RECEIVED

10:11 am, Jan 14, 2009

Alameda County Environmental Health



January 13, 2009

Alameda County Environmental Health 1131 Harbor Bay Parkway, 2nd Floor Alameda, CA 94502

Attention: Mr. Paresh Khatri

Subject: Soil and Water Investigation Report Addendum Former Coast Sausage UST Site 1173 28th Street, Oakland, California ACDEH Fuel Leak Case: RO# 0002562; Global ID: T0600194544

Ladies and Gentlemen:

Gribi Associates is pleased to submit this Soil and Water Investigation (SWI) Report Addendum on behalf of Rush Properties Group for the underground storage tank (UST) site located at 1173 28th Street in Oakland, California. This SWI Report Addendum addresses technical comments and provides additional information to comply with requests included in a letter from Alameda County Environmental Health (ACEH) dated October 31, 2008.

SITE BACKGROUND

Site Description

The site is located in a mixed commercial and residential area of west Oakland (Figure 1 and Figure 2). Soils in the immediate site area generally consist of clays, with occasional thin interbedded silts and sands. Groundwater is encountered at a depth of about 8 feet below surface grade. The site currently includes a fire-damaged remnant portion of the former Coast Sausage building on the east side, the concrete slab for the demolished portion of the former site building on the northwest side, and a concrete and asphalt paved former parking area on the southwest side of the site. The planned site development, Coast Lofts, will include approximately 60 live/work condominiums and townhouses set on grade, with ground floor parking and minimal landscaping elements.

Environmental Site History

Treadwell and Rollo - 2001

In December 2001, Treadwell & Rollo (T&R)drilled and sampled four soil borings (B-1 through B-4 at the site (see Figures 3 and 4). The results of the investigation generally showed relatively

minor halogenated volatile organic compound (HVOC) and petroleum hydrocarbon impacts in groundwater at boring locations B-1, B-3, and B-4. Groundwater collected from boring B-2, located inside the southeast corner of the site building, showed HVOC impacts with reported concentrations of 47 micrograms per liter (ug/L) trichloroethene (TCE) and 990 ug/L cis-1,2 dichloroethene (cis-1,2 DCE).

ERAS Environmental - 2002

In June 2002, ERAS Environmental drilled and sampled five borings (SB-1 through SB-5) at the site (see Figure 3 and 4). Boring locations SB-1 and SB-2, which were located in close proximity to T&R boring B-2, were reported to contain no detectable HVOCs or petroleum hydrocarbons in soil samples collected at depths of 3.0 feet and 4.0 feet below surface grade. A grab groundwater sample collected at SB-4, located approximately 10 feet west from the 350-gallon gasoline underground storage tank (UST) along Magnolia Street, was reported to contain minor detectable petroleum hydrocarbon concentrations. A grab groundwater sample collected at SB-5, located approximately 55 feet northwest from the 500-gallon gasoline UST along Adeline street, was reported to contain no HVOC or petroleum hydrocarbon concentrations above laboratory detection limits. Groundwater collected from boring SB-3, located approximately 10 feet east from a former 500-gallon underground storage tank, showed elevated levels of petroleum hydrocarbons, with reported concentrations of 5,300 ug/L TPH-G, 900 ug/L TPH-D, and relatively minor detectable levels of benzene and ethylbenzene.

In January 2003, the two site USTs were removed by Environmental Recovery Systems, with oversight by Mr. Leroy Griffith of the Oakland Fire Department and sampling by ERAS Environmental (see Figure 4). Two soil samples and one grab groundwater sample were collected from the 500-gallon Adeline Street UST excavation cavity, which were reported to contain no detectable hydrocarbon concentrations in soil and 1,170 ug/L TPH-g with minor benzene, toluene, ethylbenzene, and xylenes (BTEX) concentrations in groundwater. One soil sample collected from the 350-gallon Magnolia Street UST excavation cavity was reported to contain minor concentrations of petroleum hydrocarbons.

Gribi Associates - 2006

In July 2006, in an attempt to identify a source of and further characterize observed HVOC groundwater impacts at the site, Gribi Associates completed an additional site investigation. The investigation consisted of drilling and sampling eleven soil borings (GA-1 through GA-11), and the collection and analysis of eight shallow soil gas samples (SG-1 through SG-8) at the site (see Figure 3, 4, 5, and 6). Tabulated results for this and the subsequent Gribi Associates investigation are included in Tables 1,2, and 3. Soil and groundwater results for six of the eleven soil boring locations (GA-1, GA-4, GA-7, GA-10, and GA-11) reported no concentrations of HVOCs or petroleum hydrocarbons above their respective laboratory detection limits.

