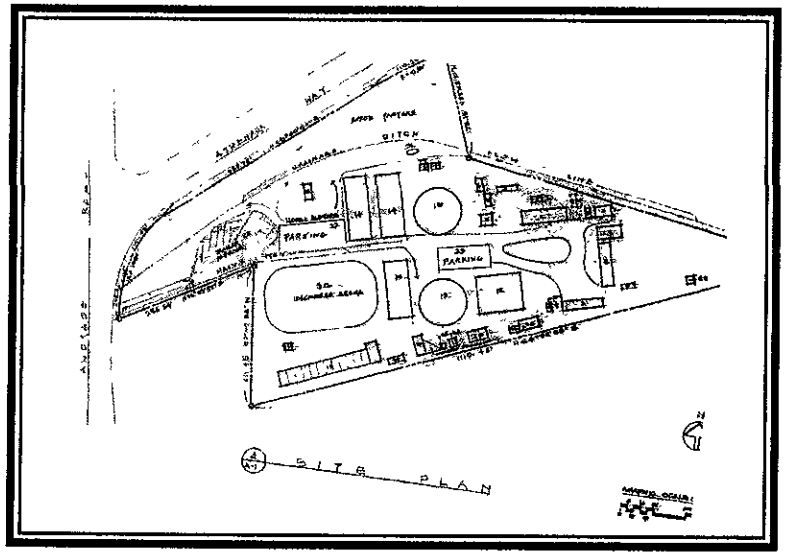
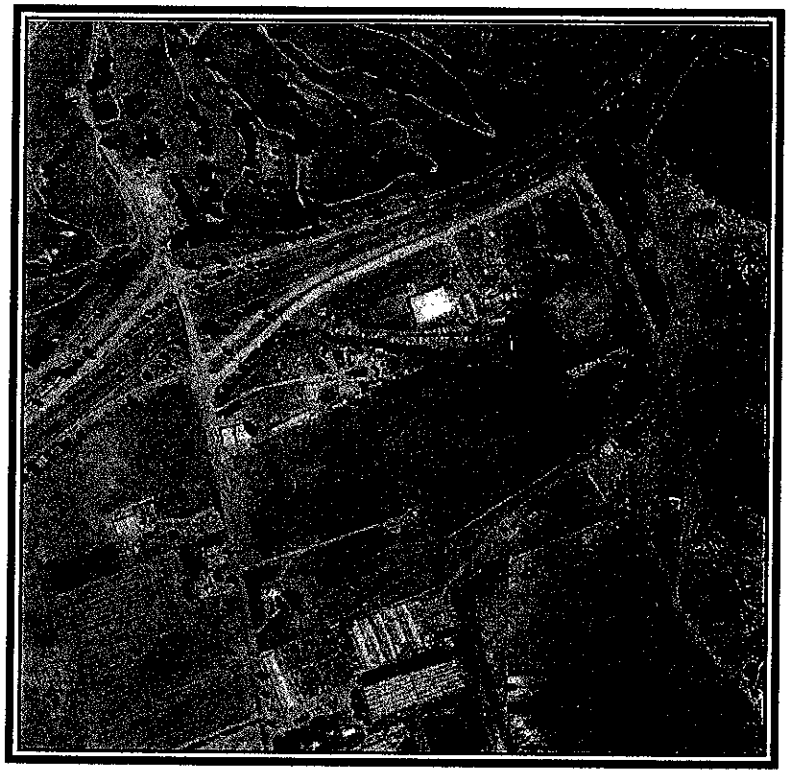
ACHCSA EAR Account

Sunol Tree Gas Station Fuel Release
3004 Andrade Road, Sunol

SITE CONCEPTUAL MODEL





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June 2004

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☐	DRAFT Site Conceptual Model (SCM)	Sunol-Tree-Gas-SCM.doc	140.5 kb	Pat Hoban	Jun 28, 2004 5:41 AM

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☐	Groundwater Basin Description	REGIONAL DESCRIPTION OF GROUNDWATER BASIN.pdf	93.7 kb	Pat Hoban	Jun 28, 2004 *4:40 AM*
☐	References	REFERENCES.pdf	9.0 kb	Pat Hoban	Jun 28, 2004 *5:02 AM*
☐	Regional Geology	REGIONAL Geology.pdf	29.0 kb	Pat Hoban	Jun 28, 2004 *5:04 AM*

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☐	2002-08-29_DIR_L	2002-08-29_DIR_L.pdf	34.8 kb	Robert Schultz	Jun 21, 2004 *1:23 PM*
☐	2003-03-20_DIR_L	2003-03-20_DIR_L.pdf	253.1 kb	Robert Schultz	Jun 21, 2004 *1:24 PM*
☐	2003-06-13_DIR_L	2003-06-13_DIR_L.pdf	134.5 kb	Robert Schultz	Jun 21, 2004 *1:24 PM*
☐	2003-10-31_DIR_L	2003-10-31_DIR_L.pdf	122.4 kb	Robert Schultz	Jun 21, 2004 *1:25 PM*

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☐	DWR LOGS-Vicinity	DWR LOGS-Vicinity.pdf	2.7 MB	Pat Hoban	Jun 25, 2004 *4:57 AM*
☐	ON-SITE BORING LOGS	ON-SITE BORING LOGS.pdf	434.2 kb	Pat Hoban	Jun 25, 2004 *5:00 AM*
☐	Video-Log Kelsoe property-2003-2-27	Video-Log Kelsoe property-2003-2-27 .pdf	183.7 kb	Pat Hoban	Jun 25, 2004 *5:01 AM*

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☐	1-Locate	1-Locate.pdf	528.5 kb	Pat Hoban	Jun 25, 2004 *5:01 AM*
☐	2-Topograph-3D	2-Topograph-3D.pdf	337.8 kb	Pat Hoban	Jun 25, 2004 *5:02 AM*
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☐	5-cross-Section	5-cross-Section.pdf	301.2 kb	Pat Hoban	Jun 25, 2004 *5:03 AM*
☐	6-Site-Map	6-Site-Map.pdf	547.8 kb	Pat Hoban	Jun 25, 2004 *5:03 AM*
☐	desktop	desktop.ini	481 bytes	Pat Hoban	Jun 25, 2004 *5:04 AM*
☐	Geologic X-Section (Bulletin 118-2)	Geologic X-Section (Bulletin 118-2).pdf	641.7 kb	Pat Hoban	Jun 25, 2004 *5:05 AM*
☐	street map	street map.pdf	49.8 kb	Pat Hoban	Jun 25, 2004 *5:06 AM*
☐	Tax-assessors map	Tax-assessors map.pdf	225.9 kb	Pat Hoban	Jun 25, 2004 *5:06 AM*

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FIGURES

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☐	2002-04-16 Geoprobe Sampling-Site Map	2002-04-16 Geoprobe Sampling-Site Map.pdf	97.1 kb	Pat Hoban	Jun 25, 2004 *5:04 AM*
☐	2002-04-16 UST Removal Report-Site Map	2002-04-16 UST Removal Report-Site Map.pdf	66.4 kb	Pat Hoban	Jun 25, 2004 *5:04 AM*
☐	2002-05-09 UST Removal & Interim S & GW Remediation Report-FIGUR	2002-05-09 UST Removal & Interim S & GW Remediation Report-FIGURES.pdf	217.2 kb	Pat Hoban	Jun 25, 2004 *5:04 AM*
☐	2002-08-27 Workplan for Preliminary Site Assessment-FIGURE	2002-08-27 Workplan for Preliminary Site Assessment-FIGURE.pdf	41.1 kb	Pat Hoban	Jun 25, 2004 *5:04 AM*
☐	2003-05-06 Well Sampling Report-FIGURE	2003-05-06 Well Sampling Report-FIGURE.pdf	69.9 kb	Pat Hoban	Jun 25, 2004 *5:04 AM*
☐	2003-05-08 Work Plan for Soil & Water Investigation-FIGURE	2003-05-08 Work Plan for Soil & Water Investigation-FIGURE.pdf	222.7 kb	Pat Hoban	Jun 25, 2004 *5:04 AM*
☐	2003-3-14 Preliminary Site Assessment Report-FIGURE	2003-3-14 Preliminary Site Assessment Report-FIGURE.pdf	432.2 kb	Pat Hoban	Jun 25, 2004 *5:05 AM*
☐	desktop	desktop.ini	273 bytes	Pat Hoban	Jun 25, 2004 *5:05 AM*

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☐	2002-05-09 UST Removal Report-PHOTOS	2002-05-09 UST Removal Report-PHOTOS.pdf	86.8 kb	Pat Hoban	Jun 25, 2004 *5:07 AM*
☐	Aug-2003 T-Bear Ranch Inspection.	Aug-2003 T-Bear Ranch Inspection..pdf	1.7 MB	Pat Hoban	Jun 25, 2004 *5:07 AM*
☐	Carbon System	Carbon System.pdf	661.6 kb	Pat Hoban	Jun 25, 2004 *5:08 AM*

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☐	2002-05-09 UST Removal Report-PHOTOS	2002-05-09 UST Removal Report-PHOTOS.pdf	86.8 kb	Pat Hoban	Jun 25, 2004 *5:07 AM*
☐	Aug-2003 T-Bear Ranch Inspection.	Aug-2003 T-Bear Ranch Inspection..pdf	1.7 MB	Pat Hoban	Jun 25, 2004 *5:07 AM*
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☐	Folder Settings		7 items		
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☐	desktop	desktop.ini	273 bytes	Pat Hoban	Jun 25, 2004 *5:09 AM*

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☐	**Folder Settings**		8 items		
☐	Cal-EPA-Guidelines for Investigation & Cleanup of MTBE-&-Ether-	Cal-EPA-Guidelines for Investigation & Cleanup of MTBE-&-Ether-.pdf	71.9 kb	Pat Hoban	Jun 25, 2004 *5:09 AM*
☐	Charaterizing MTBE Sites (Einarson, API-2000)	Charaterizing MTBE Sites (Einarson, API-2000).pdf	1.8 MB	Pat Hoban	Jun 25, 2004 *5:10 AM*
☐	desktop	desktop.ini	481 bytes	Pat Hoban	Jun 25, 2004 *5:12 AM*
☐	GW-Remediation Strategies Tool-API	GW-Remediation Strategies Tool-API.pdf	1.3 MB	Pat Hoban	Jun 25, 2004 *5:12 AM*
☐	Sunol GW-Basin Description	Sunol GW-Basin Description.pdf	298.5 kb	Pat Hoban	Jun 25, 2004 *5:13 AM*

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☐	2002-04-16 Geoprobe Sampling	2002-04-16 Geoprobe Sampling.pdf	353.0 kb	Pat Hoban	Jun 25, 2004 *5:14 AM*
☐	2002-04-16 Sample of Tanks	2002-04-16 Sample of Tanks.pdf	362.8 kb	Pat Hoban	Jun 25, 2004 *5:14 AM*
☐	2002-04-16 UST Removal Report	2002-04-16 UST Removal Report.pdf	519.5 kb	Pat Hoban	Jun 25, 2004 *5:14 AM*
☐	2002-05-09 UST Removal & Interim S & GW Remediation Report	2002-05-09 UST Removal & Interim S & GW Remediation Report.pdf	3.9 MB	Pat Hoban	Jun 25, 2004 *5:15 AM*
☐	2002-08-27 Workplan for Preliminary Site Assessment	2002-08-27 Workplan for Preliminary Site Assessment.pdf	742.0 kb	Pat Hoban	Jun 25, 2004 *5:19 AM*
☐	2003-03-14 Preliminary Site Assessment Report	2003-03-14 Preliminary Site Assessment Report.pdf	13.6 MB	Pat Hoban	Jun 25, 2004 *5:20 AM*
☐	2003-05-08 Work Plan for Soil & Water Investigation	2003-05-08 Work Plan for Soil & Water Investigation.pdf	1.1 MB	Pat Hoban	Jun 25, 2004 *5:35 AM*
☐	desktop	desktop.ini	481 bytes	Pat Hoban	Jun 25, 2004 *5:36 AM*

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☐	**Folder Settings**		7 items		
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☐	desktop	desktop.ini	266 bytes	Pat Hoban	Jun 25, 2004 *5:36 AM*
☐	TABLE-Carbon-System-&-TBear-Well-Testing	TABLE-Carbon-System-&-TBear-Well-Testing.pdf	24.0 kb	Pat Hoban	Jun 25, 2004 *5:46 AM*
☐	TABLES-Sunol Tree Gas Station	TABLES-Sunol Tree Gas Station.pdf	398.8 kb	Pat Hoban	Jun 25, 2004 *5:46 AM*
☐	TABLES-Water Supply Well Sampling Report-2003-05-06	TABLES-Water Supply Well Sampling Report-2003-05-06 .pdf	382.3 kb	Pat Hoban	Jun 25, 2004 *5:46 AM*

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2002-04-16 Geoprobe Sampling-LAB	2002-04-16 Geoprobe Sampling-LAB.pdf	154.8 kb	Pat Hoban	Jun 25, 2004 *5:36 AM*
2002-04-16 Sample of Tanks-LAB	2002-04-16 Sample of Tanks-LAB.pdf	330.7 kb	Pat Hoban	Jun 25, 2004 *5:37 AM*
2002-04-16 UST Removal Report-LAB	2002-04-16 UST Removal Report-LAB.pdf	423.8 kb	Pat Hoban	Jun 25, 2004 *5:37 AM*
2002-05-09 UST Removal & Interim S & GW Remediation Report-LAB	2002-05-09 UST Removal & Interim S & GW Remediation Report-LAB.pdf	1.8 MB	Pat Hoban	Jun 25, 2004 *5:38 AM*
2002-08-27 Water Sample Collected on 8-20-02	2002-08-27 Water Sample Collected on 8-20-02.pdf	148.4 kb	Pat Hoban	Jun 25, 2004 *5:40 AM*
2003-02-13 Domestic Well Sampled 2-23-03	2003-02-13 Domestic Well Sampled 2-23-03.pdf	42.0 kb	Pat Hoban	Jun 25, 2004 *5:40 AM*
2003-03-10 VOC Analysis- T Bear & Golf Course 3-3-03	2003-03-10 VOC Analysis- T Bear & Golf Course 3-3-03.pdf	89.4 kb	Pat Hoban	Jun 25, 2004 *5:40 AM*
2003-03-14 Preliminary Site Assessment Report-LAB	2003-03-14 Preliminary Site Assessment Report-LAB.pdf	1.5 MB	Pat Hoban	Jun 25, 2004 *5:40 AM*
2003-05-06 Well Sampling Report-LAB	2003-05-06 Well Sampling Report-LAB.pdf	479.6 kb	Pat Hoban	Jun 25, 2004 *5:42 AM*
2003-11-04 Water Sampling Results of 10-24-03	2003-11-04 Water Sampling	215.1 kb	Pat Hoban	Jun 25, 2004 *5:42 AM*

	Results of 10-24-03.pdf			
2003-12-09 Analytical Data of Treatment System for 12-02-03	2003-12-09 Analytical Data of Treatment System for 12-02-03.pdf	284.9 kb	Pat Hoban	Jun 25, 2004 *5:42 AM*
2004-01-14 Analytical Data of Treatment System for 1-6-04	2004-01-14 Analytical Data of Treatment System for 1-6-04.pdf	641.5 kb	Pat Hoban	Jun 25, 2004 *5:43 AM*
2004-02-13 Analytical Data of Treatment Systemfor 1-27-04	2004-02-13 Analytical Data of Treatment Systemfor 1-27-04.pdf	664.8 kb	Pat Hoban	Jun 25, 2004 *5:43 AM*
2004-03-01 Analytical Data of Treatment System for 2-17-04	2004-03-01 Analytical Data of Treatment System for 2-17-04.pdf	617.2 kb	Pat Hoban	Jun 25, 2004 *5:44 AM*
2004-03-18 Analytical Data for Treatment System for 3-9-04	2004-03-18 Analytical Data for Treatment System for 3-9-04.pdf	600.9 kb	Pat Hoban	Jun 25, 2004 *5:44 AM*
2004-05-21 Analytical Data for Treatment System-for 5-21-04	2004-05-21 Analytical Data for Treatment System-for 5-21-04.pdf	142.5 kb	Pat Hoban	Jun 25, 2004 *5:45 AM*
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17 documents

DESCRIPTION (chronology of events**)	Data Tables	Graphics	Reference (references)	Data Gaps	Work Necessary To Fill the Data Gap	Comments
shallow depth by nonwater-bearing rocks that are exposed in the bordering highlands Specifically the total thickness of these water-bearing sediments is reported to be less than 200 feet in the vicinity of the site Drillers logs completed during the drilling of two nearby water production wells indicate non-water bearing shale was logged at a depth of approximately 140' (More Details on Regional Hydrogeology)						
c. Groundwater Pumping There are no documented records detailing pumping rates for the water production wells in the area of the fuel release. A totalizing flow meter was installed at the T Bear Ranch in 2002 but no consistent records have been kept (the installation of a digital, continuous-recording, data logging flow meter is planned for early July-2004). The flow total from the T Bear Ranch between Aug-21, 2003 and May-21, 2004 indicates 853,010 gallons was pumped which is an average of 3,113 gal/day (2.16 gpm-avg.) Visual observations of the flow meter indicate the actual well pumping rate is 7.5 –14 gpm. Preliminary testing of one on-site and 5 downgradient/sidegradient water wells was completed in May 2003 following the discovery of MTBE in the T Bear Ranch well. The report documented the collection of water samples from the following water production wells: 1) the fuel leak site (Sunol Tree Gas Station); 2) the adjoining T Bear Ranch well located approximately 550 feet downgradient from the former USTs; 3) the adjacent driving range well (approx. 650 feet, sidegradient); 4) a riding academy well (approx.1,100 feet downgradient); and 5) a residential well (approx.1,400 feet downgradient)); and the Berkeley Ready Mix production well (approx.1,700 feet sidegradient–see Aerial Map Showing Water Well Locations, Figure 4). - The T Bear Ranch was the only well that was significantly impacted (130 ppb MTBE). No driller's log is available for this well although a video log is scheduled for June 29, 2004. - The sidegradient well located at the adjoining driving range parcel contained a trace hit of MTBE (0.5 ppb) – it should be noted that this water well only has a 20-foot cement seal and well screens that start at a depth of 25' (see Local Geologic Cross Section, Figure 5)	TABLE: Water Quality Results of Local Water Production Wells	Aerial Map Showing Water Well Locations, Figure 4 Local Geologic Cross Section, Figure 5 Drillers Logs for Local Water Wells	Water Well Sampling Report (May-2003)	- Well survey confidence. - Capture zones of nearby production wells.	- Need to conduct a complete water supply well search to include neighborhood walk-through, and review of abandoned well documentation. - Need to re-sample on-site and nearby water supply wells for accuracy as no sampling protocol was provided. - Need to determine which supply wells have pumping influence on the contaminant plume (i.e. capture zones). Tasks could include pump testing, and installation/ monitoring of digital flow meters on potential capture zone wells.	Get regional groundwater gradient maps for the Sunol area from Zone 7 Assess well construction details (perforations & gravel pack, and cement seal to determine whether potential conduits exist.
d. Preferential Pathways No detailed well survey (½-mile survey) has yet been completed. An initial survey and testing of local wells has been completed but accurate mapping and sampling protocols have not. No utility survey has yet been completed in the immediate vicinity of the site (i.e., utility trenches with gas, sewer, water, storm drain, telephone, and electric lines).		Aerial Map Showing Water Well Locations, Figure 4 Drillers Logs for Local Water Wells	Water Well Sampling Report (May-2003)	- A complete well survey and utility survey. - Well construction and preferential flow path (well screens) details for the impacted T Bear Ranch well	- Need to gather accurate location information for active, abandoned and/or decommissioned wells. - Need to map underground utilities & pipelines downgradient from site (plan view and x-section). - Need to video log and conduct production well logging of the TBear well.	

Sunol Tree Gas Station Fuel Release

DRAFT INITIAL SITE CONCEPTUAL MODEL (SCM)

	DESCRIPTION (chronology of events**)	Data Tables	Graphics	Reference (references)	Data Gaps	Work Necessary To Fill the Data Gap	Comments
	I. Regional Setting a. Geology-Statigraphy b. Hydrogeology **c. Groundwater Pumping** **d. Preferential Pathways** **e. Nearby Release Sites** **II. Site Setting** **a. Site Geology** **b. Groundwater Conditions** **c. Source Area** **d. Dissolved Plume** **e. Remediation** **f. Evaluation of Potential Impacts to Water Supply Wells**						
Section I. Regional Setting	**a. Geology/Stratigraphy** The subject site is situated in the southwestern portion of the Sunol Groundwater Bain (in a "subbasin" identfied as the Sunol subbasin). The Sunol Valley is a structural trough surrounded by Diablo Range hills. Unconsolidated surface soils at the subject site have previously been mapped as water-bearing, alluvium deposits (Qal). Underlying the shallow alluvial deposits is the Livermore Formation (Tlo), a significant water-bearing strata for the region. Non-water bearing, marine shale and sandstone deposits (JK) underlie the Livermore Formation The Livermore and Sunol region is offset by a number of faults including the nearby Sinbad fault, which is buried beneath Alameda Creek-deposited alluvium, approximately 2,000 feet northwest of the site. (More details on Regional Geologic Setting)		*Regional Geologic Map & Cross-Section (Bull.118- 2) Topographic Location Map, Figure 1 Local Geologic Cross Section, Figure 5 Drillers Logs for Local Water Wells	DWR Bulletin 118-2	- Need to determine the nature and extent of clay layers beneath and in vicinity of the fuel release site. - Need to determine depth to impermeable, bedrock shale for replacement well design.	- Soil coring & subsurface mapping in vicinity of site.	Think about obtaining at least 1 deep core during initial investigation.
	b. Hydrogeology The general direction of regional groundwater movement from the upland areas toward Alameda Creek and then westward toward the outlet of the basin (see 3-Dimensional Topographic Map, Figure 2). The main surface water drainage in the Sunol subbasin is the northwest-flowing Alameda Creek located approximately 2,000 feet north of the subject site. Locally, groundwater is reported to be both confined and unconfined and generally flows to the northwest. Recharge occurs by infiltration of the surface water along Alameda Creek. The northwest trending Sinbad fault is likely to act as a barrier to the lateral movement of groundwater. Regional geologic cross-sections indicate the subject site is on the up-gradient side of the Sinbad fault where groundwater levels reportedly stand higher (see *Bull.118 Map & Cross-Section). The Sunol Valley contains two water-bearing geologic formations that are documented to yield adequate to large quantities of groundwater from production wells. They include Plio-Plesistocene sediments of the Livermore Formation (Tlo) and more recent Quaternary alluvium (Qal). These aquifer sediments are composed largely of sand and gravel with discontinuous layers of clay, and are underlain at a		*3-Dimensional Topographic Map, Figure 2 Map of Sunol Groundwater Basin #2-11, Figure 3 Local Geologic Cross Section, Figure 5 Drillers Logs for Local Water Wells	DWR Bulletin 118-2 DWR Sunol Basin Description	- Groundwater velocity data for alluvium and Livermore Formation aquifers. Determine any continuous stratigraphic separation (i.e., clay). - Capture zones of nearby supply wells - Lateral/vertical hydraulic gradients	- Hydrogeologic investigations, including continuous coring, at and downgradient from site. - Multi-Level monitoring well installations and development of lateral and vertical gradient maps. - Groundwater flow modeling to define capture zones. - Continuous transducer monitoring of the effects of production well pumping (T Bear, Sunol Tree Gas, and/or Golf Range wells).	

	DESCRIPTION (chronology of events**)	Data Tables	Graphics	Reference (references)	Data Gaps	Work Necessary To Fill the Data Gap	Comments
	e. Nearby Release Sites Mission Valley Rock & Asphalt Operating gravel mining operation This site is an active fuel leak site that was discovered in June 1996 during a UST closure The site is located well downgradient of the subject site and is impacted with relatively low-level gasoline and gasoline constituents		GeoTracker summary sheet and map	GeoTracker database	- Data from closest fuel leak site (wells concentrations flow direction)	- Need to review ACHCSA file for groundwater flow direction depth to water and extent of plume details	Confirm GeoTracker results with ACHCSA map of nearby LUFT sites (active & closed)
Section II. Site Setting	**a. Site Geology** Logs of shallow borings drilled to depths of 24 feet at the Sunol Tree Gas Station fuel leak site showed relatively consistent lithology of low-permeability clays and silts that contained some generally small percentage of sand and gravel in the saturated zone. First groundwater was encountered as saturated silts at depths ranging from 15-to-18 feet below ground surface. Domestic water well logs were reviewed for wells installed in the vicinity of the fuel leak site (see Local Geologic Cross Section, Figure 5). The logs suggest there is a relatively continuous shallow aquifer containing upwards of 50 feet of sand and gravel with limited clay. The stratigraphy underlying the shallow aquifer is less consistent due to the logged description of shale in two well logs (see Regional Geology discussion, above). Discontinuous sand and gravel lenses appear in some of the wells at varying depths possibly indicating channel deposits.		Geologic Logs of On-site Driven Probe Soil Cores Local Geologic Cross Section, Figure 5 Drillers Logs for Local Water Wells	Preliminary Site Assessment Report (Clearwater, 2003)	- Potential presence of regional "aquitard" at depths of approx. 80-100' below ground surface (bgs) needs to be confirmed. - Need to determine depth to impermeable, bedrock shale for replacement well design. - Utilities and pipelines not shown on cross sections.	- Need for deeper geologic investigation which should include some continuous soil coring & CPT probing in vicinity of site. - Need to complete additional cross-section perpendicular to A-A'. - Need to plot utilities on cross sections	
	b. Groundwater Conditions No groundwater wells have been installed -- groundwater flow gradient and the extent of the dissolved plume have not yet been determined. It should be noted that the impacted T-Bear Ranch well appears to be controlling flow from the Sunol Tree Gas Station release as the production well on the adjoining golf driving range parcel has only had 1 trace detection of MTBE (see Figure 4). First groundwater in driven probes borings was encountered at depths ranging from 15-to-18 feet below ground surface (11-27-02) and depth to groundwater in the video logged water supply well was 19 feet.		Aerial Map Showing Water Well Locations, Figure 4	Video Log of Sunol Tree Water Well	- Hydrogeologic investigations, including continuous coring at, and downgradient from site. - Development of lateral and vertical gradient maps. - Groundwater flow modeling to define capture zones.	- Initially, install multi-level MWs to monitor the shallow groundwater zone and assess need for deeper monitoring. - Need to video log, conduct production well logging, and depth discrete sampling of the T Bear Ranch well. - Continuous transducer monitoring of the effects of production well pumping (T Bear, Sunol Tree Gas, and/or Golf Range wells).	
	c. Source Area TPH and MTBE were detected in soil sidewalls during the UST closure operations in May 2002 when five, 15,000-gallon USTs were replaced. Pit sidewall and dispenser samples generally contained low concentrations of fuel contaminants (gas/diesel) and volatile constituent compounds. Soil concentrations ranged from non-detect to 150 ppm for gasoline and non-detect to 5.9 ppm for MTBE. Groundwater samples were subsequently obtained from driven probe borings cored at 5 locations targeting the dispensers and USTs. Groundwater samples contained up to 17,000 ppb gasoline and 43	Tables Presenting Collected Soil & Groundwater Samples	Summary Figures Showing UST Closure Sample Locations and Boring Locations	Preliminary Site Assessment Report (Clearwater, 2003)	- Lateral & vertical extent of source zone undefined, particularly from dispenser area. - Temporal MTBE concentrations unknown.	- Confirmation, on site sampling downgradient of the UST's and dispensers should be completed to better define the lateral and vertical extent of the source area - Additional testing of the on-site water production well should be completed to confirm that	

DESCRIPTION (chronology of events**)	Data Tables	Graphics	Reference (references)	Data Gaps	Work Necessary To Fill the Data Gap	Comments
ppb MTBE (Nov-2002) The Horizontal and vertical extent of fuel contamination in groundwater is undefined					t isn t drawing in MTBE	
d. Dissolved plume Very little information exists regarding the extent of the dissolved plume As mentioned above - During the May 2002 UST Closure Operations, collected pit water contained no detectable gasoline concentrations but did contain 84 ppb MTBE. - Disposal acceptance testing of 160,000 gallons of fuel-impacted groundwater pumped from the open pit containerized in storage tanks contained up to 170 ppb gasoline and 190 ppb MTBE. - The T-Bear Ranch water well, located approximately 550 feet downgradient of the Sunol Tree Gas Station tank pit, was initially tested in Feb-2003 as part of a property transaction screen and contained 73 ppb MTBE.	Tables Presenting Collected Soil & Groundwater Samples	T-Bear Ranch Site Map Figure 6	Water Well Sampling Report (May-2003)	- Distal ends of plume not defined - Define health risks to potential receptors including water ingestion and volatile off-gassing (inhalation)	- Conduct initial plume definition assessment to include multi-level piezometers and water quality testing. - Install multi-level wells to define the extent of the plume and monitor plume growth/stability/attenuation. - Complete risk assessment using CRWQCB SF Bay Area Region Screening Levels	
e. Remediation During UST replacement operations in May-2002, 4,000 cubic yards of contaminated soil were removed from the tank pit area and stockpiled in the back portion of the service station, where it remains today. Pit sidewall and dispenser samples generally contained low concentrations of fuel contaminants (gas/diesel) and volatile constituent compounds. Concentrations ranged from non-detect to 150 ppm for gasoline and non-detect to 5.9 ppm for MTBE. In addition, 160,000 gallons of fuel-impacted water were pumped from the open pit and disposed of off-site. Pit water was tested and contained no detectable gasoline concentrations but did contain 84 ppb MTBE. Disposal acceptance testing of the pumped groundwater containerized in storage tanks contained up to 170 ppb gasoline and 190 ppb MTBE. A non-standard, carbon filtration system was installed to remove MTBE from groundwater pumped at the T Bear Ranch well. The carbon treatment system was installed on Nov 6th - initial breakthrough of first set of carbon vessels occurred after 89 days (Jan-27th) = 0.63 ppb MTBE. - initial breakthrough of second set of carbon vessels occurred after 202 days (May-5th) @ 1.6 ppb. - Carbon Change-out of all vessels occurred after 221 days (May-25th).	Tables Presenting Collected Soil & Groundwater Samples Table Presenting T Bear Water Well Results	Photos of the Carbon Treatment System	Preliminary Site Assessment Report (Clearwater, 2003)	- Need to determine whether interim remediation is needed to protect water resources (i.e. hydraulic control of the dissolved plume; removal of the soil stockpile). - Need to confirm there is no ongoing source continuing to add mass to the plume	Recommend actions following initial characterization assessment.	
f. Evaluation of potential impacts to water supply wells Currently two downgradient water production wells have been impacted by fuel contaminants. -The T Bear Ranch were has been impacted with up to 130 ppb MTBE. No driller's log is available for this well although a video log is scheduled for June 29, 2004.	TABLE: Water Quality Results of Local Water Production Wells	Aerial Map Showing Water Well Locations, Figure 4	Water Well Sampling Report (May-2003)	- Need to determine capture zone for threatened water production wells. - Need to calculate mass discharge of source	Perform analysis to determine if plume(s) are within capture zone of supply wells. Estimate mass discharge of contamination at site.	

	DESCRIPTION (chronology of events**)	Data Tables	Graphics	Reference (references)	Data Gaps	Work Necessary To Fill the Data Gap	Comments
	- A side-gradient well located at the adjoining driving range parcel previously contained a trace hit of MTBE (0 5 ppb) (see Local Geologic Cross Section, Figure 5)				contamination when data is available		

REFERENCES

Alameda County Health Care Services Agency Direcitves:

1. *Directive Requesting Preliminary Site Assessment Workplan,* dated 6/27/02
2. *Directive Approving PSA Workplan,* dated 8/29/02
3. *Directive Requiring Water Supply Well Sampling SCM, Site Characterization, Monitoring Well Study (due April 4),* dated 3/20/03
4. *Request for Submittal of Well Samples,* dated 4/7/03
5. *Rejection of May 8 Workplan,* dated 6/13/03
6. *Carbon System Requirements,* dated 10/13/03

Environmental Bio-System Reports:

1. *Geoprobe Sampling Report,* dated 4/16/02 (file: 2002-04-16 Geoprobe Sampling.pdf)
2. *Sample four 21,000-gallon tanks (groundwater)Letter Report,* dated 4/16/02, (2002-04-16 Sample of Tanks.pdf)
3. *Underground Storage Tank Removal Report,* dated 4/16/02, (2002-04-16 UST Removal Report.pdf)
4. *UST Removal & Interim Soil & Groundwater Remedial Report,* dated 5/9/02, (2002-05-09 UST Removal & Interim S & GW Remediation Report.pdf)

Clearwater Group Reports:

1. *Water Sample (Sunol Tree Gas Station Well) Collected on August 20, 2002,* dated 8/20/02 *(file: 2002-08-27 Water Sample Collected on 8-20-02).*
2. *Workplan for Preliminary Site Assessment,* dated 8/27/02 *(file: 2002-08-27 Workplan for Preliminary Site Assessment.pdf).*
3. *Preliminary Site Assessment Report,* dated 3/14/03, *(file: 2003-03-14 Preliminary Site Assessment Report.pdf)*
4. *Well Sampling Report,* dated 5/6/03, *(file: 2003-05-06 Well Sampling Report.pdf).*
5. *Workplan for Soil and Groundwater Investigation,* dated 5/8/03,*(file: 2003-05-08 Workplan for Soil & Groundwater Investigation.pdf)*

Department of Water Resources (DWR) documents:

1. Bulletin # 118-2: *Evaluation of Groundwater Resources for the Livermore and Sunol Valleys,* June 1974.
2. Bulletin # 118-2: Appendix A: Geology, August 1966.

Chronology of the
Sunol Tree Gas Station Fuel Release + Impact to the T-Bear Ranch Well

2002

- April 12, 2002: Contamination discovered during removal of 5 underground fuel tanks at the Sunol Tree Gas Station
    - 4,000 cubic yards of contaminated removed and stockpiled on-site.
    - 160,000 gallons of contaminated water were pumped out during installation of new tanks
- June 27, 2002: AC-HCSA directive requiring workplan.
- Aug-20, 2002: Clearwater Consultants sampled water from a faucet on the Kelso property- results came back clean.
- Aug-23, 2002: *PRELIMINARY SITE ASSESSMENT* (PSA) *WORKPLAN* submitted by Clearwater Consultants. PSA work tasks were completed in Aug-Dec, including:
    - Nov-27, 2002: Five borings were drilled on-site. Groundwater encountered at depths between 16-19' (approx). Relatively low soil contamination but elevated groundwater contamination.
    - Dec-12, 2002: Video log of Kelso well showed total depth to be 153 feet and "Mils Knife perforations located at 60', 62', 67', 101', & 103'. The well pump was located at a depth 100'. Depth to water was at 20 feet. Apparently no discrete samples were obtained from within the well.
    - Mar-14, 2003: Summary Report concluded more delineation was necessary including placement of wells.
- Aug-27, 2002: AC-HCSA approval of workplan.

2003

- Feb-12, 2003: T-Bear property refinance rejected by Washington Mutual Bank due to perceived financial liability associated with the Kelsoe gasoline contamination. Washington termed the T-Bear Ranch "Unacceptable Collateral at the present time". The bank's environmental appraisal statement included the following rationale for rejection of the bank financing:
    - "The subject parcel (T-Bear Ranch) adjoins a chevron gas station. The underground tanks at the station have been identified as leaking per the EPA (really - AC-HCSA). The tanks and a significant amount of adjoining earth and soil have been removed. .....The subject parcel (T-Bear Ranch) derives it's water from two wells - obvious concerns regarding this.....This could cost multiple thousands of dollars and dictate that the Owner of the parcel (i.e.. Hayes, Tovani, lender) clean and dispose of any contaminated soil. Phase II report might lead to a Phase III report if sufficient contaminants are found to be present....."
- Feb-13, 2003: T-Bear Ranch well water sampled and tested by RJ Lee Group, Inc (Pennsylvania). MTBE detected at a concentration of 73 parts per billion (ppb).
- Feb-27, 2003: T-Bear Ranch well water sampled from "Kitchen Sink" and tested by Cerco Analytical (Pleasanton). MTBE detected at a concentration of 87.3 ppb
- Mar-3, 2003: T-Bear Ranch well water re-sampled and tested by Zone 7 Water District. MTBE detected at a concentration of 130 ppb.
- Mar-14, 2003: Clearwater Consultants submitted *PRELIMINARY SITE ASSESSMENT* (PSA) *SUMMARY REPORT* to AC-HCSA. As noted above, the report summarized field work completed in Aug-Dec, 2002, and concluded that more delineation was necessary including placement of wells.
- Mar-20, 2003: AC-HCSA 1) response to the *PSA Summary Report*, and 2) directive requiring further expedited work. AC-HCSA directed Mr. Kelso to submit a *Soil and Water Investigation (SWI) Workplan* by April 4, 202 for completing an intensive subsurface investigation, which included the following tasks:

    - Collecting and testing water from domestic/commercial water wells in the vicinity of the Kelose gas station.
    - Removal of the 4,000 cubic yard stockpile at the Kelose gas station
    - Developing a full understanding of site conditions ("site conceptual model") by completing investigative work tasks including: on-site soil logging to at least 60 feet, installation of wells to characterize the full, 3-dimensional extent of contamination, survey of utilities and wells in the vicinity, video logging of the T-Bear well, and reporting.
- Apr-4, 2003: Request for extension of *SWI Workplan* submittal due date.
- Apr-7, 2003: AC-HCSA granted extension for the submittal of the of *SWI Workplan* to April 25th.
- Apr-11, 2003: T-Bear Ranch well water re-sampled by Clearwater Consultants. MTBE detected at a concentration of 120 ppb.
- May-6, 2003: *WELL SAMPLING REPORT* submitted by Clearwater Consultants. The report documents the sampling of 5 production wells located downgradient of the station, including the T-Bear Ranch well. Two of the wells had detections of MTBE including T-Bear Ranch well (120 ppb) and the adjacent golf driving range well (at the detection limit of 0.5 ppb, tested by Zone 7 on 3-4-02). The adjacent golf range well was resampled on April 11, 2003 by Clearwater Consultants and no MTBE was detected by their lab.
- May-8, 2003: *WORK PLAN FOR SOIL AND WATER INVESTIGATION (SWI)* submitted by Clearwater Consultants.
- May-12, 2003: State Underground Storage Tank Fund (State FUND) rejected Murray Kelsoe's application for acceptance on the grounds that he failed to comply with permit requirements. If accepted to the State FUND, Mr. Kelsoe would have been eligible for up to $1.5 million dollars toward characterization and cleanup of the fuel release.
- Jun-13, 2003: AC-HCSA 1) rejection of the May-8 *SWI Workplan* (above) due to "substantial deficiencies" and required immediate re-submittal of an amended workplan.
    - AC-HCSA rejected the proposal to provide water to the T-Bear Ranch via the Kelsoe well, located at the gas station due to concerns of pulling the fuel release downward to the well screens.
    - Deficiencies noted by AC-HCSA included:
        - inadequate presentation of site-specific subsurface conditions (i.e.. "Site Conceptual Model") which is the rationale for initial installation of piezometers and subsequent installation of monitoring wells.
        - nested wells construction problems;
        - removal of the stockpile.
- Jul-3, 2003: Mr. Kelsoe's attorney submitted a letter appealing the State FUND's rejection.
- Aug-2003: State FUND rejected the appeal.
- Nov-6, 2003: A non-standard, carbon filtration system was installed to remove MTBE from groundwater pumped at the T Bear Ranch well.
    - initial breakthrough of first set of carbon vessels occurred after 89 days (Jan-27th) = 0.63 ppb MTBE.
    - initial breakthrough of second set of carbon vessels occurred after 202 days (May-5th) @ 1.6 ppb.
    - Carbon Change-out of all vessels occurred after 221 days (May-25th).

2004

- June 9, 2004: Weber, Hayes and Associates authorized to complete initial assessment

REGIONAL DESCRIPTION OF THE SUNOL GROUNDWATER BASIN[1,2]

The **Sunol Valley Groundwater Basin** is a structural trough located east of the San Francisco Bay that is completely surrounded by hills of the Diablo Range (see Map of Sunol Groundwater Basin #2-11, Figure 3). It is divided into three subasins based on faults, topography, and hydrology that include the Vallecitos, the La Costa, and the Sunol. The subject site is situated in the Sunol subasin. Streams in the Basin drainage area include northwest flowing Alameda Creek located approximately 2,000 feet north of the subject site. The general direction of regional groundwater movement is from the upland areas toward Alameda Creek and then westward toward the outlet of the basin (see 3-Dimensional Topographic Map, Figure 2).

The **Sunol Valley Groundwater Basin** is offset by a number of faults including the nearby Sinbad fault, which is buried beneath Alameda Creek-deposited alluvium, located approximately 2,000 feet northwest of the site. The northwest trending Sinbad fault is likely to act as a barrier to the lateral movement of groundwater. Regional geologic cross-sections indicate the subject site is on the up-gradient side of the Sinbad fault where groundwater levels reportedly stand higher (see *Bull.118 Map & Cross-Section).

Groundwater in the Sunol subasin is reported to be both confined and unconfined and generally flows to the northwest. Recharge occurs by infiltration of the surface water along Alameda Creek.

