October 30, 2006

Mr. Steven Plunkett
Hazardous Materials Specialist
Alameda County
Environmental Health Services
1131 Harbor Bay Parkway, Suite
Alameda, CA. 94502

Subject: **Work Plan For Soil And Groundwater Investigation, A & C Auto Services, 186 E. Lewelling Boulevard, San Lorenzo, California**

Dear Mr. Plunkett:

With my authorization, Sierra Environmental, Inc. (Sierra) prepared the work plan describing scope of proposed soil and groundwater investigation, for the subject property.

I Declare, under penalty of perjury, that the information and/or recommendations contained in the work plan is true and correct to the best of my knowledge.

Please call me at 360-832-8020 if you have any questions.

Sincerely,

Sue Pawley

Sue Pawley
Carl & Donna Graffenstatte

Enclosure

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.

October 30, 2006
Project 06-137.06

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

Subject: 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 work plan describing scope of proposed soil and groundwater investigation for the subject property, hereafter, referred to as Site. Site location is shown in Figure 1. Mr. Steven Plunkett of Alameda County Health Care Services Agency (ACHCS) requested the work plan in his letter dated September 25, 2006.

Sierra will present the soil and groundwater investigation results together with other information in a Site Conceptual Model (SCM) format. The SCM will determine whether the gasoline constituents detected in groundwater beneath the Site pose significant risk to public health and/or the environment. The SCM may also identify data gaps that may need to be addressed in future work. The proposed work will initiate processing of a case closure for the Site.

SITE'S SPECIFIC INFORMATION AND BACKGROUND

The Site is located in a mixed residential/commercial zoning of San Lorenzo, California. It is bounded by Lewelling Boulevard on the south and Ashland Avenue on the east. A single-family residential property and Luxury Townhomes complex are situated north and west of the Site, respectively.

Please see Figure 2 for the Site's neighboring properties. San Lorenzo Creek runs within 1/4 mile south of the Site. San Francisco Bay is located approximately 4 miles west of the Site.

Presently, three groundwater monitoring wells (MW1 through MW3) exist at the Site. Groundwater has been measured at the Site at approximately 12 to 17 feet bgs with a variable flow direction ranging west/southwest to northwest. Table I summarizes Site's available groundwater data.

On September 5, 1990, three underground storage tanks (USTs) were removed from the Site. The USTs consisted of two 4,000-gallon gasoline and one 350-gallon waste oil tanks. The approximate locations of the USTs are shown in Figure 2. After removal, four soil samples were collected from beneath the gasoline tanks. One soil sample was also collected from beneath the waste oil tank.

Up to 4,000 parts per million (ppm) total petroleum hydrocarbons as gasoline (TPHG) and 1.3 ppm benzene were detected in the soil samples collected from beneath the gasoline tanks.

On June 14 and 15, 1994, CET Environmental Services, Inc. (CET) constructed groundwater monitoring wells MW1, MW2, and MW3 to evaluate groundwater condition beneath the Site. CET performed the last groundwater monitoring event on September 11, 1995. The results "Third Quarter 1995 Groundwater Monitoring Report" indicated that groundwater depths ranged 15.37 to 16.20 feet bellow top of well casings with a west/northwesterly flow direction. Analytical results showed 0.05 ppm, 39 ppm, and 49 ppm TPHG in groundwater samples collected from MW1 through MW3, respectively.

Sierra understands that CET performed an off-site precision soil and groundwater sampling as part of delineating groundwater impact at the Site on October 17, 1995. According to Plate 2 provided by CET, up to 21 ppm TPHG and 0.088 ppm benzene were detected in the groundwater samples collected off-site, near or at Lewelling Boulevard during this sampling event. Sierra could not obtain a copy of the CET report for this sampling event, because Ms. Young has not paid CET's invoices.

On April 16, 1999, Sierra performed one groundwater monitoring episode at the Site. During 2001 Sierra performed 4 quarterly groundwater monitoring events at the Site. Analytical results are presented in Table II.

The Site has been used as an auto repair shop.

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	16.55	29.26	NW
	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 were surveyed relative to a known benchmark referenced to mean sea level (MSL) by CET.

