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Alameda County Environmental Health

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Environmental Health

**CASE CLOSURE SUMMARY
LEAKING UNDERGROUND FUEL STORAGE TANK - LOCAL OVERSIGHT PROGRAM**

I. AGENCY INFORMATION

Date: February 19, 2009

Agency Name: Alameda County Environmental Health	Address: 1131 Harbor Bay Parkway
City/State/Zip: Alameda, CA 94502-6577	Phone: (510) 777-2478
Responsible Staff Person: Paresh Khatri	Title: Hazardous Materials Specialist

II. CASE INFORMATION

Site Facility Name: SNK Andante Project		
Site Facility Address: 3992 San Pablo Ave., Emeryville, CA 94608		
RB Case No.: ??	Local Case No.: ??	LOP Case No.: RO0002530
URF Filing Date: ??	Global ID No.: T06019738255	APN: see attachment #1
Responsible Parties	Addresses	Phone Numbers
Constantino and Remedios Celis (release site owners)	c/o City of Emeryville Planning Dept., 1333 Park Ave., Emeryville, California 94608, Attn. Ignacio Dayrit	(510) 596-4307
SNK Captex LLC (affected site)	3996 San Pablo Avenue, Suite A, Emeryville, CA 94608 Attn. Don Peterson,	(510) 844-1960

Tank I.D. No	Size in Gallons	Contents	Closed In Place/Removed?	Date
NO LEAKING TANKS ON SITE				

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and Type of Release: Leaking USTs <i>on adjacent property</i> . See RWQCB Case No. 01-1938		
Site characterization complete? Yes	Date Approved By Oversight Agency: July 2, 2003	
Monitoring wells installed? Yes	Number: 11	Proper screened interval? Yes
Highest GW Depth Below Ground Surface: 3.42'	Lowest Depth: 8.14'	Flow Direction: WSW
Most Sensitive Current Use: None. (See RWQCB <i>East Bay Plane Groundwater Basin Beneficial Use Evaluation Report - Alameda and Contra Costa Counties</i> , 1999.)		

Summary of Production Wells in Vicinity: None	
Are drinking water wells affected? No	Aquifer Name: Shallow aquifer
Is surface water affected? No	Nearest SW Name: Temescal Creek 0.5 mi.
Off-Site Beneficial Use Impacts (Addresses/Locations): There were no releases of contaminants on the Andante Site	
Reports on file? No	Where are reports filed n/a

TREATMENT AND DISPOSAL OF AFFECTED MATERIAL			
Material	Amount (Include Units)	Action (Treatment or Disposal w/Destination)	Date
Tank	n/a	n/a	n/a
Piping	n/a	n/a	n/a
Free Product	n/a	n/a	n/a
Soil	7,074.57 tons (≅ 4,350 cu yds <i>in situ</i>)	5,785.21 tons disposed at Keller Canyon Landfill, Pittsburg CA; 1,289.37 tons to Forward Landfill, Manteca, CA	Various May 2003
Groundwater	2,023 gal.	Shipped for treatment at DeMenno/Kerdoon recycling facility, Compton, CA	May 28, 2003

MAXIMUM DOCUMENTED CONTAMINANT CONCENTRATIONS BEFORE AND AFTER CLEANUP				
Contaminant	Soil (mg/Kg)		Water (µg/L)	
	Before	After	Before	After
TPH (Gas)	12,000 (AEGP-8@5, 5ft., 2/5/03)	2,500 (60S-80E A, 9.7ft., 5/14/03)	510,000 (ET2-CW 3/24/03)	<50 (SJC MW-8., 9/25/05)
TPH (Diesel)	2,000 (SJC-MW-T7-7.5, 7.5ft 4/11/03)	150 (60S-60E, 8.81ft, 5/13/03)	20,000 (ET2-CW 3/24/03)	74 (SJC MW-8., 9/25/05)
TPH (Motor Oil)	n/a	n/a	n/a	n/a
TRPH	n/a	n/a	n/a	n/a
Benzene	8.2 (SJC-MW-T7-11.5, 11.5ft., 4/11/03)	8.1 (0S-120E Wall N, 9.16ft, 5/15/03)	3,400 (SJC-MW-T7, 4/16/03)	0.52 (SJC MW-8., 9/25/05)
Toluene	270 (AEGP-9@5., 5 ft., 2/5/03)	37 (0S-60E, 8.05ft., 5/9/03)	4,800 (SJC-MW-T7 4/16/03)	<0.50 (SJC MW-8., 9/25/05)
Ethylbenzene	92 (AEGP-11@5., 5ft., 2/5/03)	44 (0S-60E, 8.08ft., 5/9/03)	10,000 (ET2-CW 3/24/03)	<0.50 (SJC MW-8., 9/25/05)
Xylenes	590 (AEGP-11@5, 5ft., 2/5/03)	240 (0S-60E, 8.8ft., 5/9/03)	65,000 (ET2-CW 3/24/03)	<1.0 (SJC MW-8., 9/25/05)
MTBE	0.061 (AEGP-9@5, 5ft., 2/5/03)	0.0053 (120S-0E Wall W, 7.8ft., 5/5/03)	78 (SJC-MW-T4A 4/16/03)	15 (SJC MW-8., 9/25/05)
Lead	10.3 (AEGP-6@5, 5ft, 2/5/03)	10.3 (AEGP-6@5, 5ft, 2/5/03)	n/a	n/a
TBA	0.0068 (SJW-MW-T5A-5, 5ft., 4/11/03)	0.0051 (30S-40E 13.6, 13.6ft., 5/15/03)	<5.0 (SJC-MW-8, 12/9/04)	<5.0 (SJC-MW-8, 12/9/04)
Naphthalene	3.8 (0S-230E Wall N., 9.89ft., 5/28/03)	3.8 (0S-230E Wall N., 9.89ft., 5/28/03)	140 (30S-40E Water, 5/15/03)	140 (30S-40E Water, 5/15/03)
Mineral Spirits	54 (Tank 1-N 4/29/03)	1.8 (100S-20E[A] 5/19/03)	<50 (SJC-MW-T1 4/16/03)	<50 (SJC-MW-8 9/25/05)

¹ Other VOCs (groundwater ppb): < 20 µg/L TBA, <0.5 µg/L DIPE, <0.5 µg/L ETBE, <0.5 µg/L TAME, <0.5 µg/L EDB, <0.5 µg/L 1,2-DCA, <300 µg/L EtOH
 Other VOCs (Soil mg/kg): < 0.5 mg/kg TBA, <0.5 mg/kg DIPE, <0.5 mg/kg ETBE, <0.85 mg/kg TAME, <20 mg/kg EtOH

Site History and Description of Corrective Actions:

1. INITIATION OF CORRECTIVE ACTION

1.1 BACKGROUND HISTORY

The Andante property was never the site of an unauthorized release of any kind.

The Andante Project is located on the eastern side of San Pablo Avenue at its intersection with 40th Street in Emeryville, CA (see attached Figures 1 and 2). Prior to its redevelopment in 2004, it had the address 3992 San Pablo Avenue and was vacant land. The City of Emeryville Redevelopment Agency (**ERDA**) owned the property until it was bought by SNK Capterc Andante LLC (**SNK**) in 2003. The property is currently in commercial and residential mixed use and has the addresses 3996 San Pablo Avenue and 1121 and 1147 40th Street. It is bounded on the north by 40th Street, beyond which is a mixed-use commercial and residential site; on the west by San Pablo Avenue, across which are small street front businesses and a large parking lot; on the south by the Bank Club restaurant at 3900 San Pablo Avenue and the Avalon Senior Housing multi-family residence complex; and on the east by Adeline Street, across which are street-front small businesses and residences and an industrial area.

No releases of petroleum hydrocarbons or other regulated materials occurred on the Andante Property, (**Note:** three UST's were found on the Andante Project Site that had NOT released petroleum hydrocarbons and their sites were closed by the ACEH at the time of their removal in 2003.) However, the property was affected by releases of gasoline and diesel from the adjacent Celis Alliance Service Station (**Celis**) site (Global ID T0600101794), which had been owned by Constantino and Remedios Celis and was demolished in 1993 prior to the construction of an extension of 40th Street by the City of Emeryville. Six tanks that contained gasoline, diesel and motor oil were removed from the Celis Site in 1994. Soil and groundwater contamination on the Celis Site was investigated and limited soil and groundwater remediation was undertaken by the City of Emeryville, which, by action of their purchase of the property by condemnation, had become a co-responsible party with Constantino and Remedios Celis. However, no site characterization work was conducted to the north or to the south (on the Andante Property). Consistent with the known contamination of the Celis Site, the probability that the Andante Site was affected by releases of petroleum hydrocarbons from that source was identified by a Phase I Environmental Site Assessment conducted by The San Joaquin Company Inc. (**SJC**) for SNK Development Inc. (**SNK**) in 2000 (The San Joaquin Company Inc. 2000). Contamination on the Andante Site was confirmed by a subsurface investigation conducted by Apex EnviroTech, Inc (**Apex**) for SNK in February 2003 (Apex Environmental Inc. 2003).

1.2 SITE CHARACTERIZATION ACTIVITIES

The following Site Characterization activities were conducted:

July through September 2000: Harza Engineering Company, Inc. (**Harza**) conducted a geotechnical engineering site investigation at the Andante Site. Harza drilled a total of twelve exploratory borings at the locations shown on Figure 2. The maximum depth of exploration (approximately 81 ft.) was reached in Boring HEB-11. In addition, Harza also conducted three cone penetrometer (CPT) tests that reached a maximum depth of 50 ft. Logs of those borings and the CPT test results are included in SJC's Environmental Closure Report for the Andante Site (The San Joaquin Company Inc. 2007). Harza's investigation was not intended as an environmental site characterization but the presence of olfactory indicators of petroleum hydrocarbons in the subsurface was noted at some drilling locations and it provided extensive stratigraphic information.

February 2003: Apex conducted a first phase of site characterization by drilling 31 borings using push technology with depths varying from 5 to 11 ft. BGS at the locations shown on Figure 2. Samples of soil recovered from the borings were analyzed for TPHd, TPHg, BTEX, MTBE and total lead. The results are compiled in attached Table 3. The investigation identified an area in the northwestern corner of the Andante Site where the subsurface was affected by petroleum hydrocarbons. See Figure 3.

March - April 2003: SJC submitted a remediation work plan for the Andante Site that included provision for conducting additional site characterization (The San Joaquin Company Inc. 2003b). The work plan was approved by the ACEH. In March and April 2003, SJC excavated three exploratory trenches (Exploratory Trenches ET -1 through ET-3) and on April 11, 2003, installed ten temporary, pre-fabricated groundwater-quality monitoring wells using push technology. Three (Wells SJC MWT-2, MWT-4, MWT-5) were drilled to depths of 8 ft. Four wells, SLC MWT-1, MWT-3, MWT-6 and MWT-7 were drilled to 12 ft. The seven wells mentioned above were screened from approximately one foot above the water table to their full depth. Three (Wells SJC MWT-2A, MWT-4A, MWT-5A) were drilled to total depths of 20 ft. and were screened over the bottom five feet of the casing. The screened intervals of the wells were selected to investigate the vertical distribution of groundwater contaminant

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concentrations elected based on hydrostratigraphic data obtained from earlier phases of site characterization. All wells were installed under permit of the Alameda County Public Works Agency (ACPWA). The locations of the exploratory trenches and groundwater-quality monitoring wells are shown on Figure 4. Samples of soil were recovered from the trenches and well borings and analyzed for TPHd, mineral spirits, TPHg, BTEX, MTBE, TBA, TAME, DIPE, ETBE, EDB, 1,2 DCA and polynuclear aromatic compounds. The results of the analyses are cited in attached Table 4 (The San Joaquin Company Inc. 2003a).

Depths to groundwater were measured in SJC's groundwater-quality monitoring wells on April 14, 16 and 21, 2003. That data is presented in Table 5. It is noted that April 2003 was the wettest April recorded since records had been maintained in the San Francisco Bay Area (The San Joaquin Company Inc. 2003a). The direction of groundwater flow was found to be to the south-southwest at a gradient of 0.02 ft/ft.

Groundwater samples were recovered from the exploratory trenches and temporary groundwater-quality monitoring wells and analyzed for TPHd, mineral spirits, TPHg, BTEX, MTBE, TBA, TAME, DIPE, ETBE, EDB, 1,2 DCA and ethanol. The results of the analyses are presented in attached Table 6 (The San Joaquin Company Inc. 2003a).

May 2003: On May 21, 2003, the ten temporary Monitoring Wells, MWT-1 through MWT-7, MWT-2A, MWT-4A and MWT-5A, were closed under the permit of the ACPWA.

Excavation of contaminated soil, including excavation of soil beneath the groundwater table, was selected as the appropriate remediation method for the site. After clearing surficial clean soil from the site and placing it in stockpile for later use as backfill, a total of 7,074.57 tons (approx. 4,350 cu yds as measured in situ) of contaminated soil was shipped under Special Waste Manifests to Allied Waste's Keller Canyon Landfill in Pittsburg California or that company's Forward Landfill in Manteca, California. Excavation below the water table was achieved by opening pits of limited size that could be backfilled with crushed rock containing no fine material before soil from adjacent area fell into the pit. By overlapping the excavation pits, it was possible to remove soil from beneath the water table over the whole of the affected area of the site and compact the rock backfill, which has a very high permeability and will not liquefy during a seismic event. The process of excavation of submerged soil causes volatilization of volatile compounds in the groundwater and also vigorously oxygenates the groundwater which accelerates natural processes of bioremediation of remaining contaminants.

During the progress of the remedial excavation work, three previously-unknown, historical underground fuel storage tanks were discovered on the site. They were a 1,500 gal. capacity Bunker C heating oil tank, a 100-gal. capacity storage tank assumed to have been for gasoline and a 1,500 gal. capacity heating oil tank (Dietz Irrigation 2003b,c). (See Figure 4 for locations.) None had leaked fuel into the subsurface. All three were removed and disposed under the oversight of the ACEH and the City of Emeryville Fire Department and the tank sites were closed by the ACEH.

As the remedial excavation was being opened a paleo stream bed filled with sands and gravels was discovered. It crossed the site from 40th Street to San Pablo Avenue (see Figure 5). Because the sandy materials in the paleo-stream bed were susceptible to liquefaction and the highly permeable materials formed a preferential pathway for contaminant transport across the site, they were completely removed by excavation. At the points where the paleo streambed entered the site on 40th Street and left the site on San Pablo Avenue the streambed sands and gravels extending beyond the site boundaries were sealed by a low-permeability clay cut-off. Similar clay cutoffs were used where abandoned underground utilities had crossed the site boundaries.

At the point where the paleo streambed crossed the 40th Street boundary, it was necessary to de-water the excavation used to place the clay cut-off. To achieve that, 2,000 gallons of groundwater were pumped from the partially backfilled remedial excavation and shipped, under control of a Hazardous Waste Manifest to the DeMenno/Kerdoon treatment facility in Compton, California, where its petroleum hydrocarbon content was removed and recycled in beneficial use.

The depth of the remedial excavation was controlled locally by the maximum depth of soil containing detectable concentrations of contaminants or the maximum practical depth of excavation below the water table. The lateral extent of the remedial excavation was controlled on the north and the west by the property boundaries and on the southwest by the limits of the area affected by detectable concentrations of contaminants. That area is shown on Figure 6. The lateral limits of contamination were delineated by analysis of confirmation samples which also included the concentrations of contaminants present in areas of the excavation floor where it was not possible to excavate to the full depth of affected soil. The locations of the confirmation sampling points are shown on Figure 6. Those samples were analyzed for TPHd, mineral spirits, TPHg, and BTEX and selectively for MTBE, TBA, TAME, DIPE, ETBE, EDB, 1,2 DCA ethanol and polynuclear aromatic compounds. The analytical results are recorded in Table 7. Figure 6 shows the area of the site where the subsurface was affected by petroleum hydrocarbons that coincides with the remediated area. Figures 7, 8 and 9 show hydrostratigraphic sections through the pre-remediated site along the section lines shown on Figure 5. They were developed from the hydrostratigraphic and geochemical

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data gathered from both the site characterization and remediation phases of the work.

After excavation and disposal of contaminated soil the remedial excavation was backfilled with engineered fill having a hydraulic conductivity of less than 5.65×10^{-7} cm/sec.

Figures 10, 11 and 12 show hydrostratigraphic sections through the remediated area of the site along the section lines shown on Figure 5.

June 2003: On June 23, 2003, the remediation contractor submitted a Contractor's Report of Remediation to the ACEH that documented the soil and groundwater remediation (Dietz Irrigation 2003a).

SJC performed health risk analyses for each of the buildings located on the affected area of the site for the post-remediation condition in compliance with ASTM Standard E2081-00 (American Society for Testing and Materials, 2000a.) The fact that an elastomeric membrane was installed under the floor slabs of each occupied building was ignored in performing the risk analyses. The risk analyses used very conservative values for each input parameter. The results are summarized in Table 8, which reports the computed cumulative carcinogenic risks and toxic hazard indices for each building located on the affected area of the site. The results for two conditions are presented: (1) a "Conservative Model" for which depth to groundwater was assumed to range from 5.87 ft. to 7.31 ft. BGS, depending upon the building's location on the site. That model is a conservative representation of the site conditions during a typical wet season in the San Francisco Bay Area; and, (2) a result designated "Limit Model for Extreme High GW" was derived from a model for which it was assumed that the extraordinarily high groundwater condition that occurred for a short time in April 2003 would be continuously present throughout the year, with consequent depth to groundwater ranging from 3.5 ft. to 5.0 ft. BGS.

The results presented in Table 8 show that even with an assumption of extremely high groundwater conditions prevailing throughout the year, the maximum cumulative computed carcinogenic risk of 4.5×10^{-7} and the maximum toxic hazard index of 2.2×10^{-2} were both well below their respective targets of 1.0×10^{-6} and 0.2.

On June 23, 2003, SJC's Engineer of Record for the project and the ACEH Case Officer met at the RWQCB offices where SJC reviewed the site characterization and remediation activities that had been completed at the Andante Site and presented the Tier 2 health risk assessment that is discussed above to the Case Officers. The RWQCB Case Officer stated that no further active remediation of the site would be required and that the risk assessment analyses adequately demonstrated that the completed remediation had reduced the human health risks at the site to less than significant levels, rendering it fit for mixed commercial and residential occupancy.

July 2003: In a letter to Dai Watkins dated July 2, 2003, the ACEH Case Officer approved the remediated site for use as commercial and high-density residency (Alameda County Environmental Health Care Services 2003; see Attachment 31).

August 2003: Figure 13 shows a ground floor plan of the redeveloped site. During construction of the footings and floor slabs of the buildings (excluding the parking structure) located within the remediated area of the Andante Site, a 60 mil. thickness of Liquid Boot[®] was placed under the entire floor slab of Building 1 and under the northernmost portions of Buildings 2A and Building 3A. Liquid Boot[®] is an elastomeric membrane that has been tested in compliance with ASTM Standards D-543-06 and D-1434-82(03) and has been shown to gain less than 1% in weight when exposed to benzene vapor at a concentration of 176,000 $\mu\text{g/L}$ and, at that concentration, to have a mean diffusion coefficient of 2.1×10^{-11} m^2/day (American Society for Testing and Materials International 2006, 1982 [Reapproved 2003]).

The Liquid Boot[®] was sprayed onto a geo-textile substrate, which, as is shown on Figure 14, was laid over a 4-in. thickness of $\frac{1}{2}$ -in., sieve-size crushed rock containing no fines. Two inches of sand were placed over the Liquid Boot[®] prior to placement of the 5-in. thick floor slabs, which were reinforced by #4 deformed bars that were laid 18 in. on center each way.

The Liquid Boot[®] membrane was not required for indoor health risks at the site to be reduced to less than significant levels (carcinogenic risk of 4.5×10^{-7} and the maximum toxic hazard index of 2.2×10^{-2}). That was achieved by the previously-described remediation work. The purpose of the elastomeric membrane was to provide a high degree of redundant protection against migration of volatile vapors from the underlying soil into the indoor spaces.

August 2004: On August 20, 2004 Monitoring Well SJC-MW-8 was installed at the location shown on Figure 15. The purpose of the well was to monitor groundwater quality in the remediated area of the site. Its location was dictated by the location of the only available accessible space in the remediated area of the redeveloped site. Soil samples recovered from the well boring were analyzed for TPHd, mineral spirits, TPHg, BTEX, MTBE, TBA, TAME,

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DIPE and ETBE. No detectable concentrations of any of the analytes were found.

Sept. 2004 through September 2005: Beginning on September 8, 2004 and ending on September 25, 2005 a total of five rounds of post-remediation groundwater-quality monitoring were conducted by extracting groundwater samples from Monitoring Well SJC-MW-8. The samples were analyzed for TPHd, mineral spirits, TPHg, BTEX, MTBE, TBA, TAME, DIPE and ETBE. The results are compiled in attached Table 6. The only analytes detected in the sample recovered on September 25, 2008 were TPHd at 74 µg/L, benzene at 0.52 µg/L, and MTBE at 15 µg/L (The San Joaquin Company Inc. 2007).

December 2004: The environmental deed restriction for the property was recorded on December 29, 2004.

March 2007: On March 19, 2007, SNK, Captec Andante LLC submitted SJC's *Environmental Closure Report – Andante Project, 3992 San Pablo Avenue, Emeryville, California* to the ACEH and requested closure of the site. The closure report documented all site characterization, remediation, human health risk analyses and post-remediation groundwater-quality monitoring work that had been completed together with tabulation of all of the engineering data recorded during the progress of the work.(The San Joaquin Company Inc. 2007).

1.3 INVESTIGATION METHODS

The investigative methods used to characterize the site are documented in SJC's Corrective Action and Environmental Closure Reports (the San Joaquin Company Inc. 2003a, 2007). The methods used were correct and the data obtained is believed to be valid. The following methods and procedures that are documented in the reports were reviewed.

- a. Soil sampling methodology
- b. Groundwater monitoring well design, installation, development
- c. Method used to measure groundwater elevations and gradient determination
- d. Groundwater sampling methodology
- e. Certified laboratory soil and groundwater analyses, chain-of-custody procedures, sample preservation, holding times, sample preparation methods, and detection limits.

2. EXTENT OF SOIL AND GROUNDWATER POLLUTION

Site characterization is complete. The location and number of soil and groundwater samples are adequate to define vertical and lateral extent of impact on the Andante Site from the releases that occurred at the adjacent Celis Site.