Water Bearing Formations

The floor of the Sunol Valley contains two water-bearing geologic formations that are documented to yield adequate to large quantities of groundwater from production wells. They include Plio-Plesistocene sediments of the Livermore Formation (Tlo) and more recent Quaternary alluvium (Qal). The permeable alluvium is composed largely of sand and gravel with discontinuous layers of clay, and is underlain at a shallow depth by nonwater-bearing rocks that are exposed in the bordering highlands. Specifically, the total thickness of these water-bearing sediments is reported to be less than 200 feet in the vicinity of the site. Drillers logs completed during the drilling of two nearby water production wells indicate non-water bearing shale was logged at a depth of approximately 140' (see: Local Geologic Cross Section, Figure 5, and Drillers Logs for Local Water Wells)

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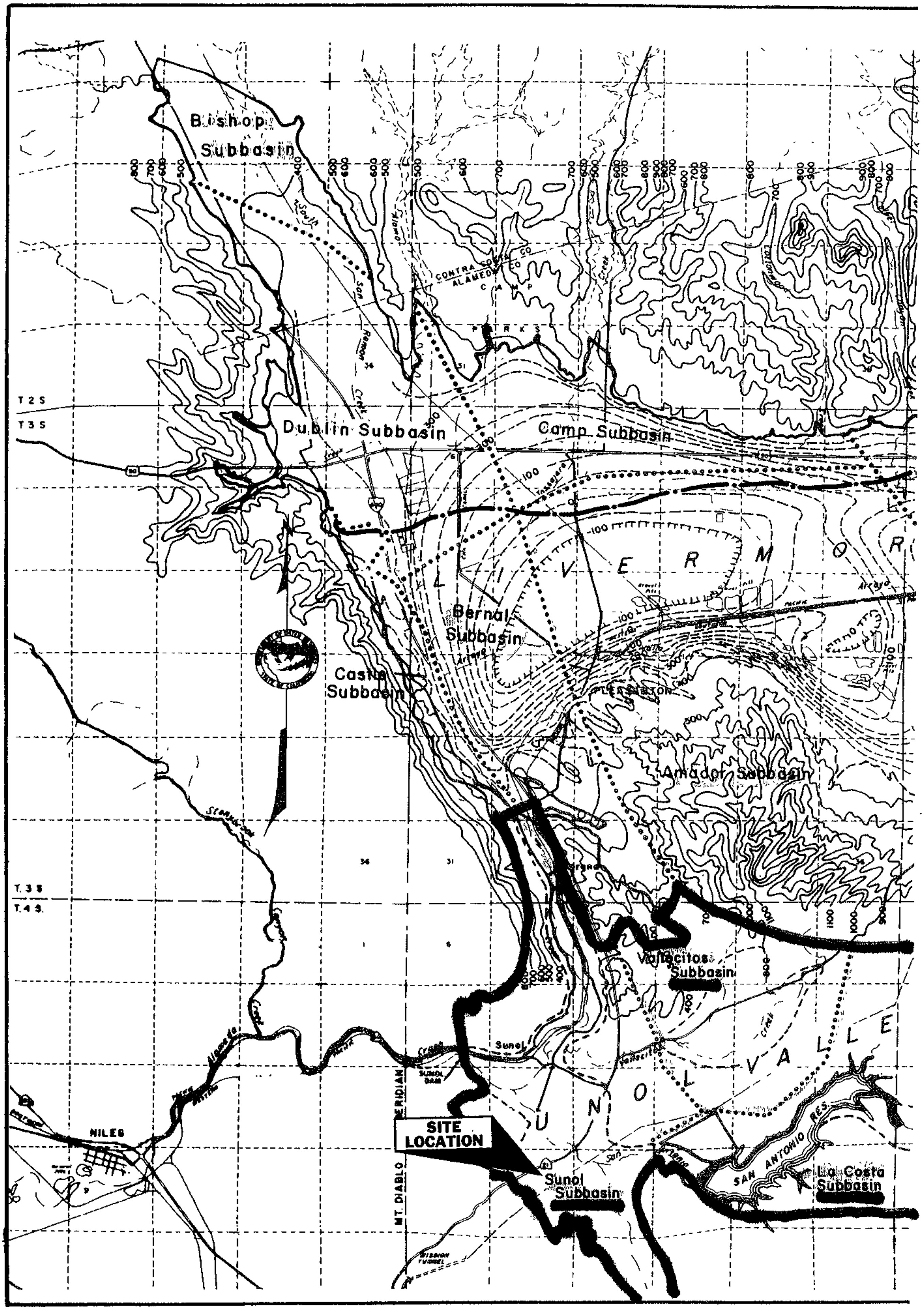
[1] Source: Sunol Valley Groundwater Basin Description, Groundwater Basin #2-11, Alameda County http://www.dpla2.water.ca.gov/publications/groundwater/bulletin118/basins/2-11V2.0.pdf

[2] Source: Department of Water Resources (DWR), Bulletin # 118-2: Evaluation of Groundwater Resources for the Livermore and Sunol Valleys, June 1974.



Bishop Subbasin
Dublin Subbasin
Camp Subbasin
Bernal Subbasin
Castle Subbasin
Amador Subbasin
Vallecitos Subbasin
Sunol Subbasin
La Costa Subbasin
SITE LOCATION
L I V E R M O R
S U N O L V A L L E
CONTRA COSTA CO
ALAMEDA CO
SAN ANTONIO RES.
NILES
MT. DIABLO MERIDIAN
T 2 S
T 3 S
T. 4 S.

REGIONAL GEOLOGY[1]

The subject site is situated in the Sunol Valley, a structural trough surrounded by hills of the Diablo Range. The site lies in the southwest portion of the Alameda Creek watershed that drains to the northwest. Geologic surficial materials mapped at the subject site are water-bearing deposits that overlie the Livermore Formation, a significant water-bearing strata for the region. Underlying the Livermore Formation are non-water bearing marine sediments (bedrock shale). For a geologic map and cross-section see: *Surface Geology Map & Cross-Section. A description of the individual units follows:

- **Quaternary Alluvium (Qal):** Pleistocene-to-Holocene age alluvial deposits of are grouped together as Quaternary alluvium. The Quaternary alluvium has previously been mapped to be less than 20 feet thick in the vicinity of the subject site (see Geologic Cross-Section) and consists of unconsolidated deposits of interbedded clay, silt, fine sand and gravel. Nearby gravel pits are actively mined at locations adjacent to the Alameda Creek, approximately 200 feet north of the site (see: Topographic Location Map, Figure 1).

- **Plio-Pleistocene, Livermore Formation (TQl):** The gravel facies of the Livermore Formation underlies the Quaternary Alluvium at a depth of only a few tens of feet. This formation is significant water–bearing formation for the region and can be upwards of 4,000 feet thick. However in the vicinity of the site, the Livermore Formation can be less than 200 feet thick and consists of unconsolidated to semi-consolidated beds of gravel, sand, silt, and clay. The source of the coarse-grained Livermore Formation is probably the Jurassic and Cretaceous rocks exposed in the uplands.

- **Jura-Cretaceous Rocks (JK):** The non-water bearing, Jura-Cretaceous bedrock shales underlie the Livermore Foundation in the vicinity of the site. These rocks are made up of marine shale, sandstone, and conglomerates. Shale was logged during the drilling of two nearby water production wells at a depth of approximately 140' (see: Local Geologic Cross Section, Figure 5, and Drillers Logs for Local Water Wells)

The Livermore and Sunol region is offset by a number of faults including the nearby Sinbad fault, which is buried beneath Alameda Creek-deposited alluvium, located approximately 2,000 feet northwest of the site. The northwest trending Sinbad fault is likely to act as a barrier to the lateral movement of groundwater. Regional geologic cross-sections indicate the subject site is on the up-gradient side of the Sinbad fault where groundwater levels reportedly stand higher (see *Bull.118 Map & Cross-Section).

---

[1] Source: Department of Water Resources (DWR), Bulletin # 118-2: Evaluation of Groundwater Resources for the Livermore and Sunol Valleys, June 1974.

GeoTracker Help

Zoomin 2X ZoomOut 2X Pan Identify LUFT Sites

Layers

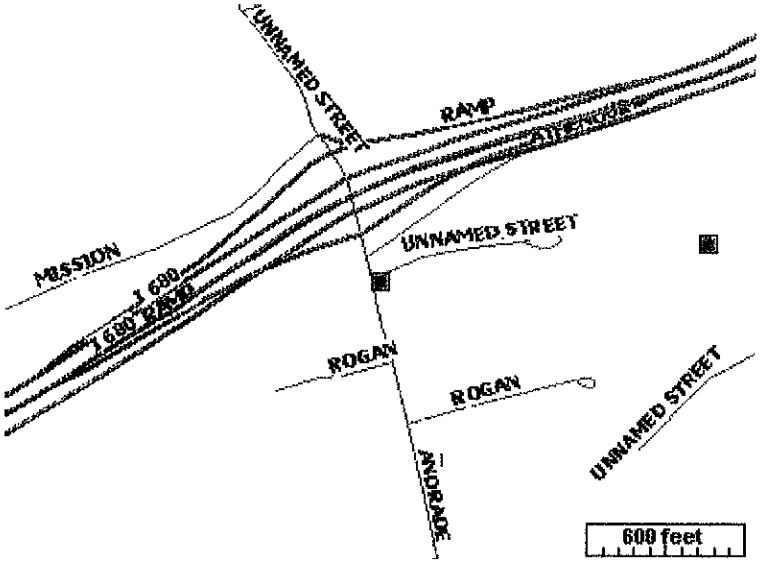
Show All sites within Any of public wells.

Click on the map to perform the selected action.

- [x] LUFT Sites
- [ ] UST Sites
- [ ] Public Wells
- [x] Highways
- [x] Major Roads
- [x] Minor Roads
- [ ] USGS Quads
- [ ] Surface Water
- [ ] Watersheds
- [ ] GW Basins
- [ ] Vulnerability

Map Size: 1X

Redraw



Street:

City: Zip: Go

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Well and LUFT site positions are approximate. Locational accuracy will improve as state agencies and responsible parties obtain and report new information.

Detailed Release Information

MISSION VALLEY ROCK & ASPHALT (SUNOL)
7999 ATHENOUR WY
SUNOL , CA 94586
CASE STATUS: OPEN
SHOW THIS SITE ON MAP
RETURN TO REPORT MAIN MENU

REGIONAL BOARD - CASE #: 01-2276
SAN FRANCISCO BAY RWQCB (REGION 2) - **(BG)**
CONTACT: BETTY GRAHAM - (510) 622-2300

LOCAL AGENCY (LEAD AGENCY) - CASE #: 2786
ALAMEDA COUNTY LOP - **(UNK)**

CASE TYPE:
Other Groundwater affected (uses other than drinking water)

ENFORCEMENT TYPE:

FUNDING:

HOW LEAK WAS DISCOVERED:
Tank Closure

METHOD USED TO STOP DISCHARGE:

INTERIM:

CAUSE OF LEAK:
Unknown

SOURCE OF LEAK:
Unknown

SUBSTANCES RELEASED:

Discharge Begin Date	Substance	Quantity
UNKNOWN	Gasoline - Automotive	

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LUFT ANALYTICAL DATA REPORT

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LOCAL AGENCY (LEAD AGENCY) - CASE #: 2786
ALAMEDA COUNTY LOP - **(UNK)**

Select Chemicals | Reset Boxes **Note: You may select up to 6 chemicals.**

(All Data) | (Most Recent) | (Maximum Concentrations)

NAME	DATE	PARAMETER	MATRIX	QUALIFIER	RESULT	UN
* MAINSITE	12/27/2001	BENZENE	W	=	15	ppl
* MAINSITE	12/27/2001	METHYL-TERT-BUTYL-ETHER (MTBE)	W	=	62	ppl

* DENOTES A HISTORICAL VALUE

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REGULATORY HISTORY

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CASE STATUS: OPEN
SHOW THIS SITE ON MAP
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CONTACT: BETTY GRAHAM - (510) 622-2300

LOCAL AGENCY (LEAD AGENCY) - CASE #: 2786
ALAMEDA COUNTY LOP - **(UNK)**

REGULATORY HISTORY

BEGIN DATE	STATUS
1/2/1965	3B - Preliminary Site Assessment Underway
6/18/1996	* Leak Discovery
6/18/1996	* Leak Reported
6/18/1996	* Leak Stopped
3/10/1998	3A - Preliminary Site Assessment Workplan Submitted
3/10/1998	* System Entry
6/19/2001	* Regulatory Review

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5 documents

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	Title	File	Size	Posted By	Modified
☐	2002-06-27_DIR_L	2002-06-27_DIR_L.pdf	86.8 kb	Robert Schultz	Jun 21, 2004 *1:23 PM*
☐	2002-08-29_DIR_L	2002-08-29_DIR_L.pdf	34.8 kb	Robert Schultz	Jun 21, 2004 *1:23 PM*
☐	2003-03-20_DIR_L	2003-03-20_DIR_L.pdf	253.1 kb	Robert Schultz	Jun 21, 2004 *1:24 PM*
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☐	2003-10-31_DIR_L	2003-10-31_DIR_L.pdf	122.4 kb	Robert Schultz	Jun 21, 2004 *1:25 PM*

5 documents

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ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

October 31, 2003

Mr. Murray Kelsoe
PO Box 176
Alamo, CA 94507

Dear Mr. Kelsoe:

Subject: Fuel Leak Case No. RO0002448, Sunol Tree Gas Station, 3004 Andrade Road, Sunol, CA

Alameda County Environmental Health (ACEH) staff have reviewed your proposal dated September 19, 2003, for installation of the temporary water treatment system (system) consisting of a carbon filtration system. We generally concur with your proposal and present the following technical comments and requirements. Please address the following technical comments regarding treatment system operation and complete the system installation and operation without delay. ACEH gave verbal approval for system installation on September 26, 2003. You are reminded that the Alameda County District Attorney's office directed you to have a water supply system for T-Bear Ranch operational by September 1, 2003. **Your system is currently 2-months late and your site is not in compliance with ACEH directives.**

TECHNICAL COMMENTS

1. **System Design** - ACEH notes that the temporary treatment system proposed is not a standardized and tested system designed by an environmental consultant. Rather it is a custom system in which the vendor, Culligan, utilized rough estimates from standardized systems to design its custom system. Based on the estimates made for system design, the initial sampling schedule to check for carbon breakthrough has been proposed to occur after three weeks of operation based on loading rates provided by Culligan and their carbon vendor.

2. **System Breakthrough** – If breakthrough occurs you are required to immediately replace the carbon/tank(s) and rotate the tanks so the vessel with the fresh carbon is in the back (discharge) end of the series so users are not exposed to a contaminated water supply. If breakthrough occurs the system and sampling schedule shall be re-evaluated and a report of the evaluation submitted by the date specified below.

3. **Initial Wellhead Sampling and Analyses** – ACEH previously requested that you analyze a water sample at the T-Bear Ranch well before system installation. We have recently received the analytical results from the sample collected on October 1, 2003. We understand that an additional sample was collected on October 24, 2003, please submit those results to our office by the date specified below.

4. **System Sampling and Analyses** – We request that you collect water samples from the influent to vessel #1, between the vessels, and the final discharge point every three weeks. Samples from the influent to vessel #1 and from between the vessels shall be submitted for analysis and the effluent sample held by the lab. If analytical results indicate breakthrough between the vessels has occurred then the effluent sample shall be immediately analyzed. Water samples collected every three weeks shall be analyzed by EPA Method 8260 for BTEX, MTBE, TAME, ETBE, DIPE, TBA, and EtOH. Additionally, analysis for TPHG shall also be performed during the first sampling event, then every 6-weeks thereafter. Analytical results (containing

cumulative data tables) shall be submitted to ACEH within 1-week of sample collection in the System Operation and Sampling Reports according to the schedule below.

5. **Data Logging Flowmeter** – Data on water usage at the T-Bear well is needed at this site to quantify the rate of MTBE mass removal from the well. We request that you replace the totalizing flowmeter currently installed on the T-Bear well with a data logging flowmeter as part of your system installation. You are required to order and install the data logging flowmeter as soon as possible, without delaying system startup. Summaries and graphs of instanteous and cumulative flow from the well shall be submitted in the System Operation and Sampling Reports according to the schedule below. An example of this type of meter is enclosed.

6. **System Responsibility** - You are responsible for all costs and for the performance of all work related to the system, including but not limited to, system evaluation and reporting, installation, operation, and dismantling.

TECHNICAL REPORTS

Please submit technical reports to Alameda County Environmental Health (Attention: Mr. Scott Seery), according to the following schedule:

Immediately - System Installation Completion & Startup Notification

November 7, 2003 - Analytical results from T-Bear Ranch water sample collected on October 24, 2003

4 weeks after System Startup and every 4 weeks thereafter - System Operation and Sampling Report

1 week after system breakthrough - System Re-evaluation Report

These reports are being requested pursuant to the Health and Safety Code Section 2725. We request that all required work be performed in a prompt and timely manner. Revisions to the schedule above shall be requested in writing with appropriate justification for anticipated delays.

Sincerely,

Donna L. Drogos, P.E.
LOP Program Manager

Enclosure

cc:

Alyce Sandbach , Esq.
Alameda County District Attorneys' Office
7677 Oakport Street, Suite 650
Oakland, CA 94621

Mr. Pat Hoban
Weber, Hayes & Associates
120 Westgate Drive
Watsonville, CA 95076

Jeffery Lawson, Esq.
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Mr. Roy Tovani
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Mr. Matt Katen
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A. Levi, D. Drogos, S. Seery

Ms. Betty Graham
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Finley Boag, Esq.
4558 Second Street
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Mr. Scott Haggerty
Alameda County Board of Supervisors
1221 Oak Street, Suite 536
Oakland, CA 94612

Drogos, Donna, Env. Health

From: Drogos, Donna, Env. Health

Sent: Thursday, November 20, 2003 9:20 PM

To: 'Jeff Lawson'

Cc: Sandbach, Alyce, DA; alphacat2000@aol.com; pat@weber-hayes.com; Seery, Scott, Env. Health; Levi, Ariu, Env. Health; Murray Einarson (mdeinarson@stanford.edu); Weston, Robert, Env. Health

Subject: Treatment System at T-Bear

Importance: High

Jeff,

It appears that the treatment system is operational at T-Bear Ranch. However, I have not received the System Installation/Startup Notification from Mr. Kelsoe.

Notification to ACEH of system startup is necessary at this site. Water samples from the T-Bear Ranch treatment system need to be analyzed on an expedited turnaround time every 3 weeks to ensure system breakthrough does not occur and to prevent residents of T-Bear Ranch from becoming exposed to contaminated water. It appears that the system may be approaching a 3 week operational time.

1) Where is the System Installation/Startup Notification?
2) How long has the treatment system been running?
3) What is the schedule for sampling and analysis of the system?
4) Re: Technical Comments 2) & 4) in ACEH's 10/31/03 letter, who will be interpreting analytical results to identify a potential breakthrough problem and take appropriate actions?
5) What is the status on installation of the data logging flowmeter?

Donna

Donna L. Drogos, P.E.
LOP Program Manager
Alameda County Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94502

510-567-6721
donna.drogos@acgov.org

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

RECEIVED JUN 18 2003

ENVIRONMENTAL HEALTH SERVICES
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June 13, 2003

Mr. Murray Kelsoe
P.O. Box 176
Alamo, CA 94507

Subject: RO0002448, Sunol Tree Gas Station, 3004 Andrade Road, Sunol, CA

Dear Mr. Kelsoe:

Alameda County Environmental Health (ACEH) staff has received the "Work Plan for Soil and Water Investigation," dated May 8, 2003, prepared by Clearwater Group (Clearwater). We have examined the work plan and determined it to be unacceptable for submittal to ACEH. For reasons stated below, ACEH is unable to review the work plan. This notifies you that your due date for the completed work plan is not extended. Please submit the work plan without delay.

Additionally, this letter provides comments on the "Well Sampling Report," dated May 6, 2003, prepared by Clearwater.

WELL SAMPLING REPORT COMMENTS

Clearwater recommends shutting down impacted domestic/irrigation water supply well 04S01E20G2 located on the adjacent private property and plumbing the service connection at that property to Mr. Kelsoe's water supply well located on the Sunol Tree Gas Station site. They recommend this as a "solution" to the MTBE contamination of the private well.

The potential consequences of Clearwater's proposed solution are serious and potentially disastrous. Clearwater's proposed action would significantly increase the extraction rate from Mr. Kelsoe's supply well, a well located on the gas station property. The increased pumping rate could draw contaminants deeper into the aquifer and into the screens of Mr. Kelsoe's supply well – a well that has up until now been free of detectable MTBE contamination. In addition to potentially causing Mr. Kelsoe's well to become contaminated, such an action has the potential to cause deeper migration of the contaminant plume and further degradation of a regional drinking water aquifer. Clearwater's recommendation is thus deemed unacceptable.

We further note that Clearwater describes this solution as providing "...protection for human health and the environment, with the least cost..." however; it does not appear that other options for a water source were considered and no formal analysis of the cost of various alternatives was presented. Clearwater's proposal to make a private property that has had its own water source dependant upon a water supply from an adjacent gas station is unacceptable.

Finally, the report incorrectly depicts the location of well 04S01E20B1, which appears to be mapped as 115' east of well 04S01E20A1 rather than 50' as stated by Clearwater in the text. Also, the well described in the report as 4S01E20H2 does not appear to be the well that Clearwater sampled. The DWR well log for 4S01E20H2 describes its location as approximately 2000 feet south of I-680, and 1000 feet east of Andrade Road. This is not the well identified by Clearwater in their report.

Kelsoe, Sunol

EXAMPLES OF WORK PLAN DEFICIENCIES

Following are several examples of why Clearwater's "Work Plan for Soil and Water Investigation," dated May 8, 2003, is unacceptable. These comments are provided to the responsible party in order to highlight some of the major deficiencies of the work plan. These deficiencies are substantial enough to cause ACEH to reject the work plan.

1) **Site Conceptual Model** – The initial site conceptual model prepared for this site is not adequate. Although substantial information is readily available in DWR well logs for the immediate vicinity of the site and DWR bulletins and other published reports for this specific groundwater basin, it appears that Clearwater limited their review of regional geological/hydrogeological references to a cursory survey of general geologic and topographic maps in addition to the limited data obtained from their shallow investigation at the subject site. This level of work is not sufficient to develop the initial SCM as previously requested of you. Also, Clearwater proposes several alternative hypotheses for various release scenarios but the scope of work proposed in the workplan is inadequate to confirm or refute them. Lastly, the rationale and details for piezometer installation and the supplemental geologic assessment need to be based on the initial SCM, which, as discussed above, is inadequately described in Clearwater's work plan.

2) **Transect of Monitoring Wells** – The work plan proposes to place a transect of wells in the same location as the temporary peizometers. These locations do not correspond to a transect oriented perpendicular to the expected axis of the contaminant plume as was requested. The temporary peizometers are intended to determine groundwater flow direction so that the transect can be oriented appropriately. Clearwater's proposal appears to ignore that intent.

3) **Nested Wells** – Clearwater proposes to install nested wells at this site. Nested wells are not acceptable at contaminated sites due to difficulties ensuring reliable seals between sampling zones. Poor seals can result in leakage between zones and are therefore not allowed. Additionally, the proposed well construction diagram appears to combine elements of several different well types, none of which are shown correctly. Among many of the discrepancies, the diagram shows the filter pack extending from 4' below ground surface to the total depth for each sampling interval without any seals between the monitored zones. Moreover, the screen lengths are shown as being 10-feet-long. This screened interval is too long for depth-discrete groundwater monitoring. In summary, aside from providing monitoring data that would likely be unreliable, Clearwater's proposed multi-level well construction has the potential to cause cross contamination of the aquifer.

4) **UST Excavation Spoils Pile** – The soil stockpile characterization and disposal activities previously requested of you have not been performed. Your proposal to continue to leave the waste soil generated during your UST removal and replacement activities in stockpiles at this site is not acceptable. If you do not dispose of this soil pile by **July 13, 2003**, we will refer your case to the County District Attorney for nuisance abatement. You could then be facing civil and criminal prosecution.

CONCLUSION

In summary, the work plan is poorly written and confusing, has numerous errors, and lacks logical presentation of essential background information and technical details of the proposed scope of work. The poor quality and content of the work plan suggests that Clearwater is not familiar with current MTBE investigation practices or the appropriate standard of care at high-risk groundwater contamination sites. In particular, the nested well 'transect' work as proposed in the work plan causes ACEH to question the consultant's understanding of dissolved plume characterization techniques and their ability to install a groundwater monitoring network protective of groundwater resources. Further, Clearwater's proposal to increase pumping of a supply well at a

contaminated site has the potential to further jeopardize groundwater resources and is unacceptable.

AGENCY OVERSIGHT

If it appears as though significant delays are occurring or reports are not submitted as requested, we will refer your case to the County District Attorney, for enforcement follow up. Enforcement follow up may include administrative action or monetary penalties of up to $10,000 per day for each day of violation of the California Health and Safety Code, Division 20, Chapter 6.75.

If you have any questions please call Mr. Scott Seery at (510) 567-6783.

Sincerely,

Scott O. Seery, CHMM
Hazardous Materials Specialist

Donna L. Drogos, P.E.
LOP Program Manager

cc: Mr. Barney Popkin
Clearwater Group
229 Tewksbury Ave
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April 7, 2003

Mr. Murray Kelsoe
P.O. Box 176
Alamo, CA 94507

Re: Fuel Leak Case No. RO 2448, Sunol Tree Gas, 3004 Andrade Road, Sunol

Dear Mr. Kelsoe:

This letter is in response to our receipt of a facsimile transmittal from your attorney, Jeff Lawson. Mr. Lawson's transmittal was in regards to the submittal of a Soil and Water Investigation (SWI) workplan, and sampling from the several water supply wells in proximity to the subject site.

We were informed on April 4, 2003, by Clearwater Group's John Reardon that the nearby water supply wells will be sampled the week of April 6, 2003. This office expects the report of this sampling effort to be received by this office by Friday, April 11, 2003.

The due date for submittal of the SWI workplan and associated elements (e.g., Site Conceptual Model, etc.) has been extended to April 25, 2003.

Please call the undersigned at (510) 567-6783 should you have any questions.

Sincerely,

Scott O. Seery, CHMM
Hazardous materials Specialist

cc: Betty Graham, RWQCB
Shari Knieriem, SWRCB UST Fund
Matt Katen, Zone 7 Water Agency
Scott Haggerty, Alameda Co. Board of Supervisors
Susan Torrance, Alameda Co. District Attorney's Office
Barney Popkin, Clearwater Group, 229 Tewksbury Ave., Pt. Richmond, CA 94801
Roy Tovani, P.O. Box 333, Sunol, CA 94566
A. Levi, D. Drogos

ALAMEDA COUNTY
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March 20, 2003

Mr. Murray Kelsoe
PO Box 176
Alamo, CA 94507

Dear Mr. Kelsoe:

Subject: Fuel Leak Case No. RO2448, Sunol Tree Gas Station, 3004 Andrade Road, Sunol, CA

Alameda County Environmental Health (ACEH) staff has reviewed the "Preliminary Site Assessment Report," dated March 14, 2003, prepared by the Clearwater Group for the subject site. Additionally, analytical data from the domestic wells on properties immediately adjacent to your site have been reviewed.

Methyl tert-Butyl Ether (MTBE) up to 130 ppb has been detected in the domestic well located approximately 750' in the apparent downgradient direction from your site. MTBE at 0.5 ppb has also been detected in a well on the golf course adjacent to your property. Limited investigation activities at your site have confirmed the presence of MTBE at up to 43 ppb in groundwater and 5.7 ppm in soil. Up to 17,000 ppb TPHG has also been confirmed in groundwater. We are very concerned with the impacts of MTBE to drinking water wells, the detections of petroleum hydrocarbons and MTBE at your site, the proximity of your site to other water supply wells in the vicinity, and the site's location within a groundwater basin used for drinking water.

This letter presents a request for three-dimensional characterization and monitoring of soil and groundwater contamination (MTBE, petroleum products, and associated blending compounds and additives) from the unauthorized releases from your site. Due to the impacts of MTBE to a drinking water well and to groundwater resources, apparently from your site, your case has been classified as a highest risk MTBE site.

TECHNICAL COMMENTS

1) **Water Supply Well Sampling** – Five domestic/irrigation supply wells have been identified in the apparent downgradient direction of your site. Well 04S01E20G2 detected 130 ppb MTBE, well 04S01E20A2 detected 0.5 ppb MTBE, and wells 04S01E20A1, 04S01E20B1, and 04S01E20H2 have not been sampled. We request that you collect groundwater samples from these five wells and analyze by EPA Method 8260 for TPHG, BTEX, MTBE, TAME, ETBE, DIPE, TBA, and EtOH. Please submit the results of your sampling in the Water Supply Well Sampling Report requested below.

2) **UST Excavation Spoils Pile** - Soil excavated during UST removal and replacement activities in April 2002 remains in stockpiles at your site. TPHG, BTEX, and MTBE have been detected in your stockpiled soil. Although the October 10, 2002, Preliminary Site Assessment Status Report stated that stockpile soil was to be characterized with removal activities commencing on October 30, 2002, to date this work has not been performed.

Due to its location the stockpiled soil will impede performance of the site investigation activities requested below. Additionally, runoff from the pile or water infiltrating the soil pile could have (and could still be) contributed petroleum hydrocarbons to the underlying soil and shallow

groundwater. In addition to this being a potential ongoing source of groundwater contamination, the introduction of contaminants from the soil stockpile may 'confuse the signal' of groundwater contamination due to subsurface releases when interpreting results during the next phases of investigation at your site. Therefore, it is imperative that you properly remove and dispose of this soil. We request that you complete your disposal activities by **April 4, 2003**. Document the results of your soil stockpile sampling and removal in the Soil and Water Investigation (SWI) Report requested below.

3) Site Conceptual Model - Appropriate plans for characterization and remediation and considerable cost savings can be realized if your consultant focuses on developing and refining a viable Site Conceptual Model (SCM) for the project. A SCM is a set of working hypotheses pertaining to all aspects of the contaminant release, including site geology, hydrogeology, release history, residual and dissolved contamination, attenuation mechanisms, pathways to nearby receptors, and likely magnitude of potential impacts to receptors. The SCM is used to identify data gaps that are subsequently filled as the investigation proceeds. As the data gaps are filled, the working hypotheses are modified, and the overall SCM is refined and strengthened. Subsurface investigations continue until the SCM no longer changes as new data are collected. At this point, the SCM is said to be "validated." The validated SCM then forms the foundation for developing the most cost-effective corrective action plan to protect existing and potential receptors.

When performed properly, the process of developing, refining and ultimately validating the SCM effectively guides the scope of the entire site investigation. We have identified in this letter, based on our review of existing data, some initial key data gaps and have described several tasks that we believe will provide important new data to refine the SCM. Starting with a review of the data available for this site we request that your consultant develop the initial SCM of site conditions and present it in the work plan requested below. We request that your consultant incorporate the results of the new work requested in this letter into their SCM, identify new and/or remaining data gaps, and propose supplemental tasks for future investigations. There may need to be additional phases of investigations, each building on the results of the prior work, to validate the SCM. Characterizing the site in this way will improve the efficiency of the work and limit its overall cost.

The SCM approach is endorsed by both industry and the regulatory community. Technical guidance for developing SCMs is presented in Strategies for Characterizing Subsurface Releases of Gasoline Containing MTBE, American Petroleum Institute Publication No. 4699, dated February 2000; "Expedited Site Assessment Tools for Underground Storage Tank Sites: A Guide for Regulators" (EPA 510-B-97-001), prepared by the U.S. Environmental Protection Agency (EPA), dated March 1997; and "Guidelines for Investigation and Cleanup of MTBE and Other Ether-Based Oxygenates, Appendix C," prepared by the State Water Resources Control Board, dated March 27, 2000.

4) Site Characterization and Monitoring - A review of supply well logs in the immediate vicinity of your site indicates that a productive groundwater basin is likely present beneath your site at depths of approximately 25' to 80' bgs. Calculations from supply well log data estimate a hydraulic conductivity of approximately 90 feet/day within this aquifer.

A review of the data from your site indicates that the upper 20' of the site are comprised of silts and clays. Although boring logs indicate that the formation becomes increasingly sandy at the 20' to 24' depth, your consultant completed the borings to those depths, thereby performing only a shallow investigation that did not penetrate the underlying productive aquifer, which is tapped by nearby water supply wells. Therefore, additional site investigation activities are needed to appropriately characterize your site.

a) **Define Groundwater Gradient** - We request that you establish groundwater gradient within the productive aquifer beneath and downgradient of your site. We recommend that you install temporary piezometers and monitor them over several days to establish gradient. We recommend that you explore to depths of at least 60' bgs during this work and collect and analyze soil and depth discrete groundwater samples from appropriate borings for TPHG, TPHD, BTEX, MTBE, TAME, ETBE, DIPE, TBA, and EtOH. We recommend expedited turnaround time for the analytical results. Describe your proposal to establish groundwater gradient in the Work Plan requested below.

b) **Transect of Monitoring Wells** - Once gradient has been established we request that you install a transect of monitoring devices such as well clusters, multi-level wells, etc., capable of monitoring groundwater at multiple depths. The monitoring transect should be oriented perpendicular to the plume axis and should extend far and deep enough to fully encompass the contaminant plume. We anticipate that the spacing between the wells will be approximately 25 feet however the actual spacing should be based on the site conceptual model. Due to the impacted water supply well and your site's status as a highest risk MTBE site we strongly encourage you to perform your work using expedited site assessment (ESA) techniques (see API Publication No. 4699, referenced above). You may want to consider performing an initial investigation to quickly define the depth and width of the suspected contaminant plume downgradient from the release site prior to installing the permanent monitoring transect. That will allow you to optimize the location and depth of the permanent wells, thereby reducing the cost of the monitoring work. Collection of groundwater samples at multiple depths using a one-time direct push water sampling tool would be appropriate for this initial investigation. Using ESA methodology we foresee beginning the initial direct-push sampling investigation one week after establishing groundwater gradient and installation of the permanent monitoring transect within two weeks of the direct-push sampling investigation.

Please submit your proposal for the direct-push sampling investigation, sampling transect location, and design of your depth discrete monitoring network based upon your initial SCM in the work plan requested below. If revisions to transect location and well construction are needed based upon results from monitoring your piezometric network or supplemental direct-push groundwater sampling please contact us and submit proposed changes (sketches are acceptable) by fax (510-337-9335) for expedited regulatory review and concurrence.

Please refer to API Publication No. 4699 (referenced above) when proposing wells to monitor multiple groundwater zones. Additionally, expedited site assessment tools and methods are a scientifically valid and cost-effective approach to define the three-dimensional extent of the plume. Technical protocol for expedited site assessments are provided in the EPA's ESA document (EPA 510-B-97-001), referenced above.

5) **Preferential Pathway Study** - We request that you perform a preferential pathway study that details the potential migration pathways and potential conduits (wells, utilities, pipelines, etc.) for horizontal and vertical migration that may be present in the vicinity of the site. The purpose of the preferential pathway study is to locate potential migration pathways and conduits and determine the probability of the plume encountering preferential pathways and conduits that could spread contamination. Of particular concern is the identification of abandoned wells and improperly-destroyed wells that can act as vertical conduits to deeper water bearing zones, pumping wells in the vicinity of your site, and manmade conduits for shallow migration.

Discuss your analysis and interpretation of the results of the preferential pathway study (including the detailed well survey and utility survey requested below) and report your results in the SWI Report requested below. Include an evaluation of the probability of the dissolved phase plumes

for all constituents of concern encountering preferential pathways and conduits that could spread the contamination, particularly in the vertical direction to deeper drinking water aquifers. **As part of your analysis we request that you identify other water supply wells in the area that may need to be sampled.** The results of your study shall contain all information required by 23 CCR, Section 2654(b).

a) Utility Survey - An evaluation of all utility lines and trenches (including sewers, storm drains, pipelines, trench backfill, etc.) within and near the site and plume area(s) is required as part of your study. Submittal of map(s) and cross-sections showing the location and depth of all utility lines and trenches within and near the site and plume area(s) is required as part of your study.

b) Well Survey - The preferential pathway study shall include a **detailed well survey** of all wells (monitoring and production wells: active, inactive, standby, destroyed (sealed with concrete), abandoned (improperly destroyed); and dewatering, drainage, and cathodic protection wells) within a 1/2-mile radius of the subject site. **We specifically request that you review well log records at the Department of Water Resources (DWR) offices in addition to well information available at Zone 7 Water Agency or other sources.**

As part of your detailed well survey, please perform a background study of the historical land uses of the site and properties in the vicinity of the site. Use the results of your background study to determine the existence of unrecorded/unknown (abandoned) wells, which can act as pathways for migration of contamination at and/or from your site. Please review historical maps such as Sanborn maps, aerial photos, etc., when performing the background study. Submittal of map(s) showing the location of all wells identified in your study, and the use of tables to report the data collected as part of your survey are required. Include appropriate photographic prints, in stereo pairs, of historic aerial photos used as part of your study. We also request that you list by date all aerial photographs available for the site from the aerial survey company or library you use during your study. Please refer to the Regional Board's guidance for identification, location, and evaluation of potential deep well conduits (see Attachment) when conducting your preferential pathway study.

6) Video Survey of Impacted Water Supply Well 04S01E20G2 – The well located at 3000 Andrade Road on the property immediately adjacent to your site has known MTBE impacts. Information on the construction of this well is not available from the well owner or from Zone 7 Water Agency. We request that you obtain drillers report records for this well from DWR or other sources and submit to this office by **April 4, 2003.** If you are unable to locate a drillers log for this well we request that you perform a video survey of the well to identify its construction. Include your proposal for this work in the work plan requested below.

REQUEST FOR INFORMATION

1) Video Survey of Sunol Tree Gas Station Well – Your consultant performed a video survey on the water supply well located on the Sunol Tree Gas Station site on December 12, 2002. We request that you submit a copy of the video to this office for viewing by the date specified below.

TECHNICAL REPORT REQUEST

Please submit technical reports to Alameda County Environmental Health (Attention: Scott O. Seery), according to the following schedule:

March 28, 2003 – Video of Sunol Tree Gas Station water supply well.

April 4, 2003 - Water Supply Well Sampling Report

April 4, 2003 - Completion of disposal of UST excavation spoils pile

April 4, 2003 - Work Plan with SCM

60 days after Work Plan Approval - Soil and Water Investigation Report

These reports are being requested pursuant to the Regional Board's authority under Section 13267 of the California Water Code. **Each report shall include conclusions and recommendations for the next phases of work required at the site.** We request that all required work be performed in a prompt and timely manner. Revisions to the schedule above shall be requested in writing with appropriate justification for anticipated delays.

AGENCY OVERSIGHT

If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement follow up. Enforcement follow up may include administrative action or monetary penalties of up to $10,000 per day for each day of violation of the California Health and Safety Code, Division 20, Chapter 6.75.

If you have any questions, please call Mr. Scott Seery at (510) 567-6783.

Sincerely,

Donna L. Drogos, P.E.
LOP Program Manager

Enclosures

cc:

Mr. Barney Popkin (w/enc)
Clearwater Group
229 Tewksbury Ave
Point Richmond, CA 94801

Mr. Matt Katen
Zone 7 Water Agency
5997 Parkside Drive
Pleasanton, CA 94588-5217

Mr. Roy Tovani
PO Box 333
Sunol, CA 94586

S. Seery (w/orig enc), A. Levi, D. Drogos

Ms. Betty Graham
Regional Water Quality Control Board
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ALAMEDA COUNTY
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August 29, 2002

RO 2448

Mr. Murray Kelsoe
P.O. Box 176
Alamo, CA 94507

RE: Sunol Tree Gas, 3004 Andrade Road, Sunol – Preliminary Site Assessment Work Plan

Dear Mr. Kelsoe:

The August 23, 2002 Clearwater Group *Workplan for Preliminary Site Assessment* has been received by this office and reviewed to determine whether the proposed scope satisfies project objectives for the initial investigation of the subject site. Three tasks are proposed as a part of the cited workplan, but only one task, Task 3, will be addressed in this correspondence.

Task 3 of the cited workplan proposes the advance of five (5) push-tool soil probes in the vicinity of the underground storage tank (UST) complex, and within the dispenser area drive slab. Both soil and groundwater samples will be collected for analyses. Samples will be analyzed for the presence of a range of petroleum hydrocarbons, plus methyl tert-butyl ether (MtBE).

Task 3 of the cited workplan is accepted, with the following changes:

- Target compounds sought in soil and water samples analyzed by EPA Method 8260 (624) shall also include TAME, ETBE, DIPE, TBA, EDB, and EDC, in addition to those compounds already proposed.

This workplan shall be implemented with 45 days of the date of this letter.

Please call me at (510) 567-6783 to inform me when field work has been scheduled.

Sincerely,

Scott O. Seery, CHMM
Hazardous Materials Specialist

cc: Chuck Headlee, RWQCB
Shari Knieriem, SWRCB UST Fund
Robert Weston, ACDEH
Brian Pierskalla, Clearwater Group, 229 Tewksbury Ave., Pt. Richmond, CA 94801

ALAMEDA COUNTY
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June 27, 2002

RO 2448

Mr. Murray Kelsoe
Sunol Tree Gas
3004 Andrade Road
Sunol, CA 94586

RE: Sunol Tree Gas, 3004 Andrade Road, Sunol – Request for Preliminary Site Assessment Work Plan

Dear Mr. Kelsoe:

Five 15,000-gallon underground storage tanks (UST) were removed from this site on April 2, 2002, along with their appurtenant vent and product piping and dispensers. A sixth 15,000 gallon UST was retained intact for storage of fire suppression water.

It has been reported that some evidence of an unauthorized release was identified during tank removals in the form of stained soil/backfill that also exhibited hydrocarbon odor. This apparent unauthorized release was substantiated through analyses of water samples collected from the base of the resultant UST excavation and from the contents of several, large-capacity, above-ground holding tanks into which groundwater was pumped to facilitate both UST removals and their subsequent replacement. Up to 190 micrograms per liter (ug/l) methyl tert-butyl ether (MtBE) was identified in water sampled from the above-ground holding tanks, while 84 ug/l was identified in a water sample collected from within the UST excavation. Soil samples collected from the base of the excavation were unremarkable; however, up to 1300 parts per million (ppm) of total petroleum hydrocarbons as diesel (TPH-d) was identified in sampleDSP7-3', collected near one of the removed dispensers. Few aromatics were identified in any soil or groundwater samples collected during the course of the confirmatory sampling activities. Benzene was not at all detected.

A reported 3500 cubic yards of soil/backfill was removed from around the USTS and stockpiled on Visqueen behind the facility during the course of the removal project. A reported 210,000 gallons of extracted groundwater was stored in 10 above-ground tanks. Stockpiled soil and stored water are still located on-site at the time of this correspondence.

In addition, it has been reported that a private supply well is located on the subject property. Review of Zone 7 well permit records failed to turn up evidence of a permitted well at this location. It is possible that the noted well was installed sans permit. Details of its construction are unknown at this time. Nonetheless, we have been informed that water from this well is not

used for drinking water purposes, but only for other supply needs as they arise (e.g., toilet flushing, etc.). We have also been informed that all current drinking water is derived from bottled water sources.

Consistent with provisions of Article 11, *Corrective Action Requirements*, Section 2720 et seq., Title 23, California Code of Regulations (CCR), a Preliminary Site Assessment (PSA) must be conducted to initially assess the extent of the release at the site. The PSA typically involves the installation of several soil borings and construction of an array of monitoring wells strategically located to track contaminant location. However, in this case it will be acceptable to begin the project with a series of push-tool (i.e., GeoProbe) sampling points.

In order to facilitate this task, you are required to hire a California-registered engineer or geologist with the appropriate experience conducting such environmental projects to draft and submit a PSA workplan. Such licensing and registration is by provision of the California Business and Professions Code. The PSA work plan will present the anticipated scope of work necessary to complete this phase of the site assessment. Attached to this letter please find "Appendix A", a guide you may give to your chosen consultant to assist them in the submittal of an appropriate PSA work plan.

