2003	2 - 4	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591333	8/5/2003	4 - 8	--	--	X	--	--	--	--	--	--	--	--	--	--
C3S023B053	C0591334	8/5/2003	0 - 0.5	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591335	8/5/2003	0.5 - 2	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591336	8/5/2003	2 - 4	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591337	8/5/2003	4 - 8	--	--	X	--	--	--	--	--	--	--	--	--	--
C3S023B054	C0591338	8/5/2003	0 - 0.5	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591339	8/5/2003	0.5 - 2	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591340	8/5/2003	2 - 4	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591341	8/5/2003	4 - 8	--	--	X	--	--	--	--	--	--	--	--	--	--
C3S023B055	C0591343	8/1/2003	0 - 0.5	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591344	8/1/2003	0.5 - 2	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591345	8/1/2003	2 - 4	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591346	8/1/2003	4 - 8	--	--	X	--	--	--	--	--	--	--	--	--	--
C3S023B056	C0591347	8/1/2003	0 - 0.5	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591348	8/1/2003	0.5 - 2	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591349	8/1/2003	2 - 4	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591350	8/1/2003	4 - 8	--	--	X	--	--	--	--	--	--	--	--	--	--
C3S023B057	C0591351	8/1/2003	0 - 0.5	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591353	8/1/2003	0.5 - 2	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591354	8/1/2003	2 - 4	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591355	8/1/2003	4 - 8	--	--	X	--	--	--	--	--	--	--	--	--	--
C3S023B058	C0591356	8/1/2003	0 - 0.5	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591357	8/1/2003	0.5 - 2	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591358	8/1/2003	2 - 4	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591359	8/1/2003	4 - 8	--	--	X	--	--	--	--	--	--	--	--	--	--

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Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

				ANALYSES PERFORMED												
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PAH Study, 2003 (Continued)																
C3S023B059	C0591360	8/1/2003	0 - 0.5	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591361	8/1/2003	0.5 - 2	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591363	8/1/2003	2 - 4	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591364	8/1/2003	4 - 8	--	--	X	--	--	--	--	--	--	--	--	--	--
C3S023B060	C0591365	8/1/2003	0 - 0.5	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591366	8/1/2003	0.5 - 2	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591367	8/1/2003	2 - 4	--	--	X	--	--	--	--	--	--	--	--	--	--
	C0591368	8/1/2003	4 - 8	--	--	X	--	--	--	--	--	--	--	--	--	--
ENVIRONMENTAL BASELINE SURVEY				--	--	--	--	--	--	--	--	--	--	--	--	--
Phase IIA Environmental Baseline Survey				--	--	--	--	--	--	--	--	--	--	--	--	--
148-001-001	148-0002M	02/07/1995	3.5 - 4	--	X	--	--	X	--	X	--	--	--	--	--	--
	148-0003	02/07/1995	3.5 - 4	X	X	--	--	X	X	X	--	--	--	--	--	--
148-001-004	148-0005M	02/07/1995	3.5 - 4	--	X	--	--	X	--	X	--	--	--	--	--	--
	148-0006	02/07/1995	3.5 - 4	X	--	--	--	--	X	--	--	--	--	--	--	--
148-001-007	148-0008M	02/07/1995	4 - 4.5	--	X	--	--	X	--	X	--	--	--	--	--	--
	148-0009	02/07/1995	4 - 4.5	X	--	--	--	--	X	--	--	--	--	--	--	--
150-Z19-016	150-0016M	06/21/1995	0.5 - 1	X	--	--	X	X	--	X	--	--	--	--	--	--
153-Z22-004	153-0004	04/10/1995	2.5 - 3	X	--	--	X	X	X	X	--	--	--	--	--	--
	153-0004M	04/10/1995	2.5 - 3	--	--	--	X	X	--	X	--	--	--	--	--	--
211-001-001	211-0001M	03/31/1995	0.5 - 1	--	--	--	--	--	--	X	--	--	--	--	--	--
211-001-002	211-0002M	03/31/1995	0.5 - 1	--	--	--	--	--	--	X	--	--	--	--	--	--
211-001-003	211-0003M	03/31/1995	0.5 - 1	--	--	--	--	--	--	X	--	--	--	--	--	--
211-001-004	211-0004M	03/31/1995	0.5 - 1	--	--	--	--	--	--	X	--	--	--	--	--	--
211-001-005	211-0005	03/31/1995	0 - 0.5	--	--	--	--	--	X	X	--	--	--	--	--	--
	211-0005M	03/31/1995	0.5 - 1	--	--	--	--	--	--	X	--	--	--	--	--	--
211-001-006	211-0006M	03/31/1995	0.5 - 1	--	--	--	--	--	--	X	--	--	--	--	--	--
211-001-007	211-0007M	03/31/1995	0.5 - 1	--	--	--	--	--	--	X	--	--	--	--	--	--
211-001-008	211-0008	03/31/1995	0 - 0.5	--	--	--	--	--	X	X	--	--	--	--	--	--
	211-0008M	03/31/1995	0 - 0.5	--	--	--	--	--	--	X	--	--	--	--	--	--
211-IW-001	211I-001	01/19/1995	5.5 - 6.5	X	X	--	X	X	X	X	--	X	X	X	X	--
	211I-001M	01/19/1995	5.5 - 6.5	--	X	--	--	X	--	--	--	--	--	--	--	--
211-IW-002	211I-002	01/20/1995	7 - 7.5	X	X	--	X	X	X	X	--	X	X	X	X	--
	211I-002M	01/20/1995	7 - 7.5	--	X	--	--	X	--	--	--	--	--	--	--	--
211-IWCO-001	211C-001	01/20/1995	1 - 2	X	X	--	X	X	X	X	--	X	X	X	--	--
	211C-001M	01/20/1995	1 - 2	--	X	--	--	X	--	--	--	--	--	--	--	--
211-SN-001	211S-001	01/17/1995	4 - 4.5	X	--	--	X	--	X	--	--	--	--	--	--	--
	211S-001M	01/17/1995	4 - 4.5	--	X	--	--	X	--	X	--	--	--	--	--	--
211-SS-001	211M-001	03/01/1995	2.5 - 3	X	X	--	X	X	X	X	--	--	X	X	--	--
	211M-001M	03/01/1995	2.5 - 3	--	X	--	--	X	--	X	--	--	--	--	--	--
211-SS-002	211M-002	03/01/1995	2 - 2.5	X	--	--	X	--	X	--	--	--	X	X	--	--
	211M-002M	03/01/1995	2 - 2.5	--	X	--	--	X	--	X	--	--	--	--	--	--

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SAMPLE LOCATION	SAMPLE IDENTIFICATION	DATE SAMPLED	DEPTH (ft bgs)	ANALYSES PERFORMED												
				SVOC	VOC	PAH	Pesticides/ PCB	Total Metals	General Chemistry	TPH	Cyanide	Herbicides	Oil & Grease	Tin	Organic Lead	Dioxins
Phase IIA Environmental Baseline Survey (Continued)																
211-SS-003	211M-003	03/01/1995	2.5 - 3	X	--	--	X	--	X	--	--	--	X	X	--	--
	211M-003M	03/01/1995	2.5 - 3	--	X	--	--	X	--	X	--	--	--	--	--	--
211-SS-004	211M-004	03/01/1995	3.5 - 4	X	X	--	--	X	X	X	--	--	X	X	--	--
	211M-004M	03/01/1995	3.5 - 4	--	X	--	--	X	--	X	--	--	--	--	--	--
211-Z22-009	211-0009	04/11/1995	0.5 - 1	--	--	--	--	--	--	--	--	--	--	--	--	X
Phase IIB Environmental Baseline Survey																
211-002-010	211-0012	10/17/1995	1.5 - 2.5	--	X	--	--	--	X	X	--	--	--	--	--	--
	211-0013	10/17/1995	5.5 - 6.5	X	X	--	--	--	X	X	--	--	--	--	--	--
211-002-011	211-0015	10/17/1995	1 - 2	--	X	--	--	--	X	X	--	--	--	--	--	--
	211-0016	10/17/1995	5.5 - 6.5	X	X	--	--	--	X	X	--	--	--	--	--	--
211-002-012	211-0018	10/17/1995	0.5 - 1	--	X	--	--	--	X	X	--	--	--	--	--	--
	211-0019	10/17/1995	5 - 5.5	X	X	--	--	--	X	X	--	--	--	--	--	--
211-002-013	211-0021	10/18/1995	1 - 2	--	X	--	--	--	X	X	--	--	--	--	--	--
	211-0022	10/18/1995	4.5 - 6.5	X	X	--	--	--	X	X	--	--	--	--	--	--
211-002-014	211-0024	10/17/1995	0.5 - 1	--	X	--	--	--	X	X	--	--	--	--	--	--
	211-0025	10/17/1995	4.5 - 5.5	X	X	--	--	--	X	X	--	--	--	--	--	--
211-002-015	211-0027	10/17/1995	1 - 2	--	X	--	--	--	X	X	--	--	--	--	--	--
	211-0028	10/17/1995	5 - 6	X	X	--	--	--	X	X	--	--	--	--	--	--
TOTAL PETROLEUM HYDROCARBON INVESTIGATIONS																
Fuel Line and Underground Storage Tank Investigations																
530-1-MOJ	530-P1-5.5	8/20/1997	5.5	--	--	--	--	--	--	X	--	--	--	--	--	--
530-2-MOJ	530-P2-5.5	8/20/1997	5.5	--	--	--	--	--	--	X	--	--	--	--	--	--
530-3-MOJ	530-P3-5.5	8/20/1997	5.5	--	--	--	--	--	--	X	--	--	--	--	--	--
530-4-MOJ	530-P4-5.5	8/20/1997	5.5	X	--	--	--	--	--	X	--	--	--	--	--	--
530-5-MOJ	530-P5-5.5	8/20/1997	5.5	--	--	--	--	--	--	X	--	--	--	--	--	--
530-6-MOJ	530-P6-6.0	8/21/1997	6	--	--	--	--	--	--	X	--	--	--	--	--	--
530-7-MOJ	530-P7-6.0	8/21/1997	6	X	--	--	--	--	--	X	--	--	--	--	--	--
530-8-MOJ	530-P8-5.5	8/21/1997	5.5	--	--	--	--	--	--	X	--	--	--	--	--	--
530-9-MOJ	530-P9-6.0	8/21/1997	6	--	--	--	--	--	--	X	--	--	--	--	--	--
530-10-MOJ	530-P10-6.0	8/21/1997	6	--	--	--	--	--	--	X	--	--	--	--	--	--
530-11-MOJ	530-P11-4.5	9/17/1997	4.5	--	--	--	--	--	--	X	--	--	--	--	--	--
530-12-MOJ	530-P12-4.5	9/17/1997	4.5	--	--	--	--	--	--	X	--	--	--	--	--	--
530-13-MOJ	530-P13-4.5	9/17/1997	4.5	--	--	--	--	--	--	X	--	--	--	--	--	--
530-14-MOJ	530-P14-4.5	9/17/1997	4.5	--	--	--	--	--	--	X	--	--	--	--	--	--
530-15-MOJ	530-P15-4.5	9/17/1997	4.5	--	--	--	--	--	--	X	--	--	--	--	--	--
530-16-MOJ	530-P16-4.5	9/17/1997	4.5	--	--	--	--	--	--	X	--	--	--	--	--	--
530-17-MOJ	530-P17	9/17/1997		--	--	--	--	--	--	X	--	--	--	--	--	--
530-22-MOJ	530-P22-5.0	10/6/1997	5	--	--	--	--	--	--	X	--	--	--	--	--	--
530-25-MOJ	530-P25-5.0	11/11/1997	5	--	--	--	--	--	--	X	--	--	--	--	--	--
530-MJ-MW-1	530MW1-3.5	11/4/1997	3.5	--	--	--	--	--	--	X	--	--	--	--	--	--

TABLE 9-1: SITE 23 SOIL SAMPLING SUMMARY

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

SAMPLE LOCATION	SAMPLE IDENTIFICATION	DATE SAMPLED	DEPTH (ft bgs)	ANALYSES PERFORMED												
				SVOC	VOC	PAH	Pesticides/ PCB	Total Metals	General Chemistry	TPH	Cyanide	Herbicides	Oil & Grease	Tin	Organic Lead	Dioxins
Fuel Line and Underground Storage Tank Investigations (Continued)																
530-MJ-MW-2	530MW2-3.5	11/4/1997	3.5	--	--	--	--	--	--	X	--	--	--	--	--	--
530-MJ-MW-3	530MW3-4.5	12/4/1997	4.5	--	--	--	--	--	--	X	--	--	--	--	--	--
CA13-10	030-CAP-202	6/15/2000	4 - 4.5	--	X	--	--	X	X	X	--	--	--	--	--	--
	030-CAP-203	6/15/2000	6.5 - 7	--	X	--	--	X	X	X	--	--	--	--	--	--

Notes:

--	These analyses were not performed.
ft bgs	Feet below ground surface
General chemistry	Flashpoint, major anions, percent moisture, pH, reactivity, TKN, and/or TOC
PAH	Polynuclear aromatic hydrocarbon
PCB	Polychlorinated biphenyl
SVOC	Semivolatile organic compound
TKN	Total Kjelkahl nitrogen
TOC	Total organic carbon
TPH	Total petroleum hydrocarbon
VOC	Volatile organic compound
X	These analyses were performed

TABLE 9-2: SITE 23 GROUNDWATER SAMPLING SUMMARY

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

SAMPLE LOCATION	SAMPLE IDENTIFICATION	DATE SAMPLED	DEPTH (ft bgs)	ANALYSES PERFORMED								
				SVOC	VOC	Landfill Gases	Dissolved Metals	Total Metals	Pesticides/ PCBs	General Chemistry	TPH	PAH
REMEDIAL INVESTIGATION												
Phases 1 & 2A Investigation, 1991												
MW410-4	MW410-4 [08/22/90]	08/22/1990		X	X	--	X	--	--	X	--	--
MW530-1	MW530-1 [08/23/90]	08/23/1990		X	X	--	X	--	--	X	X	--
MW530-2	MW530-2 [08/23/90]	08/23/1990		X	X	--	X	--	--	X	X	--
MW530-3	MW530-3 [08/24/90]	08/24/1990		X	X	--	X	--	--	X	X	--
MWOR-5	MWOR-5 [08/28/90]	08/28/1990		X	X	--	X	--	X	X	X	--
Follow-on Investigation, 1994												
D10B-01	280-S10B-138	12/15/1994		X	X	--	X	--	--	X	X	--
	280-S10B-141	02/22/1995		X	X	--	X	--	--	X	X	--
	280-S10B-142	06/23/1995		X	X	--	X	--	--	X	X	--
	280-S10B-143	09/14/1995		X	X	--	X	--	--	X	X	--
D10B-02	280-S10B-139	12/15/1994		X	X	--	X	--	--	X	X	--
	280-S10B-144	02/22/1995		X	X	--	X	--	--	X	X	--
	280-S10B-145	06/23/1995		X	X	--	X	--	--	X	X	--
	280-S10B-146	09/14/1995		X	X	--	X	--	--	X	X	--
DHP-S09-04	280-S09-056	08/26/1994	22	X	X	--	X	--	--	X	--	--
DHP-S10B-01	280-S10B-110	07/15/1994	40	X	X	--	X	--	--	X	X	--
DHP-S10B-02	280-S10B-111	07/15/1994	33	X	X	--	X	--	--	X	X	--
DHP-S10B-03	280-S10B-112	07/18/1994	24	X	X	--	X	--	--	--	X	--
DHP-S10B-04	280-S10B-114	07/15/1994	24.5	X	X	--	X	--	--	X	X	--
DHP-S10B-05	280-S10B-115	07/15/1994	21	X	X	--	X	--	--	--	X	--
DHP-S13-05	280-S13-076	08/29/1994	13.5 - 17	X	X	--	X	--	--	X	X	--
M09-05	280-S09-044	11/30/1994		X	X	--	X	--	--	X	X	--
	280-S09-046	02/21/1995		X	X	--	X	--	--	X	X	--
	280-S09-047	06/21/1995		X	X	--	X	--	--	X	X	--
	280-S09-048	08/07/1995		X	X	--	X	--	--	X	X	--
M10B-01	280-S10B-140	12/01/1994		X	X	--	X	--	--	X	X	--
	280-S10B-147	02/22/1995		X	X	--	X	--	--	X	X	--
	280-S10B-148	06/23/1995		X	X	--	X	--	--	X	X	--
	280-S10B-149	08/09/1995		X	X	--	X	--	--	X	X	--
MW410-4	280-S09-040	10/19/1994		X	X	--	X	--	--	X	X	--
	280-S09-041	02/21/1995		X	X	--	X	--	--	X	X	--
	280-S09-042	06/23/1995		X	X	--	X	--	X	X	X	--
	280-S09-043	08/07/1995		X	X	--	X	--	--	X	X	--

TABLE 9-2: SITE 23 GROUNDWATER SAMPLING SUMMARY

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

SAMPLE LOCATION	SAMPLE IDENTIFICATION	DATE SAMPLED	DEPTH (ft bgs)	ANALYSES PERFORMED								
				SVOC	VOC	Landfill Gases	Dissolved Metals	Total Metals	Pesticides/ PCBs	General Chemistry	TPH	PAH
Follow-on Investigation, 1994 (Continued)												
MW530-1	280-S10B-017	10/19/1994		X	X	--	X	--	--	X	X	--
	280-S10B-018	02/22/1995		X	X	--	X	--	--	X	X	--
	280-S10B-020	06/26/1995		X	X	--	X	--	--	X	X	--
	280-S10B-021	08/09/1995		X	X	--	X	--	--	X	X	--
MW530-2	280-S10B-022	10/19/1994		X	X	--	X	--	--	X	X	--
	280-S10B-023	02/22/1995		X	X	--	X	--	--	X	X	--
	280-S10B-024	06/26/1995		X	X	--	X	--	--	X	X	--
	280-S10B-025	08/08/1995		X	X	--	X	--	--	X	X	--
MW530-3	280-S10B-026	10/19/1994		X	X	--	X	--	--	X	X	--
	280-S10B-027	02/22/1995		X	X	--	X	--	--	X	X	--
	280-S10B-028	06/26/1995		X	X	--	X	--	--	X	X	--
	280-S10B-029	08/09/1995		X	X	--	X	--	--	X	X	--
MWOR-5	280-S13-050	10/21/1994		X	X	--	X	--	X	X	X	--
	280-S13-051	02/23/1995		X	X	--	X	--	X	X	X	--
	280-S13-052	06/28/1995		X	X	--	X	--	X	X	X	--
	280-S13-053	08/11/1995		X	X	--	X	--	X	X	X	--
SHP-S10B-05	280-S10B-127	08/22/1994	5 - 8.5	X	X	--	X	--	--	--	X	--
SHP-S10B-06	280-S10B-128	08/22/1994	4.5 - 8	X	X	--	X	--	--	--	X	--
Follow-on Investigation, 1998												
D10B-02	108-S23-001	11/13/1997		--	X	--	X	--	--	X	--	--
	108-S23-003	02/12/1998		--	X	--	X	--	--	X	--	--
	108-S23-005	05/13/1998		--	X	--	X	--	--	X	--	--
	108-S23-007	08/07/1998		--	X	--	--	X	--	X	--	--
MW530-2	108-S23-002	11/06/1997		--	X	--	X	--	--	X	X	--
	108-S23-004	02/06/1998		--	X	--	X	--	--	X	X	--
	108-S23-006	05/13/1998		--	X	--	X	--	--	X	X	--
	108-S23-008	08/10/1998		--	X	--	--	X	--	X	X	--
MWOR-5	108-S13-003	11/07/1997		--	X	--	X	--	--	X	X	--
	108-S13-007	02/10/1998		--	X	--	X	--	--	X	X	--
	108-S13-011	05/13/1998		--	X	--	X	--	--	X	X	--
	108-S13-015	08/07/1998		--	X	--	--	X	--	X	X	--
Supplemental Remedial Investigation Data Gap Sampling, 2001												
530-MJ-MW-1	385-S23-008	07/09/2001		--	X	--	--	--	--	--	X	--
530-MJ-MW-2	385-S23-009	07/09/2001		--	X	--	--	--	--	--	X	--
530-MJ-MW-3	385-S23-010	07/06/2001		X	X	--	--	--	--	--	X	X

TABLE 9-2: SITE 23 GROUNDWATER SAMPLING SUMMARY

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

SAMPLE LOCATION	SAMPLE IDENTIFICATION	DATE SAMPLED	DEPTH (ft bgs)	ANALYSES PERFORMED								
				SVOC	VOC	Landfill Gases	Dissolved Metals	Total Metals	Pesticides/ PCBs	General Chemistry	TPH	PAH
Supplemental Remedial Investigation Data Gap Sampling, 2001 (Continued)												
D10B-01	385-S23-006	07/09/2001		X	X	--	--	--	--	--	X	X
D10B-02	385-S23-007	07/09/2001		X	X	--	--	--	--	--	X	X
M09-05	385-S09-029	06/25/2001		X	X	--	--	--	--	--	X	X
M10B-01	385-S23-005	07/06/2001		X	X	--	--	--	--	--	X	X
MW530-1	385-S23-002	07/06/2001		X	X	--	--	--	--	--	X	X
MW530-2	385-S23-003	07/06/2001		X	X	--	--	--	--	--	X	X
MW530-3	385-S23-004	07/06/2001		X	X	--	--	--	--	--	X	X
MWOR-5	385-S13-005	06/29/2001		X	X	--	--	--	--	--	X	X
S23-DGS-SG03	385-S23-019	07/27/2001	1.5	X	--	X	--	--	--	--	--	--
S23-DGS-SG03	385-S23-955	07/27/2001	4	X	--	X	--	--	--	--	--	--
S23-DGS-VE01	385-S23-015	08/08/2001	8 - 10	--	X	--	--	--	--	--	X	--
	385-S23-015A	08/08/2001	8 - 10	X	--	--	--	--	--	--	X	--
S23-DGS-VE02	385-S23-023	08/21/2001	7	--	X	--	--	--	--	--	--	--
Basewide Groundwater Monitoring, 2002												
D10B-02	D10B-02-A1137	06/28/2002		--	X	X	X	--	--	X	X	--
	D10B-02-A1638	12/16/2002		--	X	X	X	--	--	X	X	--
M10B-01	M10B-01-A1143	06/18/2002		--	X	X	X	--	--	X	X	--
	M10B-01-A1342	09/05/2002		--	X	--	--	--	--	--	X	--
	M10B-01-A1644	12/16/2002		--	X	X	X	--	--	X	X	--
	M10B-01-A1995	04/10/2003		--	X	--	--	--	--	--	X	--
MW410-4	MW410-4-A1152	06/18/2002		--	X	X	X	--	--	X	X	--
	MW410-4-A1346	09/04/2002		--	X	--	--	--	--	--	X	--
	MW410-4-A1653	12/16/2002		--	X	X	X	--	--	X	X	--
	MW410-4-A1999	04/09/2003		--	X	--	--	--	--	--	X	--
MW530-2	MW530-2-A1154	06/18/2002		--	X	X	X	--	--	X	X	--
	MW530-2-A1655	12/16/2002		--	X	X	X	--	--	X	X	--
MW530-3	MW530-3-A1155	06/18/2002		--	X	X	X	--	--	X	X	--
	MW530-3-A1656	12/16/2002		--	X	X	X	--	--	X	X	--
ENVIRONMENTAL BASELINE SURVEY												
Phase IIA Environmental Baseline Survey												
148-001-001	148-0001M	02/07/1995	5 - 5	--	X	--	--	--	--	--	--	--
148-001-004	148-0004M	02/07/1995	3.5 - 4	--	X	--	--	--	--	--	--	--
148-001-007	148-0007M	02/07/1995	3 - 3.5	--	X	--	--	--	--	--	--	--

TABLE 9-2: SITE 23 GROUNDWATER SAMPLING SUMMARY

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

SAMPLE LOCATION	SAMPLE IDENTIFICATION	DATE SAMPLED	DEPTH (ft bgs)	ANALYSES PERFORMED								
				SVOC	VOC	Landfill Gases	Dissolved Metals	Total Metals	Pesticides/ PCBs	General Chemistry	TPH	PAH
Phase IIB Environmental Baseline Survey												
211-002-010	211-0011	10/17/1995	9 - 9	X	--	--	--	--	--	--	X	--
	211-0011RS	11/29/1995	9 - 9	--	X	--	--	--	--	--	--	--
211-002-011	211-0014	10/17/1995	9 - 9	X	--	--	--	--	--	--	X	--
	211-0014RS	11/29/1995	8 - 9	--	X	--	--	--	--	--	--	--
211-002-012	211-0017	10/17/1995	9 - 9	X	--	--	--	--	--	--	X	--
	211-0017RS	11/29/1995	8 - 9	--	X	--	--	--	--	--	--	--
211-002-013	211-0020	10/18/1995	7.5 - 8.5	X	--	--	--	--	--	--	X	--
	211-0020RS	11/29/1995	8 - 8.5	--	X	--	--	--	--	--	--	--
	211-0029RS	11/29/1995	8 - 9	--	X	--	--	--	--	--	--	--
211-002-014	211-0023	10/17/1995	9 - 9	X	--	--	--	--	--	--	X	--
	211-0023RS	11/29/1995	8 - 9	--	X	--	--	--	--	--	--	--
211-002-015	211-0026	10/17/1995	9 - 9	X	--	--	--	--	--	--	X	--
	211-0026RS	11/29/1995	9 - 10	--	X	--	--	--	--	--	--	--
TOTAL PETROLEUM HYDROCARBON INVESTIGATIONS												
Fuel Line and Underground Storage Tank Investigations												
530-1-MOJ	530-P1W	08/20/1997		--	X	--	--	--	--	--	X	--
530-2-MOJ	530-P2W	08/20/1997		--	--	--	--	--	--	--	X	--
530-3-MOJ	530-P3W	08/20/1997		--	--	--	--	--	--	--	X	--
530-4-MOJ	530-P4W	08/20/1997		--	X	--	--	--	--	--	X	--
530-5-MOJ	530-P5W	08/20/1997		--	--	--	--	--	--	--	X	--
530-6-MOJ	530-P6W	08/21/1997		--	X	--	--	--	--	--	X	--
530-7-MOJ	530-P7W	08/21/1997		--	X	--	--	--	--	--	X	--
530-8-MOJ	530-P8W	08/21/1997		--	--	--	--	--	--	--	X	--
530-9-MOJ	530-P9W	08/21/1997		--	--	--	--	--	--	--	X	--
530-10-MOJ	530-P10W	08/21/1997		--	X	--	--	--	--	--	X	--
530-11-MOJ	530-P11W	09/17/1997		--	--	--	--	--	--	--	X	--
530-12-MOJ	530-P12W	09/17/1997		--	--	--	--	--	--	--	X	--
530-13-MOJ	530-P13W	09/17/1997		--	--	--	--	--	--	--	X	--
530-14-MOJ	530-P14W	09/17/1997		--	--	--	--	--	--	--	X	--
530-15-MOJ	530-P15W	09/17/1997		--	--	--	--	--	--	--	X	--
530-16-MOJ	530-P16W	09/17/1997		--	--	--	--	--	--	--	X	--
530-17-MOJ	530-P17W	09/17/1997		--	--	--	--	--	--	--	X	--
530-18-MOJ	530-P18W	09/18/1997		--	--	--	--	--	--	--	X	--
530-20-MOJ	530-P20W	09/18/1997		--	--	--	--	--	--	--	X	--
530-22-MOJ	530-P22W	10/06/1997		--	--	--	--	--	--	--	X	--

TABLE 9-2: SITE 23 GROUNDWATER SAMPLING SUMMARY

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

SAMPLE LOCATION	SAMPLE IDENTIFICATION	DATE SAMPLED	DEPTH (ft bgs)	ANALYSES PERFORMED								
				SVOC	VOC	Landfill Gases	Dissolved Metals	Total Metals	Pesticides/ PCBs	General Chemistry	TPH	PAH
Fuel Line and Underground Storage Tank Investigations (Continued)												
530-25-MOJ	530-P25W	11/11/1997		--	--	--	--	--	--	--	X	--
530-MJ-MW-1	530-MJ-MW-1	12/15/1997		--	--	--	--	--	--	--	X	--
	530-MJ-MW-1	03/16/1998		--	--	--	--	--	--	--	X	--
	530-MJ-MW-1	09/29/1998		--	--	--	--	--	--	--	X	--
	530-MJ-MW-1	04/07/1999		--	--	--	--	--	--	--	X	--
530-MJ-MW-2	530-MJ-MW-2	12/15/1997		--	--	--	--	--	--	--	X	--
	530-MJ-MW-2	03/16/1998		--	--	--	--	--	--	--	X	--
	530-MJ-MW-2	09/29/1998		--	--	--	--	--	--	--	X	--
530-MJ-MW-3	530-MJ-MW-2	04/07/1999		--	--	--	--	--	--	--	X	--
	530-MJ-MW-3	12/15/1997		--	--	--	--	--	--	--	X	--
	530-MJ-MW-3	03/16/1998		--	--	--	--	--	--	--	X	--
	530-MJ-MW-3	09/29/1998		--	--	--	--	--	--	--	X	--
	530-MJ-MW-3	04/07/1999		--	--	--	--	--	--	--	X	--
5-JF	030-CAP-191	05/03/2000		--	X	--	X	--	--	--	X	--
CA13-07	030-CAP-200	04/26/2000	3 - 8	--	X	--	X	--	--	--	X	--
CA13-08	030-CAP-200A	05/02/2000	3 - 8	--	X	--	X	--	--	--	X	--
CA13-09	030-CAP-201	04/26/2000	3 - 8	--	X	--	X	--	--	--	X	--
CA13-10	030-CAP-204	06/15/2000	3 - 8	--	X	--	X	--	--	--	X	--
M10B-01	030-CAP-198	04/25/2000		--	X	--	X	--	--	--	X	--
MW530-1	030-CAP-197	04/26/2000		--	X	--	X	--	--	--	X	--

Notes:

--	These analyses were not performed.
ft bgs	Feet below ground surface
General chemistry	Acidity, alkalinity, conductivity, hardness, major anions, MBAS, oxydation, pH, sulfide, TDS, and/or TOC
MBAS	Methylene blue active substances (surfactants)
PAH	Polynuclear aromatic hydrocarbons
PCB	Polychlorinated biphenyls
SVOC	Semivolatile organic compounds
TDS	Total dissolved solids
TOC	Total organic carbon
TPH	Total petroleum hydrocarbons
VOC	Volatile organic compounds
X	These analyses were performed.