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
	911-95	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

LOCAL GEOLOGY AND HYDROGEOLOGY INFORMATION

Sierra reviewed information related to geology and hydrogeology of Ultramar/Beacon No. 721 property located at 44 Lewelling Boulevard approximately 1,200 feet west of the Site. Well log for a groundwater monitoring well (MW-5) documented the following soil type:

1’	-	13.5’	Silty Sand, Dark Brawn, Moist, Medium Dense
13.5’	-	17’	Poorly Graded Gravel with Sand, Moist, Loose
17’	-	18’	Lean Clay
18’	-	19’	Poorly Graded Sand With Silt, Moist
19’	-	20’	Silty Clay, Moist, Medium Stiff
20’	-	23’	Silty Sand, Saturated, Loose
23’	-	25’	Fat Clay, Medium Stiff, Saturated
25’	-	27’	Silty Clay, Medium Stiff, Saturated
27’	-	30’	Sandy Lean Clay, Very Stiff, Wet

The above boring was terminated at 30 feet bgs. Groundwater was encountered at approximately 21.5 feet bgs. Groundwater flow direction has been measured to be consistently toward southwest at this property “4th Quarter 2005 Groundwater Monitoring/Remediation Status Report And SCM Update” prepared by RDM Environmental, Inc. And Haley & Aldrich Of New York dated March 31, 2006.

Sierra also reviewed available groundwater information for 76 Station #5760 located at 376 Lewelling Boulevard, approximately 2,500 feet west of the Site. According to a semi-annual 2004 summary report prepared by ConcoPhillips, dated July 12, 2005, groundwater levels ranged 12.68 feet to 14.97 feet below top of casing with a consistent southwest flow direction at this property.

OBJECTIVE

The objectives of the proposed work consist of the followings:

- Compile and evaluate information on man-made conduits, which may influence transport and dispersion of contaminants from the Site
- Identify sensitive receptors within ½-mile radius of the Site
- Delineate the horizontal and vertical extent of groundwater contamination down-gradient of the Site
- Study geology and hydrology of the area
- Summarize the findings in a Site conceptual model (SCM) report

To achieve the above objectives, Sierra proposes to perform the following tasks:

Task 1 - GROUNDWATER SAMPLING AND SURVEY OF EXISTING MONITORING WELL HEADS

Sierra proposes to purge and collect groundwater samples from the existing wells at the Site to evaluate present contaminants levels in groundwater beneath the Site. Additionally, to comply with the State requirements, Sierra proposes to survey the wellheads and obtain their vertical and horizontal controls. The surveying information will (1) confirm the accuracy of groundwater flow direction measurements and (2) will be loaded to Geotracker in electronic formats.

Task 2 - EVALUATE MAN-MADE CONDUITS

Sierra will visit City of San Lorenzo, Alameda County Public Works, and other agencies providing utilities to the Site and obtain maps of City improvements depicting utility trench locations and depths near the Site. Sierra will evaluate whether any identified trench will intercept groundwater flow originating from the Site. Sierra will make an evaluation of whether the identified trench(s) will effect transport and dispersion of contaminants from the Site.

Task 3 - IDENTIFYING SENSETIVE RECEPTORS

Sierra will utilize services of Environmental Data Resources, Inc. (EDR) to identify sensitive receptors through a GeoCheck® and offsite receptor report. The reports will include public and private well search within ½-mile radius of the Site. Sierra will also review available information for existence of private and public wells near the Site at the health department . Additionally, Sierra will obtain from EDR historical aerial photographs, Sanborn fire insurance maps, and other relevant information related to historical land use practices at the Site.

Sierra will obtain an assessor parcel map from County of Alameda Assessor Office for the Site and its neighboring properties.

The complete evaluation of sensitive receptors as well as the well survey will be included in the SCM.

Task 4 - OBTAIN ENCROACHMENTA AND DRILLING PERMITS

After obtaining the most recent groundwater data, Sierra will mark boring locations, coordinate with a State-licensed drilling contractor, a State-certified analytical laboratory, ACHCS, and the client to start the field activities. Sierra will prepare a health and safety plan for its employees and sub-contractors. Sierra will obtain encroachment permits from Alameda County Public Works and private properties. Sierra will notify Underground Services Alert (USA) to clear underground utilities. Sierra will prepare necessary equipment and materials before starting the drilling activities.