The PSA work plan is due within 60 days of the date of this letter.

We are aware that the soil stockpiles and water generated during the April UST excavation activities are still located at the site. I understand that you are currently in contact with the State UST Fund in an attempt to seek monies to assist with their lawful disposal. Please be advised that even absent assistance from the Fund, these waste materials will need to be properly handled and disposed.

Further, within 30 days of the date of this letter, you are requested to determine the specific construction characteristics of the noted private well located at this site, and submit this information to this office. Such requested information would include drillers logs, depth and length of screened interval(s), and sanitary seal interval, among other relevant facts. Please be advised that you may be required by this agency and/or Zone 7 to destroy this well under permit issued by Zone 7 at some point in the near future.

Please call me at (510) 567-6783 should you have any questions.

Sincerely,

Scott O. Seery, CHMM
Hazardous Materials Specialist

Attachment (addressee, only)

cc: Chuck Headlee, RWQCB
Shari Knieriem, SWRCB UST Fund
Robert Weston, ACDEH

Documents (Boring Logs)

Exchange files of all types in the Document Manager. Upload, edit, and manage these files directly from Windows Explorer when you set up a Web Folder for your intranet. Learn more

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Sort By: Title ☑ show folders Search: Find It Advanced Search

4 documents

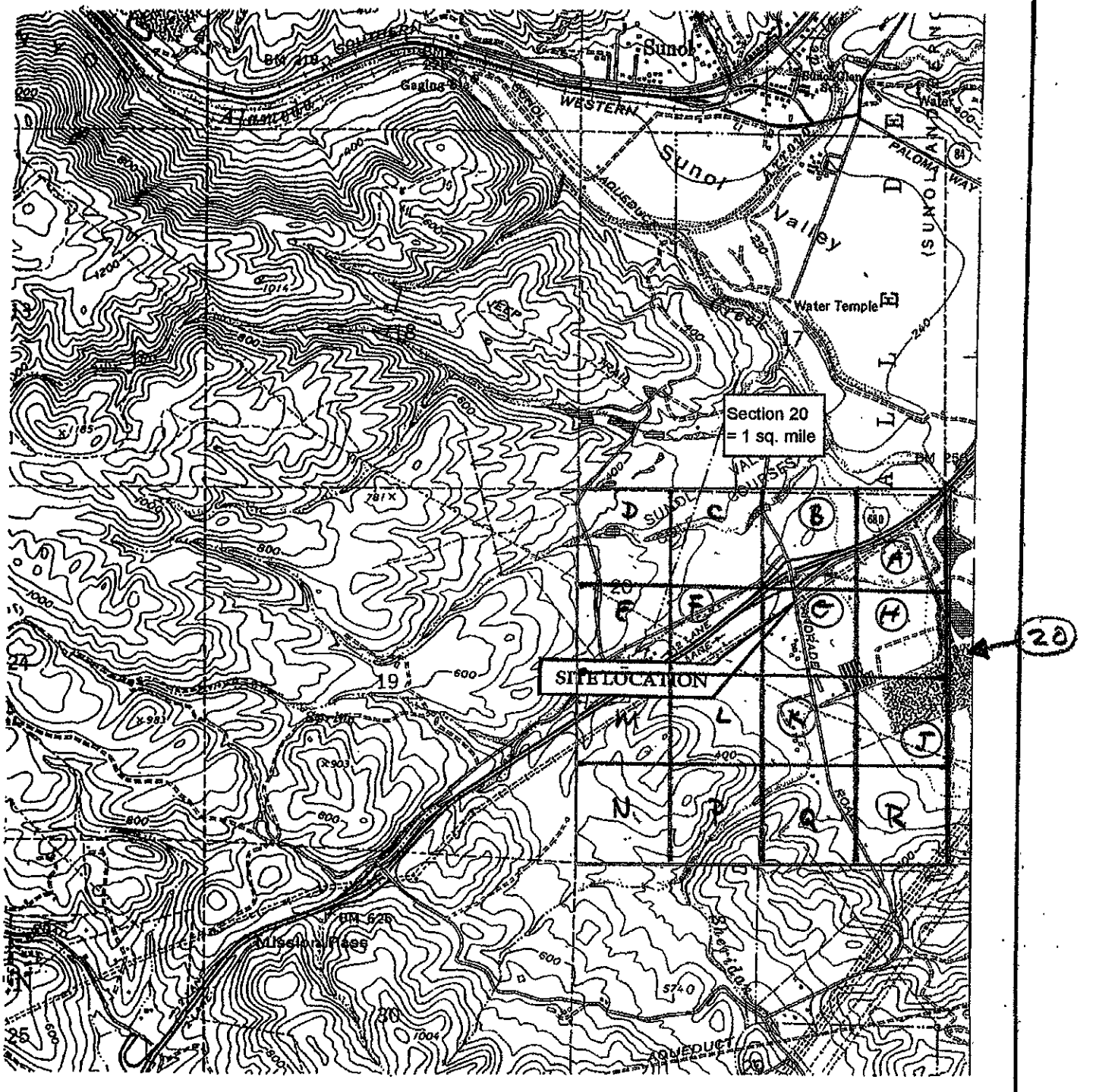
All Folders | Group Documents / Boring Logs

	Title	File	Size	Posted By	Modified
☐	Cross-Section Well Logs & Zone 7 Map	Cross-Section Well Logs & Zone 7 Map.pdf	1.9 MB	Pat Hoban	Jun 25, 2004 *4:55 AM*
☐	DWR LOGS-Vicinity	DWR LOGS-Vicinity.pdf	2.7 MB	Pat Hoban	Jun 25, 2004 *4:57 AM*
☐	ON-SITE BORING LOGS	ON-SITE BORING LOGS.pdf	434.2 kb	Pat Hoban	Jun 25, 2004 *5:00 AM*
☐	Video-Log Kelsoe property-2003-2-27	Video-Log Kelsoe property-2003-2-27 .pdf	183.7 kb	Pat Hoban	Jun 25, 2004 *5:01 AM*

4 documents

Select All | Clear All

WELL LOGS



SOURCE: U.S.G.S. 7.5 MINUTE TOPOGRAPHIC MAPS
NILES, CALIFORNIA, 1961, PHOTOREVISED 1980

APPROXIMATE SCALE IN FEET

SITE LOCATION MAP Sunol Tree Gas Service Station 3400 Andrade Road, Sunol, California	CLEARWATER GROUP, INC.		
	Project No. CB021C	Figure Date 5/03	Figure 1

09/09/2002 15:32 ZONE 7 WATER DISTRICT → 15103379335 NO.778 0002

APN 96-0061-007-14

Do Not Fill In

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

WATER WELL DRILLERS REPORT

Our Invoice #17888

ORIGINAL
File with DWR

No 969112

State Well No. 4S1E 20A8A

Other Well No. 20A2

(1) OWNER:

Name Joseph Franco
Address 255 Durham Rd.
Fremont, Ca.

(2) LOCATION OF WELL:

County Alameda Owner's number, if any

Township, Range, and Section Middle of 3rd Block PAR. 1

Distance from cities, roads, railroads, etc. ON Andrade Rd.
OFF Hiway 680 Next To Gas Station

(3) TYPE OF WORK (check):

New Well ☒ Deepening ☐ Reconditioning ☐ Destroying ☐

If destruction, describe material and procedure in Item 11.

(4) PROPOSED USE (check):

Domestic ☐ Industrial ☐ Municipal ☐
Irrigation ☒ Test Well ☐ Other ☐

(5) EQUIPMENT:

Rotary ☐
Cable ☒
Other ☐

(6) CASING INSTALLED:

STEEL: OTHER:
SINGLE ☒ DOUBLE ☐

From ft.	To ft.	Diam.	Gage or Wall
+1	140	10	10

Size of shoe or well ring 5/8 x 4

Describe joint Welded

If gravel packed

Diameter of Bore	From ft.	To ft.

Size of gravel:

(7) PERFORATIONS OR SCREEN:

Type of perforation or name of screen

From ft.	To ft.	Perf. per row	Rows per ft.	Size in. x in.
25	82	4	1	3/8 x 1 1/2 Mills
94	103	4	1	"
124	126	4	1	"

(8) CONSTRUCTION:

Was a surface sanitary seal provided? Yes ☒ No ☐ To what depth 20' ft.

Were any strata sealed against pollution? Yes ☐ No ☒ If yes, note depth of strata

From ft. to ft.

From ft. to ft.

Method of sealing Cement

(9) WATER LEVELS:

Depth at which water was first found, if known 22 ft.

Standing level before perforating, if known 8 ft.

Standing level after perforating and development 8 ft.

(10) WELL TESTS:

Was pump test made? Yes ☒ No ☐ If yes, by whom? Bail Test

120 gal./min. with 20 ft. drawdown after 2 hrs.

Temperature of water Was a chemical analysis made? Yes ☐ No ☒

Was electric log made of well? Yes ☐ No ☒ If yes, attach copy

(11) WELL LOG: 10" well

Total depth ft. Depth of completed well ft.

Cement seal 0-20

Formations: Describe by color, character, size of material, and structure

From ft.	To ft.	Formation
0	4	Adobe brown clay
4	18	gt brown clay
18	21	gravel
21	42	sand & gravel
42	46	Dk. blue sand & gravel
46	82	blue clay
82	94	blue gravel like
94	103	gravely blue clay
103	124	gravel
124	126	gravely blue clay
126	133	blue shale
133	146	

Perf. 25-82
94-103
124-126

120 gal. at 20'

Well A2
Country Drives (driving range) parcel
3220 Andrade Road

Work started 11-15 19 73 Completed 12-4 19 73

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME DeLucchi Well & Pump, Inc.
(Person, firm, or corporation) (Typed or printed)

Address 35137 Mission Blvd. Fremont, Ca.

[SIGNED] [signature] (Well Driller)

License No. 116079 Dated Dec. 4, 19 73

SKETCH LOCATION OF WELL ON REVERSE SIDE

DWR 188 (REV. 9-88)

$\frac{120 \text{ gpm}}{20} = \frac{Q}{5} = 6$ Specific Capacity

76118

K4
G1?

ORIGINAL
File with DWR

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

WATER WELL DRILLERS REPORT

(Our Invoice #20098)

Do Not Fill In
No 120334
State Well No. 4S/1E-20G1
Other Well No.

(1) OWNER: (Our Invoice #20468)
Name Sam Brunson
Address ~~40936 Cascade Pl.~~ ~~Fremont, Ca. 94538~~

(2) LOCATION OF WELL:
County Owner's number, if any
Township, Range, and Section
Distance from cities, roads, railroads, etc.
~~other 680 & Andrede Rd. Sunol 9½ acre~~ parcel

(3) TYPE OF WORK (check):
New Well X Deepening Reconditioning Destroying
If destruction, describe material and procedure in Item 11.

(4) PROPOSED USE (check):
Domestic X Industrial Municipal
Irrigation Test Well Other

(5) EQUIPMENT:
Rotary
Cable X
Other

(6) CASING INSTALLED:
STEEL: OTHER:
SINGLE DOUBLE

From ft.	To ft.	Diam.	Gage or Wall
~~25~~			
1 -	244	10	10

If gravel packed: Diameter of Bore | F

Size of gravel:

Type of shoe or well ring:
Describe joint

Cement seal = ? ("owner cemented")
Perfs.
48-60'
68-104'
80-124' (?)
150-162'
180-192', and
200-236'

(7) PERFORATIONS OR SCREEN:
Type of perforation or name of screen

From ft.	To ft.	Perf. per row	Rows per ft.	Size in. x in.
48	60			
68	104			
80	124			
150	162			
180	192			
200	236			

(8) CONSTRUCTION:
Was a surface sanitary seal provided? Yes No To what depth ft.
Were any strata sealed against pollution? Yes No If yes, note depth of strata
from ft. to ft.
from ft. to ft.
Method of sealing

(9) WATER LEVELS:
Depth at which water was first found, if known ft.
Standing level before perforating, if known ft.
Standing level after perforating and development 22 ft.

(10) WELL TESTS:
Was pump test made? Yes No If yes, by whom?
Yield: 30 gal./min. with 100 ft. drawdown after hrs.
Temperature of water Was a chemical analysis made? Yes No
Was electric log made of well? Yes No X If yes, attach copy

(11) WELL LOG: 10" well
Total depth ft. Depth of completed well 244 ft.
Formations: Describe by color, character, size of material, and structure

Well G1
#3111 Andrade Road

From ft.	To ft.	Formation
0	1	Soil
1	11	brown clay
11	40	yellow clay
40	60	sandy yellow clay
60	78	sandy yellow clay with some gravel
?		
78	90	sandy yellow clay
?		
90	102	sandy yellow clay with some gravel
102	130	soft blue shale
112	148	blue clay
148	160	gravel with some clay
160	180	blue clay
180	192	gravel with some clay
192	210	blue clay
210	236	blue clay & gravel
236	244	blue clay

Work started 6-21 19 76, Completed 6-24 19 76

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME DeLucchi Well & Pump, Inc.
(Person, firm, or corporation) (Typed or printed)
Address 35137 Mission Blvd.
Fremont, Ca. 94536
[Signature] R. L. DeLucchi
(Well Driller)
License No. 116079 Dated June 30, 1976 19

SKETCH LOCATION OF WELL ON REVERSE SIDE

OWR 188 (REV. 9-68)

ORIGINAL
File Original, Duplicate and Triplicate with the
REGIONAL WATER POLLUTION CONTROL BOARD No. 2 (appropriate number)

WATER WELL DRILLERS REPORT

(Sections 7076, 7077, 7078, Water Code)

STATE OF CALIFORNIA

RECEIVED
REGIONAL WATER POLLUTION CONTROL BOARD #2
JUN 21 1962

T-4S, R-1E Sunol

Do Not Fill In
No 68336
State Well No. [illegible]
Other Well No. 4/1E-20

(1) OWNER:

Name Mr. Joseph Athenour, Jr.
Address 7587 Mission Rd.
Sunol, California

Well B1
#7581 Athenour Way
(residences)

(2) LOCATION OF WELL:

County Alameda Owner's number, if any
R. F. D. or Street No. 300 ft. South of Mission Rd
3/4 mile East of Andrade Rd.

1/4 ?

(3) TYPE OF WORK (check):

New well [X] Deepening [ ] Reconditioning [ ] Abandon [ ]
If abandonment, describe material and procedure in Item 11.

(4) PROPOSED USE (check):

Domestic [X] Industrial [ ] Municipal [ ]
Irrigation [ ] Test Well [ ] Other [ ]

(5) EQUIPMENT:

Rotary [ ]
Cable [X]
Dug Well [ ]

(6) CASING INSTALLED:

SINGLE [ ] DOUBLE [X]

From ft.	to ft.	Diam.	Gage or Wall
0	152	10	12

Type and size of shoe or well ring 5/8x6
Describe joint slip joint

If gravel packed

Diameter of Bore	from ft.	to ft.

Size of gravel:

(7) PERFORATIONS:

Type of perforator used mills perforator
Size of perforations 3/8 in., length, by 4 in.

From ft.	to ft.	Perf. per row	Rows per ft.
23	48	6	1
132	141	6	1

(8) CONSTRUCTION:

Was a surface sanitary seal provided? [ ] Yes [X] No To what depth ft.
Were any strata sealed against pollution? [ ] Yes [X] No If yes, note depth of strata

From ft.	to ft.

Method of Sealing

(9) WATER LEVELS:

Depth at which water was first found	13 ft.
Standing level before perforating	13 ft.
Standing level after perforating	13 ft.

(10) WELL TESTS:

Was a pump test made? [ ] Yes [ ] No If yes, by whom?
Yield: gal./min. with ft. draw down after hrs.
Temperature of water Was a chemical analysis made? [ ] Yes [ ] No
Was electric log made of well? [ ] Yes [ ] No

(11) WELL LOG:

Total depth 152 ft. Depth of completed well 152 ft.
Formation: Describe by color, character, size of material, and structure.

0 ft. to	6 ft.	Top soil	6
6 "	8 "	brown clay	3
8 "	48 "	gravel	20
48 "	127 "	blue clay	3
127 "	141 "	gravel	20
141 "	152 "	shale formation	3

Cement seal= 0-20'
Perfs. 23-48' & 132-141'

FOR OFFICIAL USE ONLY

Work started 5/14 1962, Completed 5/22 1962

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Silva Bros.
(Person, firm, or corporation) (Typed or printed)
Address 3524 Peralta Blvd.
Fremont, California

[SIGNED] A. M. Silva
Well Driller

License No. 175502 Dated 5/29, 1962

57025 6-57 50M QUIN △ SPG

DWR 188 (REV. 3-54)

APN 096-0001-11-9 ??

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

WATER WELL DRILLERS REPORT
(Our Invoice #20473)

ORIGINAL
File with DWR

Do Not Fill In

№ 120422

State Well No. 4S/1E-20H2

Other Well No. 7137

(1) OWNER:
Name Jack M. Farnham
Address 15572 Woodard Rd.
San Jose, Ca.

Well H2
#3540 Andrade Road

(2) LOCATION OF WELL:
County ALAMEDA Owner's number, if any
Township, Range, and Section
Distance from cities, roads, railroads, etc.
3540 Andrada Rd. Sunol

(3) TYPE OF WORK (check):
New Well [X] Deepening [ ] Reconditioning [ ] Destroying [ ]
If destruction, describe material and procedure in Item 11.

(4) PROPOSED USE (check):
Domestic [X] Industrial [ ] Municipal [ ]
Irrigation [ ] Test Well [ ] Other [ ]

(5) EQUIPMENT:
Rotary [ ]
Cable [X]
Other [ ]

(6) CASING INSTALLED:
STEEL: OTHER:
SINGLE [ ] DOUBLE [ ]

From ft.	To ft.	Diam.	Gage of Well
0	214	12	10

If gravel packed

Diameter of Bore	From ft.	To ft.
16"	40	80

Type of shoe or well ring
Size of gravel: PEA
Describe joint WELDED

(7) PERFORATIONS OR SCREEN:
Type of perforation or name of screen

From ft.	To ft.	Perf. per row	Rows per ft.	Size in. x in.
46-80				Mills Knife
99-110				" "
172-180				" "
188-208				1/8 X 1½

(8) CONSTRUCTION: Cement to surface.
Was a surface sanitary seal provided? Yes [ ] No [ ] To what depth ft.
Were any strata sealed against pollution? Yes [ ] No [X] If yes, note depth of strata
From ft. to ft.
From ft. to ft.
Method of sealing

(9) WATER LEVELS:
Depth at which water was first found, if known ft.
Standing level before perforating, if known ft.
Standing level after perforating and developing 35 ft.

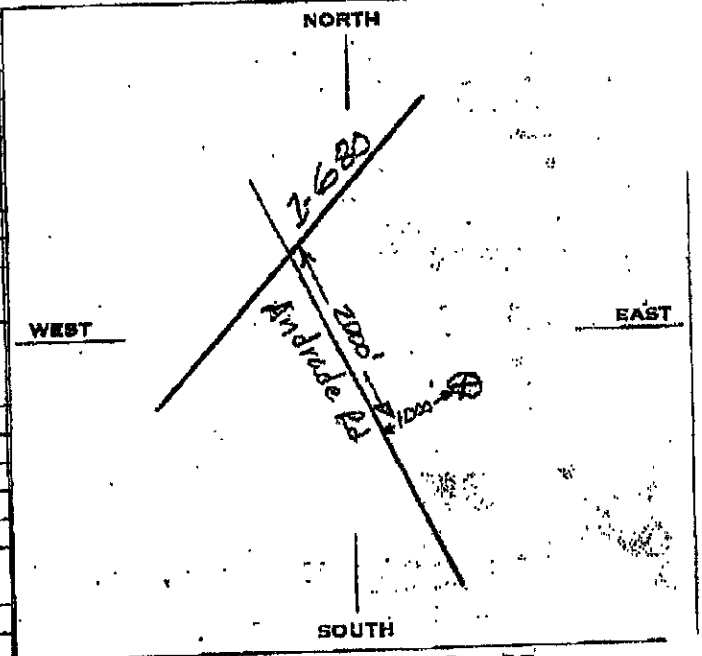
(10) WELL TESTS:
Was pump test made? Yes [ ] No [X] If yes, by whom?
for 100 gal./min. with ft. drawdown after hrs.
Temperature of water Was a chemical analysis made? Yes [ ] No [X]
Was electric log made of well? Yes [ ] No [X] If yes, attach copy

(11) WELL LOG: 12" well
Total depth of completed well ft.
Formation: describe by color, character, size of material, and structure

ft. to	Formation
0-5	Soil
5-25	yellow clay
25-48	gravel & boulders
48-80	loose gravel
80-97	blue clay
97-107	blue gravel
107-133	blue clay
133-155	yellow clay
155-165	blue clay
165-190	gravel with some clay
190-205	blue clay with some gravel
205-240	blue shale

Cement seal = ?
("owner to cement")

Perfs:
46-80'
99-110'
172-180'
188-208'



Work started 1-24 1977 Completed 2-3 1977

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME DeLucchi Well & Pump, Inc.
(Person, firm, or corporation) (Typed or printed)
Address 35137 Mission Blvd.
Fremont, Ca. 94536
(SIGNED) [signature] (Well Driller)

License No. #116079 Dated June 3, 1977

SKETCH LOCATION OF WELL ON REVERSE SIDE

DWR 188 (REV. 9-68)

Ro244

WellSpy
WATER WELL SURVEYS

December 13, 2002

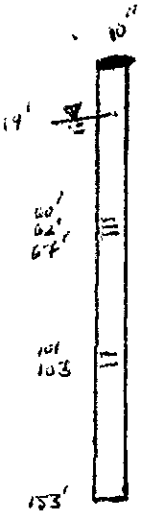
DEC 18 2002

Clear Water Group
229 Tewksbury Ave.
Richmond, CA 94801

Attn: Brian Pierskalla

Video Log of Sunol Tree Gas Station Water Production Well (10"-diam, domestic)

Observation report on survey performed December 12, 2002 for Sunol Tree Gasoline Station, located at 3004 Andrade rd in Alameda County.



1) Well ID on top is 10". The well is under a diamond plate cover and is 12" below the level of the surounding concrete driveway.
2) Zero datum marked at top of the concrete driveway. All side view depths are 18" less than indicated on the monitor.
3) 19' Static water level.
4) 53' Casing appears to be slightly oblong in this area.
5) 55' Clean spot on the casing. Layer of rust was broke off the casing wall.
6) 60' First evidence of Mills knife perforations in the casing.
7) 62' One perforation is evident with water movement.
8) 67' One perforation is evident with water movement.
9) 101' One perforation is evident with water movement.
10) 103' One perforation is evident with water movement.
11) 153' Bottom of the well.
12) Note: There appears to be some biological growth on the casing walls.
13) Note: There may be more perforations in the well that are plugged or encrusted but not visible.

Thank you for choosing WellSpy for your well video service.

WellSpy

Bruce Hunter

ORIGINAL
File Original Duplicate and Triplicate with the

WATER WELL DRILLERS REPORT

Do Not Fill In
NO. 00000

CUSTOMER COPY

DE LUCCHI WELL & PUMP, INC.

DRILLING, CLEANING & REPAIR
SALES, SERVICE & SUPPLIES

35137 MISSION BLVD. PHONE (415) 793-2822
FREMONT, CALIFORNIA 94536

☒ COMPLETED

Invoice No. 24812

Well G2
T-Bear Pump Test, 3000 Andrade Road

APN 96-0001-007-06

45/1E 20 G2

BILLING DATE March 4,1983

TO Helen Hayes
251 Arguello
San Francisco, CA. 94118

ORDER DATE March 3,1983 Joanne Biotti-
CUSTOMER'S ORDER NO. 862-2309
Mr. Tovani-991-9299 Till 9:30A.
PHONE 387-1632 Evenings

WORK ORDERED BY	ORDER TAKEN BY	HOW	LOCATION OF JOB
	JHD	phone	3000 Andrade Rd. Sunol T-Bear Ranch

WORK TO BE DONE ▶ Run well test if pump yields more than 5 gpm.

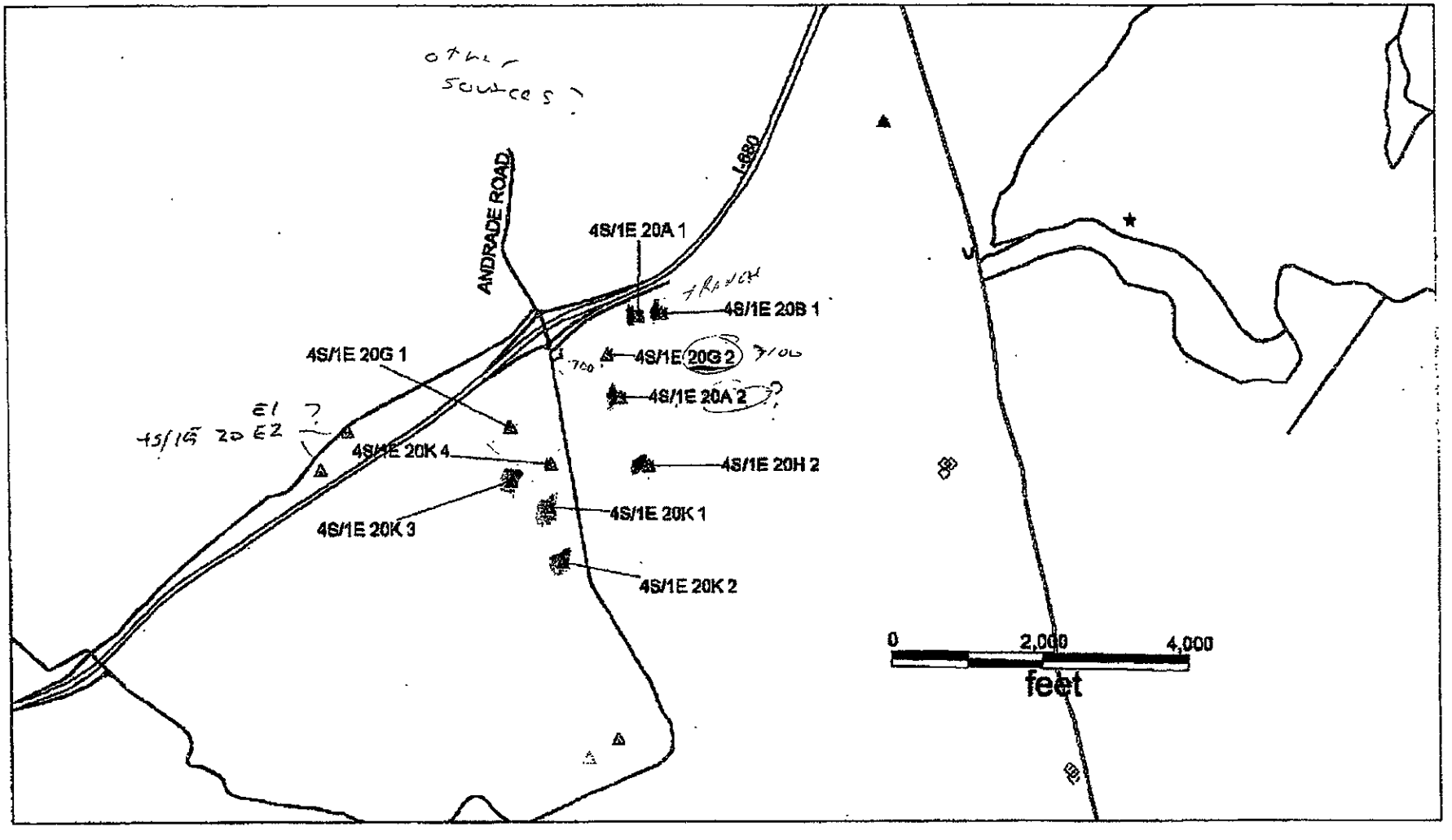
QUANTITY	DESCRIPTION	UNIT PRICE	AMOUNT
	On March 4,1983 a serviceman from DeLucchi Well & Pump, Inc. conducted a well test at 3000 Andrade Rd., Sunol.		
	He began pumping at a rate of 22 gallons per minute with a static level of 1 foot above ground level. After pumping for 4 hours at that rate, the water level was 2'6" below ground level.		
	5 hrs. labor 1 man $42.00 per hr to run test on well.		$ 210.-

TOTAL $ 210.-

RECEIVED

TERMS: 30 DAYS – NET.

Goods delivered to the carrier in good order, and his receipt for same, constitutes delivery of merchandise covered by this invoice. All claims must be made within ten days after receipt of goods. Terms Net 30 Day. Overdue bills subject to a Finance Charge of 1½% (18% Annual Interest). All prices and quotations are subject to change without notice. Shipments and deliveries are contingent on strikes, accidents and/or delays beyond our control. If action is instituted by seller to collect a part or all of purchase price, Buyer agrees to pay such sum as the court may fix as attorneys fees and court costs


other sources?
ANDRADE ROAD
I-680
4S/1E 20A 1
4S/1E 20B 1
4S/1E 20G 1
4S/1E 20G 2
4S/1E 20A 2
4S/1E 20K 4
4S/1E 20H 2
4S/1E 20K 1
4S/1E 20K 3
4S/1E 20K 2
0
2,000
4,000
feet

■ : from DWR

Zone 7
Alameda County Flood Control
&
Water Conservation District

5997 Parkside Drive ■ Pleasanton, California 94588-5127 ■ Phone (925) 484-2600 ■ Fax (925) 462-3914

Telefax Transmittal

Date: 2-27-03

Deliver To: Scott Seery

Name of Firm: ACEHS

Fax Number: 510-337-9335

From: Colleen Winey

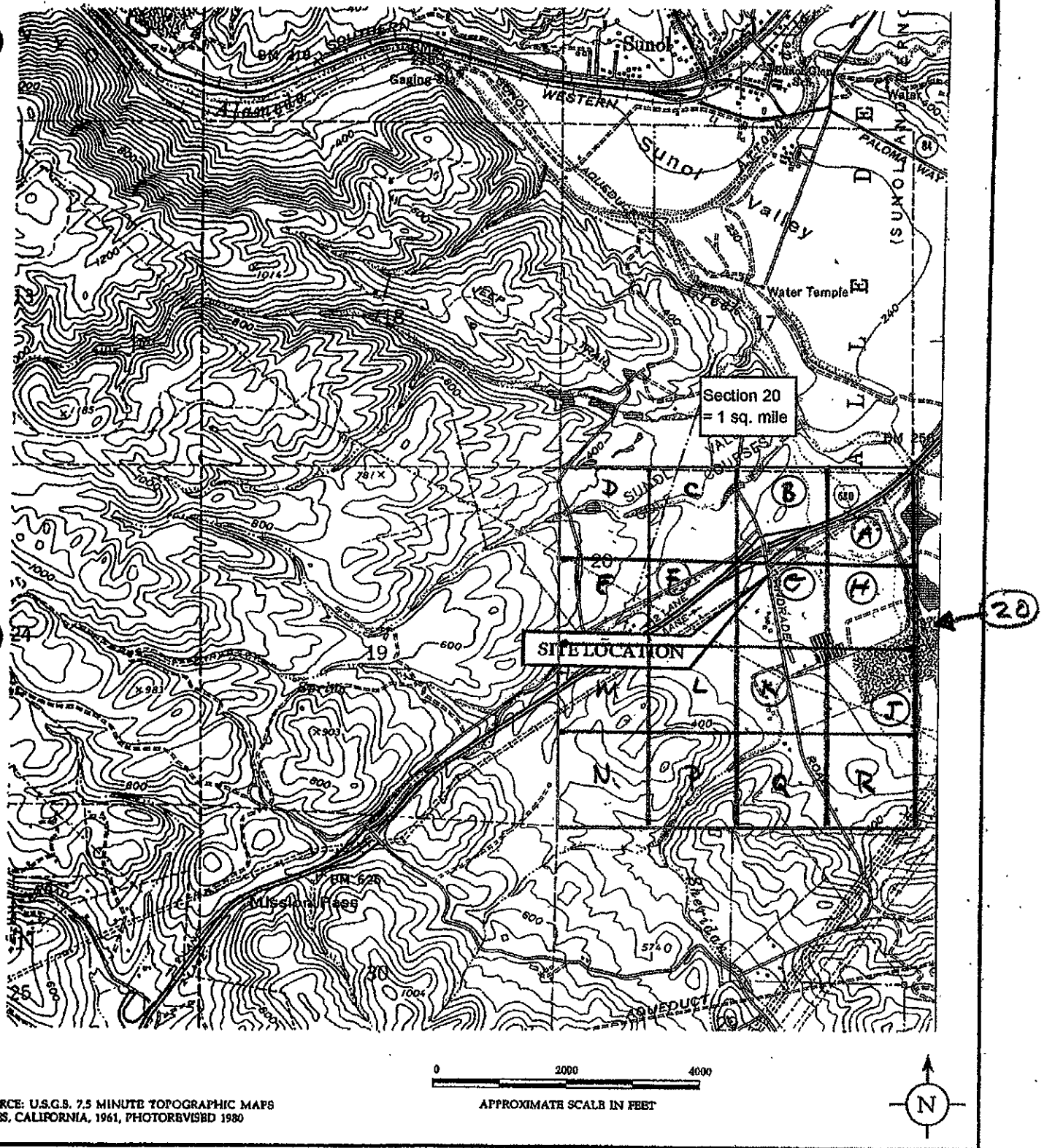
Number of Pages: 5
(including Cover Page)

For Voice Contact Call: (925) 484-2600, Extension:

For Return Fax: (925) 462-3914

Remarks: Scott,
Here's a map. I threw in a couple more logs of nearby wells.
If you need anything else let me know.
C —

WELL LOGS



SOURCE: U.S.G.S. 7.5 MINUTE TOPOGRAPHIC MAPS
NILES, CALIFORNIA, 1961, PHOTOREVISED 1980

SITE LOCATION MAP Sunol Tree Gas Service Station 3400 Andrade Road, Sunol, California	CLEARWATER GROUP, INC.		
	Project No. CB021C	Figure Date 5/03	Figure 1

F-76118

K4?
G1?

ORIGINAL
File with DWR

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

WATER WELL DRILLERS REPORT

(Our Invoice #20098)

Do Not Fill In

No 120334

State Well No. 4S/1E-20G1

Other Well No.

(1) OWNER: (Our Invoice #20468)
Name Sam Brunson
Address 40936 Cascade Pl.
Fremont, Ca. 94538

(2) LOCATION OF WELL:
County Owner's number, if any
Township, Range, and Section
Distance from cities, roads, railroads, etc. Offset 660 & Andrade Rd. 5and1 9½ acre parcel

(3) TYPE OF WORK (check):
New Well X Deepening ☐ Reconditioning ☐ Destroying ☐
If destruction, describe material and procedure in Item 11.

(4) PROPOSED USE (check):
Domestic X Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(5) EQUIPMENT:
Rotary ☐
Cable ☒
Other ☐

(6) CASING INSTALLED:
STEEL: OTHER:
SINGLE ☐ DOUBLE ☐

From ft.	To ft.	Diam.	Gage or Wall	Diameter of Bore	F
0					
1	244	10	10		

Size of shoe or well ring:
Describe joints
If grav
Size of gravel:

Cement seal = ? ("owner cemented")

Perfs.
48-60'
68-104'
80-124' (?)
150-162'
180-192', and
200-236'

(7) PERFORATIONS OR SCREEN:
Type of perforation or name of screen

From ft.	To ft.	Perf. per row	Rows per ft.	Size in. x in.
48	60			
68	104			
80	124			
150	162			
180	192			
200	236			

(8) CONSTRUCTION:
Was a surface sanitary seal provided? Yes ☐ No ☐ To what depth ft.
Were any strata sealed against pollution? Yes ☐ No ☐ If yes, note depth of strata
From ft. to ft.
From ft. to ft.
Method of sealing

(9) WATER LEVELS:
Depth at which water was first found, if known ft.
Standing level before perforating, if known ft.
Standing level after perforating and developing 22 ft.

(10) WELL TESTS:
Was pump test made? Yes ☐ No ☐ If yes, by whom?
For 30 hrs. 100 gal./min. with ft. drawdown after hrs.
Temperature of water Was a chemical analysis made? Yes ☐ No ☐
Was electric log made of well? Yes ☐ No ☒ If yes, attach copy

(11) WELL LOG: 10" well
Total depth ft. Depth of completed well 244 ft.
Formation: Describe by color, character, size of material

Well G1
#3111 Andrade Road

ft. to	Formation
0-4	Soil
4-11	brown clay
11-40	yellow clay
40-60	sandy yellow clay
60-78	sandy yellow clay with some gravel
78-90	sandy yellow clay
90-102	sandy yellow clay with some gravel
102-130	soft blue shale
112-148	blue clay
148-160	gravel with some clay
160-180	blue clay
180-192	gravel with some clay
192-210	blue clay
210-236	blue clay & gravel
236-244	blue clay

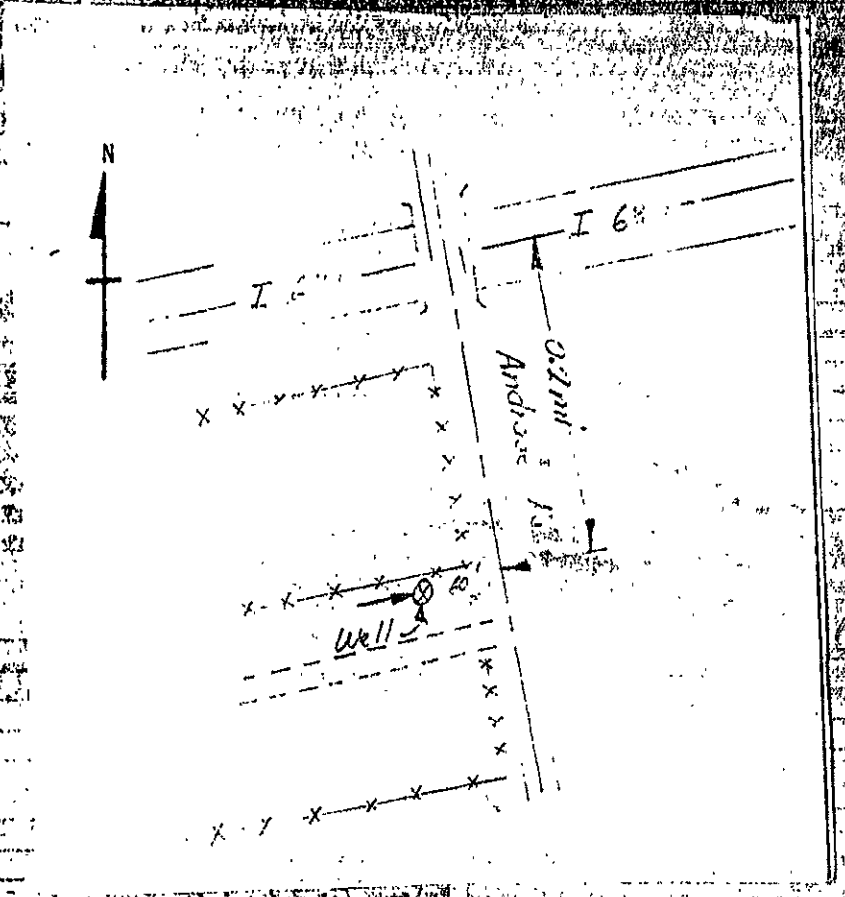
Work started 6-21 19 76 Completed 6-24 19 76

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME DeLucchi Well & Pump, Inc.
(Person, firm, or corporation) (Typed or printed)
Address 35137 Mission Blvd.
Fremont, Ca. 94536
[Signed] R. J. DeLucchi
(Well Driller)
License No. 116079 Dated June 30, 1976 19

SKETCH LOCATION OF WELL ON REVERSE SIDE

DWR 188 (REV. 9-66)



NOV 6 2017

DIVISION OF WATER RESOURCES

QUADRUPLICATE
For Local Requirements

Page ___ of ___

Owner's Well No. ___

Date Work Began ___, Ended ___

Local Permit Agency ___

Permit No. ___ Permit Date ___

STATE OF CALIFORNIA
WELL COMPLETION REPORT
Refer to Instruction Pamphlet

No. 556062

DWR USE ONLY — DO NOT FILL IN
4S 1E 20 [redacted]
STATE WELL NO./STATION NO.
LATITUDE LONGITUDE
APN/TRS/OTHER

GEOLOGIC LOG

ORIENTATION (✓) ___ VERTICAL ___ HORIZONTAL ___ ANGLE ___ (SPECIFY)

DEPTH TO FIRST WATER ___ (Ft.) BELOW SURFACE

DEPTH FROM SURFACE Ft.	to Ft.	DESCRIPTION *Describe material, grain size, color, etc.*

TOTAL DEPTH OF BORING ___ (Feet)

TOTAL DEPTH OF COMPLETED WELL ___ (Feet)

WELL OWNER

Name ___

Mailing Address ___

CITY STATE ZIP

WELL LOCATION

Address ___

City ___

County ___

APN Book ___ Page ___ Parcel ___

or Township ___ Range ___ Section ___

or Latitude ___ DEG. MIN. SEC. NORTH Longitude ___ DEG. MIN. SEC. WEST

LOCATION SKETCH

NORTH / WEST / EAST / SOUTH

Illustrate or Describe Distance of Well from Landmarks such as Roads, Buildings, Fences, Rivers, etc. PLEASE BE ACCURATE & COMPLETE.

ACTIVITY (✓)

___ NEW WELL

MODIFICATION/REPAIR
___ Deepen
___ Other (Specify)

___ DESTROY *(Describe Procedures and Material Under "GEOLOGIC LOG"*

PLANNED USE(S) (✓)

___ MONITORING

WATER SUPPLY
___ Domestic
___ Public
___ Irrigation
___ Industrial
___ "TEST WELL"
___ CATHODIC PROTECTION
___ OTHER (Specify)

DRILLING METHOD ___ FLUID ___

WATER LEVEL & YIELD OF COMPLETED WELL

DEPTH OF STATIC WATER LEVEL ___ (Ft.) & DATE MEASURED ___

ESTIMATED YIELD* ___ (GPM) & TEST TYPE ___

TEST LENGTH ___ (Hrs.) TOTAL DRAWDOWN ___ (Ft.)