TABLE 9-3: SITE 23 STATISTICAL SUMMARY OF SOIL ANALYSES

Phases 1 and 2A Investigation, 1991

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

Analyte	Number of Samples Analyzed	Number of Detections	Percent of Detections	Average of Detected Concentration	Minimum Detected Concentration	Maximum Detected Concentration	Minimum Non-detected Concentration	Maximum Non-detected Concentration	Number of Detections Over PRG	Number of Non-detects Over PRG	Residential PRG
Volatile Organic Compounds (µg/kg)											
1,1,1-TRICHLOROETHANE	54	0	0	--	--	--	5	30	0	0	1,200,000
1,1,2,2-TETRACHLOROETHANE	54	0	0	--	--	--	5	30	0	0	410
1,1,2-TRICHLOROETHANE	54	0	0	--	--	--	5	30	0	0	730
1,1-DICHLOROETHANE	54	0	0	--	--	--	5	30	0	0	2,800 (CAL-modified)
1,1-DICHLOROETHENE	54	0	0	--	--	--	5	30	0	0	120,000
1,2-DICHLOROBENZENE	37	0	0	--	--	--	5	840	0	0	370,000
1,2-DICHLOROETHANE	54	0	0	--	--	--	5	61	0	0	280
1,2-DICHLOROETHENE (TOTAL)	54	1	2	5	5 J	5 J	5	30	0	0	43,000 (cis)
1,2-DICHLOROPROPANE	54	0	0	--	--	--	5	30	0	0	340
1,3-DICHLOROBENZENE	37	0	0	--	--	--	5	840	0	0	16,000
1,4-DICHLOROBENZENE	37	0	0	--	--	--	5	840	0	0	3,400
2-BUTANONE	54	0	0	--	--	--	5	30	--	--	NA
2-CHLOROETHYLVINYLETHER	37	0	0	--	--	--	10	19	--	--	NA
2-HEXANONE	54	1	2	2	2 J	2 J	10	61	--	--	NA
4-METHYL-2-PENTANONE	54	0	0	--	--	--	6	61	--	--	NA
ACETONE	56	1	2	18	18	18	10	1,500	0	0	1,600,000
BENZENE	54	0	0	--	--	--	5	30	0	0	600
BROMODICHLOROMETHANE	54	0	0	--	--	--	5	30	0	0	820
BROMOFORM	54	0	0	--	--	--	5	30	0	0	62,000
BROMOMETHANE	54	0	0	--	--	--	10	61	0	0	3,900
CARBON DISULFIDE	54	0	0	--	--	--	5	30	0	0	360,000
CARBON TETRACHLORIDE	54	0	0	--	--	--	5	30	0	0	250
CHLOROBENZENE	54	0	0	--	--	--	5	30	0	0	150,000
CHLOROETHANE	54	0	0	--	--	--	10	61	0	0	3,000
CHLOROFORM	54	0	0	--	--	--	5	30	0	0	940 (CAL-modified)
CHLOROMETHANE	54	0	0	--	--	--	10	61	0	0	1,200
CIS-1,3-DICHLOROPROPENE	54	0	0	--	--	--	5	30	0	0	780 (not cis)
DIBROMOCHLOROMETHANE	54	0	0	--	--	--	5	30	0	0	1,100
ETHYLBENZENE	56	2	4	3,100	36	6,200	5	29	0	0	8,900
METHYLENE CHLORIDE	56	3	5	660	7	1,800	5	63	0	0	9,100
STYRENE	54	0	0	--	--	--	5	30	0	0	1,700,000

TABLE 9-3: SITE 23 STATISTICAL SUMMARY OF SOIL ANALYSES (Continued)

Phases 1 and 2A Investigation, 1991

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

Analyte	Number of Samples Analyzed	Number of Detections	Percent of Detections	Average of Detected Concentration	Minimum Detected Concentration	Maximum Detected Concentration	Minimum Non-detected Concentration	Maximum Non-detected Concentration	Number of Detections Over PRG	Number of Non-detects Over PRG	Residential PRG
Volatile Organic Compounds (µg/kg)											
TETRACHLOROETHENE	54	0	0	--	--	--	5	30	0	0	1,500
TOLUENE	56	49	88	55	2.1	1,100	5	750	0	0	520,000
TRANS-1,3-DICHLOROPROPENE	54	0	0	--	--	--	5	30	0	0	780 (not trans)
TRICHLOROETHENE	54	0	0	--	--	--	5	30	0	0	53
TRICHLOROFLUOROMETHANE	37	0	0	--	--	--	5	9	0	0	390,000
VINYL ACETATE	54	0	0	--	--	--	10	61	0	0	430,000
VINYL CHLORIDE	54	0	0	--	--	--	10	61	0	0	79 (child or adult)
XYLENE (TOTAL)	56	3	5	4,100	11	12,000	5	29	0	0	270,000
Semivolatile Organic Compounds (µg/kg)											
1,2,4-TRICHLOROBENZENE	73	0	0	--	--	--	340	16,000	0	0	650,000
1,2-DICHLOROBENZENE	73	0	0	--	--	--	340	16,000	0	0	370,000
1,2-DIPHENYLHYDRAZINE	49	0	0	--	--	--	340	**1,200**	0	6	610
1,3-DICHLOROBENZENE	73	0	0	--	--	--	340	16,000	0	0	16,000
1,4-DICHLOROBENZENE	73	0	0	--	--	--	340	**16,000**	0	4	3,400
2,4,5-TRICHLOROPHENOL	73	0	0	--	--	--	1,600	75,000	0	0	6,100,000
2,4,6-TRICHLOROPHENOL	73	0	0	--	--	--	340	**16,000**	0	3	6,900 (CAL-modified)
2,4-DICHLOROPHENOL	73	0	0	--	--	--	340	16,000	0	0	180,000
2,4-DIMETHYLPHENOL	73	0	0	--	--	--	340	16,000	0	0	1,200,000
2,4-DINITROPHENOL	73	0	0	--	--	--	1,600	75,000	0	0	120,000
2,4-DINITROTOLUENE	73	0	0	--	--	--	340	16,000	0	0	120,000
2,6-DINITROTOLUENE	73	0	0	--	--	--	340	16,000	0	0	61,000
2-CHLORONAPHTHALENE	73	0	0	--	--	--	340	16,000	--	--	NA
2-CHLOROPHENOL	73	0	0	--	--	--	340	16,000	0	0	63,000
2-METHYLNAPHTHALENE	73	1	1	41,000	41,000	41,000	340	8,500	--	--	NA
2-METHYLPHENOL	73	0	0	--	--	--	340	16,000	--	--	NA
2-NITROANILINE	73	0	0	--	--	--	1,600	**75,000**	0	56	1,700
2-NITROPHENOL	73	0	0	--	--	--	340	16,000	--	--	NA
3,3'-DICHLOROBENZIDINE	73	0	0	--	--	--	670	**31,000**	0	24	1,100
3-NITROANILINE	73	0	0	--	--	--	1,600	75,000	--	--	NA
4,6-DINITRO-2-METHYLPHENOL	73	0	0	--	--	--	1,600	75,000	--	--	NA

TABLE 9-3: SITE 23 STATISTICAL SUMMARY OF SOIL ANALYSES (Continued)

Phases 1 and 2A Investigation, 1991

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

Analyte	Number of Samples Analyzed	Number of Detections	Percent of Detections	Average of Detected Concentration	Minimum Detected Concentration	Maximum Detected Concentration	Minimum Non-detected Concentration	Maximum Non-detected Concentration	Number of Detections Over PRG	Number of Non-detects Over PRG	Residential PRG
Semivolatile Organic Compounds (µg/kg)											
4-BROMOPHENYL-PHENYLETHER	73	0	0	--	--	--	340	16,000	--	--	NA
4-CHLORO-3-METHYLPHENOL	73	0	0	--	--	--	340	16,000	--	--	NA
4-CHLOROANILINE	73	0	0	--	--	--	340	16,000	0	0	240,000
4-CHLOROPHENYL-PHENYLETHER	73	0	0	--	--	--	340	16,000	--	--	NA
4-METHYLPHENOL	73	0	0	--	--	--	340	16,000	0	0	310,000
4-NITROANILINE	73	0	0	--	--	--	1,600	75,000	--	--	NA
4-NITROPHENOL	73	0	0	--	--	--	1,600	75,000	--	--	NA
ACENAPHTHENE	73	0	0	--	--	--	340	16,000	0	0	3,700,000
ACENAPHTHYLENE	73	0	0	--	--	--	340	16,000	--	--	NA
ANILINE	13	0	0	--	--	--	350	1,200	0	0	85,000
ANTHRACENE	73	2	3	63	40.J	85.J	340	16,000	0	0	22,000,000
BENZO(A)ANTHRACENE	73	10	14	140	50.J	310.J	340	**16,000**	0	19	620
BENZO(A)PYRENE	73	8	11	**280**	**64.J**	**450**	**340**	**16,000**	8	65	62
BENZO(B)FLUORANTHENE	73	7	10	320	130.J	450.J	340	**16,000**	0	19	620
BENZO(G,H,I)PERYLENE	73	8	11	300	62.J	460.J	340	16,000	--	--	NA
BENZO(K)FLUORANTHENE	73	6	8	200	120.J	310.J	340	**16,000**	0	48	380 (CAL-modified)
BENZOIC ACID	73	0	0	--	--	--	1,600	75,000	0	0	100,000,000
BENZYL ALCOHOL	73	0	0	--	--	--	340	16,000	0	0	18,000,000
BIS(2-CHLOROETHOXY)METHANE	73	0	0	--	--	--	340	16,000	--	--	NA
BIS(2-CHLOROETHYL)ETHER	73	0	0	--	--	--	**340**	**16,000**	0	73	210
BIS(2-ETHYLHEXYL)PHTHALATE	73	0	0	--	--	--	340	16,000	0	0	35,000
BUTYLBENZYLPHTHALATE	73	0	0	--	--	--	340	16,000	0	0	12,000,000
CHRYSENE	73	10	14	180	65.J	340.J	340	**16,000**	0	4	3,800 (CAL-modified)
DI-N-BUTYLPHTHALATE	73	1	1	12,000	12,000	12,000	340	16,000	--	--	NA
DI-N-OCTYLPHTHALATE	73	0	0	--	--	--	340	16,000	--	--	NA
DIBENZO(A,H)ANTHRACENE	73	0	0	--	--	--	**340**	**16,000**	0	73	62
DIBENZOFURAN	73	0	0	--	--	--	340	16,000	0	0	290,000
DIETHYLPHTHALATE	73	0	0	--	--	--	340	16,000	0	0	49,000,000
DIMETHYLPHTHALATE	73	0	0	--	--	--	340	16,000	0	0	100,000,000
FLUORANTHENE	73	8	11	240	83.J	630	340	16,000	0	0	2,300,000
FLUORENE	73	0	0	--	--	--	340	16,000	0	0	2,700,000

TABLE 9-3: SITE 23 STATISTICAL SUMMARY OF SOIL ANALYSES (Continued)

Phases 1 and 2A Investigation, 1991

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

Analyte	Number of Samples Analyzed	Number of Detections	Percent of Detections	Average of Detected Concentration	Minimum Detected Concentration	Maximum Detected Concentration	Minimum Non-detected Concentration	Maximum Non-detected Concentration	Number of Detections Over PRG	Number of Non-detects Over PRG	Residential PRG
Semivolatile Organic Compounds (µg/kg)											
HEXACHLOROBENZENE	73	0	0	--	--	--	**340**	**16,000**	0	73	300
HEXACHLOROBUTADIENE	73	0	0	--	--	--	340	**16,000**	0	3	6,200
HEXACHLOROCYCLOPENTADIENE	73	0	0	--	--	--	340	16,000	0	0	370,000
HEXACHLOROETHANE	73	0	0	--	--	--	340	16,000	0	0	35,000
INDENO(1,2,3-CD)PYRENE	73	6	8	280	200 J	390 J	340	**16,000**	0	20	620
ISOPHORONE	73	0	0	--	--	--	340	16,000	0	0	510,000
N-NITROSO-DI-N-PROPYLAMINE	73	0	0	--	--	--	**340**	**16,000**	0	73	69
N-NITROSODIMETHYLAMINE	13	0	0	--	--	--	**350**	**1,200**	0	13	10
N-NITROSODIPHENYLAMINE	73	12	16	97	46 J	220 J	340	16,000	0	0	99,000
NAPHTHALENE	73	16	22	55	38 J	110 J	340	16,000	0	0	56,000
NITROBENZENE	73	0	0	--	--	--	340	16,000	0	0	20,000
PENTACHLOROPHENOL	73	1	1	930	930 J	930 J	1,600	**75,000**	0	21	3,000
PHENANTHRENE	73	9	12	140	42 J	370 J	340	16,000	--	--	NA
PHENOL	73	0	0	--	--	--	340	16,000	0	0	37,000,000
PYRENE	73	15	21	360	48 J	970	340	16,000	0	0	2,300,000
PCBs/Pesticides (µg/kg)											
4,4'-DDD	39	1	3	14	14	14	2	94	0	0	2,400
4,4'-DDE	39	1	3	7	7	7	2	94	0	0	1,700
4,4'-DDT	39	2	5	37	3	72	2	94	0	0	1,700
ALDRIN	39	0	0	--	--	--	1	**47**	0	1	29
ALPHA-BHC	39	0	0	--	--	--	1	47	--	--	NA
ALPHA-CHLORDANE	25	0	0	--	--	--	4	470	0	0	1,600 (chlordane)
AROCLOR-1016	39	0	0	--	--	--	27	470	0	0	3,900
AROCLOR-1221	39	0	0	--	--	--	27	**850**	0	4	220
AROCLOR-1232	39	0	0	--	--	--	27	**850**	0	4	220
AROCLOR-1242	39	0	0	--	--	--	27	**470**	0	4	220
AROCLOR-1248	39	0	0	--	--	--	17	**470**	0	2	220
AROCLOR-1254	39	0	0	--	--	--	17	**940**	0	4	220
AROCLOR-1260	39	0	0	--	--	--	17	**940**	0	4	220
BETA-BHC	39	0	0	--	--	--	1	47	--	--	NA

TABLE 9-3: SITE 23 STATISTICAL SUMMARY OF SOIL ANALYSES (Continued)

Phases 1 and 2A Investigation, 1991

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

Analyte	Number of Samples Analyzed	Number of Detections	Percent of Detections	Average of Detected Concentration	Minimum Detected Concentration	Maximum Detected Concentration	Minimum Non-detected Concentration	Maximum Non-detected Concentration	Number of Detections Over PRG	Number of Non-detects Over PRG	Residential PRG
PCBs/Pesticides (µg/kg)											
CHLORDANE	14	0	0	--	--	--	11	120	0	0	1,600
DELTA-BHC	39	0	0	--	--	--	1	47	--	--	NA
DIELDRIN	39	0	0	--	--	--	1	**94**	0	1	30
ENDOSULFAN I	39	0	0	--	--	--	2	47	0	0	370,000
ENDOSULFAN II	40	0	0	--	--	--	2	94	0	0	370,000 (endosulfan)
ENDOSULFAN SULFATE	39	0	0	--	--	--	2	94	--	--	NA
ENDRIN	36	0	0	--	--	--	2	94	0	0	18,000
ENDRIN ALDEHYDE	15	0	0	--	--	--	2	24	--	--	NA
ENDRIN KETONE	25	0	0	--	--	--	8	94	--	--	NA
GAMMA-BHC (LINDANE)	39	0	0	--	--	--	1	47	--	--	NA
GAMMA-CHLORDANE	25	0	0	--	--	--	4	470	0	0	1,600 (chlordane)
HEPTACHLOR	35	0	0	--	--	--	1	47	0	0	110
HEPTACHLOR EPOXIDE	38	0	0	--	--	--	1	47	0	0	53
METHOXYCHLOR	39	0	0	--	--	--	5	470	0	0	310,000
TOXAPHENE	39	3	8	1,400	400	**2,500**	53	**940**	2	3	440
Metals (mg/kg)											
ALUMINUM	74	74	100	6,220	370	28,800	0.0	0.0	0	0	76,000
ANTIMONY	74	18	24	4.2	2.4	7.4	2.0	10.0	0	0	31.0
ARSENIC	74	22	30	**5.1**	**2.6**	**12.0**	**2.2**	**17.0**	22	52	0.39
BARIUM	69	62	90	54.2	15.2	300	21.0	25.0	0	0	5,400
BERYLLIUM	74	14	19	0.26	0.10	0.50	0.20	1.7	0	0	150
CADMIUM	74	31	42	0.54	0.20	4.1	0.19	1.7	0	0	37.0
CALCIUM	74	73	99	4,480	710	28,800	10.0	10.0	--	--	NA
CHROMIUM	74	73	99	33.1	7.3	89.0	6.2	6.2	0	0	210
COBALT	74	48	65	5.9	2.8	15.0	5.2	6.6	0	0	900
COPPER	74	73	99	20.8	4.5	113	5.3	5.3	0	0	3,100
IRON	74	74	100	10,600	1,500	**37,000**	0.0	0.0	5	0	23,000
LEAD	74	28	38	20.2	6.4	120	3.5	6.4	0	0	150 (CAL-modified)
MAGNESIUM	74	72	97	2,950	26.6	10,000	620	640	--	--	NA
MANGANESE	74	73	99	140	13.0	759	6.2	6.2	0	0	1,800

TABLE 9-3: SITE 23 STATISTICAL SUMMARY OF SOIL ANALYSES (Continued)

Phases 1 and 2A Investigation, 1991

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

Analyte	Number of Samples Analyzed	Number of Detections	Percent of Detections	Average of Detected Concentration	Minimum Detected Concentration	Maximum Detected Concentration	Minimum Non-detected Concentration	Maximum Non-detected Concentration	Number of Detections Over PRG	Number of Non-detects Over PRG	Residential PRG
Metals (mg/kg)											
MOLYBDENUM	74	0	0	--	--	--	0.31	8.5	0	0	390
NICKEL	74	72	97	30.2	4.7	91.0	6.2	6.4	0	0	1,600
POTASSIUM	74	68	92	1,020	390	3,700	520	620	--	--	NA
SELENIUM	74	1	1	26.0	26.0	26.0	4.3	14.0	0	0	390
SILVER	74	1	1	0.38	0.38	0.38	0.38	8.5	0	0	390
SODIUM	74	56	76	854	130	3,400	520	660	--	--	NA
THALLIUM	74	2	3	3.1	2.9	3.3	2.6	**17.0**	0	31	5.2
TITANIUM	74	74	100	422	229	2,540	0.0	0.0	--	--	NA
VANADIUM	74	73	99	21.8	12.0	82.0	6.2	6.2	0	0	550
ZINC	74	74	100	36.1	10.0	130	0.0	0.0	0	0	23,000

NOTES:

Bold denotes values elevated above the PRG

-- Not detected
BHC Benzene Hexachloride
DDD Dichlorodiphenyldichloroethane
DDE Dichlorodiphenyldichloroethene
DDT Dichlorodiphenyltrichloroethane
J Estimated value
mg/kg Milligrams per kilogram
NA No PRG available
PCB Polychlorinated biphenyl
PRG Preliminary Remediation Goal, U.S. Environmental Protection Agency, Region 9 or CAL-modified
ug/kg Micrograms per kilogram

TABLE 9-4: SITE 23 STATISTICAL SUMMARY OF GROUNDWATER ANALYSES

Phases 1 and 2A Investigation, 1991

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

Analyte	Number of Samples Analyzed	Number of Detections	Percent of Detections	Average of Detected Concentration	Minimum Detected Concentration	Maximum Detected Concentration	Minimum Non-detected Concentration	Maximum Non-detected Concentration	Number of Detections Over PRG	Number of Non-detects Over PRG	Tap Water PRG	MCL
Volatile Organic Compounds (µg/L)												
1,1,1-TRICHLOROETHANE	5	0	0	--	--	--	5	5	0	0	3,200	200
1,1,2,2-TETRACHLOROETHANE	5	0	0	--	--	--	5	5	0	5	0.06	1
1,1,2-TRICHLOROETHANE	5	0	0	--	--	--	5	5	0	5	0.2	5
1,1-DICHLOROETHANE	5	0	0	--	--	--	5	5	0	5	2 (CAL-modified)	5
1,1-DICHLOROETHENE	5	0	0	--	--	--	5	5	0	0	340	6
1,2-DICHLOROETHANE	5	0	0	--	--	--	5	5	0	5	0.1	0.5
1,2-DICHLOROETHENE (TOTAL)	5	0	0	--	--	--	5	5	0	0	61 (cis)	NA
1,2-DICHLOROPROPANE	5	0	0	--	--	--	5	5	0	5	0.2	5
2-BUTANONE	5	0	0	--	--	--	10	10	--	--	NA	NA
2-HEXANONE	5	0	0	--	--	--	10	10	--	--	NA	NA
4-METHYL-2-PENTANONE	5	0	0	--	--	--	10	10	--	--	NA	NA
ACETONE	5	0	0	--	--	--	10	10	0	0	610	NA
BENZENE	5	1	20	19	19	19	5	5	1	4	0.3	1
BROMODICHLOROMETHANE	5	0	0	--	--	--	5	5	0	5	0.2	80
BROMOFORM	5	0	0	--	--	--	5	5	0	0	9	80
BROMOMETHANE	5	0	0	--	--	--	10	10	0	5	9	NA
CARBON DISULFIDE	5	0	0	--	--	--	5	5	0	0	1,000	NA
CARBON TETRACHLORIDE	5	0	0	--	--	--	5	5	0	5	0.2	0.5
CHLOROBENZENE	5	0	0	--	--	--	5	5	0	0	110	70
CHLOROETHANE	5	0	0	--	--	--	10	10	0	5	5	NA
CHLOROFORM	5	0	0	--	--	--	5	5	0	5	0.5 (CAL-modified)	80
CHLOROMETHANE	5	0	0	--	--	--	10	10	0	5	2	NA
CIS-1,3-DICHLOROPROPENE	5	0	0	--	--	--	5	5	0	5	0.4 (not cis)	0.5
DIBROMOCHLOROMETHANE	5	0	0	--	--	--	5	5	0	5	0.1	80
ETHYLBENZENE	5	1	20	79	79	79	5	5	1	4	3	300
METHYLENE CHLORIDE	5	0	0	--	--	--	5	12	0	5	4	NA
STYRENE	5	0	0	--	--	--	5	5	0	0	1,600	100
TETRACHLOROETHENE	5	0	0	--	--	--	5	5	0	5	0.7	5
TOLUENE	5	1	20	7	7	7	5	5	0	0	720	150
TRANS-1,3-DICHLOROPROPENE	5	0	0	--	--	--	5	5	0	5	0.4 (not trans)	0.5
TRICHLOROETHENE	5	0	0	--	--	--	5	5	0	5	0.03	5

TABLE 9-4: SITE 23 STATISTICAL SUMMARY OF GROUNDWATER ANALYSES

Phases 1 and 2A Investigation, 1991

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

Analyte	Number of Samples Analyzed	Number of Detections	Percent of Detections	Average of Detected Concentration	Minimum Detected Concentration	Maximum Detected Concentration	Minimum Non-detected Concentration	Maximum Non-detected Concentration	Number of Detections Over PRG	Number of Non-detects Over PRG	Tap Water PRG	MCL
Volatile Organic Compounds (µg/L)												
VINYL ACETATE	5	0	0	--	--	--	5	5	0	0	410	NA
VINYL CHLORIDE	5	0	0	--	--	--	**10**	**10**	0	5	0.02 (child or adult)	0.5
XYLENE (TOTAL)	5	1	20	190	190	190	5	5	0	0	210	1,800
Semivolatile Organic Compounds (µg/L)												
1,2,4-TRICHLOROBENZENE	5	0	0	--	--	--	10	100	0	0	190	5
1,2-DICHLOROBENZENE	5	0	0	--	--	--	10	100	0	0	370	600
1,3-DICHLOROBENZENE	5	0	0	--	--	--	**10**	**100**	0	5	6	NA
1,4-DICHLOROBENZENE	5	0	0	--	--	--	**10**	**100**	0	5	0.5	5
2,4,5-TRICHLOROPHENOL	5	0	0	--	--	--	50	500	0	0	3,600	50
2,4,6-TRICHLOROPHENOL	5	0	0	--	--	--	**10**	**100**	0	5	1 (CAL-modified)	NA
2,4-DICHLOROPHENOL	5	0	0	--	--	--	10	100	0	0	110	NA
2,4-DIMETHYLPHENOL	5	0	0	--	--	--	10	100	0	0	730	NA
2,4-DINITROPHENOL	5	0	0	--	--	--	50	**500**	0	2	73	NA
2,4-DINITROTOLUENE	5	0	0	--	--	--	10	**100**	0	1	73	NA
2,6-DINITROTOLUENE	5	0	0	--	--	--	10	**100**	0	1	36	NA
2-CHLORONAPHTHALENE	5	0	0	--	--	--	10	100	--	--	NA	NA
2-CHLOROPHENOL	5	0	0	--	--	--	10	**100**	0	1	30	NA
2-METHYLNAPHTHALENE	5	1	20	390	390	390	10	20	--	--	NA	NA
2-METHYLPHENOL	5	0	0	--	--	--	10	100	0	0	1,800	NA
2-NITROANILINE	5	0	0	--	--	--	**50**	**500**	0	5	1	NA
2-NITROPHENOL	5	0	0	--	--	--	10	100	--	--	NA	NA
3,3'-DICHLOROBENZIDINE	5	0	0	--	--	--	**20**	**200**	0	5	0.2	NA
3-NITROANILINE	5	0	0	--	--	--	50	500	--	--	NA	NA
4,6-DINITRO-2-METHYLPHENOL	5	0	0	--	--	--	50	500	--	--	NA	NA
4-BROMOPHENYL-PHENYLETHER	5	0	0	--	--	--	10	100	--	--	NA	NA
4-CHLORO-3-METHYLPHENOL	5	0	0	--	--	--	10	100	--	--	NA	NA
4-CHLOROANILINE	5	0	0	--	--	--	10	100	0	0	150	NA
4-CHLOROPHENYL-PHENYLETHER	5	0	0	--	--	--	10	100	--	--	NA	NA
4-METHYLPHENOL	5	0	0	--	--	--	10	100	0	0	180	NA
4-NITROANILINE	5	0	0	--	--	--	50	500	--	--	NA	NA

TABLE 9-4: SITE 23 STATISTICAL SUMMARY OF GROUNDWATER ANALYSES

Phases 1 and 2A Investigation, 1991

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

Analyte	Number of Samples Analyzed	Number of Detections	Percent of Detections	Average of Detected Concentration	Minimum Detected Concentration	Maximum Detected Concentration	Minimum Non-detected Concentration	Maximum Non-detected Concentration	Number of Detections Over PRG	Number of Non-detects Over PRG	Tap Water PRG	MCL
Semivolatile Organic Compounds (µg/L)												
4-NITROPHENOL	5	0	0	--	--	--	50	500	--	--	NA	NA
ACENAPHTHENE	5	0	0	--	--	--	10	100	0	0	370	NA
ACENAPHTHYLENE	5	0	0	--	--	--	10	100	--	--	NA	NA
ANTHRACENE	5	0	0	--	--	--	10	100	0	0	1,800	NA
BENZO(A)ANTHRACENE	5	0	0	--	--	--	**10**	**100**	0	5	0.09	0.1
BENZO(A)PYRENE	5	0	0	--	--	--	**10**	**100**	0	5	0.009	0.2
BENZO(B)FLUORANTHENE	5	0	0	--	--	--	**10**	**100**	0	5	0.09	NA
BENZO(G,H,I)PERYLENE	5	0	0	--	--	--	10	100	--	--	NA	NA
BENZO(K)FLUORANTHENE	5	0	0	--	--	--	**10**	**100**	0	5	0.06 (CAL-modified)	NA
BENZOIC ACID	5	0	0	--	--	--	50	500	0	0	150,000	NA
BENZYL ALCOHOL	5	0	0	--	--	--	10	100	0	0	11,000	NA
BIS(2-CHLOROETHOXY)METHANE	5	0	0	--	--	--	10	100	--	--	NA	NA
BIS(2-CHLOROETHYL)ETHER	5	0	0	--	--	--	**10**	**100**	0	5	0.01	NA
BIS(2-ETHYLHEXYL)PHTHALATE	5	0	0	--	--	--	**10**	**100**	0	5	5	NA
BUTYLBENZYLPHTHALATE	5	0	0	--	--	--	10	100	0	0	7,300	NA
CHRYSENE	5	0	0	--	--	--	**10**	**100**	0	5	0.6 (CAL-modified)	NA
DI-N-BUTYLPHTHALATE	5	0	0	--	--	--	10	100	--	--	NA	NA
DI-N-OCTYLPHTHALATE	5	0	0	--	--	--	10	100	--	--	NA	NA
DIBENZO(A,H)ANTHRACENE	5	0	0	--	--	--	**10**	**100**	0	5	0.009	NA
DIBENZOFURAN	5	0	0	--	--	--	10	**100**	0	1	24	NA
DIETHYLPHTHALATE	5	0	0	--	--	--	10	100	0	0	29,000	NA
DIMETHYLPHTHALATE	5	0	0	--	--	--	10	100	0	0	360,000	NA
FLUORANTHENE	5	0	0	--	--	--	10	100	0	0	1,500	NA
FLUORENE	5	0	0	--	--	--	10	100	0	0	240	NA
HEXACHLOROBENZENE	5	0	0	--	--	--	**10**	**100**	0	5	0.04	1
HEXACHLOROBUTADIENE	5	0	0	--	--	--	**10**	**100**	0	5	0.9	NA
HEXACHLOROCYCLOPENTADIENE	5	0	0	--	--	--	10	100	0	0	220	NA
HEXACHLOROETHANE	5	0	0	--	--	--	**10**	**100**	0	5	5	NA
INDENO(1,2,3-CD)PYRENE	5	0	0	--	--	--	**10**	**100**	0	5	0.09	NA
ISOPHORONE	5	0	0	--	--	--	10	**100**	0	1	71	NA
N-NITROSO-DI-N-PROPYLAMINE	5	0	0	--	--	--	**10**	**100**	0	5	0.01	NA

TABLE 9-4: SITE 23 STATISTICAL SUMMARY OF GROUNDWATER ANALYSES

Phases 1 and 2A Investigation, 1991

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

Analyte	Number of Samples Analyzed	Number of Detections	Percent of Detections	Average of Detected Concentration	Minimum Detected Concentration	Maximum Detected Concentration	Minimum Non-detected Concentration	Maximum Non-detected Concentration	Number of Detections Over PRG	Number of Non-detects Over PRG	Tap Water PRG	MCL
Semivolatile Organic Compounds (µg/L)												
N-NITROSODIPHENYLAMINE	5	0	0	--	--	--	10	100	0	2	14	NA
NAPHTHALENE	5	1	20	250	250	250	10	20	1	4	6	NA
NITROBENZENE	5	0	0	--	--	--	10	100	0	5	3	NA
PENTACHLOROPHENOL	5	0	0	--	--	--	50	500	0	5	0.6	1
PHENANTHRENE	5	0	0	--	--	--	10	100	--	--	NA	NA
PHENOL	5	0	0	--	--	--	10	100	0	0	22,000	NA
PYRENE	5	0	0	--	--	--	10	100	0	0	180	NA
PCBs/Pesticides (µg/L)												
4,4'-DDD	1	0	0	--	--	--	0.02	0.02	0	0	0.3	NA
4,4'-DDE	1	0	0	--	--	--	0.02	0.02	0	0	0.2	NA
4,4'-DDT	1	0	0	--	--	--	0.02	0.02	0	0	0.2	NA
ALDRIN	1	0	0	--	--	--	0.02	0.02	0	1	0.004	NA
ALPHA-BHC	1	0	0	--	--	--	0.02	0.02	--	--	NA	NA
AROCLOR-1016	1	0	0	--	--	--	0.3	0.3	0	0	1	NA
AROCLOR-1221	1	0	0	--	--	--	0.3	0.3	0	1	0.03	NA
AROCLOR-1232	1	0	0	--	--	--	0.3	0.3	0	1	0.03	NA
AROCLOR-1242	1	0	0	--	--	--	0.3	0.3	0	1	0.03	NA
AROCLOR-1248	1	0	0	--	--	--	0.3	0.3	0	1	0.03	NA
AROCLOR-1254	1	0	0	--	--	--	0.5	0.5	0	1	0.03	NA
AROCLOR-1260	1	0	0	--	--	--	0.5	0.5	0	1	0.03	NA
BETA-BHC	1	0	0	--	--	--	0.02	0.02	--	--	NA	NA
CHLORDANE	1	0	0	--	--	--	0.3	0.3	0	1	0.2	NA
DELTA-BHC	1	0	0	--	--	--	0.02	0.02	--	--	NA	NA
DIELDRIN	1	0	0	--	--	--	0.02	0.02	0	1	0.004	NA
ENDOSULFAN I	1	0	0	--	--	--	0.02	0.02	0	0	220	NA
ENDOSULFAN II	1	0	0	--	--	--	0.02	0.02	--	--	NA	NA
ENDOSULFAN SULFATE	1	0	0	--	--	--	0.02	0.02	--	--	NA	NA
ENDRIN	1	0	0	--	--	--	0.02	0.02	0	0	11	2
ENDRIN ALDEHYDE	1	0	0	--	--	--	0.02	0.02	--	--	NA	NA
GAMMA-BHC (LINDANE)	1	0	0	--	--	--	0.02	0.02	--	--	NA	NA

