

Beta Associates Inc.

Consultants in Waste Management, Environmental Control and the Geotechnical Sciences

May 9, 1988
Project 156-44.2

Lincoln Property Company
248 Lincoln Centre Drive
Foster City, California 94404

Attention: Mr. John Young

Subject: Sediment Analysis
Elmhurst Business Park
85th Avenue and San Leandro Street
Oakland, California

Gentlemen:

As requested, on April 11, 1988 samples of the accumulated sediment within the Alameda County Flood Control Channel running through the subject site was sampled for laboratory analysis. Two samples were obtained; one upgradient sample from the inspection pit toward the east end of the site and one downgradient sample from the end of the flood control pipe at the west end of the site. Storm water within this channel flows from east to west.

Both samples were obtained within two-inch diameter by four-inch long brass tubes, wrapped in foil, capped at both ends, labeled, and kept in a refrigerated container for transportation to California Water Labs of Modesto for analysis, accompanied by appropriate chain of custody documents. Analytical tests performed on the two sediment samples were selected by request of the Regional Water Quality Control Board and include: 1) total petroleum hydrocarbons using gasoline, diesel, motor oil, paint thinner, and kerosene as comparison standards, and 2) heavy metals on the Priority Pollutant List under Total Threshold Limit Concentration (TTLC) conditions.

Results of analyses revealed the upgradient and downgradient samples to contain 940 parts per million (ppm) and 980 ppm of motor oil, respectively. The remainder of the petroleum hydrocarbon comparison standards were not detected (see Table 1). Results of the analyses for heavy metals revealed all metals detected to be below State Department of Health Services' (DHS) - established levels so as not to be considered hazardous with respect to net weight of the individual metals in the soil. However, the concentrations of lead and selenium from the upgradient sample and lead from the downgradient sample did exceed ten times the Soluble Threshold Limit Concentration (STLC) warranting a Waste Extraction Test (WET) to be performed (see Table 1). The STLC determines the amount of extractable substance in a waste. The STLC values established by the DHS for lead and selenium are 5 ppm and 1 ppm, respectively.

Results of the WFT on the upgradient and downgradient samples revealed STLC concentrations for lead in the downgradient sample and selenium in the upgradient sample to be below the DHS-established STLC values. ~~The STLC~~ concentration for lead in the upgradient sample, however, fell above the DHS level with a concentration of 8.62 ppm (see Table 1). Results of all laboratory analyses are attached.

Conclusions/Recommendations

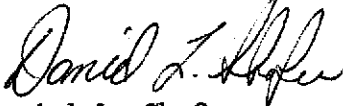
Laboratory analyses have revealed the sediment samples obtained from the Alameda County Flood Control Channel to contain moderately high concentrations of petroleum hydrocarbons as motor oil, and lead exceeding the DHS - established STLC to consider it a hazardous waste. Since lead exceeded the STLC in only one of the two sediment samples, we cannot deduce how much of the sediment from the flood control channel is considered hazardous waste, unless more samples are obtained and analyzed.

Generally, since the STLC has been exceeded, the sediment has to be disposed of as a hazardous waste which means contracting a hazardous waste hauler to transport it to a Class I disposal site accompanied by all appropriate manifests. In order to have it hauled to a Class I site, however, the sediment will have to undergo a waste analysis profile where additional priority pollutant analyses will have to be performed before the landfill will accept it.


If you have any further questions on this matter, please do not hesitate to call.

Respectfully submitted,

BETA ASSOCIATES, INC.