* *May not be representative of a well's long-term yield.*

CASING(S)

DEPTH FROM SURFACE Ft.	to Ft.	BORE-HOLE DIA. (Inches)	TYPE (✓) BLANK	SCREEN	CONDUCTOR	FILL PIPE	MATERIAL/ GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)
81	258	7-7/8		x			PVC	4-1/2		

ANNULAR MATERIAL

DEPTH FROM SURFACE Ft.	to Ft.	TYPE CEMENT (✓)	BENTONITE (✓)	FILL (✓)	FILTER PACK (TYPE/SIZE)

ATTACHMENTS (✓)

___ Geologic Log
___ Well Construction Diagram
___ Geophysical Log(s)
___ Soil/Water Chemical Analyses
___ Other ___

ATTACH ADDITIONAL INFORMATION, IF IT EXISTS.

CERTIFICATION STATEMENT

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.

NAME GLENN MARTELL & SON, INC. (PERSON, FIRM, OR CORPORATION — TYPED OR PRINTED)

ADDRESS 1818 Loveridge Road CITY PITTSBURG, CALIFORNIA STATE 94565 ZIP

Signed ___ (WELL DRILLER/AUTHORIZED REPRESENTATIVE) DATE SIGNED 9/11/95

510952 C-57 LICENSE NUMBER

DWR 188 REV. 7-90

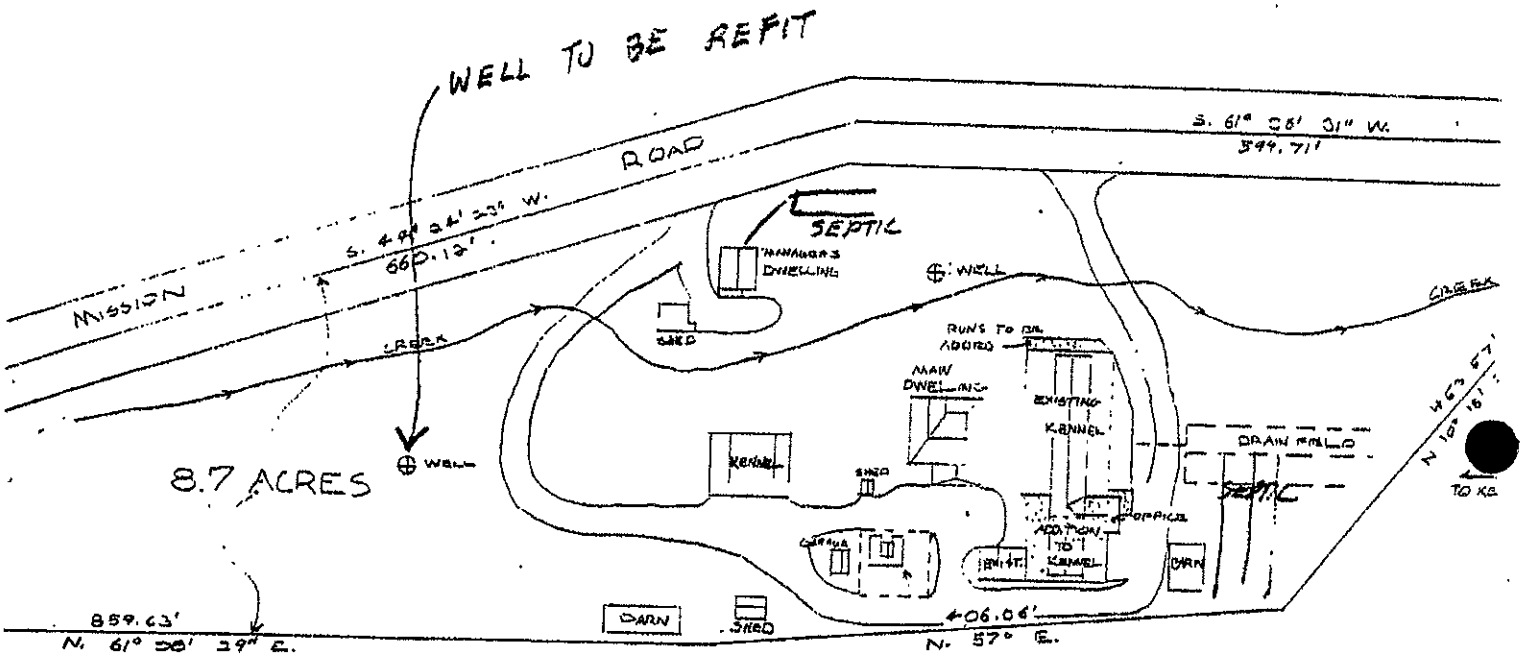
IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

356

JJ6062

VICINITY MAP

INDICATE BELOW THE EXACT LOCATION OF WELL WITH RESPECT TO THE FOLLOWING ITEMS: PROPERTY LINES, WATER BODIES OR WATER COURSES, DRAINAGE PATTERN ROADS, EXISTING WELLS, SEWER MAIN AND LATERALS AND PRIVATE SEWAGE DISPOSAL SYSTEMS OR OTHER SOURCES OF CONTAMINATION OR POLLUTION. ***INCLUDE DIMENSIONS. THIS IS REQUIRED IN ORDER TO OBTAIN YOUR PERMIT! ALSO, PLEASE INCLUDE YOUR A.P.N. (ASSESSORS PARCEL NUMBER) ON THIS MAP.*** *YOU CAN GET IT FROM THE ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT.*



INTERSTATE HIGHWAY 680

To Livermore

0 100 200 300 400

FEET

5815 MISSION ROAD
SUNOL, CA 94586

Parcel No. 96-1-3-4.

PREPARED BY: Pete Wiard

APN 096-0001-11-9 ??

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

WATER WELL DRILLERS REPORT

(Our Invoice #20473)

Do Not Fill In

№ 120422

State Well No 4S/1E-20H2

Other Well No 77137

ORIGINAL
File with DWR

(1) OWNER:
Name Jack M. Farnham
Address 15572 Woodard Rd.
San Jose, Ca.

Well H2
#3540 Andrade Road

(2) LOCATION OF WELL:
County ALAMEDA Owner's number, if any
Township, Range, and Section
Distance from cities, roads, railroads, etc.
3540 Andrada Rd. Sunol

(3) TYPE OF WORK (check):
New Well [X] Deepening [ ] Reconditioning [ ] Destroying [ ]
If destruction, describe material and procedure in Item 11.

(4) PROPOSED USE (check):
Domestic [X] Industrial [ ] Municipal [ ]
Irrigation [ ] Test Well [ ] Other [ ]

(5) EQUIPMENT:
Rotary [ ]
Cable [X]
Other [ ]

(6) CASING INSTALLED:
STEEL: OTHER:
SINGLE [ ] DOUBLE [ ]

From ft.	To ft.	Diam.	Gage or Wall
0	216	12	10

If gravel packed

Diameter of Bore	From ft.	To ft.
16"	46	80

Type of shoe or well ring:
Describe joint WELDED
Size of gravel: PEA

(7) PERFORATIONS OR SCREEN:
Type of perforation or name of screen

From ft.	To ft.	Perf. per row	Rows per ft.	Size in. x in.
46-80				Mills Knife
99-110				" "
172-180				" "
188-208				1/8 X 1½

(8) CONSTRUCTION: Cement to surface.
Was a surface sanitary seal provided? Yes [ ] No [ ] To what depth ft.
Were any strata sealed against pollution? Yes [ ] No [X] If yes, note depth of strata
From ft. to ft.
From ft. to ft.
Method of sealing

(9) WATER LEVELS:
Depth at which water was first found, if known ft.
Standing level before perforating, if known ft.
Standing level after perforating and developing 35 ft.

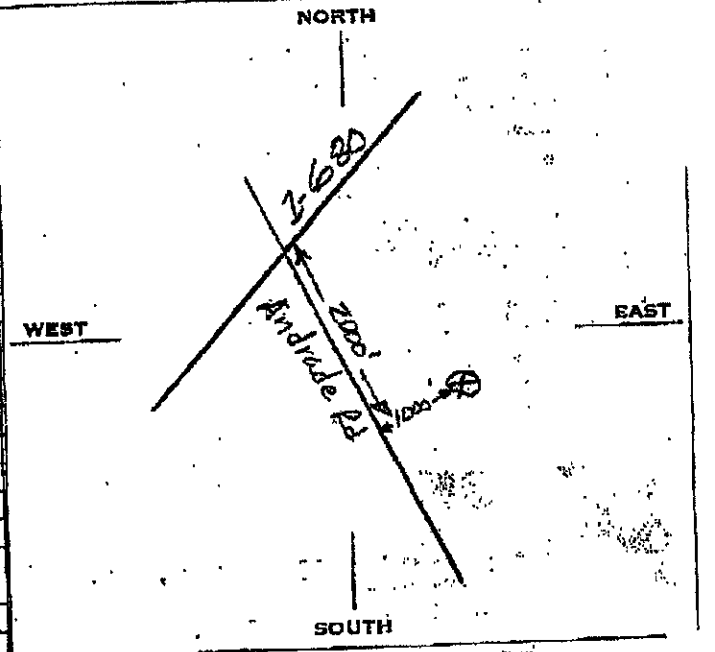
(10) WELL TESTS:
Was pump test made? Yes [ ] No [X] If yes, by whom?
½ hr. 100 gal./min. with ft. drawdown after hrs.
Temperature of water Was a chemical analysis made? Yes [ ] No [X]
Was electric log made of well? Yes [ ] No [X] If yes, attach copy

(11) WELL LOG: 12" well
Total depth of completed well ft.
Formation: describe by color, character, size of material, and structure

From ft.	To ft.	Formation
0	5	Soil
5	25	yellow clay
25	48	gravel & boulders
48	80	loose gravel
80	97	blue clay
97	107	blue gravel
107	133	blue clay
133	155	yellow clay
155	165	blue clay
165	190	gravel with some clay
190	205	blue clay with some gravel
205	240	blue shale

Cement seal= ?
("owner to cement")

Perfs:
46-80
99-110
172-180
188-208



Work started 1-24 1977 Completed 2-3 1977

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

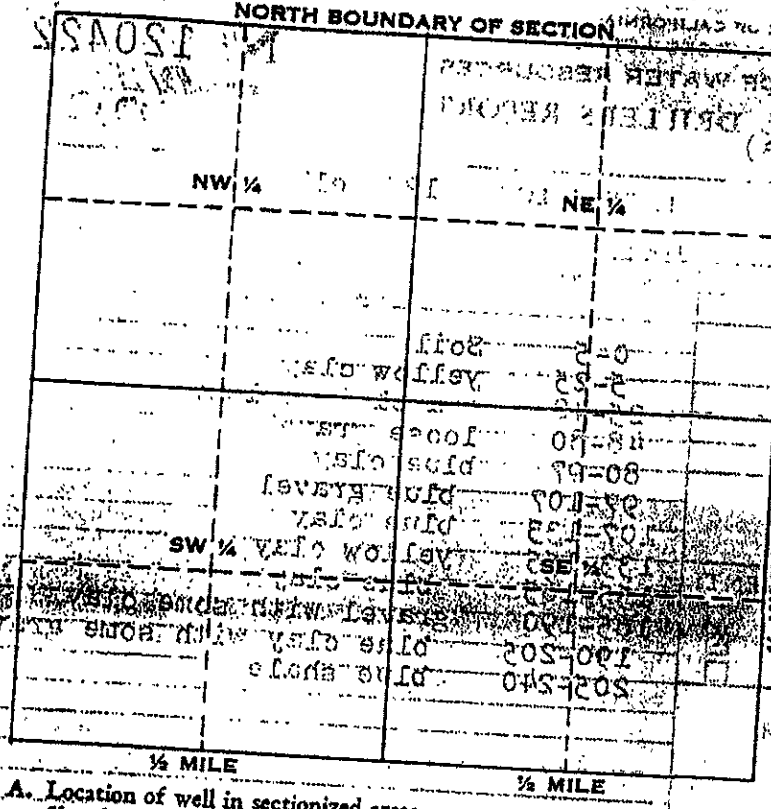
NAME DeLucchi Well & Pump, Inc.
(Person, firm, or corporation) (Typed or printed)
Address 35137 Mission Blvd.
Fremont, Ca. 94536
[SIGNED] W. L. DeLucchi
(Well Driller)
License No #116079 Dated June 3, 1977

SKETCH LOCATION OF WELL ON REVERSE SIDE

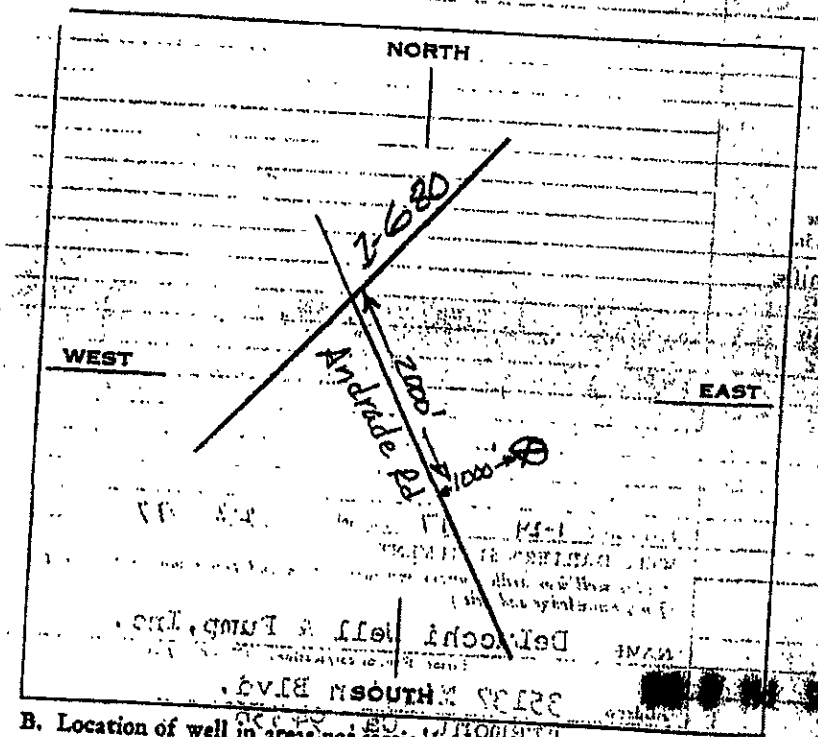
DWR 188 (REV. 9-68)

WELL LOCATION SKETCH

12052



A. Location of well in sectionized areas.
Sketch roads, railroads, streams, or other features as necessary.



B. Location of well in areas not sectionized.
Sketch roads, railroads, streams, or other features as necessary.
Indicate distances.

K3

ORIGINAL
File With DWR
Page 1 of 3 (+map)

STATE OF CALIFORNIA
WELL COMPLETION REPORT
Refer to Instruction Pamphlet
No. 715716

DWR USE ONLY — DO NOT FILL IN
4S/1E/25 2D [redacted]
STATE WELL NO./STATION NO.
LATITUDE LONGITUDE
APN/TRS/OTHER

Owner's Well No.
Date Work Began 5-11-99 Ended 5-14-99
Local Permit Agency Zone 7 Water Agency
Permit No. 98203 Permit Date 12-11-98

GEOLOGIC LOG

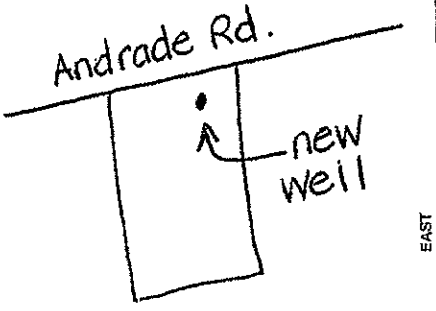
ORIENTATION (✓) ___ VERTICAL ___ HORIZONTAL ___ ANGLE ___ (SPECIFY)
DRILLING METHOD ___ FLUID ___

DEPTH FROM SURFACE FL	to Ft	DESCRIPTION *Describe material, grain size, color, etc.*
0	6	dark clay
6	8	brown clay & rock
8	9	brown clay
9	10	brown sandy clay & rock
10	11	brown clay
11	12	brown sandy clay & rock
12	14	brown clay
14	17	sandy clay
17	18	brown clay
18	23	sandy clay
23	24	sandy clay & rock
24	27	brown clay
27	31	sandy clay & strips of rock
31	34	hard clay
34	35	sandy clay
35	36	clay
36	38	sandy clay
38	39	sandy clay & rock
39	42	clay
42	46	fine brown sand & rock
46	49	clay
49	51	sandy clay
51	53	clay
53	54	gravel & sandy clay
54	55	clay
55	56	rock & sandy clay
56	71	sandy gray clay
71	72	gray fine sand
72	78	gray clay
78	79	fine sand

TOTAL DEPTH OF BORING 193' (Feet)
TOTAL DEPTH OF COMPLETED WELL 133' (Feet)

WELL OWNER
Name Geoff Goble
Mailing Address 1076 Michigan Avenue
San Jose CA 95125
CITY STATE ZIP

WELL LOCATION
Address Andrade Road
City Sunol
County Alameda County
APN Book 096 Page 0001 Parcel 012 02
Township ___ Range ___ Section ___
Latitude ___ DEG. ___ MIN. ___ SEC. NORTH Longitude ___ DEG. ___ MIN. ___ SEC. WEST

LOCATION SKETCH
NORTH


WEST EAST
SOUTH
Illustrate or Describe Distance of Well from Roads, Buildings, Fences, Rivers, etc. and attach a map. Use additional paper if necessary. PLEASE BE ACCURATE & COMPLETE.

ACTIVITY (✓)
X NEW WELL
MODIFICATION/REPAIR
___ Deepen
___ Other (Specify)
___ DESTROY *(Describe Procedures and Materials Under "GEOLOGIC LOG")*

PLANNED USES (✓)
WATER SUPPLY
X Domestic ___ Public
___ Irrigation ___ Industrial
___ MONITORING
___ TEST WELL
___ CATHODIC PROTECTION
___ HEAT EXCHANGE
___ DIRECT PUSH
___ INJECTION
___ VAPOR EXTRACTION
___ SPARGING
___ REMEDIATION
___ OTHER (SPECIFY)

WATER LEVEL & YIELD OF COMPLETED WELL
DEPTH TO FIRST WATER ___ (Ft.) BELOW SURFACE
DEPTH OF STATIC WATER LEVEL 60' (Ft.) & DATE MEASURED 05-18-99
ESTIMATED YIELD * ___ (GPM) & TEST TYPE ___
TEST LENGTH ___ (Hrs.) TOTAL DRAWDOWN ___ (Ft.)
** May not be representative of a well's long-term yield.*

CASING (S)

DEPTH FROM SURFACE Ft	to Ft	BORE-HOLE DIA. (Inches)	TYPE (✓) BLANK	SCREEN	CONDUCTOR	FILL PIPE	MATERIAL / GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)
0	42	12¼"	X				SDR-21	6"	.316"	
42	55	12¼"		X			SDR-21	6"	.316"	40/1000
55	75	12¼"	X				SDR-21	6"	.316"	
75	95	12¼"		X			SDR-21	6"	.316"	40/1000
95	115	12¼"	X				SDR-21	6"	.316"	
115	133	12¼"		X			SDR-21	6"	.316"	40/1000

ANNULAR MATERIAL

DEPTH FROM SURFACE Ft	to Ft	TYPE CEMENT (✓)	BENTONITE (✓)	FILL (✓)	FILTER PACK (TYPE/SIZE)
0	40	X			
40	133				¼" grave

ATTACHMENTS (✓)
___ Geologic Log
___ Well Construction Diagram
___ Geophysical Log(s)
___ Soil/Water Chemical Analyses
___ Other ___
ATTACH ADDITIONAL INFORMATION, IF IT EXISTS.

CERTIFICATION STATEMENT
I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.
NAME Dejesus Pump & Well Drilling, Inc.
(PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)
ADDRESS 2582 Sellers Avenue, Brentwood, CA 94513
CITY STATE ZIP
Signed [signature] WELL DRILLER/AUTHORIZED REPRESENTATIVE
06/04/99 DATE SIGNED
542544 C-57 LICENSE NUMBER

DWR 188 REV. 11-97
IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

ORIGINAL
File with DWR
Page 2 of 3

STATE OF CALIFORNIA

WELL COMPLETION REPORT

Refer to Instruction Pamphlet

No. 715716

STATE WELL NO./STATION NO.

LATITUDE LONGITUDE

APN/TRS/OTHER

Owner's Well No. —

Date Work Began 5-11-99 Ended 5-14-99

Local Permit Agency Zone 7 Water Agency

Permit No. 98203 Permit Date 12-11-98

GEOLOGIC LOG

ORIENTATION (✓) ___ VERTICAL ___ HORIZONTAL ___ ANGLE ___ (SPECIFY)

DRILLING METHOD ___ FLUID ___

DEPTH FROM SURFACE Ft.	to Ft.	DESCRIPTION *Describe material, grain size, color, etc.*
79	80	sandy clay
80	82	sandy clay & strips of sand
82	90	sandy clay
90	92	coarse sand & sheel
92	98	gray hard clay
98	102	sheel & sandstone
102	105	clay
105	108	sandstone & sheel
108	110	hard sheel & sandstone
110	112	sandy clay
112	114	hard sheel & sandstone
114	115	sandy clay
115	119	hard sheel & sandstone
119	121	soft sandy clay
121	122	hard sheel
122	128	sandy soft clay, gravel, & sandstone & sheel
128	130	hard dark clay & strips of sheel
130	131	sheel (hard)
131	134	hard dark clay
134	166	sheel
166	167	brown hard clay
167	170	sheel with strips of hard clay
170	171	brown hard clay
171	174	sheel
174	175	hard clay
175	176	sheel
176	178	hard clay & sandstone
178	182	sheel
182	184	rock

TOTAL DEPTH OF BORING ___ (Feet)

TOTAL DEPTH OF COMPLETED WELL ___ (Feet)

WELL OWNER

Name Geoff Goble

Mailing Address 1076 Michigan Avenue

City San Jose State CA Zip 95125

WELL LOCATION

Address Andrade Road

City Sunol

County Alameda County

APN Book 096 Page 0001 Parcel 012 02

Township ___ Range ___ Section ___

Latitude ___ DEG. ___ MIN. ___ SEC. NORTH

Longitude ___ DEG. ___ MIN. ___ SEC. WEST

LOCATION SKETCH

NORTH / WEST / EAST / SOUTH

Illustrate or Describe Distance of Well from Roads, Buildings, Fences, Rivers, etc. and attach a map. Use additional paper if necessary. PLEASE BE ACCURATE & COMPLETE.

ACTIVITY (✓)

___ NEW WELL

MODIFICATION/REPAIR

___ Deepen

___ Other (Specify)

___ DESTROY *(Describe Procedures and Materials Under "GEOLOGIC LOG")*

PLANNED USES (✓)

WATER SUPPLY

___ Domestic ___ Public

___ Irrigation ___ Industrial

___ MONITORING

___ TEST WELL

___ CATHODIC PROTECTION

___ HEAT EXCHANGE

___ DIRECT PUSH

___ INJECTION

___ VAPOR EXTRACTION

___ SPARGING

___ REMEDIATION

___ OTHER (SPECIFY)

WATER LEVEL & YIELD OF COMPLETED WELL

DEPTH TO FIRST WATER ___ (Ft.) BELOW SURFACE

DEPTH OF STATIC WATER LEVEL ___ (Ft.) & DATE MEASURED ___

ESTIMATED YIELD * ___ (GPM) & TEST TYPE ___

TEST LENGTH ___ (Hrs.) TOTAL DRAWDOWN ___ (Ft.)

** May not be representative of a well's long-term yield.*

CASING (S)

DEPTH FROM SURFACE Ft.	to Ft.	BORE-HOLE DIA. (Inches)	TYPE (✓) BLANK	SCREEN	CON-DUCTOR	FILL PIPE	MATERIAL / GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)

ANNULAR MATERIAL

DEPTH FROM SURFACE Ft.	to Ft.	TYPE CEMENT (✓)	BENTONITE (✓)	FILL (✓)	FILTER PACK (TYPE SIZE)

ATTACHMENTS (✓)

___ Geologic Log

___ Well Construction Diagram

___ Geophysical Log(s)

___ Soil/Water Chemical Analyses

___ Other ___

ATTACH ADDITIONAL INFORMATION, IF IT EXISTS.

CERTIFICATION STATEMENT

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.

NAME ___ (PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)

ADDRESS ___ CITY ___ STATE ___ ZIP ___

Signed ___ DATE SIGNED ___ C-57 LICENSE NUMBER ___

WELL DRILLER/AUTHORIZED REPRESENTATIVE

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

DWR 188 REV. 11-97

ORIGINAL
File with DWR

Page 3 of 3

STATE OF CALIFORNIA
WELL COMPLETION REPORT
Refer to Instruction Pamphlet

No. 715716

DWR USE ONLY — DO NOT FILL IN
STATE WELL NO./STATION NO.
LATITUDE LONGITUDE
APN/TRS/OTHER

Owner's Well No. .
Date Work Began 5-11-99 Ended 5-14-99
Local Permit Agency Zone 7 Water Agency
Permit No. 98203 Permit Date 12-11-98

GEOLOGIC LOG

ORIENTATION (✓) ___ VERTICAL ___ HORIZONTAL ___ ANGLE ___ (SPECIFY)
DRILLING METHOD ___ FLUID ___

DEPTH FROM SURFACE Ft.	to Ft.	DESCRIPTION *Describe material, grain size, color, etc.*
184	193	sheel
193	--	hard

TOTAL DEPTH OF BORING ___ (Feet)
TOTAL DEPTH OF COMPLETED WELL ___ (Feet)

WELL OWNER

Name Geoff Goble
Mailing Address 1076 Michigan Avenue
San Jose CA 95125
CITY STATE ZIP

WELL LOCATION

Address Andrade Road
City Sunol
County Alameda County
APN Book 096 Page 0001 Parcel 012 02
Township ___ Range ___ Section ___
Latitude ___ DEG. ___ MIN. ___ SEC. NORTH
Longitude ___ DEG. ___ MIN. ___ SEC. WEST

LOCATION SKETCH

NORTH / WEST / EAST / SOUTH

Illustrate or Describe Distance of Well from Roads, Buildings, Fences, Rivers, etc. and attach a map. Use additional paper if necessary. PLEASE BE ACCURATE & COMPLETE.

ACTIVITY (✓)

___ NEW WELL
MODIFICATION/REPAIR
___ Deepen
___ Other (Specify)
___ DESTROY *(Describe Procedures and Materials Under "GEOLOGIC LOG")*

PLANNED USES (✓)

WATER SUPPLY
___ Domestic ___ Public
___ Irrigation ___ Industrial
MONITORING ___
TEST WELL ___
CATHODIC PROTECTION ___
HEAT EXCHANGE ___
DIRECT PUSH ___
INJECTION ___
VAPOR EXTRACTION ___
SPARGING ___
REMEDIATION ___
OTHER (SPECIFY) ___

WATER LEVEL & YIELD OF COMPLETED WELL

DEPTH TO FIRST WATER ___ (Ft.) BELOW SURFACE
DEPTH OF STATIC WATER LEVEL ___ (Ft.) & DATE MEASURED ___
ESTIMATED YIELD * ___ (GPM) & TEST TYPE ___
TEST LENGTH ___ (Hrs.) TOTAL DRAWDOWN ___ (Ft.)
* *May not be representative of a well's long-term yield.*

CASING (S)

DEPTH FROM SURFACE Ft.	to Ft.	BORE-HOLE DIA. (Inches)	TYPE (✓) BLANK	SCREEN	CONDUCTOR	FILL PIPE	MATERIAL / GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (inches)

ANNULAR MATERIAL

DEPTH FROM SURFACE Ft.	to Ft.	TYPE CE-MENT (✓)	BEN-TONITE (✓)	FILL (✓)	FILTER PACK (TYPE/SIZE)

ATTACHMENTS (✓)

___ Geologic Log
___ Well Construction Diagram
___ Geophysical Log(s)
___ Soil/Water Chemical Analyses
___ Other ___

ATTACH ADDITIONAL INFORMATION, IF IT EXISTS.

CERTIFICATION STATEMENT

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.

NAME ___ (PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)
ADDRESS ___ CITY ___ STATE ___ ZIP
Signed ___ (WELL DRILLER/AUTHORIZED REPRESENTATIVE) DATE SIGNED ___ C-57 LICENSE NUMBER ___

DWR 188 REV. 11-97

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

ZONE 7
WATER RESOURCES ENGINEERING

WELL LOCATION DATA

7/5716

WELL NUMBER: **4S/1E 20K 3**

ADDRESS: **ANDRADE ROAD**

OWNER: **GEOFF GOBLE**

USE: **DOMESTIC**

DRILLER: **DEJESUS PUMP & WELL DRILLING**

DATE COMPLETED: **05/14/1999**

DEPTH:
DRILLED **193** Ft

DIAMETER: **6** In

OTHER DESIGNATION:

PERFS: UPPER **42**
LOWER **133**

METER NUMBER:

RP ELEVATION: **300** Ft

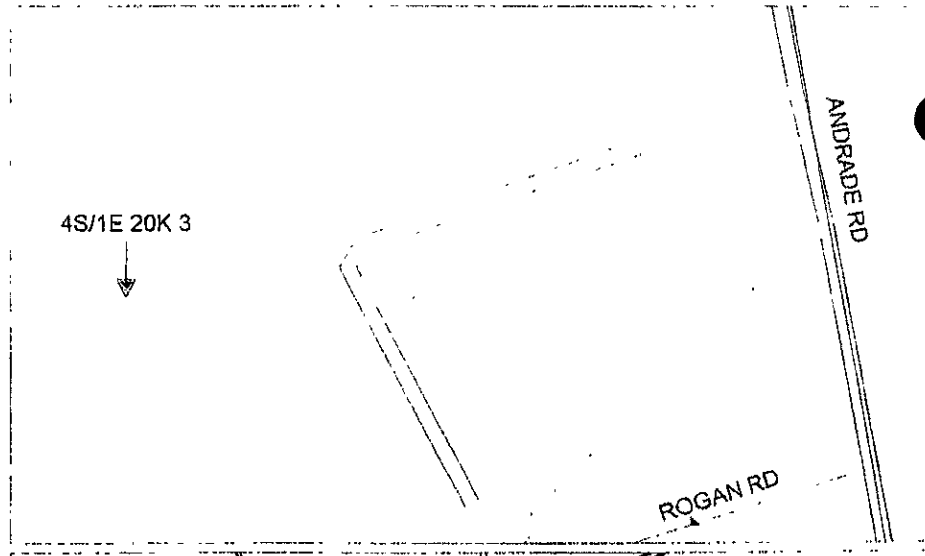
DATE SOUNDED:

DATE DESTROYED:

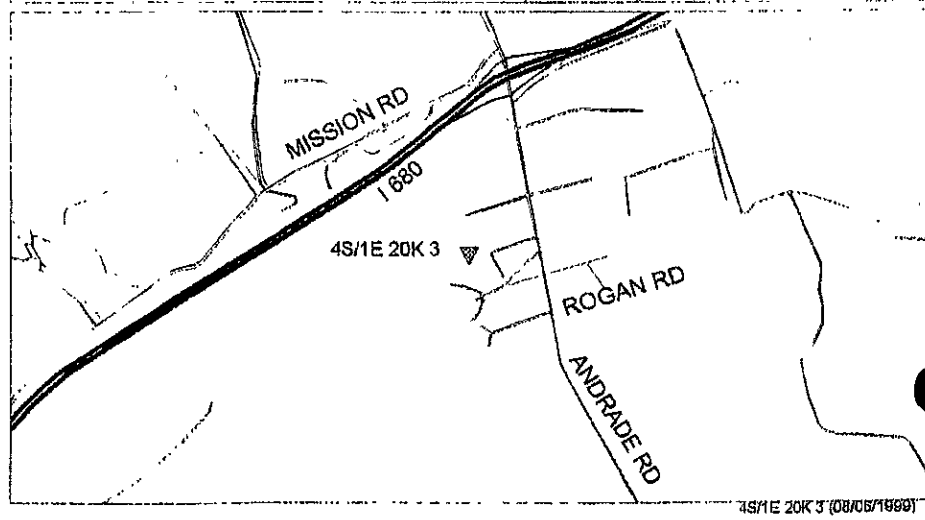
DATE UNLOCATABLE:

LOCATION SKETCH

DETAIL



GENERAL



Scale: 1 inch = 2000 ft

0 2000

4S/1E 20K 3 (08/05/1999)

Boeky

WellSpy
WATER WELL SURVEYS

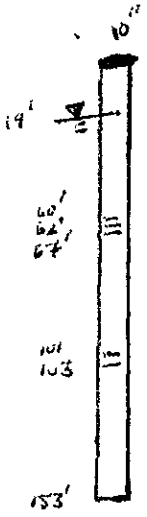
December 13, 2002

Clear Water Group
229 Tewksbury Ave.
Richmond, CA 94801

Attn: Brian Pierskalla

Video Log of Sunol Tree Gas Station Water Production Well (10" diam, domestic)

Observation report on survey performed December 12, 2002 for Sunol Tree Gasoline Station, located at 3004 Andrade rd in Alameda County.



1) Well ID on top is 10". The well is under a diamond plate cover and is 12" below the level of the surounding concrete driveway.
2) Zero datum marked at top of the concrete driveway. All side view depths are 18" less than indicated on the monitor.
3) 19' Static water level.
4) 53' Casing appears to be slightly oblong in this area.
5) 55' Clean spot on the casing. Layer of rust was broke off the casing wall.
6) 60' First evidence of Mills knife perforations in the casing.
7) 62' One perforation is evident with water movement.
8) 67' One perforation is evident with water movement.
9) 101' One perforation is evident with water movement.
10) 103' One perforation is evident with water movement.
11) 153' Bottom of the well.
12) Note: There appears to be some biological growth on the casing walls.
13) Note: There may be more perforations in the well that are plugged or encrusted but not visible.

Thank you for choosing WellSpy for your well video service.

WellSpy

Bruce Hunter

2/27/03

PSA_R_2003-2-27

CLEARWATER
GROUP
Environmental Services

FACSIMILE TRANSMITTAL SHEET

TO: Scott Seery	FROM: Brian Pierskalla
COMPANY: ACHCSA	DATE: 2/27/2003
FAX NUMBER: 510-337-9335	TOTAL NO. OF PAGES INCLUDING COVER: 2
PHONE NUMBER: 510-567-6783	SENDER'S REFERENCE NUMBER: 510-307-9943 x 231
RE: Sunol Tree Gas Preliminary Site Assessment Well Spy Log	YOUR REFERENCE NUMBER: CP032F

☐ URGENT ☑ FOR REVIEW ☐ PLEASE COMMENT ☐ PLEASE REPLY ☐ PLEASE RECYCLE

NOTES/COMMENTS:

Dear Scott:

Please see attached Preliminary Site Assessment Log from Well Spy for the Sunol Tree Gas site on Andrade Road, Sunol. We also have a VCR tape of the down-well camera, which I have perused about half of the tape. The well looked very flocculated with rust/iron scaling. No evidence of vertical damage was apparent. Please call me with any questions at (510) 307-9943 x 231.

Regards,

Brian Pierskalla

Project Manager

229 Tewksbury Avenue ◆ Point Richmond, California 94801 ◆ Telephone: 510-307-9943 ◆ Fax: 510-232-2823

CLEARWATER
GROUP
Environmental Services

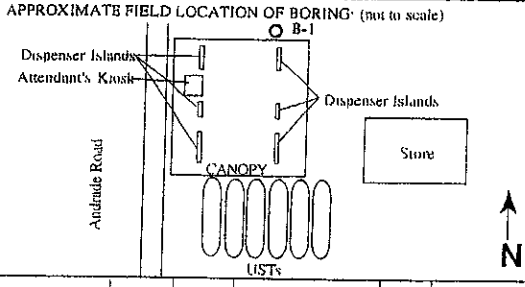
APPENDIX C

Boring Logs

SOIL BORING LOG: B-1

CLEARWATER GROUP INC.

APPROXIMATE FIELD LOCATION OF BORING: (not to scale)



DRILLING CONTRACTOR: Fast Tek	BORING DIAMETER: 2 inches	CLIENT/LOCATION: Sunol Tree Service, Sunol, CA	
DRILL RIG OPERATOR: Anthony Harris	BORING DEPTH: 20 feet	SCREEN SLOT SIZE: 0.010	DRILLING DATE: 11/27/02
DRILL RIG TYPE: Geoprobe DPT	WELL DEPTH: 20 feet	WELL MATERIAL: Sch. 40 PVC	FILTER PACK: NA
BORING SEAL: Neat Cement w/ 5% Bentonite		PLANNED USE: Grab Samples	LOGGED BY: Brin Pierskalla
SAMPLING METHOD: 4-foot Continuous Core w/ Sleeve		MONITORING INST.: Thermo 580B PID	APPROVED BY: Barney Popkin, R.G.
FIRST ENCOUNTERED WATER DEPTH: 15.75 feet below ground surface ▽		STATIC WATER DEPTH - DATE: NA-Temporary Boring ▼	

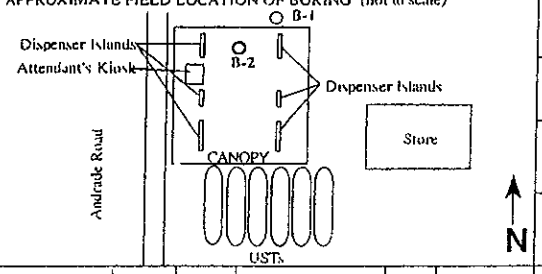
WELL CONSTRUCTION DETAIL	WATER LEVEL	DEPTH (FEET)	SAMPLING: INTERVAL	SAMPLING: RECOVERY	SAMPLING: ANALYTICAL	OVM READING (PPM)	GRAPHIC LOG OR USCS CODE	
		1–3						6 inches Concrete, Sandy gravel, medium brown, moist, medium dense. Sandy GRAVEL (GM), with solt, medium brown , dense, 75% fine to medium gravel to 2inches, 20% silt, 15% medium sand, moist.
		4				0.0		
		5–7						CLAY (CL), green-black, medium stiff, moderate to high plasticity, moist.
		8				0.0		
		9–11						CLAY (CL), brown, very stiff, low plasticity, moist.
		12				0.0		
		13–15						Sandy SILT (ML), medium brown, medium stiff, low to moderate plasticity, 80% silt, 20% fine sand, moist.
	▽	16				0.0		
		17–19						Sandy SILT (ML) w/ gravel, medium brown, medium stiff, low to moderate plasticity, 70% silt, 15% fine to medium sand, 15% fine to medium gravel, wet.
		20				0.9		
		21–30						END OF BORING @ 20 feet BGS

SOIL BORING LOG: B-2

CLEARWATER GROUP INC.

Project: CP032F

APPROXIMATE FIELD LOCATION OF BORING (not to scale)



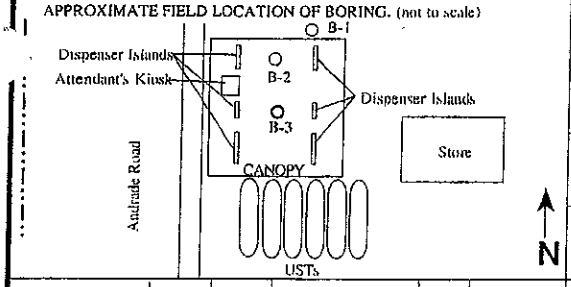
DRILLING CONTRACTOR: Fast Tek	BORING DIAMETER: 2 inches	CLIENT/LOCATION: Sunol Tree Service, Sunol, CA	
DRILL RIG OPERATOR: Anthony Harris	BORING DEPTH: 24 feet	SCREEN SLOT SIZE: 0.010	DRILLING DATE: 11/27/02
DRILL RIG TYPE: Geoprobe DPT	WELL DEPTH: 24 feet	WELL MATERIAL: Sch. 40 PVC	FILTER PACK: NA
BORING SEAL: Neat Cement w/ 5% Bentonite		PLANNED USE: Grab Samples	LOGGED BY: Brin Pierskalla
SAMPLING METHOD: 4-foot Continuous Core w/ Sleeve		MONITORING INST.: Thermo 580B PID	APPROVED BY: Barney Popkin, R.G.
FIRST ENCOUNTERED WATER DEPTH: 17.50 feet below ground surface ▽		STATIC WATER DEPTH - DATE: NA-Temporary Well ▼	

WELL CONSTRUCTION DETAIL	WATER LEVEL	DEPTH (FEET)	SAMPLING: INTERVAL	SAMPLING: RECOVERY	SAMPLING: ANALYTICAL	OVM READING (PPM)	GRAPHIC LOG OR USCS CODE	
		1–3						6 inches Concrete, Artificial Fill Sandy gravel, medium brown, moist, medium dense.
		4				0.0		
		5–7						Sandy SILT (ML), medium brown, medium stiff, moderateto high plasticity, 90% silt, 10% fine sand, moist. Colr changes to dark brown at approximately 6 feet bgs.
		8				0.0		
		9–11						SILT (ML) w/ gravel, yellow-brown to moderate browm, stiff, medium plasticity, moist. .
		12				0.0		
		13–15						Sandy SILT (ML) w/ gravel,dark yellow-brown, medium stiff, low to moderate plasticity, moist. Fuel odor, mottled staining.
	▽	16				0.0		
		17–19						
		20				1.5		Sandy SILT (ML) w/ gravel,dark yellow-brown, medium stiff, low to moderate plasticity, 60% silt, 25% medium to coarse sand, 15% fine gravel, wet. Fuel odor.
		21–23						
		24				0.9		END OF BORING @ 24 feet BGS
		25–30						

SOIL BORING LOG: B-3

CLEARWATER GROUP INC.