TABLE 9-4: SITE 23 STATISTICAL SUMMARY OF GROUNDWATER ANALYSES

Phases 1 and 2A Investigation, 1991

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

Analyte	Number of Samples Analyzed	Number of Detections	Percent of Detections	Average of Detected Concentration	Minimum Detected Concentration	Maximum Detected Concentration	Minimum Non-detected Concentration	Maximum Non-detected Concentration	Number of Detections Over PRG	Number of Non-detects Over PRG	Tap Water PRG	MCL
PCBs/Pesticides (µg/L)												
HEPTACHLOR	1	0	0	--	--	--	**0.02**	**0.02**	0	1	0.02	0.01
HEPTACHLOR EPOXIDE	1	0	0	--	--	--	**0.02**	**0.02**	0	1	0.007	0.01
METHOXYCHLOR	1	0	0	--	--	--	0.05	0.05	0	0	180	30
TOXAPHENE	1	0	0	--	--	--	**1**	**1**	0	1	0.06	3
Metals (µg/L)												
Filtered												
ALUMINUM	5	5	100	117,000	**54,000**	**223,000**	0.0	0.0	5	0	36,000	NA
ANTIMONY	5	0	0	--	--	--	**60.0**	**60.0**	0	5	15.0	6.0
ARSENIC	5	2	40	**83.5**	**57.0**	**110**	**50.0**	**50.0**	2	3	0.045	10.0
BARIUM	5	5	100	1,010	350	2,400	0.0	0.0	0	0	2,600	1,000
BERYLLIUM	5	1	20	6.0	6.0	6.0	5.0	5.0	0	0	73.0	4.0
CADMIUM	5	1	20	7.0	7.0	7.0	5.0	5.0	0	0	18.0	5.0
CALCIUM	5	5	100	67,600	23,000	129,000	0.0	0.0	--	--	NA	NA
CHROMIUM	5	5	100	406	300	650	0.0	0.0	--	--	NA	50.0
COBALT	5	4	80	81.5	60.0	130	50.0	50.0	0	0	730	NA
COPPER	5	5	100	178	120	250	0.0	0.0	0	0	1,500	1,300
IRON	5	5	100	179,000	**136,000**	**296,000**	0.0	0.0	5	0	11,000	NA
LEAD	5	4	80	146	55.0	360	200	200	--	--	NA	15.0
MAGNESIUM	5	5	100	51,000	33,000	81,000	0.0	0.0	--	--	NA	NA
MANGANESE	5	5	100	2,290	770	**5,400**	0.0	0.0	4	0	880	NA
MOLYBDENUM	5	0	0	--	--	--	50.0	50.0	0	0	180	NA
NICKEL	5	5	100	426	170	**800**	0.0	0.0	1	0	730	100
POTASSIUM	5	5	100	27,800	23,000	35,000	0.0	0.0	--	--	NA	NA
SELENIUM	5	3	60	81.0	55.0	120	50.0	100	0	0	180	50.0
SILVER	5	1	20	18.0	18.0	18.0	10.0	10.0	0	0	180	NA
SODIUM	5	5	100	145,000	53,000	274,000	0.0	0.0	--	--	NA	NA
THALLIUM	5	0	0	--	--	--	**50.0**	**50.0**	0	5	2.4	2.0
TITANIUM	5	5	100	5,180	2,400	12,000	0.0	0.0	--	--	NA	NA
VANADIUM	5	5	100	**338**	250	**510**	0.0	0.0	4	0	260	NA
ZINC	5	5	100	398	280	630	0.0	0.0	0	0	11,000	NA

TABLE 9-4: SITE 23 STATISTICAL SUMMARY OF GROUNDWATER ANALYSES

Phases 1 and 2A Investigation, 1991

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

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NOTES:

Bold denotes values elevated above the PRG

--	Not detected
BHC	Benzene Hexachloride
DDD	Dichlorodiphenyldichloroethane
DDE	Dichlorodiphenyldichloroethene
DDT	Dichlorodiphenyltrichloroethane
MCL	Maximum Contaminant Level
NA	No criteria available
PCB	Polychlorinated biphenyl
PRG	Preliminary Remediation Goal, U.S. Environmental Protection Agency, Region 9 or CAL-modified
ug/L	Micrograms per liter

TABLE 9-5: SITE 23 STATISTICAL SUMMARY OF SOIL ANALYSES

Follow-on Investigation, 1994

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

Analyte	Number of Samples Analyzed	Number of Detections	Percent of Detections	Average of Detected Concentration	Minimum Detected Concentration	Maximum Detected Concentration	Minimum Non-detected Concentration	Maximum Non-detected Concentration	Number of Detections Over PRG	Number of Non-detects Over PRG	Residential PRG
Volatile Organic Compounds (µg/kg)											
1,1,1-TRICHLOROETHANE	15	0	0	--	--	--	10	12	0	0	1,200,000
1,1,2,2-TETRACHLOROETHANE	15	0	0	--	--	--	10	12	0	0	410
1,1,2-TRICHLOROETHANE	15	0	0	--	--	--	10	12	0	0	730
1,1-DICHLOROETHANE	15	0	0	--	--	--	10	12	0	0	2,800 (CAL-modified)
1,1-DICHLOROETHENE	15	0	0	--	--	--	10	12	0	0	120,000
1,2-DICHLOROETHANE	15	0	0	--	--	--	10	12	0	0	280
1,2-DICHLOROETHENE (TOTAL)	15	0	0	--	--	--	10	12	0	0	43,000 (cis)
1,2-DICHLOROPROPANE	15	0	0	--	--	--	10	12	0	0	340
2-BUTANONE	15	0	0	--	--	--	10	12	--	--	NA
2-HEXANONE	15	0	0	--	--	--	10	12	--	--	NA
4-METHYL-2-PENTANONE	15	0	0	--	--	--	10	12	--	--	NA
ACETONE	15	0	0	--	--	--	10	12	0	0	1,600,000
BENZENE	15	0	0	--	--	--	10	12	0	0	600
BROMODICHLOROMETHANE	15	0	0	--	--	--	10	12	0	0	820
BROMOFORM	15	0	0	--	--	--	10	12	0	0	62,000
BROMOMETHANE	15	0	0	--	--	--	10	12	0	0	3,900
CARBON DISULFIDE	15	0	0	--	--	--	10	12	0	0	360,000
CARBON TETRACHLORIDE	15	0	0	--	--	--	10	12	0	0	250
CHLOROBENZENE	15	0	0	--	--	--	10	12	0	0	150,000
CHLOROETHANE	15	0	0	--	--	--	10	12	0	0	3,000
CHLOROFORM	15	0	0	--	--	--	10	12	0	0	940 (CAL-modified)
CHLOROMETHANE	15	0	0	--	--	--	10	12	0	0	1,200
CIS-1,3-DICHLOROPROPENE	15	0	0	--	--	--	10	12	0	0	780 (not cis)
DIBROMOCHLOROMETHANE	15	0	0	--	--	--	10	12	0	0	1,100
ETHYLBENZENE	15	0	0	--	--	--	10	12	0	0	8,900
METHYLENE CHLORIDE	15	0	0	--	--	--	10	40	0	0	9,100
STYRENE	15	0	0	--	--	--	10	12	0	0	1,700,000
TETRACHLOROETHENE	15	0	0	--	--	--	10	12	0	0	1,500
TOLUENE	15	0	0	--	--	--	10	12	0	0	520,000
TRANS-1,3-DICHLOROPROPENE	15	0	0	--	--	--	10	12	0	0	780 (not trans)
TRICHLOROETHENE	15	0	0	--	--	--	10	12	0	0	53

TABLE 9-5: SITE 23 STATISTICAL SUMMARY OF SOIL ANALYSES (Continued)

Follow-on Investigation, 1994

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

Analyte	Number of Samples Analyzed	Number of Detections	Percent of Detections	Average of Detected Concentration	Minimum Detected Concentration	Maximum Detected Concentration	Minimum Non-detected Concentration	Maximum Non-detected Concentration	Number of Detections Over PRG	Number of Non-detects Over PRG	Residential PRG
Volatile Organic Compounds (µg/kg)											
VINYL CHLORIDE	15	0	0	--	--	--	10	12	0	0	79 (child or adult)
XYLENE (TOTAL)	15	0	0	--	--	--	10	12	0	0	270,000
Semivolatile Organic Compounds (µg/kg)											
1,2,4-TRICHLOROBENZENE	15	0	0	--	--	--	340	6,000	0	0	650,000
1,2-DICHLOROBENZENE	15	0	0	--	--	--	340	6,000	0	0	370,000
1,3-DICHLOROBENZENE	15	0	0	--	--	--	340	6,000	0	0	16,000
1,4-DICHLOROBENZENE	15	0	0	--	--	--	340	**6,000**	0	1	3,400
2,2'-OXYBIS(1-CHLOROPROPANE)	15	0	0	--	--	--	340	6,000	--	--	NA
2,4,5-TRICHLOROPHENOL	15	0	0	--	--	--	830	14,000	0	0	6,100,000
2,4,6-TRICHLOROPHENOL	15	0	0	--	--	--	340	6,000	0	0	6,900 (CAL-modified)
2,4-DICHLOROPHENOL	15	0	0	--	--	--	340	6,000	0	0	180,000
2,4-DIMETHYLPHENOL	15	1	7	52	52 J	52 J	340	6,000	0	0	1,200,000
2,4-DINITROPHENOL	15	0	0	--	--	--	830	14,000	0	0	120,000
2,4-DINITROTOLUENE	15	0	0	--	--	--	340	6,000	0	0	120,000
2,6-DINITROTOLUENE	15	0	0	--	--	--	340	6,000	0	0	61,000
2-CHLORONAPHTHALENE	15	0	0	--	--	--	340	6,000	--	--	NA
2-CHLOROPHENOL	15	0	0	--	--	--	340	6,000	0	0	63,000
2-METHYLNAPHTHALENE	15	1	7	9,400	9,400	9,400	340	420	--	--	NA
2-METHYLPHENOL	15	1	7	21	21 J	21 J	340	6,000	--	--	NA
2-NITROANILINE	15	0	0	--	--	--	830	**14,000**	0	1	1,700
2-NITROPHENOL	15	0	0	--	--	--	340	6,000	--	--	NA
3,3'-DICHLOROBENZIDINE	15	0	0	--	--	--	340	**6,000**	0	1	1,100
3-NITROANILINE	15	0	0	--	--	--	830	14,000	--	--	NA
4,6-DINITRO-2-METHYLPHENOL	15	0	0	--	--	--	830	14,000	--	--	NA
4-BROMOPHENYL-PHENYLETHER	15	0	0	--	--	--	340	6,000	--	--	NA
4-CHLORO-3-METHYLPHENOL	15	0	0	--	--	--	340	6,000	--	--	NA
4-CHLOROANILINE	15	0	0	--	--	--	340	6,000	0	0	240,000
4-CHLOROPHENYL-PHENYLETHER	15	0	0	--	--	--	340	6,000	--	--	NA
4-METHYLPHENOL	15	1	7	48	48 J	48 J	340	6,000	0	0	310,000
4-NITROANILINE	15	0	0	--	--	--	830	14,000	--	--	NA

TABLE 9-5: SITE 23 STATISTICAL SUMMARY OF SOIL ANALYSES (Continued)

Follow-on Investigation, 1994

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

Analyte	Number of Samples Analyzed	Number of Detections	Percent of Detections	Average of Detected Concentration	Minimum Detected Concentration	Maximum Detected Concentration	Minimum Non-detected Concentration	Maximum Non-detected Concentration	Number of Detections Over PRG	Number of Non-detects Over PRG	Residential PRG
Semivolatile Organic Compounds (µg/kg)											
4-NITROPHENOL	15	0	0	--	--	--	830	14,000	--	--	NA
ACENAPHTHENE	15	0	0	--	--	--	340	6,000	0	0	3,700,000
ACENAPHTHYLENE	15	0	0	--	--	--	340	6,000	--	--	NA
ANTHRACENE	15	1	7	22	22 J	22 J	340	6,000	0	0	22,000,000
BENZO(A)ANTHRACENE	15	0	0	--	--	--	340	**6,000**	0	1	620
BENZO(A)PYRENE	15	1	7	57	57 J	57 J	**340**	**6,000**	0	14	62
BENZO(B)FLUORANTHENE	15	1	7	69	69 J	69 J	340	**6,000**	0	1	620
BENZO(G,H,I)PERYLENE	15	0	0	--	--	--	340	6,000	--	--	NA
BENZO(K)FLUORANTHENE	15	0	0	--	--	--	340	**6,000**	0	4	380 (CAL-modified)
BIS(2-CHLOROETHOXY)METHANE	15	0	0	--	--	--	340	6,000	--	--	NA
BIS(2-CHLOROETHYL)ETHER	15	0	0	--	--	--	**340**	**6,000**	0	15	210
BIS(2-ETHYLHEXYL)PHTHALATE	15	0	0	--	--	--	340	6,000	0	0	35,000
BUTYLBENZYLPHTHALATE	15	0	0	--	--	--	340	6,000	0	0	12,000,000
CARBAZOLE	15	0	0	--	--	--	340	6,000	0	0	24,000
CHRYSENE	15	1	7	63	63 J	63 J	340	**6,000**	0	1	3,800 (CAL-modified)
DI-N-BUTYLPHTHALATE	15	0	0	--	--	--	340	6,000	--	--	NA
DI-N-OCTYLPHTHALATE	15	0	0	--	--	--	340	6,000	--	--	NA
DIBENZO(A,H)ANTHRACENE	15	0	0	--	--	--	**340**	**6,000**	0	15	62
DIBENZOFURAN	15	0	0	--	--	--	340	6,000	0	0	290,000
DIETHYLPHTHALATE	15	0	0	--	--	--	340	6,000	0	0	49,000,000
DIMETHYLPHTHALATE	15	0	0	--	--	--	340	6,000	0	0	100,000,000
FLUORANTHENE	15	2	13	150	54 J	240 J	340	6,000	0	0	2,300,000
FLUORENE	15	0	0	--	--	--	340	6,000	0	0	2,700,000
HEXACHLOROBENZENE	15	0	0	--	--	--	**340**	**6,000**	0	15	300
HEXACHLOROBUTADIENE	15	0	0	--	--	--	340	6,000	0	0	6,200
HEXACHLOROCYCLOPENTADIENE	15	0	0	--	--	--	340	6,000	0	0	370,000
HEXACHLOROETHANE	15	0	0	--	--	--	340	6,000	0	0	35,000
INDENO(1,2,3-CD)PYRENE	15	1	7	26	26 J	26 J	340	**6,000**	0	1	620
ISOPHORONE	15	0	0	--	--	--	340	6,000	0	0	510,000
N-NITROSO-DI-N-PROPYLAMINE	15	0	0	--	--	--	**340**	**6,000**	0	15	69
N-NITROSODIPHENYLAMINE	15	0	0	--	--	--	340	6,000	0	0	99,000

TABLE 9-5: SITE 23 STATISTICAL SUMMARY OF SOIL ANALYSES (Continued)

Follow-on Investigation, 1994

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

Analyte	Number of Samples Analyzed	Number of Detections	Percent of Detections	Average of Detected Concentration	Minimum Detected Concentration	Maximum Detected Concentration	Minimum Non-detected Concentration	Maximum Non-detected Concentration	Number of Detections Over PRG	Number of Non-detects Over PRG	Residential PRG
Semivolatile Organic Compounds (µg/kg)											
NAPHTHALENE	15	1	7	4,200	4,200 J	4,200 J	340	420	0	0	56,000
NITROBENZENE	15	0	0	--	--	--	340	6,000	0	0	20,000
PENTACHLOROPHENOL	15	0	0	--	--	--	830	**14,000**	0	1	3,000
PHENANTHRENE	15	1	7	170	170 J	170 J	340	6,000	--	--	NA
PHENOL	15	0	0	--	--	--	340	6,000	0	0	37,000,000
PYRENE	15	3	20	110	38 J	240 J	340	6,000	0	0	2,300,000
PCBs/Pesticides (µg/kg)											
4,4'-DDD	3	0	0	--	--	--	3	4	0	0	2,400
4,4'-DDE	3	0	0	--	--	--	3	4	0	0	1,700
4,4'-DDT	3	1	33	5	5 J	5 J	3	4	0	0	1,700
ALDRIN	3	0	0	--	--	--	2	2	0	0	29
ALPHA-BHC	3	0	0	--	--	--	2	2	--	--	NA
ALPHA-CHLORDANE	3	0	0	--	--	--	2	2	0	0	1,600 (chlordane)
AROCLOR-1016	3	0	0	--	--	--	34	42	0	0	3,900
AROCLOR-1221	3	0	0	--	--	--	70	85	0	0	220
AROCLOR-1232	3	0	0	--	--	--	34	42	0	0	220
AROCLOR-1242	3	0	0	--	--	--	34	42	0	0	220
AROCLOR-1248	3	0	0	--	--	--	34	42	0	0	220
AROCLOR-1254	3	0	0	--	--	--	34	42	0	0	220
AROCLOR-1260	3	1	33	38	38 J	38 J	34	35	0	0	220
BETA-BHC	3	0	0	--	--	--	2	2	--	--	NA
DELTA-BHC	3	0	0	--	--	--	2	2	--	--	NA
DIELDRIN	3	0	0	--	--	--	3	4	0	0	30
ENDOSULFAN I	3	0	0	--	--	--	2	2	0	0	370,000
ENDOSULFAN II	3	0	0	--	--	--	3	4	0	0	370,000 (endosulfan)
ENDOSULFAN SULFATE	3	0	0	--	--	--	3	4	--	--	NA
ENDRIN	3	0	0	--	--	--	3	4	0	0	18,000
ENDRIN ALDEHYDE	3	0	0	--	--	--	3	4	--	--	NA
ENDRIN KETONE	3	0	0	--	--	--	3	4	--	--	NA
GAMMA-BHC (LINDANE)	3	0	0	--	--	--	2	2	--	--	NA

TABLE 9-5: SITE 23 STATISTICAL SUMMARY OF SOIL ANALYSES (Continued)

Follow-on Investigation, 1994

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

Analyte	Number of Samples Analyzed	Number of Detections	Percent of Detections	Average of Detected Concentration	Minimum Detected Concentration	Maximum Detected Concentration	Minimum Non-detected Concentration	Maximum Non-detected Concentration	Number of Detections Over PRG	Number of Non-detects Over PRG	Residential PRG
PCBs/Pesticides (µg/kg)											
GAMMA-CHLORDANE	3	0	0	--	--	--	2	2	0	0	1,600 (chlordane)
HEPTACHLOR	3	0	0	--	--	--	2	2	0	0	110
HEPTACHLOR EPOXIDE	3	0	0	--	--	--	2	2	0	0	53
METHOXYCHLOR	3	0	0	--	--	--	18	22	0	0	310,000
TOXAPHENE	3	0	0	--	--	--	180	220	0	0	440
Metals (mg/kg)											
ALUMINUM	6	6	100	4,310	3,310	4,670	0.0	0.0	0	0	76,000
ANTIMONY	6	1	17	0.89	0.89 J	0.89 J	0.52	0.93	0	0	31.0
ARSENIC	6	2	33	**0.88**	**0.84 J**	**0.92**	**0.71**	**1.5**	2	4	0.39
BARIUM	6	6	100	36.3	27.0 J	50.7	0.0	0.0	0	0	5,400
BERYLLIUM	6	1	17	0.22	0.22 J	0.22 J	0.21	0.27	0	0	150
CADMIUM	6	2	33	5.1	0.18 J	10.0	0.060	0.080	0	0	37.0
CALCIUM	6	6	100	3,200	2,050	4,700	0.0	0.0	--	--	NA
CHROMIUM	6	6	100	31.1	21.9	58.9	0.0	0.0	0	0	210
COBALT	6	3	50	5.2	5.0 J	5.5 J	3.7	4.5	0	0	900
COPPER	6	3	50	5.0	4.7 J	5.4 J	5.4	12.5	0	0	3,100
CYANIDE	3	0	0	--	--	--	0.50	0.60	--	--	NA
IRON	6	6	100	7,770	5,630	8,760	0.0	0.0	0	0	23,000
LEAD	6	6	100	16.1	1.3	85.8 J	0.0	0.0	0	0	150 (CAL-modified)
MAGNESIUM	6	6	100	2,030	1,650	2,210	0.0	0.0	--	--	NA
MANGANESE	6	6	100	95.3	75.0	107	0.0	0.0	0	0	1,800
MERCURY	6	0	0	--	--	--	0.16	0.19	0	0	23.0
MOLYBDENUM	6	0	0	--	--	--	2.6	3.4	0	0	390
NICKEL	6	6	100	20.7	15.6	24.9	0.0	0.0	0	0	1,600
POTASSIUM	6	3	50	687	570 J	872 J	425	620	--	--	NA
SELENIUM	6	0	0	--	--	--	0.55	0.69	0	0	390
SILVER	6	0	0	--	--	--	0.18	0.32	0	0	390
SODIUM	6	3	50	279	254 J	318 J	69.0	96.8	--	--	NA
THALLIUM	6	0	0	--	--	--	0.40	0.53	0	0	5.2
VANADIUM	6	6	100	20.8	13.8	24.3	0.0	0.0	0	0	550

TABLE 9-5: SITE 23 STATISTICAL SUMMARY OF SOIL ANALYSES (Continued)

Follow-on Investigation, 1994

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

Analyte	Number of Samples Analyzed	Number of Detections	Percent of Detections	Average of Detected Concentration	Minimum Detected Concentration	Maximum Detected Concentration	Minimum Non-detected Concentration	Maximum Non-detected Concentration	Number of Detections Over PRG	Number of Non-detects Over PRG	Residential PRG
Metals (mg/kg)											
ZINC	6	5	83	24.6	17.8	46.2	16.6	16.6	0	0	23,000

NOTES:

Bold denotes values elevated above the PRG

-- Not detected
BHC Benzene Hexachloride
DDD Dichlorodiphenyldichloroethane
DDE Dichlorodiphenyldichloroethene
DDT Dichlorodiphenyltrichloroethane
J Estimated value
mg/kg Milligrams per kilogram
NA No PRG available
PCB Polychlorinated biphenyl
PRG Preliminary Remediation Goal, U.S. Environmental Protection Agency, Region 9 or CAL-modified
µg/kg Micrograms per kilogram

TABLE 9-6: SITE 23 STATISTICAL SUMMARY OF GROUNDWATER ANALYSES

Follow-on Investigation, 1994

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

Analyte	Number of Samples Analyzed	Number of Detections	Percent of Detections	Average of Detected Concentration	Minimum Detected Concentration	Maximum Detected Concentration	Minimum Non-detected Concentration	Maximum Non-detected Concentration	Number of Detections Over PRG	Number of Non-detects Over PRG	Tap Water PRG	MCL
Volatile Organic Compounds (µg/L)												
1,1,1-TRICHLOROETHANE	45	3	7	8	2	16	1	200	0	0	3,200	200
1,1,2,2-TETRACHLOROETHANE	45	0	0	--	--	--	1	200	0	45	0.06	1
1,1,2-TRICHLOROETHANE	45	0	0	--	--	--	1	200	0	45	0.2	5
1,1-DICHLOROETHANE	45	1	2	1	1	1	1	200	0	1	2 (CAL-modified)	5
1,1-DICHLOROETHENE	45	1	2	4	4J	4J	1	200	0	0	340	6
1,2-DICHLOROETHANE	45	0	0	--	--	--	0.5	50	0	45	0.1	0.5
1,2-DICHLOROETHENE (TOTAL)	45	0	0	--	--	--	1	200	0	1	61 (cis)	NA
1,2-DICHLOROPROPANE	45	0	0	--	--	--	1	200	0	45	0.2	5
2-BUTANONE	4	1	25	4,200	4,200J	4,200J	15	15	--	--	NA	NA
2-HEXANONE	42	1	2	2	2J	2J	2	200	--	--	NA	NA
4-METHYL-2-PENTANONE	45	1	2	2	2J	2J	2	200	--	--	NA	NA
ACETONE	4	0	0	--	--	--	3	26	0	0	610	NA
BENZENE	45	5	11	6	0.5	28	0.5	50	5	40	0.3	1
BROMODICHLOROMETHANE	45	0	0	--	--	--	1	200	0	45	0.2	80
BROMOFORM	45	0	0	--	--	--	1	200	0	1	9	80
BROMOMETHANE	45	0	0	--	--	--	1	100	0	1	9	NA
CARBON DISULFIDE	45	1	2	170	170J	170J	1	200	0	0	1,000	NA
CARBON TETRACHLORIDE	45	0	0	--	--	--	0.5	50	0	45	0.2	0.5
CHLOROBENZENE	45	0	0	--	--	--	1	200	0	1	110	70
CHLOROETHANE	45	0	0	--	--	--	2	200	0	1	5	NA
CHLOROFORM	45	0	0	--	--	--	1	200	0	45	0.5 (CAL-modified)	80
CHLOROMETHANE	45	0	0	--	--	--	2	200	0	45	2	NA
CIS-1,3-DICHLOROPROPENE	45	0	0	--	--	--	0.5	50	0	45	0.4 (not cis)	0.5
DIBROMOCHLOROMETHANE	45	0	0	--	--	--	1	200	0	45	0.1	80
ETHYLBENZENE	45	5	11	9	2	15	1	200	4	1	3	300
ETHYLENE DIBROMIDE	5	0	0	--	--	--	1	1	--	--	NA	0.05
METHYLENE CHLORIDE	45	0	0	--	--	--	1	200	0	1	4	NA
STYRENE	45	0	0	--	--	--	1	200	0	0	1,600	100
TETRACHLOROETHENE	45	0	0	--	--	--	1	200	0	45	0.7	5
TOLUENE	45	5	11	3	0.9J	5	0.5	200	0	0	720	150
TRANS-1,3-DICHLOROPROPENE	45	0	0	--	--	--	0.5	50	0	45	0.4 (not trans)	0.5

TABLE 9-6: SITE 23 STATISTICAL SUMMARY OF GROUNDWATER ANALYSES

Follow-on Investigation, 1994

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

Analyte	Number of Samples Analyzed	Number of Detections	Percent of Detections	Average of Detected Concentration	Minimum Detected Concentration	Maximum Detected Concentration	Minimum Non-detected Concentration	Maximum Non-detected Concentration	Number of Detections Over PRG	Number of Non-detects Over PRG	Tap Water PRG	MCL
Volatile Organic Compounds (µg/L)												
TRICHLOROETHENE	45	1	2	**2**	**2**	**2**	**1**	**200**	1	44	0.03	5
VINYL CHLORIDE	45	0	0	--	--	--	**0.5**	**50**	0	45	0.02 (child or adult)	0.5
XYLENE (TOTAL)	45	5	11	54	23	70	1	200	0	0	210	1,800
Semivolatile Organic Compounds (µg/L)												
1,2,4-TRICHLOROBENZENE	45	0	0	--	--	--	10	30	0	0	190	5
1,2-DICHLOROBENZENE	45	0	0	--	--	--	5	15	0	0	370	600
1,3-DICHLOROBENZENE	45	0	0	--	--	--	5	**15**	0	1	6	NA
1,4-DICHLOROBENZENE	45	0	0	--	--	--	**5**	**15**	0	45	0.5	5
2,2'-OXYBIS(1-CHLOROPROPANE)	45	0	0	--	--	--	10	30	--	--	NA	NA
2,4,5-TRICHLOROPHENOL	45	0	0	--	--	--	25	75	0	0	3,600	50
2,4,6-TRICHLOROPHENOL	45	0	0	--	--	--	**10**	**30**	0	45	1 (CAL-modified)	NA
2,4-DICHLOROPHENOL	45	1	2	0.5	0.5J	0.5J	10	30	0	0	110	NA
2,4-DIMETHYLPHENOL	45	1	2	9	9J	9J	10	30	0	0	730	NA
2,4-DINITROPHENOL	37	0	0	--	--	--	25	25	0	0	73	NA
2,4-DINITROTOLUENE	45	0	0	--	--	--	10	30	0	0	73	NA
2,6-DINITROTOLUENE	45	1	2	6	6J	6J	10	30	0	0	36	NA
2-CHLORONAPHTHALENE	45	0	0	--	--	--	10	30	--	--	NA	NA
2-CHLOROPHENOL	45	0	0	--	--	--	10	30	0	0	30	NA
2-METHYLNAPHTHALENE	45	5	11	17	0.8J	51	10	10	--	--	NA	NA
2-METHYLPHENOL	45	0	0	--	--	--	10	30	0	0	1,800	NA
2-NITROANILINE	45	0	0	--	--	--	**25**	**75**	0	45	1	NA
2-NITROPHENOL	45	0	0	--	--	--	10	30	--	--	NA	NA
3,3'-DICHLOROBENZIDINE	45	0	0	--	--	--	**10**	**30**	0	45	0.2	NA
3-NITROANILINE	45	0	0	--	--	--	25	75	--	--	NA	NA
4,6-DINITRO-2-METHYLPHENOL	45	1	2	25	25J	25J	25	75	--	--	NA	NA
4-BROMOPHENYL-PHENYLETHER	45	0	0	--	--	--	10	30	--	--	NA	NA
4-CHLORO-3-METHYLPHENOL	45	0	0	--	--	--	10	30	--	--	NA	NA
4-CHLOROANILINE	45	0	0	--	--	--	10	30	0	0	150	NA
4-CHLOROPHENYL-PHENYLETHER	45	0	0	--	--	--	10	30	--	--	NA	NA
4-METHYLPHENOL	45	1	2	3	3J	3J	10	30	0	0	180	NA

TABLE 9-6: SITE 23 STATISTICAL SUMMARY OF GROUNDWATER ANALYSES

Follow-on Investigation, 1994

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Analyte	Number of Samples Analyzed	Number of Detections	Percent of Detections	Average of Detected Concentration	Minimum Detected Concentration	Maximum Detected Concentration	Minimum Non-detected Concentration	Maximum Non-detected Concentration	Number of Detections Over PRG	Number of Non-detects Over PRG	Tap Water PRG	MCL
Semivolatile Organic Compounds (µg/L)												
4-NITROANILINE	45	0	0	--	--	--	25	75	--	--	NA	NA
4-NITROPHENOL	45	0	0	--	--	--	25	75	--	--	NA	NA
ACENAPHTHENE	45	2	4	0.9	0.8J	1J	10	30	0	0	370	NA
ACENAPHTHYLENE	45	0	0	--	--	--	10	30	--	--	NA	NA
ANTHRACENE	45	0	0	--	--	--	10	30	0	0	1,800	NA
BENZO(A)ANTHRACENE	45	0	0	--	--	--	**10**	**30**	0	45	0.09	0.1
BENZO(A)PYRENE	45	1	2	**0.6**	**0.6J**	**0.6J**	**10**	**30**	1	44	0.009	0.2
BENZO(B)FLUORANTHENE	45	1	2	**0.8**	**0.8J**	**0.8J**	**10**	**30**	1	44	0.09	NA
BENZO(G,H,I)PERYLENE	45	0	0	--	--	--	10	30	--	--	NA	NA
BENZO(K)FLUORANTHENE	45	0	0	--	--	--	**10**	**30**	0	45	0.06 (CAL-modified)	NA
BIS(2-CHLOROETHOXY)METHANE	45	0	0	--	--	--	10	30	--	--	NA	NA
BIS(2-CHLOROETHYL)ETHER	45	0	0	--	--	--	**10**	**30**	0	45	0.01	NA
BIS(2-ETHYLHEXYL)PHTHALATE	45	0	0	--	--	--	4	**40**	0	7	5	NA
BUTYLBENZYLPHTHALATE	45	0	0	--	--	--	10	30	0	0	7,300	NA
CARBAZOLE	45	0	0	--	--	--	**10**	**30**	0	45	3	NA
CHRYSENE	45	1	2	**0.9**	**0.9J**	**0.9J**	**10**	**30**	1	44	0.6 (CAL-modified)	NA
DI-N-BUTYLPHTHALATE	45	0	0	--	--	--	10	30	--	--	NA	NA
DI-N-OCTYLPHTHALATE	45	0	0	--	--	--	10	30	--	--	NA	NA
DIBENZO(A,H)ANTHRACENE	45	0	0	--	--	--	**10**	**30**	0	45	0.009	NA
DIBENZOFURAN	45	0	0	--	--	--	10	**30**	0	1	24	NA
DIETHYLPHTHALATE	45	0	0	--	--	--	10	30	0	0	29,000	NA
DIMETHYLPHTHALATE	45	0	0	--	--	--	10	30	0	0	360,000	NA
FLUORANTHENE	45	2	4	1	1J	1J	10	30	0	0	1,500	NA
FLUORENE	45	4	9	4	3J	5J	10	10	0	0	240	NA
HEXACHLOROBENZENE	45	0	0	--	--	--	**10**	**30**	0	45	0.04	1
HEXACHLOROBUTADIENE	45	0	0	--	--	--	**10**	**30**	0	45	0.9	NA
HEXACHLOROCYCLOPENTADIENE	45	0	0	--	--	--	10	30	0	0	220	NA
HEXACHLOROETHANE	45	0	0	--	--	--	**10**	**30**	0	45	5	NA
INDENO(1,2,3-CD)PYRENE	45	0	0	--	--	--	**10**	**30**	0	45	0.09	NA
ISOPHORONE	45	3	7	4	2J	7J	10	30	0	0	71	NA
N-NITROSO-DI-N-PROPYLAMINE	45	0	0	--	--	--	**10**	**30**	0	45	0.01	NA