A soil sample collected from a depth of 7.5 feet below surface grade at boring GA-5, located approximately 20 feet south from the southwest corner of the site building , was reported to



contain 1,200 milligrams per kilogram (mg/kg) TPH-D with no detectable concentrations of gasoline range hydrocarbons. A soil sample collected from 15 feet below surface grade and a grab groundwater sample collected from the same boring were reported to contain no HVOCs or petroleum hydrocarbons above laboratory detection limits.

Samples collected from boring GA-8, located approximately 40 feet west and in an expected downgradient direction from the former 500-gallon UST, were reported to contain minor levels of gasoline range hydrocarbons, in a soil sample collected at 7.5 feet below surface grade, but did not contain detectable concentrations of HVOCs or petroleum hydrocarbons in a soil sample collected from 15 feet below surface grade and a grab groundwater sample. Samples collected from boring GA-9, located approximately 15 feet west-southwest in an expected downgradient direction from the former 500-gallon UST, were reported to contain no detectable concentrations of HVOCs or petroleum hydrocarbons in a soil sample collected from 9 feet below surface grade and contained 440 ug/L TPH-G, with relatively minor levels benzene and ethylbenzene, in a grab groundwater sample.

Samples collected from boring GA-3, located approximately 40 feet northeast and in an expected upgradient to crossgradient groundwater direction from boring B-2, were reported to contain no detectable concentrations of HVOCs or petroleum hydrocarbons in soil samples collected from depths of 7 feet and 9 feet below surface grade, but reported 3.3 ug/L cis-1,2 DCE in a grab groundwater sample from the boring. Samples collected from boring GA-2, located approximately 40 feet southeast and in an expected upgradient direction from boring B-2, were reported to contain no detectable concentrations of HVOCs or petroleum hydrocarbons in a soil sample collected at a depth of 6.5 feet below grade and 0.069 mg/kg cis-1,2 DCE in a soil sample collected from a depth of 23 feet below surface grade. A grab groundwater sample from GA-2 was reported to contain 170 ug/L TCE, 3,100 ug/L cis-1,2 DCE,130 ug/L vinyl chloride, 2,400 ug/L TPH-G and 3.0 ug/L benzene.

Laboratory results for soil gas samples collected from five of the eight soil gas sampling locations (SG-2, SG-4, SG-6, SG-7, and SG-8) reported no concentrations of volatile organic compounds (VOCs) above the laboratory limit of detection. The following VOC detections in soil gas samples were reported: (1) 0.15 micrograms per liter (ug/l) of ethylbenzene and 1.04 ug/l of xylenes in soil gas sample SG-1, located in the former compressor room on the south side of the site; (2) 5.0 ug/l of Trichlorofluoromethane in soil gas sample SG-3, located immediately west of the former 500-gallon Adeline Street gasoline UST;and (3) 0.11 ug/l of benzene in soil gas sample SG-5, located in a former holding room on the south-middle side of the site.

Gribi Associates - 2007

In April 2007, Gribi Associates drilled and sampled five borings (GA-12 through GA-16) at the site in order to assess further HVOC impacts observed at GA-2. Soil samples from four of the five boring locations (GA-12 through GA-15) were reported to contain no detectable concentrations of HVOCs above their respective laboratory detection limits. A soil sample collected from boring GA-16 at depth of 4 feet below surface grade was reported to contain



0.0056 mg/kg cis-1,2 DCE. A soil sample collected from the same boring at a depth of 13.5 feet below grade was reported to contain no HVOCs above laboratory detection limits. Grab groundwater samples from borings GA-12 and GA-13 were reported to contain no HVOCs above laboratory detection limits. Cis-1,2 DCE groundwater concentrations of 1.2 ug/L, 5.9 ug/L, and 1.9 ug/L were reported in grab groundwater samples from GA-14, GA-15, and GA-16, respectively. A concentration of 2.1 ug/L vinyl chloride was reported in a grab groundwater sample from GA-14.

IMPROPERLY CONSTRUCTED WELL BORING (B-2)

As noted in the ACEH letter dated October 31, 2008, boring B-2 was previously installed by Treadwell and Rollo during a Phase I/II site investigation conducted in 2001. The boring was never properly abandoned by Treadwell and Rollo at the conclusion of their investigation. The boring was re-sampled as part of Gribi Associates July 2006 Phase II investigation. The boring was re-sampled again on November 24, 2008, prior to complying with the ACDEH letter to properly decommission the site boring.

Boring B-2 was decommissioned on January 5, 2009 by drilling out using 8-inch diameter auger and filling the resulting borehole with neat cement. Drilling activities were conducted by Gregg Drilling of Martinez, California (C-57 No. 485165) under the direction of Gribi Associates personnel. Mr. James Yoo of Alameda County Public Works was onsite to inspect and document the well abandonment. A copy of the drilling permit is provided as Attachment A.