Extent and Concentrations of Contaminants in Soil

The lateral extent of contamination in soil within the property boundaries is limited on the north by the property line along 40th Street, on the west by the property line along San Pablo Avenue, and on the SE by a line that crosses the site from San Pablo Avenue to 40th Street that is shown on Figure 3. That line was defined to be the southeasterly limit of contamination based on a synthesis of the analytical data from Site Characterization borings and confirmation sampling in the remedial excavation.

No detectable concentrations of TPHg, BTEX compounds, fuel oxygenates or naphthalene were found at depths greater than 15.5 ft. BGS beneath the affected area of the Andante site (see Table 4) Traces of diesel-range organic compounds detected at greater depths (up to 20 ft. BGS) are believed to have a natural organic origin. (**Note:** Silica gel cleanup was not used prior to the analyses of soil samples for TPHd.)

For historic and current maximum concentrations of contaminants in soil, see Part III, above: "MAXIMUM DOCUMENTED CONTAMINANT CONCENTRATIONS BEFORE AND AFTER CLEANUP," which is based on sampling and analyses documented in SJC's Corrective Action and Environmental Closure Reports (the San Joaquin Company Inc. 2003a, 2007).

Extent and Concentrations of Contaminants in Groundwater

The lateral extent of contamination in groundwater within the property boundaries is limited on the north by the property line along 40th Street, on the west by the property line along San Pablo Avenue, and on the SE by a line that crosses the site from San Pablo Avenue to 40th Street that is shown on Figure 3. That line was defined to be the southeasterly limit of contamination based on a synthesis of the analytical data from Site Characterization and post-remediation groundwater-quality monitoring wells and the hydrostratigraphy and soil chemistry of the site.

Based on the vertical distribution of contaminants in soil, the stratigraphy (see Figures 7-9) of the site and the occurrence of contaminants in samples recovered from wells installed on the Oak Walk Site to the north of the Celis Site, which is adjacent to the Andante Site, it is believed that no contaminants are present in groundwater beneath

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the Andante Site at depths greater than 20 ft.

For historic and current maximum concentrations of contaminants in groundwater, see Part III, above: "MAXIMUM DOCUMENTED CONTAMINANT CONCENTRATIONS BEFORE AND AFTER CLEANUP," which is based on sampling and analyses documented in SJC's Corrective Action and Environmental Closure Reports (The San Joaquin Company Inc. 2003a, 2007).

Soil Vapor

Soil gas testing was not conducted at the site due to the very shallow depth of the top of the capillary zone (less than approx. 2.5 ft.) and the very low permeability of the surficial clay soils ($\ll 1.0 \times 10^{-6}$ cm/sec). The lateral and vertical extent of soil vapor is limited to the same area of the site as is described above for soil and groundwater contamination.

Groundwater Occurrence

Due to the extremely low permeability of the soils, no groundwater was encountered in any of the borings and wells drilled on the site at the time they were drilled. (**Note:** None of the borings or wells encountered the sands and gravels paleo streambed deposits, which crossed the site in a narrow band.)

When measured in April 2003 (the wettest April on record in the San Francisco Bay area), groundwater in the GW-quality monitoring wells stabilized at depths varying between 2.50 and 5.69 ft. BGS.

Hydraulic Gradient

Groundwater flows to the west-southwest at a gradient of 0.2 ft/ft. (see Figure 16). Construction of a rose diagram was not possible because: a) The groundwater flow direction did not change over the period that multi-well monitoring wells were installed at the site, and b) because groundwater flow regime across the site and adjacent land are highly complex due to the presence of paleo streambeds in the subsurface of the site and in neighboring areas (see Figure 17). The groundwater flow beneath the Andante Site is similar to the regional flow direction, which is macroscopically to the west or west-southwest, but, over north to south distances on the order of 100 ft., the flow direction may vary significantly in the hydrogeologically complex alluvial fan deposits that cover the region. This complexity is illustrated by groundwater contours on property directly north of the Andante site (see Figure 18).

3. BENEFICIAL USES

An evaluation was made of all existing and potential impacts on beneficial uses of groundwater and surface water, including:

The RWQCB's *East Bay Plane Groundwater Basin Beneficial Use Evaluation Report - Alameda and Contra Costa Counties* (1999) found that there were no groundwater supply wells in the vicinity of the Andante property and that there are no current beneficial uses of groundwater in Emeryville. However, as contaminated sites within the City are remediated, principally by application of passive remedial measures, there is a long-term goal of returning groundwater to a quality sufficient for use as a source of potable water.

Contaminants remaining in soil and groundwater beneath the adjacent Celis Site are migrating down-gradient across San Pablo Avenue and are dispersing laterally to the north and south of that release site. The affected areas include the Andante Site, to the south of the Celis Site, the Oak Walk Site to the north and property to the west across San Pablo Avenue. All leaking tanks have been removed from the adjacent Celis Site and processes of biodegradation and natural attenuation are decreasing contaminant concentrations over time.

4. REMEDIAL ACTIVITIES

The RWQCB's *East Bay Plane Groundwater Basin Beneficial Use Evaluation Report - Alameda and Contra Costa Counties* recommended that remediation of sites in Emeryville should be based on Health Risk Assessments with remedial actions being limited to those required to reduce risks to an acceptable level for the planned site use. Otherwise, it was recommended that remediation strategies should be based on passive methods such as natural bioremediation.

Due to the high elevation of groundwater and contaminated soil at the Andante Site, it was necessary to remove contaminated soil by excavation and off-site disposal so as to sufficiently separate the floor slabs of occupied buildings from the residual contaminated soil in order for post-remediation health risks to be reduced to acceptable levels for the current use of the site, which is mixed commercial and residential in character. A total of 7,074.57 tons of soil contaminated by releases from the adjacent Celis Site was excavated from the Andante property over the area shown on Figure 6 and disposed at Class II landfills. The depth of the remedial excavation ranged from 7.5 ft.

to 13.1 Ft. BGS. The local depth of excavation was controlled either by the absence of detectable concentrations of contaminants or by the practical depth limits of underwater excavation.

Strategically, active groundwater remediation was not considered as a primary remediation objective. However, disposal of the very large volume of contaminated soil from beneath the groundwater removed a mass source of desorption of contaminants into groundwater. Excavation below the groundwater table vigorously oxygenates the groundwater and accelerates processes of natural bioremediation and also causes volatilization of VOC's from the groundwater. (**Note:** To permit placement of a clay cut-off across a submerged paleo streambed, 2,000 gals. of contaminated groundwater were pumped into vacuum trucks, shipped off-site and recycled into beneficial use.)

A Tier 2 Health Risk analysis showed that the soil and groundwater remediation program described above had reduced the risks to residential and commercial occupants of the site to less than significant levels (The San Joaquin Company Inc. 2003a, Vol. II). However, to provide conservative redundancy with respect to unacceptable concentrations of soil gas migrating from the subsurface into occupied spaces, a 60 mil. thickness of elastomeric membrane (Liquid Boot[®]) was placed under the floor slabs.

The remediation work completed on the Andante site has reduced human health risks at the site to insignificant levels and permitted its use as a mixed residential and commercial development. Health risks were shown to be insignificant even without consideration of the elastomeric membrane that was placed beneath the floor slab of the occupied buildings. The removal of contaminated soil from the site and the reduction of contaminant concentrations in groundwater will accelerate processes of bioremediation and natural attenuation in groundwater.

5. REMEDIATION EFFECTIVENESS

Final cleanup levels are consistent with SWRCB Resolution 68-16 "Statement of Policy with Respect to Maintaining High Quality of Waters in California."

The verification monitoring at the site, which consisted of five rounds of groundwater-quality monitoring conducted at quarterly intervals using Monitoring Well SJC-MW-8 (see Figure 15 for location) was effective and is complete.

The residual contamination has no effect on the current use of the site as a mixed residential and commercial development. The soil and groundwater remedial actions will accelerate the processes of bioremediation and natural attenuation and will aid in achieving the RWQCB long term goal for groundwater quality in Emeryville.

For the current maximum concentrations of contaminants remaining locally in soil and groundwater, see Part III, above: "MAXIMUM DOCUMENTED CONTAMINANT CONCENTRATIONS BEFORE AND AFTER CLEANUP."

A conservatively-estimated 650 cubic yards of soil locally affected by concentrations of TPHg, BTEX compounds, fuel oxygenates and naphthalene up to those cited in Part III remain in place at depths varying between 7 and 15.5 feet BGS, all of which are below the groundwater table. The localized areas where residual affected soils remain in the floor of the remedial excavation are shown on Figure 19 and hydrocarbons detected in soil left in situ at boring and well locations are cited in Table 9.

6. CONCLUSIONS

The Andante Site qualifies as "low risk" as described in the RWQCB "Supplemental Instructions to State Water Board December 18, 1995 Interim Guidance on Required Cleanup at Low-Risk Fuel Sites" based on the following findings:

1. No leaks of petroleum hydrocarbons or other contaminants occurred on this site.
2. The site has been adequately characterized.
3. The dissolved hydrocarbon plume within the boundaries of the Andante property is stable.
4. No water wells, deeper drinking-water aquifers, surface water, or other sensitive receptors are likely to be impacted.
5. The site presents no significant risk to human health, as demonstrated by a Tier 2 Health Risk Analysis based on conservatively-selected parameters applied to a conservative site model (see Table 8).
6. Because no contaminants were released on the Andante Site, it does not, of itself, present any significant risk to the environment. Residual contamination of groundwater will continue to remediate by process of bioremediation and

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natural attenuation and will assist achievement of the RWQCB's goal of restoring regional groundwater to a quality suitable for use as a potable water resource (see Table 2).

IV. CLOSURE

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan? Yes		
Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan? Yes		
Does corrective action protect public health for current land use? Based upon the information available in our files to date, it does not appear that the Andante Site would present a significant risk to human health based upon current land use and conditions.		
Site Management Requirements: City of Emeryville Planning and Building Department has been notified that, should excavation or development of the property be proposed that may encounter impacted soil or groundwater, Alameda County Environmental Health must be notified as required by Government Code Section 65850.2.2.		
Should corrective action be reviewed if land use changes? Yes		
Was a deed restriction or deed notification filed? Yes		Date Recorded: 12/29/04
Monitoring Wells Commissioned: 11	Number Decommissioned: 10	Number Retained: 1
List Enforcement Actions Taken: None		
List Enforcement Actions Rescinded: Not Applicable		

V. ADDITIONAL COMMENTS, DATA, ETC.

<p>Considerations and/or Variances:</p> <p>The following concentrations of contaminants in soil that exceed the currently-published ESLs for shallow soils at sites where the groundwater is a current or potential source of drinking water (May 2008 edition) that remain in the floor of the remedial excavation, which is entirely beneath the groundwater table: 2,500 mg/Kg of TPHg, 150 mg/Kg of TPHd, 8.1 mg/Kg of benzene, 37 mg/Kg of Toluene, 44 mg/Kg of Ethylbenzene, 240 mg/Kg of Xylenes, 3.8 mg/Kg of naphthalene was left in place at the Andante property. A Tier 2 Health Risk analysis that simultaneously considered the residual concentrations of contaminants in both soil and groundwater concluded that the residual contamination does not pose a significant risk to the current residential/commercial use of the site.</p> <p>Groundwater at the site has no current beneficial uses (RWQCB 1999). The following residual concentrations of contaminants in groundwater that exceed the currently-published ESLs for groundwater at sites where the water table is less than 10 ft. BGS and groundwater is a current or potential source of drinking water (May 2008 edition) were detected in groundwater beneath the Andante property: MTBE at 15 µg/L and naphthalene 140 µg/L. Those concentrations are expected to decrease over time as a result of biodegradation and natural attenuation processes.</p> <p>Conclusion:</p> <p>Alameda County Environmental Health staff consider that the levels of residual contamination do not pose a significant threat to water resources, public health and safety, and the environment based upon the information available in our files to date. No further investigation or cleanup is necessary. ACEH staff recommend case closure for this site based on the current use of the site.</p>
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VI. LOCAL AGENCY REPRESENTATIVE DATA

Prepared by: Paresh Khatri	Title: Hazardous Materials Specialist
Signature:	Date:
Approved by: Donna L. Drogos, P.E.	Title: Supervising Hazardous Materials Specialist
Signature:	Date:

This closure approval is based upon the available information and with the provision that the information provided to this agency was accurate and representative of site conditions.

VII. REGIONAL BOARD NOTIFICATION

Regional Board Staff Name: Cherie McCaulou	Title: Engineering Geologist
RB Response: Concur, based solely upon information contained in this case closure summary.	Date Submitted to RB:
Signature:	Date:

VIII. MONITORING WELL DECOMMISSIONING

Date Requested by ACEH: TBD	Date of Well Decommissioning Report: TBD	
All Monitoring Wells Decommissioned: Yes	Number Decommissioned: 10+1	Number Retained: 0
Reason Wells Retained: The 11th well, post-remediation GW-quality monitoring well SJC-MW-8, to be closed following approval by RWQCB for site closure.		
Additional requirements for submittal of groundwater data from retained wells:		None
ACEH Concurrence - Signature:		Date:

Attachments:

- Tables 1 & 2: Comparison of residual contamination to applicable ESLs or approved Cleanup Goals.
- Tables 3 - 9: Tables with results of analysis of samples of soil, depths to groundwater, tables with results of analysis of samples of soil, results of risk analyses
- Figures 1 - 19: Figures to support summary text
- Attachment 29: Andante Site Assessor's Parcel Numbers as of September 2000
- Attachment 30: References
- Attachment 31: Letter: *SNK Andante Project at 3992 San Pablo Ave.*, Emeryville, CA from Eva Chu (ACEH Hazardous Materials Specialist) to Mr. Dai Watkins, The San Joaquin Company. Dated July 2, 2003.

This document and the related CASE CLOSURE LETTER & REMEDIAL ACTION COMPLETION CERTIFICATE shall be retained by the lead agency as part of the official site file.

Environmental Impacts in Soil

SNK Andante Project

3992 San Pablo Avenue, Emeryville, California

Table 1. Comparison of Maximum Residual Soil Concentrations at the Site to Relevant Cleanup Standards (mg/kg)

	TPH-g (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl Benzene (mg/kg)	Xylenes (mg/kg)	MtBE (mg/kg)
Maximum Residual Soil Concentrations at Site in milligrams per kilogram	2,500	8.1	37	44	240	0.0053
RWQCB, Region 2 ESLs ¹	83 ³	0.044 ³	2.9 ³	3.3 ³	2.3 ³	0.023 ³

N.B. The extant environmental screening criteria used at the time of completion of the remediation and post-remediation groundwater-quality monitoring at the Andante Site were the risk-based screening levels (**RBSLs**) promulgated by the RWQCB in December 2001 (Regional Water Quality Control Board 2001).

¹ Environmental Screening Levels (ESLs); Shallow Soil Screening Level for residential land use where potentially impacted groundwater is current or potential drinking water resource. Shallow soils defined as soils situated <3 meters below the ground surface. Depth to water ranges between 4.9 ft and 21.25 ft bgs.

² Lowest ESL value based on direct exposure scenario. Depth to water ranges between 4.9 ft and 21.25 ft bgs.

³ Lowest ESL value based on groundwater protection (soil leaching). Depth to water ranges between 4.9 ft and 21.25 ft bgs.

⁴ Soil sample collected at 12 feet bgs. Depth to water ranges between 4.9 ft and 21.25 ft bgs.

⁵ Soil sample collected at 15 feet bgs. Depth to water ranges between 4.9 ft and 21.25 ft bgs.

⁶ Soil sample collected at 14 feet bgs. Depth to water ranges between 4.9 ft and 21.25 ft bgs.

Environmental Impacts in Groundwater
 SNK Andante Project
 3992 San Pablo Avenue, Emeryville, California

Table 2. Comparison of Maximum Residual Groundwater Concentrations at the Site to Relevant Cleanup Standards (µg/L)

	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl Benzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	TBA (µg/L)
Maximum Residual Groundwater Concentrations at Site	<50	0.52	<0.5	<0.5	<1.0	15	<5.0
RWQCB Region 2 ESLs2	100 ¹ 1003 2104 -- ⁶	1.01 1702 1.0 ³ 540 ⁴ -- ⁶	401 402 150 ³ 380,000 ⁴ -- ⁶	301 302 300 ³ 170,000 ⁴ -- ⁶	201 202 1,800 ³ 160,000 ⁴ -- ⁶	5 ¹ 5 ² 13 ³ 24,000 ⁴	-- ¹ 50,000 ² -- ³ -- ⁴
ASTM Tier 1 Standard Human Health RBSL (Benzene)	NA	11,0005 23.86	32,800	77,500	NA	NA	NA

¹ Environmental Screening Levels (ESLs) for impacted subsurface groundwater less than 10 feet, where groundwater IS a current or potential drinking water resource

² Final Groundwater Screening Level, based on ceiling value (taste and odor threshold)

³ Groundwater Screening Level, based on drinking water toxicity

⁴ Groundwater Volatilization to indoor air (residential) Level,

⁵ Groundwater Vapor Intrusion from groundwater to buildings (residential, chronic hazard quotient = 1)

⁶ Final Groundwater Screening Level, based on Aquatic Habitat

TABLE 3

RESULTS OF ANALYSES OF SOIL SAMPLES FROM BORINGS DRILLED BY APEX¹
ON ANDANTE PROJECT SITE

Sample ID	Date Sampled	Depth BGS ft.	TPHd (diesel) mg/Kg	TPHg (gasoline) mg/Kg	Benzene mg/Kg	Toluene mg/Kg	Ethyl-benzene mg/Kg	Total Xylenes mg/Kg	MTBE mg/Kg	Total Lead mg/Kg
AE GP-1@5'	02/05/03	5	ND ²	ND	ND	ND	ND	ND	ND	6.35
AE GP-2@5'	02/05/03	5	ND	ND	0.0093	ND	ND	ND	ND	8.83
AE GP-2@8'	02/05/03	8	69	1,600	6.6	30	19	150	ND	4.16
AE GP-3@5'	02/05/03	5	1.6	ND	0.0081	ND	0.014	ND	ND	6.70
AE GP-4@8'	02/05/03	8	34	400	1.6	1.9	7.7	35	ND	4.58
AE GP-5@5'	02/05/03	5	130	42	0.17	0.013	0.69	0.48	ND	8.07
AE GP-5@10'	02/05/03	10	1.2	31	0.31	ND	0.53	1.7	0.0086	3.80
AE GP-6@5'	02/05/03	5	ND	ND	ND	ND	ND	ND	ND	10.3
AE GP-6@11'	02/05/03	11	ND	ND	ND	ND	ND	ND	ND	6.03
AE GP-7@5'	02/05/03	5	13	1.8	ND	0.0061	0.019	0.0055	ND	10.3
AE GP-7@10'	02/05/03	10	11	25	0.12	ND	1.2	0.23	0.0069	5.42
AE GP-8@10'	02/05/03	10	3.4	ND	ND	ND	ND	ND	ND	3.01
AE GP-9@5'	02/05/03	5	1,100	12,000	19	270	230	1,300	0.061	16.7
AE GP-10@6'	02/05/03	6	420	870	3.0	8.8	9.3	46	ND	8.41
AE GP-11@5'	02/05/03	5	6.2	4,900	3.3	61	92	590	ND	7.92
AE GP-11@10'	02/05/03	10	630	26	0.34	0.5	0.61	2.5	ND	6.84
AE GP-12@8'	02/05/03	8	ND	ND	ND	ND	ND	ND	ND	6.05
AE GP-13@8'	02/05/03	8	1.5	40	0.66	ND	1.6	3.2	0.0075	2.83
AE GP-16@5'	02/05/03	5	1.4	1.3	ND	ND	ND	ND	ND	5.57
AE GP-17@5'	02/05/03	5	ND	ND	ND	ND	ND	ND	ND	5.06
AE GP-18@5'	02/05/03	5	ND	ND	ND	ND	ND	ND	ND	6.52
AE GP-18@10'	02/05/03	10	15	ND	ND	ND	ND	ND	ND	2.17
AE GP-21@7'	02/05/03	7	ND	ND	ND	ND	ND	ND	ND	6.10
AE GP-22@7'	02/05/03	7	ND	ND	ND	ND	ND	ND	ND	4.46
AE GP-23@7'	02/05/03	7	41	ND	ND	ND	ND	ND	ND	4.58
AE GP-24@7'	02/05/03	7	140	ND	ND	ND	ND	ND	ND	4.28
AE GP-25@7'	02/05/03	7	54	ND	ND	ND	ND	ND	ND	4.58
AE GP-26@5'	02/05/03	5	ND	ND	ND	ND	ND	ND	ND	5.31
AE GP-27@5'	02/05/03	5	ND	ND	ND	ND	ND	ND	ND	4.14
AE GP-28@5'	02/05/03	5	ND	ND	ND	ND	ND	ND	ND	3.73
AE GP-29@5'	02/05/03	5	ND	ND	ND	ND	ND	ND	ND	5.05

Notes:

- (1) Data Apex Envirotech, Inc., (2003) *Results of Limited Subsurface Investigation*, Table 1
- (2) ND = Not Detected above the Method Detection Limit (MDL).
- (3) Concentrations in **bold** script exceed the San Francisco Bay Area RWQCB's RBSL limits for residential sites where groundwater is at less than 3 meters BGS in porous soils where groundwater is not a source of drinking water (Interim Final Edition December 2001).