TABLE 9-6: SITE 23 STATISTICAL SUMMARY OF GROUNDWATER ANALYSES

Follow-on Investigation, 1994

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

Analyte	Number of Samples Analyzed	Number of Detections	Percent of Detections	Average of Detected Concentration	Minimum Detected Concentration	Maximum Detected Concentration	Minimum Non-detected Concentration	Maximum Non-detected Concentration	Number of Detections Over PRG	Number of Non-detects Over PRG	Tap Water PRG	MCL
Semivolatile Organic Compounds (µg/L)												
N-NITROSODIPHENYLAMINE	45	0	0	--	--	--	10	**30**	0	1	14	NA
NAPHTHALENE	45	3	7	**29**	**12**	**57**	**10**	**10**	3	42	6	NA
NITROBENZENE	45	0	0	--	--	--	**10**	**30**	0	45	3	NA
PENTACHLOROPHENOL	45	0	0	--	--	--	**25**	**75**	0	45	0.6	1
PHENANTHRENE	45	5	11	2	0.6J	5J	10	10	--	--	NA	NA
PHENOL	45	3	7	2	0.5J	5J	10	30	0	0	22,000	NA
PYRENE	45	3	7	0.8	0.5J	1J	10	30	0	0	180	NA
PCBs/Pesticides (µg/L)												
4,4'-DDD	5	0	0	--	--	--	0.1	0.1	0	0	0.3	NA
4,4'-DDE	5	0	0	--	--	--	0.1	0.1	0	0	0.2	NA
4,4'-DDT	5	0	0	--	--	--	0.1	0.1	0	0	0.2	NA
ALDRIN	5	0	0	--	--	--	**0.05**	**0.05**	0	5	0.004	NA
ALPHA-BHC	5	0	0	--	--	--	0.05	0.05	--	--	NA	NA
ALPHA-CHLORDANE	5	0	0	--	--	--	0.05	0.05	0	0	0.2 (chlordane)	NA
AROCLOR-1016	5	0	0	--	--	--	0.5	0.5	0	0	1	NA
AROCLOR-1221	5	0	0	--	--	--	**0.5**	**0.5**	0	5	0.03	NA
AROCLOR-1232	5	0	0	--	--	--	**0.5**	**0.5**	0	5	0.03	NA
AROCLOR-1242	5	0	0	--	--	--	**0.5**	**0.5**	0	5	0.03	NA
AROCLOR-1248	5	0	0	--	--	--	**0.5**	**0.5**	0	5	0.03	NA
AROCLOR-1254	5	0	0	--	--	--	**0.5**	**0.5**	0	5	0.03	NA
AROCLOR-1260	5	0	0	--	--	--	**0.5**	**0.5**	0	5	0.03	NA
BETA-BHC	5	0	0	--	--	--	0.05	0.05	--	--	NA	NA
DELTA-BHC	5	0	0	--	--	--	0.05	0.05	--	--	NA	NA
DIELDRIN	5	0	0	--	--	--	**0.1**	**0.1**	0	5	0.004	NA
ENDOSULFAN I	5	0	0	--	--	--	0.05	0.05	0	0	220	NA
ENDOSULFAN II	5	0	0	--	--	--	0.1	0.1	--	--	NA	NA
ENDOSULFAN SULFATE	5	0	0	--	--	--	0.1	0.1	--	--	NA	NA
ENDRIN	5	0	0	--	--	--	0.1	0.1	0	0	11	2
ENDRIN ALDEHYDE	5	0	0	--	--	--	0.1	0.1	--	--	NA	NA
ENDRIN KETONE	5	0	0	--	--	--	0.1	0.1	--	--	NA	NA

TABLE 9-6: SITE 23 STATISTICAL SUMMARY OF GROUNDWATER ANALYSES

Follow-on Investigation, 1994

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

Analyte	Number of Samples Analyzed	Number of Detections	Percent of Detections	Average of Detected Concentration	Minimum Detected Concentration	Maximum Detected Concentration	Minimum Non-detected Concentration	Maximum Non-detected Concentration	Number of Detections Over PRG	Number of Non-detects Over PRG	Tap Water PRG	MCL
PCBs/Pesticides (µg/L)												
GAMMA-BHC (LINDANE)	5	0	0	--	--	--	0.05	0.05	--	--	NA	NA
GAMMA-CHLORDANE	5	0	0	--	--	--	0.05	0.05	0	0	0.2 (chlordane)	NA
HEPTACHLOR	5	0	0	--	--	--	**0.05**	**0.05**	0	5	0.02	0.01
HEPTACHLOR EPOXIDE	5	0	0	--	--	--	**0.01**	**0.01**	0	5	0.007	0.01
METHOXYCHLOR	5	0	0	--	--	--	0.5	0.5	0	0	180	30
TOXAPHENE	5	0	0	--	--	--	**3**	**3**	0	5	0.06	3
Metals (µg/L)												
Filtered												
ALUMINUM	45	7	16	12,500	25.2J	**50,600**	17.5	81.6	1	0	36,000	NA
ANTIMONY	45	2	4	10.1	5.9J	14.3J	2.2	**44.0**	0	4	15.0	6.0
ARSENIC	45	13	29	**11.6**	**4.1J**	**22.5**	**2.6**	**100**	13	32	0.045	10.0
BARIUM	45	34	76	91.7	13.7J	468	4.3	62.9	0	0	2,600	1,000
BERYLLIUM	45	12	27	5.3	1.0J	39.5	0.10	3.0	0	0	73.0	4.0
CADMIUM	45	5	11	8.1	0.49J	**20.2**	0.30	8.0	1	0	18.0	5.0
CALCIUM	45	45	100	186,000	8,290	1,110,000	0.0	0.0	--	--	NA	NA
CHROMIUM	45	7	16	32.4	1.6J	147	0.40	32.0	--	--	NA	50.0
COBALT	45	2	4	1,820	85.9	**3,560**	3.8	16.7	1	0	730	NA
COPPER	45	3	7	61.0	13.7J	153	2.0	90.7	0	0	1,500	1,300
IRON	45	13	29	28,100	59.1J	**244,000J**	3.2	85.8	5	0	11,000	NA
LEAD	45	2	4	34.2	12.6	55.7	1.0	20.0	--	--	NA	15.0
MAGNESIUM	45	45	100	205,000	2,740J	1,370,000	0.0	0.0	--	--	NA	NA
MANGANESE	45	41	91	4,120	6.6J	**93,900**	0.90	3.2	9	0	880	NA
MERCURY	45	1	2	0.33	0.33	0.33	0.20	0.20	0	0	11.0	2.0
MOLYBDENUM	45	0	0	--	--	--	7.9	28.0	0	0	180	NA
NICKEL	45	6	13	1,970	11.3J	**11,400**	7.5	84.7	1	0	730	100
POTASSIUM	45	45	100	20,300	3,140J	111,000	0.0	0.0	--	--	NA	NA
SELENIUM	45	0	0	--	--	--	2.4	54.0	0	0	180	50.0
SILVER	43	0	0	--	--	--	0.90	10.0	0	0	180	NA
SODIUM	45	45	100	1,120,000	12,700	5,310,000	0.0	0.0	--	--	NA	NA
THALLIUM	45	4	9	**31.3**	**3.7J**	**52.7**	2.0	**76.0**	4	32	2.4	2.0
VANADIUM	45	5	11	37.3	9.4J	86.2	3.7	34.4	0	0	260	NA

TABLE 9-6: SITE 23 STATISTICAL SUMMARY OF GROUNDWATER ANALYSES

Follow-on Investigation, 1994

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

Analyte	Number of Samples Analyzed	Number of Detections	Percent of Detections	Average of Detected Concentration	Minimum Detected Concentration	Maximum Detected Concentration	Minimum Non-detected Concentration	Maximum Non-detected Concentration	Number of Detections Over PRG	Number of Non-detects Over PRG	Tap Water PRG	MCL
Metals (µg/L)												
Filtered												
ZINC	45	9	20	1,080	15.6J	7,340	5.3	29.1	0	0	11,000	NA

NOTES:

Bold denotes values elevated above the PRG

--	Not detected
BHC	Benzene Hexachloride
DDD	Dichlorodiphenyldichloroethane
DDE	Dichlorodiphenyldichloroethene
DDT	Dichlorodiphenyltrichloroethane
J	Estimated value
MCL	Maximum Contaminant Level
NA	No criteria available
PCB	Polychlorinated biphenyl
PRG	Preliminary Remediation Goal, U.S. Environmental Protection Agency, Region 9 or CAL-modified
µg/L	Micrograms per liter

TABLE 9-7: SITE 23 STATISTICAL SUMMARY OF GROUNDWATER ANALYSES

Follow-on Investigation, 1998

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

Analyte	Number of Samples Analyzed	Number of Detections	Percent of Detections	Average of Detected Concentration	Minimum Detected Concentration	Maximum Detected Concentration	Minimum Non-detected Concentration	Maximum Non-detected Concentration	Number of Detections Over PRG	Number of Non-detects Over PRG	Tap Water PRG	MCL
Volatile Organic Compounds (µg/L)												
1,1,1-TRICHLOROETHANE	12	0	0	--	--	--	1	1	0	0	3,200	200
1,1,2,2-TETRACHLOROETHANE	12	0	0	--	--	--	1	1	0	12	0.06	1
1,1,2-TRICHLOROETHANE	12	0	0	--	--	--	1	1	0	12	0.2	5
1,1-DICHLOROETHANE	12	0	0	--	--	--	1	1	0	0	2 (CAL-modified)	5
1,1-DICHLOROETHENE	12	0	0	--	--	--	1	1	0	0	340	6
1,2,4-TRICHLOROBENZENE	12	0	0	--	--	--	1	1	0	0	190	5
1,2-DIBROMO-3-CHLOROPROPANE	12	0	0	--	--	--	1	1	0	12	0.002 (CAL-modified)	0.2
1,2-DICHLOROBENZENE	12	0	0	--	--	--	1	1	0	0	370	600
1,2-DICHLOROETHANE	12	0	0	--	--	--	0.5	0.5	0	12	0.1	0.5
1,2-DICHLOROPROPANE	12	0	0	--	--	--	1	1	0	12	0.2	5
1,3-DICHLOROBENZENE	12	0	0	--	--	--	1	1	0	0	6	NA
1,4-DICHLOROBENZENE	12	0	0	--	--	--	1	1	0	12	0.5	5
2-BUTANONE	1	0	0	--	--	--	5	5	--	--	NA	NA
2-HEXANONE	8	0	0	--	--	--	5	5	--	--	NA	NA
4-METHYL-2-PENTANONE	12	0	0	--	--	--	5	5	--	--	NA	NA
ACETONE	1	0	0	--	--	--	5	5	0	0	610	NA
BENZENE	12	0	0	--	--	--	0.5	0.5	0	12	0.3	1
BROMOCHLOROMETHANE	12	0	0	--	--	--	1	1	--	--	NA	NA
BROMODICHLOROMETHANE	12	0	0	--	--	--	1	1	0	12	0.2	80
BROMOFORM	12	0	0	--	--	--	1	1	0	0	9	80
BROMOMETHANE	12	0	0	--	--	--	1	1	0	0	9	NA
CARBON DISULFIDE	12	0	0	--	--	--	1	1	0	0	1,000	NA
CARBON TETRACHLORIDE	12	0	0	--	--	--	0.5	0.5	0	12	0.2	0.5
CHLOROBENZENE	12	0	0	--	--	--	1	1	0	0	110	70
CHLOROETHANE	12	0	0	--	--	--	1	1	0	0	5	NA
CHLOROFORM	12	0	0	--	--	--	1	1	0	12	0.5 (CAL-modified)	80
CHLOROMETHANE	12	0	0	--	--	--	1	1	0	0	2	NA
CIS-1,2-DICHLOROETHENE	12	0	0	--	--	--	1	1	0	0	61	6
CIS-1,3-DICHLOROPROPENE	12	0	0	--	--	--	0.5	0.5	0	12	0.4 (not cis)	0.5
DIBROMOCHLOROMETHANE	12	0	0	--	--	--	1	1	0	12	0.1	80
ETHYLBENZENE	12	0	0	--	--	--	1	1	0	0	3	300

TABLE 9-7: SITE 23 STATISTICAL SUMMARY OF GROUNDWATER ANALYSES

Follow-on Investigation, 1998

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

Analyte	Number of Samples Analyzed	Number of Detections	Percent of Detections	Average of Detected Concentration	Minimum Detected Concentration	Maximum Detected Concentration	Minimum Non-detected Concentration	Maximum Non-detected Concentration	Number of Detections Over PRG	Number of Non-detects Over PRG	Tap Water PRG	MCL
Volatile Organic Compounds (µg/L)												
ETHYLENE DIBROMIDE	12	0	0	--	--	--	1	1	--	--	NA	0.05
METHYLENE CHLORIDE	12	0	0	--	--	--	2	2	0	0	4	NA
STYRENE	12	0	0	--	--	--	1	1	0	0	1,600	100
TETRACHLOROETHENE	12	0	0	--	--	--	**1**	**1**	0	12	0.7	5
TOLUENE	12	0	0	--	--	--	1	1	0	0	720	150
TRANS-1,2-DICHLOROETHENE	12	0	0	--	--	--	1	1	0	0	120	10
TRANS-1,3-DICHLOROPROPENE	12	0	0	--	--	--	**0.5**	**0.5**	0	12	0.4 (not trans)	0.5
TRICHLOROETHENE	12	0	0	--	--	--	**1**	**1**	0	12	0.03	5
VINYL CHLORIDE	12	0	0	--	--	--	**0.5**	**0.5**	0	12	0.02 (child or adult)	0.5
XYLENE (TOTAL)	12	0	0	--	--	--	1	1	0	0	210	1,800
Metals (µg/L)												
Filtered												
ALUMINUM	9	2	22	2,380	920	3,830	7.4	236	0	0	36,000	NA
ANTIMONY	9	0	0	--	--	--	0.70	1.8	0	0	15.0	6.0
ARSENIC	9	3	33	**7.5**	**6.5**	**8.9**	**0.80**	**2.2**	3	6	0.045	10.0
BARIUM	9	9	100	157	53.0J	388	0.0	0.0	0	0	2,600	1,000
BERYLLIUM	9	0	0	--	--	--	0.10	0.15	0	0	73.0	4.0
CADMIUM	9	3	33	0.29	0.16J	0.38J	0.15	0.20	0	0	18.0	5.0
CALCIUM	9	9	100	82,500	6,800	242,000	0.0	0.0	--	--	NA	NA
CHROMIUM	9	2	22	7.2	3.0J	11.4	0.20	1.0	--	--	NA	50.0
COBALT	9	4	44	1.7	0.42J	4.5J	0.30	1.4	0	0	730	NA
COPPER	9	2	22	1.7	0.66J	2.7J	0.35	9.4	0	0	1,500	1,300
IRON	9	2	22	2,640	894	4,390	5.6	154	0	0	11,000	NA
LEAD	9	0	0	--	--	--	0.50	1.4	--	--	NA	15.0
MAGNESIUM	9	9	100	62,300	11,500	160,000	0.0	0.0	--	--	NA	NA
MANGANESE	9	9	100	226	53.1	456	0.0	0.0	0	0	880	NA
MERCURY	9	0	0	--	--	--	0.10	0.10	0	0	11.0	2.0
MOLYBDENUM	9	4	44	2.0	0.62J	3.7J	0.64	2.9	0	0	180	NA
NICKEL	9	6	67	8.3	1.5J	22.3	1.5	3.0	0	0	730	100
POTASSIUM	9	9	100	14,600	7,250J	23,900J	0.0	0.0	--	--	NA	NA
SELENIUM	6	0	0	--	--	--	0.80	9.0	0	0	180	50.0

TABLE 9-7: SITE 23 STATISTICAL SUMMARY OF GROUNDWATER ANALYSES

Follow-on Investigation, 1998

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

Analyte	Number of Samples Analyzed	Number of Detections	Percent of Detections	Average of Detected Concentration	Minimum Detected Concentration	Maximum Detected Concentration	Minimum Non-detected Concentration	Maximum Non-detected Concentration	Number of Detections Over PRG	Number of Non-detects Over PRG	Tap Water PRG	MCL
Metals (µg/L)												
Filtered												
SILVER	9	0	0	--	--	--	0.15	0.35	0	0	180	NA
SODIUM	9	9	100	538,000	68,300	1,360,000	0.0	0.0	--	--	NA	NA
THALLIUM	9	0	0	--	--	--	0.90	1.4	0	0	2.4	2.0
VANADIUM	9	2	22	8.2	6.3J	10.1J	0.25	3.5	0	0	260	NA
ZINC	9	5	56	70.9	6.0J	141	2.7	4.3	0	0	11,000	NA

NOTES:

Bold denotes values elevated above the PRG

- Not detected
J Estimated value
MCL Maximum Contaminant Level
NA No criteria available
PRG Preliminary Remediation Goal, U.S. Environmental Protection Agency, Region 9 or CAL-modified
µg/L Micrograms per liter

TABLE 9-8: SITE 23 STATISTICAL SUMMARY OF SOIL ANALYSES

Supplemental Remedial Investigation Data Gap Sampling, 2001

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

Analyte	Number of Samples Analyzed	Number of Detections	Percent of Detections	Average of Detected Concentration	Minimum Detected Concentration	Maximum Detected Concentration	Minimum Non-detected Concentration	Maximum Non-detected Concentration	Number of Detections Over PRG	Number of Non-detects Over PRG	Residential PRG
Metals (mg/kg)											
CHROMIUM	1	1	100	76.9	76.9	76.9	0.0	0.0	0	0	210
LEAD	1	1	100	12.5	12.5	12.5	0.0	0.0	0	0	150 (CAL-modified)

NOTES:

Bold denotes values elevated above the PRG

mg/kg Milligrams per kilogram

NA No PRG available

PRG Preliminary Remediation Goal, U.S. Environmental Protection Agency, Region 9 or CAL-modified

TABLE 9-9: SITE 23 STATISTICAL SUMMARY OF GROUNDWATER ANALYSES

Supplemental Remedial Investigation Data Gap Sampling, 2001

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

Analyte	Number of Samples Analyzed	Number of Detections	Percent of Detections	Average of Detected Concentration	Minimum Detected Concentration	Maximum Detected Concentration	Minimum Non-detected Concentration	Maximum Non-detected Concentration	Number of Detections Over PRG	Number of Non-detects Over PRG	Tap Water PRG	MCL
Volatile Organic Compounds (µg/L)												
1,1,1,2-TETRACHLOROETHANE	4	0	0	--	--	--	**1**	**1,300**	0	4	0.4	NA
1,1,1-TRICHLOROETHANE	13	0	0	--	--	--	1	1,300	0	0	3,200	200
1,1,2,2-TETRACHLOROETHANE	13	0	0	--	--	--	**1**	**1,300**	0	13	0.06	1
1,1,2-TRICHLOROETHANE	13	0	0	--	--	--	**1**	**1,300**	0	13	0.2	5
1,1-DICHLOROETHANE	13	0	0	--	--	--	0.5	**1,300**	0	2	2 (CAL-modified)	5
1,1-DICHLOROETHENE	13	0	0	--	--	--	**1**	**1,300**	0	1	340	6
1,1-DICHLOROPROPENE	2	0	0	--	--	--	100	1,300	--	--	NA	NA
1,2,3-TRICHLOROBENZENE	2	0	0	--	--	--	100	1,300	--	--	NA	NA
1,2,3-TRICHLOROPROPANE	2	0	0	--	--	--	**100**	**1,300**	0	2	0.006	NA
1,2,4-TRICHLOROBENZENE	2	0	0	--	--	--	100	**1,300**	0	1	190	5
1,2,4-TRIMETHYLBENZENE	2	1	50	860	860,J	860,J	**100**	**100**	1	1	12	NA
1,2-DIBROMO-3-CHLOROPROPANE	2	0	0	--	--	--	100	**1,300**	0	2	0.002 (CAL-modified)	0.2
1,2-DICHLOROBENZENE	13	0	0	--	--	--	1	**1,300**	0	1	370	600
1,2-DICHLOROETHANE	13	0	0	--	--	--	**0.5**	1,300	0	13	0.1	0.5
1,2-DICHLOROETHENE (TOTAL)	9	1	11	1	1,J	1,J	2	4	0	0	61 (cis)	NA
1,2-DICHLOROPROPANE	11	0	0	--	--	--	**2**	**1,300**	0	11	0.2	5
1,3,5-TRIMETHYLBENZENE	2	0	0	--	--	--	**100**	**1,300**	0	2	12	NA
1,3-DICHLOROBENZENE	13	0	0	--	--	--	1	**1,300**	0	2	6	NA
1,3-DICHLOROPROPANE	2	0	0	--	--	--	100	1,300	--	--	NA	NA
1,4-DICHLOROBENZENE	13	0	0	--	--	--	**1**	**1,300**	0	13	0.5	5
2,2-DICHLOROPROPANE	2	0	0	--	--	--	100	1,300	--	--	NA	NA
2-BUTANONE	9	0	0	--	--	--	2	4	--	--	NA	NA
2-CHLOROTOLUENE	2	0	0	--	--	--	100	1,300	--	--	NA	NA
2-HEXANONE	9	0	0	--	--	--	2	4	--	--	NA	NA
4-CHLOROTOLUENE	2	0	0	--	--	--	100	1,300	--	--	NA	NA
4-METHYL-2-PENTANONE	11	0	0	--	--	--	2	13,000	--	--	NA	NA
ACETONE	9	0	0	--	--	--	3	33	0	0	610	NA
BENZENE	13	0	0	--	--	--	**0.5**	**1,300**	0	13	0.3	1
BROMOBENZENE	2	0	0	--	--	--	**100**	**1,300**	0	2	20	NA
BROMOCHLOROMETHANE	2	0	0	--	--	--	100	1,300	--	--	NA	NA
BROMODICHLOROMETHANE	11	0	0	--	--	--	**2**	**1,300**	0	11	0.2	80

TABLE 9-9: SITE 23 STATISTICAL SUMMARY OF GROUNDWATER ANALYSES

Supplemental Remedial Investigation Data Gap Sampling, 2001

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

Analyte	Number of Samples Analyzed	Number of Detections	Percent of Detections	Average of Detected Concentration	Minimum Detected Concentration	Maximum Detected Concentration	Minimum Non-detected Concentration	Maximum Non-detected Concentration	Number of Detections Over PRG	Number of Non-detects Over PRG	Tap Water PRG	MCL
Volatile Organic Compounds (µg/L)												
BROMOFORM	11	0	0	--	--	--	2	1,300	0	2	9	80
BROMOMETHANE	11	0	0	--	--	--	2	1,300	0	2	9	NA
CARBON DISULFIDE	11	1	9	0.3	0.3J	0.3J	2	1,300	0	1	1,000	NA
CARBON TETRACHLORIDE	11	0	0	--	--	--	0.5	1,300	0	11	0.2	0.5
CHLOROBENZENE	13	0	0	--	--	--	1	1,300	0	1	110	70
CHLOROETHANE	13	0	0	--	--	--	1	1,300	0	2	5	NA
CHLOROFORM	11	0	0	--	--	--	2	1,300	0	11	0.5 (CAL-modified)	80
CHLOROMETHANE	13	0	0	--	--	--	1	1,300	0	11	2	NA
CIS-1,2-DICHLOROETHENE	4	1	25	1	1	1	1	1,300	0	2	61	6
CIS-1,3-DICHLOROPROPENE	11	0	0	--	--	--	0.5	1,300	0	11	0.4 (not cis)	0.5
DIBROMOCHLOROMETHANE	11	0	0	--	--	--	2	1,300	0	11	0.1	80
DIBROMOMETHANE	2	0	0	--	--	--	100	1,300	--	--	NA	NA
DICHLORODIFLUOROMETHANE	2	0	0	--	--	--	100	1,300	0	1	390	NA
ETHYLBENZENE	13	1	8	3	3J	3J	1	1,300	1	2	3	300
ETHYLENE DIBROMIDE	2	0	0	--	--	--	100	1,300	--	--	NA	0.05
HEXACHLOROBUTADIENE	2	0	0	--	--	--	100	1,300	0	2	0.9	NA
ISOPROPYLBENZENE	2	1	50	1,000	1,000J	1,000J	100	100	--	--	NA	NA
M,P-XYLENE	2	1	50	1	1	1	1	1	0	0	210 (xylenes)	NA
METHYL-T-BUTYL ETHER	13	0	0	--	--	--	1	2,500	0	3	6 (CAL-modified)	13
METHYLENE CHLORIDE	13	0	0	--	--	--	1	1,300	0	2	4	NA
N-BUTYLBENZENE	2	0	0	--	--	--	100	1,300	--	--	NA	NA
N-PROPYLBENZENE	2	0	0	--	--	--	100	1,300	0	1	240	NA
NAPHTHALENE	4	2	50	560	21	1,100J	1	100	2	1	6	NA
O-XYLENE	2	0	0	--	--	--	1	1	0	0	210 (xylenes)	NA
P-ISOPROPYLTOLUENE	2	0	0	--	--	--	100	1,300	--	--	NA	NA
SEC-BUTYLBENZENE	2	1	50	1,000	1,000J	1,000J	100	100	1	0	240	NA
STYRENE	11	0	0	--	--	--	2	1,300	0	0	1,600	100
TERT-BUTYLBENZENE	2	0	0	--	--	--	100	1,300	0	1	240	NA
TETRACHLOROETHENE	13	0	0	--	--	--	1	1,300	0	13	0.7	5
TOLUENE	13	0	0	--	--	--	1	1,300	0	1	720	150
TRANS-1,2-DICHLOROETHENE	4	0	0	--	--	--	1	1,300	0	1	120	10

TABLE 9-9: SITE 23 STATISTICAL SUMMARY OF GROUNDWATER ANALYSES

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Volatile Organic Compounds (µg/L)												
TRANS-1,3-DICHLOROPROPENE	11	0	0	--	--	--	**0.5**	**1,300**	0	11	0.4 (not trans)	0.5
TRICHLOROETHENE	13	0	0	--	--	--	**1**	**1,300**	0	13	0.03	5
TRICHLOROFLUOROMETHANE	2	0	0	--	--	--	100	1,300	--	--	NA	NA
VINYL CHLORIDE	13	1	8	**8**	**8**	**8**	**0.5**	**1,300**	1	12	0.02 (child or adult)	0.5
XYLENE (TOTAL)	11	2	18	**330**	7	**660J**	2	100	1	0	210	1,800
Semivolatile Organic Compounds (µg/L)												
1,2,4-TRICHLOROBENZENE	10	0	0	--	--	--	10	10	0	0	190	5
1,2-DICHLOROBENZENE	10	0	0	--	--	--	5	5	0	0	370	600
1,3-DICHLOROBENZENE	10	0	0	--	--	--	5	5	0	0	6	NA
1,4-DICHLOROBENZENE	10	0	0	--	--	--	**5**	**5**	0	10	0.5	5
2,2'-OXYBIS(1-CHLOROPROPANE)	10	0	0	--	--	--	10	10	--	--	NA	NA
2,4,5-TRICHLOROPHENOL	10	0	0	--	--	--	25	25	0	0	3,600	50
2,4,6-TRICHLOROPHENOL	10	0	0	--	--	--	**10**	**10**	0	10	1 (CAL-modified)	NA
2,4-DICHLOROPHENOL	10	0	0	--	--	--	10	10	0	0	110	NA
2,4-DIMETHYLPHENOL	10	0	0	--	--	--	10	10	0	0	730	NA
2,4-DINITROPHENOL	10	0	0	--	--	--	25	50	0	0	73	NA
2,4-DINITROTOLUENE	10	0	0	--	--	--	10	10	0	0	73	NA
2,6-DINITROTOLUENE	10	0	0	--	--	--	10	10	0	0	36	NA
2-CHLORONAPHTHALENE	10	0	0	--	--	--	10	10	--	--	NA	NA
2-CHLOROPHENOL	10	0	0	--	--	--	10	10	0	0	30	NA
2-METHYLNAPHTHALENE	10	1	10	21	21	21	10	10	--	--	NA	NA
2-METHYLPHENOL	10	0	0	--	--	--	10	10	0	0	1,800	NA
2-NITROANILINE	10	0	0	--	--	--	**25**	**25**	0	10	1	NA
2-NITROPHENOL	10	0	0	--	--	--	10	10	--	--	NA	NA
3,3'-DICHLOROBENZIDINE	10	0	0	--	--	--	**12**	**12**	0	10	0.2	NA
3-NITROANILINE	10	0	0	--	--	--	25	25	--	--	NA	NA
4,6-DINITRO-2-METHYLPHENOL	10	0	0	--	--	--	25	25	--	--	NA	NA
4-BROMOPHENYL-PHENYLETHER	10	0	0	--	--	--	10	10	--	--	NA	NA
4-CHLORO-3-METHYLPHENOL	10	0	0	--	--	--	10	10	--	--	NA	NA
4-CHLOROANILINE	10	0	0	--	--	--	17	19	0	0	150	NA

