



STD 4251

LEVINE•FRICKE

ENGINEERS, HYDROGEOLOGISTS & APPLIED SCIENTISTS

13 JUL 1993 11:00P

July 16, 1993

LF-1649.12

Ms. Susan Hugo
Alameda County Health Care Services Agency
80 Swan Way, Room 350
Oakland, California 94621

Subject: ~~Containment of Soil Excavated from the Former
Bashland Company Property, 4015 Hollis Street,
Emeryville, California~~

Dear Ms. Hugo:

As we discussed in our meeting at the Regional Water Quality Control Board office on June 2, 1993, soil excavated from the former Bashland Property ("the Property") will be contained on the Phase I Area of the Yerba Buena/East Baybridge Project Site ("the Site"), east of Hollis Street, in Emeryville and Oakland, California, in conjunction with development activities.

Approximately 700 cubic yards of oil-affected soil is currently stockpiled on the Property, located at 4015 Hollis Street. As we discussed, the excavated soil will be contained on the Site in accordance with the Site Remedial Plan dated February 11, 1991 (Levine•Fricke 1991), and the Containment Plan for Total Petroleum Hydrocarbon-Affected Soil, Yerba Buena Project Site ("Containment Plan"), dated March 10, 1992 (Levine•Fricke 1992). The plan for containing soil affected with total petroleum hydrocarbons (TPH) on site was approved by the RWQCB in a letter dated June 24, 1992 to Mr. Ric Notini of Catellus.

In accordance with the Containment Plan, the oil-affected soil excavated from the Property will be placed beneath proposed building pads, asphalt, and/or concrete to minimize possible exposure to the affected soils and mitigate future effects to shallow ground water by reducing surface infiltration through the soil. To monitor potential future effects of TPH-affected soil on ground water beneath the Site, ground-water samples will be collected from selected ground-water monitoring wells and analyzed for TPH as oil and diesel on a periodic basis (Levine•Fricke 1993).

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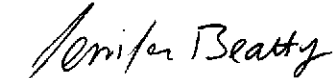
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As you requested, we have attached a summary of the results of the soil investigation and remediation activities conducted by Levine-Fricke at the Property, and a summary of analytical results for soil samples collected during these activities, please refer to the report entitled "Soil Investigation and Remediation Activities Report for the Bashiand Property, Linda Bacon East Baybridge Development Project, Emeryville, California" and dated January 1993.

We anticipate that the petroleum-affected soils will be removed from the Site during August or September 1993 in conjunction with proposed development activities.

If you have any questions, please do not hesitate to call me or Cindy Barclay.

Sincerely,



Jenifer J. Beatty
Project Hydrogeologist

Attachment

cc: Richard Hiett, Regional Water Quality Control Board
Kimberly Brandt, Catellus
Pat Cashman, Catellus
Dennis Wong, Catellus

REFERENCES

- Levine·Fricke, Inc. 1991. Site Remedial Plan, Yerba Buena Project Site, Emeryville and Oakland, California. February 11.
- . 1992. Containment Plan for Total Petroleum Hydrocarbon-Affected Soils, Yerba Buena Project Site, Emeryville and Oakland, California. March 10.
- . 1993. Correspondence to Ms. Susan Hugo of Alameda County Health Care Services Agency. Subject: Summary of Investigation Activities Performed to Date at the Former Bashland Property, Yerba Buena Project Site, Emeryville, California. February 23

TABLE 1

CHEMICAL ANALYSES RESULTS FOR MONITORING WELL LF-31
FORMER BASHLAND COMPANY PROPERTY
(results in parts per million [ppm])

Date Sampled	Lab		TPH		Benzene	Toluene	Ethylbenzene	Total Xylenes	TCE	1,2-DCE
			TRPH	as Diesel						
12-Feb-93	ANA	(1)	<5	<0.05	<0.05	<0.0005	<0.0005	<0.0005	NA	NA
26-May-93 duplicate	ANA		<5	0.200	NA	NA	NA	NA	0.020	0.0039
			<5	0.310	NA	NA	NA	NA	0.020	0.0034
14-Jul-93 duplicate	ANA	(2)	<5	0.150	NA	NA	NA	NA	0.0073	0.0024
	AEN		<1	0.400	NA	NA	NA	NA	0.010	0.002
09-Dec-93	ANA	(3)	<5	0.200	<0.05	<0.0005	<0.0005	<0.0005	NA	NA

Data entered by NAS/11-Jan-94. Proofed by JJB.

