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**REVISED WORK PLAN FOR
SOIL AND GROUNDWATER INVESTIGATION**

**A&C Auto Service
186 E. Lewelling Boulevard
San Lorenzo, California**

**Prepared for
Mr. Carl Graffenstatte**

**Prepared by
Sierra Environmental, Inc.**

**November 30, 2006
Project 06-137.06**

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**Mr. Carl Graffenstatte
P.O. Box 1295
Eatonville, WA 98328**

Subject: Revised Work Plan For Soil and Groundwater Investigation, A&C Auto Service, 186 E. Lewelling Boulevard, San Lorenzo, California

Dear Mr. Graffenstatte:

Sierra Environmental, Inc. (Sierra) is pleased to submit this revised work plan including additional explanations related to proposed soil and groundwater investigation for the subject property, hereafter, referred to as Site. Mr. Steven Plunkett of Alameda County Health Care Services Agency (ACHCSA) requested the revised work plan in his letter dated November 30, 2006. Mr. Plunkett's letter was in response to a work plan prepared by Sierra dated October 30, 2006. In his letter, Mr. Plunkett concurred with the general scope of work proposed by Sierra in its work plan. However, he has asked to explain the rationale related to the following technical comment in the revised work plan:

4- Soil boring location and soil sampling

The following task has been modified to address the above technical comment. Additionally, Sierra has revised Figure 3 of the work plan to better depict the Site and its relationship with the proposed soil boring locations.

Task 5 - PROPOSED SUBSURFACE INVESTIGATION

Delineate Lateral Extent of the Groundwater Contamination

Nine quarterly groundwater monitoring events have been performed by Sierra and other consultants at the Site in the past. Groundwater flow direction has been measured to be toward southwest during the last groundwater monitoring event (December 31, 2001). Although groundwater

flow direction have, generally, been measured to be toward west/southwest, west/northwest (San Lorenzo Creek and San Francisco Bay); it also has been measured to be toward northeast during one monitoring event and southeast during another monitoring event. Table I presents the historical groundwater flow direction at the Site.

TABLE I
GROUNDWATER ELEVATION DATA

Well ID	Measurement Date	Well Casing Diameter (in)	Well Casing Elevation (ft)	Depth to Water ¹ (ft)	Water Table ² Elevation (ft)	Groundwater Flow Direction
MW1	6-23-94	2	44.88	17.37	27.51	NW
	3-15-95			13.47	31.41	W-SW
	6-01-95			13.35	31.53	W-NW
	9-11-95			15.37	29.51	W-NW
	4-16-99			12.05	32.83	SE
	3-21-01			13.59	31.29	NW
	6-26-01			14.72	30.16	NE
	9-18-01			15.98	28.90	NW
	12-31-01			13.92	30.96	SW
MW2	6-23-94	2	45.26	16.75	28.51	NW
	3-15-95			13.74	31.52	W-SW
	6-1-95			13.52	31.74	W-NW
	9-11-95			15.58	29.68	SE
	3-21-01			13.81	31.45	NW
	6-26-01			15.55	29.71	NE
	9-18-01			16.22	29.04	NW
	12-31-01			14.22	31.04	SW
	MW3			6-23-94	2	45.81
3-15-95		14.43	31.38	W-SW		
6-1-95		14.16	31.65	W-NW		
9-11-95		16.20	29.61	SE		
3-21-01		14.44	31.37	NW		
6-26-01		14.97	30.84	NE		
9-18-01		16.82	28.99	NW		
12-31-01		14.91	30.90	SW		

1. Depths to groundwater were measured to the top of the well casings
2. Water table elevations were measured in relation to the mean sea level (MSL)

NOTE: Top of the well casings was surveyed relative to a known benchmark referenced to mean sea level (MSL) by CET.