TABLE 9-9: SITE 23 STATISTICAL SUMMARY OF GROUNDWATER ANALYSES

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Semivolatile Organic Compounds (µg/L)												
4-CHLOROPHENYL-PHENYLETHER	10	0	0	--	--	--	10	10	--	--	NA	NA
4-METHYLPHENOL	10	0	0	--	--	--	10	10	0	0	180	NA
4-NITROANILINE	10	0	0	--	--	--	25	25	--	--	NA	NA
4-NITROPHENOL	10	0	0	--	--	--	25	25	--	--	NA	NA
ACENAPHTHENE	10	0	0	--	--	--	10	10	0	0	370	NA
ACENAPHTHYLENE	10	0	0	--	--	--	10	10	--	--	NA	NA
ANTHRACENE	10	0	0	--	--	--	10	10	0	0	1,800	NA
BENZO(A)ANTHRACENE	10	0	0	--	--	--	**10**	**10**	0	10	0.09	0.1
BENZO(A)PYRENE	10	0	0	--	--	--	**0.2**	**3**	0	10	0.009	0.2
BENZO(B)FLUORANTHENE	10	0	0	--	--	--	**10**	**10**	0	10	0.09	NA
BENZO(G,H,I)PERYLENE	10	0	0	--	--	--	10	10	--	--	NA	NA
BENZO(K)FLUORANTHENE	10	0	0	--	--	--	**10**	**10**	0	10	0.06 (CAL-modified)	NA
BIS(2-CHLOROETHOXY)METHANE	10	0	0	--	--	--	10	10	--	--	NA	NA
BIS(2-CHLOROETHYL)ETHER	10	0	0	--	--	--	**10**	**10**	0	10	0.01	NA
BIS(2-ETHYLHEXYL)PHTHALATE	10	0	0	--	--	--	4	4	0	0	5	NA
BUTYLBENZYLPHTHALATE	10	0	0	--	--	--	10	10	0	0	7,300	NA
CARBAZOLE	10	0	0	--	--	--	**10**	**14**	0	10	3	NA
CHRYSENE	10	0	0	--	--	--	**10**	**10**	0	10	0.6 (CAL-modified)	NA
DI-N-BUTYLPHTHALATE	10	0	0	--	--	--	10	10	--	--	NA	NA
DI-N-OCTYLPHTHALATE	10	0	0	--	--	--	10	10	--	--	NA	NA
DIBENZO(A,H)ANTHRACENE	10	0	0	--	--	--	**20**	**20**	0	10	0.009	NA
DIBENZOFURAN	10	0	0	--	--	--	10	10	0	0	24	NA
DIETHYLPHTHALATE	10	0	0	--	--	--	10	10	0	0	29,000	NA
DIMETHYLPHTHALATE	10	0	0	--	--	--	10	10	0	0	360,000	NA
FLUORANTHENE	10	0	0	--	--	--	10	10	0	0	1,500	NA
FLUORENE	10	0	0	--	--	--	10	10	0	0	240	NA
HEXACHLOROBENZENE	10	0	0	--	--	--	**10**	**10**	0	10	0.04	1
HEXACHLOROBUTADIENE	10	0	0	--	--	--	**10**	**10**	0	10	0.9	NA
HEXACHLOROCYCLOPENTADIENE	10	0	0	--	--	--	11	16	0	0	220	NA
HEXACHLOROETHANE	10	0	0	--	--	--	**10**	**10**	0	10	5	NA
INDENO(1,2,3-CD)PYRENE	10	0	0	--	--	--	**10**	**10**	0	10	0.09	NA

TABLE 9-9: SITE 23 STATISTICAL SUMMARY OF GROUNDWATER ANALYSES

Supplemental Remedial Investigation Data Gap Sampling, 2001

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Analyte	Number of Samples Analyzed	Number of Detections	Percent of Detections	Average of Detected Concentration	Minimum Detected Concentration	Maximum Detected Concentration	Minimum Non-detected Concentration	Maximum Non-detected Concentration	Number of Detections Over PRG	Number of Non-detects Over PRG	Tap Water PRG	MCL
Semivolatile Organic Compounds (µg/L)												
ISOPHORONE	10	0	0	--	--	--	10	10	0	0	71	NA
N-NITROSO-DI-N-PROPYLAMINE	10	0	0	--	--	--	**10**	**10**	0	10	0.01	NA
N-NITROSODIPHENYLAMINE	10	0	0	--	--	--	10	**18**	0	1	14	NA
NAPHTHALENE	10	1	10	**19**	**19**	**19**	**10**	**10**	1	9	6	NA
NITROBENZENE	10	0	0	--	--	--	**10**	**10**	0	10	3	NA
PENTACHLOROPHENOL	10	0	0	--	--	--	**25**	**25**	0	10	0.6	1
PHENANTHRENE	10	0	0	--	--	--	10	10	--	--	NA	NA
PHENOL	10	0	0	--	--	--	10	10	0	0	22,000	NA
PYRENE	10	0	0	--	--	--	10	10	0	0	180	NA
Polynuclear Aromatic Hydrocarbons (µg/L)												
ACENAPHTHENE	9	0	0	--	--	--	5	5	0	0	370	NA
ACENAPHTHYLENE	9	0	0	--	--	--	2	2	--	--	NA	NA
ANTHRACENE	9	0	0	--	--	--	0.2	0.2	0	0	1,800	NA
BENZO(A)ANTHRACENE	9	1	11	0.1	0.1J	0.1J	**0.2**	**0.2**	1	8	0.09	0.1
BENZO(A)PYRENE	9	0	0	--	--	--	**0.2**	**0.2**	0	9	0.009	0.2
BENZO(B)FLUORANTHENE	9	0	0	--	--	--	**0.2**	**0.2**	0	9	0.09	NA
BENZO(G,H,I)PERYLENE	9	0	0	--	--	--	0.2	0.2	--	--	NA	NA
BENZO(K)FLUORANTHENE	9	0	0	--	--	--	**0.2**	**0.2**	0	9	0.06 (CAL-modified)	NA
CHRYSENE	9	0	0	--	--	--	0.2	0.2	0	0	0.6 (CAL-modified)	NA
DIBENZO(A,H)ANTHRACENE	9	0	0	--	--	--	**0.5**	**0.5**	0	9	0.009	NA
FLUORANTHENE	9	0	0	--	--	--	0.2	0.2	0	0	1,500	NA
FLUORENE	9	0	0	--	--	--	1	1	0	0	240	NA
INDENO(1,2,3-CD)PYRENE	9	0	0	--	--	--	**0.2**	**0.2**	0	9	0.09	NA
NAPHTHALENE	9	0	0	--	--	--	5	5	0	0	6	NA
PHENANTHRENE	9	0	0	--	--	--	1	1	--	--	NA	NA
PYRENE	9	1	11	0.2	0.2	0.2	0.2	0.2	0	0	180	NA

NOTES:

Bold denotes values elevated above the PRG

-- Not detected

J Estimated value

MCL Maximum Contaminant Level

NA No criteria available

PRG Preliminary Remediation Goal, U.S. Environmental Protection Agency, Region 9 or CAL-modified

µg/l Micrograms per liter

TABLE 9-10: SITE 23 STATISTICAL SUMMARY OF GROUNDWATER ANALYSES

Basewide Groundwater Monitoring, 2002 and 2003

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

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Volatile Organic Compounds (µg/L)												
1,1,1,2-TETRACHLOROETHANE	14	0	0	--	--	--	**0.5**	**0.5**	0	14	0.4	NA
1,1,1-TRICHLOROETHANE	14	0	0	--	--	--	0.5	0.5	0	0	3,200	200
1,1,2,2-TETRACHLOROETHANE	14	0	0	--	--	--	**0.5**	**0.5**	0	14	0.06	1
1,1,2-TRICHLOROETHANE	14	0	0	--	--	--	**0.5**	**0.5**	0	14	0.2	5
1,1-DICHLOROETHANE	14	0	0	--	--	--	0.5	0.5	0	0	2 (CAL-modified)	5
1,1-DICHLOROETHENE	14	0	0	--	--	--	0.5	0.5	0	0	340	6
1,1-DICHLOROPROPENE	14	0	0	--	--	--	0.5	0.5	--	--	NA	NA
1,2,3-TRICHLOROBENZENE	14	1	7	1	1	1	0.5	0.5	--	--	NA	NA
1,2,3-TRICHLOROPROPANE	14	0	0	--	--	--	**0.5**	**0.5**	0	14	0.006	NA
1,2,4-TRICHLOROBENZENE	14	0	0	--	--	--	0.5	0.5	0	0	190	5
1,2,4-TRIMETHYLBENZENE	14	0	0	--	--	--	0.5	0.5	0	0	12	NA
1,2-DIBROMO-3-CHLOROPROPANE	14	0	0	--	--	--	**0.5**	**0.5**	0	14	0.002 (CAL-modified)	0.2
1,2-DICHLOROBENZENE	14	1	7	0.1	0.1J	0.1J	0.5	0.5	0	0	370	600
1,2-DICHLOROETHANE	14	0	0	--	--	--	**0.5**	**0.5**	0	14	0.1	0.5
1,2-DICHLOROPROPANE	14	0	0	--	--	--	**0.5**	**0.5**	0	14	0.2	5
1,3,5-TRIMETHYLBENZENE	14	0	0	--	--	--	0.5	0.5	0	0	12	NA
1,3-DICHLOROBENZENE	14	0	0	--	--	--	0.5	0.5	0	0	6	NA
1,3-DICHLOROPROPANE	14	0	0	--	--	--	0.5	0.5	--	--	NA	NA
1,4-DICHLOROBENZENE	14	0	0	--	--	--	0.5	0.5	0	0	0.5	5
2,2-DICHLOROPROPANE	14	0	0	--	--	--	0.5	0.5	--	--	NA	NA
2-BUTANONE	14	0	0	--	--	--	10	10	--	--	NA	NA
2-CHLOROTOLUENE	14	0	0	--	--	--	0.5	0.5	--	--	NA	NA
2-HEXANONE	14	0	0	--	--	--	10	10	--	--	NA	NA
4-CHLOROTOLUENE	14	0	0	--	--	--	0.5	0.5	--	--	NA	NA
4-METHYL-2-PENTANONE	14	0	0	--	--	--	10	10	--	--	NA	NA
ACETONE	14	5	36	1	0.4J	2J	0.5	10	0	0	610	NA
BENZENE	14	1	7	0.2	0.2J	0.2J	**0.5**	**0.5**	0	13	0.3	1
BROMOBENZENE	14	0	0	--	--	--	0.5	0.5	0	0	20	NA
BROMOCHLOROMETHANE	14	0	0	--	--	--	0.5	0.5	--	--	NA	NA
BROMODICHLOROMETHANE	14	0	0	--	--	--	**0.5**	**0.5**	0	14	0.2	80
BROMOFORM	14	1	7	0.2	0.2J	0.2J	1	1	0	0	9	80

TABLE 9-10: SITE 23 STATISTICAL SUMMARY OF GROUNDWATER ANALYSES

Basewide Groundwater Monitoring, 2002 and 2003

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Volatile Organic Compounds (µg/L)												
BROMOMETHANE	14	0	0	--	--	--	0.6	1	0	0	9	NA
CARBON DISULFIDE	14	0	0	--	--	--	0.5	0.5	0	0	1,000	NA
CARBON TETRACHLORIDE	14	0	0	--	--	--	**0.5**	**0.5**	0	14	0.2	0.5
CHLOROBENZENE	14	0	0	--	--	--	0.5	0.5	0	0	110	70
CHLOROETHANE	14	0	0	--	--	--	1	1	0	0	5	NA
CHLOROFORM	14	0	0	--	--	--	0.2	0.5	0	0	0.5 (CAL-modified)	80
CHLOROMETHANE	14	0	0	--	--	--	1	1	0	0	2	NA
CIS-1,2-DICHLOROETHENE	14	0	0	--	--	--	0.5	0.5	0	0	61	6
DIBROMOCHLOROMETHANE	14	0	0	--	--	--	**0.5**	**0.5**	0	14	0.1	80
DIBROMOMETHANE	14	0	0	--	--	--	0.5	0.5	--	--	NA	NA
DICHLORODIFLUOROMETHANE	14	0	0	--	--	--	1	1	0	0	390	NA
DIISOPROPYL ETHER	14	0	0	--	--	--	0.5	0.5	--	--	NA	NA
ETHYL TERT-BUTYL ETHER	14	0	0	--	--	--	0.5	0.5	--	--	NA	NA
ETHYLBENZENE	14	0	0	--	--	--	0.5	0.5	0	0	3	300
ETHYLENE DIBROMIDE	14	0	0	--	--	--	0.5	0.5	--	--	NA	0.05
HEXACHLOROBUTADIENE	14	0	0	--	--	--	0.5	0.5	0	0	0.9	NA
ISOPROPYLBENZENE	14	0	0	--	--	--	0.5	0.5	--	--	NA	NA
M,P-XYLENE	14	0	0	--	--	--	0.5	0.5	0	0	210 (xylenes)	NA
METHYL-T-BUTYL ETHER	14	0	0	--	--	--	0.2	0.5	0	0	6 (CAL-modified)	13
METHYLENE CHLORIDE	14	0	0	--	--	--	0.2	**5**	0	12	4	NA
N-BUTYLBENZENE	14	0	0	--	--	--	0.3	0.5	--	--	NA	NA
N-PROPYLBENZENE	14	0	0	--	--	--	0.5	0.5	0	0	240	NA
NAPHTHALENE	14	0	0	--	--	--	2	2	0	0	6	NA
O-XYLENE	14	0	0	--	--	--	0.5	0.5	0	0	210 (xylenes)	NA
P-ISOPROPYLTOLUENE	14	0	0	--	--	--	0.5	0.5	--	--	NA	NA
SEC-BUTYLBENZENE	14	1	7	0.2	0.2J	0.2J	0.5	0.5	0	0	240	NA
STYRENE	14	0	0	--	--	--	0.5	0.5	0	0	1,600	100
TERT-AMYL METHYL ETHER	14	0	0	--	--	--	0.5	0.5	--	--	NA	NA
TERT-BUTANOL	14	0	0	--	--	--	10	20	--	--	NA	NA
TERT-BUTYLBENZENE	14	0	0	--	--	--	0.5	0.5	0	0	240	NA
TETRACHLOROETHENE	14	0	0	--	--	--	0.5	0.5	0	0	0.7	5

TABLE 9-10: SITE 23 STATISTICAL SUMMARY OF GROUNDWATER ANALYSES

Basewide Groundwater Monitoring, 2002 and 2003

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

Analyte	Number of Samples Analyzed	Number of Detections	Percent of Detections	Average of Detected Concentration	Minimum Detected Concentration	Maximum Detected Concentration	Minimum Non-detected Concentration	Maximum Non-detected Concentration	Number of Detections Over PRG	Number of Non-detects Over PRG	Tap Water PRG	MCL
Volatile Organic Compounds (µg/L)												
TOLUENE	14	0	0	--	--	--	0.5	0.5	0	0	720	150
TRANS-1,2-DICHLOROETHENE	14	0	0	--	--	--	0.5	0.5	0	0	120	10
TRICHLOROETHENE	14	0	0	--	--	--	**0.5**	**0.5**	0	14	0.03	5
TRICHLOROFLUOROMETHANE	14	0	0	--	--	--	1	1	--	--	NA	NA
VINYL CHLORIDE	14	0	0	--	--	--	**0.5**	**0.5**	0	14	0.02 (child or adult)	0.5
Metals (µg/L)												
Filtered												
ALUMINUM	10	2	20	50.5	38.0J	63.0J	4.9	100	0	0	36,000	NA
ANTIMONY	10	3	30	0.17	0.10J	0.22J	0.063	**50.0**	0	1	15.0	6.0
ARSENIC	10	10	100	**8.9**	**2.1J**	**18.0**	0.0	0.0	10	0	0.045	10.0
BARIUM	10	10	100	59.4	44.0	84.0	0.0	0.0	0	0	2,600	1,000
BERYLLIUM	10	0	0	--	--	--	2.0	2.0	0	0	73.0	4.0
CADMIUM	10	3	30	0.11	0.066J	0.19J	5.0	5.0	0	0	18.0	5.0
CALCIUM	10	10	100	88,200	20,000	300,000	0.0	0.0	--	--	NA	NA
CHROMIUM	10	8	80	3.0	0.16J	8.0J	10.0	10.0	--	--	NA	50.0
COBALT	10	10	100	0.25	0.033J	0.54J	0.0	0.0	0	0	730	NA
COPPER	10	9	90	0.88	0.31J	2.0J	1.6	1.6	0	0	1,500	1,300
IRON	10	8	80	550	54.0J	1,100	72.0	90.0	0	0	11,000	NA
LEAD	10	3	30	0.14	0.029J	0.31J	0.029	3.0	--	--	NA	15.0
MAGNESIUM	10	10	100	41,400	6,400	140,000	0.0	0.0	--	--	NA	NA
MANGANESE	10	8	80	227	54.0	380	10.0	10.0	0	0	880	NA
MERCURY	10	2	20	0.91	0.12J	1.7	0.18	0.20	0	0	11.0	2.0
MOLYBDENUM	10	6	60	2.5	0.85J	4.4J	0.95	3.1	0	0	180	NA
NICKEL	10	4	40	1.2	0.42J	2.0J	2.0	20.0	0	0	730	100
POTASSIUM	10	10	100	13,500	4,300	32,000	0.0	0.0	--	--	NA	NA
SELENIUM	10	6	60	3.1	0.49J	7.4J	5.0	5.0	0	0	180	50.0
SILVER	9	1	11	0.019	0.019J	0.019J	5.0	5.0	0	0	180	NA
SODIUM	10	10	100	465,000	22,000	1,400,000	0.0	0.0	--	--	NA	NA
THALLIUM	10	0	0	--	--	--	0.18	2.0	0	0	2.4	2.0
VANADIUM	10	7	70	8.6	0.93J	30.0	0.21	10.0	0	0	260	NA
ZINC	10	5	50	9.7	1.7J	33.0J	20.0	20.0	0	0	11,000	NA

TABLE 9-10: SITE 23 STATISTICAL SUMMARY OF GROUNDWATER ANALYSES

Basewide Groundwater Monitoring, 2002 and 2003

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

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NOTES:

Bold denotes values elevated above the PRG

--	Not detected
J	Estimated value
MCL	Maximum Contaminant Level
NA	No criteria available
PRG	Preliminary Remediation Goal, U.S. Environmental Protection Agency, Region 9 or CAL-modified
ug/L	Micrograms per liter

TABLE 9-11: SITE 23 STATISTICAL SUMMARY OF SOIL ANALYSES

All Soil Investigations

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

Analyte	Number of Samples Analyzed	Number of Detections	Percent of Detections	Average of Detected Concentration	Minimum Detected Concentration	Maximum Detected Concentration	Minimum Non-detected Concentration	Maximum Non-detected Concentration	Number of Detections Over PRG	Number of Non-detects Over PRG	Residential PRG
Volatile Organic Compounds (µg/kg)											
1,1,1-TRICHLOROETHANE	82	0	0	--	--	--	5	1,400	0	0	1,200,000
1,1,2,2-TETRACHLOROETHANE	81	1	1	930	930 J	930	5	**1,400**	1	1	410
1,1,2-TRICHLOROETHANE	81	0	0	--	--	--	5	**1,400**	0	2	730
1,1-DICHLOROETHANE	81	0	0	--	--	--	5	1,400	0	0	2,800 (CAL-modified)
1,1-DICHLOROETHENE	82	0	0	--	--	--	5	1,400	0	0	120,000
1,2-DICHLOROBENZENE	37	0	0	--	--	--	5	840	0	0	370,000
1,2-DICHLOROETHANE	82	0	0	--	--	--	5	**1,400**	0	2	280
1,2-DICHLOROETHENE (TOTAL)	81	1	1	5	5 J	5 J	5	1,400	0	0	43,000 (cis)
1,2-DICHLOROPROPANE	81	0	0	--	--	--	5	**1,400**	0	2	340
1,3-DICHLOROBENZENE	37	0	0	--	--	--	5	840	0	0	16,000
1,4-DICHLOROBENZENE	37	0	0	--	--	--	5	840	0	0	3,400
2-BUTANONE	82	0	0	--	--	--	5	1,400	--	--	NA
2-CHLOROETHYL VINYL ETHER	37	0	0	--	--	--	10	19	--	--	NA
2-HEXANONE	81	1	1	2	2 J	2 J	10	1,400	--	--	NA
4-METHYL-2-PENTANONE	81	0	0	--	--	--	6	1,400	--	--	NA
ACETONE	83	2	2	1,100	18	2,100 J	10	1,500	0	0	1,600,000
BENZENE	82	1	1	1	1 J	1 J	5	**1,400**	0	2	600
BROMODICHLOROMETHANE	81	0	0	--	--	--	5	**1,400**	0	2	820
BROMOFORM	81	0	0	--	--	--	5	1,400	0	0	62,000
BROMOMETHANE	81	0	0	--	--	--	10	1,400	0	0	3,900
CARBON DISULFIDE	81	0	0	--	--	--	5	1,400	0	0	360,000
CARBON TETRACHLORIDE	81	0	0	--	--	--	5	**1,400**	0	2	250
CHLOROBENZENE	81	0	0	--	--	--	5	1,400	0	0	150,000
CHLOROETHANE	81	0	0	--	--	--	10	1,400	0	0	3,000
CHLOROFORM	81	0	0	--	--	--	5	**1,400**	0	2	940 (CAL-modified)
CHLOROMETHANE	81	0	0	--	--	--	10	**1,400**	0	2	1,200
CIS-1,2-DICHLOROETHENE	1	0	0	--	--	--	10	10	0	0	43,000
CIS-1,3-DICHLOROPROPENE	81	0	0	--	--	--	5	**1,400**	0	2	780 (not cis)
DIBROMOCHLOROMETHANE	81	0	0	--	--	--	5	**1,400**	0	2	1,100
ETHYLBENZENE	84	3	4	3,600	36	6,200	5	1,400	0	0	8,900
HEXANE	1	0	0	--	--	--	20	20	0	0	110,000 (n-hexane)

TABLE 9-11: SITE 23 STATISTICAL SUMMARY OF SOIL ANALYSES (Continued)

All Soil Investigations

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

Analyte	Number of Samples Analyzed	Number of Detections	Percent of Detections	Average of Detected Concentration	Minimum Detected Concentration	Maximum Detected Concentration	Minimum Non-detected Concentration	Maximum Non-detected Concentration	Number of Detections Over PRG	Number of Non-detects Over PRG	Residential PRG
Volatile Organic Compounds (µg/kg)											
M,P-XYLENE	1	0	0	--	--	--	20	20	0	0	270,000 (xylenes)
METHYLENE CHLORIDE	84	3	4	660	7	1,800	5	1,400	0	0	9,100
O-XYLENE	1	0	0	--	--	--	10	10	0	0	270,000 (xylenes)
STYRENE	81	0	0	--	--	--	5	1,400	0	0	1,700,000
TETRACHLOROETHENE	82	0	0	--	--	--	5	1,400	0	0	1,500
TOLUENE	84	50	60	54	1J	1,100	5	1,400	0	0	520,000
TRANS-1,2-DICHLOROETHENE	1	0	0	--	--	--	10	10	0	0	69,000
TRANS-1,3-DICHLOROPROPENE	81	0	0	--	--	--	5	**1,400**	0	2	780 (not trans)
TRICHLOROETHENE	82	0	0	--	--	--	5	**1,400**	0	2	53
TRICHLOROFLUOROMETHANE	37	0	0	--	--	--	5	9	0	0	390,000
VINYL ACETATE	54	0	0	--	--	--	10	61	0	0	430,000
VINYL CHLORIDE	82	0	0	--	--	--	10	**1,400**	0	2	79 (child or adult)
XYLENE (TOTAL)	83	5	6	3,000	3J	12,000	5	1,400	0	0	270,000
Semivolatile Organic Compounds (µg/kg)											
1,2,4-TRICHLOROBENZENE	100	0	0	--	--	--	340	110,000	0	0	650,000
1,2-DICHLOROBENZENE	100	0	0	--	--	--	340	110,000	0	0	370,000
1,2-DIPHENYLHYDRAZINE	49	0	0	--	--	--	340	**1,200**	0	6	610
1,3-DICHLOROBENZENE	100	0	0	--	--	--	340	**110,000**	0	3	16,000
1,4-DICHLOROBENZENE	100	0	0	--	--	--	340	**110,000**	0	11	3,400
2,2'-OXYBIS(1-CHLOROPROPANE)	27	0	0	--	--	--	340	110,000	--	--	NA
2,4,5-TRICHLOROPHENOL	100	0	0	--	--	--	830	280,000	0	0	6,100,000
2,4,6-TRICHLOROPHENOL	100	0	0	--	--	--	340	**110,000**	0	7	6,900 (CAL-modified)
2,4-DICHLOROPHENOL	100	0	0	--	--	--	340	110,000	0	0	180,000
2,4-DIMETHYLPHENOL	100	1	1	52	52J	52 J	340	110,000	0	0	1,200,000
2,4-DINITROPHENOL	100	0	0	--	--	--	830	**280,000**	0	1	120,000
2,4-DINITROTOLUENE	100	0	0	--	--	--	340	110,000	0	0	120,000
2,6-DINITROTOLUENE	100	0	0	--	--	--	340	**110,000**	0	1	61,000
2-CHLORONAPHTHALENE	100	0	0	--	--	--	340	110,000	--	--	NA
2-CHLOROPHENOL	100	0	0	--	--	--	340	**110,000**	0	1	63,000
2-METHYLPHENOL	100	1	1	21	21J	21 J	340	110,000	--	--	NA

TABLE 9-11: SITE 23 STATISTICAL SUMMARY OF SOIL ANALYSES (Continued)

All Soil Investigations

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

Analyte	Number of Samples Analyzed	Number of Detections	Percent of Detections	Average of Detected Concentration	Minimum Detected Concentration	Maximum Detected Concentration	Minimum Non-detected Concentration	Maximum Non-detected Concentration	Number of Detections Over PRG	Number of Non-detects Over PRG	Residential PRG
Semivolatile Organic Compounds (µg/kg)											
2-NITROANILINE	100	0	0	--	--	--	830	**280,000**	0	64	1,700
2-NITROPHENOL	100	0	0	--	--	--	340	110,000	--	--	NA
3,3'-DICHLOROBENZIDINE	100	0	0	--	--	--	340	**110,000**	0	32	1,100
3-NITROANILINE	100	0	0	--	--	--	830	280,000	--	--	NA
4,6-DINITRO-2-METHYLPHENOL	100	0	0	--	--	--	830	280,000	--	--	NA
4-BROMOPHENYL-PHENYLETHER	100	0	0	--	--	--	340	110,000	--	--	NA
4-CHLORO-3-METHYLPHENOL	100	0	0	--	--	--	340	110,000	--	--	NA
4-CHLOROANILINE	100	1	1	1,100	1,100J	1,100 J	340	110,000	0	0	240,000
4-CHLOROPHENYL-PHENYLETHER	100	0	0	--	--	--	340	110,000	--	--	NA
4-METHYLPHENOL	100	1	1	48	48J	48 J	340	110,000	0	0	310,000
4-NITROANILINE	100	1	1	760	760J	760 J	830	280,000	--	--	NA
4-NITROPHENOL	100	0	0	--	--	--	830	280,000	--	--	NA
ANILINE	14	0	0	--	--	--	350	1,200	0	0	85,000
AZOBENZENE	1	0	0	--	--	--	350	350	0	0	4,400
BENZIDINE	1	0	0	--	--	--	**350**	**350**	0	1	2
BENZOIC ACID	73	0	0	--	--	--	1,600	75,000	0	0	100,000,000
BENZYL ALCOHOL	74	0	0	--	--	--	340	16,000	0	0	18,000,000
BIS(2-CHLOROETHOXY)METHANE	100	0	0	--	--	--	340	110,000	--	--	NA
BIS(2-CHLOROETHYL)ETHER	100	0	0	--	--	--	**340**	**110,000**	0	100	210
BIS(2-ETHYLHEXYL)PHTHALATE	100	2	2	720	560J	880	340	**110,000**	0	1	35,000
BUTYLBENZYLPHTHALATE	100	2	2	370	32J	700 J	340	110,000	0	0	12,000,000
CARBAZOLE	26	0	0	--	--	--	340	**110,000**	0	3	24,000
DI-N-BUTYLPHTHALATE	100	1	1	12,000	12,000	12,000	340	110,000	--	--	NA
DI-N-OCTYLPHTHALATE	100	0	0	--	--	--	340	110,000	--	--	NA
DIBENZOFURAN	100	0	0	--	--	--	340	110,000	0	0	290,000
DIETHYLPHTHALATE	100	0	0	--	--	--	340	110,000	0	0	49,000,000
DIMETHYLPHTHALATE	100	0	0	--	--	--	340	110,000	0	0	100,000,000
HEXACHLOROBENZENE	100	0	0	--	--	--	**340**	**110,000**	0	100	300
HEXACHLOROBUTADIENE	100	0	0	--	--	--	340	**110,000**	0	7	6,200
HEXACHLOROCYCLOPENTADIENE	100	0	0	--	--	--	340	110,000	0	0	370,000
HEXACHLOROETHANE	100	0	0	--	--	--	340	**110,000**	0	1	35,000

TABLE 9-11: SITE 23 STATISTICAL SUMMARY OF SOIL ANALYSES (Continued)

All Soil Investigations

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

Analyte	Number of Samples Analyzed	Number of Detections	Percent of Detections	Average of Detected Concentration	Minimum Detected Concentration	Maximum Detected Concentration	Minimum Non-detected Concentration	Maximum Non-detected Concentration	Number of Detections Over PRG	Number of Non-detects Over PRG	Residential PRG
Semivolatile Organic Compounds (µg/kg)											
ISOPHORONE	100	2	2	12,000	10,000	13,000	340	110,000	0	0	510,000
N-NITROSO-DI-N-PROPYLAMINE	100	0	0	--	--	--	**340**	**110,000**	0	100	69
N-NITROSODIMETHYLAMINE	14	0	0	--	--	--	**350**	**1,200**	0	14	10
N-NITROSODIPHENYLAMINE	100	12	12	97	46 J	220 J	340	**110,000**	0	1	99,000
NITROBENZENE	100	0	0	--	--	--	340	**110,000**	0	3	20,000
PENTACHLOROPHENOL	99	1	1	930	930 J	930 J	830	**280,000**	0	28	3,000
PHENOL	100	0	0	--	--	--	340	110,000	0	0	37,000,000
Polynuclear Aromatic Hydrocarbons (µg/kg)											
2-METHYLNAPHTHALENE	240	69	29	160	0.001J	11,000	0.005	130	--	--	NA
ACENAPHTHENE	240	22	9	11	0.002J	93 J	0.005	130	0	0	3,700,000
ACENAPHTHYLENE	240	48	20	3	0.002J	66 J	0.005	130	--	--	NA
ANTHRACENE	240	60	25	16	0.001J	430	0.005	280	0	0	22,000,000
BENZ(A)ANTHRACENE	240	133	55	37	0.002J	2,100	0.005	130	--	--	NA
BENZO(A)PYRENE	240	128	53	45	0.002J	**2,000**	0.005	**130**	13	1	62
BENZO(B)FLUORANTHENE	240	130	54	45	0.002J	**2,000**	0.005	130	2	0	620
BENZO(G,H,I)PERYLENE	240	148	62	34	0.002J	1,300	0.005	52	--	--	NA
BENZO(K)FLUORANTHENE	240	103	43	44	0.002J	**1,600**	0.005	130	2	0	380 (CAL-modified)
CHRYSENE	240	140	58	45	0.002	2,300	0.005	52	0	0	3,800 (CAL-modified)
DIBENZ(A,H)ANTHRACENE	238	98	41	12	0.002J	390	0.005	280	--	--	NA
FLUORANTHENE	240	132	55	68	0.002J	3,400	0.005	130	0	0	2,300,000
FLUORENE	240	36	15	12	0.003J	290	0.005	130	0	0	2,700,000
INDENO(1,2,3-CD)PYRENE	240	120	50	34	0.003J	**1,400**	0.005	130	2	0	620
NAPHTHALENE	240	86	36	140	0.001J	12,000	0.005	130	0	0	56,000
PHENANTHRENE	237	122	51	36	0.002J	1,500	0.005	100	--	--	NA
PYRENE	240	141	59	58	0.002J	2,700	0.005	130	0	0	2,300,000
PCBs/Pesticides (µg/kg)											
4,4'-DDD	46	1	2	14	14	14	2	94	0	0	2,400
4,4'-DDE	46	1	2	7	7	7	2	94	0	0	1,700
4,4'-DDT	46	3	7	27	3	72	2	94	0	0	1,700

TABLE 9-11: SITE 23 STATISTICAL SUMMARY OF SOIL ANALYSES (Continued)