APPROXIMATE FIELD LOCATION OF BORING. (not to scale)



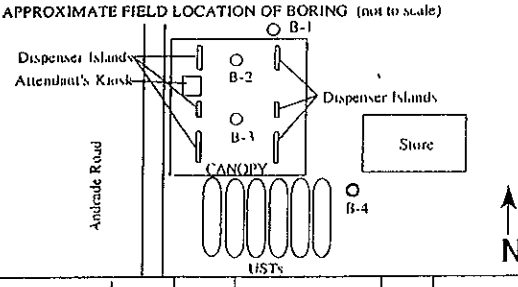
DRILLING CONTRACTOR: Fast Tek	BORING DIAMETER: 2 inches	CLIENT/LOCATION: Sunol Tree Service, Sunol, CA	
DRILL RIG OPERATOR: Anthony Harris	BORING DEPTH: 20 feet	SCREEN SLOT SIZE: 0.010	DRILLING DATE: 11/27/02
DRILL RIG TYPE: Geoprobe DPT	WELL DEPTH 20 feet	WELL MATERIAL: Sch. 40 PVC	FILTER PACK: NA
BORING SEAL: Neat Cement w/ 5% Bentonite		PLANNED USE: Grab Samples	LOGGED BY Brin Pierskalla
SAMPLING METHOD: 4-foot Continuous Core w/ Sleeve		MONITORING INST Thermo 580B PID	APPROVED BY: Barney Popkin, R.G.
FIRST ENCOUNTERED WATER DEPTH: 18.10 feet below ground surface ▽		STATIC WATER DEPTH - DATE: NA-Temporary Well ▼	

WELL CONSTRUCTION DETAIL	WATER LEVEL	DEPTH (FEET)	SAMPLING: INTERVAL	SAMPLING: RECOVERY	SAMPLING: ANALYTICAL	OVM READING (PPM)	GRAPHIC LOG OR USCS CODE	
		1						6 inches Concrete,
		2						Sandy GRAVEL (GM), medium yellow-brown, dense, 80% fine pea gravel, 20% fine to medium sand, dry to moist.
		3						
		4				7.9		
		5						SILT (ML), green-black, medium stiff, low plasticity,moist. Slight fuel odor.
		6						
		7						
		8				0.0		SILT (ML) w/ gravel, moderate brown, stiff to very stiff, medium plasticity, 85% silt, 15% fine gravel, dry to moist. slight fuel odor.
		9						
		10						
		11						
		12				7.1		
		13						
		14						
		15						
		16				8.5		SILT (ML) w/ gravel, moderate brown,very stiff to hard, low plasticity, dry to moist. slight fuel odor
		17						
	▽	18						Sandy SILT (ML) w/ gravel,dark yellow-brown, stiff, moderate plasticity, 80% silt, 20% fine sand, wet.
		19						
		20						END OF BORING @ 20 feet BGS
		21						
		22						
		23						
		24						
		25						
		26						
		27						
		28						
		29						
		30						

SOIL BORING LOG: B-4

CLEARWATER GROUP INC.

APPROXIMATE FIELD LOCATION OF BORING (not to scale)



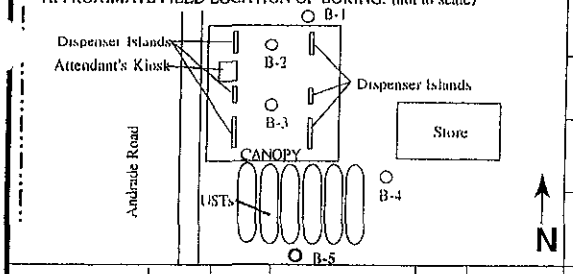
DRILLING CONTRACTOR: Fast Tek	BORING DIAMETER: 2 inches	CLIENT/LOCATION: Sunol Tree Service, Sunol, CA	
DRILL RIG OPERATOR: Anthony Harris	BORING DEPTH: 24 feet	SCREEN SLOT SIZE: 0.010	DRILLING DATE: 11/27/02
DRILL RIG TYPE: Geoprobe DPT	WELL DEPTH: 24 feet	WELL MATERIAL: Sch. 40 PVC	FILTER PACK: NA
BORING SEAL: Neat Cement w/ 5% Bentonite		PLANNED USE: Grab Samples	LOGGED BY: Brin Pierskalla
SAMPLING METHOD: 4-foot Continuous Core w/ Sleeve		MONITORING INST: Thermo 580B PID	APPROVED BY: Barney Popkin, R.G.
FIRST ENCOUNTERED WATER DEPTH: 16.40 feet below ground surface ▽		STATIC WATER DEPTH - DATE: NA-Temporary Well ▼	

WELL CONSTRUCTION DETAIL	WATER LEVEL	DEPTH (FEET)	SAMPLING: INTERVAL	SAMPLING: RECOVERY	SAMPLING: ANALYTICAL	OVM READING (PPM)	GRAPHIC LOG OR USCS CODE	
		1–3						6 inches Concrete Sandy GRAVEL (GM) (Artificial Fill?), medium brown, medium dense, 85% fine pea gravel, 15% well sorted sand dry to moist.
		4			■	0.0		
		5–7						SILT (ML), green-black, medium stiff, low plasticity,moist. Slight fuel odor.
		8			■	0.0		
		9–11						
		12			■	0.0		SILT (ML) w/ gravel, moderate browm, very stiff to hard, 75% silt 25% medium gravel, moist. Slight fuel odor .
		13–15						
	▽	16			■	0.0		
		17–19						
		20			■	1.5		Sandy SILT (ML) w/ gravel, moderate yellow-brown, medium stiff, low to moderate plasticity, 80% silt, 20% medium to coarse sand, wet.
		21–23						
		24			■	0.9		END OF BORING @ 24 feet BGS
		25–30						

SOIL BORING LOG: B-5

CLEARWATER GROUP INC.

APPROXIMATE FIELD LOCATION OF BORING: (not to scale)



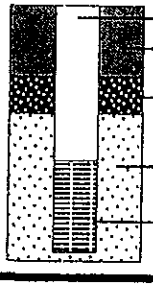
DRILLING CONTRACTOR: Fast Tek	BORING DIAMETER: 2 inches	CLIENT/LOCATION: Sunol Tree Service, Sunol, CA	
DRILL RIG OPERATOR: Anthony Harris	BORING DEPTH: 25 feet	SCREEN SLOT SIZE: 0.010	DRILLING DATE: 11/27/02
DRILL RIG TYPE: Geoprobe DPT	WELL DEPTH: 25 feet	WELL MATERIAL: Sch. 40 PVC	FILTER PACK: NA
BORING SEAL: Neat Cement w/ 5% Bentonite		PLANNED USE: Grab Samples	LOGGED BY: Brin Pierskalla
SAMPLING METHOD: 4-foot Continuous Core w/ Sleeve		MONITORING INST: Thermo 580B PID	APPROVED BY: Barney Popkin, R.G.
FIRST ENCOUNTERED WATER DEPTH: 17.65 feet below ground surface ▽		STATIC WATER DEPTH - DATE: NA-Temporary Well ▼	

WELL CONSTRUCTION DETAIL	WATER LEVEL	DEPTH (FEET)	SAMPLING: INTERVAL	SAMPLING: RECOVERY	SAMPLING: ANALYTICAL	OVM READING (PPM)	GRAPHIC LOG OR USCS CODE	
		1–3						6 inches Concrete Sandy GRAVEL (GM) (Artificial Fill?), medium brown, medium dense, 85% fine pea gravel, 15% well sorted sand dry to moist.
		4				0.0		
		5–7						SILT (ML), green-black, medium stiff to hard, non-plastic, dry to moist.
		8				0.0		
		9–11						
		12				0.2		SILT (ML) , moderate browm, stiff, medium plasticity, dry to moist.
		13–15						
		16				0.2		Sandy SILT (ML) , mottled moderate brown, yellow-brown, very stiff to hard, , trace gravel, moist.
	▽	17–19						
		20				0.2		
		21–24						SILT (ML) w/ gravel, moderate brown, medium stiff , medium plasticity,o moist.
		25						END OF BORING @ 25 feet BGS
		26–30						

UNIFIED SOIL CLASSIFICATION SYSTEM - VISUAL CLASSIFICATION OF SOILS
(ASTM D-2488)

MAJOR DIVISIONS		GROUP SYMBOL	GROUP NAME	DESCRIPTION
COARSE GRAINED SOILS	GRAVEL AND GRAVELLY SOILS	GW	Well-graded gravel Well-graded gravel with sand	Well-graded gravels or gravel-sand mixtures, little or no fines
		GP	Poorly-graded gravel Poorly-graded gravel with sand	Poorly-graded gravels or gravel sand mixture, little or no fines.
		GM	Silty gravel Silty gravel with sand	Silty gravels, gravel-sand-silt mixtures.
		GC	Clayey gravel Clayey gravel with sand	Clayey gravels, gravel-sand-clay mixtures
	SAND AND SANDY SOILS	SW	Well-graded sand Well-graded sand with gravel	Well-graded sands or gravelly sands, little or no fines.
		SP	Poorly-graded sand Poorly-graded sand with gravel	Poorly-graded sands or gravelly sands, little or no fines.
		SM	Silty sand Silty sand with gravel	Silty sands, sand-silt mixtures.
		SC	Clayey sand Clayey sand with gravel	Clayey sands, sand-clay mixtures
FINE GRAINED SOILS	SILTS AND CLAYS	ML	Silt; Silt with sand; Silt with gravel Sandy silt; Sandy silt with gravel Gravelly silt; Gravelly silt with sand	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity
		CL	Lean clay, Lean clay with sand, Lean clay with gravel Sandy lean clay; Sandy lean clay with gravel Gravelly lean clay, Gravelly lean clay with sand	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
	ELASTIC SILTS AND CLAYS	MH	Elastic silt, Elastic silt with sand, Elastic silt with grave Sandy elastic silt; Sandy elastic silt with gravel Gravelly elastic silt; Gravelly elastic silt with sand	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts.
		CH	Fat clay; Fat clay with sand; Fat clay with gravel Sandy fat clay, Sandy fat clay with gravel Gravelly fat clay; Gravelly fat clay with sand	Inorganic clays of high plasticity, fat clays
HIGHLY ORGANIC SOILS		OL/OH	Organic soil, Organic soil with sand; Organic soil with gravel Sandy organic soil; Sandy organic soil with gravel Gravelly organic soil; Gravelly organic soil with sand	Organic silts and organic silt-clays of low plasticity Organic clays of medium to high plasticity
		Pt	Peat	Peat and other highly organic soils.

WELL CONSTRUCTION EXPLANTION



SOIL BORING NOTES:

Blow count represents the number of blows of a 140-lb hammer falling 30 inches per blow required to drive a sampler through the last 12 inches of an 18-inch penetration.

No warranty is provided as to the continuity of soil strata between borings. Logs represent the soil section observed at the boring location on the date of drilling only.

S = Sampler sank into medium under the weight of the hammer (no blow count)
P = Sampler was pushed into medium by drilling rig (no blow count)
NR = No Recovery

SANDS & GRAVELS	BLOWS/FT
VERY LOOSE	0 - 5
LOOSE	5 - 12
MED DENSE	12 - 37
DENSE	37 - 62
VERY DENSE	OVER 62

SILTS & CLAYS	BLOWS/FT
SOFT	0 - 5
FIRM	5 - 10
STIFF	10 - 20
VERY STIFF	20 - 40
HARD	OVER 40

▼ Approximate stabilized water level

▽ Approximate first encountered water level

NOTE. all percentages of lithological composition presented on the soil boring logs are approximate. They represent the best estimates of a CGI geologist based on visual inspection in the field.

CLEARWATER Group

SOIL BORING LOG AND WELL CONSTRUCTION DIAGRAM LEGEND

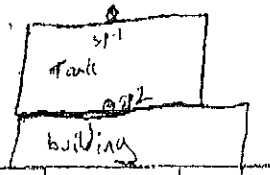
CP004A

SOIL BORING AND WELL CONSTRUCTION LOG:

Project No. EBS-0100-SOIS

Sheet 1 of 2

FIELD LOCATION OF BORING: SP-1



CLIENT/LOCATION: Murray Kehoe 3004 Middle Road, Sunol, Ca	PLANNED USE: Soil Sampling	BORING DEPTH: 16.5 Ft	BORING/WELL NO.: SP-1
DRILLING CONTRACTOR: Fast-Tek	DRILL RIG TYPE: Power Probe	WELL DEPTH:	BORING DIAMETER: 2"
DRILL RIG OPERATOR: Abulah	WELL MATERIAL:	SCREEN SLOT SIZE:	FILTER PACK:
WELL SEAL:			DRILLING DATE: 3-27-02

FINISH: 9:40

DRILLING START:

LOGGED BY: Scott Robertson

APPROVED BY:

SAMPLING METHOD: 2' Tube Sampler

MONITORING INSTRUMENT:

FIRST ENCOUNTERED WATER DEPTH:

STATIC WATER DEPTH - DATE:

WELL CONSTRUCTION DETAIL	SAMPLING: BLOWS/6" INTERVAL	SAMPLING: INTERVAL	SAMPLING: RECOVERY	SAMPLING: ANALYTICAL	WATER LEVEL	DEPTH (FEET)	OVM READING (PPM)	ESTIMATED PERCENT: GRAVEL	ESTIMATED PERCENT: SAND	ESTIMATED PERCENT: FINES	GRAPHIC LOG
						1–30					

Silty CLAY, brown, with moderate plasticity with small to medium gravel

Jim Jacobs, President
Environmental Bio-Systems, Inc.
707 View Point Road
Mill Valley, CA 94941

CP004A

SOIL BORING AND WELL CONSTRUCTION LOG: SP-2

Project No. EBS-0100-5 UTS

Sheet 2 of 2

FIELD LOCATION OF BORING:

Tank

OSP-2

building

CLIENT/LOCATION: 3004 Andrade Road, Sunol, C	PLANNED USE: soil sampling	BORING DEPTH: 16.5ft	BORING/WELL NO.: SP-2
DRILLING CONTRACTOR: Fast Trk	DRILL RIG TYPE: power probe	WELL DEPTH:	BORING DIAMETER: 2"
DRILL RIG OPERATOR: Dallal	WELL MATERIAL:	SCREEN SLOT SIZE:	FILTER PACK:
WELL SEAL:			DRILLING DATE: 3-22-02

SAMPLING METHOD: 2" tube sampler

MONITORING INSTRUMENT:

FIRST ENCOUNTERED WATER DEPTH:

STATIC WATER DEPTH - DATE:

WELL CONSTRUCTION DETAIL	SAMPLING: BLOWS/6" INTERVAL	SAMPLING: INTERVAL	SAMPLING: RECOVERY	SAMPLING: ANALYTICAL	WATER LEVEL	DEPTH (FEET)	OVM READING (PPM)	ESTIMATED PERCENT: GRAVEL	ESTIMATED PERCENT: SAND	ESTIMATED PERCENT: FINES	GRAPHIC LOG
						1					
						2					
						3					
						4					
						5					
						6					
						7					
						8					
						9					
						10					
						11					
						12					
						13					
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						16					
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						19					
						20					
						21					
						22					
						23					
						24					
						25					
						26					
						27					
						28					
						29					
						30					

silty CLAY, brown, low to moderate plasticity, some fine sand

LOGGED BY: Scott Roberts

DRILLING CONTRACTOR:

APPROVED BY:

Jim Jacobs, President
Environmental Bio-Systems, Inc.
707 View Point Road
Mill Valley, CA 94941

Documents (FIGURES)

Exchange files of all types in the Document Manager. Upload, edit, and manage these files directly from Windows Explorer when you set up a Web Folder for your intranet. Learn more

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Sort By: Title | show folders | Search: | Find It | Advanced Search

10 documents

All Folders | Group Documents / FIGURES

Title	File	Size	Posted By	Modified
Folder Settings		8 items		
Gas-Station (next pg.)		9 items		
1-Locate	1-Locate.pdf	528.5 kb	Pat Hoban	Jun 25, 2004 5:01 AM
2-Topograph-3D	2-Topograph-3D.pdf	337.8 kb	Pat Hoban	Jun 25, 2004 5:02 AM
3-gw-basins	3-gw-basins.pdf	321.3 kb	Pat Hoban	Jun 25, 2004 5:02 AM
4-aerial-vicinity	4-aerial-vicinity.pdf	428.2 kb	Pat Hoban	Jun 25, 2004 5:02 AM
5-cross-Section	5-cross-Section.pdf	301.2 kb	Pat Hoban	Jun 25, 2004 5:03 AM
6-Site-Map	6-Site-Map.pdf	547.8 kb	Pat Hoban	Jun 25, 2004 5:03 AM
desktop	desktop.ini	481 bytes	Pat Hoban	Jun 25, 2004 5:04 AM
Geologic X-Section (Bulletin 118-2)	Geologic X-Section (Bulletin 118-2).pdf	641.7 kb	Pat Hoban	Jun 25, 2004 5:05 AM
street map	street map.pdf	49.8 kb	Pat Hoban	Jun 25, 2004 5:06 AM
Tax-assessors map	Tax-assessors map.pdf	225.9 kb	Pat Hoban	Jun 25, 2004 5:06 AM

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Documents (Gas-Station)

FIGURES

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☐	2002-04-16 Geoprobe Sampling-Site Map	2002-04-16 Geoprobe Sampling-Site Map.pdf	97.1 kb	Pat Hoban	Jun 25, 2004 *5:04 AM*
☐	2002-04-16 UST Removal Report-Site Map	2002-04-16 UST Removal Report-Site Map.pdf	66.4 kb	Pat Hoban	Jun 25, 2004 *5:04 AM*
☐	2002-05-09 UST Removal & Interim S & GW Remediation Report-FIGUR	2002-05-09 UST Removal & Interim S & GW Remediation Report-FIGURES.pdf	217.2 kb	Pat Hoban	Jun 25, 2004 *5:04 AM*
☐	2002-08-27 Workplan for Preliminary Site Assessment-FIGURE	2002-08-27 Workplan for Preliminary Site Assessment-FIGURE.pdf	41.1 kb	Pat Hoban	Jun 25, 2004 *5:04 AM*
☐	2003-05-06 Well Sampling Report-FIGURE	2003-05-06 Well Sampling Report-FIGURE.pdf	69.9 kb	Pat Hoban	Jun 25, 2004 *5:04 AM*
☐	2003-05-08 Work Plan for Soil & Water Investigation-FIGURE	2003-05-08 Work Plan for Soil & Water Investigation-FIGURE.pdf	222.7 kb	Pat Hoban	Jun 25, 2004 *5:04 AM*
☐	2003-3-14 Preliminary Site Assessment Report-FIGURE	2003-3-14 Preliminary Site Assessment Report-FIGURE.pdf	432.2 kb	Pat Hoban	Jun 25, 2004 *5:05 AM*
☐	desktop	desktop.ini	273 bytes	Pat Hoban	Jun 25, 2004 *5:05 AM*

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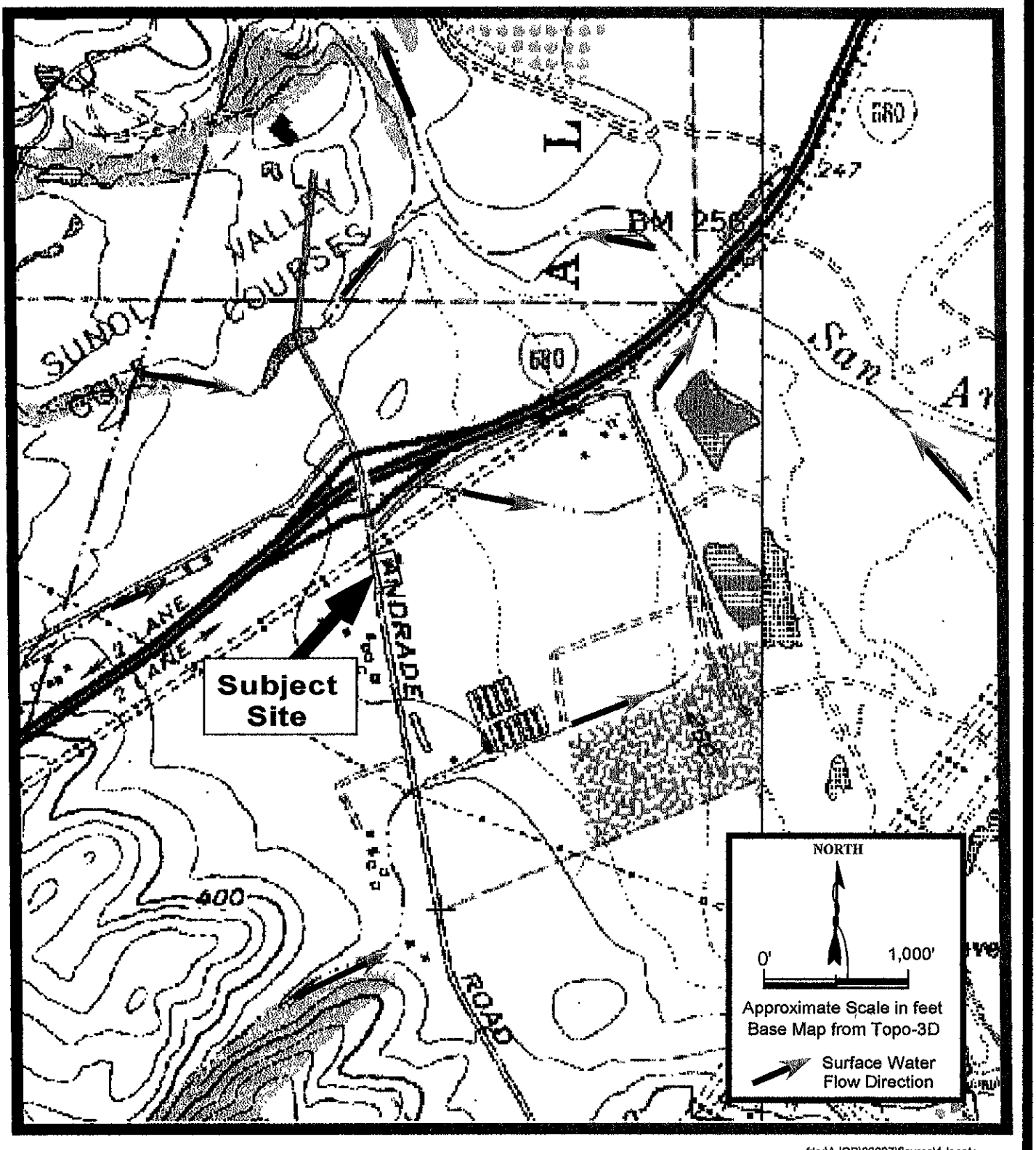

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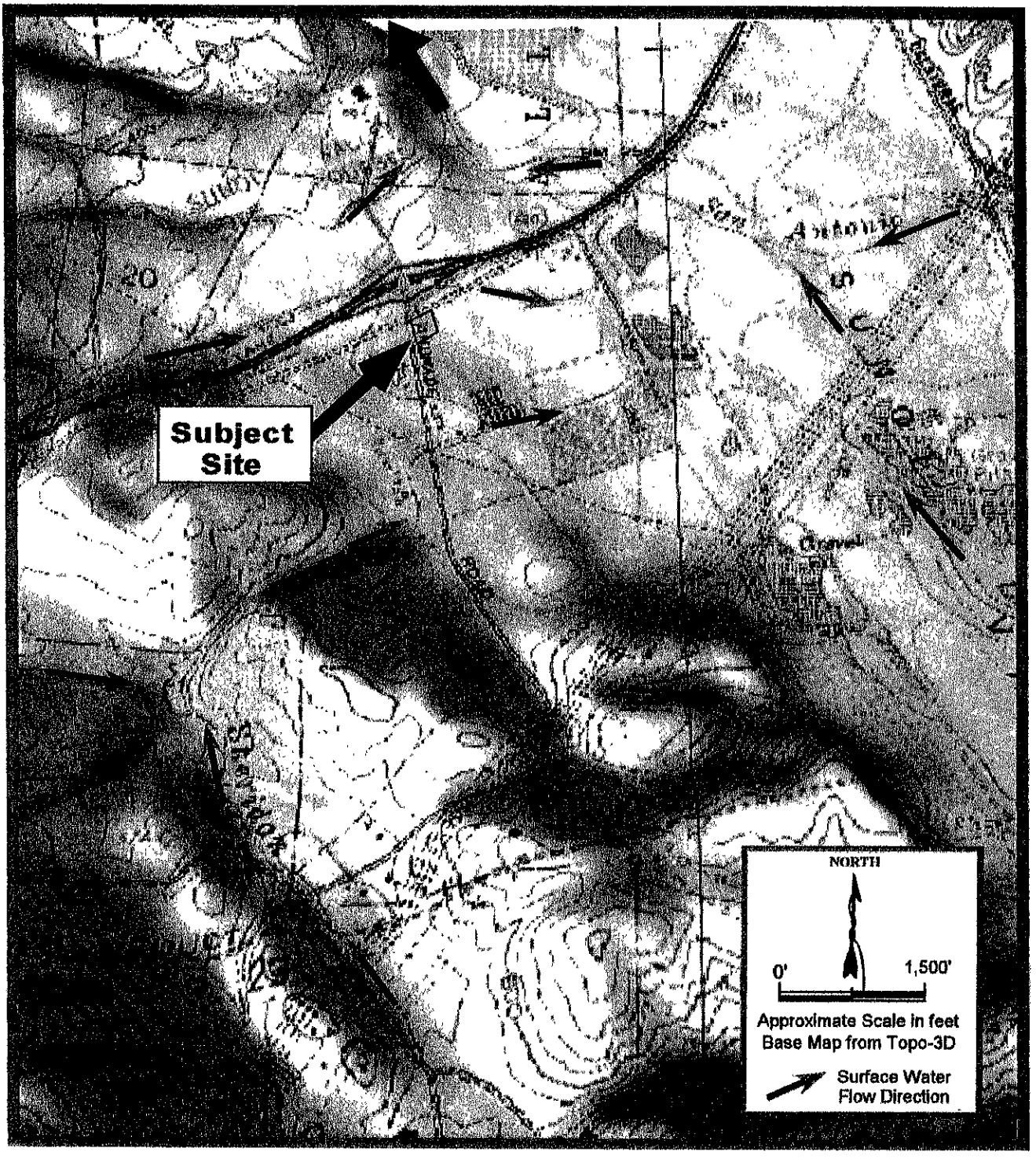
Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Drive, Watsonville, Ca. 95076
(831) 722 - 3580 (831) 662 - 3100

Topographic Location Map
SUNOL TREE GAS STATION
3004 Andrade Road
Sunol, Alameda County

FIGURE 1
Job # 23027



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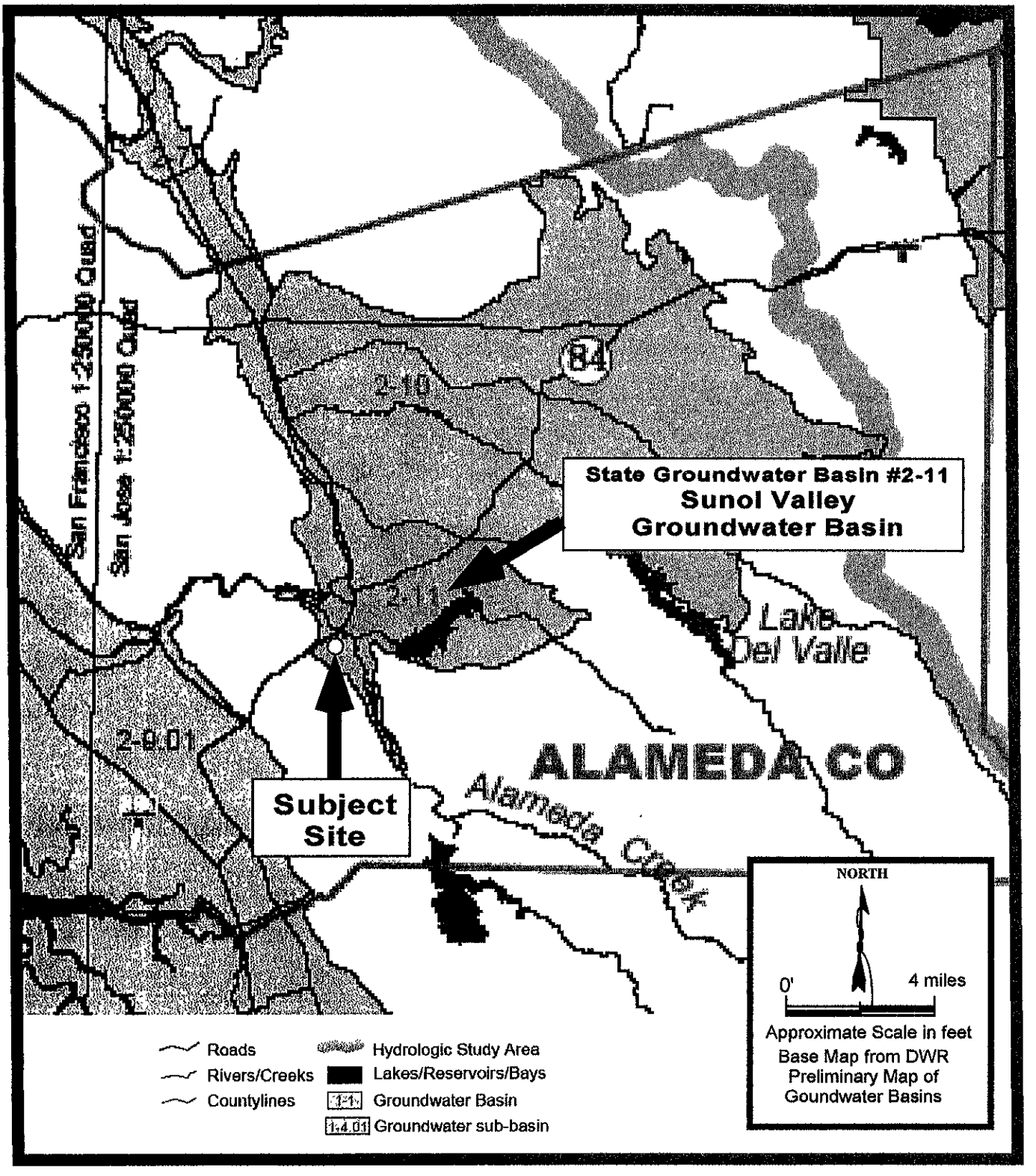
Hydrogeology and Environmental Engineering
120 Westgate Drive, Watsonville, Ca. 95076
(831) 722 - 3580 (831) 662 - 3100

3-Dimension Topographic Map
SUNOL TREE GAS STATION
3004 Andrade Road
Sunol, Alameda County

FIGURE 2
Job # 23027



file:\AJOB\23027\figures/3-gw-basins

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Groundwater Basins
SUNOL TREE GAS STATION
3004 Andrade Road
Sunol, Alameda County

FIGURE 3
Job # 23017

FIGURE
4
Job #
23027

AERIAL VICINITY MAP
SUNOL TREE GAS STATION
3004 Andrade Road
Sunol, Alameda County

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Drive, Watsonville, Ca. 95076
(831) 722 - 3580 (831) 662 - 3100

EXPLANATION

G1 — **Water Production Well and ID#** (see Drillers Logs for details)

FIRST GROUNDWATER - Approximate depth to water = 20 feet

Perforated Screen Section

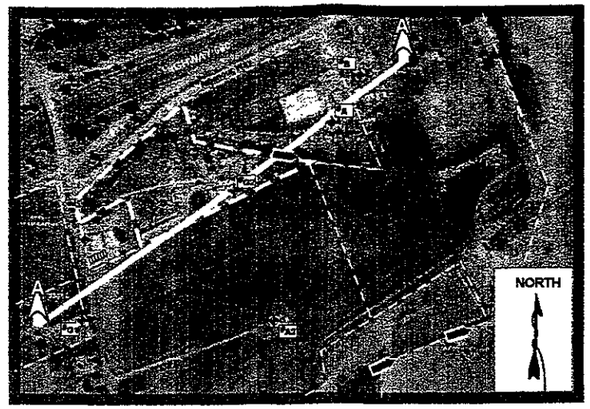
NOTE: Geologic contacts separating soil types are approximate and based on Drillers Logs.

Permeable Strata, primarily consisting of Sand and Gravels with or without some Clay.

Less Permeable Strata, primarily consisting Clay with or without some component of Sand or Gravels.

Shale, possibly the first occurrence of Jura-Cretaceous Marine Sediments (non-water bearing).

File: 23027\Figures\5-Cross-Section
June-2004 (PH)



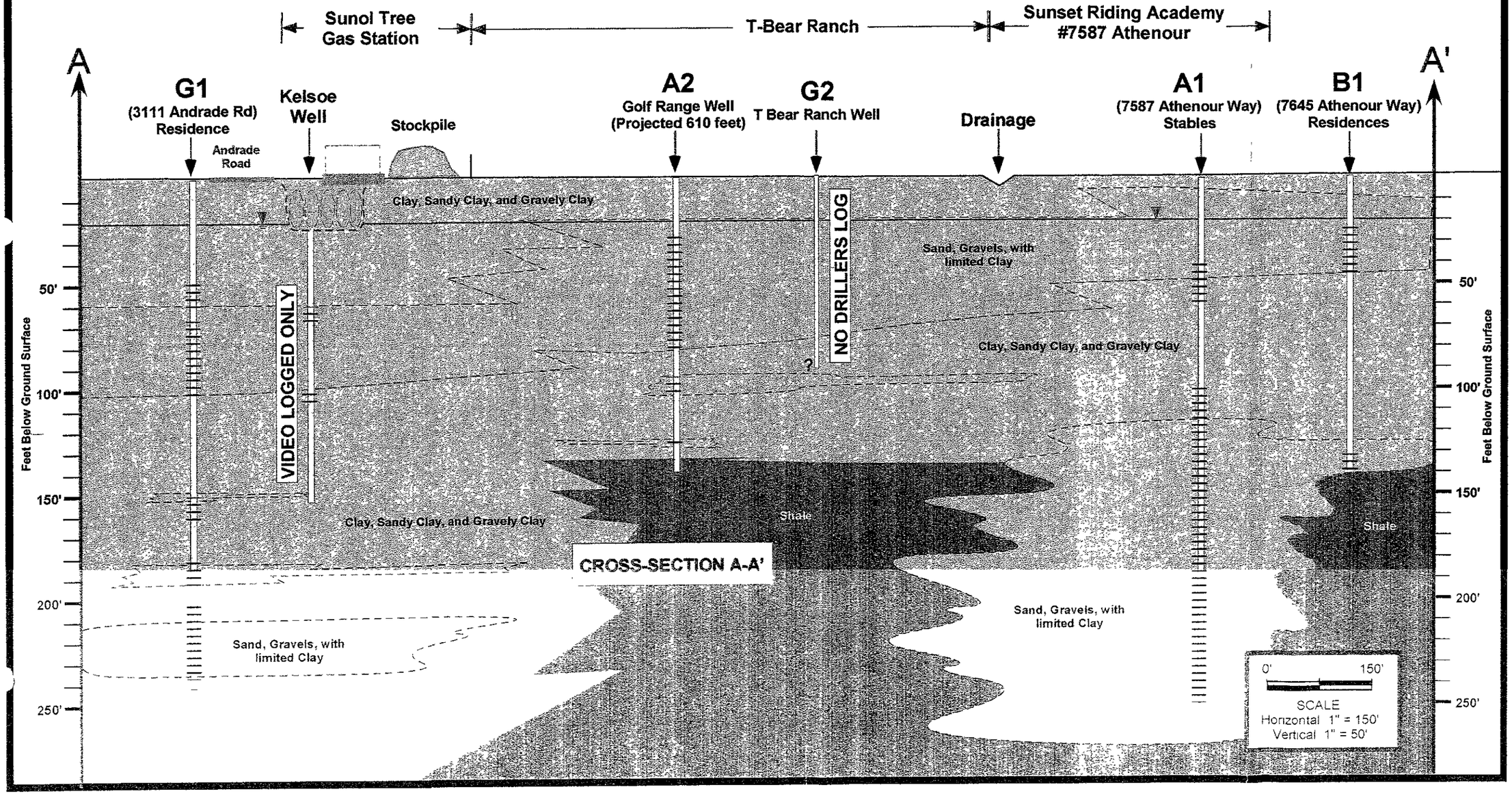


FIGURE 5
Job # 23027

SIMPLIFIED GEOLOGIC CROSS SECTION
SUNOL TREE GAS STATION
3004 Andrade Road
Sunol, Alameda County

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Drive, Watsonville, Ca. 95076
(831) 722 - 3580 (831) 662 - 3100

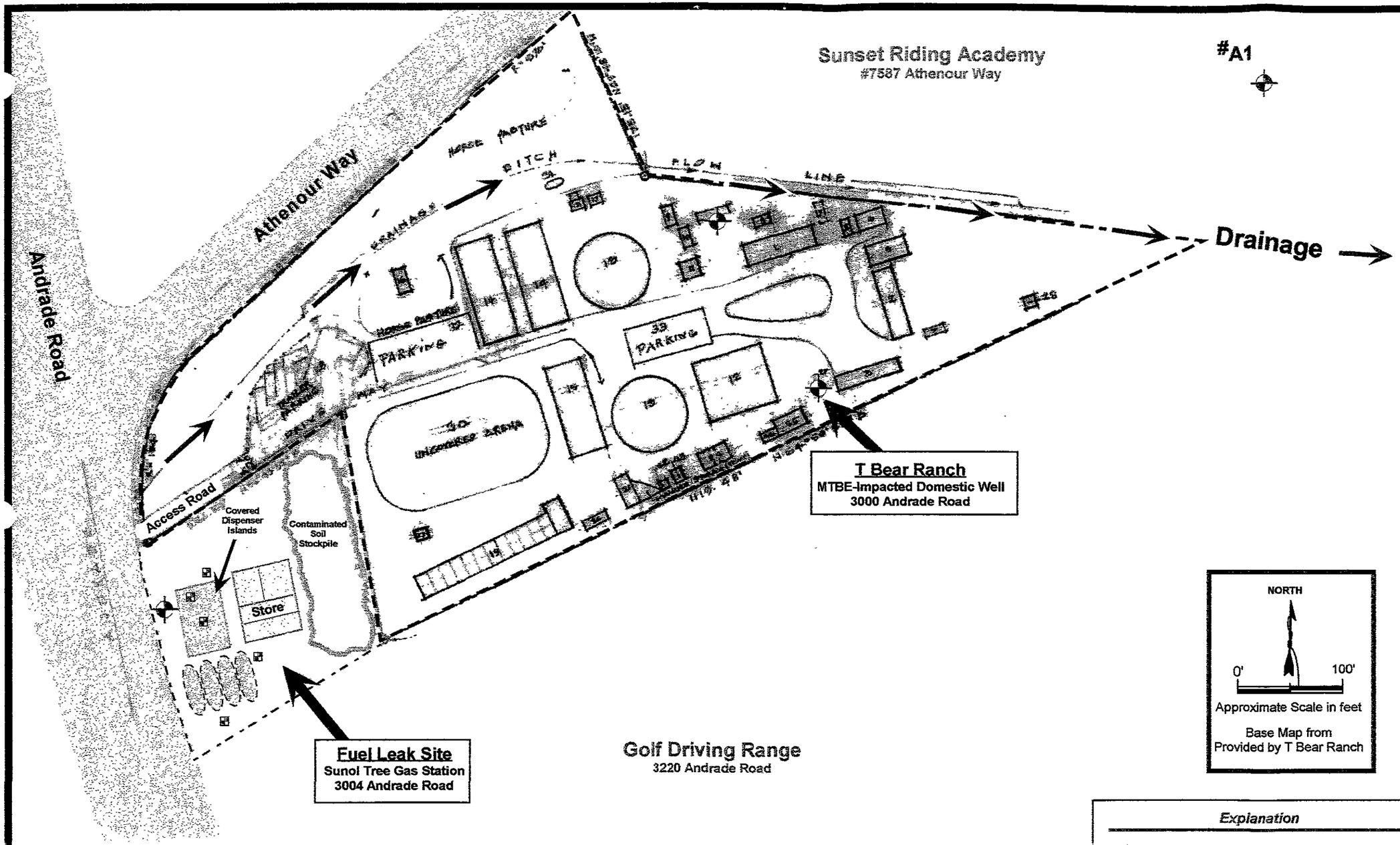


FIGURE 6
Job # 23027

SITE MAP
SUNOL TREE GAS STATION
3004 Andrade Road
Sunol, Alameda County

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Drive, Watsonville, Ca. 95076
(831) 722 - 3580 (831) 662 - 3100