Task 5 - PROPOSED SUBSURFACE INVESTIGATION

Delineate Lateral Extent of the Groundwater Contamination

Based on the most recent Site's information, and the groundwater data mentioned for the above properties, groundwater flow direction appears to be toward southwest of the Site. Therefore, the dissolved-phase groundwater plume of gasoline may have extended along this direction. The information also suggest that the shallow water-bearing zone is about 5-7 feet thick at approximately 18-25 feet bgs. At this time, Sierra proposes to use direct push drilling method to collect grab groundwater samples along transects within groundwater flow directions. Before commencing the drilling work, Sierra will evaluate updated well-head survey results, groundwater elevations, and flow direction. If changes is groundwater flow direction should occur, Sierra will notify ACHCS and will adjust the boring locations. However, the groundwater sampling and analysis procedures will remain the same as explained in the following sections.

Sierra will utilize a Geoprobe™ direct push equipment for groundwater sampling at six 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 or 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.

Sierra does not anticipate to encounter contamination in unsaturated zone in the off-site soil borings. Therefore, Sierra will not collect any soil samples for chemical analysis. Otherwise, if contamination will be encountered in this

zone, Sierra will collect soil sample(s) 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 pending groundwater sample collection.

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.

After collecting the soil (if any) 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.

Task 6 - LABORATORY TESTING AND CHEMICAL ANALYSIS

Soil (if any) and groundwater samples will be analyzed for TPHG using the United State Environmental Protection Agency (EPA) method 8260B, GC-MS. They will also be analyzed for, benzene, toluene, ethylbenzene, and xylenes (BTEX), and the fuel oxygenates also using EPA method 8260B. ACHCS has requested that the samples also be analyzed for total petroleum hydrocarbons as diesel (TPHD) and total lead. Therefore, the samples will also be analyzed for TPHD using modified EPA method 8015, and for lead using atomic adsorption (AA) method.

Task 7 - SCM PREPARATION

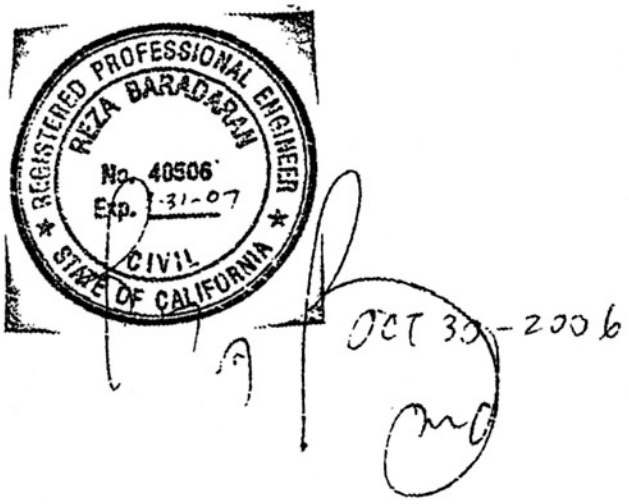
After completion of the field activities and obtaining the analytical results, Sierra will prepare a SCM, which will include the followings:

- Evaluation of man-made conduits near the Site, and determine whether they may influence transport and dispersion of contaminants from the Site
- Identifying sensitive receptors including water wells within ½-mile radius of the Site
- Identifying extent of groundwater contamination down gradient of the Site
- Evaluation of geology and hydrology of the general area near the Site
- Boring logs geologic cross section
- Graphs of petroleum hydrocarbon concentrations over time
- Evaluation of exposure scenarios

Sierra will discuss data gaps (if any) and make recommendations regarding further investigation and possible remediation, if warranted.

Please feel welcome to call us if you have questions.

Very Truly Yours,
Sierra Environmental, Inc.



