



earth metrics incorporated

May 15, 1987

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CALIFORNIA DEPARTMENT OF HEALTH SERVICES
WASHER/1000000000

Mr. Lowell Miller
Alameda County
Alameda County Hazardous Materials Unit
470 27th Street, Third Floor
Oakland, CA 94612

Subject: Bay Center, Emeryville Stockpile Relocation
(Earth Metrics file reference A9507.B2)

Dear Lowell:

This letter concerns the stockpiled excavation spoils at Bay Center, Emeryville and addresses the conditions you placed on the stockpiling activity as of February 25, 1987. Your conditions include the following:

1. Treatment, removal or other disposition, within one year (from February 25, 1987).
2. If hauled from the site to a Class I landfill, then testing shall be performed of the subject material as required by the rules governing disposal of hazardous waste.
3. If treated, then documentation shall be prepared of the treatment process and efficacy per the joint requirements of DOHS and Hazardous Materials Unit.
4. If there is some other disposition of the stockpiled material, then testing may be required per Hazardous Materials Unit requirements.

Also requested by you was a second aerial photograph to show the new location of stockpiled excavation spoils in the northeast corner of the site. This aerial photograph was acquired by Earth Metrics in conjunction with Herrington-Olson Photography on March 17, 1987, and shows the current status of stockpiled excavation spoils. We apologize for delays in the flyover and subsequent photo processing.

All of the individual smaller stockpiles have been aggregated into one major stockpile (medium grey) and three minor stockpiles (light brown). The broken up asphalt along the northern fenceline originated from the grid of square-shaped holes that were cut for pile driving. Since the time of this photograph (March 17, 1987), the broken up asphalt has been removed from the site.

Removal of broken up asphalt occurred on March 25, 1987, after notification of the Hazardous Materials Unit, and involved only the broken up asphalt. No soil or debris underlying the asphalt has been removed from the site. The asphalt was brought to the Richmond landfill.

The only other material which has been authorized to be transported off site is concrete from the demolished Garrett and Delta truck terminals. This concrete was transported off site to the CALTRANS crusher in Richmond. This crusher is making aggregate for the I-880 highway project in Richmond.

The darkest-colored, small-sized stockpiles shown in the aerial originated from the pilot pile hole excavations for the parking structure. These latter stockpiles do not represent relocated stockpiles but rather newly excavated spoils.

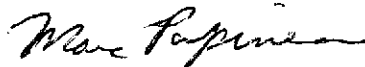
Currently, other disposition of the stockpiled excavation spoils is being proposed by The Martin Company. This other disposition is, precisely, on site encapsulation beneath a proposed concrete parking structure. The following analysis of stockpile test results documents the average composition of the aggregated excavation spoils, in the major existing stockpile, in the northeast corner of the site.

Forty (40) test results for lead content in the stockpiled soil were analyzed to determine the mean, standard deviation, and confidence interval (refer to Appendix A). The stockpiled soil was found to contain an average of 1,175 ppm (lead) ± 56 ppm, at the 90 percent confidence level. Other "surface" (0 to 3 feet) soils contain an estimated 1,320 ppm (lead) ± 538 ppm, at the 90 percent confidence level.

Therefore, treatment by encapsulation should be equally effective for the stockpiled soils as for other in-place "surface" soils. The in-place soils are being encapsulated by asphalt (Christie Street and surface parking lots) and concrete (sidewalks and building pads). Additional characterization of the currently stockpiled soils is not recommended prior to encapsulation with the parking structure.

If you have any questions about this letter, please call me.

Sincerely,



Marc Papineau
Department Manager

MP/ag

cc: Mr. Walter Kaczmarek

APPENDIX A

TABLE A-1. LEAD SUMMARY FOR BAY CENTER, EMERYVILLE

ITEM	SAMPLE SIZE	RAW DATA		TRANSFORMED DATA	
		MEAN	STANDARD DEVIATION (a)	MEAN	STANDARD DEVIATION (a)
Current Stock Piled Material 4/23/87	40	1,425	1,104	0.154	0.012
Initial Soil Characterization (b) (5/19/86)					
Pooled Data (c)	31	2,618	978	0.168	0.032
Stratum I (0 to 3 feet)	15	3,813	1,948	0.196	0.065
Stratum II (3 to 6 feet)	11	1,981	604	0.172	0.033
Stratum III (over 6 feet)	5	436	299	0.074	0.029
Revised Soil Characterization (b) (8/20/86)					
Pooled Data (c)	64	1,926	636	0.126	0.021
Stratum I	24	2,846	1,283	0.163	0.041
Stratum II	23	2,253	1,132	0.148	0.036
Stratum III	17	184	94	0.046	0.010
State Criterion		1,000	N/A	0.142	N/A
N/A = Not Applicable					
(a) Refers to the standard deviation of the sample mean.					
(b) Refers to tests of soil in place.					
(c) Refers to all data in Strata I, II, and III combined.					