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3:00 pm, Dec 19, 2008

Alameda County  
Environmental Health

July 28, 2006

Ms. Teresa Clarke  
Affordable Housing Associates  
1250 Addison Street, Suite G  
Berkeley, California 94702

RE: Revised Opinion Letter - Stockpiled Soil  
160 14th Street, Oakland, California  
*ACC Project Number 6179-014-02*

Dear Mr. Clarke:

ACC Environmental Consultants, Inc. (ACC) is providing this Revised Opinion Letter regarding soil presently stockpiled at 160 14th Street, Oakland, California (Site) and generated during the installation of select soldier piles, and existing soil scheduled for excavation and offsite disposal.

### **Soil Sampling Procedures**

ACC personnel witnessed soil excavation activities associated with installation of soldier piles on July 21, 2006. Soil cuttings from soldier piles advanced in the vicinity of the former underground storage tanks (USTs) were segregated into two stockpiles. Soil from the surface to approximately 12 feet below ground surface was added to the soil planned for reuse onsite. Soil from approximately 12 feet bgs to 18 feet bgs which displayed field indications of subsurface impact such as soil discoloration and/or characteristic odor was stockpiled separately. The soil in this stockpile was noted to be free of fill materials and debris and consisted primarily of silt and silty clay.

ACC personnel collected two representative 4-point composites from the segregated soil stockpile, designating them COMP-1 and COMP-2. These samples were transported under standard chain of custody protocols to Curtis & Tompkins, Ltd. (C&T), a state-certified analytical laboratory, and analyzed for known constituents of concern as total petroleum hydrocarbons as gasoline (TPHg); benzene, toluene, ethyl-benzene, and total xylenes (BTEX); and methyl tert butyl ether (MTBE) by EPA Method 8260B. COMP-1 and COMP-2 analytical results are summarized in Table 1 below.

During a previous subsurface investigation conducted in April 2006, ACC collected representative soil samples from the vicinity of the former USTs. On representative soil sample was analyzed for the 17

California Assessment Manual (CAM 17) metals by EPA Method 6010B. CAM 17 analytical results are summarized in Table 2.

**Analytical Results**

Both COMP-1 and COMP-2 soil sample analytical results reported concentrations below laboratory reporting limits for TPHg, BTEX, and MTBE. B2-COMP metal analyses reported concentrations well below the Regional Water Quality Control Board (RWQCB) Environmental Screening Levels values according to Table A, *Subsurface Soil and Groundwater Environmental Screening Levels (ESLs)*, from the RWQCB document *Application of Risk-Based Screening Levels and Decision Making to Sites with Impacted Soil and Groundwater (Interim Final - December 2005)*. A copy of analytical results attached.

**TABLE 1 – JULY 2006 TPHg/BTEX/MTBE SOIL RESULTS**

Sample ID	TPHg	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE
COMP-1	<0.98	<0.0049	<0.0049	<0.0049	<0.0098	<0.0049
COMP-2	<0.93	<0.0046	<0.0046	<0.0046	<0.0092	<0.0046

**TABLE 2 – APRIL 2006 CAM 17 METAL SOIL RESULTS**

Constituent	B2-COMP	North Bay Average*	Residential PRG**
Antimony	<2.9	1.3-10	31
Arsenic	2.9	6-16	22
Barium	68	500	5,400
Beryllium	0.22	<1	1,100
Cadmium	<0.24	---	1,400
Chromium	36	100-700	210
Cobalt	5.7	15-70	900
Copper	8.9	50-300	3,100
Lead	18	30-300	255
Mercury	0.066	0.082-0.13	23
Molybdenum	<0.97	<3	390
Nickel	23	30-200	1,600
Selenium	<0.24	0.5	390
Silver	<0.24	---	390
Thallium	<0.24	---	5.2
Vanadium	32	150-500	78
Zinc	42	150-500	23,000

Notes: All soil results reported in micrograms per kilogram (mg/kg), approximately equal to parts per million  
 < Sample tested below the laboratory minimum detection limit indicated  
 \* According to United States Geologic Survey Professional Paper 1270  
 \*\* Residential Preliminary Remediation Goal set by USEPA Region 9 as of October 2004

## **Conclusion**

Subsurface conditions at the Site have been characterized with confidence. The majority of soil scheduled for excavation and offsite disposal is suitable for unrestricted use or disposal at any accepting disposal facility. Soil adjacent to the former USTs may contain minor residual petroleum hydrocarbons. Soil excavated adjacent to the former USTs should be temporarily stockpiled and sampled to determine if this soil can be accepted by the West Contra Costa Landfill (or other unpermitted facility) or require disposal at a Class II or Class III disposal facility.

- Based on representative soil sample analytical results of the soil generated during installation of the soldier piles, this soil meets criteria for both reuse as clean fill and acceptance at local permitted and non-permitted disposal facilities.
- As shown on attached Figure 2, soil scheduled for excavation northwest of the heavy dashed box is suitable for unrestricted reuse.
- As shown on attached Figure 2, soil scheduled for excavation inside the heavy dashed box should be temporarily stockpiled and sampled to determine the most cost-effective soil disposal option.
- With the exception of minor, degraded petroleum hydrocarbons in the vicinity of the former USTs, there are no other constituents of concern.
- Metal concentrations in soil are typical, naturally-occurring levels, and this soil is acceptable to the West Contra Costa Landfill (or other unpermitted facility).
- ACC would be glad to help profile soil into any local disposal facility to reduce overall soil disposal costs related to this project.

If you have any questions, please contact me at (510) 638-8400, ext. 109.

Sincerely,



David R. DeMent, PG, REA II  
Senior Geologist

/trb:drd