Based on the historical analytical results for groundwater samples collected from existing monitoring wells (MW1 through MW3), the primary source of groundwater contamination appear to be the former underground storage tanks (USTs) at the Site. MW2 is located within proximity of the former tank complex and have shown the highest concentrations of the gasoline constituents in groundwater. Please note that no methyl tertiary butyl ether (MTBE) have been detected in any of the water samples collected from the monitoring wells at the Site. Additionally, the historical data have shown a decreasing trend of the gasoline constituents in groundwater beneath the Site. Except for 8.1 parts per billion (ppb) benzene detected in a groundwater sample collected from MW3, no benzene has been detected in groundwater samples collected at the Site during the four most recent quarterly monitoring events. These conditions suggest that contaminants in groundwater beneath the Site are stabilized and biodegrading by time. Table II summarizes the historical analytical data for groundwater samples collected at the Site.

Among the gasoline constituents in groundwater beneath the Site, ethylbenzene and xylenes have the highest concentrations in MW2 and MW3 (table II). If groundwater flow direction was toward north/northwest, these indicator constituents would have been intercepted and detected in MW1 (Figure 3).

**TABLE II
 ANALYTICAL RESULTS FOR
 GROUNDWATER SAMPLES**

Sample ID	Sample Date	TPHG ¹ ppm ³	Benzene ppb ⁴	Toluene ppb	Ethylbenzene ppb	Xylenes ppb	MTBE ² ppb
MW1	6-23-94	3.6	<0.5	<0.5	7.2	2.6	NA ⁵
	3-15-95	<0.05	<0.5	<0.5	<0.5	<0.5	NA
	6-1-95	0.10	<0.5	<0.5	<0.5	<0.5	NA
	9-11-95	0.05	<0.5	<0.5	<0.5	<0.5	NA
	4-16-99	0.16	ND ⁶	ND	ND	ND	ND
	3-21-01	ND	ND	ND	ND	ND	ND
	6-26-01	ND	ND	ND	ND	ND	ND
	9-18-01	0.082	ND	ND	2.1	ND	ND
	12-31-01	ND	ND	ND	ND	ND	ND
MW2	6-23-94	71	310	710	2600	4600	NA
	3-15-95	35	150	1000	2100	10000	NA
	6-1-95	49	210	1300	2900	11000	NA
	9-11-95	39	150	1000	2900	13000	NA
	4-16-99	50	25	110	1900	8000	ND
	3-21-01	22	ND	52	1300	3700	ND
	6-26-01	15	ND	ND	910	2100	ND
	9-18-01	14	ND	ND	1,000	2,000	ND
	12-31-01	24	ND	ND	1,600	4,000	ND
MW3	6-23-94	93	550	130	3300	7500	NA
	3-15-95	46	330	94	3800	10000	NA
	6-1-95	42	270	230	3400	10000	NA
	9-11-95	49	190	330	4000	12000	NA
	4-16-99	16	10	ND	2300	940	ND
	3-21-01	12	ND	28	2000	ND	ND
	6-26-01	14	ND	ND	2100	ND	ND
	9-18-01	13	ND	ND	1.5	ND	ND
	12-31-01	3.9	8.1	12	640	13	ND

1. TPHG = Total Petroleum Hydrocarbons as Gasoline
2. MTBE = Methyl-tertiary-Butyl Ether
3. ppm = Parts Per Million (mg/l)
4. ppb = Parts Per Billion (µg/l)
5. NA = Not Analyzed
6. ND = Below Laboratory Detection Limit

Groundwater flow direction recorded for properties near the Site have consistently measured to be toward southwest. However, to obtain accurate subsurface data at the Site Sierra will (1) have the well heads surveyed, (2) measure water levels and redevelop the monitoring wells, (3) evaluate local geology and hydrogeology, (4) evaluate man-made and possible natural conduits and preferential pathways, (5) identify sensitive receptors including private and public wells, and (6) obtain subsurface information from 7 exploratory soil borings. The boring locations will be on northeast/southwest and northwest/southeast transects covering all reasonably possible directions of groundwater flow. With absence of MTBE in groundwater, it is unlikely that the remaining gasoline constituents have migrated long distance from the Site. Therefore, the proposed boring locations are selected to evaluate soil and groundwater quality at and within proximity of the Site. Figure 3 shows the proposed soil boring locations.

