PRC Environmer
1099 18th Street
Suite 1960
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N00296.001581
MOFFETT FIELD
SSIC NO. 5090.3

PRC

February 3, 1993

Ms. Elizabeth Adams
Regional Water Quality Review Board
2101 Webster Street, Suite 500
Oakland, California 94612

RE: Navy Channel Sediment Sampling Results Naval Air Station (NAS) Moffett Field

Dear Elizabeth:

Enclosed are tables summarizing the analytical results of sediment samples taken in September 1992 at the Navy Channel at NAS Moffett Field. Two composite sediment samples were obtained from the Navy Channel at that time. The first location was approximately 5 feet downstream of Building 191 discharge pipe and the second location was approximately 50 feet downstream of Building 191. In addition, two aliquots were taken at each location, at intervals of 0 to 3 inches and 3 to 5 inches. Both aliquots from 0 to 3 inches were composited into one sample, SS5-3; similarly both aliquots from 3 to 5 inches were composited into sample SS5-5. Finally, one surface water sample (SWNC-50) was collected approximately 50 feet downstream from the Building 191 discharge pipe. All of the samples were analyzed for metals, volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), pesticides and polychlorinated biphenyls, purgeable total petroleum hydrocarbons (TPH) as gasoline, and extractable TPH as diesel.

The Navy is currently planning to conduct additional investigations at the Navy Channel to further characterize the sediments as part of the site-wide ecological assessments (SWEA) and additional investigations in the vicinity of the new golf course landfill. The results of these investigations will be included in the SWEA reports or the site-wide remedial investigation (RI) report. PRC Environmental Management, Inc. will continue to send you the results of any future samples taken. If you have any questions regarding the analytical results please contact Dirk Applegate at (303) 295-1101.

Sincerely,

PRC Environmental Management, Inc.

Michael N. Young

for Joshua D. Marvil
Project Manager

Enclosures

cc: Stephen Chao, WESTDIV
Camille Garibaldi, WESTDIV
LT Susanne Openshaw, NAS Moffett Field
Roberta Blank, EPA
Cyrus Shabahari, Cal EPA
PRC File

contains recycled fiber and is recyclable

VOLATILE ORGANIC ANALYSIS

Project : MOFFETT
Lab. : MIDPAC ENV LAB
Reviewer : S9040
Date : 02/03/93 11:01:54

Form 1A -- EPA Specification OLM 01.1.1 (format A)

Concentrations in UG/KG Matrix: SOIL

PRC Sample ID	SS5-3			SS5-5			SWNC-50								
EPA Sample #	SS5-3			SS5-5			SWNC-50								
Date Received	09/11/92			09/11/92			09/11/92								
Date Analyzed	09/21/92			09/21/92			09/20/92								
Compound	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com
Chloromethane	14	U		17	U		2	U							
Bromomethane	14	U		17	U		2	U							
Vinyl Chloride	14	U		17	U		2	U							
Chloroethane	14	U		17	U		2	U							
Methylene Chloride	14	U		17	U		0.7	J							
Acetone	53			54			2								
Carbon Disulfide	14	U		7	J		2	U							
1,1-Dichloroethene	14	U		17	U		2	U							
1,1-Dichloroethane	14	U		17	U		2	U							
1,2-Dichloroethene (total)	14	U		17	U		0.4	J							
Chloroform	14	U		17	U		2	U							
1,2-Dichloroethane	14	U		17	U		2	U							
2-Butanone	10	J		10	J		2	U							
1,1,1-Trichloroethane	14	U		17	U		2	U							
Carbon Tetrachloride	14	U		17	U		2	U							
Bromodichloromethane	14	U		17	U		2	U							
1,2-Dichloropropane	14	U		17	U		2	U							
cis-1, 3-Dichloropropene	14	U		17	U		2	U							
Trichloroethene	14	U		17	U		1	J							
Dibromochloromethane	14	U		17	U		2	U							
1,1,2-Trichloroethane	14	U		17	U		2	U							
Benzene	14	U		17	U		2	U							
trans-1, 3-Dichloropropene	14	U		17	U		2	U							
Bromoform	14	U		17	U		2	U							
4-Methyl-2-Pentanone	14	U		17	U		2	U							
2-Hexanone	14	U		17	U		2	U							
Tetrachloroethene	14	U		17	U		2	U							
1,1,2,2-Tetrachloroethane	14	U		17	U		2	U							
Toluene	14	U		17	U		2	U							
Chlorobenzene	14	U		17	U		2	U							
Ethylbenzene	14	U		17	U		2	U							
Styrene	14	U		17	U		2	U							
Xylene (total)	14	U		17	U		2	U							