All Soil Investigations

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

Analyte	Number of Samples Analyzed	Number of Detections	Percent of Detections	Average of Detected Concentration	Minimum Detected Concentration	Maximum Detected Concentration	Minimum Non-detected Concentration	Maximum Non-detected Concentration	Number of Detections Over PRG	Number of Non-detects Over PRG	Residential PRG
PCBs/Pesticides (µg/kg)											
ALDRIN	46	0	0	--	--	--	1	**47**	0	1	29
ALPHA-BHC	46	0	0	--	--	--	1	47	--	--	NA
ALPHA-CHLORDANE	32	0	0	--	--	--	2	470	0	0	1,600 (chlordane)
AROCLOR-1016	49	0	0	--	--	--	21	470	0	0	3,900
AROCLOR-1221	49	0	0	--	--	--	21	**850**	0	4	220
AROCLOR-1232	49	0	0	--	--	--	21	**850**	0	4	220
AROCLOR-1242	49	0	0	--	--	--	21	**470**	0	4	220
AROCLOR-1248	49	0	0	--	--	--	17	**470**	0	2	220
AROCLOR-1254	49	0	0	--	--	--	17	**940**	0	4	220
AROCLOR-1260	49	1	2	38	38J	38 J	17	**940**	0	4	220
BETA-BHC	46	1	2	4	4J	4 J	1	47	--	--	NA
CHLORDANE	14	0	0	--	--	--	11	120	0	0	1,600
DELTA-BHC	46	0	0	--	--	--	1	47	--	--	NA
DIELDRIN	46	0	0	--	--	--	1	**94**	0	1	30
ENDOSULFAN I	46	0	0	--	--	--	2	47	0	0	370,000
ENDOSULFAN II	47	0	0	--	--	--	2	94	0	0	370,000 (endosulfan)
ENDOSULFAN SULFATE	46	0	0	--	--	--	2	94	--	--	NA
ENDRIN	43	0	0	--	--	--	2	94	0	0	18,000
ENDRIN ALDEHYDE	22	0	0	--	--	--	2	24	--	--	NA
ENDRIN KETONE	32	0	0	--	--	--	3	94	--	--	NA
GAMMA-BHC (LINDANE)	46	0	0	--	--	--	1	47	--	--	NA
GAMMA-CHLORDANE	32	0	0	--	--	--	2	470	0	0	1,600 (chlordane)
HEPTACHLOR	42	0	0	--	--	--	1	47	0	0	110
HEPTACHLOR EPOXIDE	45	0	0	--	--	--	1	47	0	0	53
METHOXYCHLOR	46	0	0	--	--	--	5	470	0	0	310,000
TOXAPHENE	46	3	7	1,400	400	**2,500**	53	**940**	2	3	440
Metals (mg/kg)											
ALUMINUM	80	80	100	6,080	370	28,800	0.0	0.0	0	0	76,000
ANTIMONY	81	19	23	4.0	0.89J	7.4	0.52	25.0	0	0	31.0
ARSENIC	80	24	30	**4.7**	**0.84J**	**12.0**	**0.71**	**17.0**	24	56	0.39

TABLE 9-11: SITE 23 STATISTICAL SUMMARY OF SOIL ANALYSES (Continued)

All Soil Investigations

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

Analyte	Number of Samples Analyzed	Number of Detections	Percent of Detections	Average of Detected Concentration	Minimum Detected Concentration	Maximum Detected Concentration	Minimum Non-detected Concentration	Maximum Non-detected Concentration	Number of Detections Over PRG	Number of Non-detects Over PRG	Residential PRG
Metals (mg/kg)											
BARIUM	75	68	91	52.6	15.2	300	21.0	25.0	0	0	5,400
BERYLLIUM	81	15	19	0.26	0.10	0.50	0.20	25.0	0	0	150
CADMIUM	81	33	41	0.81	0.18	10.0	0.060	25.0	0	0	37.0
CALCIUM	80	79	99	4,380	710	28,800	10.0	10.0	--	--	NA
CHROMIUM	82	80	98	33.5	7.3	89.0	6.2	25.0	0	0	210
COBALT	80	51	64	5.0	2.8	15.0	3.7	6.6	0	0	900
COPPER	81	76	94	20.2	4.5	113	5.3	25.0	0	0	3,100
CYANIDE	3	0	0	--	--	--	0.50	0.60	--	--	NA
IRON	80	80	100	10,300	1,500	**37,000**	0.0	0.0	5	0	23,000
LEAD	85	38	45	18.1	1.3	120	3.5	25.0	0	0	150 (CAL-modified)
MAGNESIUM	80	78	98	2,880	26.6	10,000	620	640	--	--	NA
MANGANESE	80	79	99	137	13.0	759	6.2	6.2	0	0	1,800
MERCURY	7	0	0	--	--	--	0.16	**25.0**	0	1	23.0
MOLYBDENUM	80	0	0	--	--	--	0.31	8.5	0	0	390
NICKEL	81	79	98	29.5	4.7	91.0	6.2	6.4	0	0	1,600
POTASSIUM	80	71	89	1,010	390	3,700	425	620	--	--	NA
SELENIUM	80	1	1	26.0	26.0	26.0	0.55	14.0	0	0	390
SILVER	81	1	1	0.38	0.38	0.38	0.18	25.0	0	0	390
SODIUM	80	59	74	825	130	2,400	69.0	660	--	--	NA
THALLIUM	80	2	3	3.1	2.9	3.3	0.40	**17.0**	0	31	5.2
TITANIUM	74	74	100	422	229	2,540	0.0	0.0	--	--	NA
VANADIUM	80	79	99	21.8	12.0	82.0	6.2	6.2	0	0	550
ZINC	81	79	98	35.4	10.0	130	16.6	25.0	0	0	23,000

TABLE 9-11: SITE 23 STATISTICAL SUMMARY OF SOIL ANALYSES

All Soil Investigations

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

NOTES:

Bold denotes values elevated above the PRG

--	Not detected
BHC	Benzene Hexachloride
DDD	Dichlorodiphenyldichloroethane
DDE	Dichlorodiphenyldichloroethene
DDT	Dichlorodiphenyltrichloroethane
J	Estimated value
mg/kg	Milligrams per kilogram
NA	No PRG available
PCB	Polychlorinated biphenyl
PRG	Preliminary Remediation Goal, U.S. Environmental Protection Agency, Region 9 or CAL-modified
ug/kg	Micrograms per kilogram

TABLE 9-12: SITE 23 STATISTICAL SUMMARY OF GROUNDWATER ANALYSES

All Groundwater Investigations

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

Analyte	Number of Samples Analyzed	Number of Detections	Percent of Detections	Average of Detected Concentration	Minimum Detected Concentration	Maximum Detected Concentration	Minimum Non-detected Concentration	Maximum Non-detected Concentration	Number of Detections Over PRG	Number of Non-detects Over PRG	Tap Water PRG	MCL
Volatile Organic Compounds (µg/L)												
1,1,1,2-TETRACHLOROETHANE	18	0	0	--	--	--	**0.5**	**1,300**	0	18	0.4	NA
1,1,1-TRICHLOROETHANE	96	3	3	8	2	16	0.5	1,300	0	0	3,200	200
1,1,2,2-TETRACHLOROETHANE	96	0	0	--	--	--	**0.5**	**1,300**	0	96	0.06	1
1,1,2-TRICHLOROETHANE	96	0	0	--	--	--	**0.5**	**1,300**	0	96	0.2	5
1,1-DICHLOROETHANE	96	2	2	2	1	2	0.5	**1,300**	0	8	2 (CAL-modified)	5
1,1-DICHLOROETHENE	96	1	1	4	4J	4J	0.5	**1,300**	0	1	340	6
1,1-DICHLOROPROPENE	16	0	0	--	--	--	0.5	1,300	--	--	NA	NA
1,2,3-TRICHLOROBENZENE	16	1	6	1	1	1	0.5	1,300	--	--	NA	NA
1,2,3-TRICHLOROPROPANE	16	0	0	--	--	--	**0.5**	**1,300**	0	16	0.006	NA
1,2,4-TRICHLOROBENZENE	28	0	0	--	--	--	0.5	**1,300**	0	1	190	5
1,2,4-TRIMETHYLBENZENE	16	1	6	**860**	**860J**	**860J**	0.5	**100**	1	1	12	NA
1,2-DIBROMO-3-CHLOROPROPANE	28	0	0	--	--	--	**0.5**	**1,300**	0	28	0.002 (CAL-modified)	0.2
1,2-DICHLOROBENZENE	39	1	3	0.1	0.1J	0.1J	0.5	**1,300**	0	1	370	600
1,2-DICHLOROETHANE	96	0	0	--	--	--	**0.5**	**1,300**	0	96	0.1	0.5
1,2-DICHLOROETHENE (TOTAL)	66	2	3	1	1	1	1	**200**	0	1	61 (cis)	NA
1,2-DICHLOROPROPANE	94	0	0	--	--	--	**0.5**	**1,300**	0	94	0.2	5
1,3,5-TRIMETHYLBENZENE	16	0	0	--	--	--	0.5	**1,300**	0	2	12	NA
1,3-DICHLOROBENZENE	39	0	0	--	--	--	0.5	**1,300**	0	2	6	NA
1,3-DICHLOROPROPANE	16	0	0	--	--	--	0.5	1,300	--	--	NA	NA
1,4-DICHLOROBENZENE	39	0	0	--	--	--	0.5	**1,300**	0	25	0.5	5
2,2-DICHLOROPROPANE	16	0	0	--	--	--	0.5	1,300	--	--	NA	NA
2-BUTANONE	40	1	3	4,200	4,200J	4,200J	2	15	--	--	NA	NA
2-CHLOROTOLUENE	16	0	0	--	--	--	0.5	1,300	--	--	NA	NA
2-HEXANONE	85	1	1	2	2J	2J	2	200	--	--	NA	NA
4-CHLOROTOLUENE	16	0	0	--	--	--	0.5	1,300	--	--	NA	NA
4-METHYL-2-PENTANONE	94	1	1	2	2J	2J	2	13,000	--	--	NA	NA
ACETONE	40	5	13	1	0.4J	2J	0.5	33	0	0	610	NA
BENZENE	96	8	8	**15**	0.2J	**67**	**0.5**	**1,300**	7	88	0.3	1
BROMOBENZENE	16	0	0	--	--	--	0.5	**1,300**	0	2	20	NA
BROMOCHLOROMETHANE	28	0	0	--	--	--	0.5	1,300	--	--	NA	NA
BROMODICHLOROMETHANE	94	0	0	--	--	--	**0.5**	**1,300**	0	94	0.2	80

TABLE 9-12: SITE 23 STATISTICAL SUMMARY OF GROUNDWATER ANALYSES

All Groundwater Investigations

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

Analyte	Number of Samples Analyzed	Number of Detections	Percent of Detections	Average of Detected Concentration	Minimum Detected Concentration	Maximum Detected Concentration	Minimum Non-detected Concentration	Maximum Non-detected Concentration	Number of Detections Over PRG	Number of Non-detects Over PRG	Tap Water PRG	MCL
Volatile Organic Compounds (µg/L)												
BROMOFORM	94	1	1	0.2	0.2J	0.2J	1	**1,300**	0	3	9	80
BROMOMETHANE	94	0	0	--	--	--	0.6	**1,300**	0	8	9	NA
CARBON DISULFIDE	94	2	2	85	0.3J	170J	0.5	**1,300**	0	1	1,000	NA
CARBON TETRACHLORIDE	94	0	0	--	--	--	**0.5**	**1,300**	0	94	0.2	0.5
CHLOROBENZENE	96	0	0	--	--	--	0.5	**1,300**	0	2	110	70
CHLOROETHANE	96	0	0	--	--	--	1	**1,300**	0	8	5	NA
CHLOROFORM	94	1	1	**3**	**3**	**3**	0.2	**1,300**	1	79	0.5 (CAL-modified)	80
CHLOROMETHANE	96	0	0	--	--	--	1	**1,300**	0	68	2	NA
CIS-1,2-DICHLOROETHENE	30	1	3	1	1	1	0.5	**1,300**	0	2	61	6
CIS-1,3-DICHLOROPROPENE	80	0	0	--	--	--	**0.5**	**1,300**	0	80	0.4 (not cis)	0.5
DIBROMOCHLOROMETHANE	94	0	0	--	--	--	**0.5**	**1,300**	0	94	0.1	80
DIBROMOMETHANE	16	0	0	--	--	--	0.5	1,300	--	--	NA	NA
DICHLORODIFLUOROMETHANE	16	0	0	--	--	--	1	**1,300**	0	1	390	NA
DIISOPROPYL ETHER	14	0	0	--	--	--	0.5	0.5	--	--	NA	NA
ETHYL TERT-BUTYL ETHER	14	0	0	--	--	--	0.5	0.5	--	--	NA	NA
ETHYLBENZENE	96	8	8	**19**	2	**79**	0.5	**1,300**	7	7	3	300
ETHYLENE DIBROMIDE	33	0	0	--	--	--	0.5	1,300	--	--	NA	0.05
HEXACHLOROBUTADIENE	16	0	0	--	--	--	0.5	**1,300**	0	2	0.9	NA
ISOPROPYLBENZENE	16	1	6	1,000	1,000J	1,000J	0.5	100	--	--	NA	NA
M,P-XYLENE	16	1	6	1	1	1	0.5	1	0	0	210 (xylenes)	NA
METHYL-T-BUTYL ETHER	27	0	0	--	--	--	0.2	**2,500**	0	3	6 (CAL-modified)	13
METHYLENE CHLORIDE	96	0	0	--	--	--	0.2	**1,300**	0	20	4	NA
N-BUTYLBENZENE	16	0	0	--	--	--	0.3	1,300	--	--	NA	NA
N-PROPYLBENZENE	16	0	0	--	--	--	0.5	**1,300**	0	1	240	NA
NAPHTHALENE	18	2	11	**560**	**21**	**1,100J**	1	**100**	2	1	6	NA
O-XYLENE	16	0	0	--	--	--	0.5	1	0	0	210 (xylenes)	NA
P-ISOPROPYLTOLUENE	16	0	0	--	--	--	0.5	1,300	--	--	NA	NA
SEC-BUTYLBENZENE	16	2	13	**500**	0.2J	**1,000J**	0.5	100	1	0	240	NA
STYRENE	94	0	0	--	--	--	0.5	1,300	0	0	1,600	100
TERT-AMYL METHYL ETHER	14	0	0	--	--	--	0.5	0.5	--	--	NA	NA
TERT-BUTANOL	14	0	0	--	--	--	10	20	--	--	NA	NA

TABLE 9-12: SITE 23 STATISTICAL SUMMARY OF GROUNDWATER ANALYSES

All Groundwater Investigations

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

Analyte	Number of Samples Analyzed	Number of Detections	Percent of Detections	Average of Detected Concentration	Minimum Detected Concentration	Maximum Detected Concentration	Minimum Non-detected Concentration	Maximum Non-detected Concentration	Number of Detections Over PRG	Number of Non-detects Over PRG	Tap Water PRG	MCL
Volatile Organic Compounds (µg/L)												
TERT-BUTYLBENZENE	16	0	0	--	--	--	0.5	**1,300**	0	1	240	NA
TETRACHLOROETHENE	96	0	0	--	--	--	0.5	**1,300**	0	82	0.7	5
TOLUENE	96	7	7	5	0.9J	11	0.5	**1,300**	0	1	720	150
TRANS-1,2-DICHLOROETHENE	30	0	0	--	--	--	0.5	**1,300**	0	1	120	10
TRANS-1,3-DICHLOROPROPENE	80	0	0	--	--	--	**0.5**	**1,300**	0	80	0.4 (not trans)	0.5
TRICHLOROETHENE	96	1	1	**2**	**2**	**2**	0.5	**1,300**	1	95	0.03	5
TRICHLOROFLUOROMETHANE	16	0	0	--	--	--	1	1,300	--	--	NA	NA
VINYL ACETATE	5	0	0	--	--	--	5	5	0	0	410	NA
VINYL CHLORIDE	96	1	1	**8**	**8**	**8**	0.5	**1,300**	1	95	0.02 (child or adult)	0.5
XYLENE (TOTAL)	80	9	11	130	7	**660J**	1	200	1	0	210	1,800
Semivolatile Organic Compounds (µg/L)												
1,2,4-TRICHLOROBENZENE	66	0	0	--	--	--	10	100	0	0	190	5
1,2-DICHLOROBENZENE	66	0	0	--	--	--	5	100	0	0	370	600
1,3-DICHLOROBENZENE	66	0	0	--	--	--	5	**100**	0	12	6	NA
1,4-DICHLOROBENZENE	66	0	0	--	--	--	**5**	**100**	0	66	0.5	5
2,2'-OXYBIS(1-CHLOROPROPANE)	61	0	0	--	--	--	10	30	--	--	NA	NA
2,4,5-TRICHLOROPHENOL	66	0	0	--	--	--	25	500	0	0	3,600	50
2,4,6-TRICHLOROPHENOL	66	0	0	--	--	--	**10**	**100**	0	66	1 (CAL-modified)	NA
2,4-DICHLOROPHENOL	66	1	2	0.5	0.5J	0.5J	10	100	0	0	110	NA
2,4-DIMETHYLPHENOL	66	1	2	9	9J	9J	10	100	0	0	730	NA
2,4-DINITROPHENOL	58	0	0	--	--	--	25	**500**	0	2	73	NA
2,4-DINITROTOLUENE	66	0	0	--	--	--	10	**100**	0	1	73	NA
2,6-DINITROTOLUENE	66	1	2	6	6J	6J	10	**100**	0	1	36	NA
2-CHLORONAPHTHALENE	66	0	0	--	--	--	10	100	--	--	NA	NA
2-CHLOROPHENOL	66	0	0	--	--	--	10	**100**	0	1	30	NA
2-METHYLNAPHTHALENE	66	9	14	69	0.8J	390	10	20	--	--	NA	NA
2-METHYLPHENOL	66	0	0	--	--	--	10	100	0	0	1,800	NA
2-NITROANILINE	66	0	0	--	--	--	**25**	**500**	0	66	1	NA
2-NITROPHENOL	66	0	0	--	--	--	10	100	--	--	NA	NA
3,3'-DICHLOROBENZIDINE	66	0	0	--	--	--	**10**	**200**	0	66	0.2	NA

TABLE 9-12: SITE 23 STATISTICAL SUMMARY OF GROUNDWATER ANALYSES

All Groundwater Investigations

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

Analyte	Number of Samples Analyzed	Number of Detections	Percent of Detections	Average of Detected Concentration	Minimum Detected Concentration	Maximum Detected Concentration	Minimum Non-detected Concentration	Maximum Non-detected Concentration	Number of Detections Over PRG	Number of Non-detects Over PRG	Tap Water PRG	MCL
Semivolatile Organic Compounds (µg/L)												
3-NITROANILINE	66	0	0	--	--	--	25	500	--	--	NA	NA
4,6-DINITRO-2-METHYLPHENOL	66	1	2	25	25J	25J	25	500	--	--	NA	NA
4-BROMOPHENYL-PHENYLETHER	66	0	0	--	--	--	10	100	--	--	NA	NA
4-CHLORO-3-METHYLPHENOL	66	0	0	--	--	--	10	100	--	--	NA	NA
4-CHLOROANILINE	66	0	0	--	--	--	10	100	0	0	150	NA
4-CHLOROPHENYL-PHENYLETHER	66	0	0	--	--	--	10	100	--	--	NA	NA
4-METHYLPHENOL	66	1	2	3	3J	3J	10	100	0	0	180	NA
4-NITROANILINE	66	0	0	--	--	--	25	500	--	--	NA	NA
4-NITROPHENOL	66	0	0	--	--	--	25	500	--	--	NA	NA
ACENAPHTHENE	66	2	3	0.9	0.8J	1J	10	100	0	0	370	NA
ACENAPHTHYLENE	66	0	0	--	--	--	10	100	--	--	NA	NA
ANTHRACENE	66	0	0	--	--	--	10	100	0	0	1,800	NA
BENZO(A)ANTHRACENE	66	0	0	--	--	--	**10**	**100**	0	66	0.09	0.1
BENZO(A)PYRENE	66	1	2	**0.6**	**0.6J**	**0.6J**	**0.2**	**100**	1	65	0.009	0.2
BENZO(B)FLUORANTHENE	66	1	2	**0.8**	**0.8J**	**0.8J**	**10**	**100**	1	65	0.09	NA
BENZO(G,H,I)PERYLENE	66	0	0	--	--	--	10	100	--	--	NA	NA
BENZO(K)FLUORANTHENE	66	0	0	--	--	--	**10**	**100**	0	66	0.06 (CAL-modified)	NA
BENZOIC ACID	5	0	0	--	--	--	50	500	0	0	150,000	NA
BENZYL ALCOHOL	5	0	0	--	--	--	10	100	0	0	11,000	NA
BIS(2-CHLOROETHOXY)METHANE	66	0	0	--	--	--	10	100	--	--	NA	NA
BIS(2-CHLOROETHYL)ETHER	66	0	0	--	--	--	**10**	**100**	0	66	0.01	NA
BIS(2-ETHYLHEXYL)PHTHALATE	66	1	2	**22**	**22**	**22**	4	**100**	1	17	5	NA
BUTYLBENZYLPHTHALATE	66	1	2	1	1J	1J	10	100	0	0	7,300	NA
CARBAZOLE	61	0	0	--	--	--	**10**	**30**	0	61	3	NA
CHRYSENE	66	1	2	**0.9**	**0.9J**	**0.9J**	**10**	**100**	1	65	0.6 (CAL-modified)	NA
DI-N-BUTYLPHTHALATE	66	0	0	--	--	--	10	100	--	--	NA	NA
DI-N-OCTYLPHTHALATE	66	1	2	17	17	17	10	100	--	--	NA	NA
DIBENZO(A,H)ANTHRACENE	66	0	0	--	--	--	**10**	**100**	0	66	0.009	NA
DIBENZOFURAN	66	0	0	--	--	--	10	**100**	0	2	24	NA
DIETHYLPHTHALATE	66	1	2	19	19	19	10	100	0	0	29,000	NA
DIMETHYLPHTHALATE	66	0	0	--	--	--	10	100	0	0	360,000	NA

TABLE 9-12: SITE 23 STATISTICAL SUMMARY OF GROUNDWATER ANALYSES

All Groundwater Investigations

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

Analyte	Number of Samples Analyzed	Number of Detections	Percent of Detections	Average of Detected Concentration	Minimum Detected Concentration	Maximum Detected Concentration	Minimum Non-detected Concentration	Maximum Non-detected Concentration	Number of Detections Over PRG	Number of Non-detects Over PRG	Tap Water PRG	MCL
Semivolatile Organic Compounds (µg/L)												
FLUORANTHENE	66	2	3	1	1J	1J	10	100	0	0	1,500	NA
FLUORENE	66	4	6	4	3J	5J	10	100	0	0	240	NA
HEXACHLOROBENZENE	66	0	0	--	--	--	**10**	**100**	0	66	0.04	1
HEXACHLOROBUTADIENE	66	0	0	--	--	--	**10**	**100**	0	66	0.9	NA
HEXACHLOROCYCLOPENTADIENE	66	0	0	--	--	--	10	100	0	0	220	NA
HEXACHLOROETHANE	66	0	0	--	--	--	**10**	**100**	0	66	5	NA
INDENO(1,2,3-CD)PYRENE	66	0	0	--	--	--	**10**	**100**	0	66	0.09	NA
ISOPHORONE	66	3	5	4	2J	7J	10	**100**	0	1	71	NA
N-NITROSO-DI-N-PROPYLAMINE	66	0	0	--	--	--	**10**	**100**	0	66	0.01	NA
N-NITROSODIPHENYLAMINE	66	0	0	--	--	--	10	**100**	0	4	14	NA
NAPHTHALENE	66	7	11	**91**	4J	**280J**	**10**	**20**	6	59	6	NA
NITROBENZENE	66	0	0	--	--	--	**10**	**100**	0	66	3	NA
PENTACHLOROPHENOL	66	0	0	--	--	--	**25**	**500**	0	66	0.6	1
PHENANTHRENE	66	5	8	2	0.6J	5J	10	100	--	--	NA	NA
PHENOL	66	3	5	2	0.5J	5J	10	100	0	0	22,000	NA
PYRENE	66	3	5	0.8	0.5J	1J	10	100	0	0	180	NA
Polynuclear Aromatic Hydrocarbons (µg/L)												
ACENAPHTHENE	9	0	0	--	--	--	5	5	0	0	370	NA
ACENAPHTHYLENE	9	0	0	--	--	--	2	2	--	--	NA	NA
ANTHRACENE	9	0	0	--	--	--	0.2	0.2	0	0	1,800	NA
BENZO(A)ANTHRACENE	9	1	11	**0.1**	**0.1J**	**0.1J**	**0.2**	**0.2**	1	8	0.09	0.1
BENZO(A)PYRENE	9	0	0	--	--	--	**0.2**	**0.2**	0	9	0.009	0.2
BENZO(B)FLUORANTHENE	9	0	0	--	--	--	**0.2**	**0.2**	0	9	0.09	NA
BENZO(G,H,I)PERYLENE	9	0	0	--	--	--	0.2	0.2	--	--	NA	NA
BENZO(K)FLUORANTHENE	9	0	0	--	--	--	**0.2**	**0.2**	0	9	0.06 (CAL-modified)	NA
CHRYSENE	9	0	0	--	--	--	0.2	0.2	0	0	0.6 (CAL-modified)	NA
DIBENZO(A,H)ANTHRACENE	9	0	0	--	--	--	**0.5**	**0.5**	0	9	0.009	NA
FLUORANTHENE	9	0	0	--	--	--	0.2	0.2	0	0	1,500	NA
FLUORENE	9	0	0	--	--	--	1	1	0	0	240	NA
INDENO(1,2,3-CD)PYRENE	9	0	0	--	--	--	**0.2**	**0.2**	0	9	0.09	NA

TABLE 9-12: SITE 23 STATISTICAL SUMMARY OF GROUNDWATER ANALYSES

All Groundwater Investigations

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

Analyte	Number of Samples Analyzed	Number of Detections	Percent of Detections	Average of Detected Concentration	Minimum Detected Concentration	Maximum Detected Concentration	Minimum Non-detected Concentration	Maximum Non-detected Concentration	Number of Detections Over PRG	Number of Non-detects Over PRG	Tap Water PRG	MCL
Polynuclear Aromatic Hydrocarbons (µg/L)												
NAPHTHALENE	9	0	0	--	--	--	5	5	0	0	6	NA
PHENANTHRENE	9	0	0	--	--	--	1	1	--	--	NA	NA
PYRENE	9	1	11	0.2	0.2	0.2	0.2	0.2	0	0	180	NA
PCBs/Pesticides (µg/L)												
4,4'-DDD	6	0	0	--	--	--	0.02	0.1	0	0	0.3	NA
4,4'-DDE	6	0	0	--	--	--	0.02	0.1	0	0	0.2	NA
4,4'-DDT	6	0	0	--	--	--	0.02	0.1	0	0	0.2	NA
ALDRIN	6	0	0	--	--	--	**0.02**	**0.05**	0	6	0.004	NA
ALPHA-BHC	6	0	0	--	--	--	0.02	0.05	--	--	NA	NA
ALPHA-CHLORDANE	5	0	0	--	--	--	0.05	0.05	0	0	0.2 (chlordane)	NA
AROCLOR-1016	6	0	0	--	--	--	0.3	0.5	0	0	1	NA
AROCLOR-1221	6	0	0	--	--	--	**0.3**	**0.5**	0	6	0.03	NA
AROCLOR-1232	6	0	0	--	--	--	**0.3**	**0.5**	0	6	0.03	NA
AROCLOR-1242	6	0	0	--	--	--	**0.3**	**0.5**	0	6	0.03	NA
AROCLOR-1248	6	0	0	--	--	--	**0.3**	**0.5**	0	6	0.03	NA
AROCLOR-1254	6	0	0	--	--	--	**0.5**	**0.5**	0	6	0.03	NA
AROCLOR-1260	6	0	0	--	--	--	**0.5**	**0.5**	0	6	0.03	NA
BETA-BHC	6	0	0	--	--	--	0.02	0.05	--	--	NA	NA
CHLORDANE	1	0	0	--	--	--	**0.3**	**0.3**	0	1	0.2	NA
DELTA-BHC	6	0	0	--	--	--	0.02	0.05	--	--	NA	NA
DIELDRIN	6	0	0	--	--	--	**0.02**	**0.1**	0	6	0.004	NA
ENDOSULFAN I	6	0	0	--	--	--	0.02	0.05	0	0	220	NA
ENDOSULFAN II	6	0	0	--	--	--	0.02	0.1	--	--	NA	NA
ENDOSULFAN SULFATE	6	0	0	--	--	--	0.02	0.1	--	--	NA	NA
ENDRIN	6	0	0	--	--	--	0.02	0.1	0	0	11	2
ENDRIN ALDEHYDE	6	0	0	--	--	--	0.02	0.1	--	--	NA	NA
ENDRIN KETONE	5	0	0	--	--	--	0.1	0.1	--	--	NA	NA
GAMMA-BHC (LINDANE)	6	0	0	--	--	--	0.02	0.05	--	--	NA	NA
GAMMA-CHLORDANE	5	0	0	--	--	--	0.05	0.05	0	0	0.2 (chlordane)	NA
HEPTACHLOR	6	0	0	--	--	--	**0.02**	**0.05**	0	6	0.02	0.01

TABLE 9-12: SITE 23 STATISTICAL SUMMARY OF GROUNDWATER ANALYSES

All Groundwater Investigations

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

Analyte	Number of Samples Analyzed	Number of Detections	Percent of Detections	Average of Detected Concentration	Minimum Detected Concentration	Maximum Detected Concentration	Minimum Non-detected Concentration	Maximum Non-detected Concentration	Number of Detections Over PRG	Number of Non-detects Over PRG	Tap Water PRG	MCL
PCBs/Pesticides (µg/L)												
HEPTACHLOR EPOXIDE	6	0	0	--	--	--	**0.01**	**0.02**	0	6	0.007	0.01
METHOXYCHLOR	6	0	0	--	--	--	0.05	0.5	0	0	180	30
TOXAPHENE	6	0	0	--	--	--	**1**	**3**	0	6	0.06	3
Metals (µg/L)												
Filtered												
ALUMINUM	69	16	23	42,200	25.2J	**223,000**	4.9	236	6	0	36,000	NA
ANTIMONY	69	5	7	4.1	0.10J	14.3J	0.063	**60.0**	0	10	15.0	6.0
ARSENIC	69	28	41	**15.3**	**2.1J**	**110**	0.80	**100**	28	41	0.045	10.0
BARIUM	69	58	84	175	13.7J	2,400	4.3	62.9	0	0	2,600	1,000
BERYLLIUM	69	13	19	5.3	1.0J	39.5	0.10	5.0	0	0	73.0	4.0
CADMIUM	69	12	17	4.0	0.066J	**20.2**	0.15	8.0	1	0	18.0	5.0
CALCIUM	69	69	100	149,000	6,800	1,110,000	0.0	0.0	--	--	NA	NA
CHROMIUM	69	22	32	104	0.16J	650	0.20	32.0	--	--	NA	50.0
COBALT	69	20	29	199	0.033J	**3,560**	0.30	50.0	1	0	730	NA
COPPER	69	19	28	57.1	0.31J	250	0.35	90.7	0	0	1,500	1,300
IRON	69	28	41	45,400	54.0J	**296,000**	3.2	154	10	0	11,000	NA
LEAD	69	9	13	72.4	0.029J	360	0.029	200	--	--	NA	15.0
MAGNESIUM	69	69	100	151,000	2,740J	1,370,000	0.0	0.0	--	--	NA	NA
MANGANESE	69	63	91	2,920	5.6J	**93,900**	0.90	10.0	13	0	880	NA
MERCURY	64	3	5	0.72	0.12J	1.7	0.10	0.20	0	0	11.0	2.0
MOLYBDENUM	69	10	14	2.3	0.62J	4.4J	0.64	50.0	0	0	180	NA
NICKEL	69	21	30	666	0.42J	**11,400**	1.5	84.7	2	0	730	100
POTASSIUM	69	69	100	19,100	3,140J	111,000	0.0	0.0	--	--	NA	NA
SELENIUM	66	9	14	29.0	0.49J	120	0.80	100	0	0	180	50.0
SILVER	66	2	3	9.0	0.019J	18.0	0.15	10.0	0	0	180	NA
SODIUM	69	69	100	876,000	12,700	5,310,000	0.0	0.0	--	--	NA	NA
THALLIUM	69	4	6	**31.3**	**3.7J**	**52.7**	0.18	**76.0**	4	37	2.4	2.0
TITANIUM	5	5	100	5,180	2,400	12,000	0.0	0.0	--	--	NA	NA
VANADIUM	69	19	28	103	0.93J	**510**	0.21	34.4	4	0	260	NA
ZINC	69	24	35	503	1.7J	7,340	2.7	29.1	0	0	11,000	NA

TABLE 9-12: SITE 23 STATISTICAL SUMMARY OF GROUNDWATER ANALYSES

All Groundwater Investigations

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

NOTES:

Bold denotes values elevated above the PRG

--	Not detected
BHC	Benzene Hexachloride
DDD	Dichlorodiphenyldichloroethane
DDE	Dichlorodiphenyldichloroethene
DDT	Dichlorodiphenyltrichloroethane
J	Estimated value
MCL	Maximum Contaminant Level
NA	No criteria available
PCB	Polychlorinated biphenyl
PRG	Preliminary Remediation Goal, U.S. Environmental Protection Agency, Region 9 or CAL-modified
ug/L	Micrograms per liter

TABLE 9-13: SITE 23 SUMMARY OF HUMAN HEALTH RISKS; REASONABLE MAXIMUM EXPOSURE

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

	CANCER RISK					NONCANCER HAZARD				
EXPOSURE PATHWAY	Current/ Future Industrial Worker (0-2 ft)	Future Construction Worker (0-2 ft)	Future Resident (Adult + Child) (0-2 ft)	Future Construction Worker (0-8 ft)	Future Resident (Adult + Child) (0-8 ft)	Current/ Future Industrial Worker (0-2 ft)	Future Construction Worker (0-2 ft)	Future Resident (Child) (0-2 ft)	Future Construction Worker (0-8 ft)	Future Resident (Child) (0-8 ft)
Soil Exposure Pathways										
Soil Ingestion	3E-06	4E-07	1E-05	3E-07	1E-05	0.01	0.05	0.2	0.05	0.2
Dermal Contact with Soil	9E-07	6E-08	2E-06	4E-08	2E-06	0.003	0.004	0.02	0.004	0.02
Inhalation of Particulates and Volatiles Released from Soil to Outdoor Air	3E-09	1E-10	7E-09	1E-10	7E-09	--	--	--	0.001	0.0000002
Ingestion of Homegrown Produce	--	--	2E-05	--	2E-05	--	--	0.07	--	0.07
Soil Total	**4E-06**	**4E-07**	**3E-05**	**4E-07**	**3E-05**	**0.02**	**0.05**	**0.3**	**0.05**	**0.3**
Groundwater Exposure Pathways										
Groundwater Ingestion	--	--	3E-04	--	3E-04	--	--	7	--	7
Dermal Contact with Groundwater	--	--	3E-04	--	3E-04	--	--	1	--	1
Inhalation of Volatiles Released from Household Use of Groundwater	--	--	2E-07	--	2E-07	--	--	6	--	6
Groundwater Total	--	--	**6E-04**	--	**6E-04**	--	--	**15**	--	**15**
Multipathway Total	**4E-06**	**4E-07**	**7E-04**	**4E-07**	**7E-04**	**0.02**	**0.05**	**15**	**0.05**	**15**

Notes:

-- Not applicable; exposure pathway is not complete for this receptor.