Sierra proposes to utilize a Geoprobe™ direct push equipment for soil and groundwater sampling at seven locations shown in Figure 3. Geoprobe™ is mounted on a truck. The drilling equipment consists of a hollow barrel (4 feet long) lined with a clean plastic tube (also 4-foot long) and attached to solid rods. The barrel penetrates into the soil by a hydraulic hammer. After collecting soil in the plastic tubes, Sierra will inspect the soil for any odor, stain, and its physical characteristics will be documented in boring logs. They will also be screened with photoionization detector (PID) for presence of volatile petroleum hydrocarbons. If contamination (i.e. stain, odor, and or/and PID readings) will be encountered, Sierra will collect soil sample(s) for chemical analysis. Otherwise, Sierra will collect soil samples from capillary fringe, changes in lithology, and bottom of each boring for chemical analysis. After sample collection, both ends of each sample will be sealed with Teflon® tape and plastic end-caps, labeled, placed on ice to be delivered to analytical laboratory for chemical analysis. The soil samples will be analyzed for TPHG and TPHD using the United State Environmental Protection Agency (EPA) modified method 8015. They will also be analyzed for, benzene, toluene, ethylbenzene, and xylenes (BTEX), and EDB, EDC, TAME, ETBE, DIPE, TBA, and EtOH using EPA method 8260B. Additionally, the samples will be analyzed for total lead using atomic adsorption (AA) method.

Sierra will collect a grab groundwater sample from each boring for chemical analysis. The borings will be advanced to approximately 25-30 feet bgs extending through the saturated zone. A hollow shaft with an adjustable cone or 1-inch diameter slotted and solid PVC pipe will be used to collect the groundwater samples. After reaching groundwater, the shaft will be pulled up where a separation between the shaft and the cone allowed for

groundwater to enter into a stainless steel perforated barrel in the shaft, or PVC pipes will be inserted into the boring to collect groundwater for sampling. A Teflon[®] tube equipped with a small ball valve at the tip of the tube, acting as bailer, will be placed inside of the perforated pipe to collect groundwater samples. The groundwater will be collected by making up and down motions on the Teflon[®] tube. After collection, the groundwater from each well will be transferred into clean volatile organic analysis (VOA) vials. The vials will be sealed with Teflon-septum screw caps, labeled, placed in a cooler, and delivered to laboratory with chain-of-custody documentation. Except for lead, the groundwater samples will be analyzed for the same constituents explained above.

After collecting the soil and groundwater samples, driller will seal the borings with Portland cement grout.

All Geoprobe[®] and sampling equipment will be washed with Liquinox[®] (a phosphate-free laboratory detergent) and rinsed with clean tap water at each sampling interval.

Sierra will summarize and evaluate all information related to the work explained above in a soil and groundwater investigation report in a format of a Site conceptual model. The report will explained data gaps (if any) and provide recommendations.

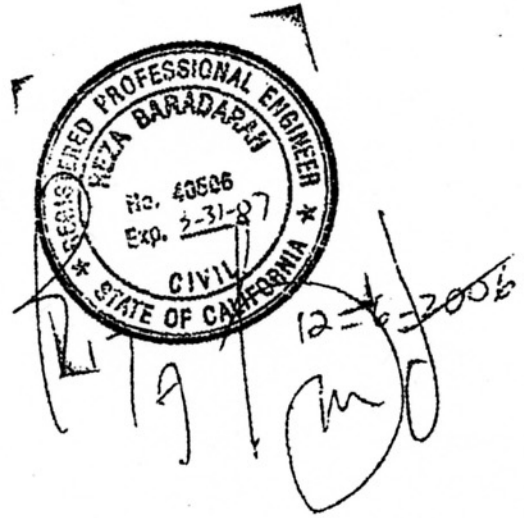
Please feel welcome to call us if you have questions.

Very Truly Yours,
Sierra Environmental, Inc.