TABLE 4

RESULTS OF ANALYSES OF SOIL SAMPLES RECOVERED FROM EXPLORATORY TRENCHES, TANK PITS AND WELLS ON ANDANTE PROJECT SITE

Sample ID	Date Sampled	Depth BGS ft.	TPHd (diesel) mg/Kg	Mineral Spirits mg/Kg	TPHg (gasoline) mg/Kg	Benzene mg/Kg	Toluene mg/Kg	Ethyl-benzene mg/Kg	Total Xylenes mg/Kg	TBA mg/Kg	MTBE mg/Kg	TAME mg/Kg	DIPE mg/Kg	ETBE mg/Kg	1,2-DCA mg/Kg	EDB mg/Kg	Ethanol mg/Kg	PNA (Naphthalene) mg/Kg	Total Lead mg/Kg
ET2-N-6.5	03/24/03	6.5	110 ³	n/a ²	510 ⁵	1.1	3.7	10	65	ND	ND	ND	ND	ND	ND	ND	ND	n/a	n/a
ET2-N-9	03/24/03	9.0	46 ³	n/a	400	2.8	8.2	7.9	45	ND	ND	ND	ND	ND	ND	ND	ND	n/a	n/a
ET2-S-7	03/24/03	7.0	ND ¹	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	n/a	n/a
ET1-S-6	03/25/03	6.0	ND	n/a	ND	ND	ND	ND	ND	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ET3-E-8	03/25/03	8.0	1.2	n/a	1.2	0.030	ND	ND	ND	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Tank 1 - N	04/29/03	10.0	ND	54	31 ⁴	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	n/a	n/a	5.6
Tank 1 - S	04/29/03	10.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	n/a	n/a	2.4
Tank 1P - 20N	04/29/03	3.0	230 ³	ND	ND	ND	ND	2	ND	ND	ND	ND	ND	ND	ND	ND	n/a	n/a	n/a
Tank 1P - 40N	04/29/03	3.0	1.2 ³	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	n/a	n/a	n/a
Tank 3	05/22/03	7.8	ND	ND	n/a	ND	ND	ND	ND	0.0080	0.0081	ND	ND	ND	ND	ND	n/a	n/a	n/a
SJC-MW-T1-7.5	04/11/03	7.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	n/a	n/a	n/a	ND	n/a
SJC-MW-T1-11.5	04/11/03	11.5	3.5 ³	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	n/a	n/a	n/a	ND	n/a
SJC-MW-T2-8	04/11/03	8.0	18 ³	ND	250	1.4	3.5	5.2	27	ND	ND	ND	ND	ND	n/a	n/a	n/a	ND	n/a
SJC-MW-T2A-5	04/11/03	5.0	130 ³	ND	660	ND	1.4	9.9	75	ND	ND	ND	ND	ND	n/a	n/a	n/a	1.8	n/a
SJC-MW-T2A-9	04/11/03	9.0	8.3 ³	ND	500	0.5	0.5	0.5	2	ND	ND	ND	ND	ND	n/a	n/a	n/a	ND	n/a
SJC-MW-T2A-15.5	04/11/03	15.5	6.1 ³	ND	ND	ND	ND	ND	0.012	ND	ND	ND	ND	ND	n/a	n/a	n/a	ND	n/a
SJC-MW-T2A-19.5	04/11/03	19.5	1.2 ³	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	n/a	n/a	n/a	ND	n/a
SJC-MW-T3-8	04/11/03	8.0	2.4 ³	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	n/a	n/a	n/a	ND	n/a
SJC-MW-T3-12	04/11/03	12.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	n/a	n/a	n/a	n/a	n/a
SJC-MW-T4-8	04/11/03	8.0	12 ³	ND	ND	ND	ND	ND	1.8	0.01	ND	ND	ND	ND	n/a	n/a	n/a	ND	n/a

Sample ID	Date Sampled	Depth BGS ft.	TPHd (diesel) mg/Kg	Mineral Spirits mg/Kg	TPHg (gasoline) mg/Kg	Benzene mg/Kg	Toluene mg/Kg	Ethyl-benzene mg/Kg	Total Xylenes mg/Kg	TBA mg/Kg	MTBE mg/Kg	TAME mg/Kg	DIPE mg/Kg	ETBE mg/Kg	1,2-DCA mg/Kg	EDB mg/Kg	Ethanol mg/Kg	PNA (Naphthalene) mg/Kg	Total Lead mg/Kg
SJC-MW-T4A-5	04/11/03	5.0	2.9 ³	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	n/a	n/a	n/a	ND	n/a
SJC-MW-T4A-12	04/11/03	12.0	14 ³	ND	76	ND	ND	0.98	3.1	ND	ND	ND	ND	ND	n/a	n/a	n/a	ND	n/a
SJC-MW-T4A-15.5	04/11/03	15.5	4.2 ³	ND	ND	ND	ND	ND	ND	ND	0.0052	ND	ND	ND	n/a	n/a	n/a	ND	n/a
SJC-MW-T4A-20	04/11/03	20.0	4.6 ³	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	n/a	n/a	n/a	ND	n/a
SJC-MW-T5-5	04/11/03	5.0	34 ³	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	n/a	n/a	n/a	ND	n/a
SJC-MW-T5-7.5	04/11/03	7.5	12 ³	ND	ND	ND	ND	0.57	2.4	ND	ND	ND	ND	ND	n/a	n/a	n/a	ND	n/a
SJC-MW-T5A-5	04/11/03	5.0	9.3 ³	ND	ND	0.0086	ND	0.019	ND	0.0068	ND	ND	ND	ND	n/a	n/a	n/a	0.29	n/a
SJC-MW-T5A-10	04/11/03	10.0	71 ³	ND	1,500	4.40	17.0	26.0	150.0	ND	ND	ND	ND	ND	n/a	n/a	n/a	0.35	n/a
SJC-MW-T5A-15.5	04/11/03	15.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	n/a	n/a	n/a	n/a	n/a
SJC-MW-T5A-19.5	04/11/03	19.5	ND	ND	ND	ND	ND	ND	0.011	ND	0.014	ND	ND	ND	n/a	n/a	n/a	n/a	n/a
SJC-MW-T6-5	04/11/03	5.0	48 ³	ND	1,300	4.2	15	23	140	ND	ND	ND	ND	ND	n/a	n/a	n/a	1.1	n/a
SJC-MW-T6-11.5	04/11/03	11.5	20 ³	ND	180	ND	ND	2.3	120	ND	ND	ND	ND	ND	n/a	n/a	n/a	0.50	n/a
SJC-MW-T7-7.5	04/11/03	7.5	37 ³	ND	2,000	9.1	41	35	230	ND	ND	ND	ND	ND	n/a	n/a	n/a	0.91	n/a
SJC-MW-T7-11.5	04/11/03	11.5	150 ³	ND	1,600	8.2	33	31	200	ND	ND	ND	ND	ND	n/a	n/a	n/a	2.1	n/a
SJC-MW-8-6.5	08/20/04	6.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	n/a	n/a	n/a	n/a	n/a
SJC-MW-8-11.0	08/20/04	11.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	n/a	n/a	n/a	n/a	n/a
SJC-MW-8-16.0	08/20/04	16.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	n/a	n/a	n/a	n/a	n/a
SJC-MW-8-20.5	08/20/04	20.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	n/a	n/a	n/a	n/a	n/a
SJC-MW-8-24.0	08/20/04	24.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	n/a	n/a	n/a	n/a	n/a

Notes:

- (1) ND = Not Detected above the Method Detection Limit (MDL).
- (2) n/a = Not analyzed
- (3) The laboratory reports that the detected hydrocarbon does not match its Diesel standard. The hydrocarbon detected appears to be a mixture of Diesel and Mineral Spirits, but the components of the mixture, all of which were in the Diesel range, were insufficiently distinct to quantify them separately.
- (4) Does not match laboratory's standard for gasoline.
- (5) Concentrations in **bold** script exceed the San Francisco Bay Area RWQCB's RBSL limits for residential sites where groundwater is at less than 3 meters BGS in porous soils where groundwater is not a source of drinking water (Interim Final Edition December 2001).

TABLE 5
DEPTHS TO GROUNDWATER

Well No.	Date Measured	Casing Elevation ft. NAVD	Ground Elevation ft. NAVD	Depth below Top of Well Casing ft.	Depth below Ground Level ft.	Groundwater Elevation ft. NAVD
SMW-1 ¹	09/11/92	n/a ²		9.10	n/a	n/a
	12/03/92	n/a		9.55	n/a	n/a
	03/04/93	n/a		7.82	n/a	n/a
	06/04/93	n/a		5.15	n/a	n/a
	09/02/93	n/a		8.00	n/a	n/a
	12/01/93	n/a		11.82	n/a	n/a
	03/08/94	n/a		5.08	n/a	n/a
WC-EW-1		39.04	n/a			
	12/05/97			6.00	n/a	33.04
	09/26/97			8.06	n/a	30.98
	06/02/98			7.24	n/a	31.80
	03/13/98			5.92	n/a	33.12
LF-LF-1		38.95	n/a			
	08/08/93			9.40	n/a	29.55
	08/20/93			10.00		28.95
LF-LF-2		40.25	n/a			
	08/08/93			7.97	n/a	32.28
	08/20/93			8.29	n/a	31.96
LF-LF-3		39.35	n/a			
	08/08/93			8.90	n/a	30.45
	08/07/93			9.18	n/a	30.17
LF-LF-4		38.08	n/a			
	06/02/98			6.99	n/a	31.09
	03/13/98			6.58	n/a	31.50
	12/05/97			6.28	n/a	31.80
	09/26/97			8.25	n/a	29.83
	01/28/94			6.77	n/a	31.31
SJC-MW-T1		46.99	43.51			
	04/14/03			6.69	3.21	40.30
	04/16/03			6.84	3.36	40.15
	04/21/03			8.14	4.66	38.85
SJC-MW-T2		43.26	41.54			
	04/14/03			2.83	1.11	40.43
	04/16/03			3.42	1.70	39.84
	04/21/03			4.22	2.50	39.04
SJC-MW-T2A		43.99	41.52			
	04/14/03			7.49	5.02	36.50
	04/16/03			7.52	5.05	36.47
	04/21/03			7.00	4.53	36.99
SJC-MW-T3		46.01	42.50			
	04/14/03			7.77	4.26	38.24
	04/16/03			7.89	4.38	38.12

Well No.	Date Measured	Casing Elevation ft. NAVD	Ground Elevation ft. NAVD	Depth below Top of Well Casing ft.	Depth below Ground Level ft.	Groundwater Elevation ft. NAVD
SJC-MW-T4	04/21/03			8.12	4.61	37.89
		41.01	39.73			
	04/14/03			3.32	2.04	37.69
	04/16/03			3.54	2.26	37.47
SJC-MW-T4A	04/21/03			5.14	3.86	35.87
		42.70	39.69			
	04/14/03			8.81	5.80	33.89
	04/16/03			8.10	5.09	34.60
SJC-MW-T5	04/21/03			8.00	4.99	34.70
		41.79	39.64			
	04/14/03			2.33	0.18	39.46
	04/11/02			3.52	1.37	38.27
SJC-MW-T5A	04/21/03			5.22	3.07	36.57
		42.30	39.52			
	04/14/03			4.20	1.42	38.10
	04/16/03			6.62	3.84	35.68
SJC-MW-T6	04/21/03			7.56	4.78	34.74
		44.02	40.73			
	04/14/03			5.28	1.99	38.74
	04/16/03			5.99	2.70	38.03
SJC-MW-T7	04/21/03			7.07	3.78	36.95
		44.10	40.55			
	04/14/03			5.86	2.31	38.24
	04/16/03			6.24	2.69	37.86
SJC-MW-8	04/21/03			6.86	3.31	37.24
		42.58	43.07			
	09/08/04			5.69	6.18	36.89
	12/09/04			3.90	4.39	38.68
	03/24/05			3.66	4.15	38.92
	06/22/05			4.78	5.27	37.80
	09/22/05			5.53	6.02	37.05

TABLE 6

RESULTS OF ANALYSES OF GROUNDWATER SAMPLES RECOVERED FROM EXPLORATORY TRENCHES AND TEMPORARY WELLS ON ANDANTE PROJECT SITE

Sample ID	Date Sampled	TPHd (diesel) µg/L	Mineral Spirits µg/L	TPHg (gasoline) µg/L	Benzene µg/L	Toluene µg/L	Ethyl- benzene µg/L	Total Xylenes µg/L	TBA µg/L	MTBE µg/L	TAME µg/L	DIPE µg/L	ETBE µg/L	1,2-DCA µg/L	EDB µg/L	Ethanol µg/L	PNA (Naphthalene) µg/L
ET2-C-W	03/24/03	20,000 ³	n/a	510,000	1,100	3,700	10,000	65,000	ND ¹	ND	ND	ND	ND	ND	ND	ND	n/a ²
SJC-MW-T1	04/16/03	380 ⁴	ND	280	1.7	ND	0.54	ND	ND	6.3	ND	ND	ND	ND	ND	ND	n/a
SJC-MW-T2	04/16/03	7,900 ⁴	ND	33,000	460	1,200	1,300	8,300	ND	15	ND	ND	ND	ND	ND	ND	n/a
SJC-MW-T2A	04/16/03	6,700 ⁴	ND	63,000	1,400	2,000	3,300	17,000	ND	ND	ND	ND	ND	ND	ND	ND	n/a
SJC-MW-T3	04/16/03	320 ⁴	ND	ND	ND	0.71	ND	ND	ND	0.59	ND	ND	ND	ND	ND	ND	n/a
SJC-MW-T4	04/16/03	360 ⁴	ND	670	94	1.9	83	120	ND	0.93	ND	ND	ND	ND	ND	ND	n/a
SJC-MW-T4A	04/16/03	740 ⁴	ND	5,700	120	4	630	790	ND	78	ND	ND	ND	ND	ND	ND	n/a
SJC-MW-T5	04/16/03	320 ⁴	ND	610	130	2.1	54	90	ND	1.4	ND	ND	ND	ND	ND	ND	n/a
SJC-MW-T5A	04/16/03	5,400 ⁴	ND	34,000	2,700	2,200	2,100	9,000	ND	ND	ND	ND	ND	ND	ND	ND	n/a
SJC-MW-T6	04/16/03	4,500 ⁴	ND	24,000	1,900	1,900	1,100	6,200	ND	ND	ND	ND	ND	ND	ND	ND	n/a
SJC-MW-T7	04/16/03	6,100 ⁴	ND	45,000	3,400	4,800	1,700	9,300	ND	ND	ND	ND	ND	ND	ND	ND	n/a
30S-40E (Water)	05/15/03	3,200 ⁴	ND	23,000	1,500	2,400	730	3,700	ND	74	ND	ND	ND	ND	ND	ND	140
SJC-MW-8	09/08/04	ND	ND	60	ND	ND	ND	ND	ND	26	ND	ND	ND	na	na	na	na
	12/09/04	53 ⁴	ND	100	3	ND	ND	ND	0.91	26	ND	ND	ND	na	na	na	na
	03/09/05	130 ⁴	ND	180	14	22	11	20	ND	17	ND	ND	ND	na	na	na	na
	06/22/05	230 ⁴	59 ⁶	60	ND	ND	ND	ND	ND	15	ND	ND	ND	na	na	na	na
	09/25/05	74 ⁴	ND	ND	0.52	ND	ND	ND	ND	15	ND	ND	ND	na	na	na	na

Notes:

- (1) ND = Not Detected above the Method Detection Limit (MDL).
- (2) n/a = Not Analyzed.
- (3) Chromatogram for this sample indicates that the only analyte in the C₉ to C₂₄ range is Mineral Spirits.
- (4) The laboratory reports that the detected hydrocarbon does not match its Diesel Standard.
- (5) Concentrations in **bold** script exceed the San Francisco Bay Area RWQCB's RBSL limits for residential sites where groundwater is at less than 3 meters BGS in porous soils where groundwater is not a source of drinking water (Interim Final Edition December 2001).
- (6) Laboratory reports unknown hydrocarbons quantified as Mineral Spirits

TABLE 7

RESULTS OF ANALYSES OF CONFIRMATION SOIL SAMPLES RECOVERED FROM REMEDIAL EXCAVATION ON SNK ANDANTE SITE

Sample ID	Date Sampled	Elevation MSL ft.	Depth BGS ft.	TPHd (diesel) mg/Kg	Mineral Spirits mg/Kg	TPHg (gasoline) mg/Kg	Benzene mg/Kg	Toluene mg/Kg	Ethyl-benzene mg/Kg	Total Xylenes mg/Kg	TBA mg/Kg	MTBE mg/Kg	TAME mg/Kg	DIPE mg/Kg	ETBE mg/Kg	1,2-DCA mg/Kg	EDB mg/Kg	Ethanol (Naphthalene) mg/Kg	PNA mg/Kg	
0S-40E	05/09/03	30.90	9.62	110 ³	n/a	150	ND ¹	ND	ND	13	n/a ²	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
0S-40E Wall (N)	05/15/03	31.90	8.62	3.9 ³	n/a	540	ND	ND	8.8	45	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
0S-60E	05/09/03	32.40	8.08	69 ³	n/a	2,300	ND	37	44	240	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
0S-60E Wall (N))	05/15/03	33.40	7.08	10 ³	n/a	320	ND	ND	4.2	14	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
0S-80E	05/09/03	31.90	8.94	8.1	n/a	870	6.0	15	16	79	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
0S-80E Wall (N)	05/15/03	32.90	7.94	31 ³	n/a	630	ND	13	11	74	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
0S-100E	05/16/03	30.84	10.21	21 ³	n/a	890	ND	20	17	100	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
0S-100E Wall (N)	05/16/03	31.84	9.21	21 ³	n/a	1,200	ND	30	29	160	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
0S-120E	05/14/03	31.10	10.16	7.2	n/a	1.74	0.031	ND	0.037	ND	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
0S-120E Wall (N)	05/15/03	32.10	9.16	66 ³	n/a	1,100	8.1	ND	17	100	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
0S-140E	05/14/03	31.29	10.35	140 ³	n/a	90 ⁴	ND	ND	2.3	1.1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
0S-180E	05/12/03	33.99	8.51	37 ³	n/a	110 ⁴	ND	ND	1.6	1.4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
0S-200E	05/06/03	33.95	8.96	2.9 ³	ND	5.9	0.036	ND	0.13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
0S-220E	05/06/03	34.20	8.75	2.5 ³	ND	9.6	0.21	ND	0.68	0.058	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
0S-230E Wall(N)	05/28/03	33.20	9.89	34 ³	ND	450	ND	0.76	0.86	37	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.8
10S-225E Wall (E)	05/27/03	33.20	9.83	ND	n/a	ND	ND	ND	0.013	ND	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
20S-10E	05/09/03	30.44	10.78	2.1 ³	n/a	ND	ND	ND	ND	ND	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
20S-10E Wall (N)	05/09/03	31.44	9.78	ND	n/a	ND	ND	ND	ND	ND	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
20S-20E	05/13/03	33.86	5.80	69 ³	n/a	350	ND	2.0	6.0	30	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
20S-40E	05/11/03	31.25	9.27	28	n/a	200	2.3	8.1	3.9	19	ND	ND	ND	ND	ND	n/a	n/a	n/a	n/a	n/a

Andante Project, 3992 San Pablo Ave., Emeryville, CA

Sample ID	Date Sampled	Elevation MSL ft.	Depth BGS ft.	TPHd (diesel) mg/Kg	Mineral Spirits mg/Kg	TPHg (gasoline) mg/Kg	Benzene mg/Kg	Toluene mg/Kg	Ethyl-benzene mg/Kg	Total Xylenes mg/Kg	TBA mg/Kg	MTBE mg/Kg	TAME mg/Kg	DIPE mg/Kg	ETBE mg/Kg	1,2-DCA mg/Kg	EDB mg/Kg	Ethanol mg/Kg	PNA (Naphthalene) mg/Kg
20S-60E	05/11/03	32.75	7.73	40	n/a	860	9.9	30	14	79	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
20S-100E	05/16/03	30.44	10.64	48 ³	n/a	2,000	18	43	39	190	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
20S-120E	05/12/03	31.15	10.14	16 ³	n/a	1,100	6.4	22	19	93	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
20S-140E	05/14/03	31.29	10.81	120 ³	n/a	2,000 ⁴	ND	ND	62	110	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
20S-140E (Deep)	05/27/03	30.45	11.65	70 ³	n/a	2,000	7.8	ND	38	87	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
20S-160E	05/13/03	31.10	11.00	84 ³	n/a	460	ND	ND	7.2	32	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
20S-160E (Deep)	05/13/03	28.26	13.50	ND	n/a	ND	ND	ND	ND	ND	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
20S-180E	05/12/03	34.18	8.01	6.5 ³	n/a	730	5	ND	14	49	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
20S-180E(A)	05/27/03	33.26	8.93	2.8 ³	n/a	ND	ND	ND	ND	0.02	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
20S-200E	05/07/03	35.44	7.50	2.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
20S-220E	05/09/03	34.48	8.50	1.7	n/a	ND	ND	ND	ND	ND	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
20S-220E Wall (E)	05/09/03	35.48	7.50	2.1 ³	n/a	ND	ND	ND	ND	ND	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
30S-40E (13.6) ⁷	05/15/03	26.92	13.60	2.1 ³	ND	ND	ND	ND	ND	ND	0.0051	ND	ND	ND	ND	ND	ND	ND	ND
30S-40E (15.0)	05/15/03	24.52	15.00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
35S-200E	05/09/03	34.45	8.46	ND	n/a	ND	ND	ND	ND	ND	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
35S-200E Wall (S)	05/09/03	35.45	7.47	ND	n/a	ND	ND	ND	ND	ND	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
40S-0E	05/09/03	34.73	4.97	1.5 ³	n/a	ND	ND	ND	ND	0.057	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
40S-0E Wall (W)	05/09/03	35.73	3.97	ND	n/a	ND	ND	ND	ND	0.018	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
40S-20E	05/13/03	32.46	7.67	140 ³	n/a	840	3.3	19	14	74	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
40S-20E (A)	05/14/03	32.13	7.95	13 ³	n/a	200	1.9	3.0	3.5	18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
40S-60E	05/15/03	31.64	8.83	75 ³	n/a	1,100	6.7	15	18	110	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
40S-80E	05/14/03	31.10	9.62	110 ³	n/a	2,400	15	35	46	250	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
40S-80E(Deep)	05/27/03	28.00	12.73	1.0 ³	n/a	ND	ND	ND	ND	0.02	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
40S-100E	05/27/03	30.00	11.04	ND	n/a	78	0.72	ND	1.8	8.6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Andante Project, 3992 San Pablo Ave., Emeryville, CA

