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RO 2586

MEMORANDUM

Date: 2 June 2005 **Job No.:** Y0323-02

To: Barney Chan, Alameda County Health Care Agency

cc: Tom McCoy, Brush Street Partners

From: Lydia Huang, P.E.

Subject: Presentation of Chemical Data and Discussion on Adequacy of Site Characterization, 785 Seventh Street, Oakland

751-85

In response to your letter dated 1 March 2005, BASELINE electronically submitted a draft work plan for a supplemental investigation at 785 Seventh Street in Oakland on 5 April 2005. At your suggestion, together we inspected the site on 13 May 2005 and discussed the existing subsurface data from the site and BASELINE's draft work plan. Also present at the meeting was Mr. Tom McCoy of Brush Street Partners, the property owner. This memorandum address two main issues: 1) the degree of characterization needed of the subsurface given the deed restriction that the owner is willing to accept, the proposed redevelopment plan, and the anticipated risk management plan; and (2) presentation of soil data to facilitate your evaluation of the adequacy of existing data and the proposed supplemental investigation.

Presentation of Metals, PAH, and VOC Data in Soil

You indicated in our meeting that it was difficult to comprehend the chemical data compiled in the summary tables prepared by BASELINE, and requested that figures be prepared to depict the results. Therefore, two figures are included with this memorandum for that purpose.

The only set of subsurface data that is fully documented is from the investigation conducted by BASELINE in 2003. Versar conducted an investigation in 1993, but those results are only partially documented in draft form. Data from Versar's investigation is partially tabulated in a table titled, "Significant Laboratory Results of Soil Samples", in which some chemical data are listed for select samples; the criteria used by Versar to determine significance is unknown. Presumably, only data associated with 'elevated' concentrations were included. Therefore, the data presented in Versar's table is biased because lower concentrations of chemicals are not listed. Ecology and Environmental also collected some soil samples at the site in 1999 as part of the emergency response action conducted under the direction of the U.S. Environmental Protection Agency. These data are also poorly documented and include some metals data determined using a portable XRF instrument (X-ray Fluorescence Spectroscopy). All data associated with soil remaining on the site, except for XRF measurements, were tabulated in BASELINE's January 2005 report titled, "Site History and Data Summary Report". The XRF data were not included because these data varied by as much as 100 percent or more from

laboratory determined metal concentrations; inclusion of these data would be very misleading in some cases.

Six metals are present in site soils at concentrations above the ESLs compiled by the RWQCB for shallow soils under residential land uses, where groundwater is a current or potential drinking water resource (Table A). The metals are cadmium (Cd), chromium (Cr), cobalt (Co), lead (Pb), nickel (Ni), and zinc (Zn). Figure 1 presents concentrations of these metals adjacent to the sample locations to facilitate review of the data.

Samples from several locations contained VOCs and/or PAHs above laboratory reporting limits. These data are presented in Figure 2. The symbols in Figure 2 without text boxes represent locations where soil samples were analyzed for VOCs and/or PAHs but were not detected.

The Environmental Screening Levels (ESLs) compiled by the San Francisco Bay Regional Water Quality Control Board (RWQCB) for shallow soils under both the residential and commercial/industrial land use scenarios, where groundwater is a current or potential resource, for the chemicals included in Figures1 and 2 are listed in Table 1 for easy reference. We hope the additional information provided will facilitate your review of existing data.

Appropriate Degree of Site Characterization

Brush Street Partners have been working with the non-profit group Resources for Community Development (RCD), who are interested in constructing a multi-story low income residential building on the site. RCD currently has developed over 970 affordable housing units and emergency shelter beds in the cities of Alameda, Albany, Antioch, Bay Point, Berkeley, Concord, Emeryville, Hayward, Oakland, and Pacheco.

Two conceptual plans are being considered for this site. One plan calls for the entire ground level to be used as a parking garage with all the housing units above the garage level. Another plan calls for a portion of the ground level to be used as a garage with some housing units to also be located on the ground level; the ground-floor housing units would be on top of a concrete slab which would isolate the future occupants from the soil at the site. Both Brush Street Group and RCD accept that the ultimately chosen site plan will need to fully cap the site soils and all landscaping will be planted in planter boxes containing clean imported soil. Brush Street Partners will accept a deed restriction on the property which requires perpetuation of the cap and other risk management measures to protect future construction workers and occupants, and to ensure proper management of soils that may be graded and/or excavated during construction.

The chemicals of concern at the site are metals across the site and polyaromatic hydrocarbons (PAHs) in the area near a sump inside the former plating building. In some of the soil samples,

concentrations of several metals and PAHs exceed ESLs for residential land uses for shallow soils, where groundwater is a current or potential drinking water resource. However, future occupants would not be exposed to these chemicals since the foundation and pavement that would be installed for the proposed redevelopment would isolate the subsurface materials from the occupants.