Reza Baradaran, PE, GE

Mitch Hajiaghai, REA II, CAC
Principal

Enclosures:

Figure 1	-	Site Location
Figure 2	-	On-Site Groundwater Monitoring Wells Locations
Figure 3	-	Proposed Soil Boring Locations

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

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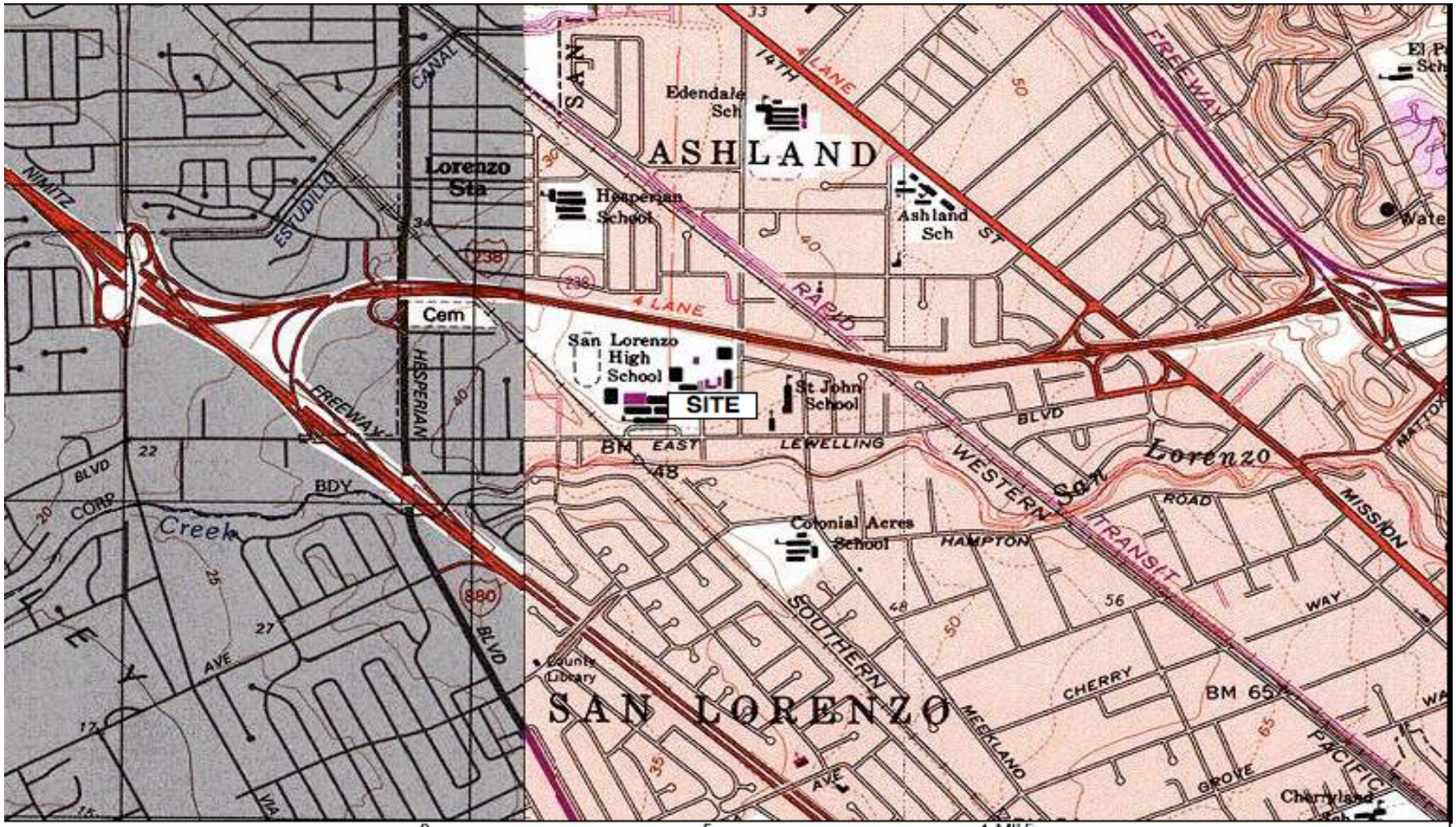