Val - Validity Refer to data qualifier definitions.
Com - Comments
NA - Not Analyzed

Comments:
D - Laboratory Duplicate
EB - Equipment Blank
FB - Field Blank
TB - Trip Blank

MS - Matrix Spike
MSD - Matrix Spike Duplicate

SEMIVOLATILE ORGANIC ANALYSIS

Project : MOFFETT
Lab. : MIDPAC ENV LAB
Reviewer : S9040
Date : 02/03/93 11:03:33

Form 1BC -- EPA Specification OLM 01.1.1 (format A)

Concentrations in UG/KG Matrix: SOIL

PRC Sample ID	SS5-3			SS5-5				SS5-3			SS5-5		
EPA Sample #	SS5-3			SS5-5				SS5-3			SS5-5		
Date Received	09/11/92			09/11/92				09/11/92			09/11/92		
Date Extracted	09/18/92			09/18/92				09/18/92			09/18/92		
Date Analyzed	09/23/92			09/23/92				09/23/92			09/23/92		
Compound	Result	Val	Com	Result	Val	Com	Compound	Result	Val	Com	Result	Val	Com
Phenol	14000	U		17000	U		2,4-Dinitrophenol	36000	U		42000	U	
bis(2-Chloroethyl)ether	14000	U		17000	U		4-Nitrophenol	36000	U		42000	U	
2-Chlorophenol	14000	U		17000	U		Dibenzofuran	14000	U		17000	U	
1,3-Dichlorobenzene	14000	U		17000	U		2,4-Dinitrotoluene	14000	U		17000	U	
1,4-Dichlorobenzene	14000	U		17000	U		Diethylphthalate	14000	U		17000	U	
1,2-Dichlorobenzene	14000	U		17000	U		4-Chlorophenyl-phenylether	14000	U		17000	U	
2-Methylphenol	14000	U		17000	U		Fluorene	14000	U		17000	U	
2,2'-oxybis(1-Chloropropane)	14000	U		17000	U		4-Nitroaniline	36000	U		42000	U	
4-Methylphenol	14000	U		17000	U		4,6-Dinitro-2-methylphenol	36000	U		42000	U	
N-Nitroso-di-n-propylamine	14000	U		17000	U		N-Nitrosodiphenylamine (1)	2300	BJ		2800	BJ	
Hexachloroethane	14000	U		17000	U		4-Bromophenyl-phenylether	14000	U		17000	U	
Nitrobenzene	14000	U		17000	U		Hexachlorobenzene	14000	U		17000	U	
Isophorone	14000	U		17000	U		Pentachlorophenol	36000	U		42000	U	
2-Nitrophenol	14000	U		17000	U		Phenanthrene	2400	J		17000	U	
2,4-Dimethylphenol	14000	U		17000	U		Anthracene	410	J		17000	U	
bis(2-Chloroethoxy)methane	14000	U		17000	U		Carbazole	390	J		17000	U	
2,4-Dichlorophenol	14000	U		17000	U		Di-n-butylphthalate	14000	U		17000	U	
1,2,4-Trichlorobenzene	14000	U		17000	U		Fluoranthene	2900	J		1600	J	
Naphthalene	14000	U		17000	U		Pyrene	2500	J		1400	J	
4-Chloroaniline	14000	U		17000	U		Butylbenzylphthalate	14000	U		17000	U	
Hexachlorobutadiene	14000	U		17000	U		3,3'-Dichlorobenzidine	14000	U		17000	U	
4-Chloro-3-methylphenol	14000	U		17000	U		Benzo(a)anthracene	1400	J		17000	U	
2-Methylnaphthalene	14000	U		17000	U		Chrysene	1800	J		17000	U	
Hexachlorocyclopentadiene	14000	U		17000	U		bis(2-Ethylhexyl)phthalate	1900	J		17000		
2,4,6-Trichlorophenol	14000	U		17000	U		Di-n-octylphthalate	14000	U		17000	U	
2,4,5-Trichlorophenol	36000	U		42000	U		Benzo(b)fluoranthene	1300	J		17000	U	
2-Chloronaphthalene	14000	U		17000	U		Benzo(k)fluoranthene	1100	J		17000	U	
2-Nitroaniline	36000	U		42000	U		Benzo(a)pyrene	1200	J		17000	U	
Dimethylphthalate	14000	U		17000	U		Indeno(1,2,3-cd)pyrene	14000	U		17000	U	
Acenaphthylene	14000	U		17000	U		Dibenz(a,h)anthracene	14000	U		17000	U	
2,6-Dinitrotoluene	14000	U		17000	U		Benzo(g,h,i)perylene	14000	U		17000	U	
3-Nitroaniline	36000	U		42000	U								
Acenaphthene	14000	U		17000	U								