TRPH - Total recoverable petroleum hydrocarbons as oil and grease (Standard Methods 5520BF)

TCE - Trichloroethene (EPA Method 8010)

1,2-DCE - 1,2-dichloroethene (EPA Method 8010)

NA - Not analyzed

ANA - Anametrix, Inc., of San Jose, California

AEN - American Environmental Network of Pleasant Hill, California

(1) Ground-water samples also analyzed for cadmium, chromium, nickel, lead, and zinc, and semivolatile organic compounds using EPA Method 8270. None of these compounds were detected above laboratory detection limits.

(2) Tetrachloroethene (PCE) detected at a concentration of 0.0063 ppm.

(3) TPH as motor oil was detected at 0.10 ppm using EPA Method 3510 GCF10.

TABLE 1
 ANALYTICAL RESULTS FOR SOIL SAMPLES COLLECTED FROM BENEATH
 THE RETAINING WALL LOCATED NORTH OF THE FORMER TANK EXCAVATION
 FORMER BASHLAND PROPERTY, EMERYVILLE, CALIFORNIA
 (results expressed in milligrams per kilograms [mg/kg])

Sample ID	Depth (ft bgs)	TPHg	TPHd	O & G	Benzene	Toluene	Ethyl-benzene	Xylenes
SS-1	4.5	<0.5	<10	30	<0.005	<0.005	<0.005	<0.005
SS-2	4.5	<0.5	<10	50	<0.005	<0.005	<0.005	<0.005
SS-3	4.5	<0.5	<10	87	<0.005	<0.005	<0.005	<0.005
SS-4	4.5	<0.5	31	50	<0.005	<0.005	<0.005	<0.005
SS-6	4.5	<0.5	<10	100	<0.005	<0.005	<0.005	<0.005

Data entered by MEK/16-Mar-93. Data proofed by MEK/16-Mar-93. QA/QC by JJB/16-Mar-93.

NOTES

All soil samples also were analyzed for volatile organic compounds using EPA Method 8010 and semivolatile organic compounds using EPA Method 8270. Analytical results for these analyses are discussed in Section 4.4 of the report.

ft bgs = feet below ground surface.

mg/kg = milligrams per kilogram; equivalent to parts per million.

TPHg = Total petroleum hydrocarbons as gasoline; analyzed using Modified EPA Method 8015/5030.

TPHd = Total petroleum hydrocarbons as diesel; analyzed using EPA Method 3550.

O & G = Oil and grease; analyzed using Standard Method 5520EF.

Benzene, toluene, ethylbenzene, and xylenes analyzed using Modified EPA Method 8020/5030.

ANALYTICAL RESULTS FOR STOCKPILE SAMPLES (1)

FORMER SUPERFUND SITE, 10000 S. GARDNER AVENUE, DENVER, CO 80231

Sample ID	Stockpile	Sample Date	Notes	TPHg	TPHd	O & G	TRPH	Benzene	Toluene	Ethyl-benzene	Xylenes	PCBs	Organic Lead
SS-10-1.5		10-Feb-93	(2)	1.7	23	NA	150	<0.005	<0.005	<0.005	<0.005	<0.08/<0.16	<0.50
SP-1	SP-1	08-Apr-93		<0.5	[REDACTED]	NA	[REDACTED]	<0.0005	<0.0005	<0.0005	<0.0005	NA	NA
SP-3	SP-2	08-Apr-93		<0.5	[REDACTED]	NA	[REDACTED]	<0.0005	<0.0005	<0.0005	<0.0005	NA	NA
SP-4A	SP-3	08-Apr-93		<0.5	[REDACTED]	NA	[REDACTED]	<0.0005	<0.0005	<0.0005	<0.0005	NA	NA
SP-4	SP-4	12-Apr-93	(3)	5.4	[REDACTED]	NA	[REDACTED]	<0.005	<0.005	<0.005	<0.005	[REDACTED]	NA
SP-5	SP-5	13-Apr-93		NA	[REDACTED]	NA	[REDACTED]	NA	NA	NA	NA	NA	NA
SP-6A	SP-6	13-Apr-93		NA	12	NA	160	NA	NA	NA	NA	NA	NA
SP-6C	SP-6	13-Apr-93	(4)	NA	<100	NA	[REDACTED]	NA	NA	NA	NA	NA	NA
SP-7	SP-7	13-Apr-93		NA	[REDACTED]	NA	[REDACTED]	NA	NA	NA	NA	NA	NA
SP-10A	SP-10	18-May-93		NA	NA	60	40	NA	NA	NA	NA	NA	NA
SP-10B	SP-10	18-May-93		NA	NA	140	[REDACTED]	NA	NA	NA	NA	NA	NA
SP-10C	SP-10	18-May-93		NA	NA	170	[REDACTED]	NA	NA	NA	NA	NA	NA
SP-10D	SP-10	18-May-93		NA	NA	210	[REDACTED]	NA	NA	NA	NA	NA	NA
SP-11A	SP-11	18-May-93		NA	NA	490	[REDACTED]	NA	NA	NA	NA	NA	NA
SP-11B	SP-11	18-May-93		NA	NA	190	[REDACTED]	NA	NA	NA	NA	NA	NA
SP-12A	SP-12	18-May-93		NA	NA	430	[REDACTED]	NA	NA	NA	NA	NA	NA
SP-12B	SP-12	18-May-93		NA	NA	80	60	NA	NA	NA	NA	NA	NA
SP-12C	SP-12	18-May-93		NA	NA	100	70	NA	NA	NA	NA	NA	NA
SP-12D	SP-12	18-May-93		NA	NA	100	80	NA	NA	NA	NA	NA	NA