Daniel L. Shafer
Project Geologist

reviewed by:

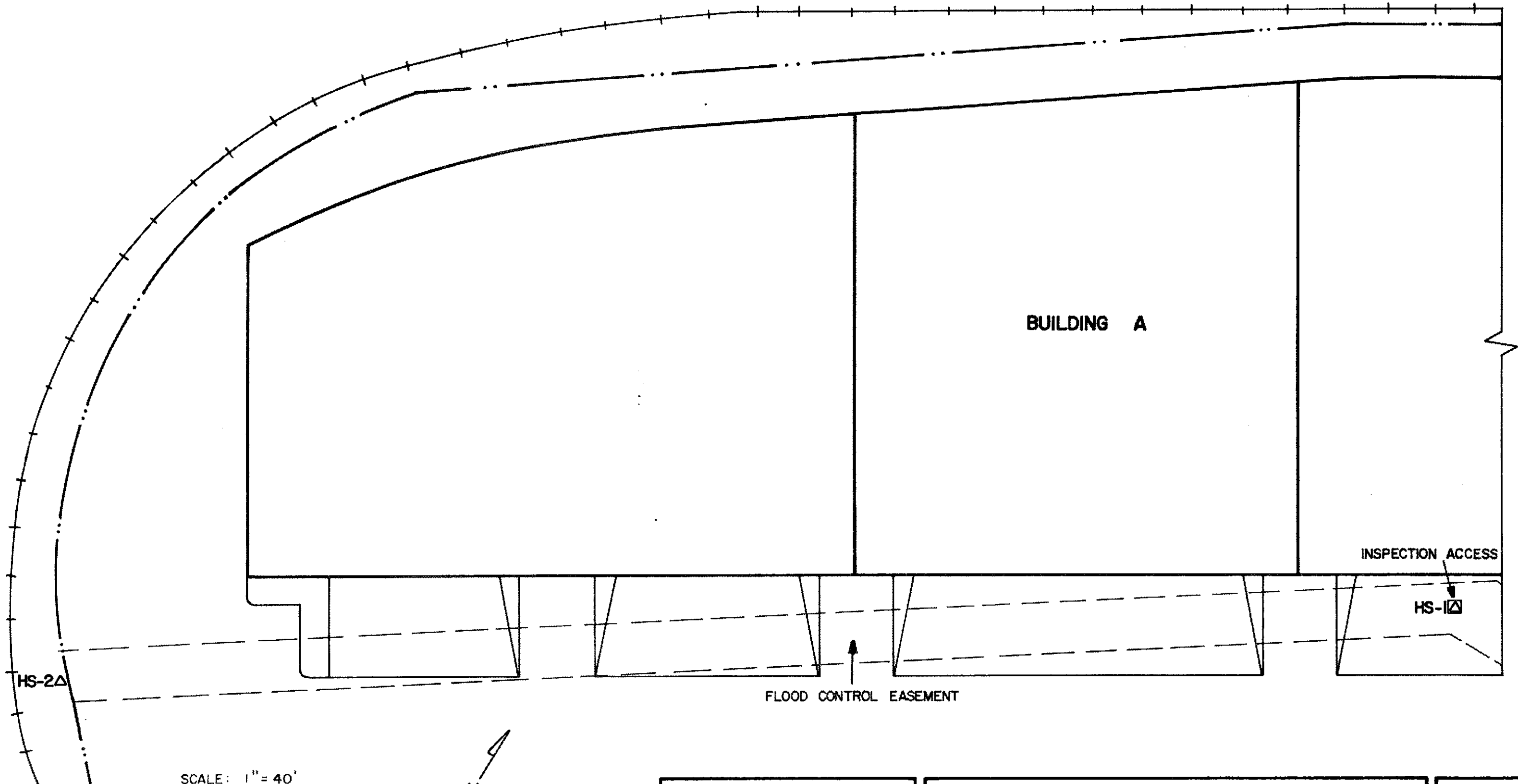

Jack E. McCollough
Registered Geologist #1559
Certified Engineering Geologist #905

DLS/JEM/pcf

Attachments

LEGEND

ΔHS Hand Sample Location



SCALE: 1" = 40'