Based on existing data, volatile organic compounds (VOCs) are not chemicals of concern at the site. Sixteen soil and four groundwater samples have been analyzed for VOCs by BASELINE during a 2003 investigation. Only two VOCs were identified above laboratory reporting limits in soil samples; trichloroethene was quantified in two soil samples at 0.024 and 0.033 mg/kg and 1,1,1-trichloroethane in two samples at 0.0054 and 0.005 mg/kg. The ESLs for residential land uses for shallow soils, where groundwater is a current or potential drinking water resource, for trichloroethene and 1,1,1-trichloroethane are 0.26 and 7.8 mg/kg, respectively.[1] The concentrations quantified in the soil samples are far below the ESLs. The only VOC identified in the groundwater samples was trichloroethene. Two of the four groundwater samples contained trichloroethene above laboratory reporting limits at 21 and 42 µg/L. The ESL for trichloroethene for potential vapor intrusion under the residential land use scenario is 530 µg/L for high permeability soils.[2] The concentrations identified in the groundwater collected from the site are significantly less than the ESL.

Soil remediation at the site is not needed to protect the health of future occupants because the only potential exposure pathway would be eliminated by the cap that would be installed as a part of the proposed redevelopment. Anticipated risk management measures include the requirement that workers involved with construction of the building will work under a health and safety plan and that all excavated soil will be classified in accordance with State and Federal regulations and disposed of appropriately.

Given the nature of the chemicals of concern, the proposed development, and the anticipated deed restriction and risk management measures, the degree of site characterization already achieved by BASELINE's 2003 investigation and semi-quantitative data from other investigations conducted by others are considered adequate by BASELINE. It is BASELINE's opinion that the available subsurface data are sufficient to identify the chemical hazards at the site, to access potential human health risk, and to determine appropriate risk management

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[1] Regional Water Quality Control Board, San Francisco Bay Region, Screening For Environmental Concerns At Sites With Contaminated Soil and Groundwater, Interim Final - February 2005, Table A, Environmental Screening Levels (ESLs), Shallow Soils (<3m bgs), Groundwater is Current or Potential Source of Drinking Water.

[2] Regional Water Quality Control Board, San Francisco Bay Region, Screening For Environmental Concerns At Sites With Contaminated Soil and Groundwater, Interim Final - February 2005, Table E-1a, Groundwater Screening Levels for Evaluation of Potential Vapor Intrusion Concerns.

measures (including deed restriction) that should be required as part of site redevelopment. Additional data are not expected to significantly increase our current understanding of subsurface conditions or indicate risk management measures not already contemplated. If, after our recent site inspection and your evaluation of the information presented in this memorandum, you agree that additional investigation is not needed, please provide a letter indicating that the information and subsurface data presented in the two previous BASELINE reports, dated April 2003 and January 2005, adequately characterize the site and that redevelopment may proceed following approval of a risk management plan and recordation of a deed restriction on the property. However, if you are still of the opinion that additional data are needed, then please consider approval of the draft work plan previously submitted.

Please contact us if you have any questions or need additional information.

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TABLE 1
Environmental Screening Levels ("ESLs") for Shallow Soil where Groundwater is a Current or Potential Drinking Water Resource

	Residential ESL	Commercial/ Industrial ESL
Metals (mg/kg)		
Cd	1.7	7.4
Cr	58	58
Co	10	10
Pb	150	750
Ni	150	150
Zn	600	600
VOCs (µg/kg)		
Toluene	2,900	2,900
Xylenes	2,300	2,300
Trichloroethene	260	460
1,1,1-Trichloroethane	7,800	7,800
PAHs (µg/kg)		
Naphthalene	460	1,500
Acenaphthylene	13,000	13,000
Acenaphthene	16,000	16,000
Fluorene	8,900	8,900
Phenanthrene	11,000	11,000
Anthracene	2,800	2,800
Fluoranthene	40,000	40,000
Pyrene	85,000	85,000
Benzo(a)Anthracene	380	1,300
Chrysene	3,800	13,000
Benzo(b)Fluoranthene	380	1,300
Benzo(k)Fluoranthene	380	1,300
Benzo(a)Pyrene	38	130
Dibenz(a,h)Anthracene	110	380
Benzo(g,h,i)Perylene	27,000	27,000
Indeno(1,2,3-cd)Pyrene	380	1,300

Source: Regional Water Quality Control Board, San Francisco Bay Region, Screening For Environmental Concerns At Sites With Contaminated Soil and Groundwater, Interim Final - February 2005, Table A, Environmental Screening Levels (ESLs), Shallow Soils (<3m bgs), Groundwater is Current or Potential Source of Drinking Water.