Sample ID	Date Sampled	Elevation MSL ft.	Depth BGS ft.	TPHd (diesel) mg/Kg	Mineral Spirits mg/Kg	TPHg (gasoline) mg/Kg	Benzene mg/Kg	Toluene mg/Kg	Ethyl-benzene mg/Kg	Total Xylenes mg/Kg	TBA mg/Kg	MTBE mg/Kg	TAME mg/Kg	DIPE mg/Kg	ETBE mg/Kg	1,2-DCA mg/Kg	EDB mg/Kg	Ethanol (Naphthalene) mg/Kg	PNA (Naphthalene) mg/Kg
40S-120E	05/27/03	30.69	10.56	4.9 ³	n/a	440	3.6	3.7	8.4	39	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
40S-140E	05/12/03	31.31	10.32	21 ³	n/a	65	ND	ND	1.1	6.8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
40S-140E	05/21/03	30.21	11.39	ND	n/a	ND	ND	ND	ND	ND	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
40S-160E	05/08/03	35.56	6.50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	n/a
40S-160E Wall(S)	05/08/03	36.56	5.50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	n/a
40S-160E	05/21/03	35.05	6.50	3.7 ³	n/a	ND	ND	ND	0.0097	0.018	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
40S-160E Wall(S)	05/21/03	35.05	5.50	ND	n/a	ND	ND	ND	ND	ND	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
40S-180E	05/06/03	33.99	8.16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	n/a
40S-180E Wall(E)	05/06/03	34.99	7.16	1.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
40S-200E	05/07/03	36.40	6.50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	n/a
40S-200E Wall(E)	05/07/03	37.40	5.50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	n/a
50S-180E	05/06/03	33.47	8.51	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	n/a
50S-180E Wall(S)	05/06/03	34.47	7.51	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	n/a
60S-0E	05/09/03	31.90	7.47	91 ³	n/a	1,100	3.4	20	22	120	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
60S-20E	05/16/03	30.93	8.92	ND	n/a	ND	ND	ND	ND	ND	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
60S-40E	05/16/03	31.59	8.26	20 ³	n/a	1,500	12	12	28	140	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
60S-60E	05/13/03	31.94	8.81	150 ³	n/a	600	ND	ND	8.0	37	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
60S-80E	05/14/03	31.94	8.50	17 ³	n/a	240	2.0	ND	3.0	11	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
60S-80E(A)	05/14/03	30.74	9.70	110 ³	n/a	2,500	12	16	41	230	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
60S-80E(Deep)	05/27/03	27.61	12.83	ND	n/a	ND	ND	ND	ND	ND	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
60S-100E	05/20/03	30.40	10.35	1.3 ³	n/a	ND	ND	ND	ND	ND	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
60S-100E Wall (S)	05/20/03	29.40	9.35	ND	n/a	ND	ND	ND	0.011	ND	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
60S-120E	05/20/03	28.81	12.15	ND	n/a	ND	ND	ND	ND	ND	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
60S-140E	05/21/03	30.21	11.13	ND	n/a	ND	ND	ND	ND	ND	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
60S-140E Wall (S)	05/21/03	31.21	10.13	ND	n/a	ND	ND	ND	ND	ND	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Andante Project, 3992 San Pablo Ave., Emeryville, CA

Sample ID	Date Sampled	Elevation MSL ft.	Depth BGS ft.	TPHd (diesel) mg/Kg	Mineral Spirits mg/Kg	TPHg (gasoline) mg/Kg	Benzene mg/Kg	Toluene mg/Kg	Ethyl-benzene mg/Kg	Total Xylenes mg/Kg	TBA mg/Kg	MTBE mg/Kg	TAME mg/Kg	DIPE mg/Kg	ETBE mg/Kg	1,2-DCA mg/Kg	EDB mg/Kg	Ethanol mg/Kg	PNA (Naphthalene) mg/Kg	
70S-135E	05/20/03	28.81	12.15	ND	n/a	ND	ND	ND	0.012	ND	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
70S-135E Wall (S)	05/20/03	29.81	11.15	1.3 ³	n/a	ND	ND	ND	ND	ND	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
80S-0E	05/05/03	32.31	8.43	68 ³	ND	470	ND	ND	7.1	21	ND	ND	ND	ND	ND	ND	ND	n/a	0.46	ND
80S-0E Wall (W)	05/05/03	33.31	7.43	8.1	ND	100	ND	ND	1.4	1.4	ND	ND	ND	ND	ND	ND	ND	n/a	ND	ND
80S-0E (DEEP)	05/19/03	28.15	10.80	6.5 ³	n/a	ND	ND	ND	0.0068	ND	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
80S-20E	05/13/03	32.02	8.11	3.3 ³	n/a	51	ND	ND	0.91	2.4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
80S-40E	05/20/03	29.04	11.58	14 ³	n/a	1,100	ND	ND	22	98	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
80S-40E (DEEP)	05/23/03	26.80	13.82	ND	n/a	ND	ND	ND	ND	ND	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
80S-60E	05/23/03	26.75	13.09	ND	n/a	ND	ND	ND	ND	ND	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
80S-80E	05/19/03	28.70	11.40	4 ³	n/a	95	0.77	ND	2.3	7.6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
80S-80E Wall (S)	05/19/03	29.70	10.40	47 ³	n/a	77	0.81	ND	1.7	7.3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
80S-80E (Deep)	05/27/03	28.01	12.09	2.8 ³	n/a	1.0	ND	ND	0.017	0.0079	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
80S-100E	05/13/03	28.41	12.00	69 ³	n/a	500	ND	ND	8.8	28	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
80S-120E	05/15/03	32.42	8.20	1.4 ³	n/a	90	1.6	ND	3.3	2.8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
80S-120E Wall (S)	05/15/03	33.42	7.20	ND	n/a	ND	ND	ND	ND	ND	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
100S-0E	05/05/03	31.08	7.61	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	n/a	n/a	n/a
100S-0E Wall (W)	05/05/03	32.08	6.61	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	n/a	n/a	n/a
100S-20E	05/16/03	30.24	8.91	71 ³	n/a	1,000	ND	ND	27	70	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
100S-20E (A)	05/19/03	26.91	12.24	9.6 ³	1.8 ⁴	ND	ND	ND	0.035	0.0074	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
100S-40E	05/21/03	26.45	12.80	ND	n/a	ND	ND	ND	ND	ND	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
100S-60E	05/22/03	29.06	9.33	ND	n/a	ND	ND	ND	ND	ND	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
100S-60E Wall (S)	05/23/03	30.03	8.33	ND	n/a	ND	ND	ND	ND	ND	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
100S-80E	05/22/03	29.06	10.78	ND	n/a	ND	ND	ND	ND	ND	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
100S-80E Wall (S)	05/22/03	30.06	9.78	ND	n/a	ND	ND	ND	ND	ND	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
100S-100E	05/13/03	32.65	8.65	ND	n/a	ND	0.087	ND	0.091	0.052	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
115S-60E	05/22/03	29.06	10.38	1.6 ³	n/a	2.2	ND	ND	0.023	0.034	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Sample ID	Date Sampled	Elevation MSL ft.	Depth BGS ft.	TPHd (diesel) mg/Kg	Mineral Spirits mg/Kg	TPHg (gasoline) mg/Kg	Benzene mg/Kg	Toluene mg/Kg	Ethyl-benzene mg/Kg	Total Xylenes mg/Kg	TBA mg/Kg	MTBE mg/Kg	TAME mg/Kg	DIPE mg/Kg	ETBE mg/Kg	1,2-DCA mg/Kg	EDB mg/Kg	Ethanol mg/Kg	PNA (Naphthalene) mg/Kg
115S-60E Wall (S)	05/22/03	30.06	9.38	4.3 ³	n/a	180	ND	ND	2.3	3.1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
120S-0E	05/05/03	29.69	8.80	5.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	n/a	ND
120S-0E Wall (W)	05/05/03	30.69	7.80	ND	ND	1.4	ND	ND	0.0083	ND	ND	0.0053	ND	ND	ND	ND	ND	n/a	n/a
120S-0E Wall (S)	05/05/03	30.69	7.80	ND	n/a	ND	ND	ND	0.014	ND	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
120S-20E	05/15/03	29.23	9.72	ND	n/a	ND	ND	ND	ND	ND	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
120S-40E	05/16/03	29.33	9.73	6.8 ³	n/a	130 ⁴	ND	ND	3.2	ND	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
120S-40E Wall (S)	05/16/03	30.33	8.73	ND	n/a	ND	ND	ND	ND	ND	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
120S-40E Wall (S)	05/22/03	30.06	9.00	ND	n/a	ND	ND	ND	0.014	ND	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Notes:

- (1) ND = Not Detected above the Method Detection Limit (MDL).
- (2) n/a = Not analyzed
- (3) The laboratory reports that the detected hydrocarbon does not match its Diesel Standard.
- (4) The laboratory reports that the detected hydrocarbon does not match its Gasoline Standard.
- (5) Concentrations in **bold** script exceed the San Francisco Bay Area RWQCB's limits for human health risk for indoor air impacts used to establish residential RBSLs for chemicals in fine-grained soils at sites where groundwater is not a source of drinking water (Interim Final Edition December 2001).
- (6) Sample data in gray script are for samples recovered from locations where the excavation was later deeped or widened.
- (7) Samples recovered from sampling location 30S-40E were taken from the bottom of a small pit dug beneath the local elevation of the floor of the remedial excavation.

TABLE 8

TIER 2 HEALTH RISK ASSESSMENT RESULTS

Building	Outdoor Exposure	Indoor Exposure	Cumulative Carcinogenic Risk			Toxic Hazard Index		
	Environment Classification	Environment Classification	Outdoor Air	Indoor Air		Outdoor Air	Indoor Air	
				Conservative Model	Limit Model for Extreme High GW		Conservative Model	Limit Model for Extreme High GW
Ground Floor Occupancy								
1	Residential	Commercial	4.0×10^{-9}	7.4×10^{-8}	8.9×10^{-8}	1.9×10^{-4}	4.3×10^{-3}	5.2×10^{-3}
2A	Residential	Commercial	4.0×10^{-9}	8.8×10^{-8}	1.0×10^{-7}	1.9×10^{-4}	5.1×10^{-3}	5.9×10^{-3}
3A	Residential	Residential	3.9×10^{-9}	4.3×10^{-7}	4.5×10^{-7}	1.9×10^{-4}	2.1×10^{-2}	2.2×10^{-2}
6	Residential	Commercial	4.0×10^{-9}	1.1×10^{-7}	1.5×10^{-7}	2.0×10^{-4}	6.5×10^{-3}	8.8×10^{-3}

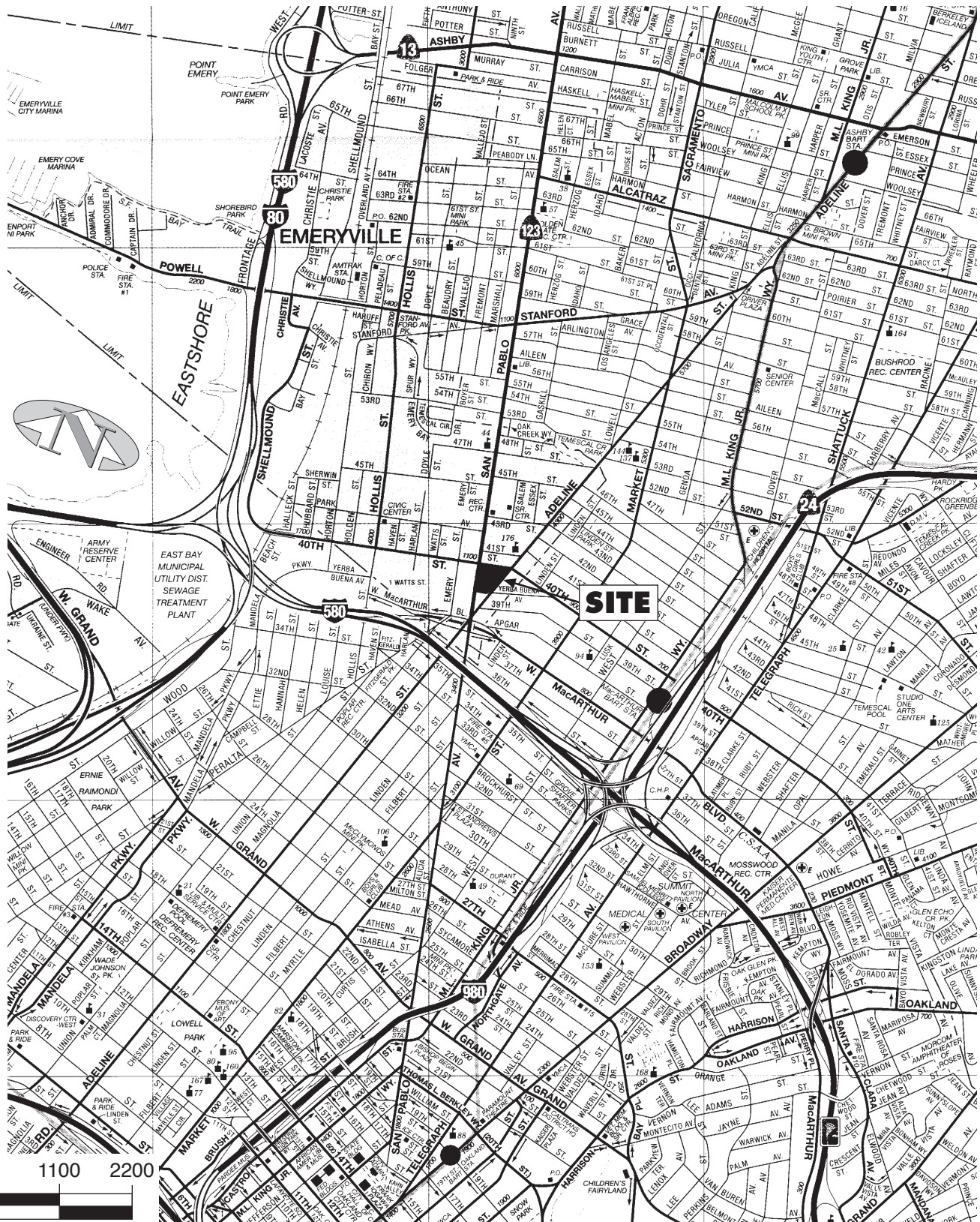
TABLE 9

CONCENTRATIONS OF PETROLEUM HYDROCARBONS DETECTED IN SOIL LEFT IN SITU
AT BORING AND WELL LOCATIONS ON ANDANTE PROJECT SITE ¹

Sample ID	Date Sampled	Depth BGS ft.	TPHd (diesel) mg/Kg	TPHg (gasoline) mg/Kg	Benzene mg/Kg	Toluene mg/Kg	Ethyl-benzene mg/Kg	Total Xylenes mg/Kg
SJC-MW-T1-11.5	04/11/03	11.5	3.5 ³	ND ²	ND	ND	ND	ND
SJC-MW-T2A-15.5	04/11/03	15.5	6.1 ³	ND	ND	ND	ND	0.012
SJC-MW-T2A-19.5	04/11/03	19.5	1.2 ³	ND	ND	ND	ND	ND
SJC-MW-T3-8	04/11/03	8.0	2.4 ³	ND	ND	ND	ND	ND
SJC-MW-T4-8	04/11/03	8.0	12 ³	ND	ND	ND	ND	1.8
SJC-MW-T4A-12	04/11/03	12.0	14 ³	76	ND	ND	0.98	3.1
SJC-MW-T4A-15.5	04/11/03	15.5	4.2 ³	ND	ND	ND	ND	ND
SJC-MW-T4A-20	04/11/03	20.0	4.6 ³	ND	ND	ND	ND	ND
SJC-MW-T5A-19.5	04/11/03	19.5	ND	ND	ND	ND	ND	0.011
SJC-MW-T6-11.5	04/11/03	11.5	20 ³	180	ND	ND	2.3	120
AE GP-8@10'	02/05/03	10	3.4	ND	ND	ND	ND	ND
AE GP-18@10'	02/05/03	10	15	ND	ND	ND	ND	ND
AE GP-23@7'	02/05/03	7	41	ND	ND	ND	ND	ND
AE GP-24@7'	02/05/03	7	140	ND	ND	ND	ND	ND
AE GP-25@7'	02/05/03	7	54	ND	ND	ND	ND	ND

Notes:

- (1) Data from Apex Envirotech, Inc. (2003) and SJC
- (2) ND = Not Detected above the Method Detection Limit (MDL).
- (3) The laboratory reports that the detected hydrocarbon does not match its Diesel Standard.
- (4) No analytes of concern were found in soil samples recovered from the following borings: AE GP-6 and - 12
- (5) The remedial excavation removed all soil to the full depth of the boring at the following well and boring sites: SJC MWT-2, -5 and -7 and AEGP-1, -2, -3, -4, -5, 6, 7, -9, -10, -11, -13, -16 and -17
- (5) Apex Envirotech Inc. recovered no soil samples from the following borings: AE GP-14, -15, -19, and -20



Basemap: AAA; Oakland-Berkeley-Alameda (12/02)

SITE LOCATION

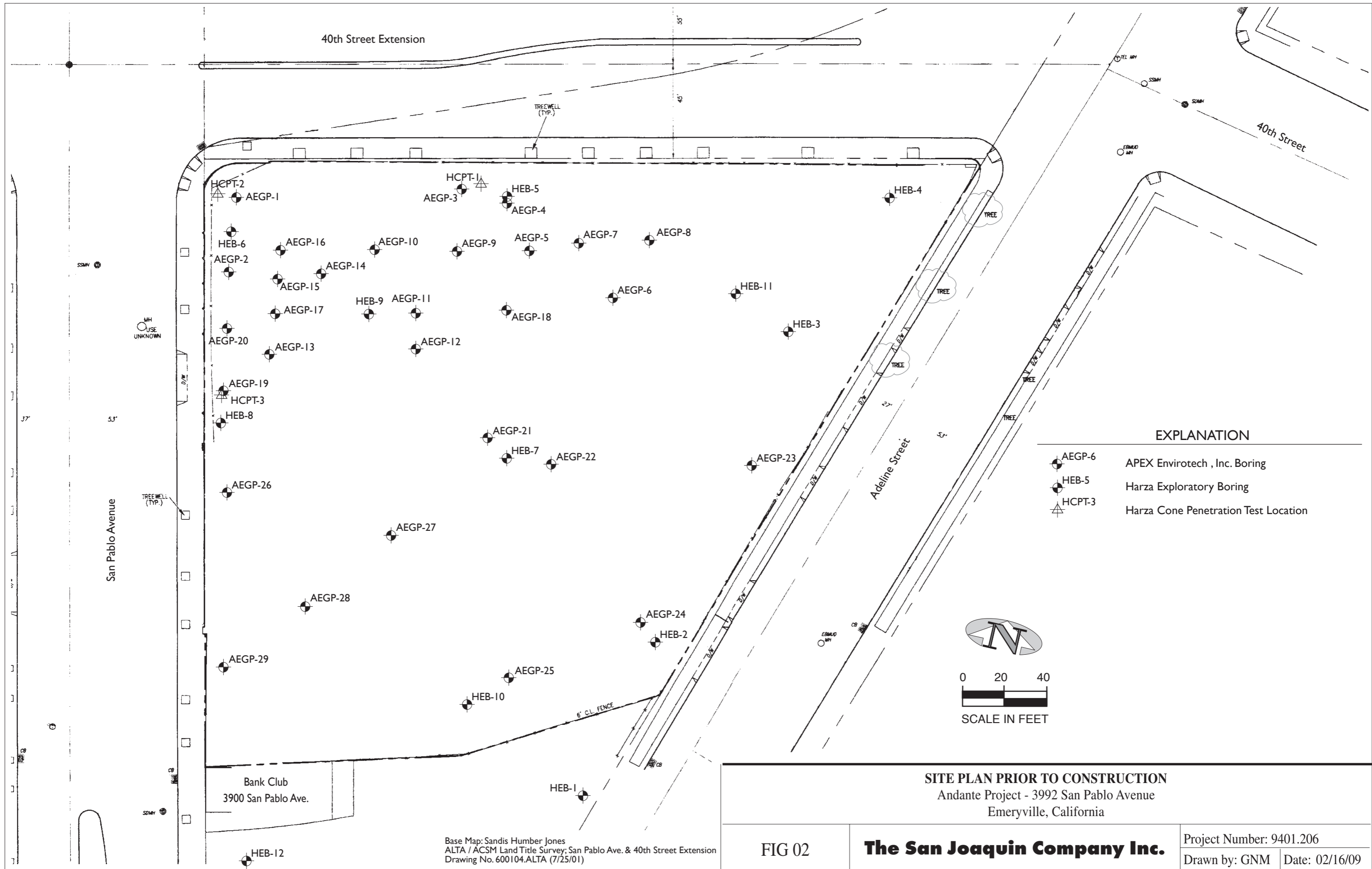
Andante Project - 3992 San Pablo Avenue
Emeryville, California

FIG 01

The San Joaquin Company Inc.

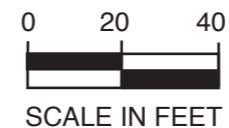
Project Number: 9401.206

Drawn by: GNM Date: 02/16/09



EXPLANATION

- AEGP-6 APEX Envirotech , Inc. Boring
- ⊗ HEB-5 Harza Exploratory Boring
- △ HCPT-3 Harza Cone Penetration Test Location



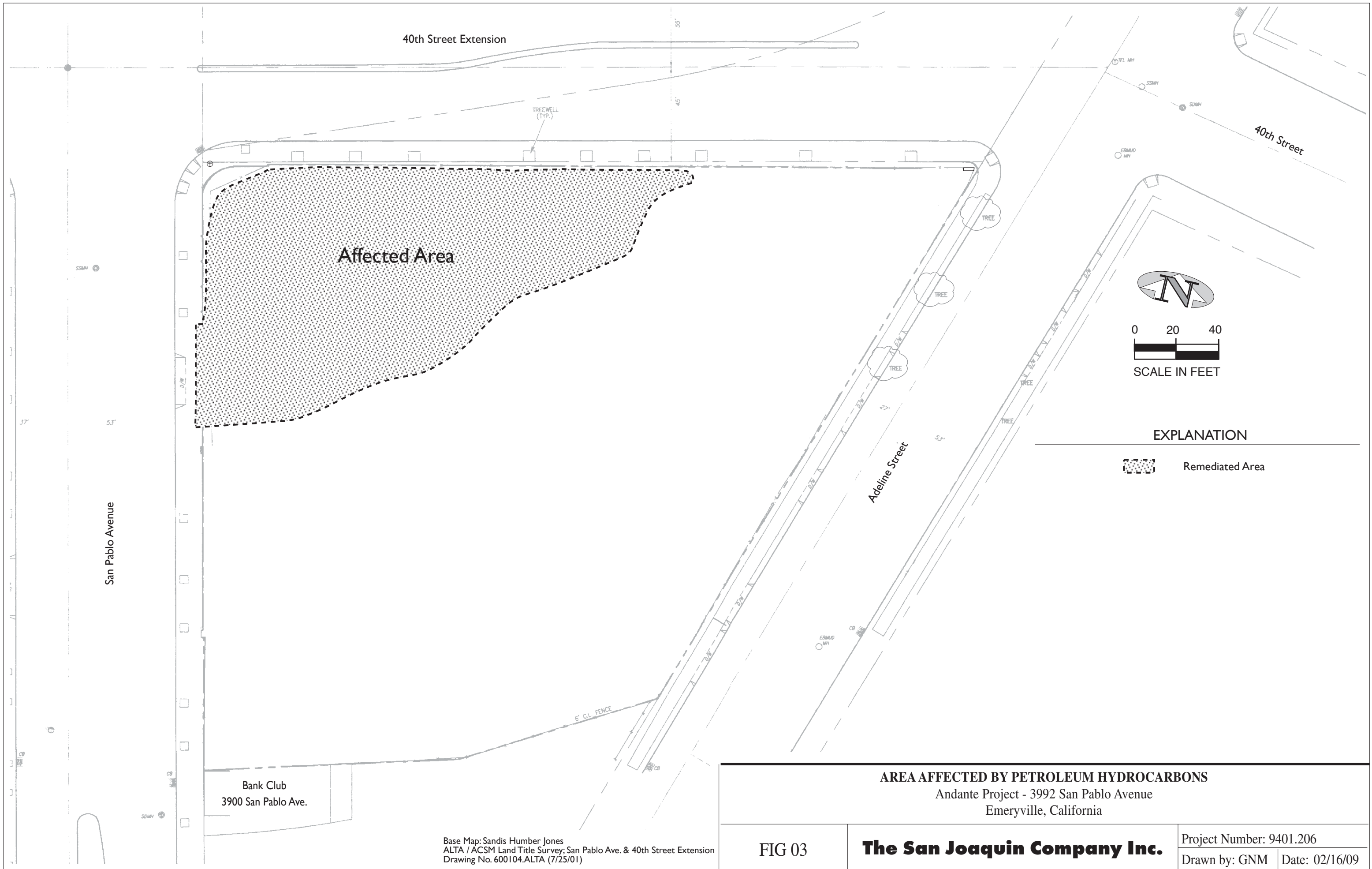
SITE PLAN PRIOR TO CONSTRUCTION
 Andante Project - 3992 San Pablo Avenue
 Emeryville, California

Base Map: Sandis Humber Jones
 ALTA / ACSM Land Title Survey; San Pablo Ave. & 40th Street Extension
 Drawing No. 600104.ALTA (7/25/01)

FIG 02

The San Joaquin Company Inc.