SIERRA ENVIRONMENTAL, INC.
Environmental Consultants

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

SITE LOCATION MAP

Work Plan For Soil And Groundwater Investigation
A&C Auto Service

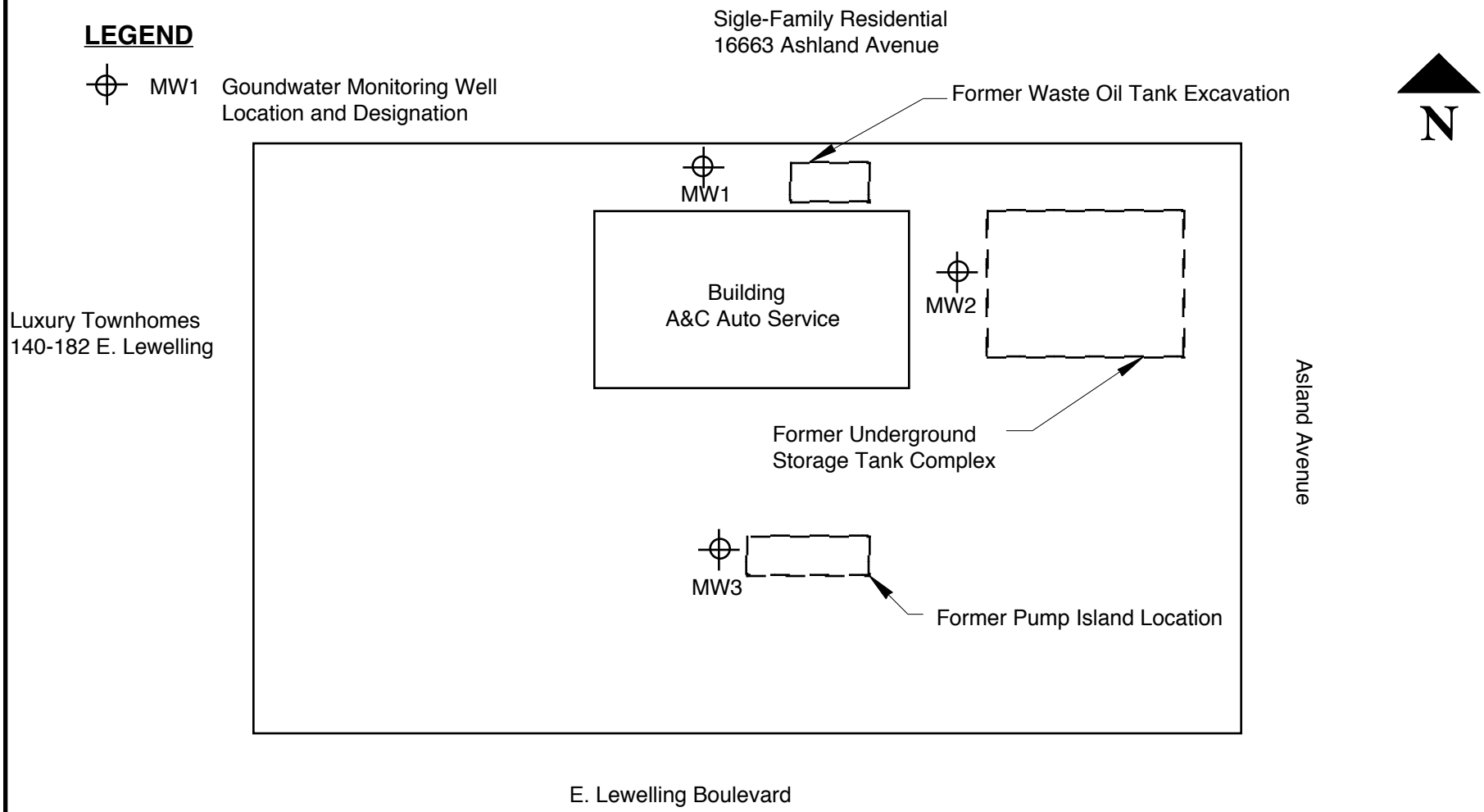
186 E. Lewelling Boulevard • San Lorenzo • California

FIGURE 1

October 30, 2006
Project 06-137.06

LEGEND

MW1 Goundwater Monitoring Well Location and Designation



Approximate Scale: 1" = 20'