(0-2 ft) Interval of soil below ground surface evaluated in this exposure scenario

(0-8 ft) Interval of soil below ground surface evaluated in this exposure scenario

TABLE 9-14: SITE 23 SUMMARY OF HUMAN HEALTH RISKS; CENTRAL TENDENCY EXPOSURE

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

	CANCER RISK					NONCANCER HAZARD				
EXPOSURE PATHWAY	Current/ Future Industrial Worker (0-2 ft)	Future Construction Worker (0-2 ft)	Future Resident (Adult + Child) (0-2 ft)	Future Construction Worker (0-8 ft)	Future Resident (Adult + Child) (0-8 ft)	Current/ Future Industrial Worker (0-2 ft)	Future Construction Worker (0-2 ft)	Future Resident (Child) (0-2 ft)	Future Construction Worker (0-8 ft)	Future Resident (Child) (0-8 ft)
Soil Exposure Pathways										
Soil Ingestion	1E-07	2E-08	3E-06	2E-08	4E-06	0.005	0.002	0.07	0.003	0.08
Dermal Contact with Soil	8E-09	2E-09	2E-07	2E-09	2E-07	0.0002	0.0002	0.002	0.0003	0.003
Inhalation of Particulates and Volatiles Released from Soil to Outdoor Air	5E-11	2E-11	1E-10	3E-11	2E-10	--	--	--	0.00	0.00
Ingestion of Homegrown Produce	--	--	1E-06	--	1E-06	--	--	0.01	--	0.01
Soil Total	**2E-07**	**2E-08**	**5E-06**	**2E-08**	**5E-06**	**0.005**	**0.003**	**0.08**	**0.003**	**0.1**
Groundwater Exposure Pathways										
Groundwater Ingestion	--	--	1E-04	--	1E-04	--	--	3	--	3
Dermal Contact with Groundwater	--	--	7E-05	--	7E-05	--	--	0.1	--	0.1
Inhalation of Volatiles Released from Household Use of Groundwater	--	--	2E-09	--	2E-09	--	--	0.02	--	0.02
Groundwater Total	--	--	**2E-04**	--	**2E-04**	--	--	**3**	--	**3**
Multipathway Total	**2E-07**	**2E-08**	**2E-04**	**2E-08**	**2E-04**	**0.005**	**0.003**	**3**	**0.003**	**3**

Notes

-- Not applicable; exposure pathway is not complete for this receptor.

(0-2 ft) Interval of soil below ground surface evaluated in this exposure scenario

(0-8 ft) Interval of soil below ground surface evaluated in this exposure scenario

TABLE 9-15: SITE 23 ECOLOGICAL RISK ASSESSMENT SOIL HAZARD QUOTIENTS

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23 Alameda Point, Alameda, California

CHEMICAL OF POTENTIAL ECOLOGICAL CONCERN	MEASUREMENT ENDPOINTS							
	Reproductive or physiological impacts to the California ground squirrel		Reproductive or physiological impacts to the Alameda song sparrow		Reproductive or physiological impacts to the American robin		Reproductive or physiological impacts to the Red-tailed hawk	
	HAZARD QUOTIENT							
	High TRV	Low TRV	High TRV	Low TRV	High TRV	Low TRV	High TRV	Low TRV
Antimony	4.53E-02[a]	2.35E-01[a]	1.23E-04[b]	4.91E-04[b]	3.90E-04[b]	1.56E-03[b]	1.81E-03[b]	7.24E-03[b]
Barium	8.44E-02[a]	2.67E-01[a]	2.41E-02[b]	4.84E-02[b]	7.65E-02[b]	1.53E-01[b]	3.62E-01[b]	7.28E-01[b]
Cadmium	3.54E-01[b]	1.52E+01[b]	9.76E-03[a]	8.53E-02[a]	3.05E-02[a]	2.66E-01[a]	1.74E-01[a]	1.52E+00[a]
Lead	1.17E-02[a]	2.92E-01[b]	1.06E-03[b]	7.70E+00[b]	3.52E-03[b]	2.58E+01[b]	8.51E-03[b]	6.23E+01[b]
Lead alternate low TRVc	NA	NA	NA	2.13E-02[b]	NA	7.10E-02[b]	NA	1.71E-01[b]
Total PCB	2.16E-02[b]	1.02E-01[a]	6.39E-05[b]	2.25E-03[b]	2.00E-04[b]	7.01E-03[b]	4.24E-03[b]	5.85E-01[b]
DDTt	2.74E-05[b]	5.49E-04[b]	1.63E-05[b]	6.04E-04[b]	5.09E-05[b]	1.88E-03[b]	3.59E-03[b]	1.58E-01[b]
HMW PAHs	2.48E-03[a]	6.22E-02[a]	QE	QE	QE	QE	QE	QE
LMW PAHs	1.96E-05[b]	5.75E-05[b]	QE	QE	QE	QE	QE	QE
n-Nitroso-diphenylamine	QE	QE	QE	QE	QE	QE	QE	QE
Toluene	4.11E-03[b]	4.11E-02[b]	QE	QE	QE	QE	QE	QE

Notes:

a	TRV based on an physiological effect
b	TRV based on an reproductive effect
c	The Navy established avian low TRV of 0.014 mg/kg-day is considered highly conservative. For comparison purposes an alternate, less conservative, low TRV of 3.85 mg/kg-day as referenced in Sample and Others (1996) also was used.
DDTt	Summed concentration of 4,4'-dichlorodiphenyldichloroethane, 4,4'-dichlorodiphenyldichloroethene, and 4,4,-dichlorodiphenyltrichloroethane
HMW	High molecular weight
LMW	Low molecular weight
mg/kg-day	Milligram per kilogram per day
NA	Not applicable

TABLE 9-15: SITE 23 ECOLOGICAL RISK ASSESSMENT SOIL HAZARD QUOTIENTS

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23 Alameda Point, Alameda, California

Notes (Continued):

PAH	Polynuclear aromatic hydrocarbon
PCB	Polychlorinated biphenyl
QE	No TRV developed for Ecological COPC and endpoint-qualitative evaluation only
TRV	Toxicity reference value

Reference: Sample, B.E., D.M. Opresko, and G.W. Suter, II. 1996. "Toxicological Benchmarks for Wildlife: 1996 Revision." ES/ER/TM-86/R3. Oak Ridge National Laboratory. Oak Ridge, Tennessee.

TABLE 9-16: ECOLOGICAL RISK ASSESSMENT HAZARD QUOTIENTS FOR SOIL BACKGROUND

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23 Alameda Point, Alameda, California

CHEMICAL OF POTENTIAL ECOLOGICAL CONCERN	MEASUREMENT ENDPOINTS							
	Reproductive or physiological impacts to the California ground squirrel		Reproductive or physiological impacts to the Alameda song sparrow		Reproductive or physiological impacts to the American robin		Reproductive or physiological impacts to the Red-tailed hawk	
	HAZARD QUOTIENT							
	High TRV	Low TRV	High TRV	Low TRV	High TRV	Low TRV	High TRV	Low TRV
Antimony	0.042	0.218	0.000114	0.000455	0.000361	0.00144	0.00168	0.0067
Arsenic	5.06E-02	2.62E-01	1.44E-04	5.76E-04	4.65E-04	1.86E-03	1.92E-03	7.70E-03
Barium	0.0687	0.217	0.0196	0.0393	0.0622	0.125	0.294	0.592
Beryllium	0.00132	0.0132	NV	NV	NV	NV	NV	NV
Cadmium	0.0553	2.37	0.000554	0.00484	0.00179	0.0156	0.0596	0.522
Chromium	0.0171	0.0684	0.00135	0.00672	0.00462	0.023	0.00722	0.036
Copper	0.00531	1.05	0.000434	0.00577	0.00141	0.0188	0.00286	0.0379
Lead	0.0041	0.103	0.000372	2.71	0.00124	9.07	0.00299	21.9
Lead, alternate TRV	NA	NA	NA	0.0075	NA	0.025	NA	0.0603
Mercury	ND	ND	ND	ND	ND	ND	ND	ND
Selenium	0.842	20.4	0.00429	0.0174	0.0137	0.0554	0.0684	0.277
Zinc	0.00523	1.37	0.000404	0.00404	0.00127	0.0127	0.00723	0.0723

Notes:

NA	Not applicable
ND	Not detected in background samples
NV	Reference value not available, HQ could not be calculated
TRV	Toxicity reference value

TABLE 9-17: RESULTS OF CHEMICAL OF POTENTIAL ECOLOGICAL CONCERN SCREENING FOR SOIL AT SITE 23

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

CHEMICAL OF POTENTIAL ECOLOGICAL CONCERN	SCREENING EVALUATION	
	Rejected	Retained
Metals		
Aluminum	CSB	--
Antimony	--	X
Arsenic	CSB	--
Barium	--	X
Beryllium	CSB	--
Cadmium	--	X
Chromium	CSB	--
Cobalt	CSB	--
Copper	CSB	--
Iron	EN	--
Lead	--	X
Manganese	CSB	--
Mercury	--	--
Molybdenum	--	--
Nickel	CSB	--
Selenium	--	--
Silver	FOD	--
Thallium	CSB	--
Titanium	CSB	--
Vanadium	CSB	--
Zinc	CSB	--
Pesticides and Polychlorinated Biphenyls		
alpha-Chlordane	--	--
Aroclor-1260	--	X
4,4'-Dichlorodiphenyldichloroethane	--	--
4,4'-Dichlorodiphenyldichloroethylene	--	--
4,4'-Dichlorodiphenyltrichloroethane	--	X
gamma-Chlordane	--	--
Heptachlor epoxide	--	--
Semivolatile Organic Compounds		
1,2,4-Trichlorobenzene	--	--
2,4-Dimethylphenol	FOD-NB	--
2-Chlorophenol	--	--
2-Methylnaphthalene		X
2-Methylphenol	FOD-NB	--
4-Chloro-3-Methylphenol	--	--
4-Methylphenol	FOD-NB	--
Acenaphthene	--	X
Acenaphthylene	--	X
Anthracene	--	X
Benzo(a)anthracene	--	X
Benzo(a)pyrene	--	X
Benzo(b)fluoranthene	--	X
Benzo(g,h,i)perylene	--	X
Benzo(k)fluoranthene	--	X
Bis(2-ethylhexyl)phthalate	--	--
Carbazole	--	--
Chrysene	--	X
Dibenzo(a,h)anthracene	--	X

TABLE 9-17: RESULTS OF CHEMICAL OF POTENTIAL ECOLOGICAL CONCERN SCREENING FOR SOIL AT SITE 23

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

CHEMICAL OF POTENTIAL ECOLOGICAL CONCERN	SCREENING EVALUATION	
	Rejected	Retained
Semivolatile Organic Compounds (Continued)		
Di-n-butylphthalate	--	--
Fluoranthene	--	X
Fluorene	--	X
Indeno(1,2,3-cd)pyrene	--	X
Naphthalene	--	X
n-Nitroso-diphenylamine	--	X
Pentachlorphenol	--	--
Phenanthrene	--	X
Pyrene	--	--
Volatile Organic Compounds		
1,2-Dichloroethene	--	--
1,3-Dichlorobenzene	--	--
2-Butanone	--	--
4-Methyl-2-Pentanone	--	--
Acetone	--	--
Benzene	--	--
Carbon Disulfide	--	--
Ethylbenzene	--	--
Methylene Chloride	--	--
Tetrachloroethene	--	--
Toluene	--	X
Trichloroethene	--	--
Xylene	--	--

Notes:

--	These analyses were not performed.
CSB	Concentrations within statistical background
EN	Essential nutrient
FOD	Frequency of detection five percent or lower
NB	Non-bioaccumulating
X	These analyses were performed.

10.0 RI CONCLUSIONS AND RECOMMENDATIONS

The conclusions of the evaluations conducted for Sites 9, 13, 19, 22, and 23 in support of the CERCLA risk management process and recommendations for further evaluation in an FS are presented in Sections 10.1 through 10.5. Tables 10-1 and 10-2 summarize the human health risks for soil and groundwater.

10.1 SITE 9 CONCLUSIONS AND RECOMMENDATIONS

The following text summarizes the conclusions and recommendations for Site 9.

10.1.1 Site 9 Nature and Extent Conclusions

The nature and extent evaluation concluded that most of the chemicals detected across Site 9 are consistent with historical activities (such as paint stripping and defueling) that occurred at the site. Physical features of Site 9, along with specific details on the hazardous waste generated and past disposal and storage practices associated with these wastes, were used to identify potential sources of CERCLA chemicals. Environmental investigations were conducted in these areas to identify and assess the extent of CERCLA chemicals in soil and groundwater, and the analytical results were evaluated. Of the potential sources the following physical features and site activities were considered likely sources at Site 9:

- Paint stripping within Building 410
- Releases of petroleum fuel from storage and defueling activities near Building 410
- Fill material containing PAHs

Most of the maximum detected concentrations of those chemicals related to paint stripping use (PCE and 1,2-DCE;) were located in soil near storm sewer and industrial wastewater connected to IWTP 410. BTEX components (toluene, ethylbenzene, and xylene) in soil were likely related to releases of petroleum fuel associated with defueling activities near Building 410. Maximum concentrations of toluene, ethylbenzene, and xylene were detected in soil in the eastern portion of the site; benzene was not detected in soil at the site.

Leaks in storm sewer and sanitary sewer lines around Building 410 are believed to be the source of solvents and VOCs (1,2,3-TCP; naphthalene; 2-methylnaphthalene; 1,1,1-TCA; 1,1-DCA; PCE, TCE, 1,2-DCE, and vinyl chloride) in groundwater at Site 9. Maximum concentrations in groundwater were detected beneath Building 410 and near storm and sanitary sewer lines, which were connected to Building 410. Storm sewer bedding material is not believed to be a source or pathway for contamination.

BTEX in groundwater may be the result of paint stripping activities at Building 410, petroleum releases associated with aircraft defueling, or the current tenant. The maximum concentrations

of benzene, toluene, and xylene were detected in groundwater samples collected in the area beneath or east of Building 410, ancillary to the storm sewer systems.

The following five PAH compounds with low solubility were detected in direct-push groundwater samples at Site 9.

- BaP
- Benzo(a)anthracene
- Benzo(b)fluoranthene
- Benzo(k)fluoranthene
- Indeno(1,2,3-cd)pyrene

Detections are within a larger groundwater VOC plume, and a discernable pattern is not present. Their presence in groundwater is likely attributed to the sampling methodology used or could also be associated with releases of fuel.

Although numerous chemicals were detected at Site 9, some of these chemicals do not pose significant risk as defined by the risk assessments. Significant risk to human health is potentially posed by arsenic in soil and by 1,2-DCP, 2-methylnaphthalene, 4-methylphenol, 1,2,3-TCP, antimony, arsenic, benzene, manganese, naphthalene, PAHs, PCE, PCP, TCE, and vinyl chloride in groundwater. No chemicals were determined to pose risk to terrestrial ecological receptors. Arsenic in soil and antimony and arsenic in groundwater are attributed to background concentrations that exist in the environment.

Data gaps for PCP, 1,2,3-TCP, and 1,2-DCP in groundwater were identified. PCP was detected in only 1 of 42 SVOC samples collected in soil at Site 9. The single result that identified PCP was qualified, indicating that PCP was present in the sample blank. Laboratory detection limits in nine of the samples analyzed for PCP exceeded the tap water PRG (EPA 2002a). 1,2,3-TCP was detected in 1 of 56 groundwater samples collected at the site at a concentration of 0.3 μg/L. The 55 other groundwater samples had laboratory detection limits of 5 μg/L or less. 1,2-DCP was detected in 1 of 119 groundwater samples at a concentration of 2 μg/L. Of the 119 samples, 86 samples contained less than the laboratory detection limit of 1.0 μg/L. An additional 38 samples contained less than the laboratory detection limit of 2 μg/L.

In addition, because detection limits were elevated in both soil and groundwater for some non-detected SVOCs, further sampling and analysis of soil and groundwater may be needed to confirm that these chemicals are not present in soil or groundwater. Because of elevated detection limits for some non-detected PAHs and VOCs in groundwater, further sampling and analysis of groundwater may be needed to confirm that these chemicals are not present in groundwater. A data gap for soil and groundwater associated with OWS-410A was identified. Although these data gaps were identified, it was determined that the types and numbers of samples collected at Site 9 and the analytical suite were adequate to characterize the site and to conduct risk assessments because data collection at the site focused mainly on potential sources

and was conducted in phases. This phased approach afforded stakeholders opportunities to provide feedback on the suitability or adequacy of the data collected and the need for additional data to identify releases and complete the RI report. There is a low potential that any source at Site 9 was not adequately evaluated or that NFA would be recommended if it poses a potential risk to human health or the environment.

10.1.2 Site 9 Risk Assessment Conclusions

An HHRA and modified screening-level ERA were conducted to evaluate risk from chemicals detected at Site 9. The sections below present the conclusions for the HHRA and ERA, respectively.

10.1.2.1 Site 9 HHRA Conclusions

According to reuse plans for Alameda Point (EDAW 1996), commercial/industrial and construction worker exposures are the most likely future exposures at Site 9. Human health risk was evaluated for commercial/industrial and construction worker exposures, along with residential exposures. The residential exposure scenario was evaluated to allow for flexibility in implementing the reuse plan (or modifications thereto) at Alameda Point, and because EPA risk assessment guidance (EPA 1989) includes a strong preference for evaluation of the residential pathway. Tables 10-1 and 10-2 present risk drivers and their relative contributions to carcinogenic risk and the noncancer HI for exposure to soil and groundwater.

For the commercial/industrial and construction worker scenarios, the most conservative cancer risks for soil and groundwater are within the risk management range. The most conservative HIs were less than 1 for soil and groundwater.

For the residential scenario, the HHRA indicated that carcinogenic risk from exposure to soil is within the risk management range and that noncancer risk from soil is less than 1; furthermore, risk from soil is attributable to background concentrations of arsenic. The carcinogenic and noncancer risks for groundwater exceed the risk management range and are attributable to the following:

- 1,2-DCE (total)
- 1,2-DCP
- 1,3-DCP
- 2-Methylnapthalene
- 1,2,3-Trichloropropane
- 4-Methylphenol
- Antimony
- Arsenic
- Benzo(a)pyrene(BaP)
- Benzene
- Benzo(a)anthracene
- Benzo(b)fluoranthene
- Benzo(k)fluoranthene
- Ethylbenzene
- Indeno(1,2,3-cd)pyrene
- Manganese
- Naphthalene
- Pentachlorophenol
- Tetrachloroethene
- Trichloroethene
- Vinyl chloride

Lead was not selected as a COPC in soil at Site 9. The maximum detected concentration of lead in surface and subsurface soil at Site 9 is 10.4 mg/kg, which is less than the California-modified residential PRG for lead of 150 mg/kg (EPA 2002a). This suggests that no receptor would have unacceptable blood lead levels due to exposure to soils (that is, there is a low potential for unacceptable effects).

10.1.2.2 Site 9 ERA Conclusions

A site-specific ERA was conducted for Site 9 to estimate potential risks to the environment. Currently, ecological habitat capable of supporting significant wildlife is not present at Site 9; therefore, exposure pathways for terrestrial receptors were considered potentially complete to provide a conservative estimate of risk. Risk to marine receptors was not evaluated because exposure pathways for aquatic receptors were considered incomplete (see Section 5.3.1). Assessment endpoints include small mammals, passerines, and raptors.

Results of the HQ calculations and qualitative evaluations indicate that residual chemicals at Site 9 have very limited potential to affect terrestrial ecological receptors. Based on the HQ calculations and qualitative evaluations and the planned future use of the site, no risks to ecological receptors have been identified that require further evaluation or mitigation.

10.1.3 Site 9 Recommendations

Based on the data and risk assessments discussed previously, soil and groundwater at Site 9 are recommended for further evaluation in an FS, as defined under CERCLA, to address risks to residential receptors under the unrestricted reuse scenario. Total site risk to residential receptors (including background) is above the risk management range. Arsenic in soil was identified as the only risk driver but is attributed to background; therefore, no chemicals of concern (COC) are identified for soil. COCs identified for groundwater are:

- 1,2- DCE (total)
- 1,2-DCP
- 1,3-DCP
- 2-Methylnapthalene
- 1,2,3-Trichloropropane
- 4-Methylphenol
- Antimony
- Arsenic
- BaP
- Benzene
- Benzo(a)anthracene
- Benzo(b)fluoranthene
- Benzo(a)pyrene (BaP)
- Benzo(k)fluoranthene
- Ethylbenzene
- Indeno(1,2,3-cd)pyrene
- Manganese
- Naphthalene
- Pentachlorophenol
- PCE
- TCE
- Vinyl chloride

Although antimony and arsenic were identified as groundwater risk drivers, they are attributed to background.

An evaluation of TPH in soil and groundwater also was conducted based on the TPH strategy for Alameda Point (Navy 2001a) (see Appendix F). Based on this evaluation, further action is not warranted under the TPH program for soil at Site 9; further action is warranted for groundwater at Site 9. TPH in groundwater is commingled with other CERCLA contaminants and should be further evaluated under the CERCLA program after the floating petroleum product is removed from the site.

10.2 SITE 13 CONCLUSIONS AND RECOMMENDATIONS

The following text summarizes the conclusions and recommendations for Site 13.

10.2.1 Site 13 Nature and Extent Conclusions

The nature and extent evaluation concluded that most chemicals detected at Site 13 are consistent with historical activities that occurred at the site, which included the former oil refinery and aircraft storage, overhaul, and defueling. Physical features of Site 13, along with specific details on the hazardous waste generated and past disposal and storage practices associated with these wastes, were used to identify potential sources of CERCLA chemicals. Environmental investigations were conducted in these areas to identify and assess the extent of CERCLA chemicals in soil and groundwater, and the analytical results from these investigations were evaluated. Of the potential sources, the following physical features and site activities were considered likely sources at Site 13:

- Former oil refinery activities
- ASTs 324 through 328
- Building 397 and associated OWSs 397A, 397B, 397D, and 397D
- Fill material containing PAHs

Most of the maximum detected concentrations of those chemicals related to operation of the former refinery (TPH, benzene, toluene, ethylbenzene, xylene, PAHs, and lead) were located within TRW. The material is black and globular in nature with strong hydrocarbon odors, and black and gray sand has been observed to be surrounding the waste. TRW has been observed in borings, test pits, and seeping onto the ground surface at several locations at Site 13 and contains elevated concentrations of TPH-g (3,000 mg/kg), TPH-d (140,000 mg/kg), TPH-mo (110,000 mg/kg), benzene (31 mg/kg), toluene (130 mg/kg), ethylbenzene (81 mg/kg), xylenes (160 mg/kg), PAHs quantified as BaP equivalent (7.198 mg/kg), and lead (2,000 mg/kg). The wastes exhibited a pH as low as 1.1. Samples from stained sands contained elevated concentrations of TPH, xylene, ethylbenzene, and PAHs, indicating that chemicals present in TRW have diffused into nearby soil.

TRW does not appear to be easily mobilized to groundwater unless unusual conditions are present. Benzene, ethylbenzene, and xylene are likely present in groundwater because TRW in

the area intersects groundwater. Areas where low pH soil and lead are present do not show that lead is leaching to groundwater in large quantities. Commingling of TRW with refined petroleum may cause the TRW to dissolve and become mobile in groundwater. However, distinctions in the commingled material cannot be made because TRW appears to have a similar composition to diesel fuel, motor oil, and gasoline and data are limited.

Petroleum fuels such as diesel fuel, aviation fuel, motor oil, and gasoline were likely stored in ASTs 324 through 328. TPH was detected in soil at concentrations indicating the presence of free product just east of the tanks in AOC 009; therefore, the tanks are the most likely source of these contaminants. Petroleum in soil and groundwater at AOC 009 appears to be commingled with TRW, which is considered a CERCLA waste. In addition, the maximum BaP concentration was detected at location C3S013B051, in the vicinity of AOC 009.

Jet fuel was used on Site 13 at the jet engine rehabilitation and testing facility in the east end of Building 397. In addition, 3,500 to 17,000 gallons of jet fuel was released to the storm drain system on the east end of Building 397 in 1991. Cleanup of the free product began immediately, but not before some of the material entered soil and groundwater in the area. The presence of free product in soil and groundwater was confirmed during subsequent investigations, and this area was designated AOC 397. In 2000, a pilot scale DVE system was installed to remove jet fuel from soil and groundwater. The system was successful; as a result, it was upgraded to full-scale operation in 2002. As of December 2003, the system appears to have removed nearly all free product at Site 13. The data indicate that the jet fuel contamination likely is not commingled with any CERCLA chemicals.

Although numerous chemicals were detected at Site 13, some of these chemicals do not pose significant risk as defined by the risk assessments. Significant risk to human health is potentially posed by arsenic and BaP in soil and benzene, manganese, PCP, thallium, and TCE in groundwater. Zinc was determined to pose risk to terrestrial ecological receptors. Arsenic and zinc in soil and thallium in groundwater are attributed to background concentrations that exist in the environment.

Data gaps for soil and groundwater at Site 13 were also identified. Further sampling and analyses of soil for TPH, lead, pH, and PAHs to further define the boundaries of the TRW is recommended. Because of elevated detection limits for SVOCs in soil and groundwater, further sampling and analysis of soil and groundwater may be needed to confirm these chemicals are not present at elevated concentrations.

Although these data gaps were identified, it was determined that the types and numbers of samples collected at Site 13 and the analytical suite were adequate to characterize the site and to conduct risk assessments because data collection at the site focused mainly on potential sources and was conducted in phases. This phased approach afforded stakeholders opportunities to provide feedback on the suitability or adequacy of the data collected and the need for additional data to identify releases and complete the RI report. There is a low potential that any source at Site 13 was not adequately evaluated or that NFA would be recommended if it poses a potential risk to human health or the environment.

10.2.2 Site 13 Risk Assessment Conclusions

An HHRA and modified screening-level ERA were conducted to evaluate risk from chemicals detected at Site 13. The sections below present the conclusions for the HHRA and ERA, respectively.

10.2.2.1 Site 13 HHRA Conclusions

According to reuse plans for Alameda Point (EDAW 1996), commercial/industrial and construction worker exposures are the most likely future exposures at Site 13. Human health risk was evaluated for commercial/industrial and construction worker exposures, along with residential exposures. The residential exposure scenario was evaluated to allow for flexibility in implementing the reuse plan (or modifications thereto) at Alameda Point, and because EPA risk assessment guidance (EPA 1989) includes a strong preference for evaluation of the residential pathway. Tables 10-1 and 10-2 present risk drivers and their relative contributions to carcinogenic risk and the noncancer HI for exposure to soil and groundwater.

For the commercial/industrial and construction worker scenarios, the most conservative cancer risks for soil and groundwater are within the risk management range. The most conservative HIs were less than 1 for soil and groundwater.

For the residential scenario, the HHRA indicated that carcinogenic risk from exposure to soil is within the risk management range and that noncancer risk from soil is less than 1; furthermore, risk from soil is attributable to PAHs (quantified as BaP and Dibenz(a,h)anthracene) and background concentrations of arsenic. The carcinogenic and noncancer risks for groundwater exceed the risk management range and are attributable to the following:

- Arsenic
- PCP
- TCE
- Benzene
- Manganese
- Thallium

Although lead was selected as a COPC, the EPCs for lead (139 mg/kg in surface soil and 54.7 mg/kg in subsurface soil) did not exceed the California-modified residential PRG (EPA 2002a). This suggests that no receptor would have unacceptable blood lead levels due to exposure to soils (that is, there is a low potential for unacceptable effects).

10.2.2.2 Site 13 ERA Conclusions

A site-specific ERA was conducted for Site 13 to estimate potential risks to the environment. Currently, ecological habitat capable of supporting significant wildlife is not present at Site 13; therefore, exposure pathways for terrestrial receptors were considered potentially complete to

provide a conservative estimate of risk. Risk to marine receptors was not evaluated because exposure pathways for aquatic receptors were considered incomplete. Assessment endpoints include small mammals, passerines, and raptors.

Results of the HQ calculations and qualitative evaluations indicate potential risk to small mammals from zinc. No significant risk to passerines and raptors occurs from exposure to Site 13 soils. However, based on the lack of habitat at Site 13 and the planned future use of the site, no risks to ecological receptors have been identified that require further evaluation or mitigation.