Project Number: 9401.206
 Drawn by: GNM Date: 02/16/09



EXPLANATION

 Remediated Area

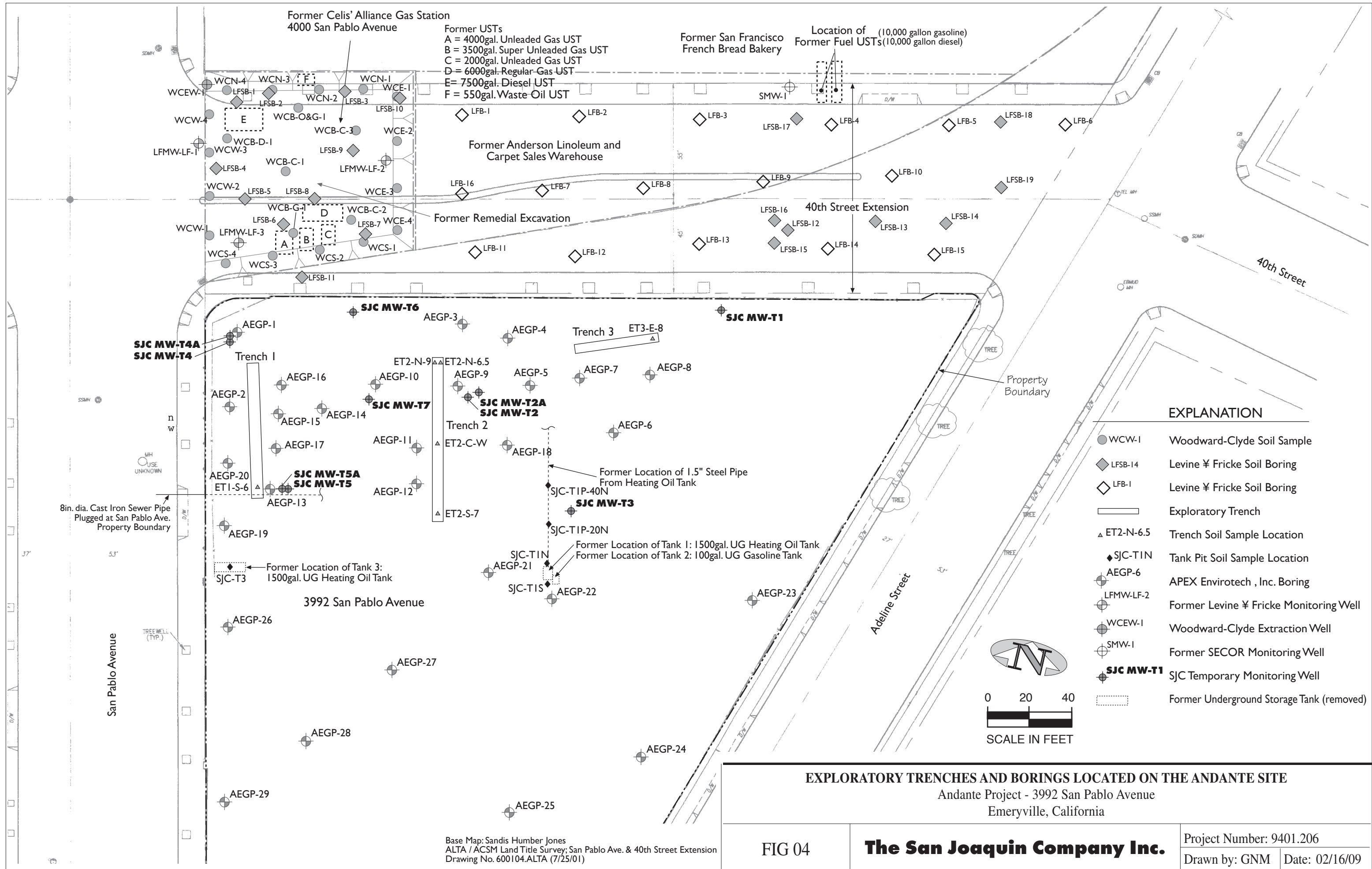
AREA AFFECTED BY PETROLEUM HYDROCARBONS
 Andante Project - 3992 San Pablo Avenue
 Emeryville, California

FIG 03

The San Joaquin Company Inc.

Project Number: 9401.206
 Drawn by: GNM Date: 02/16/09

Base Map: Sandis Humber Jones
 ALTA / ACSM Land Title Survey; San Pablo Ave. & 40th Street Extension
 Drawing No. 600104.ALTA (7/25/01)

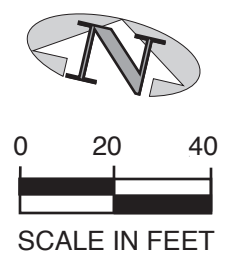


Former USTs
 A = 4000gal. Unleaded Gas UST
 B = 3500gal. Super Unleaded Gas UST
 C = 2000gal. Unleaded Gas UST
 D = 6000gal. Regular Gas UST
 E = 7500gal. Diesel UST
 F = 550gal. Waste Oil UST

Location of (10,000 gallon gasoline)
 Former Fuel USTs (10,000 gallon diesel)

EXPLANATION

- WCW-I Woodward-Clyde Soil Sample
- ◆ LFSB-14 Levine & Fricke Soil Boring
- ◇ LFB-1 Levine & Fricke Soil Boring
- ▭ Exploratory Trench
- △ ET2-N-6.5 Trench Soil Sample Location
- ◆ SJC-TIN Tank Pit Soil Sample Location
- AEGP-6 APEX Envirotech, Inc. Boring
- LFMW-LF-2 Former Levine & Fricke Monitoring Well
- WCEW-1 Woodward-Clyde Extraction Well
- SMW-1 Former SECOR Monitoring Well
- SJC MW-T1 SJC Temporary Monitoring Well
- ▭ Former Underground Storage Tank (removed)



EXPLORATORY TRENCHES AND BORINGS LOCATED ON THE ANDANTE SITE

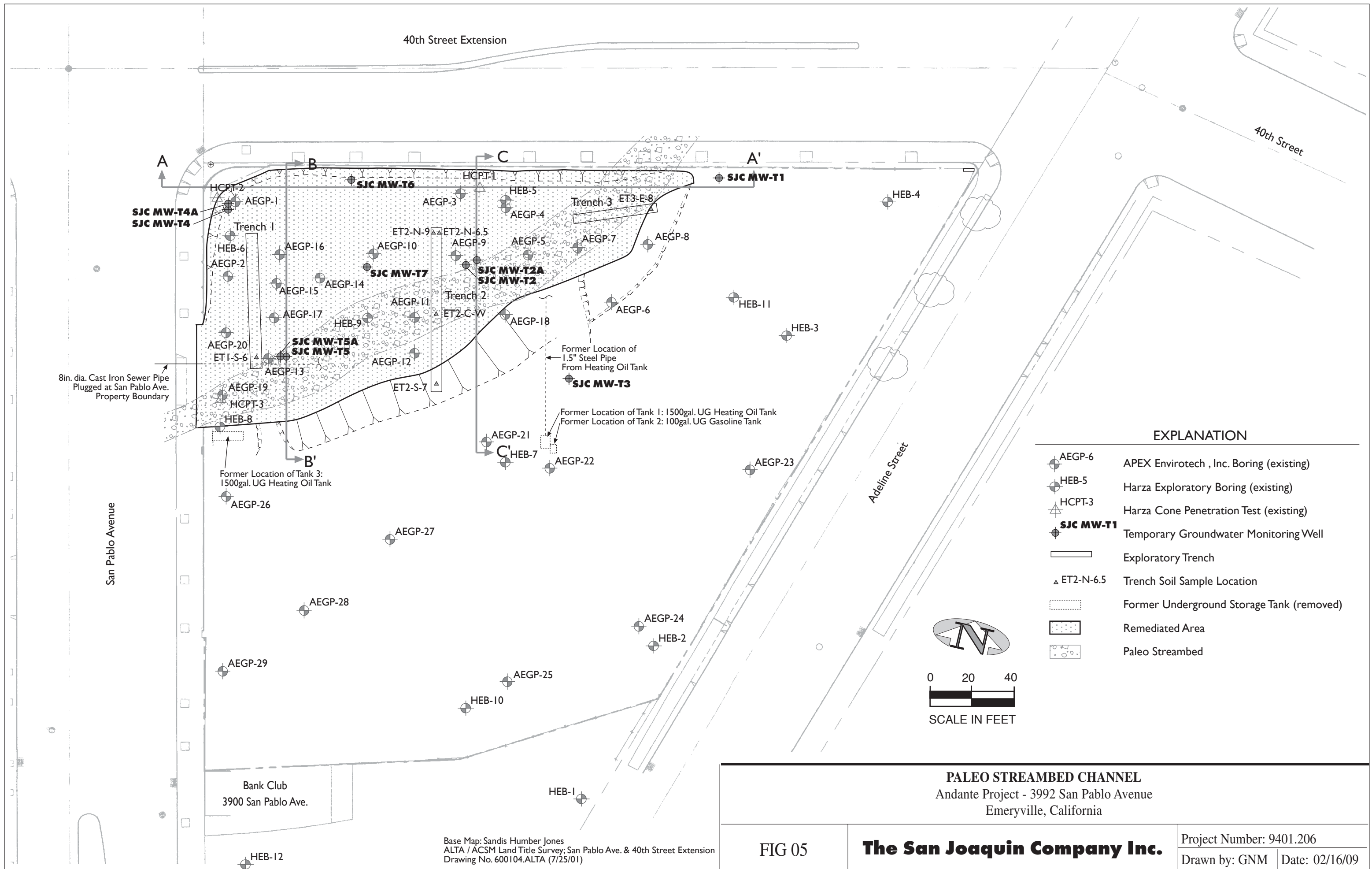
Andante Project - 3992 San Pablo Avenue
 Emeryville, California

Base Map: Sandis Humber Jones
 ALTA / ACSM Land Title Survey; San Pablo Ave. & 40th Street Extension
 Drawing No. 600104.ALTA (7/25/01)

FIG 04

The San Joaquin Company Inc.

Project Number: 9401.206
 Drawn by: GNM Date: 02/16/09



EXPLANATION

- AEGP-6 APEX Envirotech, Inc. Boring (existing)
- HEB-5 Harza Exploratory Boring (existing)
- HCPT-3 Harza Cone Penetration Test (existing)
- SJC MW-T1** Temporary Groundwater Monitoring Well
- Exploratory Trench
- ET2-N-6.5 Trench Soil Sample Location
- Former Underground Storage Tank (removed)
- Remediated Area
- Paleo Streambed



PALEO STREAMBED CHANNEL
 Andante Project - 3992 San Pablo Avenue
 Emeryville, California

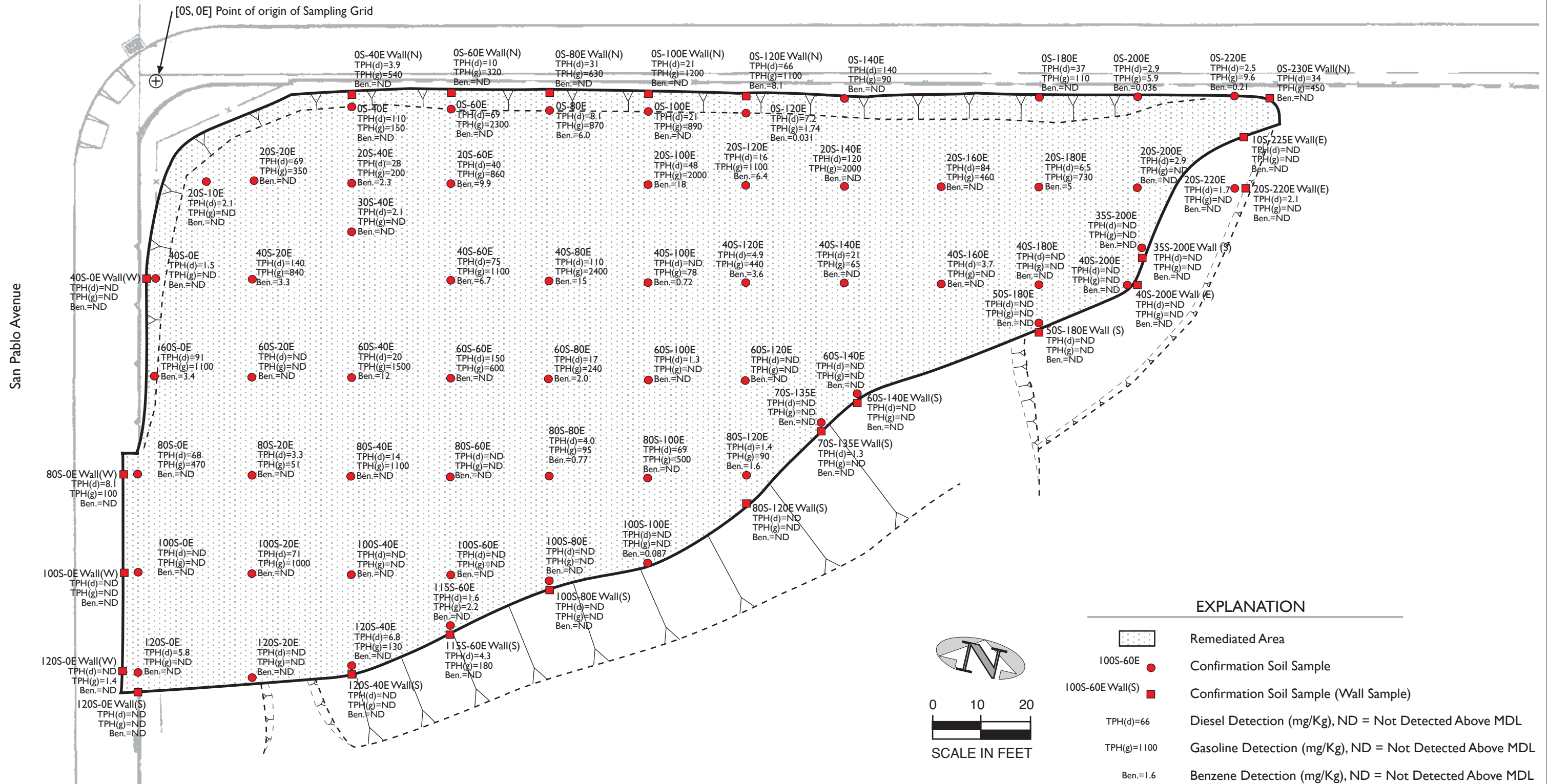
FIG 05

The San Joaquin Company Inc.

Project Number: 9401.206
 Drawn by: GNM Date: 02/16/09

Base Map: Sandis Humber Jones
 ALTA / ACSM Land Title Survey; San Pablo Ave. & 40th Street Extension
 Drawing No. 600104.ALTA (7/25/01)

40th Street Extension



CONFIRMATION SOIL SAMPLING LOCATIONS IN REMEDIAL EXCAVATION

Andante Project - 3992 San Pablo Avenue
Emeryville, California

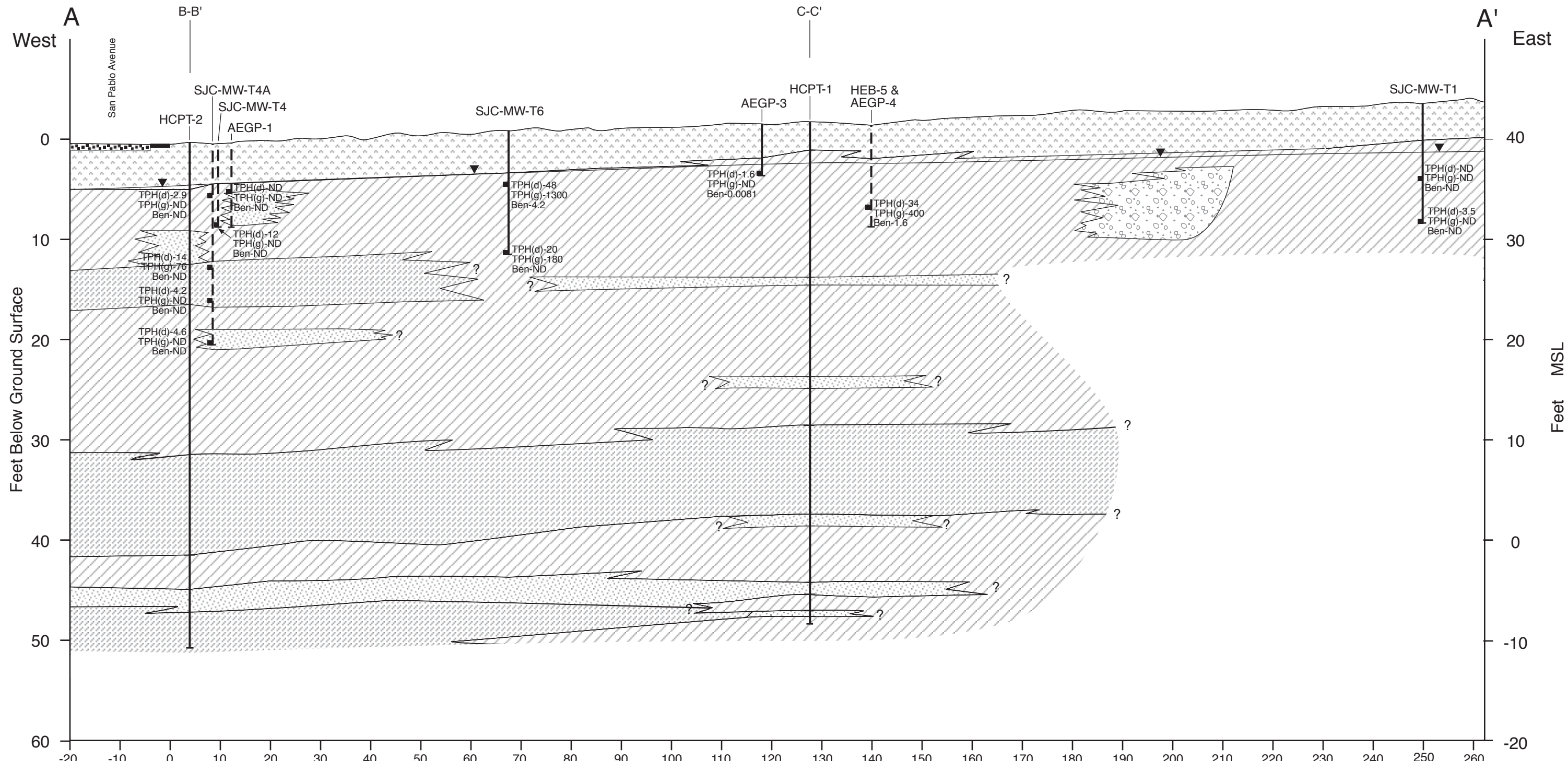
Base Map: Sandis Humber Jones
ALTA / ACSM Land Title Survey; San Pablo Ave. & 40th Street Extension
Drawing No. 600104.ALTA (7/25/01)

FIG 06

The San Joaquin Company Inc.