ASSESSOR'S MAP 96

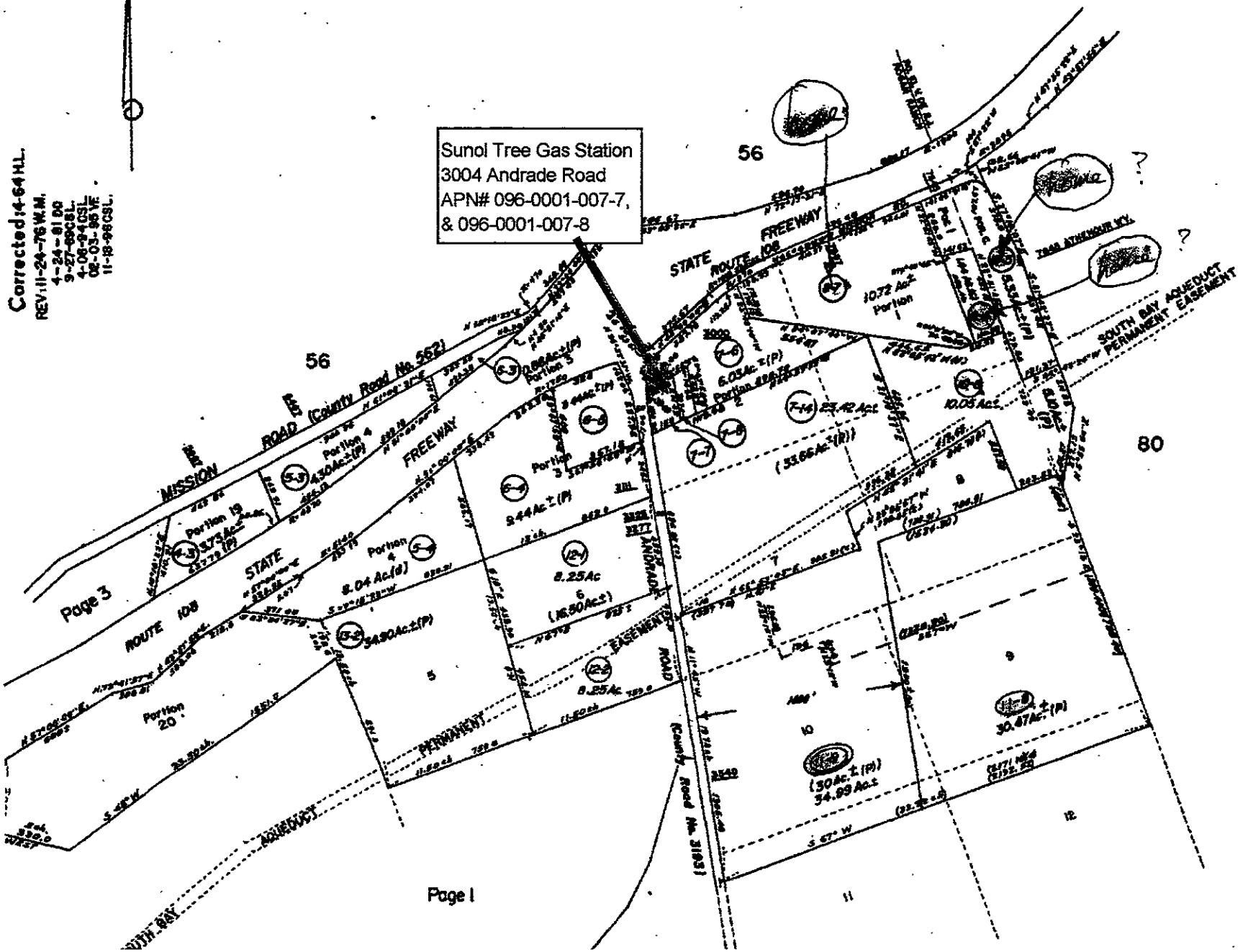
Code Area Nos. 83–004

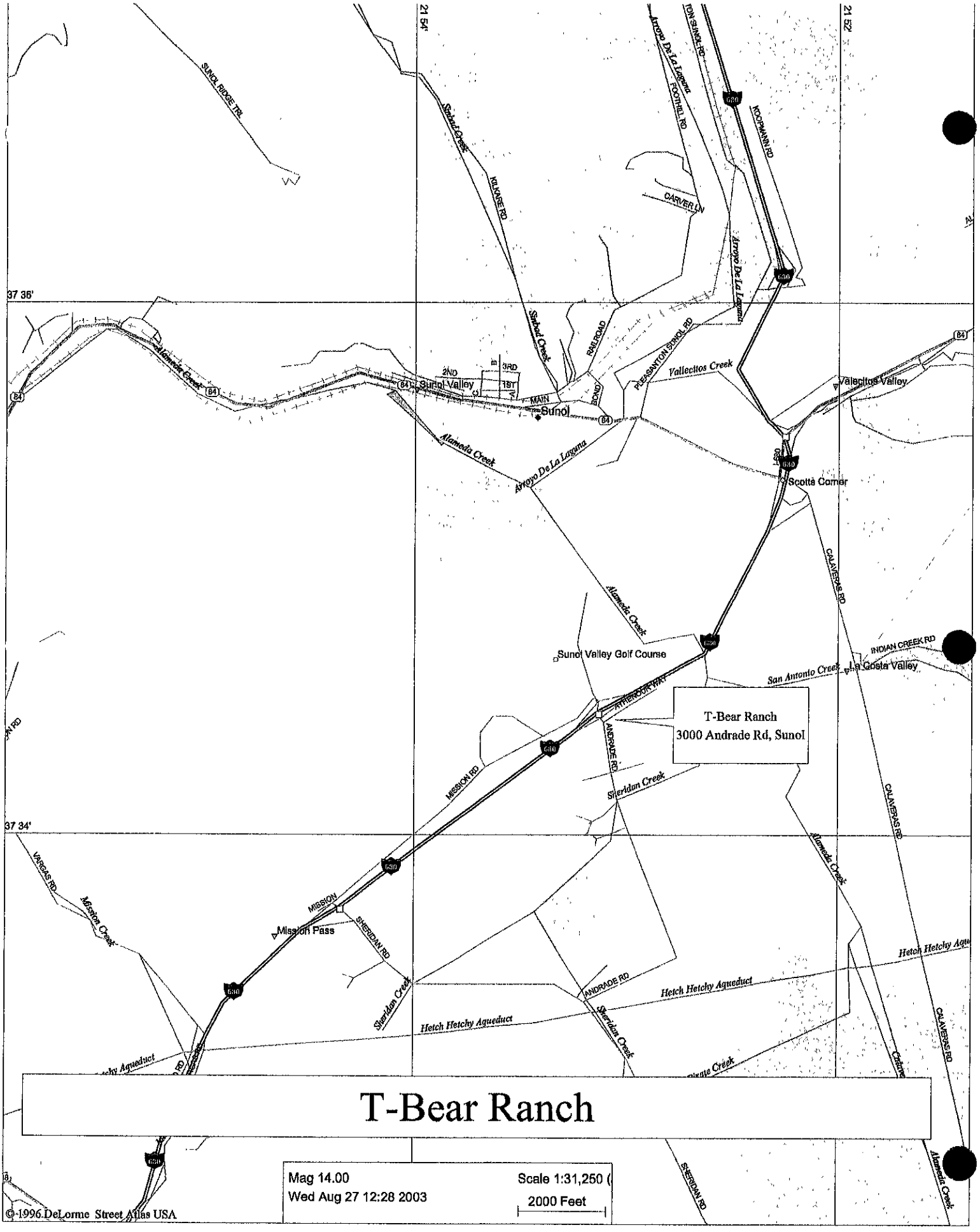
Scale: 1"=500'

Rogan Ranch (Bk. 19 Pg. 47)
Rancho el Valle de San Jose (Case I-6-2) (Por. PLOT C)

Page 2

Corrected: 4-64 H.L.
REV: 11-24-76 W.M.
4-24-81 80
9-27-89 CSL
4-06-94 CSL
02-03-95 VE
11-18-99 CSL




21 54'
21 52'
37 36'
37 34'
SUNOL RIDGE TRL
Arroyo De La Laguna
TON SUNOL RD
FOOTHILL RD
KOOPMANN RD
Sinbad Creek
KILKARE RD
CARVER LN
RAILROAD
BOND
PLEASANTON SUNOL RD
Vallecitos Creek
Vallecitos Valley
Sunol Valley
2ND
3RD
1ST
MAIN
Sunol
Alameda Creek
Scotts Corner
CALAVERAS RD
Sunol Valley Golf Course
INDIAN CREEK RD
San Antonio Creek
La Costa Valley
ANDRADE RD
Sheridan Creek
MISSION RD
VARGAS RD
Mission Creek
Mission Pass
SHERIDAN RD
Hetch Hetchy Aqueduct
T-Bear Ranch
3000 Andrade Rd, Sunol
T-Bear Ranch
Mag 14.00
Wed Aug 27 12:28 2003
Scale 1:31,250 (
2000 Feet
©1996 DeLorme Street Atlas USA

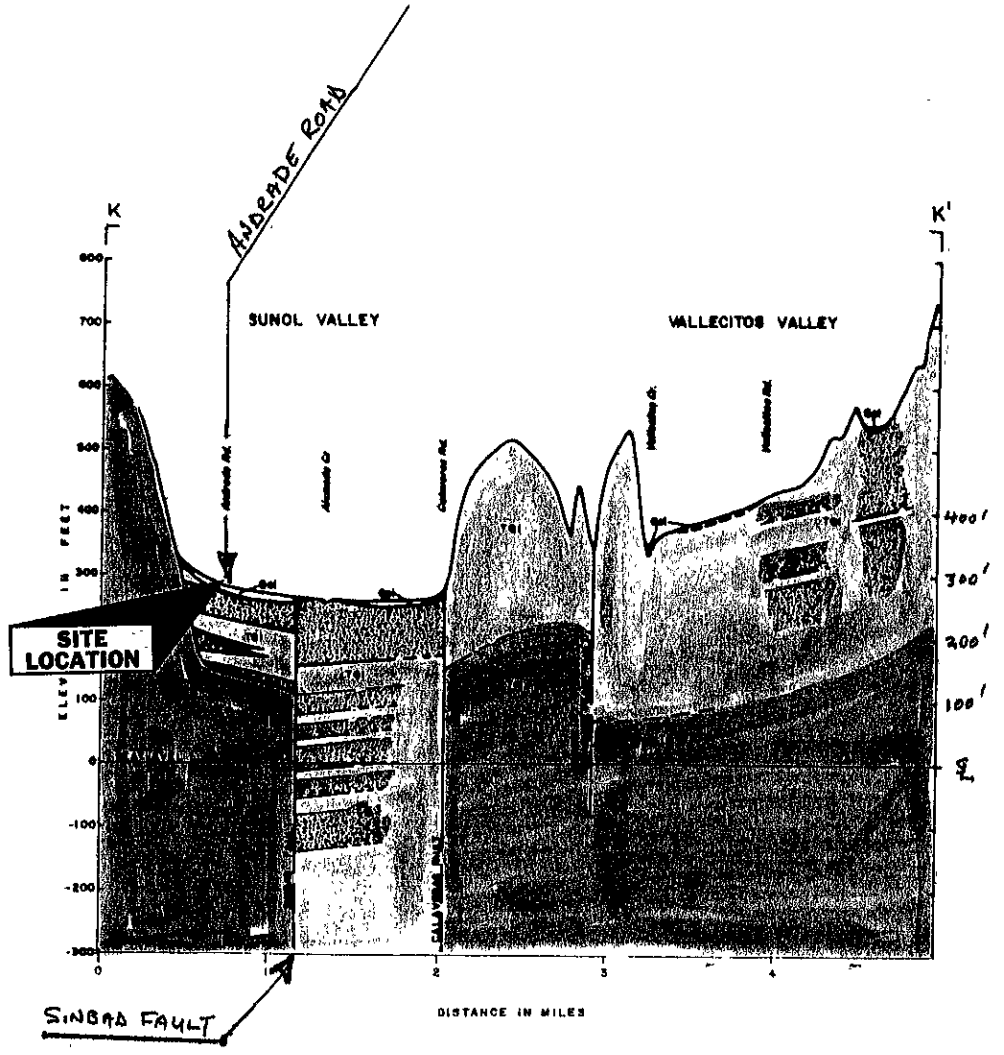
Qal = Alluvium (+ terrace deposits, Qt)

TQl = Livermore Formation (TQl)
- massive beds of rounded gravel cemented by a sandy-clay matrix

Tm = Tertiary MARINE Deposits (Tm)
- Shale, sandstone, conglomerate, chert

JK - Jura-Cretaceous MARINE Sediments (JK)
- Sandstone, shale, conglomerate, greenstone

SCALE OF MILES



LEGEND

TQl = WATER BEARING MATERIALS (in the Livermore Formation, TQl)

POTENTIOMETRIC SURFACE

SUBBASIN BOUNDARY

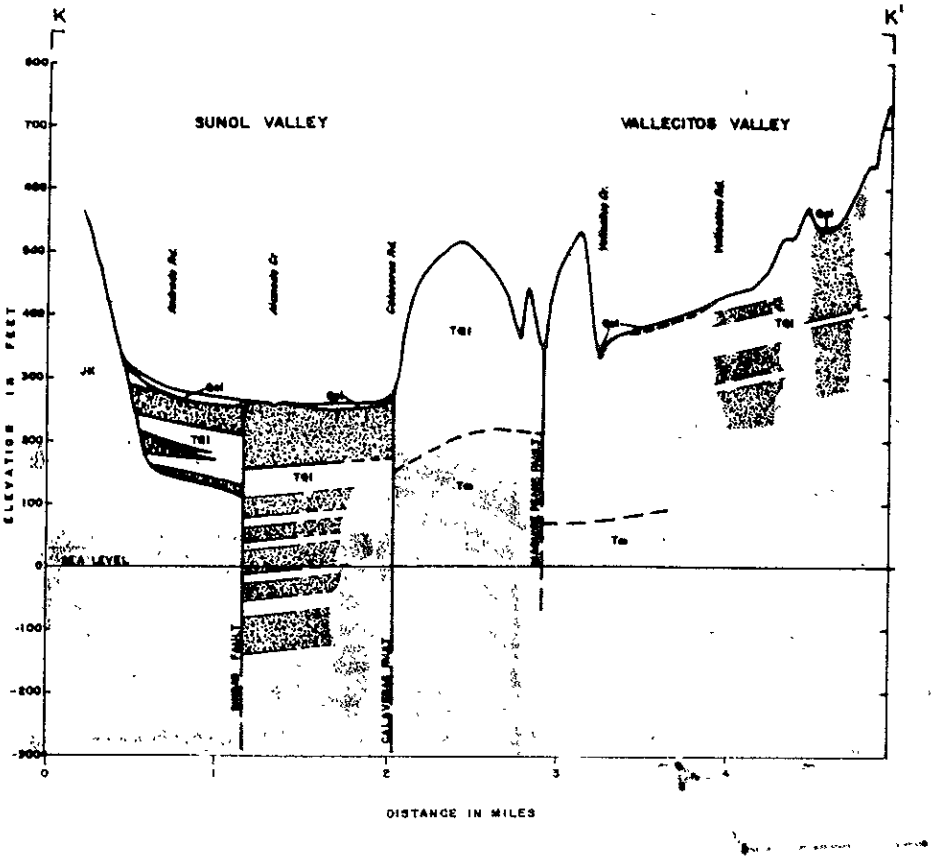
GWB GROUND WATER BASIN BOUNDARY

FOR GEOLOGIC SYMBOLS SEE PLATE 5

JK Jura-Cretaceous MARINE Sediments (JK)
-Sandstone, Shale, conglomerate, greenstone, chert.

For location of section, see Fig.4

GEOLOGIC SECTION - SUNOL VALLEY



LEGEND

WATER BEARING MATERIALS

POTENTIOMETRIC SURFACE

SUBBASIN BOUNDARY

GWB — GROUND WATER BASIN BOUNDARY

FOR GEOLOGIC SYMBOLS SEE PLATE 5

For location of section, see Fig.4

GEOLOGIC SECTION - SUNOL VALLEY

TABLE 2

GEOLOGIC UNITS OF THE
LIVERMORE VALLEY-SUNOL VALLEY AREA

Geologic Age	Map Symbol	Geologic Unit	Thickness (feet)	General Character	Water-Bearing Properties
Holocene	gp	Gravel Pits	Up to 150' deep	Location of gravel extraction operations.	May be source area for ground water recharge.
		Valley Fill Materials:			
	Qsc	Stream Channel Deposits	0-20	Loose deposits of sand, gravel and boulders along active streams.	Highly permeable but limited in thickness. Act as forebay for ground water recharge.
	Qb	Basin Deposits	0-50	Unconsolidated deposits of silt and clay.	Essentially impermeable. Subject to ponding. Not a source of ground water.
	Qal	Alluvium	0-200	Unconsolidated deposits of clay, silt, sand, and gravel.	Where not over 100' thick provides ground water sufficient for domestic needs. Thicker sections provide large quantities of ground water to wells.
	Qfg	Alluvial Fan Deposits, Gravel Facies	0-150	Semiconsolidated deposits of sand and gravel in matrix of clayey sand.	Permeable; provides adequate supplies of ground water to wells for most purposes.
	Qfc	Alluvial Fan Deposits, Clay Facies	0-150	Stratified deposits of clay, silt, and sand in north part of Livermore Valley.	Of moderate permeability. Provides low yields of ground water to domestic wells.
	Qt	Terrace Deposits	0-75	Poorly bedded deposits of clay, silt, sand, and boulders adjacent to stream channels.	Permeability ranges from high to low. Highly permeable materials usually elevated and thus are drained. Not a consistently good source for ground water.
Plio-Pleistocene	TQl	Livermore Formation	4,000	Massive beds of rounded gravel cemented by an iron-rich sandy clay matrix.	Permeable. Provides ground water to deep wells in quantities adequate for most irrigation, industrial and municipal purposes.
	TQlc	Clay Facies	500(?)	Beds of claystone with few lenses of gravel. Exposed only in eastern part of Livermore Valley.	Of low permeability; provides moderate amounts of ground water to wells.
Pliocene	Tp	Tassajara Formation	5,000+	Bedded deposits of sandstone, tuffaceous sandstone, tuff, and shale.	Of low permeability; yields water to wells in quantities sufficient only for domestic, stock, and limited irrigation purposes.
pre-Pliocene	Tm	Tertiary Marine Sediments	4,000+	Shale, sandstone, conglomerate, and chert.	Nonwater-bearing.
pre-Tertiary	KJ	Jura-Cretaceous Marine Sediments	8,000+	Sandstone, shale, conglomerate, greenstone, and chert.	Nonwater-bearing.

April 2, 2002
3004 Andrade Rd.
Sunol, California

Notes by Adam Newman
No scale implied

15K
S9
S10
15K
S7
S8
15K
S5
S6
15K
S3
S4
15K
S1

← North

← limits of excavation

depth ≈ 13 ft

sample depth ≈ 15 ft

CONTRACTC
REMOVE
VENT PIF

TO REMOVE
MANHOLES
TYPICAL

← 24' →

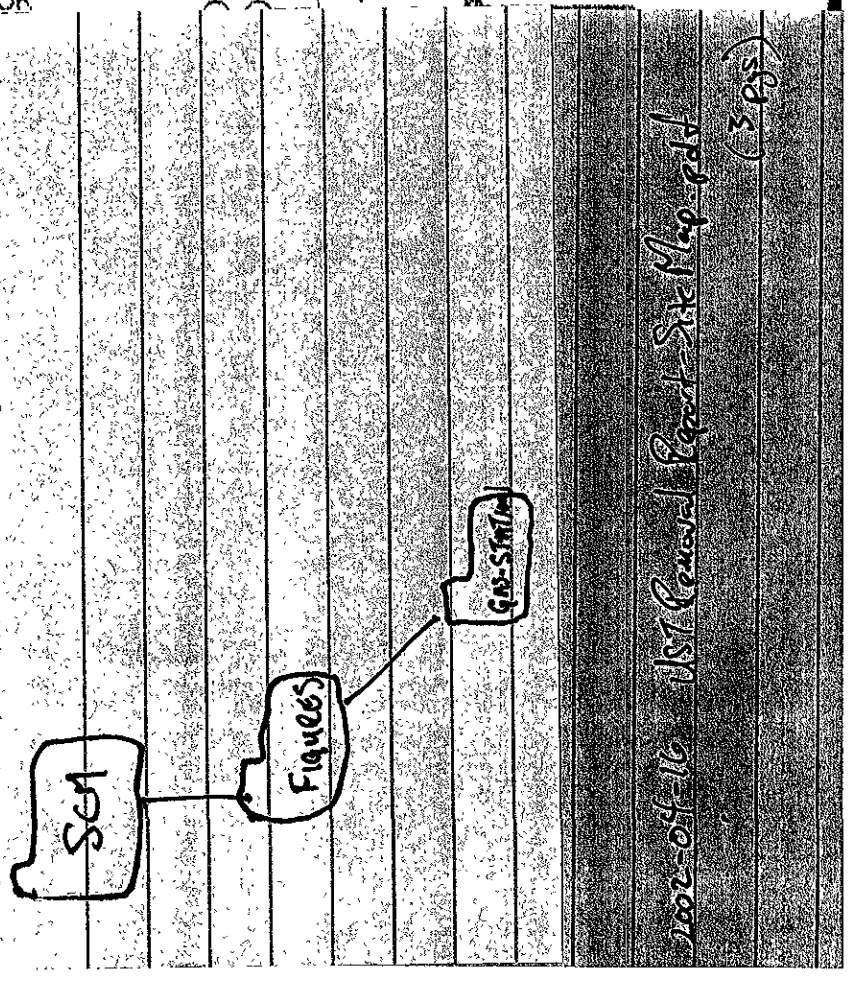


TABLE 1 - UST SOIL SAMPLING: LABORATORY ANALYTICAL SUMMARY

Sunol Tree Service

3004 Andrade Road, Sunol, California

Sampled: Adam Newman, EBS; 4/2/02; Analyzed: 4/10/02

Soil Sampling Results = ppm (mg/Kg) unless noted

< 50 or <0.50 Below reporting limit; or "non detect"; ND

Soil Sample #	Depth (ft.)	TPHg	benzene	toluene	ethylbenzene	xylenes	MTBE	TPHd
S1	15	ND	ND	ND	ND	ND	ND	ND
S2	15	ND	ND	ND	ND	ND	ND	ND
S3	15	ND	ND	ND	ND	ND	ND	~~ND~~ 1.1
S4	15	ND	ND	ND	ND	ND	ND	ND
S5	15	**9.5**	ND	ND	ND	**0.04**	ND	**2.6**
S6	15	ND	ND	ND	ND	ND	**0.25**	ND
S7	15	ND	ND	ND	ND	ND	ND	ND
S8	15	ND	ND	ND	ND	ND	ND	ND
S9	15	ND	ND	ND	ND	ND	**0.0058**	ND
S10	15	ND	ND	ND	ND	ND	ND	ND
Reporting Limits	mg/Kg	1	0.005	0.005	0.005	0.005	0.005	1

TABLE 2 - UST WATER SAMPLING: LABORATORY ANALYTICAL SUMMARY

Sunol Tree Service

3004 Andrade Road, Sunol, California

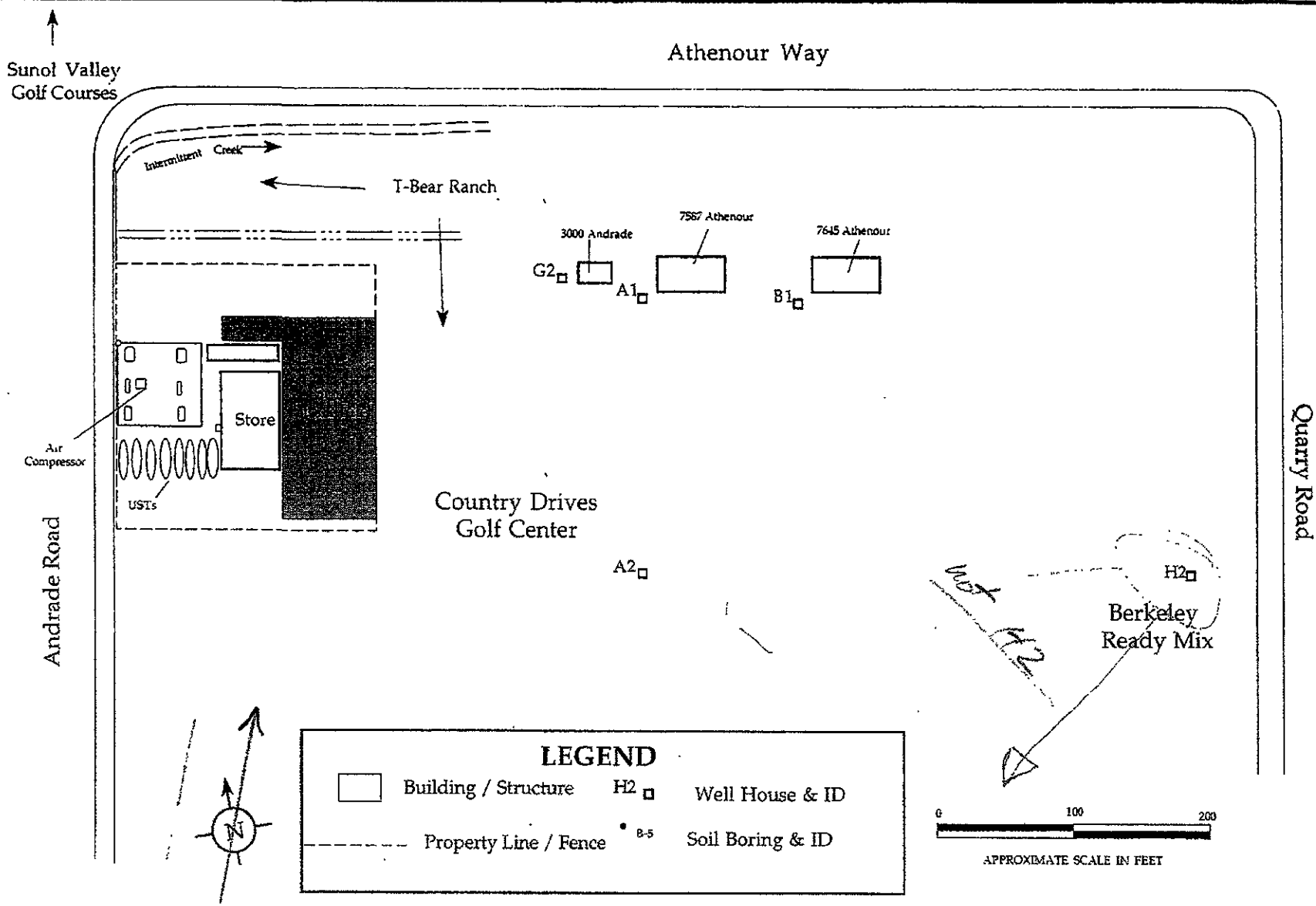
Sampled: Adam Newman, EBS; 4/2/02; Analyzed: 4/10/02

Water Sampling Results = ppb (ug/L) unless noted

Soil Sampling Results = ppm (mg/Kg) unless noted

< 50 or <0.50 Below reporting limit; or "non detect"; ND

Water Sample #	Depth (ft.)	TPHg	benzene	toluene	ethylbenzene	xylenes	MTBE	TPHd
WS-1	**ug/L**	ND	ND	**1.5**	ND	**2.7**	**84**	**290**
Reporting Limits	**ug/L**	50	0.5	0.5	0.5	0.5	0.5	50



LARGE SCALE SITE PLAN Sunol Tree Gas Service Station 3004 Andrade Road Sunol, CA 94586	CLEARWATER GROUP		
	Project No. CB021C	Figure Date 5/03	Figure 2

5/1/03

Table 1
Zone 7 Water Agency Groundwater Sampling
Sunol Tree Gas Service Station
3004 Andrade Road, Sunol, CA
Clearwater Project Number: CP021C

Sample I.D.	Sample Date	B µg/L	T µg/L	E µg/L	X µg/L	MTBE µg/L	DIPE µg/L	TAME µg/L
4S/1E-20-A2	3/3/03	<0.50	<0.50	<0.50	<0.50	**0.50**	<0.50	<0.50
4S/1E-20-G2	3/3/03	<0.50	<0.50	<0.50	<0.50	**130**	<0.50	<0.50

Notes: Samples were analyzed for U.S. EPA method 524.2

B = Benzene
T = Toluene
E = Ethylbenzene
X = Total Xylenes
MTBE = Methyl tertiary butyl ether
DIPE = Diisopropyl ether
ETBE = Ethyl tertiary butyl ether
TAME = Tertiary amyl methyl ether
TPHg = Total petroleum hydrocarbons as gasoline
µg/L = Micrograms per liter
<XXX= Analytical laboratory detection limit

5/6/03

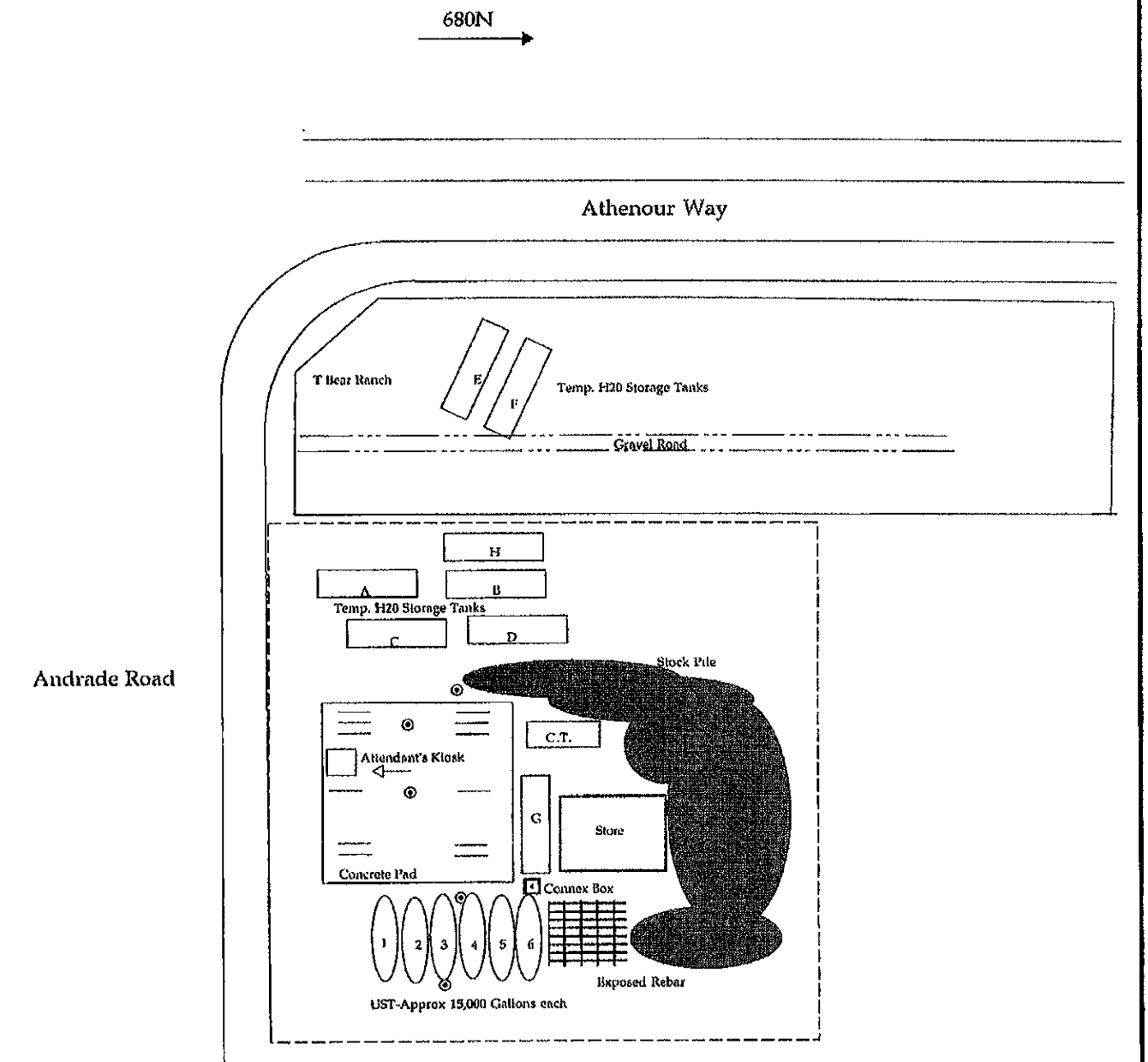
Table 2
Clearwater Group Groundwater Sampling
Sunol Tree Gas Service Station
3004 Andrade Road, Sunol, CA
Clearwater Project Number: CP021C

Sample I.D.	Sample Date	B µg/L	T µg/L	E µg/L	X µg/L	MTBE µg/L	DIPE µg/L	ETBE µg/L	TAME µg/L	Tertiary Butanol µg/L	Ethanol µg/L	TPHg µg/L
4S/1E-20-G2	4/10/03	<0.50	<0.50	<0.50	<0.50	**120**	<0.50	<0.50	**0.73**	<5.0	<5.0	<50
4S/1E-20-A1	4/10/03	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<5.0	<50
4S/1E-20-B1	4/10/03	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<5.0	<50
4S/1E-20-H2	4/10/03	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<5.0	<50
4S/1E-20-A2	4/10/03	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<5.0	<50

Notes: Samples were analyzed for U.S. EPA method 8260B

B = Benzene
T = Toluene
E = Ethylbenzene
X = Total Xylenes
MTBE = Methyl tertiary butyl ether
DIPE = Diisopropyl ether
ETBE = Ethyl tertiary butyl ether
TAME = Tertiary amyl methyl ether
TPHg = Total petroleum hydrocarbons as gasoline
µg/L = Micrograms per liter
<XXX= Analytical laboratory detection limit

5/6/03

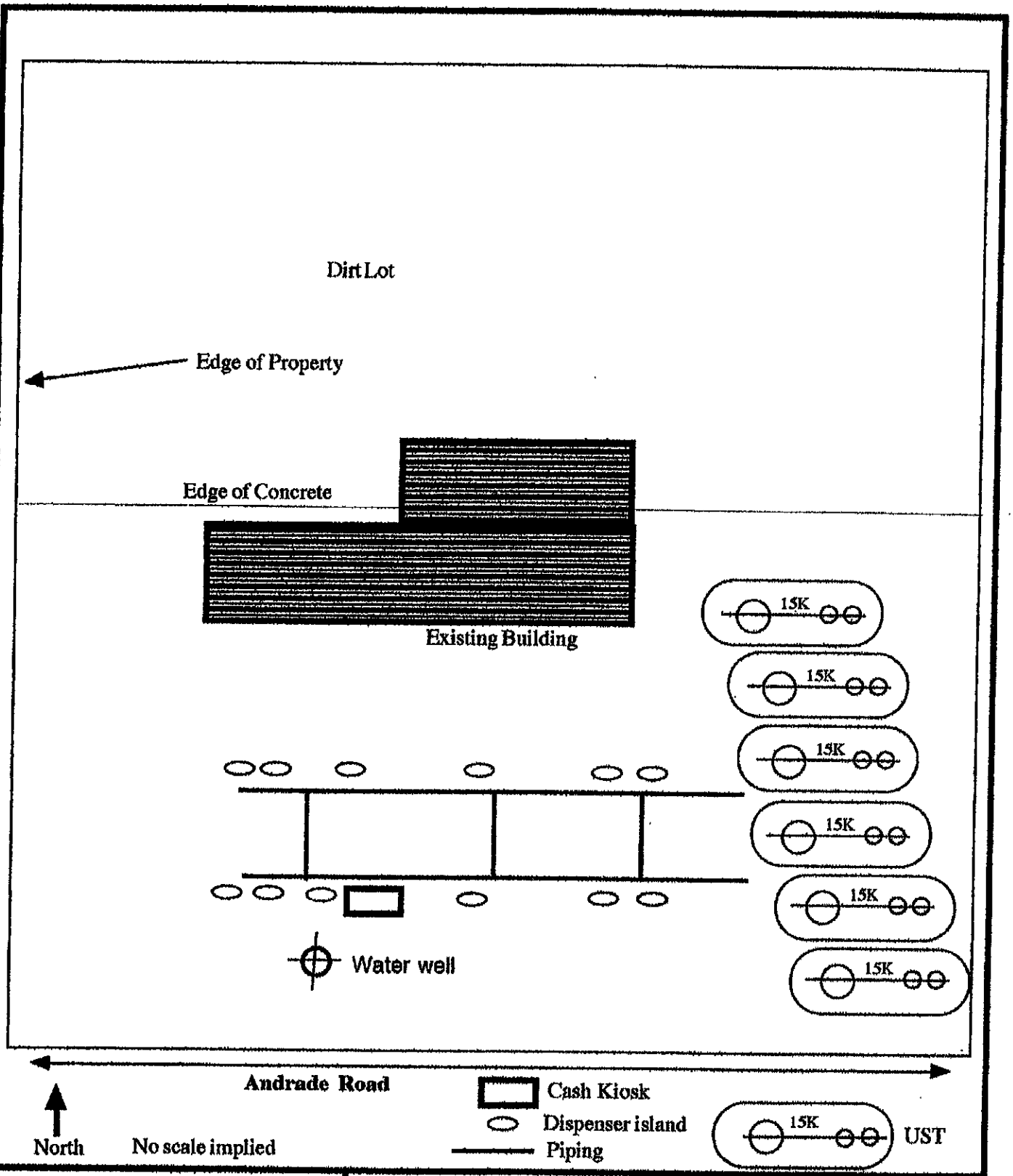


SITE PLAN

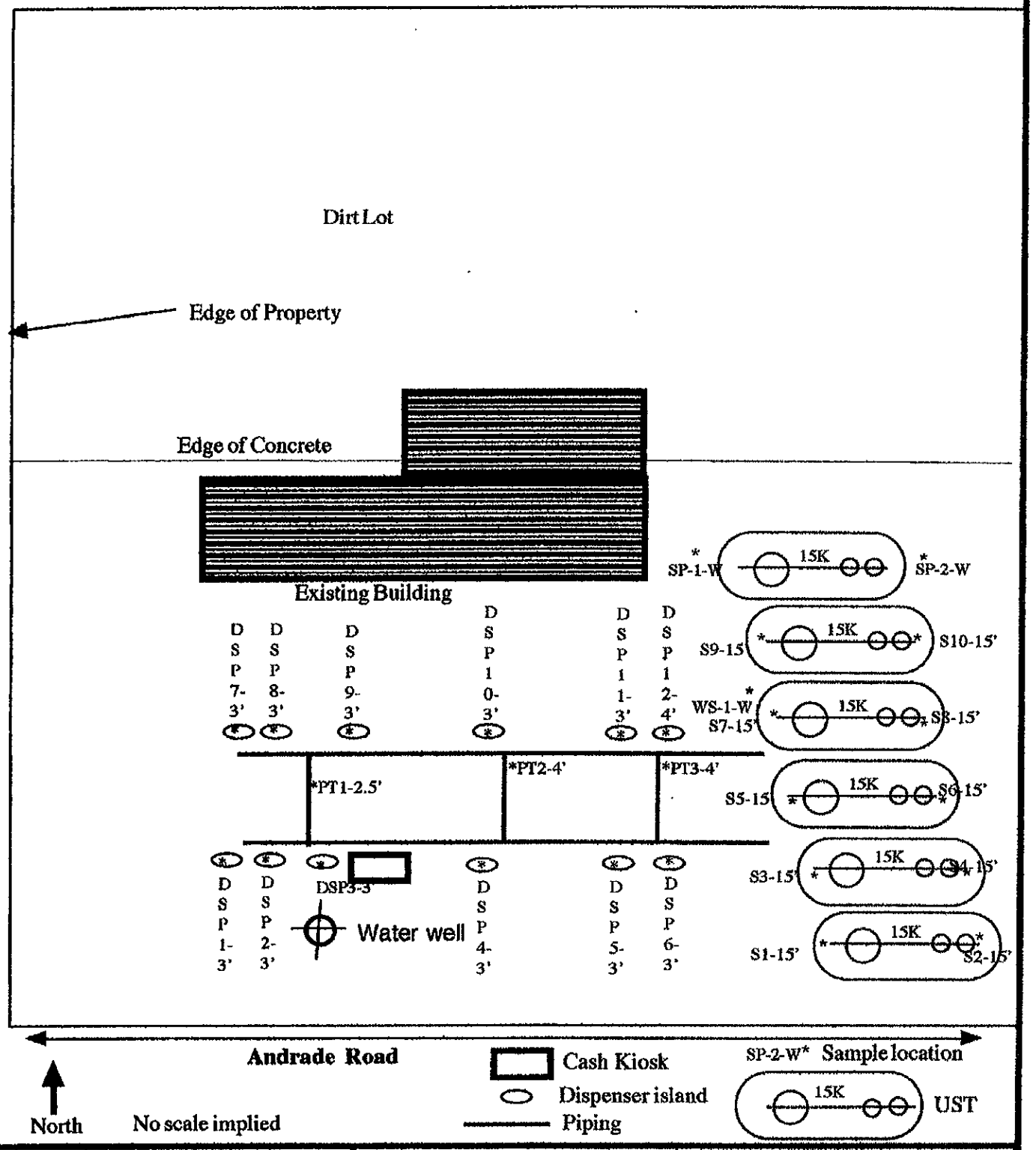
Sunol Tree Gas
3004 Andrade Road
Sunol, CA

CLEARWATER GROUP, INC.

Project No.	Report Date	Figure
CB021C	8/23/02	1.