Val - Validity Refer to data qualifier definitions.
Com - Comments
NA - Not Analyzed

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SEMIVOLATILE ORGANIC ANALYSIS

Project : MOFFETT
Lab. : MIDPAC ENV LAB
Reviewer : s9040
Date : 02/01/93 09:41:13

Form 1BC -- EPA Specification OLM 01.1.1 (format A)

Concentrations in UG/KG Matrix: SOIL

PRC Sample ID	SWNC-50							SWNC-50					
EPA Sample #	SWNC50							SWNC50					
Date Received	09/11/92							09/11/92					
Date Extracted	09/14/92							09/14/92					
Date Analyzed	09/21/92							09/21/92					
Compound	Result	Val	Com	Result	Val	Com	Compound	Result	Val	Com	Result	Val	Com
Phenol	10	U					2,4-Dinitrophenol	25	U				
bis(2-Chloroethyl)ether	10	U					4-Nitrophenol	25	U				
2-Chlorophenol	10	U					Dibenzofuran	10	U				
1,3-Dichlorobenzene	10	U					2,4-Dinitrotoluene	10	U				
1,4-Dichlorobenzene	10	U					Diethylphthalate	10	U				
1,2-Dichlorobenzene	10	U					4-Chlorophenyl-phenylether	10	U				
2-Methylphenol	10	U					Fluorene	10	U				
2,2'-oxybis(1-Chloropropane)	10	U					4-Nitroaniline	25	U				
4-Methylphenol	10	U					4,6-Dinitro-2-methylphenol	25	U				
N-Nitroso-di-n-propylamine	10	U					N-Nitrosodiphenylamine (1)	2	BJ				
Hexachloroethane	10	U					4-Bromophenyl-phenylether	10	U				
Nitrobenzene	10	U					Hexachlorobenzene	10	U				
Isophorone	10	U					Pentachlorophenol	25	U				
2-Nitrophenol	10	U					Phenanthrene	10	U				
2,4-Dimethylphenol	10	U					Anthracene	10	U				
bis(2-Chloroethoxy)methane	10	U					Carbazole	10	U				
2,4-Dichlorophenol	10	U					Di-n-butylphthalate	10	U				
1,2,4-Trichlorobenzene	10	U					Fluoranthene	10	U				
Naphthalene	10	U					Pyrene	10	U				
4-Chloroaniline	10	U					Butylbenzylphthalate	10	U				
Hexachlorobutadiene	10	U					3,3'-Dichlorobenzidine	10	U				
4-Chloro-3-methylphenol	10	U					Benzo(a)anthracene	10	U				
2-Methylnaphthalene	10	U					Chrysene	10	U				
Hexachlorocyclopentadiene	10	U					bis(2-Ethylhexyl)phthalate	10	U				
2,4,6-Trichlorophenol	10	U					Di-n-octylphthalate	10	U				
2,4,5-Trichlorophenol	25	U					Benzo(b)fluoranthene	10	U				
2-Chloronaphthalene	10	U					Benzo(k)fluoranthene	10	U				
2-Nitroaniline	25	U					Benzo(a)pyrene	10	U				
Dimethylphthalate	10	U					Indeno(1,2,3-cd)pyrene	10	U				
Acenaphthylene	10	U					Dibenz(a,h)anthracene	10	U				
2,6-Dinitrotoluene	10	U					Benzo(g,h,i)perylene	10	U				
3-Nitroaniline	25	U											
Acenaphthene	10	U											