PREFERENTIAL PATHWAY STUDY/ WELL SURVEY

A search for domestic and irrigation groundwater wells within 0.25 mile radius from the Site was conducted by obtaining "Water Well Drillers Reports" from the California Department of Water Resources for the area of the search. These reports were for all wells in the search area, including water supply (irrigation, domestic, and municipal) wells, as well as abandoned wells, monitoring wells, and remediation wells.

Results of the well survey identified one driller's report within a 0.25 mile radius from the site that may have been used as a water supply well. The report was for a well boring drilled at "28th and Magnolia Street, Oakland". The subject property adjoins the southeast corner of the identified intersection. The report, which is not dated, provides lithologic logging of a boring to a depth of 215 feet below surface grade but does not provide well destruction details. From the report it is unclear whether a well was constructed in the boring. A copy of the driller's report is provided as Attachment B.

A formal review of available historical site and site vicinity information, including review of Sanborn Fire Insurance maps, aerial photographs, and city directories, was included in "Report of Phase I Activities and Workplan Addendum" (Gribi Associates, March 12, 2007).



WATER QUALITY OBJECTIVES

The *Closure Request Report* (Gribi Associates, August 2008) provided five arguments supporting regulatory closure of the former Coast Sausage site. Included in the arguments, was the rational that ongoing natural attenuation was occurring based on analysis of groundwater samples collected from boring B-2. As discussed earlier, boring B-2 was originally drilled during a site investigation conducted in 1991. Although the boring was meant to be temporary, casing was placed in the open boring by others, and the boring was not properly grouted at the completion of the investigation. Laboratory results for the groundwater sample collected from B-2 by Treadwell & Rollo in 1991 reported concentrations of 47ug/L TCE and 990 ug/L cis-1,2 DCE.

Gribi Associates re-sampled groundwater from boring B-2 during a July 2006 site investigation. Laboratory results for the groundwater sample reported concentrations of 7.9 ug/L TCE, 370 ug/L cis-1,2 DCE, and 4.6 ug/L vinyl chloride. Based on the observed decline in TCE levels between the two sampling events, Gribi Associates argued the evidence of natural attenuation.

The October 31, 2008 letter from ACEH questioned the validity of the data due to the fact that boring B-2 was not properly converted into a monitoring well. At the time of sampling, Gribi Associates purged standing water from the casing, allowing formational groundwater to enter the casing prior to sampling. This is the same procedure that would be utilized when sampling a monitoring well. Through purging groundwater from the casing, stagnant water in which contaminants may have had the opportunity to volatilize is replaced with "new" groundwater. The "purge and sample" method used by Gribi Associates provides confidence that the analytical characteristics of the water are representative of actual groundwater conditions.

To provide further evidence, Gribi Associates re-sampled boring B-2 on November 24, 2008, ahead of scheduled activities to abandon the boring. A groundwater sample was collected after purging the well casing dry (approximately 2.5 gallons), effectively removing any standing groundwater in the casing. The groundwater sample was collected following re-charge of formational groundwater into the casing. Laboratory results from this sampling event reported concentrations of 12 ug/L TCE, 410 ug/L cis-1,2 DCE, and 3.0 ug/L trans-1,2 dichlorothene, (trans-1,2 DCE). These results are similar to the results of the 2006 sampling, and continue to represent a decline from the 2001 results.

Furthermore, the results of 2006 investigation showed evidence that impacts observed at B-2 may have originated from an offsite source. A groundwater sample collected from boring GA-2, located in Adeline Street approximately 30 feet southeast in an expected upgradient groundwater flow direction from B-2, was reported to contain concentrations of 170 ug/L TCE, 3,100 ug/L cis-1,2 DCE, and 130 ug/L vinyl chloride. These concentrations are significantly higher than the concentrations reported for groundwater samples collected at B-2.

A followup 2007 investigation was conducted in the vicinity of GA-2 in an attempt to confirm presence of an offsite source. Although, the investigation failed to identify an offsite source, the



investigation was successful at demonstrating that groundwater impacts are localized and have a very limited lateral extent. Also, soil samples showed no significant HVOC impacts that would provide evidence of a chemical release, or that could act as a continuing source to groundwater impacts. Therefore, without a contaminant source, we would expect the dissolved-phase groundwater HVOC impacts to naturally attenuate overtime through chemical breakdown processes and diffusion of contaminants into the groundwater matrix.

The groundwater concentrations reported for samples collected at B-2 and GA-2 exceed Environmental Screening Levels (ESLs) of 5 ug/L TCE, 6.0 ug/L cis-1,2 DCE, and 0.5 ug/L vinyl chloride for sites in which groundwater is a current or potential drinking water source, as contained in Table A, *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater* (San Francisco Bay Regional Water Quality Control Board, Interim Final, May 2008). However, the results of our well survey identified no drinking water wells within 0.25-mile radius from the subject site. In addition, a document prepared by Department of Toxic Substances Control entitled *Preliminary Endangerment Assessment* (DTSC, July 2005) for a site located at 1639 18th Street in Oakland, located approximately 3,500 feet southwest from the subject site, notes that there were no drinking water wells within a 4-mile radius from that site.