Beta Associates

SAMPLE LOCATIONS—FLOOD CONTROL CHANNEL
ELMHURST BUSINESS PARK
OAKLAND, CALIFORNIA

FIGURE
1
186 - 442
AUGUST 1988

TABLE 1

Results of Chemical Analyses
Flood Control Channel Sediment

<u>Sample</u>	<u>Total Petroleum Hydrocarbons¹</u>				
	<u>Gasoline</u>	<u>Diesel</u>	<u>Motor Oil</u>	<u>Paint Thinner</u>	<u>Kerosene</u>
HS-1 (upgradient)	ND	ND	940	ND	ND
HS-2 (downgradient)	ND	ND	980	ND	ND

Priority Pollutant Metals (TTLC)¹

<u>Sample</u>	<u>Lead</u>	<u>TTLC (Lead)</u>	<u>STLC² (Lead)</u>	<u>Selenium</u>	<u>TTLC (Selenium)</u>	<u>STLC² (Selenium)</u>
HS-1 (upgradient)	175	1000	5	14.8	100	1
HS-2 (downgradient)	220	1000	5	2.55	100	1

Priority Pollutant Metals (STLC)²

<u>Sample</u>	<u>Lead</u>	<u>STLC</u>	<u>Selenium</u>	<u>STLC</u>
HS-1 (upgradient)	8.62	5	<0.005	1
HS-2 (downgradient)	3.40	5	NA	--

¹ concentrations presented in mg/kg (ppm).

² concentrations presented in mg/l (ppm).

ND means none detected.

NA means not analyzed.



No cc Req.

California Water Labs, Inc.

P. O. BOX 4249
1430 CARPENTER LANE — SUITE G
MODESTO, CA 95352
PHONE (209) 527-4050

RUSH
(gold)

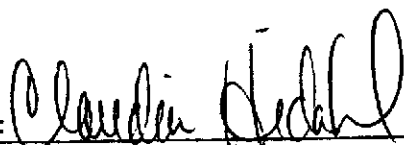
Purveyor Beta-Elmhurst Business Park
Street 2068 Lincoln Ave.
City San Jose Zip 95125
Sample I.D. Listed
Collected by: Dan Shaffer

Lab I.D. Listed
Purchase Order 156-44.2
Referring Lab
Date Collected 4-11-88

<u>CWL I.D.</u>	<u>Sample I.D.</u>	<u>Gasoline (mg/kg)</u>	<u>Paint Thinner (mg/kg)</u>
P-62062	HS-1 Up-gradient (sediment)	ND, 1.0	ND, 1.0
P-62063	HS-2 Down-gradient (sediment) surface	ND, 1.0	ND, 1.0

<u>CWL I.D.</u>	<u>Sample I.D.</u>	<u>Diesel mg/kg</u>	<u>Kerosene mg/kg</u>	<u>Motor Oil mg/kg</u>
P-62062	HS-1 Up-Gradient (sediment)	ND, < 50	ND, < 50	940
P-62063	HS-2 Down-Gradient (sediment) surface	ND, < 50	ND, < 50	980

Date Received 4-11-88
Date Started 4-12-88
Date Completed 4-14-88

By: 

California Water Labs, Inc.

P. O. BOX 4249
1430 CARPENTER LANE — SUITE G
MODESTO, CA 95352
PHONE (209) 527-4050

Purveyor Beta and Associates
Street 2068 Lincoln Ave.
City San Jose, CA Zip 95125
Sample I.D. HS-1 up gradient (sediment)
Collected by: Dan Shaffer

Lab I.D. P-62062
Purchase Order 156-44.2
Referring Lab
Date Collected 4-11-88
 Elmhurst Business Park

374 TLIC

Determination	Result mg/kg	State Allowable Limits mg/kg
Antimony	< 1.0	500
Arsenic	1.30	500
Barium	154.	10,000
Beryllium	< 0.5	75
Cadmium	2.45	100
Chromium	57.5	2,500
Cobalt	6.80	8,000
Copper	44.	2,500
Lead	175.	1,000
Mercury	0.24	20
Molybdenum	< 0.5	3,500
Nickel	38.	2,000
Selenium	14.8	100
Silver	0.85	500
Thallium	< 5.0	700
Vanadium	16.	2,400
Zinc	278.	5,000

Date Received 4-11-88
Date Started 4-11-88
Date Completed 4-21-88

By: *Dan Shaffer*

No cc Req.