Environmental Bio-Systems, Inc 707 View Point Road Mill Valley, CA 94941 Tel: 415-381-5195 Fax: 415-381-5816	Sunol Tree Service 3004 Andrade Road Sunol, California		**FIGURE 2 - SITE PLAN**
	JAJ	050902	EBS Project # 586



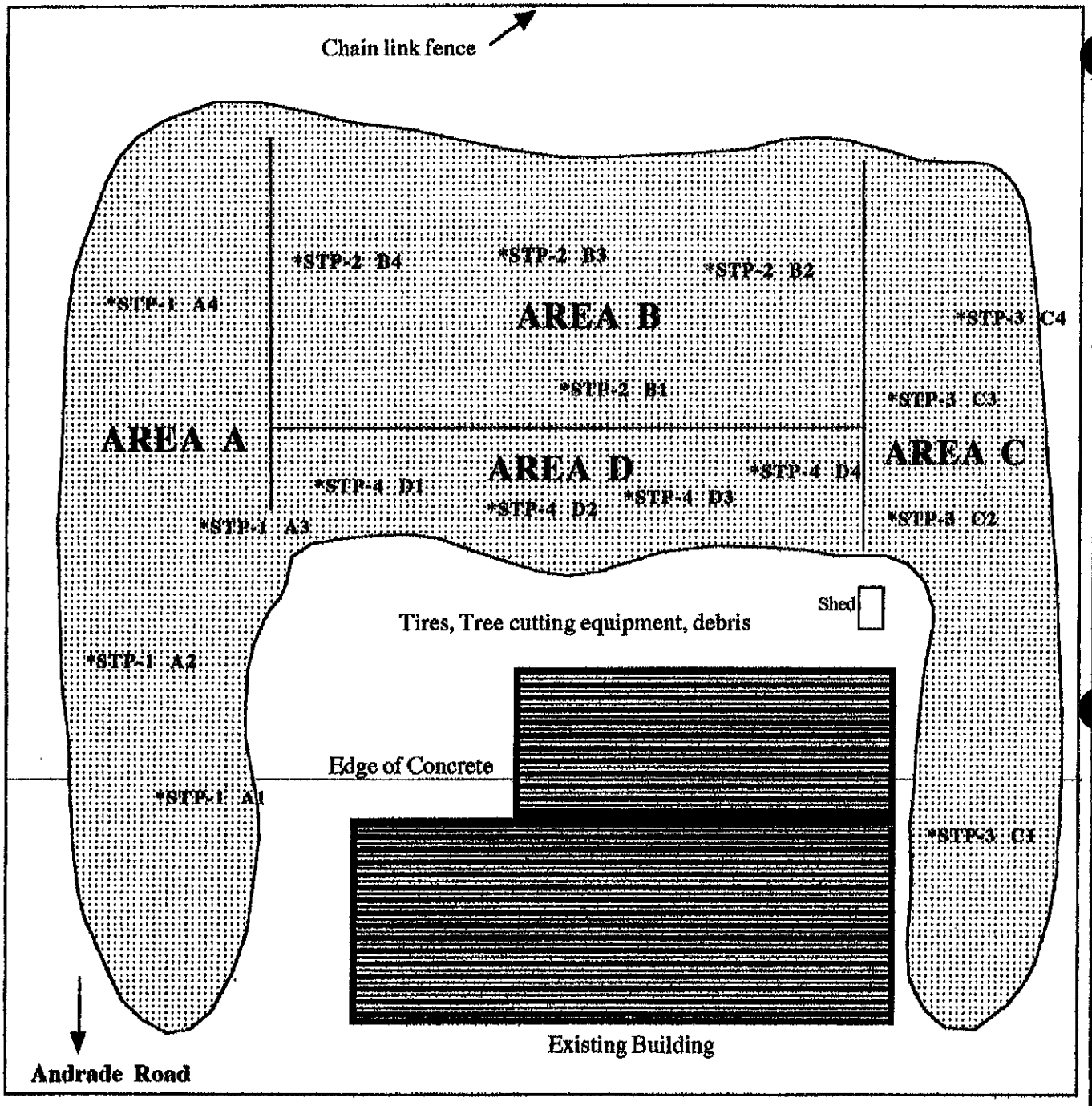
Environmental Bio-Systems, Inc
707 View Point Road
Mill Valley, CA 94941
Tel: 415-381-5195
Fax: 415-381-5816

Sunol Tree Service
3004 Andrade Road
Sunol, California

FIGURE 3 - SITE SAMPLING MAP

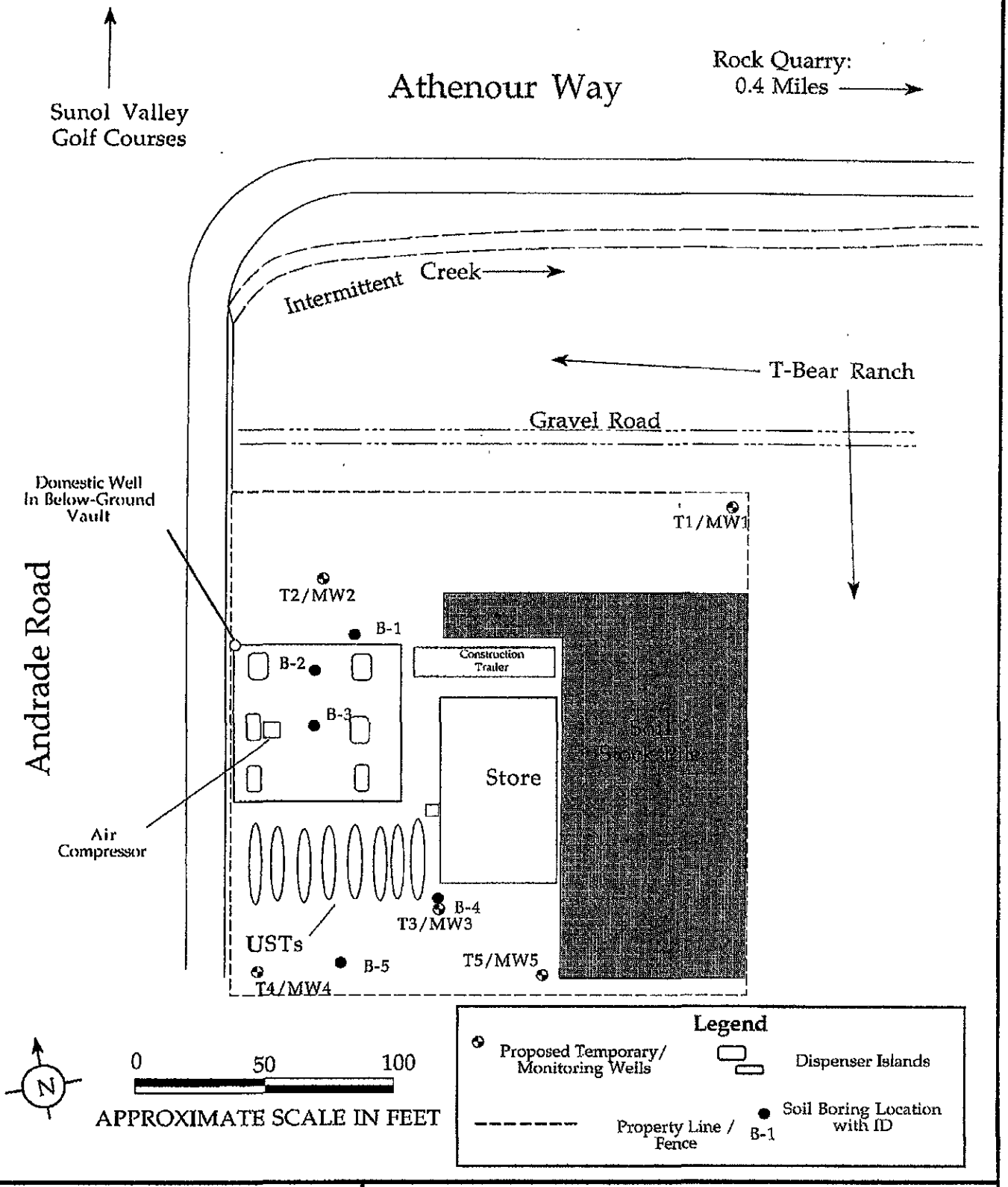
JAJ	050902		EBS Project # 586

5/9/02

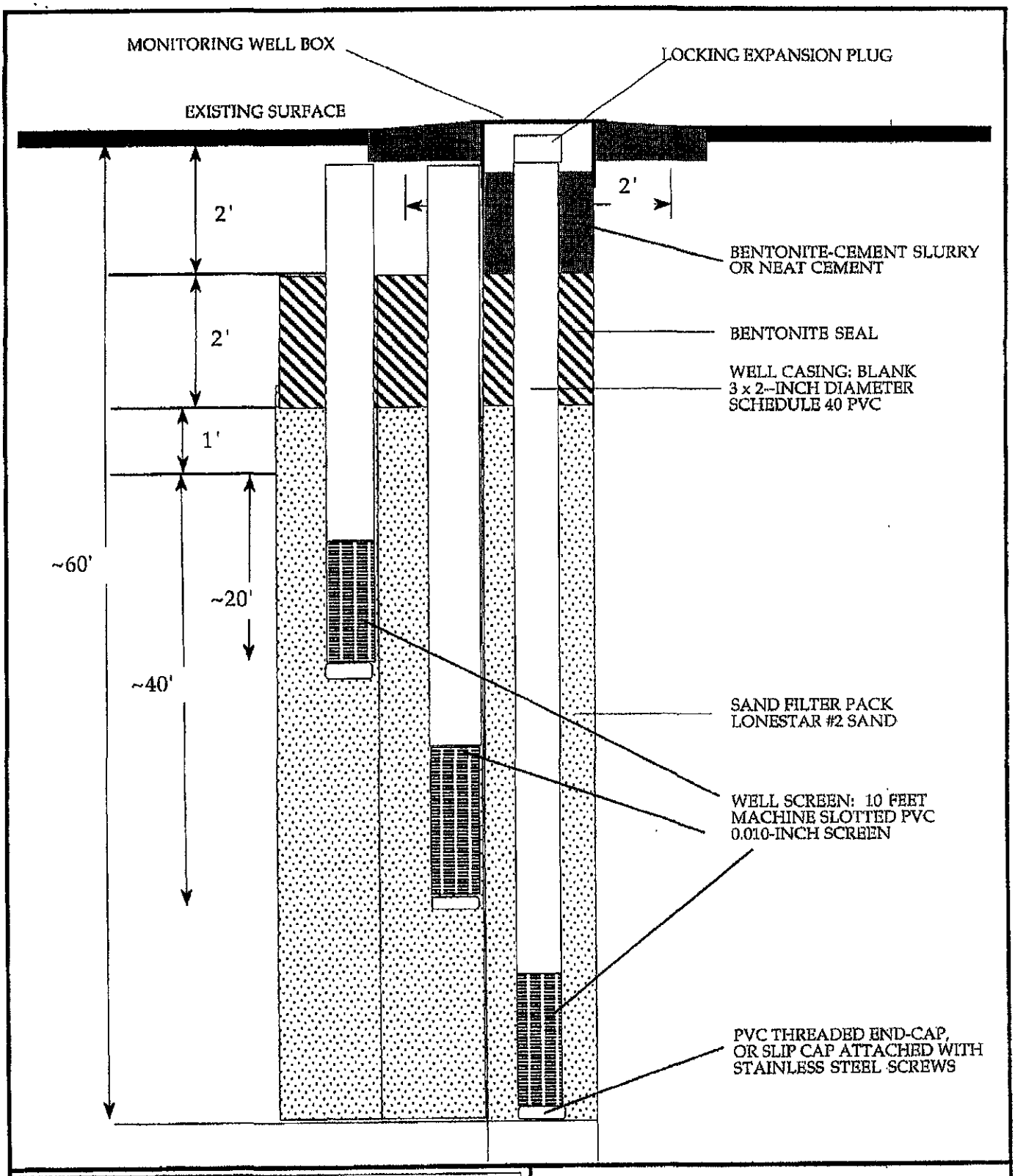


Environmental Bio-Systems, Inc 707 View Point Road Mill Valley, CA 94941 Tel: 415-381-5195 Fax: 415-381-5816	Sunol Tree Service 3004 Andrade Road Sunol, California	**FIGURE 4 - SOIL STOCKPILE SAMPLING MAP**
	JAJ | 050902 |	EBS Project # 586

5/9/02



SITE PLAN AND PROPOSED WELL LOCATIONS Sunol Tree Gas Service Station 3004 Andrade Road Sunol, CA 94586	CLEARWATER GROUP		
	Project No. CB021C	Figure Date 5/03	Figure 2

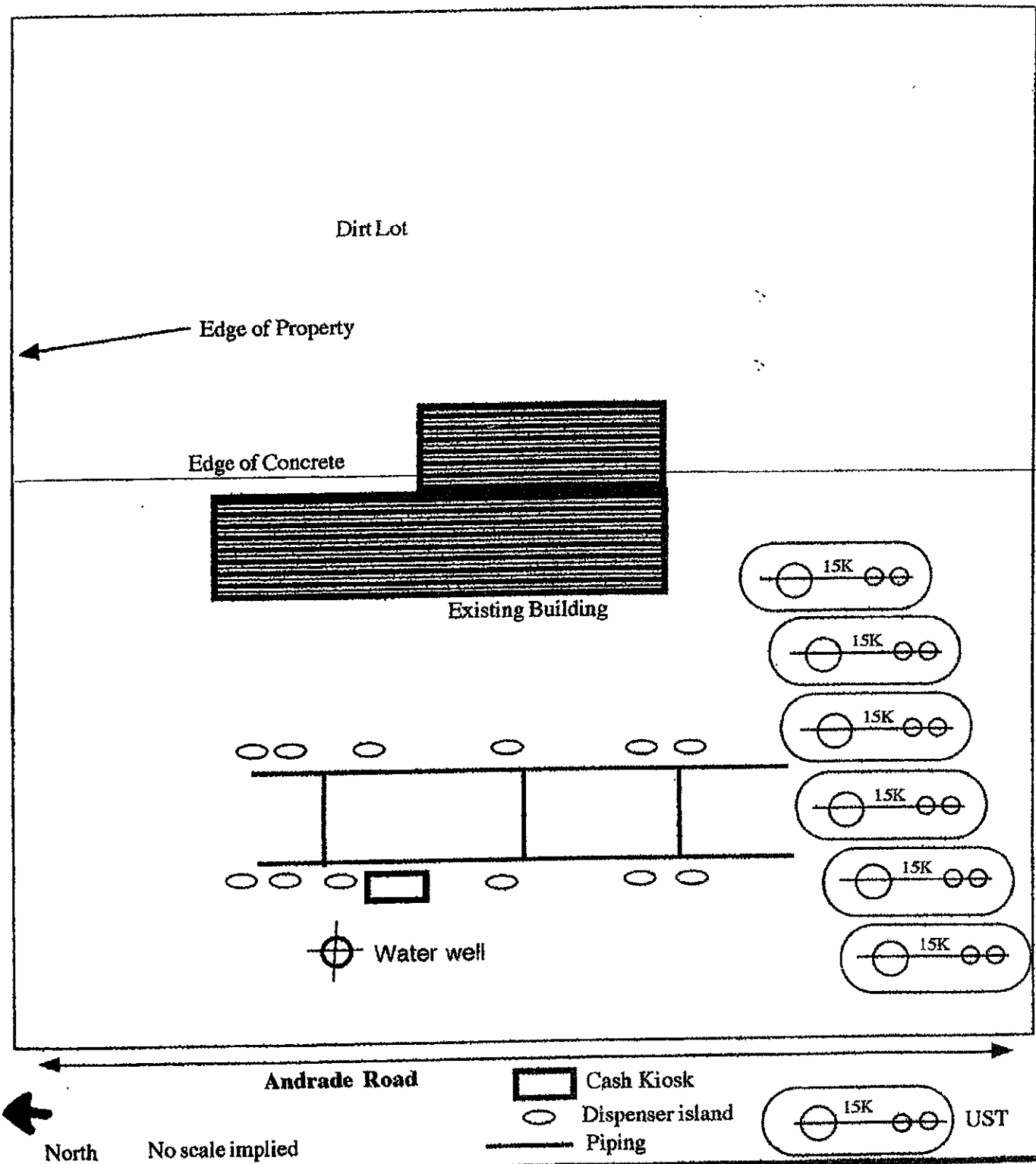


PROPOSED WELL CONSTRUCTION SCHEMATIC

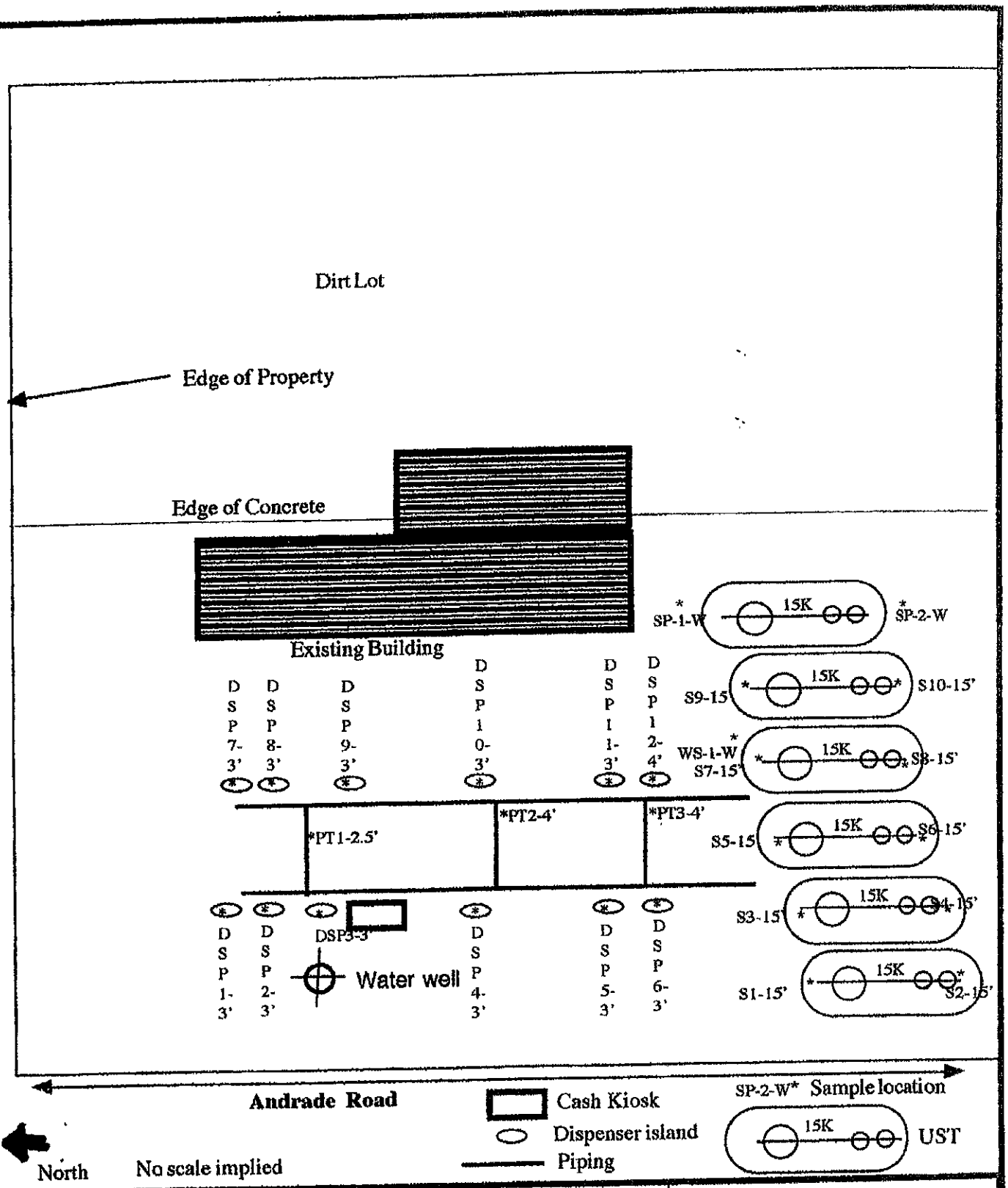
Sunol Tree Gas Service Station
3004 Andrade Road,
Sunol, California

CLEARWATER GROUP

Project No.	Date	Figure
CB021C	5/03	3

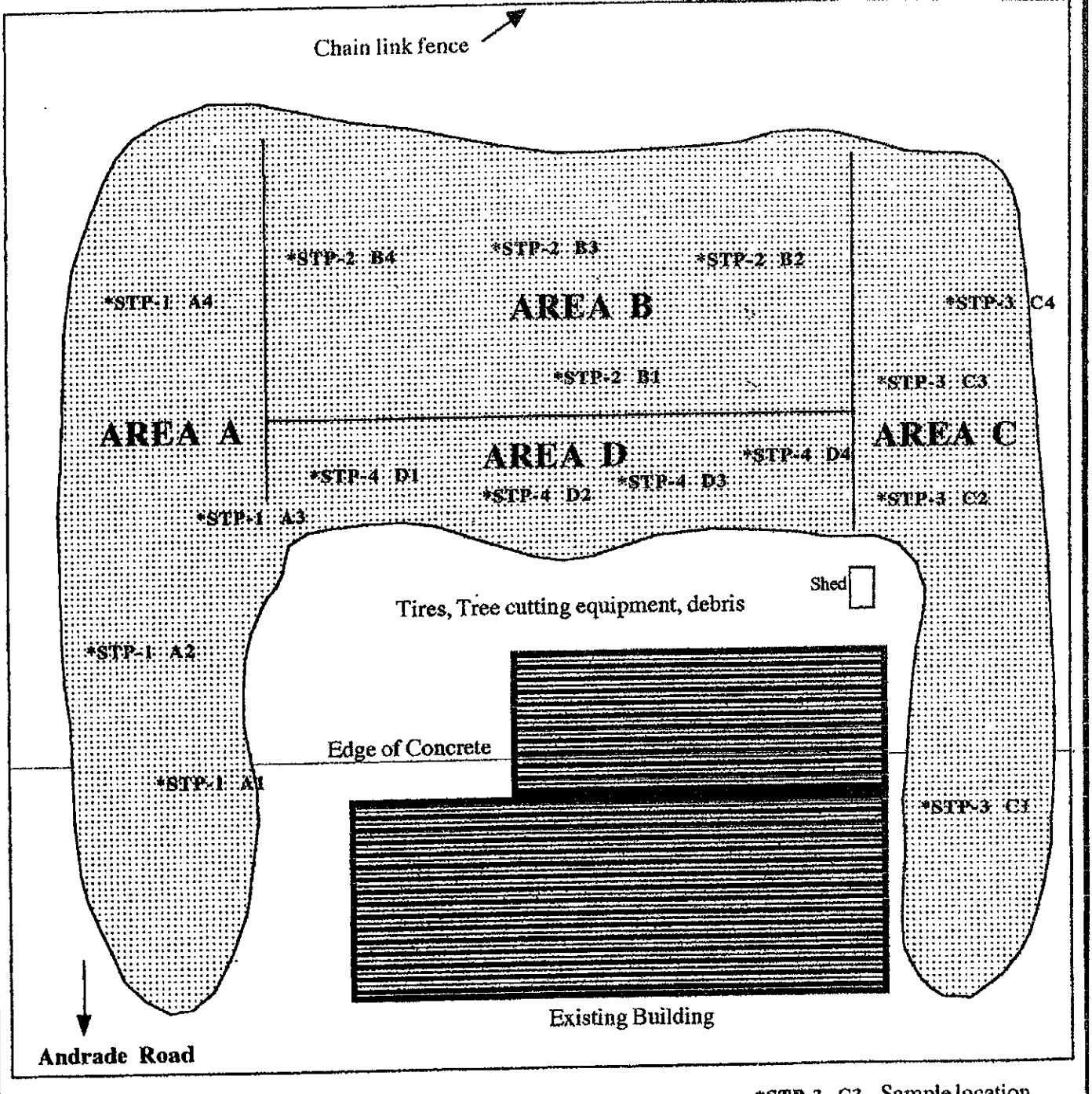


Environmental Bio-Systems, Inc 707 View Point Road Mill Valley, CA 94941 Tel: 415-381-5195 Fax: 415-381-5816	Sunol Tree Service 3004 Andrade Road Sunol, California		**FIGURE 2 - SITE PLAN**
	JAJ	050902	EBS Project # 586



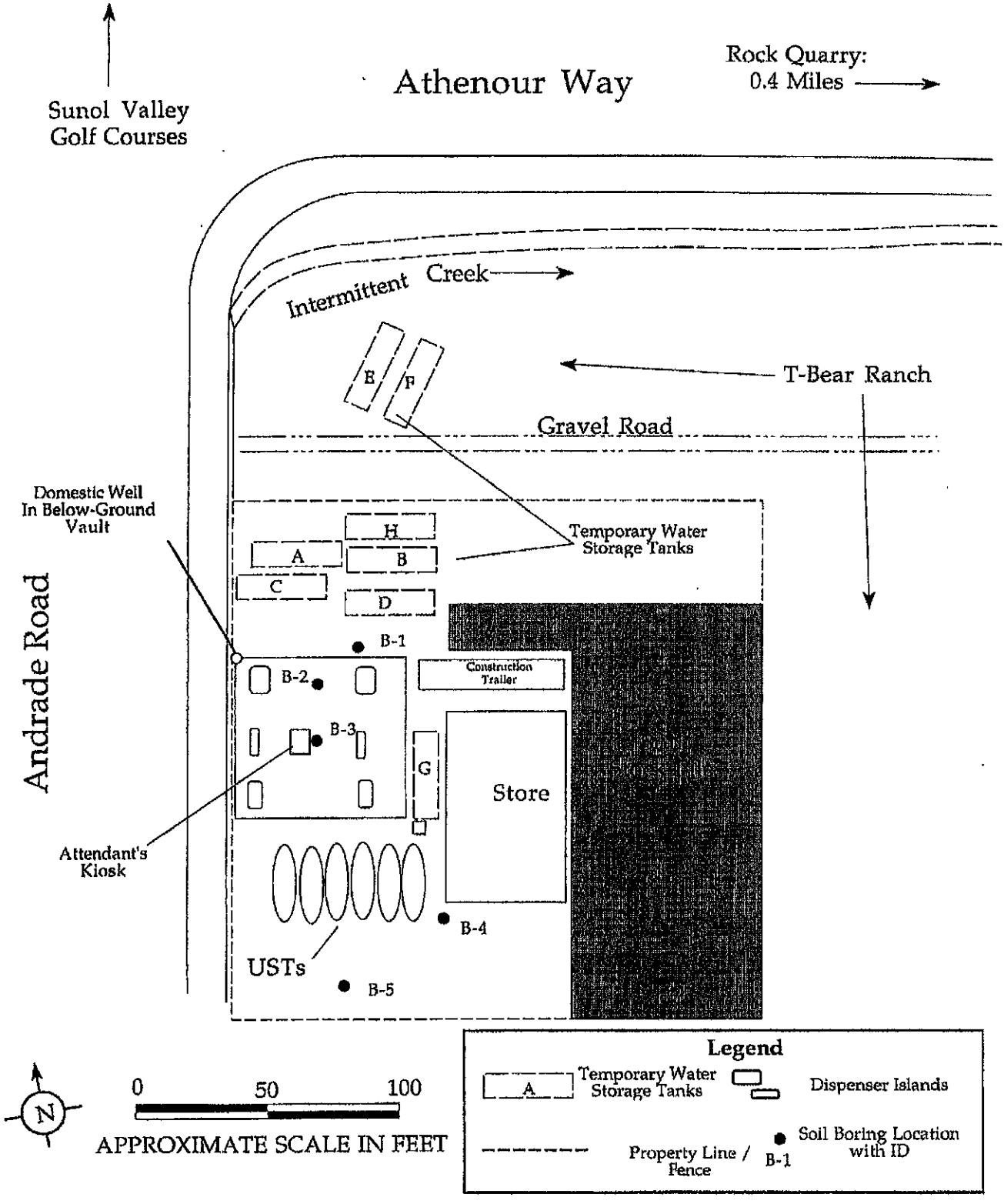
Environmental Bio-Systems, Inc 707 View Point Road Mill Valley, CA 94941 Tel: 415-381-5195 Fax: 415-381-5816	Sunol Tree Service 3004 Andrade Road Sunol, California	**FIGURE 3 - SITE SAMPLING MAP**
	JAJ | 050902 |	EBS Project # 586

3/14/03



Environmental Bio-Systems, Inc 707 View Point Road Mill Valley, CA 94941 Tel: 415-381-5195 Fax: 415-381-5816	Sunol Tree Service 3004 Andrade Road Sunol, California		**FIGURE 4 - SOIL STOCKPILE SAMPLING MAP**
	JAJ	050902	EBS Project # 586

3/14/03



SITE PLAN Sunol Tree Service 3004 Andrade Road Sunol, CA 94586	CLEARWATER GROUP		
	Project No. **CP032F**	Figure Date **03/03**	Figure **2**

3/14/03

Documents (PHOTOS)

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	Title	File	Size	Posted By	Modified
☐	2002-05-09 UST Removal Report-PHOTOS	2002-05-09 UST Removal Report-PHOTOS.pdf	86.8 kb	Pat Hoban	Jun 25, 2004 *5:07 AM*
☐	Aug-2003 T-Bear Ranch Inspection.	Aug-2003 T-Bear Ranch Inspection..pdf	1.7 MB	Pat Hoban	Jun 25, 2004 *5:07 AM*
☐	Carbon System	Carbon System.pdf	661.6 kb	Pat Hoban	Jun 25, 2004 *5:08 AM*

3 documents

Select All | Clear All

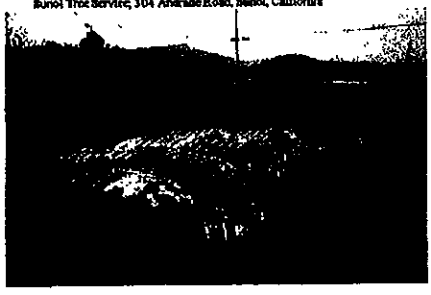
Photos of Tank Removal

- Tank removal photos taken April 2, 2002
- Five 15,000 gallon fiberglass gas tanks removed by SUTS

Environmental Bio-Systems, Inc.
707 View Point Road
Mill Valley, CA 94941

View under canopy. Note metal shoring
Tuesday, April 2, 2002
Sunol Tree Service; 304 Andrade Road, Sunol, California

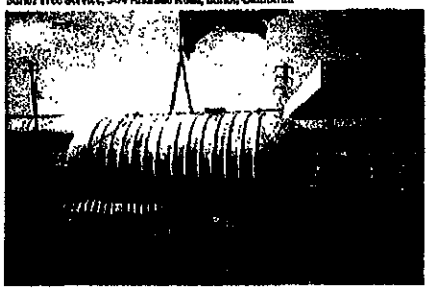
Uncovering the USTs. Boxes of dry ice visible. Tuesday, April 2, 2002
Sunol Tree Service; 304 Andrade Road, Sunol, California



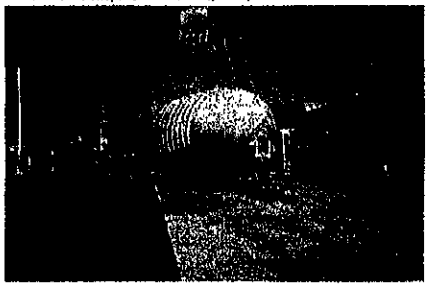
21,000 gallon groundwater storage tanks. Tuesday, April 2, 2002
Sunol Tree Service; 304 Andrade Road, Sunol, California

file: 2002-05-09 UST Removal Report - Photos.pdf

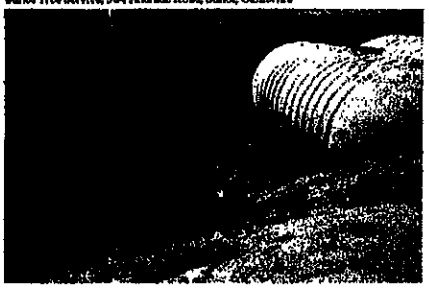
Tuesday, April 2, 2002
Sunol Tree Service; 304 Andrade Road, Sunol, California



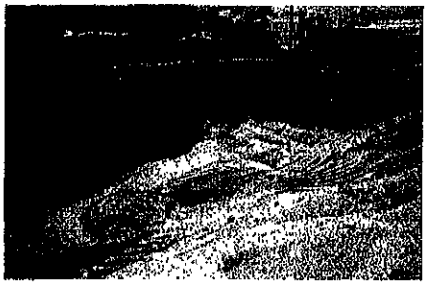
Pulling a 15,000 gallon fiberglass fuel tank with an excavator. Tuesday, April 2, 2002
Sunol Tree Service; 304 Andrade Road, Sunol, California

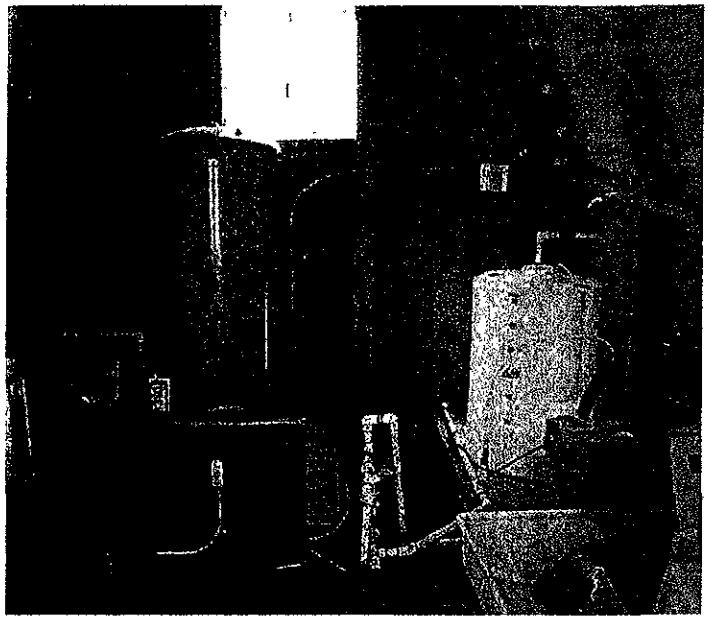


Tank removal progress photo. Tuesday, April 2, 2002
Sunol Tree Service; 304 Andrade Road, Sunol, California

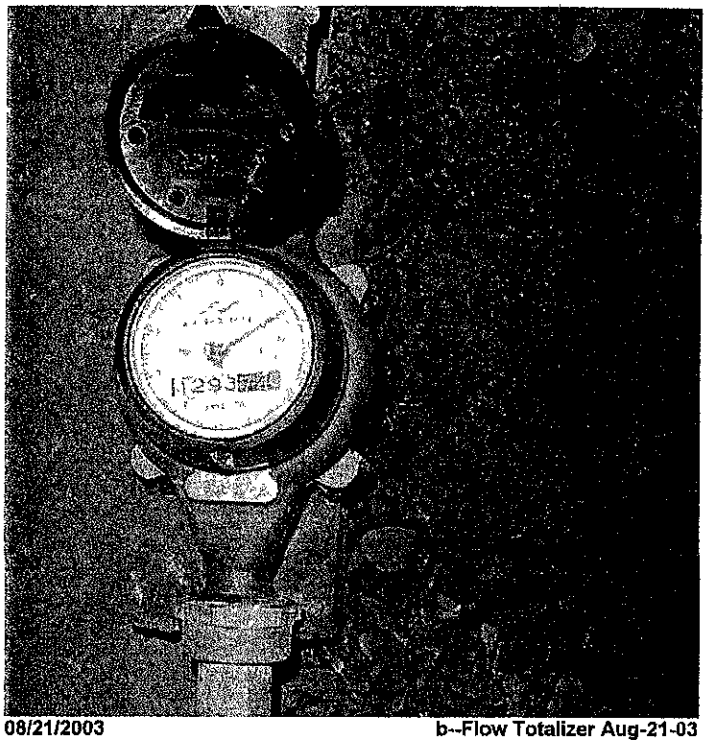


All tanks removed. Tuesday, April 2, 2002
Sunol Tree Service; 304 Andrade Road, Sunol, California

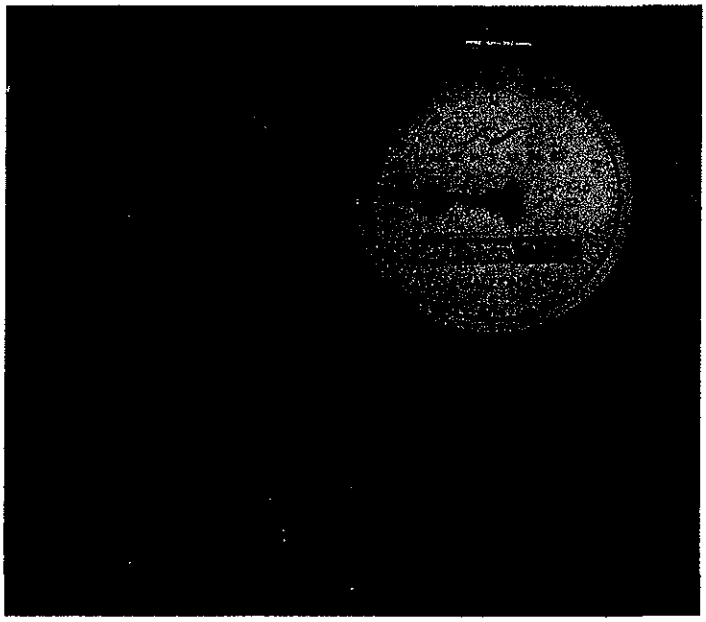




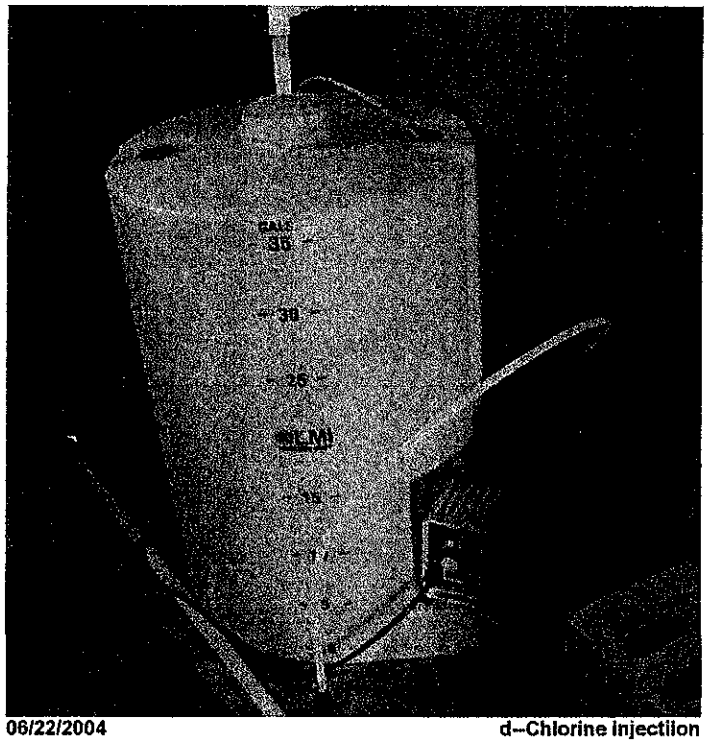
6/22/2004 a--Well Shed



08/21/2003 b--Flow Totalizer Aug-21-03

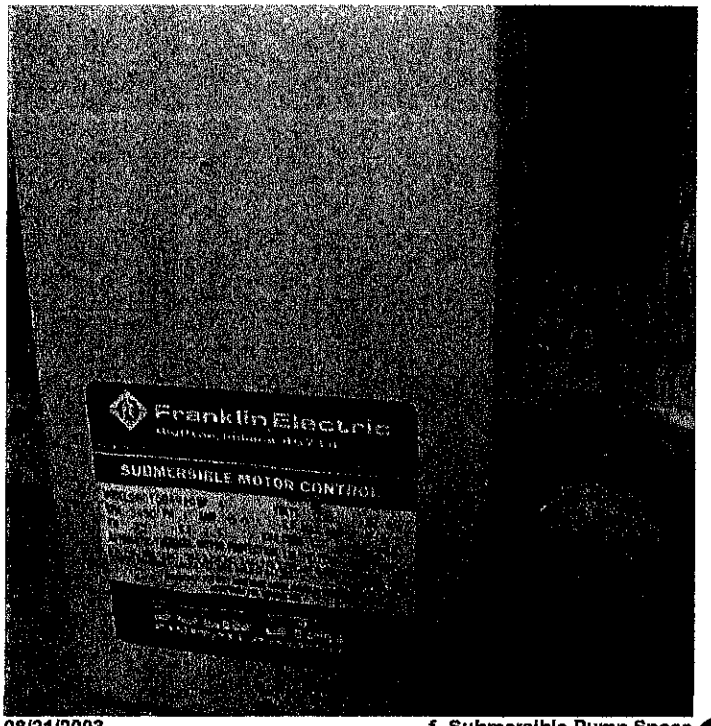


6/22/2004 c--Flow Totalizer Jun-22-04

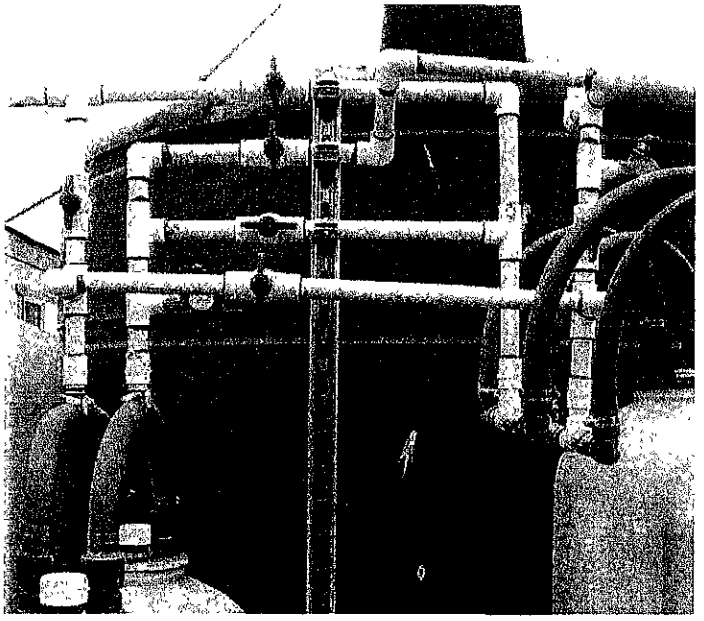


06/22/2004 d--Chlorine injection

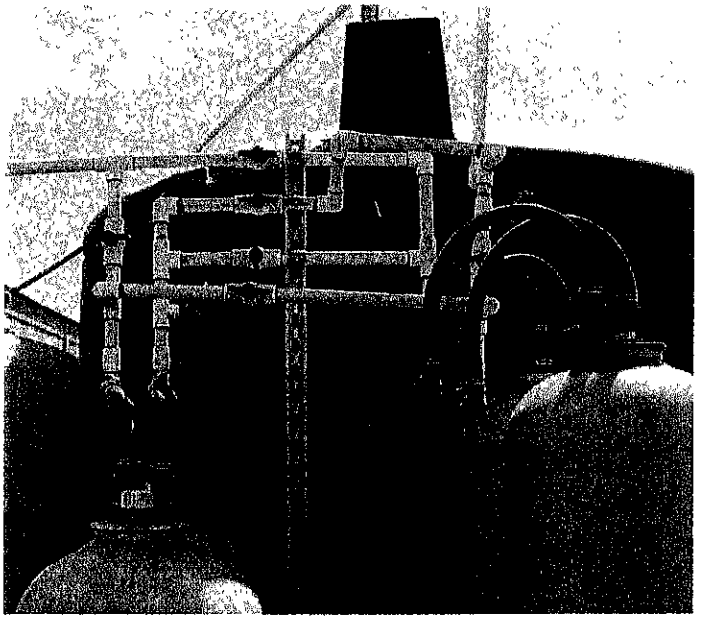
06/22/2004 e--Chlorine Retention Sampling



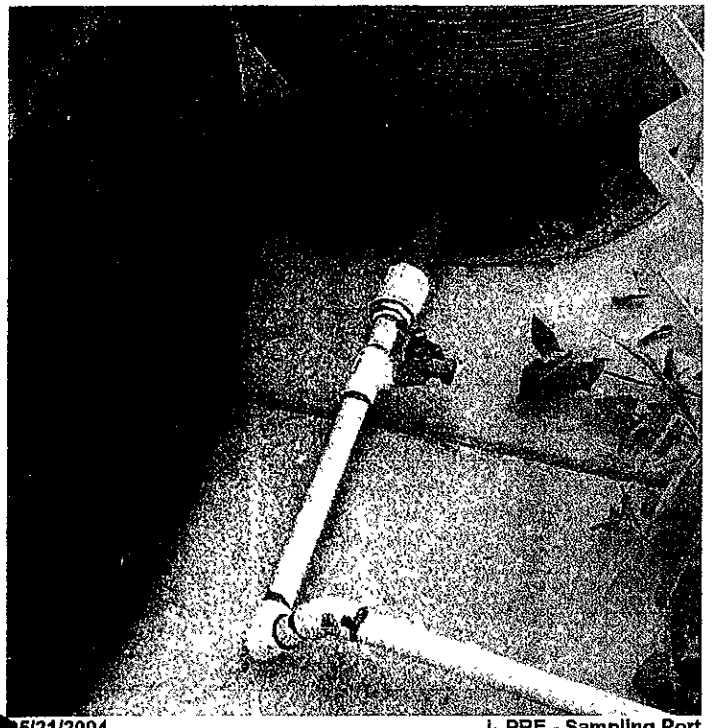
08/21/2003 f--Submersible Pump Specs



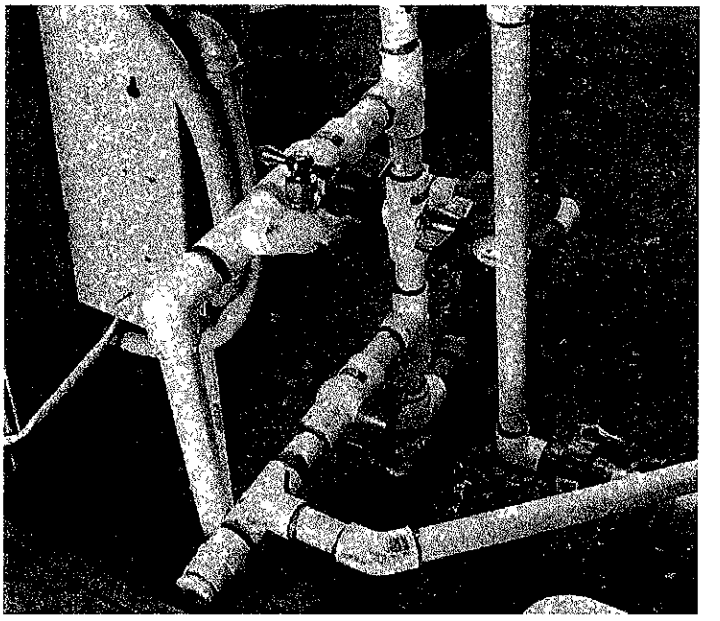
05/21/2004 g--Bypass piping-Initial Setup