Data entered by MEK/6-May-93, 25-May-93. Data proofed by MEK/25-May-93. QA/QC by MEK/24-May-93.

NOTES

mg/kg = milligrams per kilogram; equivalent to parts per million.

TPHg = Total petroleum hydrocarbons as gasoline; analyzed using Modified EPA Method 8015/5030 (GCFID).

TPHd = Total petroleum hydrocarbons as diesel; analyzed using EPA Method 3550.

Total O & G = Total Oil & Grease; analyzed using EPA Method 8020/5030.

TRPH = Total Recoverable Petroleum Hydrocarbons; analyzed using EPA Method 8020/5030.

Benzene, toluene, ethylbenzene, and xylenes analyzed using Modified EPA Method 8020/5030.

- (1) Laboratory QA/QC summary reports indicated that, with the exception of SP-4, "concentrations reported as diesel are primarily due to the presence of a heavier petroleum product of hydrocarbon range C18-C36, possibly motor oil." American Environmental Network was also asked to review chromatographs for soil samples collected from the site. The laboratory determined that concentrations detected using EPA Method 3550 for diesel were due to a "lubrication-type oil."
- (2) Laboratory QA/QC reports indicate the "concentration reported as TPHg is primarily due to a heavier petroleum product, possibly diesel."
- (3) Laboratory QA/QC reports indicate the concentration "does not match the pattern of gasoline but is calculated using gasoline response. Possibly mineral spirits and diesel hydrocarbons." Mineral spirits were reported at a concentration of 84 ppm.
- (4) 790 ppm of TPHg was reported for SP-10A.

DESCRIPTIONS FOR SPECIFIC COMPOUNDS ANALYZED
EPA METHOD 601/8010

<u>CAS #</u>	<u>COMPOUND NAME</u>	<u>ABBREVIATED NAME</u>
74-87-3	Chloromethane	Chloromethane
74-83-9	Bromomethane	Bromoethane
75-71-8	Dichlorodifluoromethane	Freon 12
75-01-4	Vinyl Chloride	Vinyl Chloride
75-00-3	Chloroethane	Chloroethane
75-09-2	Methylene Chloride	Methylene Chlor
75-69-4	Trichlorofluoromethane	Freon 11
75-35-4	1,1-Dichloroethene	1,1-DCE
75-34-3	1,1-Dichloroethane	1,1-DCA
156-59-2	Cis-1,2-Dichloroethene	Cis-1,2-DCE
156-60-5	Trans-1,2-Dichloroethene	Trans-1,2-DCE
67-66-3	Chloroform	Chloroform
76-13-1	Trichlorotrifluoroethane	Freon 113
107-06-2	1,2-Dichloroethane	1,2-DCA
71-55-6	1,1,1-Trichloroethane	1,1,1-TCA
56-23-5	Carbon Tetrachloride	Carbon Tet
75-27-4	Bromodichloromethane	BromodichloroMe
78-87-5	1,2-Dichloropropane	1,2-DCPA
10061-02-6	Trans-1,3-Dichloropropene	Trans-1,3-DCPE
79-01-6	Trichloroethene	TCE
124-48-1	Dibromochloromethane	DibromochloroMe
79-00-5	1,1,2-Trichloroethane	1,1,2-TCA
10061-01-5	Cis-1,3-Dichloropropene	Cis-1,3-DCPE
110-75-8	2-Chloroethylvinylether	Chloroethylvinl
75-25-2	Bromoform	Bromoform
127-18-4	Tetrachloroethene	PCE
79-34-5	1,1,2,2-Tetrachloroethane	PCA
108-90-7	Chlorobenzene	Chlorobenzene
95-50-1	1,2-Dichlorobenzene	1,2-DCB
541-73-1	1,3-Dichlorobenzene	1,3-DCB
106-46-7	1,4-Dichlorobenzene	1,4-DCB
352-33-0	p-Chlorofluorobenzene	Chlorofluoroben

mh/3426 - 10MH