Val - Validity Refer to data qualifier definitions.
Com - Comments
NA - Not Analyzed

Comments:
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EB - Equipment Blank
FB - Field Blank
TB - Trip Blank

MS - Matrix Spike
MSD - Matrix Spike Duplicate

TPH Purgeable GAS & BETX ANALYSIS

Project : MOFFETT
Lab. : MIDPAC ENV LAB
Reviewer : S9040
Date : 02/03/93 11:08:15

Form TPH -- EPA Specification OLM 01.1.1 (format A)

Concentrations in UG/KG Matrix: SOIL

PRC Sample ID	SS5-3			SS5-5			SWNC-50								
EPA Sample #	SS5-3			SS5-5			SWNC-50								
Date Received	09/11/92			09/11/92			09/11/92								
Date Analyzed	09/21/92			09/21/92			09/18/92								
Compound	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com
GASOLINE	1400	U		1700	U		50	U							
BENZENE	7	U		8	U		0.5	U							
ETHYLBENZENE	7	U		8	U		0.5	U							
TOLUENE	7	U		8	U		0.5	U							
TOTAL XYLENES	7	U		8	U		0.5	U							
OTHER COMPONENTS	7	U		2600			0.5	U							

Other analytes were analyzed for but were not detected/qualified.
U - Undetected at the concentration reported.
B - Analyte is found in associated blank, as well as in the sample.
J - Estimated Value
D - Diluted sample

MS - Matrix Spike
MSD - Matrix Spike Duplicate

TPH Extractable ANALYSIS

Project : MOFFETT
Lab. : MIDPAC ENV LAB
Reviewer : S9040
Date : 02/03/93 11:35:44

Form TPH -- EPA Specification OLM 01.1.1 (format A)

Concentrations in UG/KG Matrix: SOIL

PRC Sample ID	SS5-3			SS5-5			SWNC-50								
EPA Sample #	SS5-3			C04040			SWNC-50								
Date Received	09/11/92			09/11/92			09/11/92								
Date Extracted	09/14/92			/ /			09/14/92								
Date Analyzed	09/23/92			09/23/92			09/18/92								
Compound	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com
DIESEL	1400	U		17000	U		50	U							
KEROSENE	1400	U		17000	U		50	U							
MOTOR OIL	14000	U		170000	U		500	U							
JP-5	1400	U		17000	U		50	U							
OTHER COMPONENTS	960000			12000000			50	U							

Other analytes were analyzed for but were not detected/qualified.
U - Undetected at the concentration reported.
B - Analyte is found in associated blank, as well as in the sample.
J - Estimated Value
D - Diluted sample

MS - Matrix Spike
MSD - Matrix Spike Duplicate

PESTICIDE ORGANIC ANALYSIS

Project : MOFFETT
Lab. : MIDPAC ENV LAB
Reviewer : S9040
Date : 02/03/93 12:31:15

Form 1D -- EPA Specification OLM 01.1.1 (format A)