Given the absence of identifiable drinking water wells in the site vicinity and the ability of present infrastructure to deliver drinking water, ESLs for sites in which groundwater is not a current or potential drinking water source are more reasonable. Non-drinking water ESLs, which are based upon risk other than ingestion, are 360 ug/L TCE, 590 ug/L cis-1,2 DCE, and 3.8 ug/L vinyl chloride (Table B). Reported concentrations for groundwater samples collected from B-2 have generally been less than the published non-drinking water ESL concentrations, and these impacts represent a very small area of the subject property.

Lastly, analysis of two soil gas samples (SG-1 and SG-2), collected in the southeast corner of the subject building, and in close proximity to observed groundwater impacts, reported no concentrations of HVOCs above the laboratory limits of detection. Results of soil gas sampling at both locations provide evidence that upward migration of soil vapors is not occurring, minimizing concerns associated with possible indoor air risks.

The *Closure Request Report* sought to have the subject property closed as a "low" risk site with unrestricted land use and have a deed restriction attached to the property. The deed restriction would include requirements for a soil management plan and vapor barriers beneath constructed buildings, and would also preclude groundwater use. Based on all available site data, the closure request seems appropriate.



We appreciate this opportunity to provide this SWI Report Addendum for your review. Please contact the undersigned if there are questions or if additional information is required.

Sincerely,

TOL

Matthew A. Rosman Project Engineer

Enclosure

pomo Cl

James E. Gribi Professional Geologist California No. 5843



cc: Mr. Francis Rush, Rush Property Group



FIGURES















TABLES



					SUMMAR	Y OF SO Former (Table 1 IL ANALY Coast Saus	YTICAL F age Site	RESULTS					
						Concentrat	ion: milligraı	ns per kilogra	um (mg/kg); p	arts per milli	ion (ppm)			
Sample ID	Sample Type	Sample Depth	TPH-D	TPH-G	В	Т	E	X	MTBE	PCE	TCE	c-1,2- DCE	t-1,2- DCE	VC
GA-1-14.0	Soil	14.0 ft	<5.0	< 0.500	< 0.0020	< 0.0020	< 0.0020	< 0.0040	< 0.0050	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
GA-1-23.5	Soil	23.5 ft	<5.0	< 0.500	< 0.0020	< 0.0020	< 0.0020	< 0.0040	< 0.0050	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
GA-2-6.5	Soil	6.5 ft	<5.0	< 0.500	<0.0020	< 0.0020	< 0.0020	< 0.0040	< 0.0050	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
GA-2-23.0	Soil	23.0 ft	<5.0	< 0.500	< 0.0020	< 0.0020	< 0.0020	< 0.0040	< 0.0050	< 0.0020	< 0.0020	69	< 0.0020	< 0.0020
GA-3-7.0	Soil	7.5 ft	<5.0	< 0.500	< 0.0020	< 0.0020	< 0.0020	< 0.0040	< 0.0050	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
GA-3-19.0	Soil	19.0 ft	<5.0	< 0.500	< 0.0020	< 0.0020	< 0.0020	< 0.0040	< 0.0050	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
GA-4-9.0	Soil	9.0 ft	<5.0	< 0.500	< 0.0020	< 0.0020	< 0.0020	< 0.0040	< 0.0050	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
GA-5-7.5	Soil	7.5 ft	1,200	< 0.500	< 0.0020	< 0.0020	< 0.0020	< 0.0040	< 0.0050	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
GA-5-11.5	Soil	11.5 ft	<5.0	< 0.500	< 0.0020	< 0.0020	< 0.0020	< 0.0040	< 0.0050	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
GA-6-10.0	Soil	10.0 ft	<5.0	< 0.500	< 0.0020	< 0.0020	< 0.0020	< 0.0040	< 0.0050	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
GA-7-10.0	Soil	10.0 ft	<5.0	< 0.500	< 0.0020	< 0.0020	< 0.0020	< 0.0040	< 0.0050	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
GA-8-11.0	Soil	11.0 ft	<5.0	71	< 0.0020	< 0.0020	0.210	0.160	< 0.0050	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
GA-8-15.0	Soil	15.0 ft	<5.0	< 0.500	< 0.0020	< 0.0020	< 0.0020	< 0.0040	< 0.0050	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
GA-9-8.0	Soil	8.0 ft	<5.0	< 0.500	< 0.0020	< 0.0020	< 0.0020	< 0.0040	< 0.0050	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
GA-10-10.0	Soil	10.0 ft	<5.0	< 0.500	< 0.0020	< 0.0020	< 0.0020	< 0.0040	< 0.0050	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
GA-11-6.5	Soil	6.5 ft	<5.0	< 0.500	< 0.0020	< 0.0020	< 0.0020	< 0.0040	< 0.0050	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
GA-12-11.0	Soil	11.0 ft	-	-	-	-	-	-	-	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004
GA-12-13.5	Soil	13.5 ft	_	-	_	-	_	_	-	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004
GA-13-11.5	Soil	11.5 ft	_	-	-	-	_	_	-	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004
GA-13-15.0	Soil	15.0 ft	-	-	_	-	-	_	_	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004
GA-14-5.0	Soil	5.0 ft	_	-	-	-	_	_	-	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004
GA-14-7.5	Soil	7.5 ft	_	-	-	-	_	_	-	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004
GA-14-14	Soil	14.0 ft	-	_	_	_	_	_	_	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004