Reza Baradaran, PE, GE



Mitch Hajiaghahi, REA II, CAC
Principal





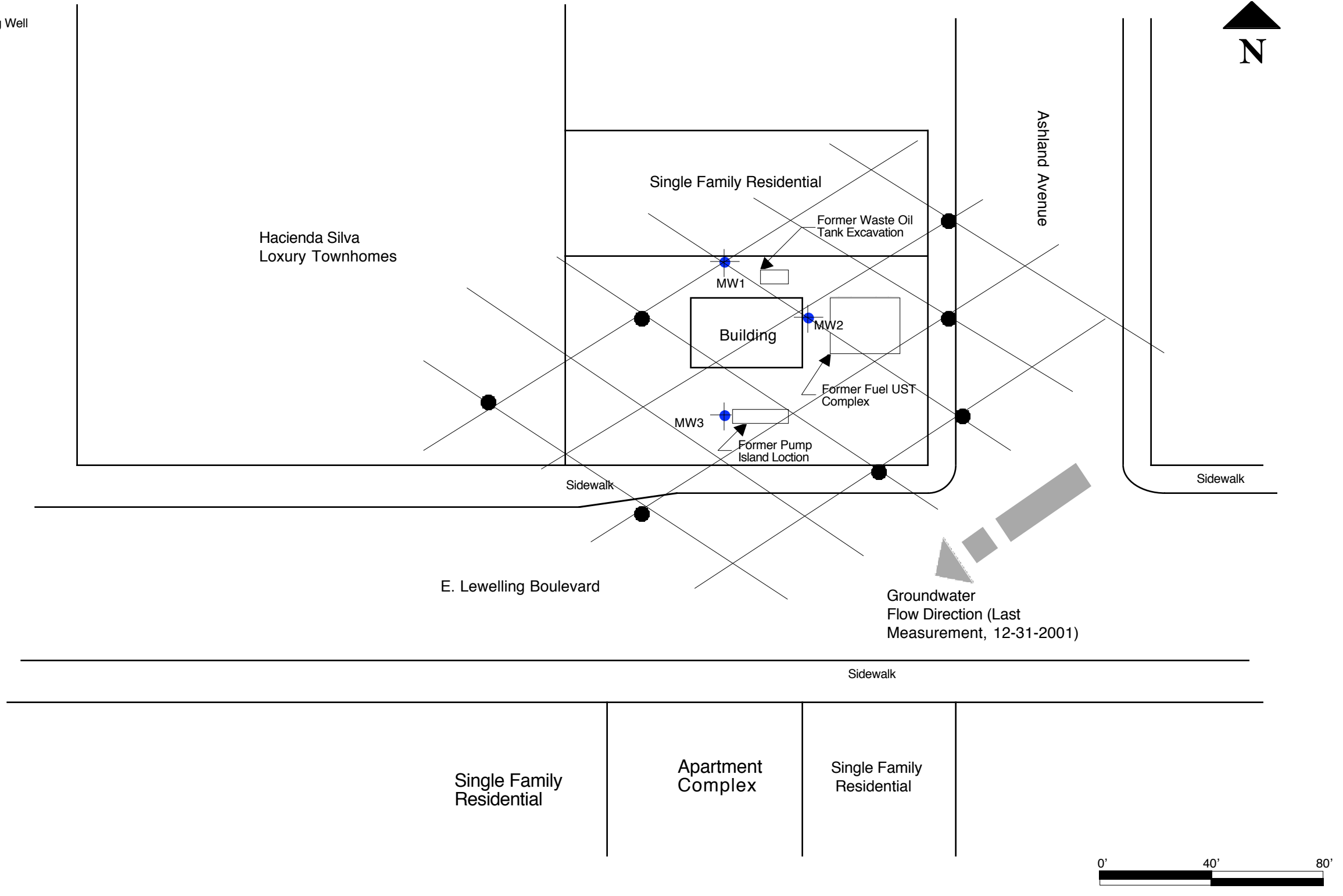
Enclosures: Figure 3 - Proposed Soil Boring Locations

CC: Mr. Steven Plunkett, ACHCS (1 Copy)

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LEGEND

-  MW1 Existing Groundwater Monitoring Well Location and Designation
-  SB1 Proposed Soil Boring Location and Designation




SIERRA ENVIRONMENTAL, INC.
Environmental Consultants
 980 W. Taylor Street, San Jose, CA 95126
 Phone [408]971-6758 • Fax [408] 971-6759

Proposed Soil Boring Locations

**Revised Work Plan For Soil and Groundwater Investigation
 A&C Auto Service**

186 E. Lewelling Boulevard, San Lorenzo, California, 94580

FIGURE
3
 Nov 30, 2006
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