Project Number: 9401.206

Drawn by: GNM Date: 02/16/09

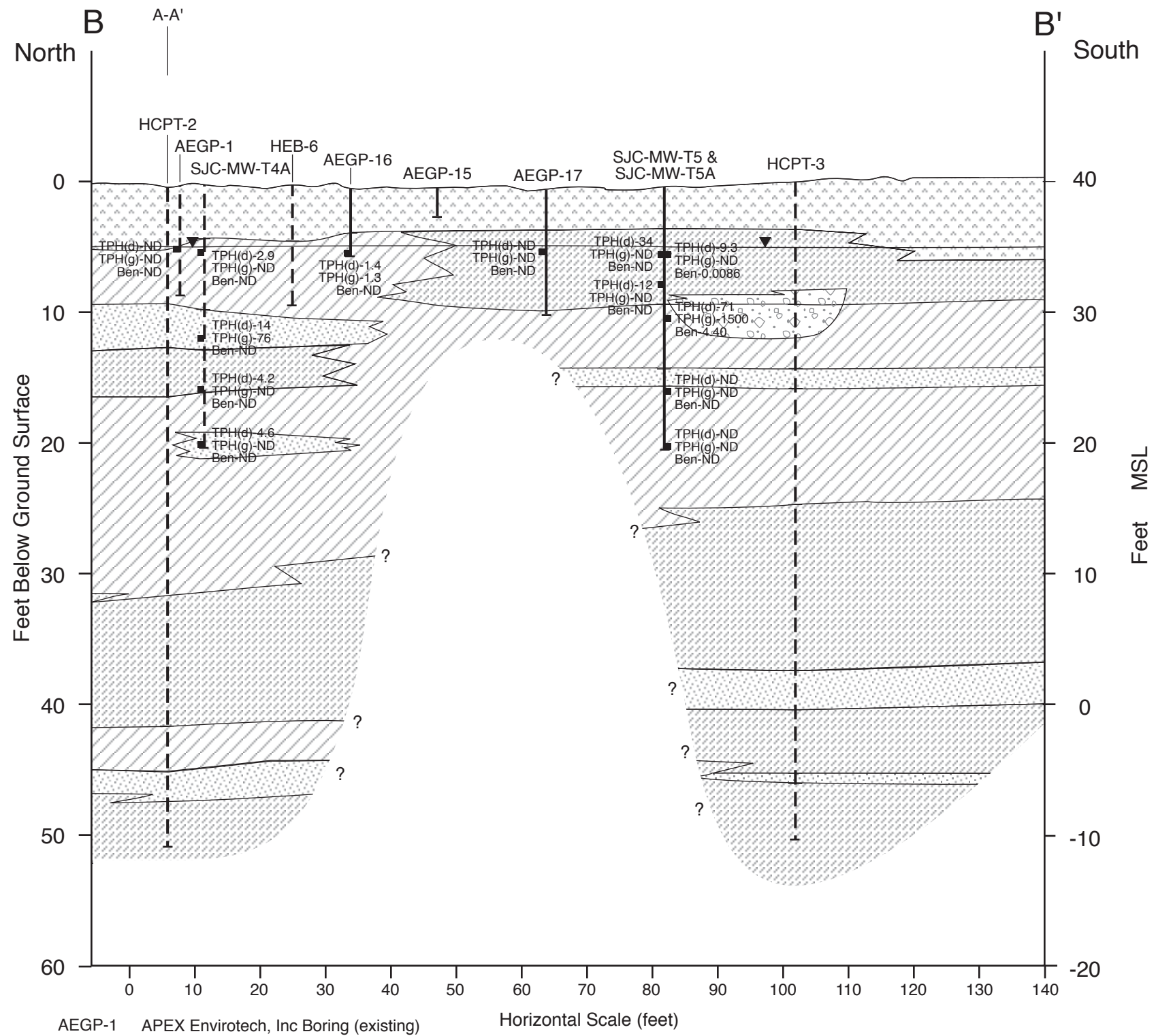







- FILL - mixture of loose Silty Sand and Gravel, with soft Silty Clay and Clay
- Sandy Silt and Clayey Silt, with some Silty Clay
- Sands, Silty Sands, Silts and some Gravel, with some Clayey Silt
- Clay and Silty Clay
- Sand and Gravel stream bed deposits


- AEGP-3 APEX Envirotech, Inc Boring (existing)
- HCPT-1 Harza Cone Penetration Test (existing)
- HEB-5 Harza Exploratory Boring (existing)
- SJC-MW-T1 San Joaquin Co. Inc Temporary Groundwater Monitoring Well
- ▼ Water Table (4/21/03)
- TPH(d)-150 Soil Sample Analysis Results (mg/kg)
- TPH(g)-150
- Ben-ND

Horizontal Scale (feet)

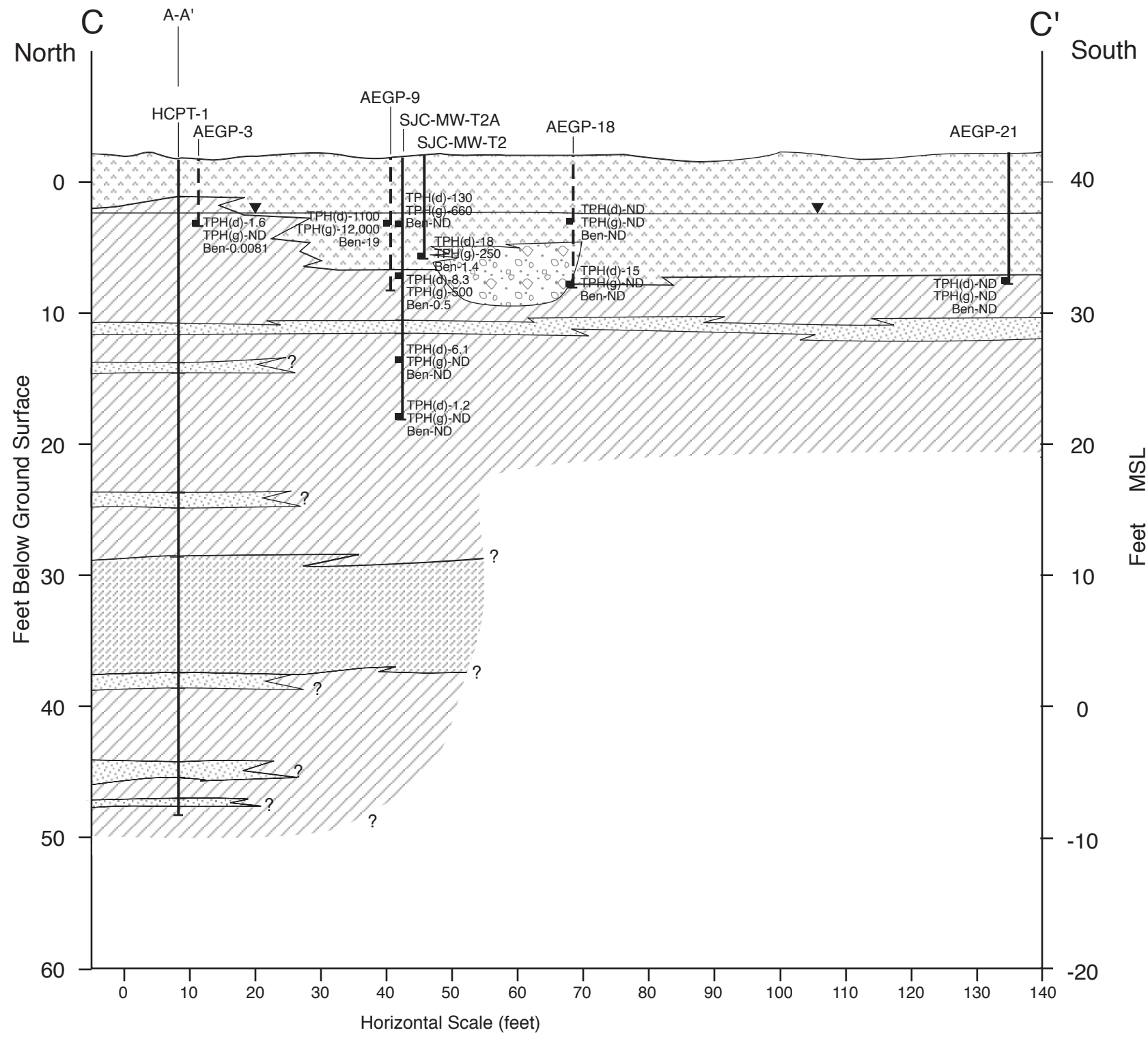
HYDROSTRATIGRAPHIC CROSS SECTION A-A' PRIOR TO EXCAVATION		
Andante Project - 3992 San Pablo Avenue Emeryville, California		
FIG 07	The San Joaquin Company Inc.	Project Number: 9401.206
		Drawn by: GNM Date: 02/16/09



-  FILL - mixture of loose Silty Sand and Gravel, with soft Silty Clay and Clay
-  Sandy Silt and Clayey Silt, with some Silty Clay
-  Sands, Silty Sands, Silts and some Gravel, with some Clayey Silt
-  Clay and Silty Clay
-  Sand and Gravel stream bed deposits

- AEGP-1 APEX Envirotech, Inc Boring (existing)
- HCPT-3 Harza Cone Penetration Test (existing)
- HEB-6 Harza Exploratory Boring (existing)
- SJC-MW-T5 San Joaquin Co. Inc Temporary Groundwater Monitoring Well
-  Water Table (4/21/03)
- TPH(d)-150 Soil Sample Analysis Results (mg/kg)
- TPH(g)-150
- Ben-ND

HYDROSTRATIGRAPHIC CROSS SECTION B-B' PRIOR TO EXCAVATION		
Andante Project - 3992 San Pablo Avenue Emeryville, California		
FIG 08	The San Joaquin Company Inc.	Project Number: 9401.206 Drawn by: GNM Date: 02/16/09

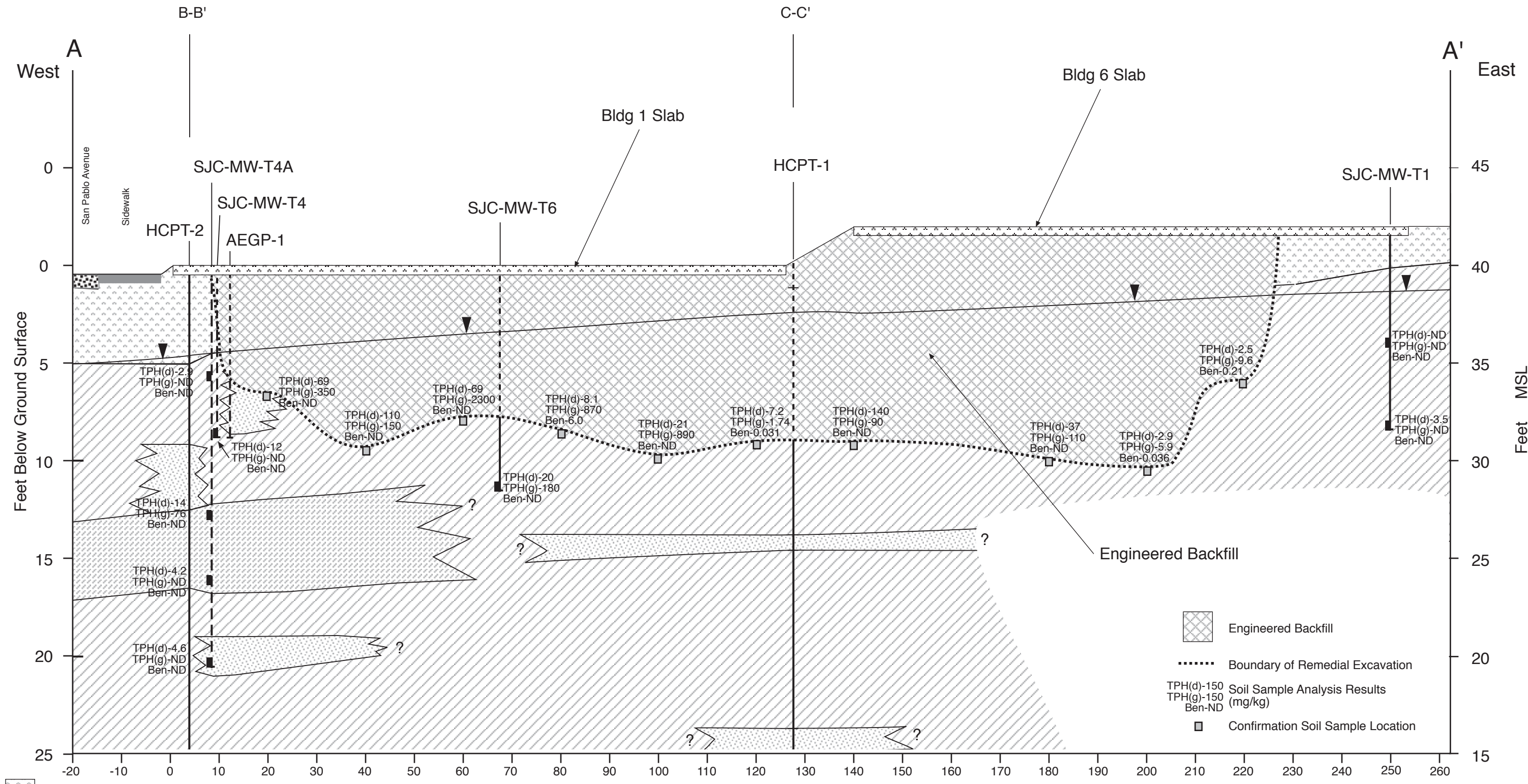


- FILL - mixture of loose Silty Sand and Gravel, with soft Silty Clay and Clay
- Sandy Silt and Clayey Silt, with some Silty Clay
- Sands, Silty Sands, Silts and some Gravel, with some Clayey Silt
- Clay and Silty Clay
- Sand and Gravel stream bed deposits

- AEGP-3 APEX Envirotech, Inc Boring (existing)
- HCPT-1 Harza Cone Penetration Test (existing)
- SJC-MW-T2 San Joaquin Co. Inc Temporary Groundwater Monitoring Well
- ▼ Water Table (4/21/03)
- TPH(d)-150 Soil Sample Analysis Results (mg/kg)
- TPH(g)-150
- Ben-ND

HYDROSTRATIGRAPHIC CROSS SECTION C-C' PRIOR TO EXCAVATION
 Andante Project - 3992 San Pablo Avenue
 Emeryville, California

FIG 09	The San Joaquin Company Inc.	Project Number: 9401.206 Drawn by: GNM Date: 02/16/09
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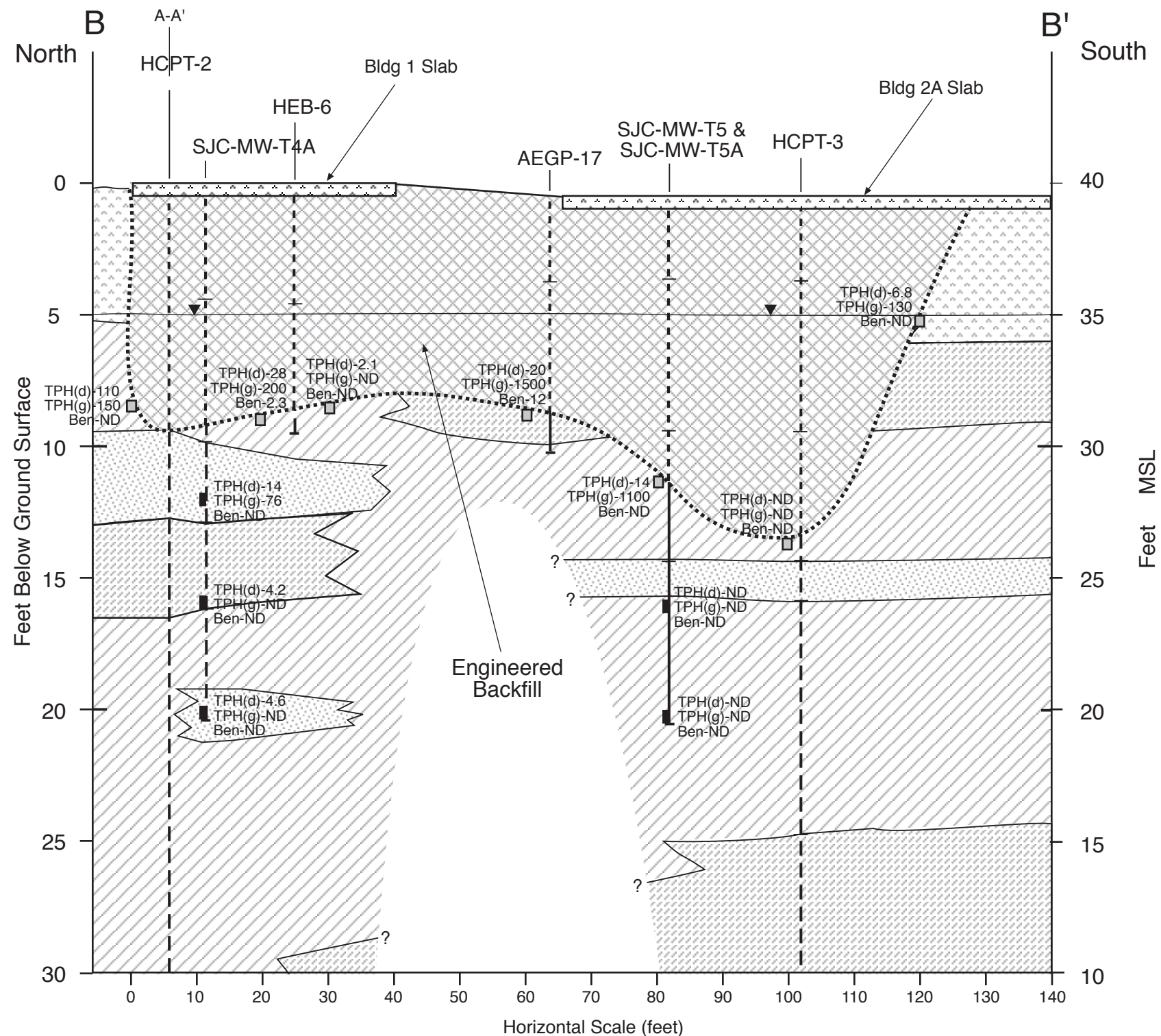


- FILL - mixture of loose Silty Sand and Gravel, with soft Silty Clay and Clay
- Sandy Silt and Clayey Silt, with some Silty Clay
- Sands, Silty Sands, Silts and some Gravel, with some Clayey Silt
- Clay and Silty Clay
- Sand and Gravel stream bed deposits

- AEGP-3 APEX Envirotech, Inc Boring (existing)
- HCPT-1 Harza Cone Penetration Test (existing)
- HEB-5 Harza Exploratory Boring (existing)
- SJC-MW-T1 San Joaquin Co. Inc Temporary Groundwater Monitoring Well
- Water Table (4/21/03)

- Engineered Backfill
- Boundary of Remedial Excavation
- TPH(d)-150
TPH(g)-150
Ben-ND
Soil Sample Analysis Results (mg/kg)
- Confirmation Soil Sample Location

HYDROSTRATIGRAPHIC CROSS SECTION A-A' THROUGH BACKFILLED REMEDIAL EXCAVATION		
Andante Project - 3992 San Pablo Avenue Emeryville, California		
FIG 10	The San Joaquin Company Inc.	Project Number: 9401.206
		Drawn by: GNM Date: 02/16/09

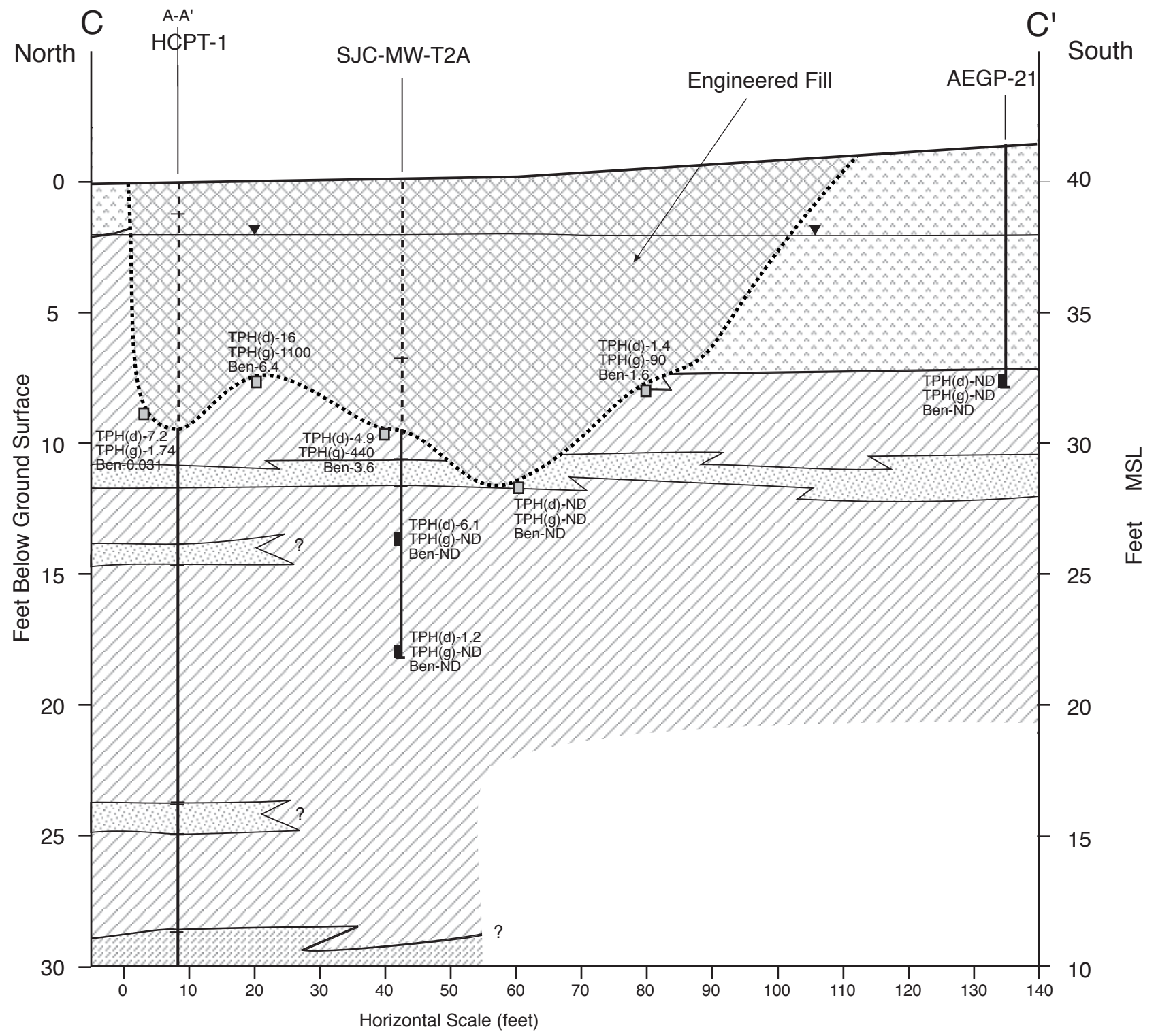


Engineered Backfill
 Boundary of Remedial Excavation
 TPH(d)-150 Soil Sample Analysis Results (mg/kg)
 TPH(g)-150
 Ben-ND
 Confirmation Soil Sample Location

FILL - mixture of loose Silty Sand and Gravel, with soft Silty Clay and Clay
 Sandy Silt and Clayey Silt, with some Silty Clay
 Sands, Silty Sands, Silts and some Gravel, with some Clayey Silt
 Clay and Silty Clay
 Sand and Gravel stream bed deposits

AEGP-1 APEX Envirotech, Inc Boring (existing)
 HCPT-3 Harza Cone Penetration Test (existing)
 HEB-6 Harza Exploratory Boring (existing)
 SJC-MW-T5 San Joaquin Co. Inc Temporary Groundwater Monitoring Well
 Water Table (4/21/03)

HYDROSTRATIGRAPHIC CROSS SECTION B-B' THROUGH BACKFILLED REMEDIAL EXCAVATION
 Andante Project - 3992 San Pablo Avenue
 Emeryville, California