				S	SUMMAR	Y OF SO Former (Table 1 IL ANALY Coast Sausa	TICAL I age Site	RESULTS					
						Concentrat	ion: milligran	ıs per kilogr	am (mg/kg); p	oarts per milli	on (ppm)			
Sample ID	Sample Type	Sample Depth	TPH-D	TPH-G	В	Т	Ε	X	MTBE	PCE	TCE	c-1,2- DCE	t-1,2- DCE	VC
GA-15-3.5	Soil	5.0 ft	-	_	_	_	-	-	_	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004
GA-15-7.5	Soil	7.5 ft	_	_	_	_	-	-	_	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004
GA-15-13.5	Soil	13.5 ft	_	_	_	_	_	_	_	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004
GA-16-4.0	Soil	4.0 ft	_	_	_	_	-	_	_	< 0.004	< 0.004	0.0056	< 0.004	< 0.004
GA-16-13.5	Soil	13.5 ft	-	-	-	-	-	_	-	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004
Soil ESL (D	rinking Wa	nter)	83	83	0.044	2.9	2.3	2.3	0.023	0.37	0.46	0.19	0.67	0.022
Soil ESL (Nor	n-Drinking V	Vater)	100	100	0.12	9.3	2.3	11	8.4	0.37	1.9	6.5	10	0.022

Table Notes

Sample Depth = Depth below ground surface, in feet. PCE = Tetrachloroethene TCE = Tetrachloroethene c-1,2-DCE = Cis-1,2-Dichloroethene t-1,2-DCE = Trans-1,2-Dichloroethene VC = Vinyl Chloride <5.0 = Not detected above the expressed value.

Groundwater ESL = Soil Environmental Screening Levels for Evaluation of Potential Vapor Intrusion Concerns (residential land use), Tables A and B, as contained in *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater*, San Francisco Bay Regional Water Quality Control Board, Interim Final, May 2008.

				SUMN	ARY OF	GROUNI Former	Table 2 DWATER Coast Saus	ANALYT sage Site	ICAL RES	SULTS				
						Concen	tration: micr	ograms per li	ter (ug/L); pa	rts per billio	n (ppb)			
Sample ID	Sample Type	Sample Depth	TPH-D	TPH-G	В	Т	Ε	X	MTBE	PCE	TCE	c-1,2- DCE	t-1,2- DCE	VC
GA-1-GW	Water	(9.0 ft)	< 0.050	< 0.050	< 0.0005	< 0.0005	< 0.0005	< 0.0010	<0.0010	ND	ND	ND	ND	ND
GA-2-GW	Water	(6.1 ft)	< 0.050	2.4	0.0030	< 0.0005	< 0.0005	< 0.0010	< 0.0010		170	3100	4.3	130
GA-3-GW	Water	(12.8 ft)	< 0.050	< 0.050	< 0.0005	< 0.0005	< 0.0005	< 0.0010	< 0.0010	ND	ND	3.3	ND	ND
GA-4-GW	Water	(7.5 ft)	< 0.050	< 0.050	< 0.0005	< 0.0005	< 0.0005	< 0.0010	< 0.0010	ND	ND	ND	ND	ND
GA-5-GW	Water	(12.4 ft)	< 0.050	< 0.050	< 0.0005	< 0.0005	< 0.0005	< 0.0010	< 0.0010	ND	ND	ND	ND	ND
GA-6-GW	Water	(26.5 ft)	< 0.050	< 0.050	< 0.0005	< 0.0005	< 0.0005	< 0.0010	< 0.0010	ND	ND	ND	ND	ND
GA-7-GW	Water	(7.2 ft)	< 0.050	< 0.050	< 0.0005	< 0.0005	< 0.0005	< 0.0010	< 0.0010	ND	ND	ND	ND	ND
GA-8-GW	Water	(19.5 ft)	< 0.050	< 0.050	< 0.0005	< 0.0005	< 0.0005	< 0.0010	< 0.0010	ND	ND	ND	ND	ND
GA-9-GW	Water	(6.8 ft)	< 0.050	0.440	0.0060	< 0.0005	0.0011	< 0.0010	< 0.0010	ND	ND	ND	ND	ND
GA-10-GW	Water	(7.0 ft)	< 0.050	< 0.050	< 0.0005	< 0.0005	< 0.0005	< 0.0010	< 0.0010	ND	ND	ND	ND	ND
GA-12-GW	Water	11.0 ft	-	-	-	-	-	-	_	<1.0	<1.0	< 0.50	< 0.50	< 0.50
GA-13-GW	Water	7.1	-	-	-	-	-	-	_	<1.0	<1.0	<0.50	< 0.50	< 0.50
GA-14-GW	Water	13.0 ft	-	-	-	-	-	-	_	<1.0	<1.0	1.2	2.1	< 0.50
GA-15-GW	Water	7.4 ft	-	-	-	-	-	-	_	<1.0	<1.0	5.9	< 0.50	< 0.50
GA-16-GW	Water	7.2 ft	-	-	-	-	-	-	_	<1.0	<1.0	1.9	< 0.50	< 0.50
B-2 ^A	Water	(6.5 ft)	-	0.360	< 0.0005	< 0.0005	< 0.0005	< 0.0010	< 0.0010	<1.0	7.9	370	< 0.50	4.6
B-2 ^B	Water	_	_	_	_	_	_	_	_	<1.0	12	410	3.0	<0.5
Groundwater	ESL (Drink	ing Water)	100	100	1.0	40	30	20	5.0	5.0	5.0	6.0	10	0.5
Groundwater Water)	ESL (Non-D	Drinking	210	210	46	130	43	100	1,800	120	360	590	590	3.8