Concentrations in UG/KG Matrix: SOIL

PRC Sample ID	SS5-3			SS5-3DL			SS5-5			SS5-5DL			SWNC-50		
Date Received	09/11/92			09/11/92			09/11/92			09/11/92			09/11/92		
Date Extracted	09/14/92			09/14/92			09/14/92			09/14/92			09/14/92		
Date Analyzed	10/13/92			10/13/92			10/13/92			10/13/92			10/13/92		
Compound	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com
alpha-BHC	4.9	U		49	U		140	U		280	U		0.050	U	
beta-BHC	4.9	U		49	U		7.9	JP		9.3	DJP		0.050	U	
delta-BHC	4.9	U		49	U		140	U		280	U		0.050	U	
gamma-BHC (Lindane)	4.9	U		49	U		140	U		280	U		0.050	U	
Heptachlor	4.9	U		49	U		140	U		280	U		0.050	U	
Aldrin	4.9	U		49	U		140	U		280	U		0.050	U	
Heptachlor epoxide	4.9	U		49	U		140	U		280	U		0.050	U	
Endosulfan I	4.9	U		49	U		140	U		280	U		0.050	U	
Dieldrin	58	DP		83	JP		250	JP		270	DJP		0.00073	JP	
4,4'-DDE	110	DP		150	P		610	P		640	DP		0.10	U	
Endrin	130	DP		210	P		850			950	D		0.00086	J	
Endosulfan II	9.6	U		96	U		270	U		550	U		0.10	U	
4,4'-DDD	630	DP		920			7900			9400	D		0.0043	JP	
Endosulfan sulfate	3.5	BDJP		96	U		270	U		550	U		0.10	U	
4,4'-DDT	9.6	U		96	U		270	U		30	BDJP		0.10	U	
Methoxychlor	49	U		490	U		1400	U		2800	U		0.50	U	
Endrin ketone	9.6	U		96	U		270	U		550	U		0.10	U	
Endrin aldehyde	9.6	U		47	JP		120	JP		130	DJP		0.10	U	
alpha-Chlordane	78	D		49	U		140	U		420	D		0.050	U	
gamma-Chlordane	47	DP		64	P		190	P		190	DJP		0.050	U	
Toxaphene	490	U		4900	U		14000	U		28000	U		5.0	U	
Aroclor-1016	96	U		960	U		2700	U		5500	U		1.0	U	
Aroclor-1221	190	U		1900	U		5600	U		11000	U		2.0	U	
Aroclor-1232	96	U		960	U		2700	U		5500	U		1.0	U	
Aroclor-1242	96	U		960	U		2700	U		5500	U		1.0	U	
Aroclor-1248	96	U		960	U		2700	U		5500	U		1.0	U	
Aroclor-1254	1900	D		2900			9700	P		12000	DP		1.0	U	
Aroclor-1260	96	U		960	U		2700	U		5500	U		1.0	U	

Val - Validity Refer to data qualifier definitions.
Com - Comments
NA - Not Analyzed

Comments:
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INORGANIC ANALYSIS

Project : MOFFETT
Lab. : MID PAC ENV LAB
Reviewer : s9040
Date : 02/01/93 09:35:18

Form I -- EPA Specification ILM 01.0 (format A)

Concentrations in MG/KG Matrix: SOIL

PRC Sample ID	SS5-3			SS5-5			SWNC-50								
EPA Sample #	XSS5-3			XSS5-5			SWNC50								
Date Received	09/11/92			09/11/92			09/11/92								
Analyte	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com
Aluminum	12300.00			15800.00			11.00	U							
Antimony	7.20	BN		13.70	BN		4.60	U							
Arsenic	2.10	BNW		4.30	NS		20.00	UNW							
Barium	108.00			145.00			55.40	B							
Beryllium	0.39	B		0.39	B		0.20	UN							
Cadmium	5.30	*		8.90	*		0.80	UN							
Calcium	80600.00			51200.00			218000.00	E*							
Chromium	106.00	N		341.00	N		0.80	U							
Cobalt	21.60			24.70			3.10	U							
Copper	114.00	EN		292.00	EN		2.70	B							
Iron	21000.00			28600.00			23.10	B							
Lead	221.00	*+		5240.00	*		20.00	UN							
Magnesium	10400.00			12600.00			460000.00	E*							
Manganese	6650.00			5880.00			746.00	EN*							
Mercury	0.29			1.00			0.20	U							
Nickel	53.20			73.10			2.20	U							
Potassium	338.00	B		624.00	B		100000.00	E*							
Selenium	1.20	BNS		2.00	NS		30.00	UNW							
Silver	5.50	N*		31.90	N*		0.40	U							
Sodium	4040.00			5610.00			3700000.00	E							
Thallium	0.87	UNW		0.86	UNW		30.00	UN							
Vanadium	47.10			59.30			4.30	B							
Zinc	516.00	N*		1990.00	N*		6.40	B							
Cyanide															

U - Undetected at the concentration reported.
B - Reported value is greater than the Instrument Detection Limit (IDL), but less than the Contract Required Detection Limit (CRDL).
W - Post digestion spike for Furnace Atomic Absorption (AA) analysis is out of control limits.
E - Reported value is estimated because of the presence of interference.
N - Spiked sample recovery not within control limits.
S - Determined by Method of Standard Additions (MSA).
* - Duplicate analysis precision is not within control limits.
+ - Correlation coefficient is less than 0.995 for the MSA.
M - Duplicate injection precision was not met for AA analysis.

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