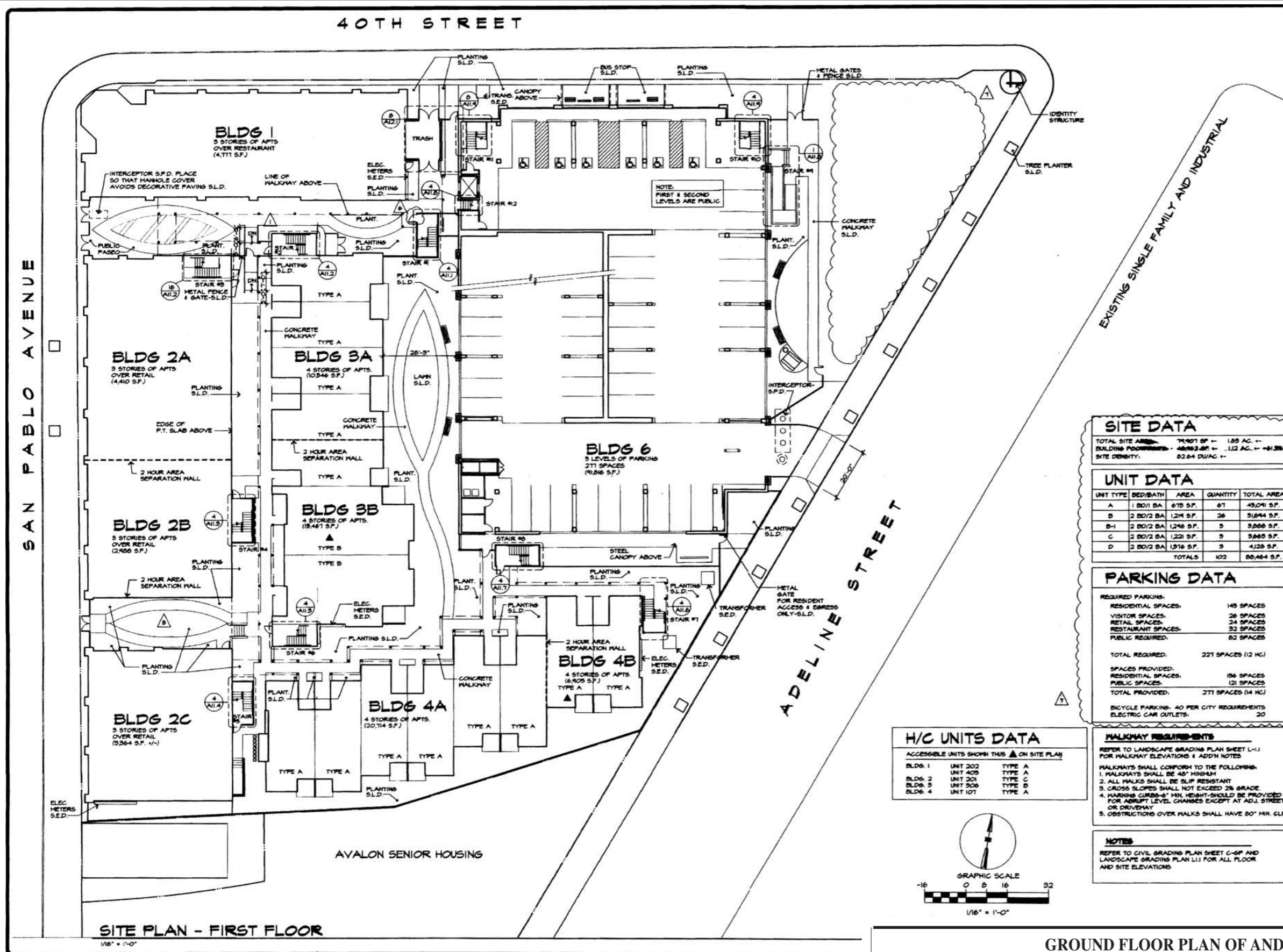


HYDROSTRATIGRAPHIC CROSS SECTION C-C' THROUGH BACK-FILLED REMEDIAL EXCAVATION
 Andante Project - 3992 San Pablo Avenue
 Emeryville, California

FIG 12

The San Joaquin Company Inc.

Project Number: 9401.206
 Drawn by: GNM | Date: 02/16/09



revisions	by
1	SK
2	SK
3	SK
4	SK
5	SK
6	SK
7	SK
8	SK
9	SK
10	SK
11	SK
12	SK

HDO
architects - planners
2480 camino Diablo
suite 110
napa, ca
94558
(707) 484-4306

ANDANTE
EMERYVILLE
102 UNIT MIXED USE COMMUNITY
FOR:
SNK DEVELOPMENT INC.

SITE DATA

TOTAL SITE AREA: 74,907 SF +/- 1.85 AC +/-
BUILDING FOOTPRINT: 48,962 SF +/- 1.12 AC +/- 41.3%
SITE DENSITY: 65.24 DU/AC +/-

UNIT DATA

UNIT TYPE	BED/BATH	AREA	QUANTITY	TOTAL AREA
A	1 BD/1 BA	675 S.F.	67	45,075 S.F.
B	2 BD/2 BA	1,219 S.F.	26	31,694 S.F.
B-1	2 BD/2 BA	1,246 S.F.	3	3,738 S.F.
C	2 BD/2 BA	1,221 S.F.	3	3,663 S.F.
D	2 BD/2 BA	1,376 S.F.	3	4,128 S.F.
TOTALS			102	80,464 S.F.

PARKING DATA

REQUIRED PARKING:	SPACES
RESIDENTIAL SPACES:	145 SPACES
VISITOR SPACES:	20 SPACES
RETAIL SPACES:	24 SPACES
RESTAURANT SPACES:	32 SPACES
PUBLIC REQUIRED:	62 SPACES
TOTAL REQUIRED:	227 SPACES (12 AC)
SPACES PROVIDED:	271 SPACES (14 AC)
RESIDENTIAL SPACES:	156 SPACES
PUBLIC SPACES:	121 SPACES
TOTAL PROVIDED:	277 SPACES (14 AC)
BICYCLE PARKING: 40 PER CITY REQUIREMENTS	
ELECTRIC CAR OUTLETS:	20

H/C UNITS DATA

ACCESSIBLE UNITS SHOWN THIS ▲ ON SITE PLAN

BLDG. 1	UNIT 302	TYPE A
BLDG. 2	UNIT 405	TYPE A
BLDG. 3	UNIT 201	TYPE C
BLDG. 4	UNIT 506	TYPE B
BLDG. 4	UNIT 107	TYPE A

WALKWAY REQUIREMENTS

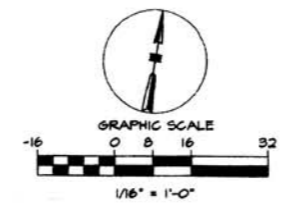
REFER TO LANDSCAPE GRADING PLAN SHEET L-11 FOR WALKWAY ELEVATIONS & ADD'N NOTES

WALKWAYS SHALL CONFORM TO THE FOLLOWING:

1. WALKWAYS SHALL BE 40" MINIMUM
2. ALL WALKS SHALL BE SLIP RESISTANT
3. CROSS SLOPES SHALL NOT EXCEED 2% GRADE
4. WARNING CURBS-6" MIN. HEIGHT-SHOULD BE PROVIDED FOR ABRUPT LEVEL CHANGES EXCEPT AT ADJ. STREET OR DRIVEWAY
5. OBSTRUCTIONS OVER WALKS SHALL HAVE 80" MIN. CLR

NOTES

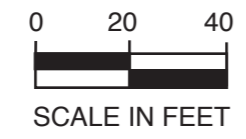
REFER TO CIVIL GRADING PLAN SHEET C-06 AND LANDSCAPE GRADING PLAN L11 FOR ALL FLOOR AND SITE ELEVATIONS



SITE PLAN
FIRST FLOOR

SCALE
1/16" = 1'-0"

SITE PLAN - FIRST FLOOR
1/16" = 1'-0"



Base Map: HDO Architects, Planners
Site Plan, 1st Floor - Andante Emeryville, 102 Unit Mixed Use Community
Job No. 9915 / Drawing No. Sheet A2.1 of 67 (rev.2/11/03)

GROUND FLOOR PLAN OF ANDANTE REDEVELOPED SITE

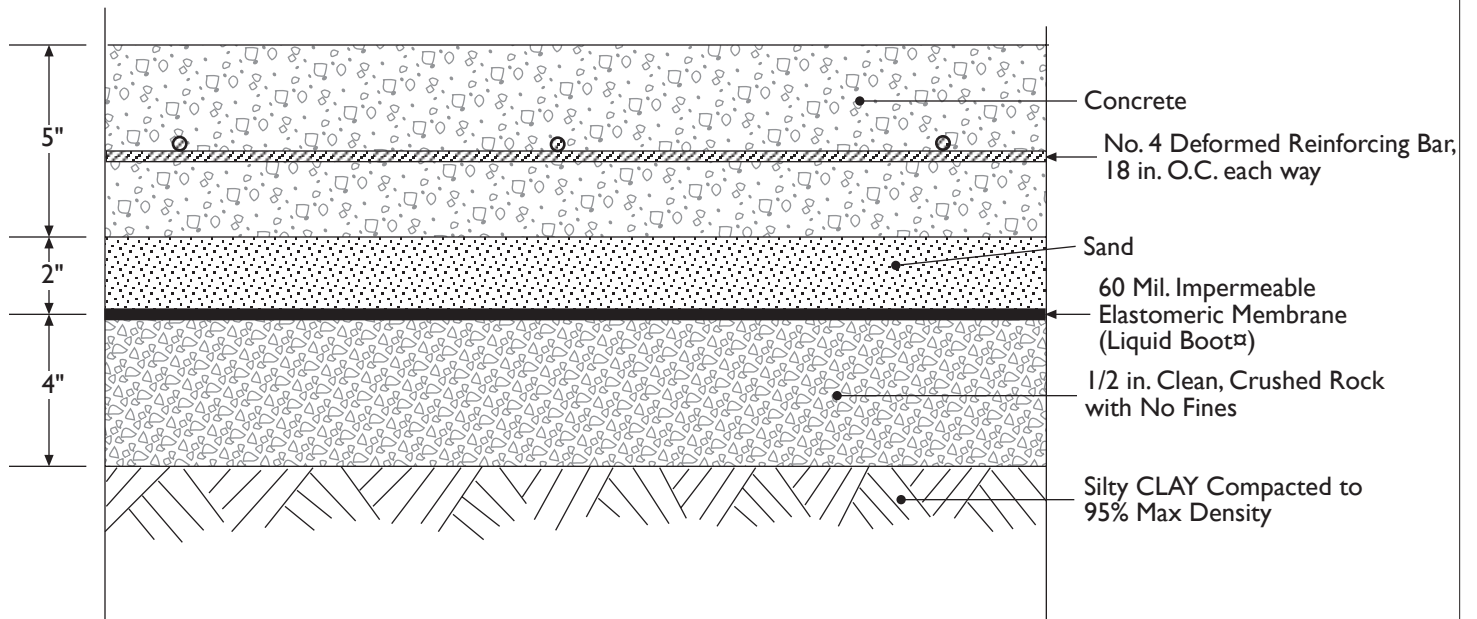
Andante Project - 3992 San Pablo Avenue
Emeryville, California

FIG 13

The San Joaquin Company Inc.

Project Number: 9401.206

Drawn by: GNM Date: 02/16/09



FLOOR SLAB WITH LIQUID BOOT® MEMBRANE

Andante Project - 3992 San Pablo Avenue
Emeryville, California

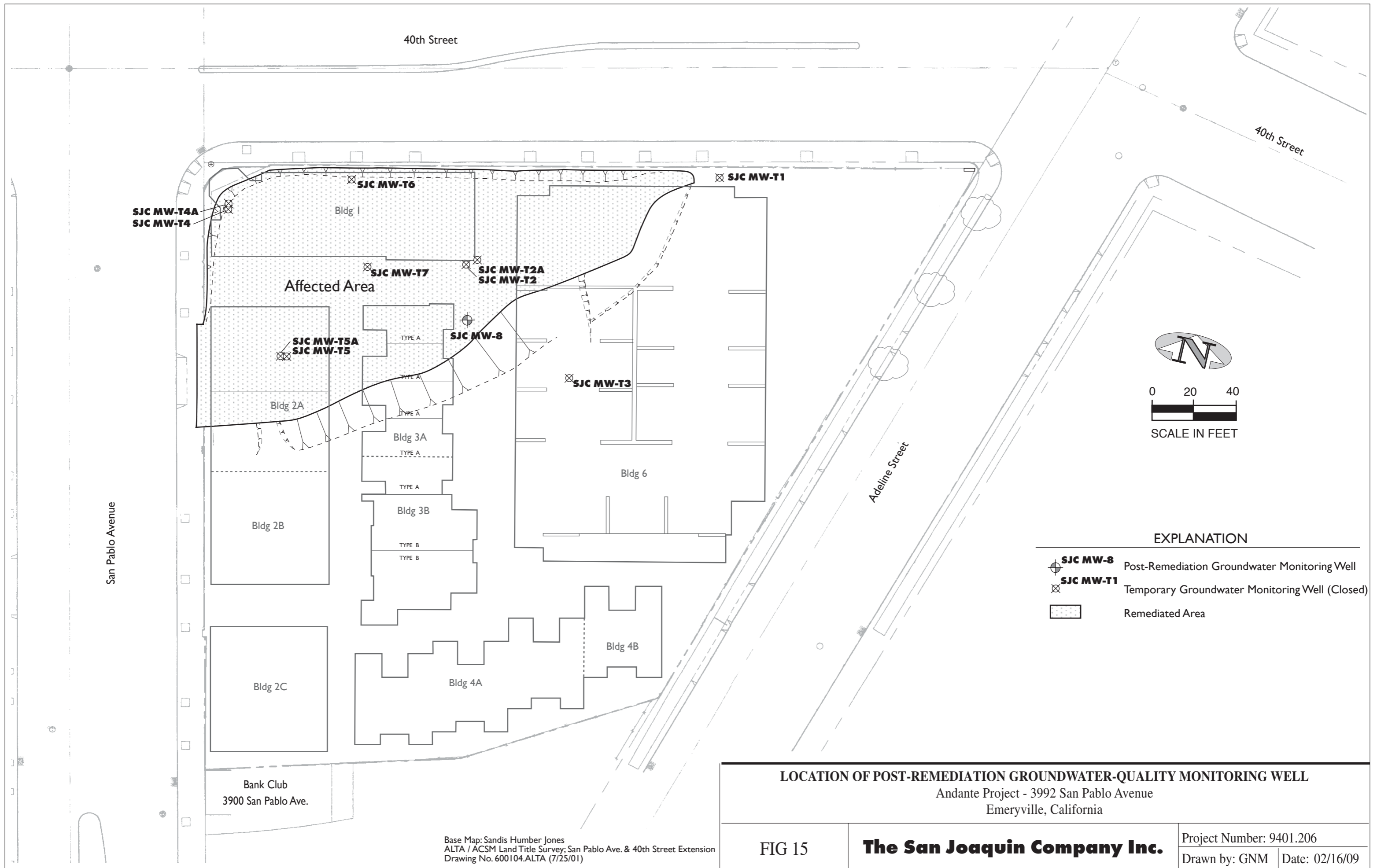
FIG 14

The San Joaquin Company Inc.

Project Number: 9401.206

Drawn by: GNM

Date: 02/16/09



0 20 40
SCALE IN FEET

EXPLANATION

- SJC MW-8** Post-Remediation Groundwater Monitoring Well
- SJC MW-T1** Temporary Groundwater Monitoring Well (Closed)
- Remediated Area

LOCATION OF POST-REMEDATION GROUNDWATER-QUALITY MONITORING WELL
 Andante Project - 3992 San Pablo Avenue
 Emeryville, California

FIG 15

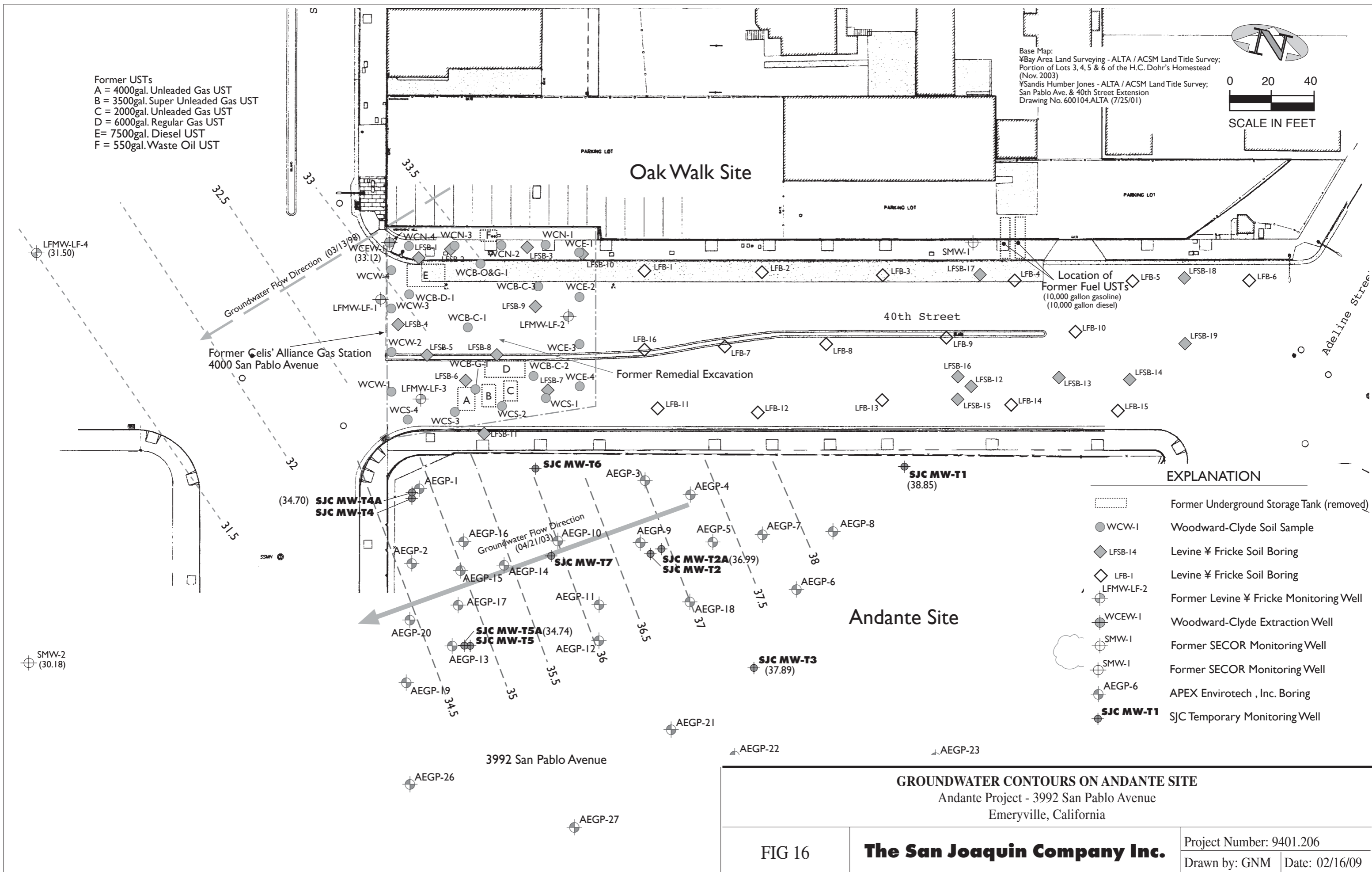
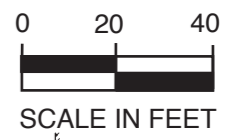
The San Joaquin Company Inc.