Table Notes

Sample Depth = Depth below ground surface, in feet. PCE = Tetrachloroethene TCE = Tetrachloroethene c-1,2-DCE = Cis-1,2-Dichloroethene t-1,2-DCE = Trans-1,2-Dichloroethene VC = Vinyl Chloride Other HVOCs = Includes 23 other Halogenated Volatile Organic Compounds. <4.0 = Not detected above the expressed value. ND = No detectable concentrations of 23 individual VOC constituents. ^A = collected on 7/26/2006 ^B = collected on 11/24/2008 Groundwater ESL = Soil Environmental Screening Levels for Evaluation of Potential Vapor Intrusion Concerns (residential land use), Tables A and B, as contained in *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater*, San Francisco Bay Regional Water Quality Control Board, Interim Final, May 2008.

		SUI	MMARY OF SO Form	Table 3 DIL GAS ANAI ner Coast Sausa	LYTICAL RESUI ge Site	LTS		
					Concentration, microg	rams per liter (ug	r/l)	
Sample ID	Sample Depth	Purge Volume	Benzene	Toluene	Ethylbenzene	Xxlenes	Trichlorofluoro- methane	Other VOCs
SG-1	2.0 ft	3 liters	<0.10	<0.20	0.19	1.11	<0.10	ND
SG-1	2.0 ft	1 liters	< 0.10	<0.20	0.11	0.74	<0.10	ND
SG-1	2.0 ft	7 liters	< 0.10	< 0.20	0.15	1.04	<0.10	ND
SG-2	2.0 ft	3 liters	<0.10	<0.20	<0.10	<0.20	<0.10	ND
SG-3	2.0 ft	3 liters	<0.10	<0.20	<0.10	<0.20	5.0	ND
SG-4	2.0 ft	3 liters	< 0.10	<0.20	<0.10	<0.20	<0.10	ND
SG-4	2.0 ft	3 liters	< 0.10	<0.20	<0.10	< 0.20	< 0.10	ND
SG-4	2.0 ft	3 liters	< 0.10	<0.20	<0.10	<0.20	<0.10	ND
SG-5	2.0 ft	3 liters	0.11	<0.20	<0.10	<0.20	<0.10	ND
SG-6	2.0 ft	3 liters	<0.10	<0.20	<0.10	<0.20	<0.10	ND
SG-6 dup	2.0 ft	3 liters	<0.10	<0.20	<0.10	<0.20	<0.10	ND
SG-7	2.0 ft	3 liters	< 0.10	<0.20	<0.10	< 0.20	<0.10	ND
SG-8	5.0 ft	3 liters	< 0.10	<0.20	<0.10	<0.20	<0.10	ND
Probe Blank			< 0.10	<0.20	<0.10	< 0.20	<0.10	ND
Soil Gas ESL-Resi	dential, ug/m3		84	63,000	980	21,000	NE	Variable
Soil Gas ESL-Resi	dential, ug/l		0.084	63	0.98	21	NE	Variable

Sample Depth = Depth below concrete slab, in feet. Purge Volume = Volume purged before sampling, in liters. Other VOCs = Includes 19 other Volatile Organic Compounds (excluding BTEX and Trichlorofluoromethane; does include chlorinated solvents). <0.10 = Not detected above the expressed value. ND = No detectable concentrations of 19 individual VOC constituents. Probe Blank = Equipment blank vapor sample taken from air purged from sampling probe.

