January 18, 1999
Project 3095.06

Mr. Ravi Arulanantham
California Regional Water Quality Control Board – San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, California 94612

Ms. Susan Hugo
Alameda County Health Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Subject: Soil Removal Work Plan
Former Emeryville Warehouse
Emeryville, California

Dear Mr. Arulanantham and Ms. Hugo:

Geomatrix Consultants, Inc. (Geomatrix) has prepared this Soil Removal Work Plan on behalf of Emery Lofts Development Company (Emery Lofts) to remove metals-affected soil at the property located at 4226 Halleck Street in Emeryville, California (Site). This excavation is being performed in order to remove soil that might otherwise require site deed restrictions if left in place.

The site is the former location of the Emeryville Warehouse Company and is in an industrial portion of Emeryville, California. A portion of the Site was reportedly used for railroad freight loading and unloading from 1906 until some time before 1975. Subsequent to 1975, the Site was reportedly used as a material storage and parking area. The former warehouse is the only existing structure and is currently being renovated for use as a multi-family residence.

Previous environmental investigations identified a thin (less than 1' thick) layer of black sandy fill (black sand) underlying a narrow strip on the western side of the Emeryville Warehouse at a depth of approximately 2.5 feet. Analysis of black sand samples showed elevated concentrations of arsenic, barium, cadmium, copper, lead, and zinc. Organic constituents were either not detected or were detected at very low concentrations in the samples. In addition, groundwater samples showed low (below MCLs) or non-detectable concentrations of metals and organics.

In 1997 and 1998 Geomatrix personnel conducted additional soil sampling activities at the Site. Continuous cores were collected from 11 borings using a direct-push technique and 4 test pits were excavated to better define the vertical extent of the black sand. Geomatrix collected a total of 19 samples from 6 borings and 4 test pits to characterize the distribution of metal concentrations in and below the black sand. Arsenic, barium, calcium, copper, lead, and zinc were detected in all samples; however, concentrations appeared to be elevated only in samples containing black sand. The

maximum detected concentration of arsenic on the Emery Lofts parcel was 1100 milligrams per kilogram (mg/kg). Based on analytical results, it is possible that the black sand may be classified as a California hazardous waste, but will likely not be classified as a hazardous waste under federal regulations.

SCOPE OF WORK

The black sand area is to be excavated to a depth of three feet, with the material removed from the top two feet stockpiled for backfill and the remaining material removed for disposal. The excavated area is to be backfilled and compacted following removal of the black sand material. Prior to excavation, Geomatrix will contact Underground Service Alert to clear the excavation area for subsurface utilities.

Following backfilling and compaction, 8 samples of native soil will be collected from the base of the excavation and 4 samples from the stockpiled overburden for analysis of total metals concentration. These samples will be analyzed as 3 four-point composites. The metals to be analyzed include arsenic, barium, cadmium, copper, lead, and zinc (EPA Method 6010/7000). The analytical results will be compared with US EPA Region 9 Preliminary Remediation Goals (PRGs) adjusted for background conditions, or other health-based remediation goals as appropriate. Sixteen samples of the stockpiled soil will also be collected for analysis of total metals concentration (4 four-point composites). Based on the results of stockpile soil analysis, Geomatrix will identify disposal alternatives from which Emery Lofts may select.

If you have questions or comments regarding this Work Plan, please contact either of the undersigned.

Sincerely yours,
GEOMATRIX CONSULTANTS, INC.

Brad Job, P.E.
Project Engineer

Tom Graf, P.E.
Principal Engineer

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ATTACHMENTS