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Site Plan

Work Plan For Soil And Groundwater Investigation
A & C Auto Service

186 E. Lewelling Boulevard, San Lorenzo, California

FIGURE
2
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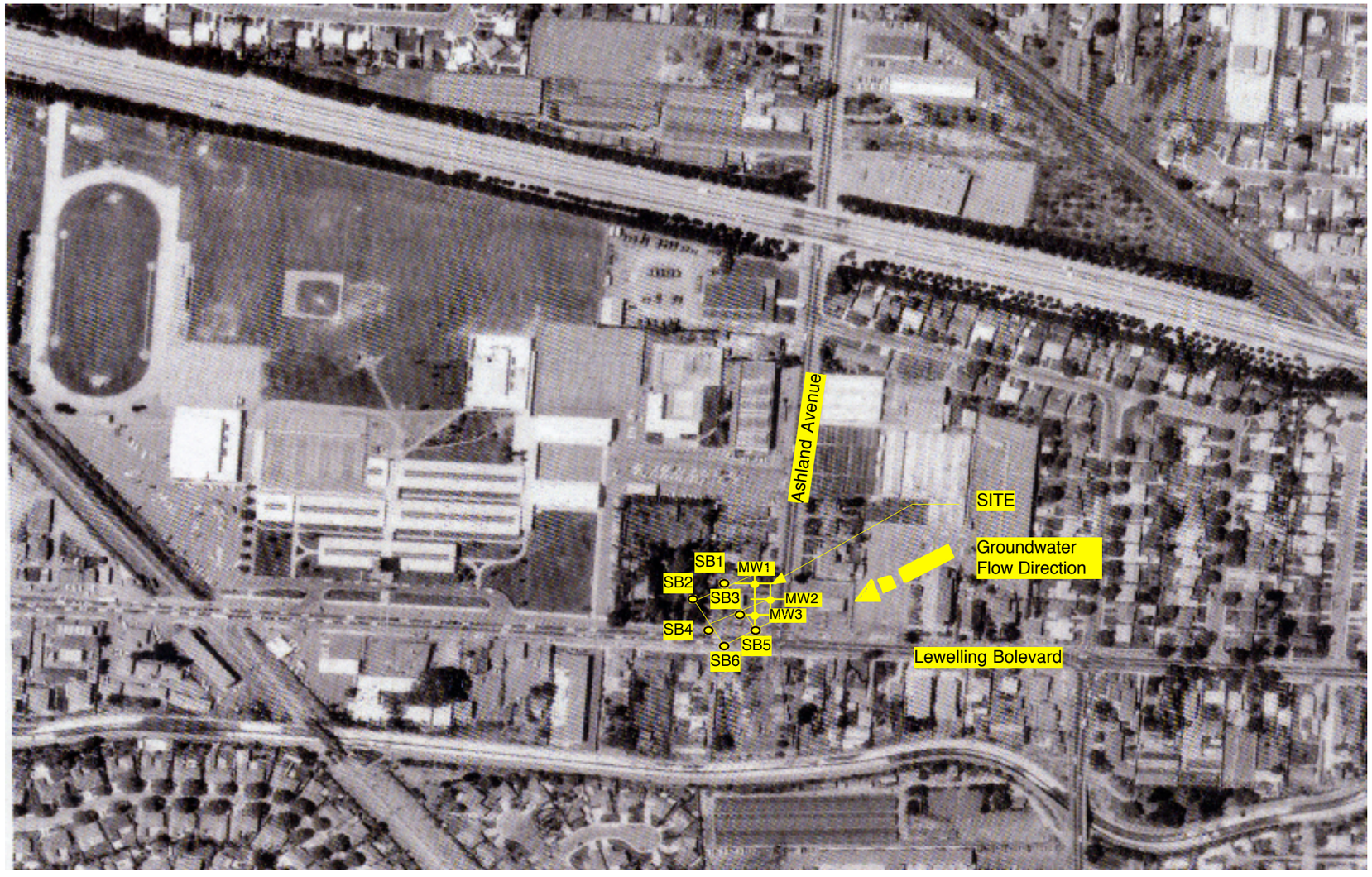
LEGEND

MW1 Existing Groundwater Monitoring Well Location and Designation

SB1 Proposed Soil BoringLocation and Designation

N



Source: The EDR Aerial Photo Decade Oackage, 1965

Approximate Scale: 1" = 282'

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Proposed Soil Boring Locations

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

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

FIGURE 3

October 30, 2006

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