Soil Gas ESL = Shallow Soil Gas Environmental Screening Levels for Evaluation of Potential Vapor Intrusion Concerns (residential land use), Table E-2, as contained in *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater*, San Francisco Bay Regional Water Quality Control Board, Interim Final, May 2008 ATTACHMENT A

DRILLING PERMIT



Alameda County Public Works Agency - Water Resources Well Permit

PUBLIC	399 Elmhurst Street Hayward, CA 94544-139 Telephone: (510)670-6633 Fax:(51	5 0)782-1939	
Application Approved	on: 11/20/2008 By jamesy	Permit Nu Permits Valid from 12/03	mbers: W2008-0888 3/2008 to 12/09/2008
Application Id:	1227133502853	City of Project Site:Oal	kland
Site Location: Project Start Date: Requested Inspection	11/3 28th street 12/03/2008 :12/03/2008 :12/02/2008	Completion Date:12/	09/2008
Scheduled Inspection	: 12/03/2008 at 9:00 AM (Contact your inspector, V	/ICKY Hamiin at (510) 670-54	443, to confirm.)
Applicant:	Gribi Associates, Inc Aaron Garcia	Phone: 707	7-718-1134
Property Owner:	Francis Rush 2200 Adeline Street #350, Oakland, CA 94607	Phone:	
Client: Contact:	** same as Property Owner ** Aaron Garcia	Phone: 707 Cell:	7-718-1134
	Receipt Number: WR2008-0423 Payer Name : Aaron Garcia	Total Due: Total Amount Paid: Paid By: VISA	\$345.00 <u>\$345.00</u> PAID IN FULL
Works Requesting Pe	rmits:		

Well Destruction-Monitoring - 1 Wells Driller: Gregg Drilling - Lic #: 485165 - Method: press

Specificatio	ons									
Permit #	Issued Date	Expire Date	Owner Well	Hole Diam.	Casing	Seal Depth	Max. Depth	State Well #	Orig.	DWR #
			ld		Diam.				Permit #	
W2008- 0888	11/20/2008	03/03/2009	B-2	4.00 in.	2.00 in.	10.00 ft	10.00 ft			

Work Total: \$345.00

Specific Work Permit Conditions

1. Drilling Permit(s) can be voided/ cancelled only in writing. It is the applicant's responsibility to notify Alameda County Public Works Agency, Water Resources Section in writing for an extension or to cancel the drilling permit application. No drilling permit application(s) shall be extended beyond ninety (90) days from the original start date. Applicants may not cancel a drilling permit application after the completion date of the permit issued has passed.

2. Prior to any drilling activities, it shall be the applicant's responsibility to contact and coordinate an Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits or agreements required for that Federal, State, County or City, and follow all City or County Ordinances. No work shall begin until all the permits and requirements have been approved or obtained. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County an Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.

3. Compliance with the well-sealing specifications shall not exempt the well-sealing contractor from complying with appropriate State reporting-requirements related to well construction or destruction (Sections 13750 through 13755 (Division 7, Chapter 10, Article 3) of the California Water Code). Contractor must complete State DWR Form 188 and mail original to the Alameda County Public Works Agency, Water Resources Section, within 60 days. Including permit number and site map.

4. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and

Alameda County Public Works Agency - Water Resources Well Permit

all expense, cost and liability in connection with or resulting from the exercise of this Permit including, but not limited to, property damage, personal injury and wrongful death.

5. Applicant shall contact Vicky Hamlin for an inspection time at 510-670-5443 or email to vickyh@acpwa.org at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.

6. Permitte, permittee's contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on or off-site storm sewers, dry wells, or waterways or be allowed to move off the property where work is being completed.

7. Remove the Christy box or similar structure.

Destroy well by grouting neat cement with a tremie pipe or pressure grouting (25 psi for 5min.) to the bottom of the well and by filling with neat cement to three (3-5) feet below surface grade. Allow the sealing material to spill over the top of the casing to fill any annular space between casing and soil.

After the seal has set, backfill the remaining hole with concrete or compacted material to match existing conditions.

8. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of \$500.00.