10.2.3 Site 13 Recommendations

Based on the data and risks discussed previously, soil and groundwater at Site 13 are recommended for further evaluation in an FS, as defined under CERCLA, to address risks to residential receptors under the unrestricted reuse scenario. Total site risk to residential receptors (including background) is above the risk management range. BaP is identified as the only COC for soil. Arsenic in soil was identified as a risk driver, but is attributed to background. COCs identified for groundwater are benzene, manganese, PCP, and TCE. Although thallium was identified as a risk driver, it is attributed to background.

An evaluation of TPH in soil and groundwater also was conducted based on the TPH strategy for Alameda Point (Navy 2001a) (see Appendix F). Based on this evaluation, further action is recommended for TTPH and TPH-associated chemicals present in soil and groundwater within Plume 1 of Site 13 under the TPH program. Further action is recommended for TTPH and TPH-associated chemicals present in soil and groundwater within Plume 2 of Site 13 under the CERCLA program for commingled contaminants.

10.3 SITE 19 CONCLUSIONS AND RECOMMENDATIONS

The following text summarizes the conclusions and recommendations for Site 19.

10.3.1 Site 19 Nature and Extent Conclusions

The nature and extent evaluation concluded that most of the chemicals detected across Site 19 are consistent with historical activities that occurred at the site, which included hazardous material storage at Building 616 and Yard D-13. Physical features of Site 19, along with specific details on the hazardous waste storage practices associated with these wastes, were used to identify potential sources of CERCLA chemicals. Environmental investigations were conducted in these areas to identify and assess the extent of CERCLA chemicals in soil and groundwater, and the analytical results were evaluated. The following physical features and site activities were considered likely sources at Site 19:

- Yard D-13 (hazardous waste storage yard)
- Building 616 (hazardous materials storage area)
- Fill material containing PAHs

Most of the chemicals related to hazardous waste storage (DCA, TCA, benzene, PCE, TCE, and PAHs) were detected within the vicinity of Yard D-13 and Building 616, with the maximum detected concentrations near Yard D-13.

1,1-DCA, PCE, and TCE were detected in one to two samples of shallow soil near the area designated for halogenated solvent storage in the southern portion of Yard D-13. It is possible that spills occurred during transport or storage of these chemicals, thereby allowing them to enter the soil column through cracks or other openings in the floor of Yard D-13 or the surrounding grounds.

PCE and TCE were also detected in a groundwater monitoring well in the southern portion of Yard D-13 and in a deep monitoring well in the northern portion of Site 19 near Building 616. PCE and TCE were not detected in any other monitoring wells within the immediate vicinity of Building 616. Relatively low concentrations of benzene also were detected in groundwater in the southern portion of Yard D-13. The highest detected concentration of 1,1-DCA in groundwater was in a Hydropunch sample collected to the west of Building 616. 1,2-DCA was detected only in a Hydropunch sample collected south of Yard D-13. 1,2-DCP was detected once in a monitoring well east of Yard D-13. The full extent of VOCs in groundwater is not fully defined.

BaP is likely associated with PAHs present in fill material used to build Alameda Island. BaP concentrations ranged from 0.000002 to 6 mg/kg, with the maximum concentration detected in a soil sample at a depth of 0.5 to 2.0 feet bgs.

Although numerous chemicals were detected at Site 19, some of the chemicals do not pose significant risk as defined by the risk assessments. Significant risk to human health is potentially posed by arsenic and BaP in soil and by arsenic, manganese, PCE, and TCE in groundwater. Barium, copper, and lead were determined to pose risk to terrestrial ecological receptors. Arsenic and barium in soil and arsenic in groundwater are attributed to background concentrations.

Manganese is not believed to be associated with site activity, but its relatively high concentrations in deeper groundwater at Site 19 are likely associated with the prevalence of reducing conditions at the site from organic material present in the BSU and marsh crust and some contribution from saltwater intrusion. There is no discernable pattern to the distribution of elevated manganese in groundwater except for higher concentrations present in deeper groundwater at Site 19.

Data gaps for soil and groundwater at Site 19 were also identified. Detection limits were elevated in both soil and groundwater for some nondetected SVOCs; therefore, further sampling and analysis of soil and groundwater for SVOCs may be needed to confirm these chemicals are not present in soil or groundwater at Site 19. Because data are limited, the full extent of VOCs in groundwater still needs to be defined.

Although these data gaps were identified, it was determined that the types and numbers of samples collected at Site 19 and the analytical suite were adequate to characterize the site and to conduct risk assessments because data collection at the site focused mainly on potential sources and was conducted in phases. This phased approach afforded stakeholders opportunities to provide feedback on the suitability or adequacy of the data collected and the need for additional data to identify releases and complete the RI report. There is a low potential that a source at Site 19 was not adequately evaluated or that NFA would be recommended if it poses a potential risk to human health or the environment.

10.3.2 Site 19 Risk Assessment Conclusions

An HHRA and modified screening-level ERA were conducted to evaluate risk from chemicals detected at Site 19. The sections below present the conclusions for the HHRA and ERA, respectively.

10.3.2.1 Site 19 HHRA Conclusions

According to reuse plans for Alameda Point (EDAW 1996), commercial/industrial and construction worker exposures are the most likely future exposures at Site 19. Human health risk was evaluated for commercial/industrial and construction worker exposures, along with residential exposures. The residential exposure scenario was evaluated to allow for flexibility in implementing the reuse plan (or modifications thereto) at Alameda Point, and because EPA risk assessment guidance (EPA 1989) includes a strong preference for evaluation of the residential pathway. Tables 10-1 and 10-2 present risk drivers and their relative contributions to carcinogenic risk and the noncancer HI for exposure to soil and groundwater.

For the commercial/industrial and construction worker scenarios, the most conservative carcinogenic risks for soil and groundwater are within the risk management range. The highest HIs calculated for these pathways were less than 1 for soil. The pathway for exposure to groundwater was incomplete.

For the residential scenario, the HHRA indicated that carcinogenic risk from exposure to soil is within the risk management range and that noncancer risk from soil is less than 1; furthermore, risk from soil is attributable to PAHs and background concentrations of arsenic. The carcinogenic and noncancer risks for groundwater exceed the risk management range and are attributable to the following:

- 1,2-DCP
- Arsenic
- TCE
- PCE
- Manganese

Although lead was selected as a COPC in subsurface soil, the EPC for lead (55 mg/kg in subsurface soil) did not exceed the California-modified residential PRG (EPA 2002a). This nonexceedance suggests that no human receptor would have unacceptable blood lead levels as a result of exposure to soils (that is, there is a low potential for unacceptable effects).

10.3.2.2 Site 19 ERA Conclusions

A site-specific ERA was conducted for Site 19 to estimate potential risks to the environment. Currently, ecological habitat capable of supporting significant wildlife is not present at Site 19; therefore, exposure pathways for terrestrial receptors were considered potentially complete to provide a conservative estimate of risk. Risk to marine receptors was not evaluated because exposure pathways for aquatic receptors were considered incomplete. Assessment endpoints included small mammals, passerines, raptors, and marine receptors.

Results of the HQ calculations and qualitative evaluations indicated potential risk to small mammals from copper and potential risk to raptors from barium and lead. No significant risk is posed to passerines from exposure to Site 19 soils. However, based on the lack of habitat at Site 19 and the planned future use of the site, no risks to ecological receptors have been identified that require further evaluation or mitigation.

10.3.3 Site 19 Recommendations

Based on the data and risk assessments discussed previously, soil and groundwater at Site 19 are recommended for further evaluation in an FS, as defined under CERCLA, to address risks to residential receptors under the unrestricted reuse scenario. Total site risk to residential receptors (including background) is above the risk management range. No COCs are identified for soil. Arsenic and BaP in soil were identified as risk drivers, but arsenic is attributed to background. Because of the use of sediments to construct the base, an ambient concentration of PAHs (BaP) exists in soil at Alameda Point. BaP at Site 19 is attributed to the Marsh Crust; therefore, the Marsh Crust ROD is applicable, and BaP is not recommended as a COC for further evaluation in the FS. COCs identified for groundwater at Site 19 are 1,2-DCP, manganese, PCE, and TCE. Although arsenic was identified as a risk driver, it is attributed to background.

An evaluation of TPH in soil and groundwater was conducted based on the TPH strategy for Alameda Point (Navy 2001a) (see Appendix F). Based on this evaluation, NFA is recommended at Site 19 under the TPH program for TPH-fractions and TPH-associated constituents.

10.4 SITE 22 CONCLUSIONS AND RECOMMENDATIONS

The following text summarizes the conclusions and recommendations for Site 22.

10.4.1 Site 22 Nature and Extent Conclusions

The nature and extent evaluation concluded that most of the chemicals detected across Site 22 are consistent with the historical activities that occurred at the site, which included a gasoline station and car wash. Physical features of Site 22, along with specific details on the waste generated and past disposal and storage practices associated with these wastes, were used to identify potential sources of CERCLA chemicals. Site 22 was a gasoline station and there were no documented uses of CERCLA contaminants during the site's history. However environmental investigations were conducted at the site to identify and assess the extent of CERCLA chemicals in soil and groundwater. Of the potential sources the following physical features and site activities were considered likely sources at Site 22:

- Former gas station and associated USTs 547-1 through 547-3 and fuel lines
- OWS 547 associated with the car wash
- Fill material containing PAHs

Because Site 22 was considered significantly impacted by TPH, corrective action for free TPH product in soil and groundwater is currently underway using dual vapor extraction. Petroleum products associated with the former gasoline station are believed to be the source of contaminants in soil and groundwater. Most of the maximum detected concentrations of the chemicals (BTEX, lead, naphthalene, 2-methylnaphthalene, isopropylbenzene, n-propylbenzene) related to petroleum fuels used at Site 22 were located near the fuel islands or fuel lines.

BTEX, naphthalene, and 2-methylnaphthalene were detected in soil samples collected across Site 22, and the highest concentrations of BTEX were generally located around the fuel islands and fuel delivery system. BTEX was detected in groundwater samples collected across Site 22, but the highest concentrations were generally around and north of the fuel islands.

Lead detected in soil at Site 22 is likely associated with the use of leaded gasoline at the fuel islands, lead-based paint, and background. Concentrations of lead in 50 of 53 samples collected at Site 22 are relatively consistent with background concentrations. Three soil samples collected at depths between 0.5 and 2 feet bgs exhibited lead ranging in concentrations from 160 to 9,890 mg/kg. Two of the samples were collected from locations below the fuel islands and are likely associated with the use of leaded gasoline. The maximum concentration of lead was detected in soil collected from an open area east of the paved refueling area; this sample was collected near the surface and may have contained lead-based paint. No other soil samples were collected within 50 feet of this sample.

Isopropylbenzene, n-propylbenzene, naphthalene, and 2-methylnaphthalene were detected in groundwater across Site 22. Isopropylbenzene and n-propylbenzene occur naturally in petroleum and were only detected in groundwater samples collected from one well during the last three quarters of 2002 to 2003 groundwater sampling. Naphthalene and 2-methylnaphthalene were detected across the site with the highest concentrations detected in groundwater to the south of the fuel islands.

In addition, VOCs (TCE, PCE, and 1,2-DCA) were detected in a few groundwater samples. TCE was detected in 2 of 77 groundwater samples, and PCE was detected in 1 of 77 groundwater samples. TCE was detected in a well along the eastern border of Site 22 next to a sanitary sewer line at a concentration of 20 μg/L in 1997 and has not been detected in the seven groundwater samples collected from this well since 1997. TCE along with PCE was also detected in a monitoring well located in the southwestern portion of Site 22 downgradient from the high concentrations of petroleum. TCE and PCE were detected at concentrations of 1.9 and 2.6 μg/L in April 2003. TCE and PCE were not detected in other samples collected from this well since 1990. TCE and PCE were commonly used at Alameda Point as a part cleaner and paint stripper; however, there is no documented or anecdotal evidence of their use at Site 22. It is possible that solvents containing PCE and TCE were used in small quantities for engine cleaning.

The presence of 1,2-DCA at Site 22 is related to its use as a gasoline additive. 1,2-DCA was detected in 6 of 77 groundwater samples. Five of these samples were collected around the former fuel island. One other sample was collected approximately 75 feet to the southwest (downgradient) from the fuel island.

Although numerous chemicals were detected at Site 22, some of these chemicals do not pose significant risk as defined by the risk assessments. Significant risk to human health is potentially posed by arsenic, BaP, benzene, ethylbenzene, lead, and xylene in soil and by arsenic, 1,2-DCA, benzene, chloroform, ethylbenzene, manganese, naphthalene, PCE, thallium, TCE, and xylene in groundwater. Lead was determined to pose a risk to terrestrial ecological receptors. Arsenic in soil and groundwater is attributed to background concentrations.

BaP in soil exceeded the action level of 0.62 mg/kg at only two sampling locations in the eastern portion of Site 22 (C3S022B009 and C3S022B019); concentrations in soil from the remaining 52 samples were below the action level. The BaP equivalents for soil from locations C3S022B009 and C3S022B019 (0.647 and 0.74 mg/kg) are within the Alameda Point risk management range of 0.62 to 1.0 mg/kg.

Chloroform was only detected in one groundwater sample collected from a quarterly groundwater monitoring well in 2003. It was not detected above the reporting limit during the three previous quarters and has not been detected in other soil or groundwater.

The background comparison determined that manganese and thallium in groundwater at Site 22 are not attributed to background. A review of the range of concentrations shows that concentrations of manganese at Site 22 are greater than manganese in the background data set. There was no discernable pattern to the distribution of elevated manganese in groundwater, and

manganese is not associated with site activities. Elevated manganese concentrations may be attributed to reducing conditions associated with organic material present at the site, including petroleum hydrocarbons.

Thallium exceeds background based on the frequency of detection. Both the site and background data sets are characterized by very low detection frequencies. The only statistical evaluation possible for thallium was comparison of the relative detection frequencies. Additional comparison of the two populations using outlier box plots and quantile tables showed that the two distributions were comparable. There is no discernable pattern to the distribution of thallium in groundwater, and thallium is not associated with site activities and has not been detected since 1995. Thallium concentrations may be attributed to reducing conditions associated with organic material present at the site, including petroleum hydrocarbons.

Data gaps for soil and groundwater were identified. Detection limits were elevated for nondetected SVOCs in soil and groundwater and for VOCs, PCBs, and thallium in groundwater. These elevated detection limits are likely related to matrix interference from high concentrations of TPH in soil and groundwater. Further sampling and analysis of soil and groundwater was recommended to confirm that these chemicals are not present or to determine the extent of contamination. In addition, sufficient sampling has not been conducted near OWS 547, which is associated with the car wash, to determine whether soil or groundwater contamination occurred during operation of the car wash.

Although these data gaps were identified, it was determined that the types and numbers of samples collected at Site 22 and the analytical suite were adequate to characterize the site and conduct risk assessments because data collection at the site focused mainly on potential sources and was conducted in phases. This phased approach afforded stakeholders opportunities to provide feedback on the suitability or adequacy of the data collected and the need for additional data to identify releases and complete the RI report. There is a low potential that NFA would be recommended if Site 22 poses a potential risk to human health or the environment.

10.4.2 Site 22 Risk Assessment Conclusions

An HHRA and modified screening-level ERA were conducted to evaluate risk from chemicals detected at Site 22. The sections below present the conclusions for the HHRA and ERA, respectively.

10.4.2.1 Site 22 HHRA Conclusions

According to reuse plans for Alameda Point (EDAW 1996), commercial/industrial and construction worker exposures are the most likely future exposures at Site 22. Human health risk was evaluated for commercial/industrial and construction worker exposures, along with residential exposures. The residential exposure scenario was evaluated to allow for flexibility in implementing the reuse plan (or modifications thereto) at Alameda Point and because EPA risk assessment guidance (EPA 1989) includes a strong preference for evaluation of the residential

pathway. Tables 10-1 and 10-2 present risk drivers and their relative contributions to carcinogenic risk and the noncancer HI for exposure to soil and groundwater.

For the commercial/industrial and construction worker scenarios, the most conservative carcinogenic risks for soil and groundwater are within the risk management range. The most conservative HIs were less than 1 for soil and groundwater.

For the residential scenario, the HHRA indicated that carcinogenic risk from exposure to soil is within the risk management range and that noncancer risk from soil is less than 1; furthermore, risk from soil is attributable to benzene, ethylbenzene and PAHs associated with petroleum products, and background concentrations of arsenic. The carcinogenic and noncancer risks for groundwater exceed the risk management range and are attributable to the following:

- 1,2-DCA
- Arsenic
- Benzene
- Chloroform
- Ethylbenzene
- Manganese
- Naphthalene
- PCE
- Thallium
- TCE
- Xylene

Site 22 groundwater risk is largely attributed to exposure to petroleum-related compounds through vapor intrusion and domestic use of groundwater. A petroleum removal action is ongoing at Site 22 to address these concerns. Carcinogenic risk from CERCLA chemicals in groundwater at Site 22 (TCE and PCE) is attributed to spurious detections within the petroleum plume.

Lead was selected as a COPC in soil at Site 22. The maximum concentration of lead detected in surface soil at Site 22 was 9,980 mg/kg, which is greater than the Cal-modified residential PRG for lead of 150 mg/kg (EPA 2002a). This exceedance suggests that a receptor would have unacceptable blood lead levels due to exposure to soils. However, the health effects associated with exposure to lead are unique in nature. Because only a single reported sample contained lead at a concentration exceeding the Cal-modified PRG, the site-wide EPC is heavily skewed toward this outlier. Because of the skewed data, this concentration of lead should be considered a hot spot rather than a site-wide exposure.

10.4.2.2 Site 22 ERA Conclusions

A site-specific ERA was conducted for Site 22 to estimate potential risks to the environment. Currently, ecological habitat capable of supporting significant wildlife is not present at Site 22; therefore, exposure pathways for terrestrial receptors were considered potentially complete to

provide a conservative estimate of risk. Risk to marine receptors was not evaluated because exposure pathways for aquatic receptors were considered incomplete. Assessment endpoints include small mammals, passerines, raptors, and marine receptors.

Results of the HQ calculations and qualitative evaluations indicate potential risk to small mammals, passerines, and raptors from lead. However, based on the lack of habitat at Site 13 and the planned future use of the site, no risks to ecological receptors have been identified that require further evaluation or mitigation.

10.4.3 Site 22 Recommendations

Based on the data and risks discussed previously, soil and groundwater at Site 22 are recommended for further evaluation in an FS, as defined under CERCLA, to address risks to residential receptors under the unrestricted reuse scenario. Total site risk to residential receptors (including background) is above the risk management range. COCs identified for soil are BaP, benzene, ethylbenzene, lead, and xylene. Arsenic in soil was identified as a risk driver but is attributed to background. Lead should be considered a hot spot rather than a site-wide exposure. COCs identified for groundwater are 1,2-DCA, benzene, chloroform, ethylbenzene, manganese, naphthalene, PCE, thallium, TCE, and xylene. Although antimony and arsenic were identified as risk drivers, they are attributed to background.

An evaluation of TPH in soil and groundwater also was conducted based on the TPH strategy for Alameda Point (Navy 2001a) (see Appendix F). Based on this evaluation, further action is not warranted for soil at Site 22. Further action is warranted for groundwater at Site 22. However, because Site 22 was considered significantly impacted by TPH, corrective action for free TPH product in soil and groundwater is currently underway using a combination of dual vapor extraction and biosparging.

Recommendations for further action under CERCLA will be based only on CERCLA contaminants; TPH-related chemicals are being addressed under a CAP.

10.5 SITE 23 CONCLUSIONS AND RECOMMENDATIONS

The following text summarizes the conclusions and recommendations for Site 22.

10.5.1 Site 23 Nature and Extent Conclusions

The nature and extent evaluation concluded that most of the chemicals detected across Site 23 are consistent with historical activities that occurred at the site, which included plane defueling and the former oil refinery. In addition, the petroleum plume at Site 13 is another likely source of petroleum contamination at Site 23. Physical features of Site 23, along with specific details on the hazardous waste generated and past disposal and storage practices associated with these wastes, were used to identify potential sources of CERCLA chemicals. Environmental investigations were conducted in these areas to identify and assess the extent of CERCLA

chemicals in soil and groundwater, and the analytical results were evaluated. The following physical features and site activities were considered likely sources at Site 23:

- Defueling area and associated OWSs 529 and 530 and ASTs 530A, 530B, and 530C
- Former oil refinery activities

Previous site activities associated with plane defueling and the operation of the former refinery were identified as a source of TPH in soil. Elevated concentrations of CERCLA chemicals were not identified in soil at Site 23. Concentrations of chromium, lead, mercury, nickel, silver, and zinc were all detected below their respective residential PRGs (EPA 2002a) and are present at concentrations considered to be background. Aroclor-1260 was detected in one soil sample at a concentration below the residential PRG (EPA 2002a). No other PCBs were detected in soil at Site 23. TCE was not detected.

BaP in soil may be attributed to the presence of petroleum contamination. BaP was detected in soil above the action level of 0.62 mg/kg in three samples. Two samples were collected at the same sampling location within the plane defueling area near a TPH plume. The third sample was collected in the northeastern corner of Site 23 at a depth of 4 to 8 feet bgs and is likely associated with TRW. TRW is present in soil in the southeastern corner of Site 13 and likely extends onto Site 23. Based on data collected at Site 13 just north of where the TRW was identified at Site 23, the material at Site 23 is not commingled with free product petroleum hydrocarbons; therefore, it is not likely mobilizing in groundwater.

PAHs BaP and benzo(b)fluoranthene also were detected in one grab groundwater sample. The detection of these compounds is likely associated with the presence of soil particles in groundwater.

Plane defueling activities and Site 13 were identified as potential sources of contamination in Site 23 groundwater. Chemicals identified in groundwater at Site 23 included petroleum and associated chemicals such as BTEX, naphthalene, trimethylbenzenes, and lead. In general, groundwater in the western portion of Site 23, the plane defueling area, is impacted with these chemicals, and a petroleum plume is present. The maximum concentrations of benzene, xylene, sec-butylbenzene, naphthalene, and 1,2,4-trimethylbenzene were detected within the petroleum plume.

Benzene, xylene, ethylbenzene, and 1,2,4-trimethylbenzene were also detected in groundwater northeast of Building 530 from 1990 to present. It is likely that petroleum contamination is associated with the petroleum plume at Site 13, and it is possible that the nearby storm sewer line, which is damaged, serves as a conduit. In addition, the groundwater flow direction at Site 13 in the area of the petroleum plume is to the west and southwest. Concentrations of benzene and ethylbenzene appear to be decreasing over time, indicating the chemicals in the plume are degrading. It is expected that benzene, ethylbenzene, and other associated petroleum products will naturally attenuate to nondetect levels.

Although numerous chemicals were detected at Site 23, some of these chemicals do not pose significant risk as defined by the risk assessments. Significant risk to human health is potentially posed by arsenic, BaP, and dibenzo(a,h)anthracene in soil and arsenic, 1,2,4-trimethylbenzene, BaP, ethylbenzene, naphthalene, sec-butylbenzene, and thallium in groundwater. Cadmium was determined to pose risk to terrestrial ecological receptors. Arsenic, cadmium, and thallium in soil and arsenic and thallium groundwater are attributed to background concentrations that exist in the environment.

Data gaps for soil and groundwater at Site 23 were also identified. Because of elevated detection limits for some nondetected VOCs in groundwater and SVOCs in soil and groundwater, further sampling and analysis of groundwater may be needed to confirm that these chemicals are not present in groundwater at Site 23. Additionally, sampling and analyses of soil for PCBs is recommended to confirm PCBs are not present in soil at levels that would pose risk. PCB oil was used for weed control in the mini-storage area until 1963; however, soil samples were not collected within the vicinity of the mini-storage area and analyzed for PCBs.

Although these data gaps were identified, it was determined that the types and numbers of samples collected at Site 23 and the analytical suite were adequate to characterize the site and conduct risk assessments because data collection at the site focused mainly on potential sources and was conducted in phases. This phased approach afforded stakeholders opportunities to provide feedback on the suitability or adequacy of the data collected and the need for additional data to identify releases and complete the RI report. There is a low potential that any source at Site 23 was not adequately evaluated or that NFA would be recommended if it poses a potential risk to human health or the environment.

10.5.2 Site 23 Risk Assessments Conclusions

An HHRA and modified screening-level ERA were conducted to evaluate risk from chemicals detected at Site 23. The sections below present the conclusions for the HHRA and ERA, respectively.

10.5.2.1 Site 23 HHRA Conclusions

According to reuse plans for Alameda Point (EDAW 1996), commercial/industrial and construction worker exposures are the most likely future exposures at Site 23. Human health risk was evaluated for commercial/industrial and construction worker exposures, along with residential exposures. The residential exposure scenario was evaluated to allow for flexibility in implementing the reuse plan (or modifications thereto) at Alameda Point and because EPA risk assessment guidance (EPA 1989) includes a strong preference for evaluation of the residential pathway. Tables 10-1 and 10-2 present risk drivers and their relative contributions to carcinogenic risk and the noncancer HI for exposure to soil and groundwater.

For the commercial/industrial and construction worker scenarios, the most conservative carcinogenic risk for soil for these two scenarios is within the risk management range. The most conservative HI is less than 1 for soil. The most conservative carcinogenic risk for groundwater

for these two scenarios is below the risk management range. This pathway was incomplete for the construction worker scenario.

For the residential scenario, the HHRA indicated carcinogenic risks from exposure to soil are within the risk management range and that noncancer risks from soil are less than 1; furthermore, risk in soil is attributable to PAHs (BaP and dibenzo[a,h]anthracene) and background concentrations of arsenic. The carcinogenic and noncancer risks for groundwater exceed the risk management range and are attributable to the following:

- 1,2,4-Trimethylbenzene
- BaP
- Ethylbenzene
- Sec-Butylbenzene
- Arsenic
- Benzo(b)fluoranthene
- Naphthalene
- Thallium

Lead was not selected as a COPC in subsurface soil because the EPC for lead (55 mg/kg in subsurface soil) did not exceed the California-modified residential PRG (EPA 2002a). This suggests that no receptor would have unacceptable blood lead levels associated with exposure to soils (that is, there is a low potential for unacceptable effects).

10.5.2.2 Site 23 ERA Conclusions

A site-specific ERA was conducted for Site 23 to estimate potential risks to the environment. Currently, ecological habitat capable of supporting significant wildlife is not present at Site 23; therefore, exposure pathways for terrestrial receptors were considered potentially complete to provide a conservative estimate of risk. Risk to marine receptors was not evaluated because exposure pathways for aquatic receptors were considered incomplete. Assessment endpoints included small mammals, passerines, and raptors.

Results of the HQ calculations and qualitative evaluations indicated potential risk to small mammals and raptors from cadmium. Based on the low magnitude of the low HQ, the limited habitat at Site 23, and the planned future use of the site, no risks to ecological receptors were identified that require further evaluation or mitigation.

10.5.3 Site 23 Recommendations

Based on the data and risks discussed previously, soil and groundwater at Site 23 are recommended for further evaluation in an FS, as defined under CERCLA, to address risks to residential receptors under the unrestricted reuse scenario. Total site risk to residential receptors (including background) is above the risk management range. BaP and dibenzo(a,h)anthracene were identified as COCs for soil. Arsenic in soil was identified as risk driver but is attributed to background. BaP and dibenzo(a,h)anthracene in soil were attributed to the presence of

petroleum contamination. 1,2,4-Trimethylbenzene, BaP, benzo(b)fluoranthene, ethylbenzene, naphthalene, and sec-butylbenzene were identified as COCs for groundwater. BaP and benzo(b)fluoranthene were attributed to the presence of soil particles in groundwater and the remaining groundwater COCs were attributed to petroleum contamination. Although arsenic and thallium were identified as groundwater risk drivers, they are attributed to background.

An evaluation of TPH in soil and groundwater also was conducted based on the TPH strategy for Alameda Point (Navy 2001a) (see Appendix F). Based on this evaluation, further action is recommended for TTPH and TPH-associated chemical concentrations present in soil and groundwater at Site 23. Site 23 was considered significantly impacted by TPH, and corrective action for free TPH product in soil and groundwater was conducted using DVE and biosparging.

Recommendations for further action under CERCLA will be based only on CERCLA contaminants; TPH-related chemicals are being addressed under a CAP.

TABLE 10-1: HUMAN HEALTH RISK ASSESSMENT SUMMARY FOR SOIL

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

EXPOSURE SCENARIOS			SITE 9[1]		SITE 13[1]		SITE 19[1]		SITE 22[1]		SITE 23[1]	
			Cancer	Non-cancer	Cancer	Non-cancer	Cancer	Non-cancer	Cancer	Non-cancer	Cancer	Non-cancer
Residential												
0-2 ft bgs	RME	Total Risk	2E-05	0.3	3E-05	0.4	2E-05	0.4	3E-05	0.5	2E-05	0.2
	CTE	Total Risk	2E-06	0.05	6E-06	0.1	4E-06	0.1	5E-06	0.1	4E-06	0.07
0-8 ft bgs	RME	Total Risk	1E-05	0.2	2E-05	0.6	2E-05	0.4	4E-05	3	1E-05	0.2
	CTE	Total Risk	3E-06	0.06	5E-06	0.1	5E-06	0.1	5E-06	0.1	4E-06	0.08
Commercial/Industrial												
0-2 ft bgs	RME	Total Risk	4E-06	0.02	7E-06	0.04	6E-06	0.04	7E-06	0.04	4E-06	0.02
	CTE	Total Risk	1E-07	0.004	3E-07	0.008	2E+07	0.006	2E-07	0.007	2E-07	0.005
Construction Worker												
0-2 ft bgs	RME	Total Risk	5E-07	0.07	8E-07	0.1	7E-07	0.1	8E-07	0.1	4E-07	0.05
	CTE	Total Risk	1E-08	0.002	3E-08	0.005	3E-08	0.004	3E-08	0.004	2E-08	0.003
0-8 ft bgs	RME	Total Risk	3E-07	0.05	6E-07	0.2	6E-07	0.09	9E-07	0.9	4E-07	0.05
	CTE	Total Risk	2E-08	0.002	3E-08	0.006	3E-08	0.005	3E-08	0.02	2E-08	0.003

Notes:

1	Includes risk from background
CTE	Central tendency exposure
RME	Reasonable maximum exposure

TABLE 10-2: HUMAN HEALTH RISK ASSESSMENT SUMMARY FOR GROUNDWATER

Remedial Investigation Report for Sites 9, 13, 19, 22, and 23, Alameda Point, Alameda, California

EXPOSURE SCENARIOS			SITE 9[1]		SITE 13[1]		SITE 19[1]		SITE 22[1]		SITE 23[1]	
			Cancer	Non-cancer	Cancer	Non-cancer	Cancer	Non-cancer	Cancer	Non-cancer	Cancer	Non-cancer
Residential												
0-2 ft bgs	RME	Total Risk	3E-03	130	7E-04	31	2E-04	17	3E-03	85	6E-04	15
	CTE	Total Risk	7E-04	15	1E-04	24	5E-05	15	4E-04	29	2E-04	3
0-8 ft bgs	RME	Total Risk	1E-05	130	7E-04	31	2E-04	17	3E-03	85	6E-04	15
	CTE	Total Risk	7E-04	15	1E-04	24	5E-05	15	4E-04	29	2E-04	3
Commercial/Industrial												
0-2 ft bgs	RME	Total Risk	3.7E-06	0.0230	--	--	--	--	2.9E-06	0.06	--	--
	CTE	Total Risk	2.3E-08	0.0009	--	--	--	--	5.8E-08	0.006	--	--
Construction Worker												
0-2 ft bgs	RME	Total Risk	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	CTE	Total Risk	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
0-8 ft bgs	RME	Total Risk	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	CTE	Total Risk	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

1	Includes risk from background
CTE	Central tendency exposure
NA	Not Applicable; groundwater pathway for construction worker receptors is not complete
RME	Reasonable maximum exposure
	Exceeds the cancer risk range of 1.0E-4 to 1.0E-6 or an HQ of 1
--	Risk evaluated but no COPCs identified

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