California Water Labs, Inc.

P. O. BOX 4249
1430 CARPENTER LANE - SUITE G
MODESTO, CA 95352
PHONE (209) 527-4050

Purveyor Beta and Associates
Street 2068 Lincoln Ave.
City San Jose, CA Zip 95125
Sample I.D. HS-2 Down gradient (sediment)
Collected by: Dan Shaffer

Lab I.D. P-62063
Purchase Order 156-44.2
Referring Lab _____
Date Collected 4-11-88
Elmhurst Business Park

374 TTLC

Determination	Result mg/kg	State Allowable Limits mg/kg
Antimony	< 1.0	500
Arsenic	1.91	500
Barium	65.	10,000
Beryllium	< 0.5	75
Cadmium	1.00	100
Chromium	36.	2,500
Cobalt	5.5	8,000
Copper	53.	2,500
Lead	220.	1,000
Mercury	0.205	20
Molybdenum	< 0.5	3,500
Nickel	40.5	2,000
Selenium	2.55	100
Silver	1.85	500
Thallium	< 5.0	700
Vanadium	12.5	2,400
Zinc	231.	5,000

Date Received 4-11-88
Date Started 4-11-88
Date Completed 4-21-88

By: Scott Foster

No cc Req.

California Water Labs, Inc.

P. O. BOX 4249
1430 CARPENTER LANE — SUITE G
MODESTO, CA 95352
PHONE (209) 527-4050

RUSH
(gold)

Purveyor Beta and Associates
Street 2068 Lincoln Ave.
City San Jose Zip 95125
Sample I.D. Listed
Collected by: Dan Shaffer

Lab I.D. Listed
Purchase Order
Referring Lab
Date Collected 4-11-88

STLC

<u>CWL I.D.</u>	<u>Sample I.D.</u>	<u>Lead (mg/L)</u>	<u>Selenium (mg/L)</u>
P-62062	Up Gradient	8.62	< 0.005
P-62063	Down Gradient	3.40	

Date Received 4-11-88
Date Started 4-22-88
Date Completed 4-26-88

By: *Scott Foster*

California Water Labs, Inc.

P. O. BOX 4249
 1430 CARPENTER LANE — SUITE G
 MODESTO, CA 95352
 PHONE (209) 527-4050

CHAIN OF CUSTODY RECORD

Metals
Priority Pollutants
TPH (Total Petroleum Hydrocarbons)
Oil, Grease
8013M

PROJECT NAME: <i>Elmhurst Business Park #156-44.2</i>						Number of Containers	ANALYSTS REQUIRED				REMARKS
SAMPLERS (signature): <i>Don Walker</i>							Priority Pollutants	Metals	Oil, Grease	TPH	
Station Number	Date	Time	Comp.	Grab	Station Location						
* HS-1	4/11				Up-gradient (sediment)	1	✓	✓			RUSH Analysis - Need results by April 15 th
* HS-2	4/11				Down-gradient (sediment)	1	✓	✓			Thanks, Don
											* Analyze sediment only
Relinquished by (signature): <i>Don Walker</i>		Date / Time 4/11/88		Received by (signature):		Relinquished by (signature):		Date / Time		Received by (signature):	
Company or Agency: <i>Beta Associates</i>				Company or Agency:		Company or Agency:				Company or Agency:	
Relinquished by (signature):		Date / Time		Received by (signature):		Relinquished by:		Date / Time		Received by (signature):	
Company or Agency:				Company or Agency:		Company or Agency:				Company or Agency:	
Relinquished by (signature):		Date / Time		Received for Laboratory by (signature): <i>Don Walker</i>		Date / Time 4/11/88 12:20 PM		Remarks/Shipping Information			
Company or Agency:											