ATTACHMENT B

DRILLER'S REPORT



		DEPARTMENT OF WATER RESOURCES		har e)71
COUNTY.			DWR ND.	f the sec	
			other nos.	()1-889 🦳
NEAR		WELL: LOG	-		
	·		•	Į	
_	0 45 -		•		
LOCATION2	8th and Ma	gnolia Street, Oakland			
					·····
OWNER	·	ADDRE88	. <u></u>		
DRULED BY				,	
DRILLING METHOD)	GRAVEL PACKEDDATE CO	MPLETED		
size of casing d	ЕРТН	STRUCK W	ATER AT		
PERFORATIONS					No
WATER LEVEL BEF	ORE PERFORATI	NGAFTER			
TEST DATA: DISCH	IARGE G. P. M	DRAWDOWN PT	Hours	RUN	
OTHER DATA AVAI	LABLE: WATER	LEVEL RECORDANALY	\$18		
	i		м		
BURFACE ELEV			N		
DEPTH	ELEV, OF BOTTOM OF STRATUM	MATERIAL	THICK- NESS	SP. Vield %	
<u> </u>		surface			
58		zravel			
	-	yellow clay			·····
75		cment-clay			
90	· · · · ·	yellow elay			
<u>92</u>		and and gravel			<u>د</u>
9 <u>5</u>		vellow elay			
98		cc.cont gravel			
100		coment gravel		ļ	<u></u>
	1	cement gravel	1	[
16					
<u> </u>	· · · · ·	<u>voltov stav</u>			
<u>116</u> <u>131</u> 139		yellow elay			
<u> </u>	``````````````````````````````````````	yellow elay yellow olay			
116 		yollow clay yollow clay sand			
116 <u>131</u> 139 145 153		yellow elay yellow elay sand yellow elay			
116 131 139 145 153 160 168		yellow clay yellow clay sand yellow clay yellow clay			
116 131 139 145 153 160 168 170		yellow clay yellow clay yellow clay yellow clay yellow clay			······································
116 <u>131</u> 139 145 153 160 168 170 170		yellow clay yellow clay yellow clay yellow clay yellow clay yellow clay			
116 <u>131</u> 139 145 153 <u>160</u> 168 170 175		yellow clay yellow clay yellow clay yellow clay yellow clay yellow clay sand gravel			
$ \begin{array}{r} 116 \\ 131 \\ 139 \\ 145 \\ 153 \\ 160 \\ 168 \\ 170 \\ 175 \\ 214 \\ 214 \\ 175 \\ 214 \\ 175 \\ 214 \\ 175 \\ 214 \\ 175 \\ 214 \\ 175 \\ 214 \\ 175 \\ 214 \\ 175 \\ 214 \\ 175 \\ 214 \\ 175 \\ 214 \\ 175 \\ 214 \\ 175 \\ 214 \\ 175 \\ 214 $		yellow clay yellow clay yellow clay yellow clay yellow clay sand gravel yellow sandy clay			
$ \begin{array}{r} 116 \\ 131 \\ 139 \\ 145 \\ 153 \\ 160 \\ 168 \\ 170 \\ 175 \\ 214 \\ 215 \\ \end{array} $		yellow clay yellow clay yellow clay yellow clay yellow clay sand gravel yellow sandy clay blus clay			
$ \begin{array}{r} 116 \\ 131 \\ 139 \\ 145 \\ 153 \\ 160 \\ 168 \\ 170 \\ 175 \\ 211 \\ 215 \\ \end{array} $		yellow elay yellow elay yellow elay yellow elay yellow elay yellow elay sand gravel yellow sandy elay blue elay			
$ \begin{array}{r} 116 \\ 131 \\ 139 \\ 145 \\ 153 \\ 160 \\ 168 \\ 170 \\ 175 \\ 214 \\ 215 \\ \end{array} $		yellow clay yollow clay sand yellow clay yellow clay yellow clay sand gravel yellow sandy clay blue clay			
$ \begin{array}{r} 116 \\ 131 \\ 139 \\ 145 \\ 153 \\ 160 \\ 168 \\ 170 \\ 175 \\ 214 \\ 215 \\ \end{array} $		yellow clay yellow clay yellow clay yellow clay yellow clay sand gravel yellow sandy clay blus clay			
$ \begin{array}{r} 116 \\ 131 \\ 139 \\ 145 \\ 153 \\ 160 \\ 168 \\ 170 \\ 175 \\ 214 \\ 215 \\ \end{array} $		yellow clay yellow clay yellow clay yellow clay yellow clay sand gravel yellow sandy clay blus clay			
$ \begin{array}{r} 116 \\ 131 \\ 139 \\ 145 \\ 153 \\ 160 \\ 168 \\ 170 \\ 175 \\ 211 \\ 215 \\ \end{array} $		yellow clay yellow clay yellow clay yellow clay yellow clay sand gravel yellow sandy clay blus clay			
$ \begin{array}{r} 116 \\ 131 \\ 139 \\ 145 \\ 153 \\ 160 \\ 168 \\ 170 \\ 175 \\ 214 \\ 215 \\ \end{array} $		yellow clay yellow clay yellow clay yellow clay yellow clay sand gravel yellow sandy clay blus clay			

÷

LOG OBTAINED BY ...

DATE.

FORM 263

.