Project Number: 9401.206
 Drawn by: GNM | Date: 02/16/09

Base Map: Sandis Humber Jones
 ALTA / ACSM Land Title Survey; San Pablo Ave. & 40th Street Extension
 Drawing No. 600104.ALTA (7/25/01)

Former USTs
 A = 4000gal. Unleaded Gas UST
 B = 3500gal. Super Unleaded Gas UST
 C = 2000gal. Unleaded Gas UST
 D = 6000gal. Regular Gas UST
 E = 7500gal. Diesel UST
 F = 550gal. Waste Oil UST

Base Map:
 Bay Area Land Surveying - ALTA / ACSM Land Title Survey;
 Portion of Lots 3, 4, 5 & 6 of the H.C. Dohr's Homestead
 (Nov. 2003)
 Sandis Humber Jones - ALTA / ACSM Land Title Survey;
 San Pablo Ave. & 40th Street Extension
 Drawing No. 600104.ALTA (7/25/01)



EXPLANATION

- Former Underground Storage Tank (removed)
- WCV-1 Woodward-Clyde Soil Sample
- LFSB-14 Levine & Fricke Soil Boring
- LFB-1 Levine & Fricke Soil Boring
- LFMW-LF-2 Former Levine & Fricke Monitoring Well
- WCEV-1 Woodward-Clyde Extraction Well
- SMW-1 Former SECOR Monitoring Well
- SMW-1 Former SECOR Monitoring Well
- AEGP-6 APEX Envirotech, Inc. Boring
- SJC MW-T1 SJC Temporary Monitoring Well

GROUNDWATER CONTOURS ON ANDANTE SITE

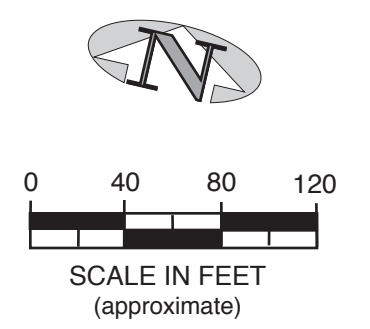
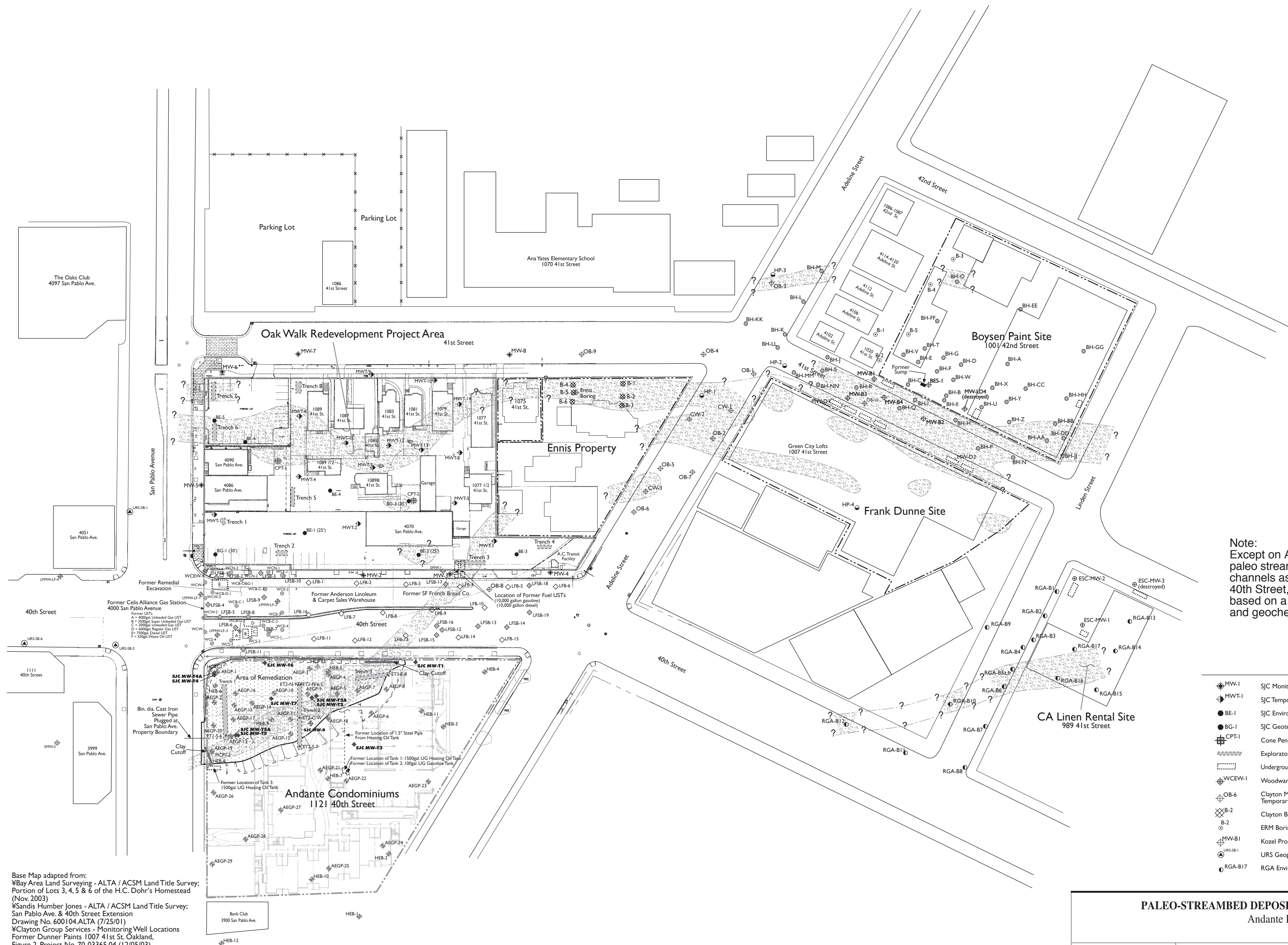
Andante Project - 3992 San Pablo Avenue
 Emeryville, California

FIG 16

The San Joaquin Company Inc.

Project Number: 9401.206

Drawn by: GNM Date: 02/16/09



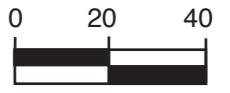
Note:
 Except on Andante and Frank Dunn sites, location and continuity of paleo streambed deposits are tentative. Continuity of paleo streambed channels as shown on Boyson Paint Site, 41st Street, Ennis Property, 40th Street, California Linen Rental, and Adeline Street are assumed based on a preponderance of available boring log, hydrostratigraphic and geochemical data.

EXPLANATION			
⊕ MW-1	SJC Monitoring Well (Oak Walk)	⊕ WCS-1	Woodward-Clyde Soil Sample
⊕ MWT-1	SJC Temporary Monitoring Well (Oak Walk)	⊕ LFSB-14	Levine V Fricke Soil Boring
● BE-1	SJC Environmental Boring (Oak Walk)	⊕ LFB-1	Levine V Fricke Soil Boring
● BG-1	SJC Geotech Boring (Oak Walk)	⊕ LFWL-LF-2	Levine V Fricke Monitoring Well
⊕ CPT-1	Cone Penetrometer Test Location (Oak Walk)	⊕ HEB-2	Harza Exploratory Boring
⊕	Exploratory Trench	⊕ SMW-1	SECOR Monitoring Well
⊕	Underground Storage Tank (removed)	⊕ AEGP-6	APEX Envirotech, Inc. Boring
⊕ WCEW-1	Woodward-Clyde Extraction Well	⊕ SJC MW-T1	SJC Temporary Monitoring Well (SNK Andante)
⊕ OB-6	Clayton Monitoring Well (CW) & Temporary Monitoring Well (OB)	⊕	Paleo Streambed, Gravelly Areas
⊕ B-2	Clayton Boring	⊕ ET1-S-6	Trench Soil Sample Location
⊕ B-2	ERM Boring (6/06)	⊕ MW-D1	Dunne Paints Monitoring Well
⊕ MW-B1	Kozel Property Monitoring Well	⊕ HP-2	ASE Boring
⊕ URS-SB-1	URS Geoprobe Soil Boring	⊕ BH-S	ASE Temporary Well
⊕ RGA-B17	RGA Environmental boring	⊕ ESC-MW-1	Environmental Strategies Corp Monitoring Well

Base Map adapted from:
 ¥Bay Area Land Surveying - ALTA / ACSM Land Title Survey; Portion of Lots 3, 4, 5 & 6 of the H.C. Dohr's Homestead (Nov. 2003)
 ¥Sandis Humber Jones - ALTA / ACSM Land Title Survey; San Pablo Ave. & 40th Street Extension Drawing No. 600104.ALTA (7/25/01)
 ¥Clayton Group Services - Monitoring Well Locations Former Dunner Paints 1007 41st St. Oakland, Figure 2, Project No. 70-03365.04 (12/05/03)
 ¥Clayton Group Services - Historical Subject Property Plan 1007 41st St & 4050 Adeline St., Oakland, Figure 3, Project No. 70-03365.00 (09/06/02)



Base Map:
 Bay Area Land Surveying - ALTA / ACSM Land Title Survey;
 Portion of Lots 3, 4, 5 & 6 of the H.C. Dohr's Homestead
 (Nov. 2003)
 Sandis Humber Jones - ALTA / ACSM Land Title Survey;
 San Pablo Ave. & 40th Street Extension
 Drawing No. 600104.ALTA (7/25/01)

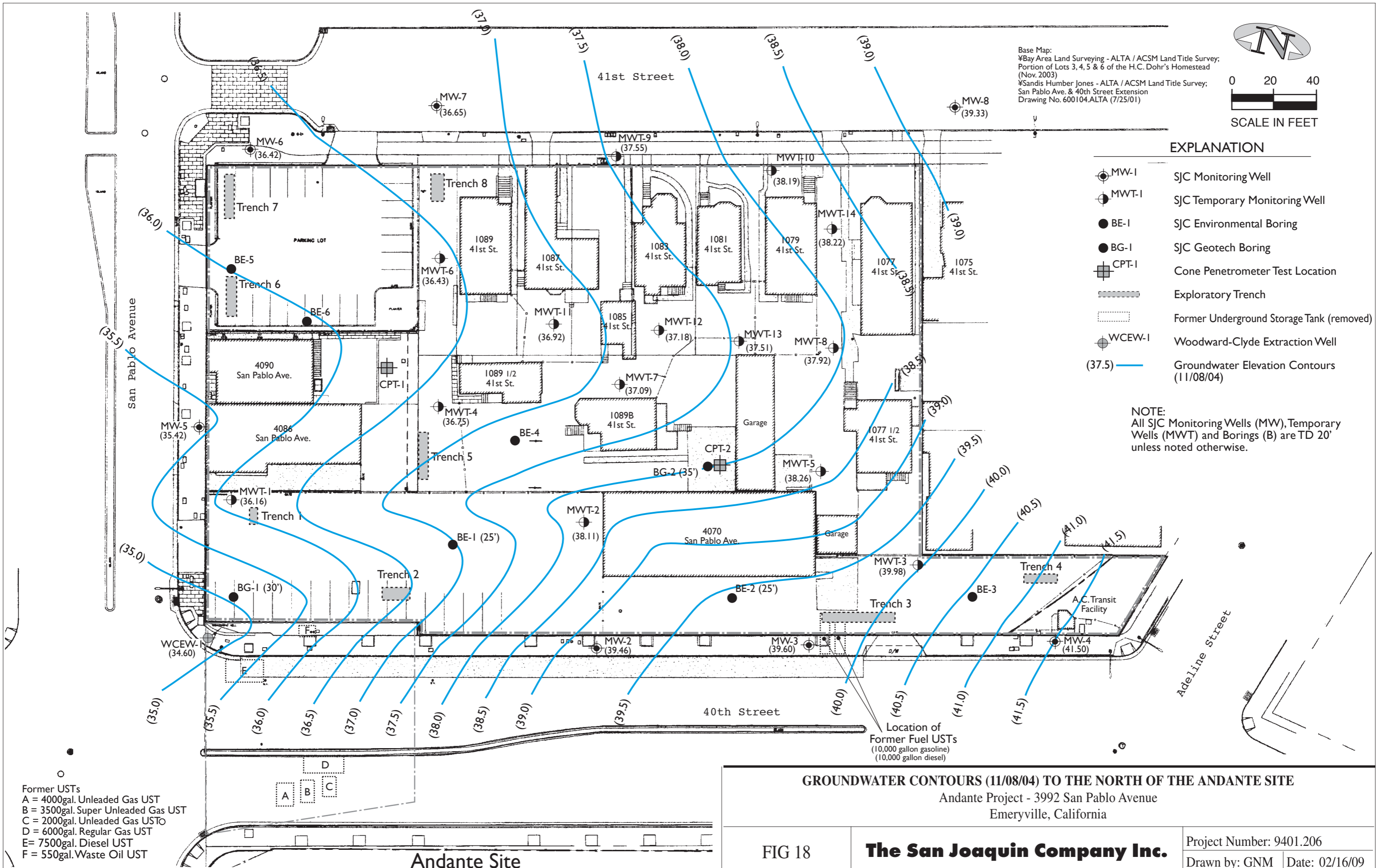


SCALE IN FEET

EXPLANATION

- MW-I SJC Monitoring Well
- MWT-I SJC Temporary Monitoring Well
- BE-I SJC Environmental Boring
- BG-I SJC Geotech Boring
- CPT-I Cone Penetrometer Test Location
- Exploratory Trench
- Former Underground Storage Tank (removed)
- WCEW-I Woodward-Clyde Extraction Well
- (37.5) Groundwater Elevation Contours (11/08/04)

NOTE:
 All SJC Monitoring Wells (MW), Temporary Wells (MWT) and Borings (B) are TD 20' unless noted otherwise.



Former USTs
 A = 4000gal. Unleaded Gas UST
 B = 3500gal. Super Unleaded Gas UST
 C = 2000gal. Unleaded Gas UST
 D = 6000gal. Regular Gas UST
 E = 7500gal. Diesel UST
 F = 550gal. Waste Oil UST

GROUNDWATER CONTOURS (11/08/04) TO THE NORTH OF THE ANDANTE SITE

Andante Project - 3992 San Pablo Avenue
 Emeryville, California

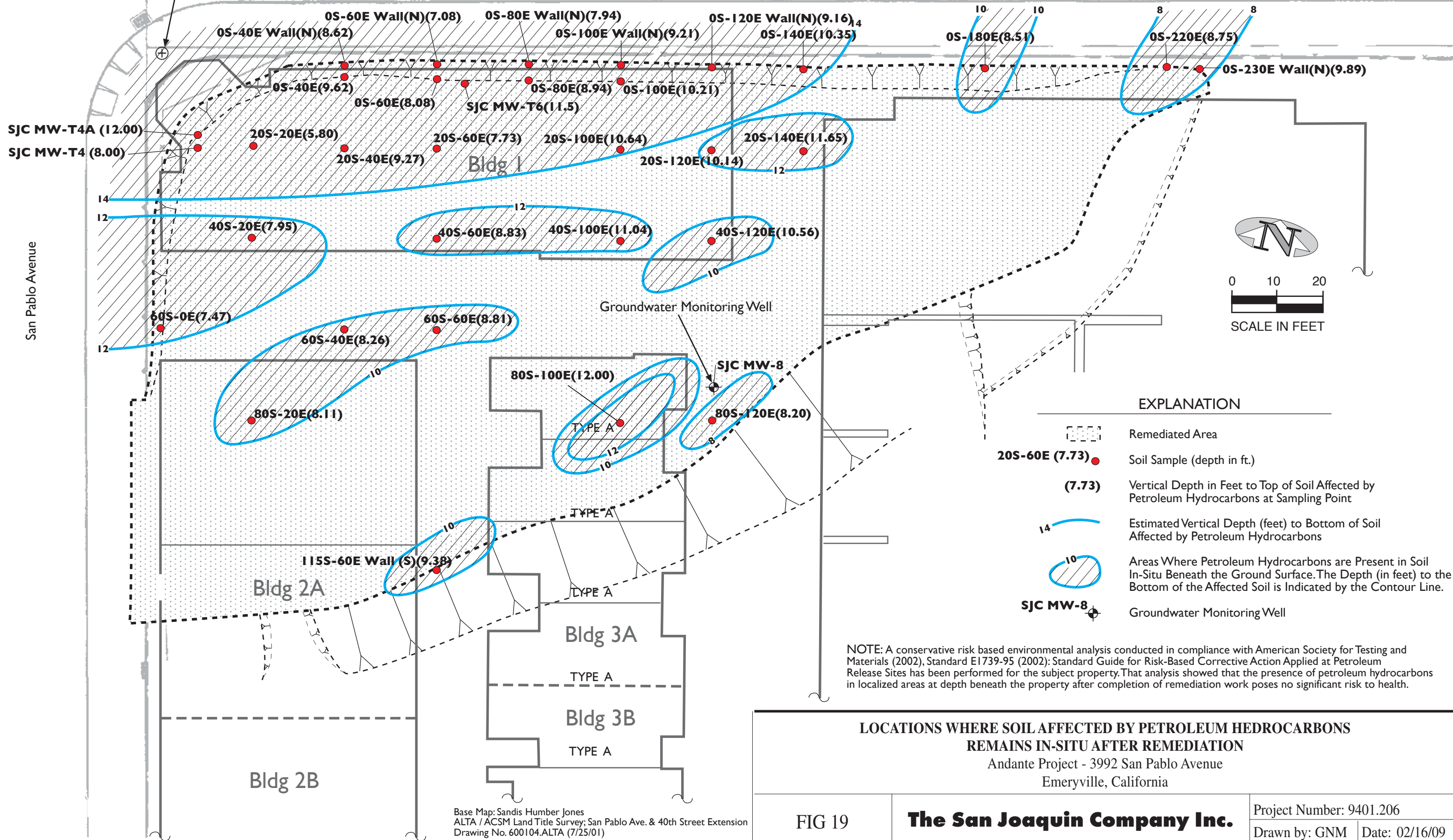
FIG 18

The San Joaquin Company Inc.

Project Number: 9401.206
 Drawn by: GNM | Date: 02/16/09

40th Street Extension

[0S, 0E] Point of origin of Sampling Grid



EXPLANATION

- Remediated Area
- 20S-60E (7.73) Soil Sample (depth in ft.)
- (7.73) Vertical Depth in Feet to Top of Soil Affected by Petroleum Hydrocarbons at Sampling Point
- 14 Estimated Vertical Depth (feet) to Bottom of Soil Affected by Petroleum Hydrocarbons
- Areas Where Petroleum Hydrocarbons are Present in Soil In-Situ Beneath the Ground Surface. The Depth (in feet) to the Bottom of the Affected Soil is Indicated by the Contour Line.
- SJC MW-8 Groundwater Monitoring Well

NOTE: A conservative risk based environmental analysis conducted in compliance with American Society for Testing and Materials (2002), Standard E1739-95 (2002): Standard Guide for Risk-Based Corrective Action Applied at Petroleum Release Sites has been performed for the subject property. That analysis showed that the presence of petroleum hydrocarbons in localized areas at depth beneath the property after completion of remediation work poses no significant risk to health.

LOCATIONS WHERE SOIL AFFECTED BY PETROLEUM HEDROCARBONS REMAINS IN-SITU AFTER REMEDIATION

Andante Project - 3992 San Pablo Avenue
Emeryville, California

Base Map: Sandis Humber Jones
ALTA / ACSM Land Title Survey; San Pablo Ave. & 40th Street Extension
Drawing No. 600104.ALTA (7/25/01)

FIG 19

The San Joaquin Company Inc.

Project Number: 9401.206

Drawn by: GNM Date: 02/16/09

Attachment 29

Andante Site Assessor's Parcel Numbers as of September 2000:

049-1024-001

049-1025-018

049-1025-020

049-1025-019

049-1025-026-4

049-1025-027-4

049-1025-028-4

Attachment 30

References

Reports are on file at ACEH

Alameda County Environmental Health Care Services (2003), Letter: SNK Andante Project at 3992 San Pablo Ave., Emeryville, CA from Eva Chu (Hazardous Materials Specialist) to Mr. Dai Watkins, The San Joaquin Company. Dated July 2, 2003.

Apex Envirotech, Inc. (2003), Results of Limited Subsurface Investigation - Andante Redevelopment Project, 3992 San Pablo Avenue, Emeryville, CA. Report prepared for SNK Development Inc., March 3, 2003.

American Society for Testing and Materials International (2006a), Standard D-543-06, *Standard Practices for Evaluating the Resistance of Plastics to Chemical Reagents*. American Society for Testing and Materials, West Conshohocken, Pennsylvania. 2006.

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American Society for Testing and Materials International (2000a), *Standard Guide for Risk-Based Corrective Action*, ASTM Standard E2081-00, American Society for Testing and Materials, West Conshohocken, Pennsylvania. November 2000.

California Regional Water Quality Control Board San Francisco Bay Region (2008), *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater*. California Regional Water Quality Control Board San Francisco Bay Region INTERIM FINAL. November 2007 (Revised May 2008).

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California Regional Water Quality Control Board - San Francisco Bay Region (1999), East Bay Plane Groundwater Basin Beneficial Use Evaluation Report - Alameda and Contra Costa Counties, California Regional Water Quality Control Board - San Francisco Bay Region Groundwater Committee. June 1999

Dietz Irrigation (2003a), *Contractor's Report of Remediation - 3992 San Pablo Avenue, Emeryville, CA*. Prepared for SNK Capterc Andante LLC. June 26, 2003.

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Dietz Irrigation (2003c), *Contractor's Report of Tank Closure - 3992 San Pablo Avenue, Emeryville, CA*. Prepared for SNK Development Inc. May 2003.

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The San Joaquin Company Inc. (2003a), *Corrective Action Report, SNK Andante Project, 3992 San Pablo Avenue, Emeryville, California*. Report prepared for SNK Capterc Andante LLC, August 2003. (In five volumes.)

The San Joaquin Company Inc. (2003b), *Remediation Work Plan, SNK Andante Project, 3992 San Pablo Avenue, Emeryville, California*. Report prepared for SNK Development Inc., March 2003.

The San Joaquin Company Inc. (2000), *Phase I Environmental Site Assessment - 3992 San Pablo Avenue, Emeryville, California: Andante Project*. Report prepared for SNK Development Inc., September 2000.

ALAMEDA COUNTY
HEALTH CARE SERVICES



AGENCY

DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1771 North Bay Parkway, Suite 250
Alameda, CA 94602-1577
(510) 567-6700
FAX (510) 337-9335

RO0002530

July 2, 2003

Mr. Dai Watkins
The San Joaquin Company
1120 Hollywood Ave Suite 3
Oakland, CA 94602-1459

RE: SNK Andante Project at 3992 San Pablo Ave, Emeryville, CA

Dear Mr. Watkins:

Alameda County Environmental Health (ACEH) staff reviewed the *Contractor's Report of Remediation* dated June 2003 and prepared by Dietz Irrigation for the above referenced site. Soil and groundwater at the site was impacted predominantly with total petroleum hydrocarbons (TPH as gasoline and some diesel and/or motor oil) and BTEX constituents. The affected area was excavated in April through May 2003, removing approximately 7075 tons of soil. The excavation was extended to depths ranging from 6.5 to 13 feet bgs. Confirmation soil samples were collected for TPHg, TPHd, TPHm, and BTEX analyses. Select samples were also analyzed for ether oxygenates, ethanol and PNAs. Residual benzene concentrations that exceeded the RWQCB's RBSLs (0.18 ppm for residential use) were identified at depths of 8.0 to 12.7 feet bgs. This zone of contamination is frequently below groundwater elevation (groundwater is believed to range from 6 to 10 feet bgs).

A draft Tier 2 RBCA (health risk analysis) was prepared for the site and presented to ACEH staff and Mr. Roger Brewer of the SF-RWQCB on June 23, 2003. A complete engineering report is due to ACEH by July 28, 2003. Based on the risk analysis, it does not appear that residual soil and water contamination would pose a significant risk to human health. Additional soil remediation is not warranted at this time.

Based upon the available information provided to date, and with the provision that the information provided was accurate and representative of site conditions, ACEH does not object to the redevelopment of the site into commercial and high density residences provided the following provisions are met:

- A vapor tight barrier/membrane shall underlie all structures (with the exception of the parking structure) within the remediated area. No utilities shall penetrate the vapor barriers.
- Clean imported soil shall comprise the upper 3 feet of all landscaped areas, planting boxes, etc.
- Installation of water supply wells on the property is prohibited.
- Single family residential or townhome use of the property is prohibited.

Dai Watkins
re: 3992 San Pablo Ave, Emeryville
July 2, 2003
Page 2 of 2

- Groundwater monitoring wells are required to assess effectiveness of remediation. Groundwater shall be monitored quarterly for a minimum of one year. The wells must be completed by the final construction phase of the project (anticipated in late 2004).
- A deed restriction specifying the above items, at a minimum, shall be recorded and a copy of the recorded deed shall be submitted to this agency and the City of Emeryville. Before drawings (prior to soil removal) and after drawings (after final soil removal) clearly delineating areas where soil does and does not exceed screening levels for unrestricted land use are to be included in the deed restriction. The maps are to include depth contours to depict the estimated vertical depth of impact.

If you have any questions, I can be reached at (510) 567-6762 or by email at echu@co.alameda.ca.us.



eva chu
Hazardous Materials Specialist

c: Roger Brewer, SF-RWQCB
Donna Drogos
Ignacio Dayrit, City of Emeryville