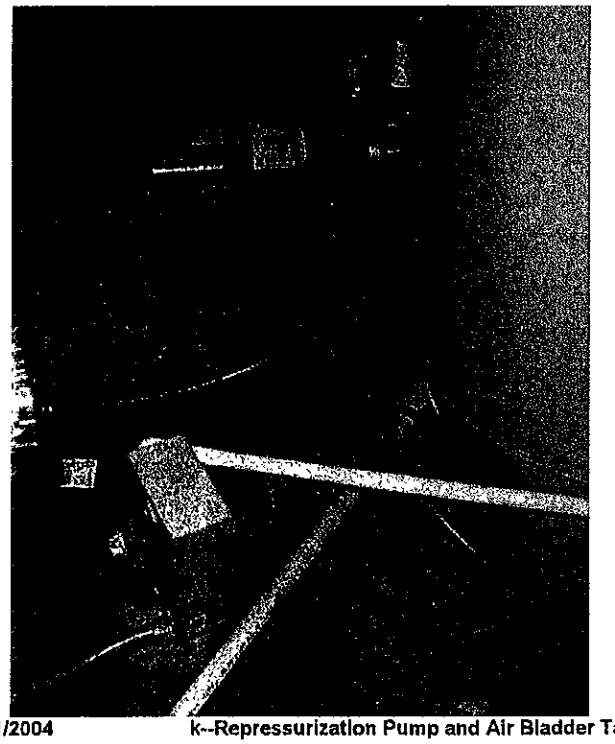
06/22/2004 h--Bypass piping-following Carbon changeout



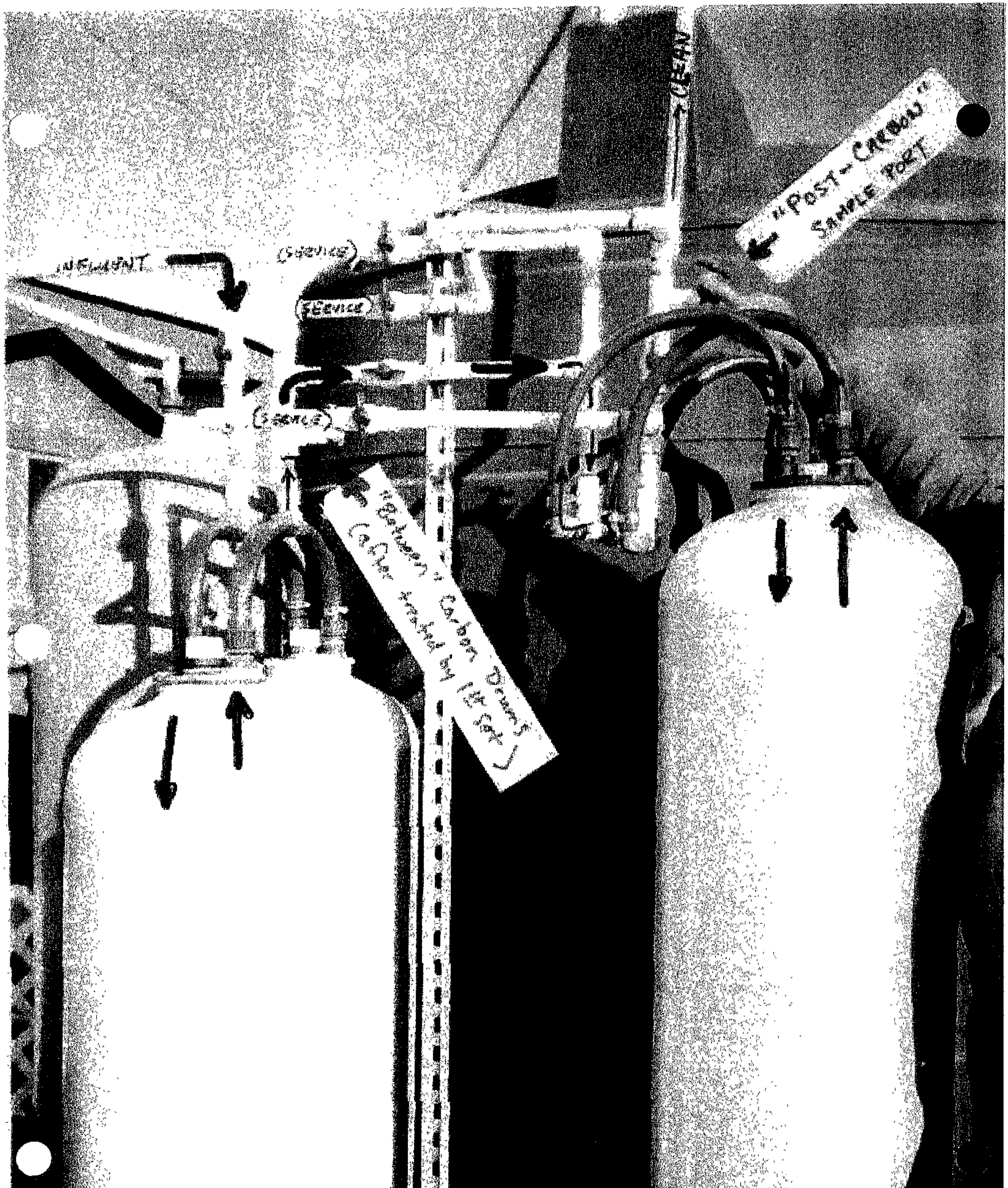
5/21/2004 i--PRE - Sampling Port

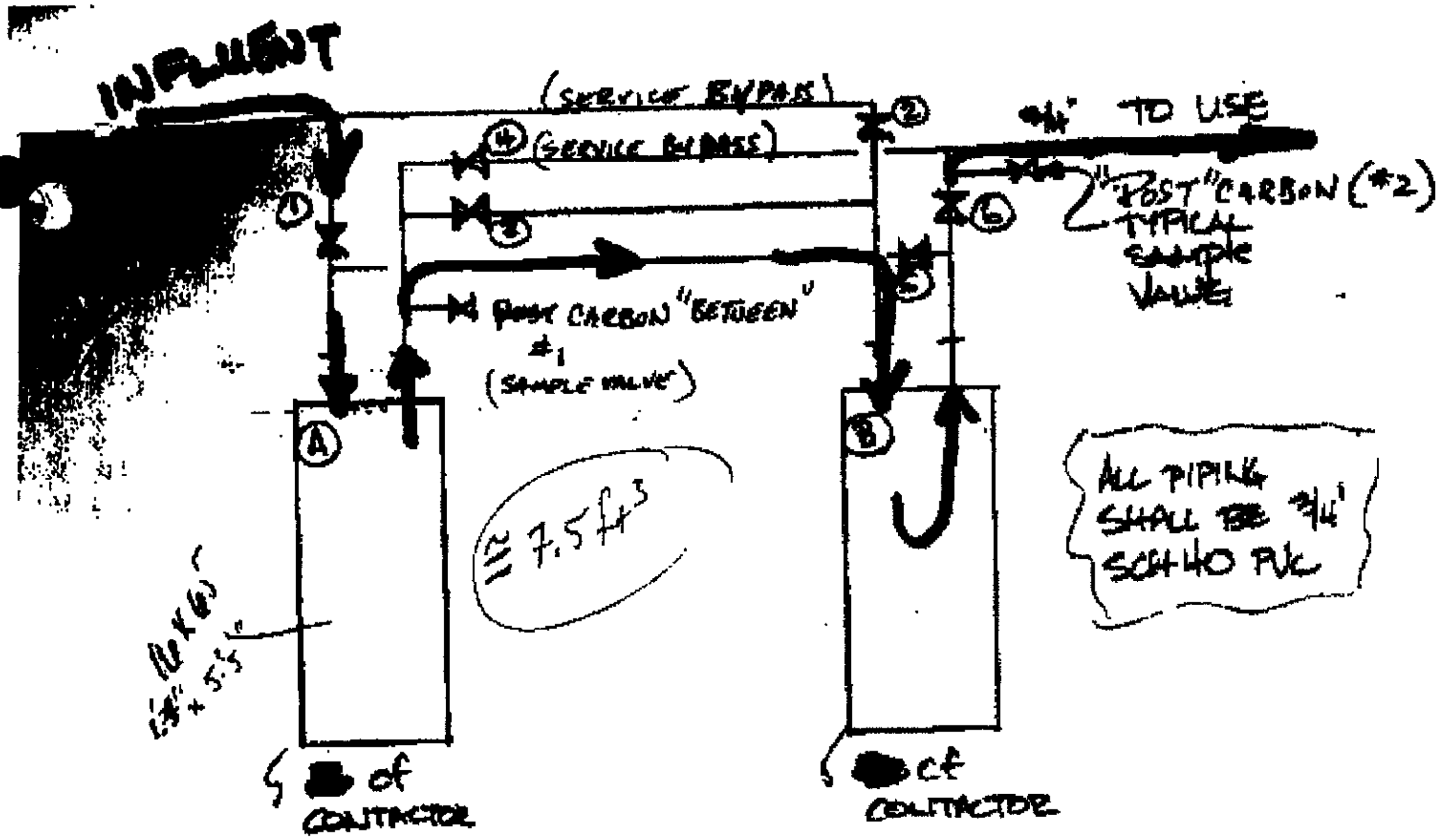


06/22/2004 j--POST - Sampling Port



5/21/2004 k--Repressurization Pump and Air Bladder Tank


INFLUENT
(SERVICE)
(SERVICE)
(SERVICE)
CLEAN
"POST-CARBON" SAMPLE PORT
"Between" Carbon Drums
(after treated by 1st Set)



NOTES

*FILL EACH CONTACTOR WITH [redacted] cf HILL OF

~~[illegible]~~

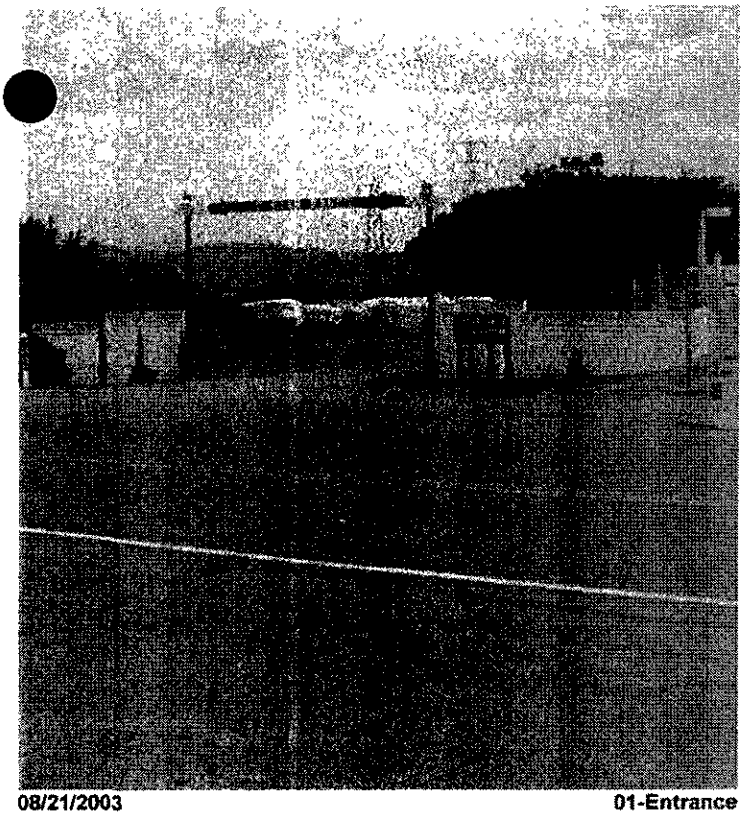
Culligan System Spec's - Initial Setup Prior to Carbon change-out at which time the valves are reversed in order for the secondary cannisters to become the primary filters

	SCENARIO	VALVE POSITION 1	2	3	4	5	6
1.	NORMAL, THRU (A), THEN (B)	O	X	O	X	X	O
2.	SERVICE (BYPASS) (A)	X	O	X	X	X	O
3.	THRU (B), THEN THRU (A)	X	O	X	O	O	X
(4)	SERVICE (BYPASS) (B)	O	X	X	O	X	X

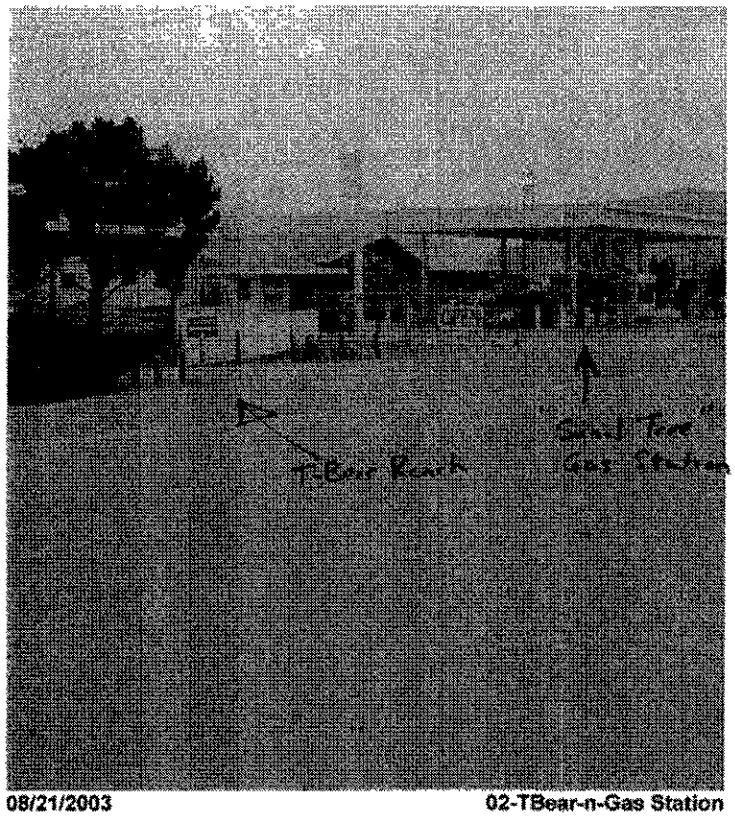
[redacted]

ENGR 7/10/03

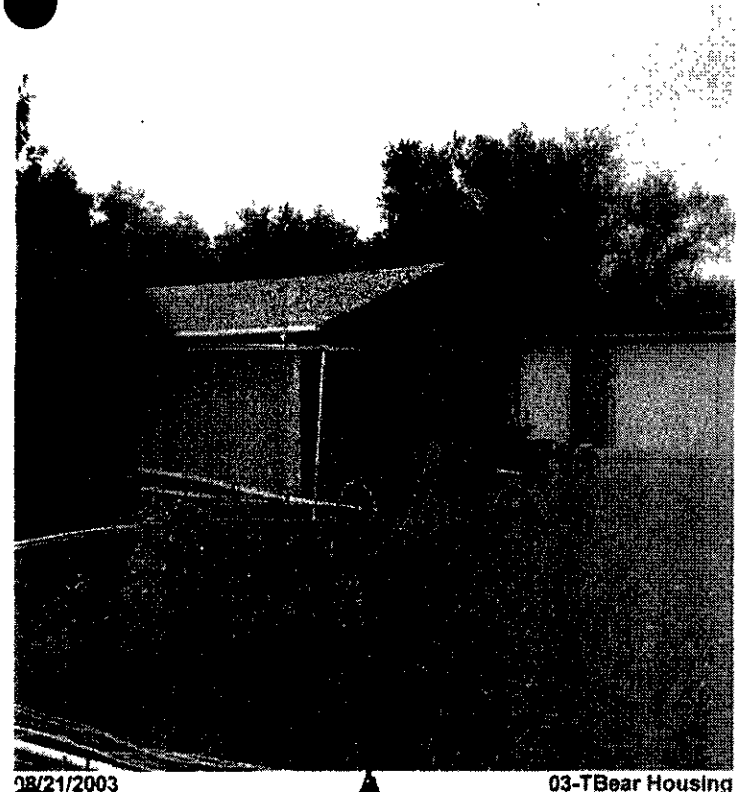
CHECK



08/21/2003 01-Entrance

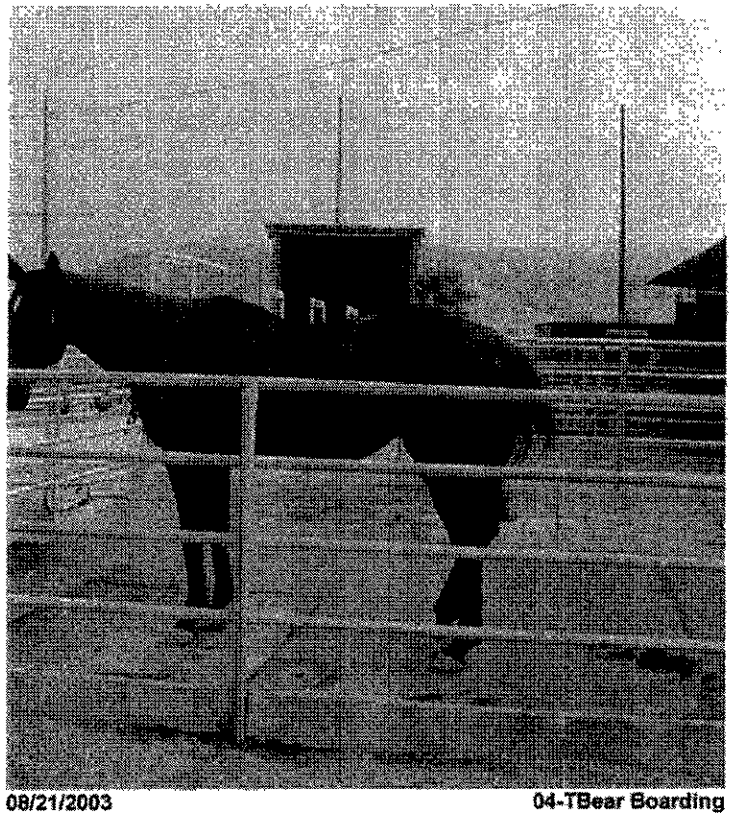


08/21/2003 02-TBear-n-Gas Station



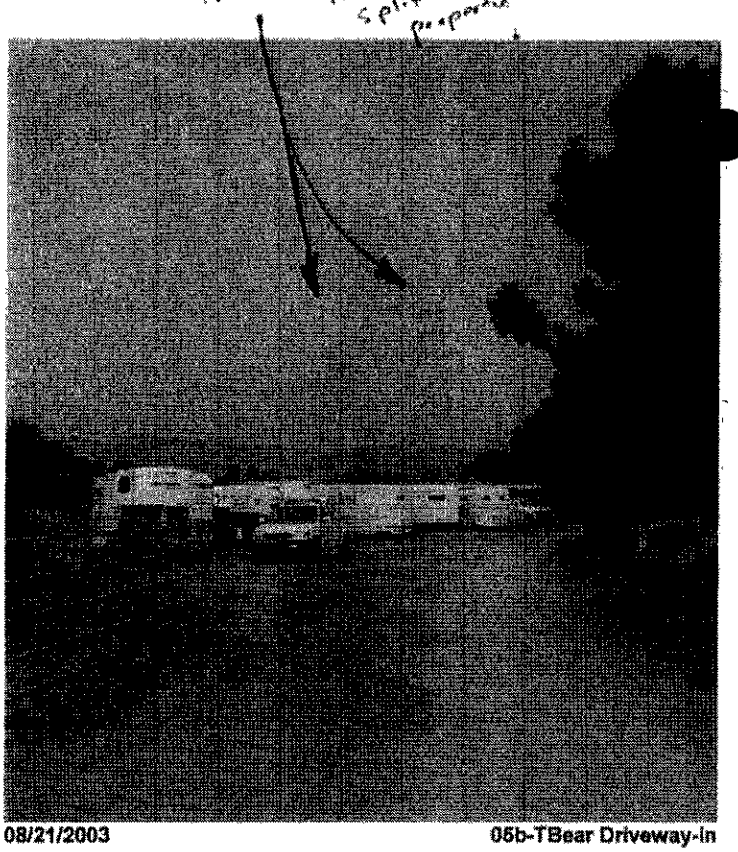
08/21/2003 03-TBear Housing

"Temporary" Housing
(Mobile Home on Blocks)

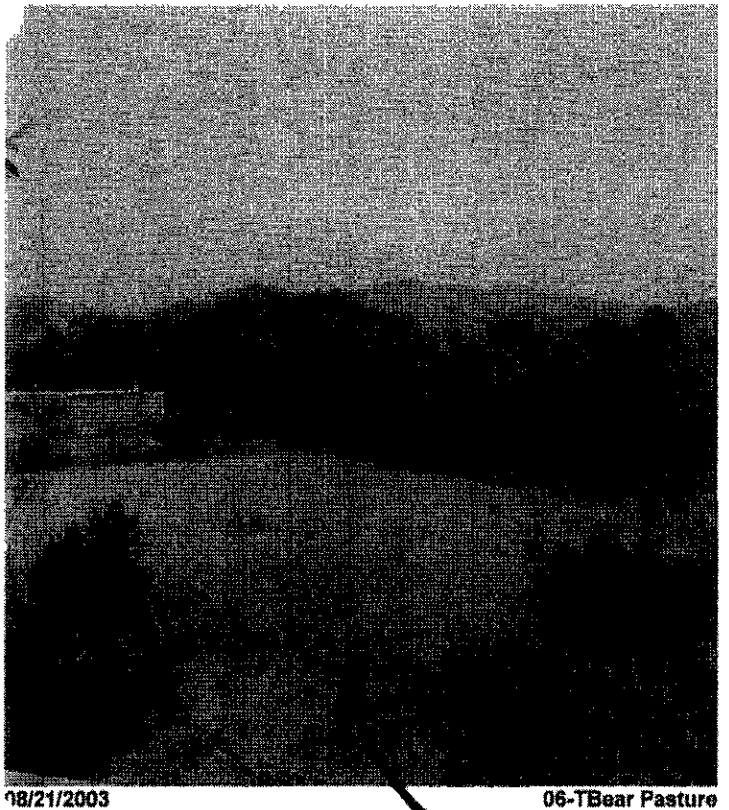


08/21/2003 04-TBear Boarding

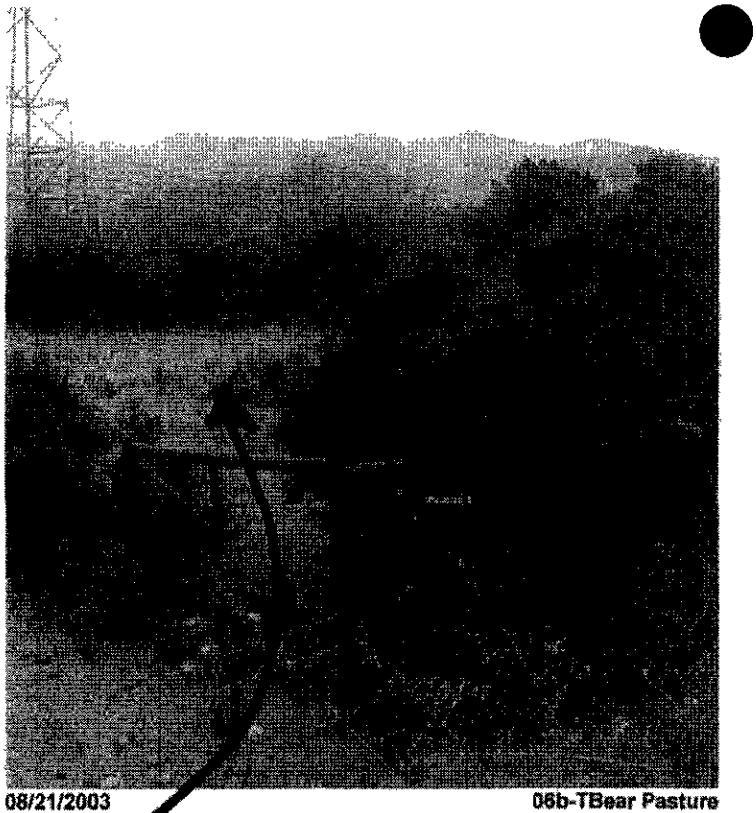
08/21/2003 05-TBear Driveway-out



08/21/2003 05b-TBear Driveway-In

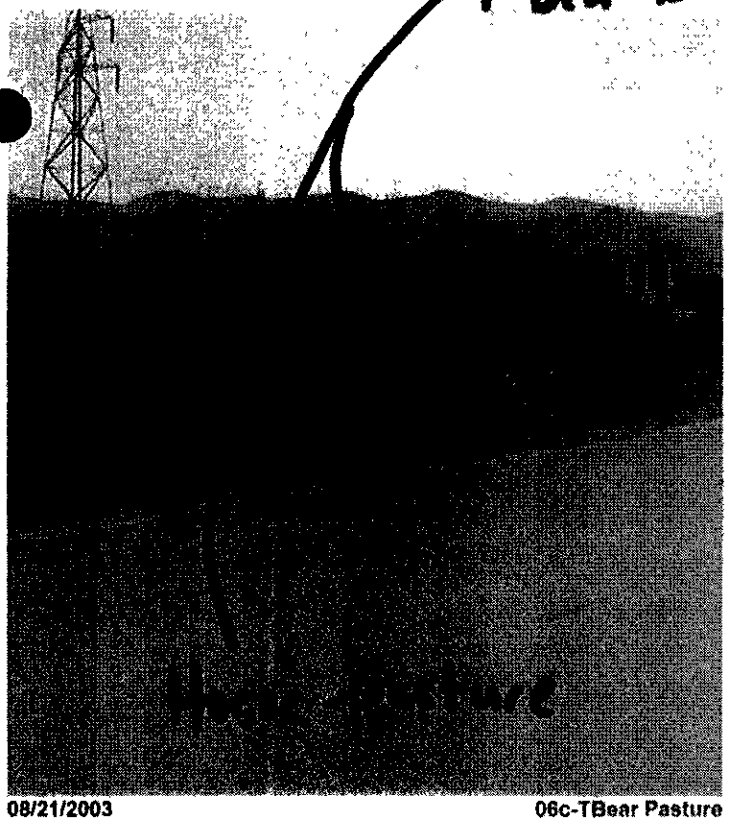


08/21/2003 06-TBear Pasture

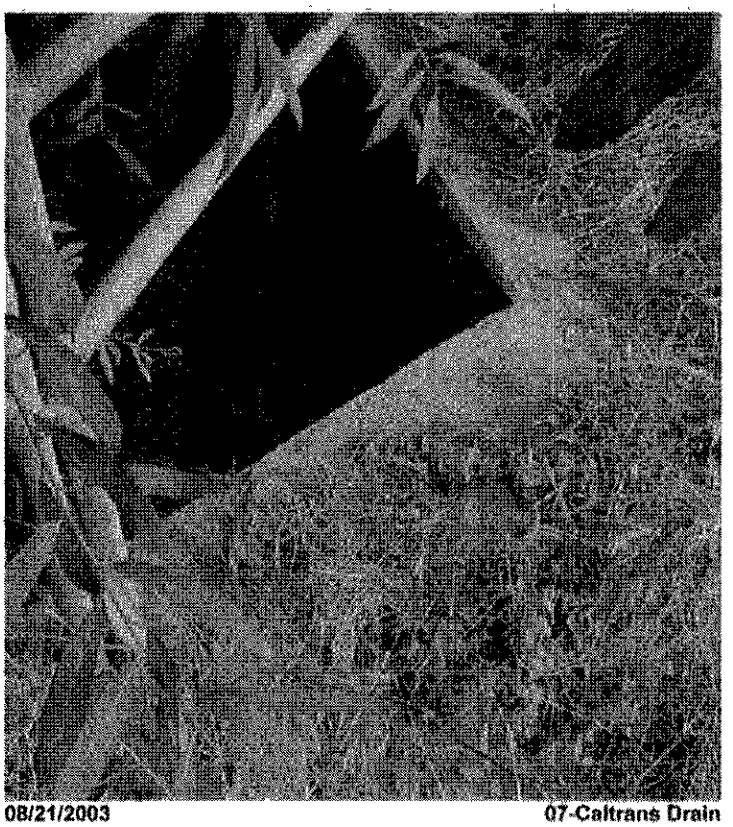


08/21/2003 06b-TBear Pasture

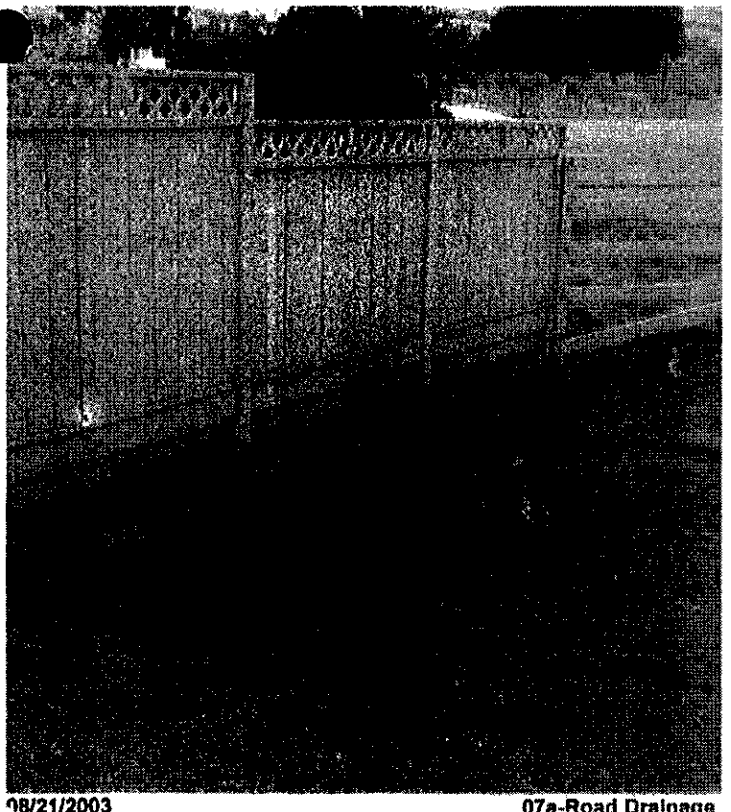
"Horse pasture" - potential well site



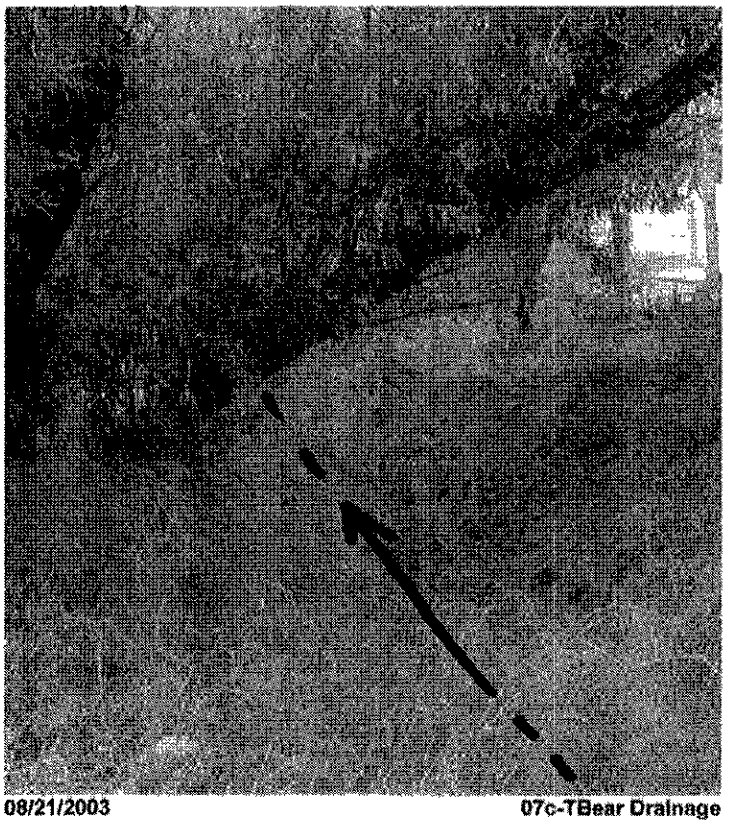
08/21/2003 06c-TBear Pasture



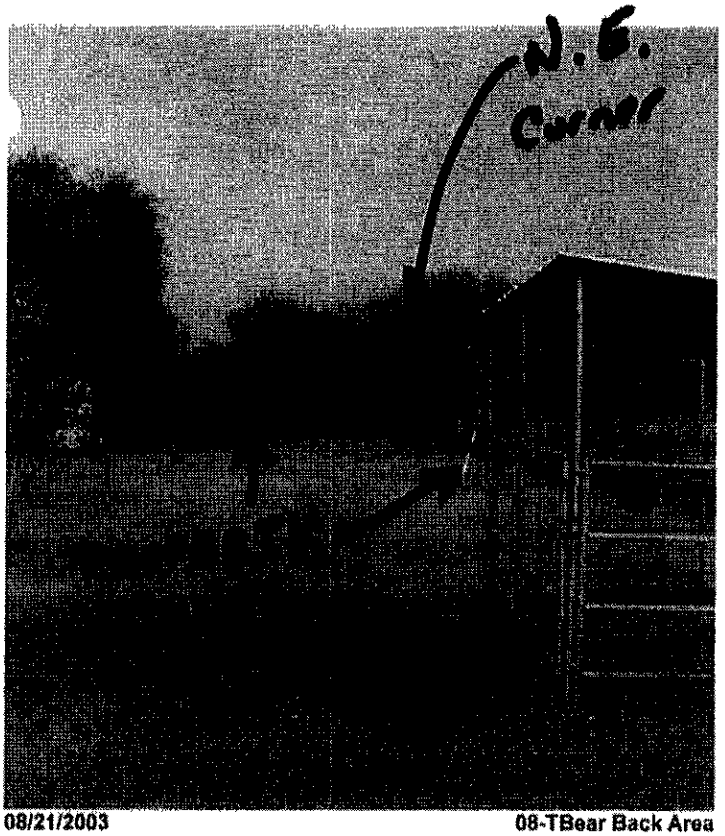
08/21/2003 07-Caltrans Drain



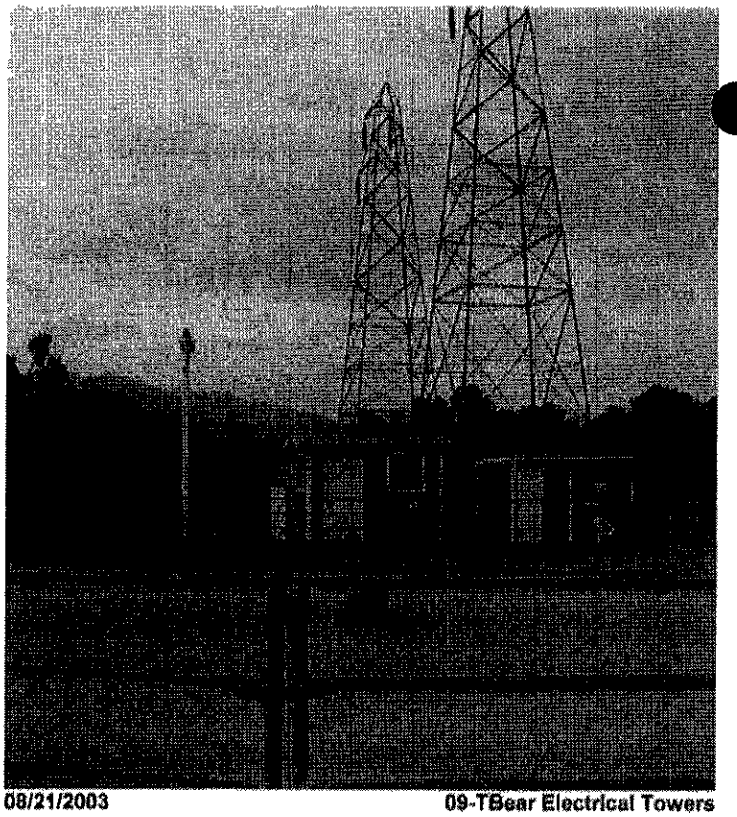
08/21/2003 07a-Road Drainage



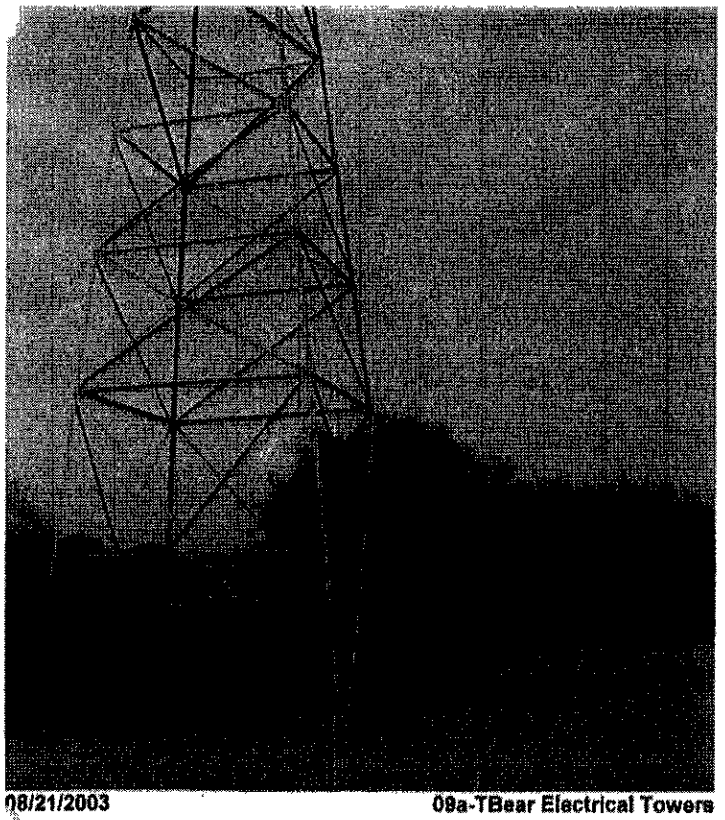
08/21/2003 07c-TBear Drainage



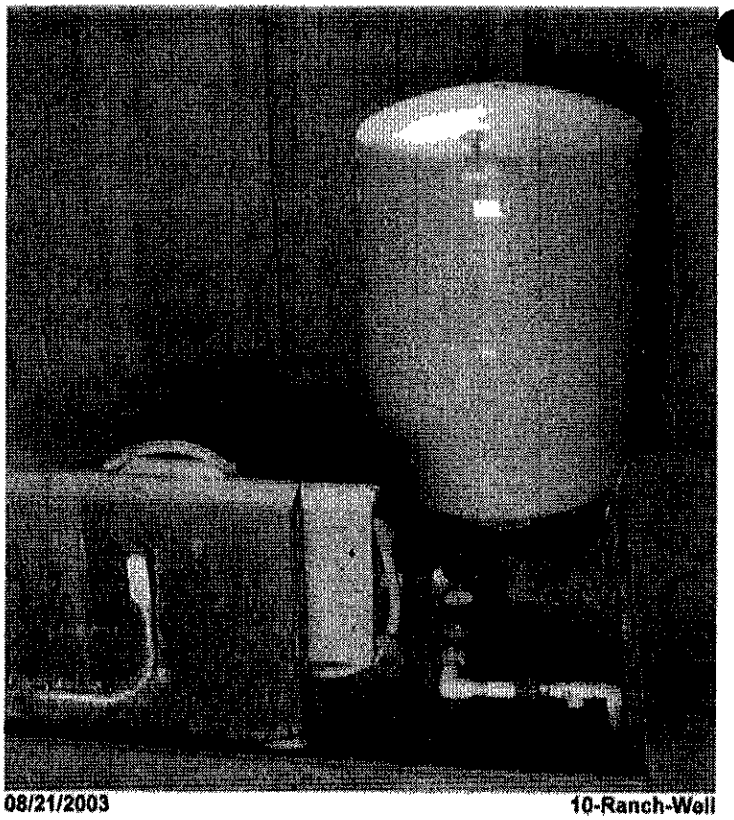
08/21/2003 08-TBear Back Area



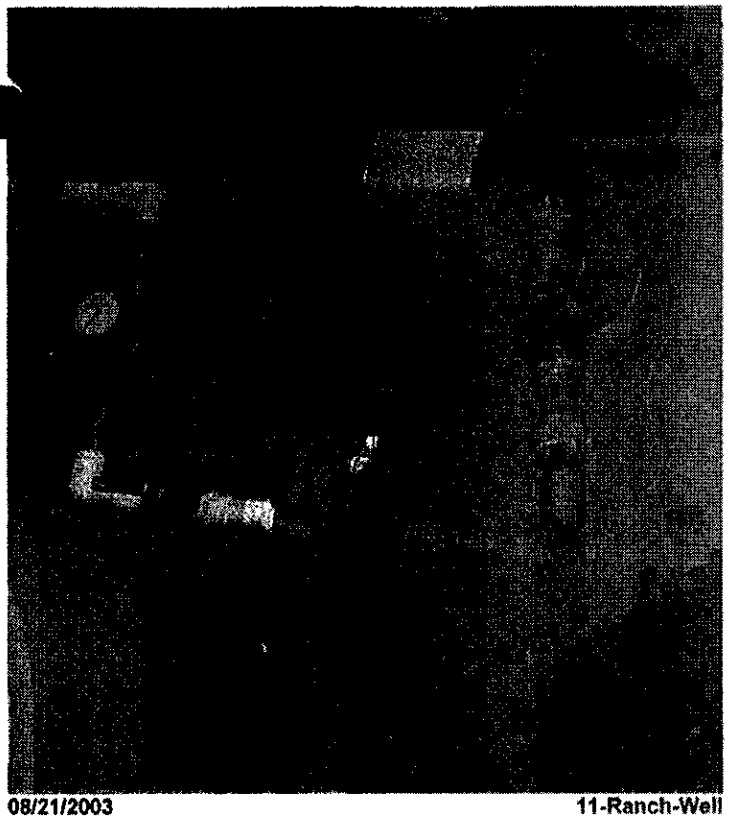
08/21/2003 09-TBear Electrical Towers



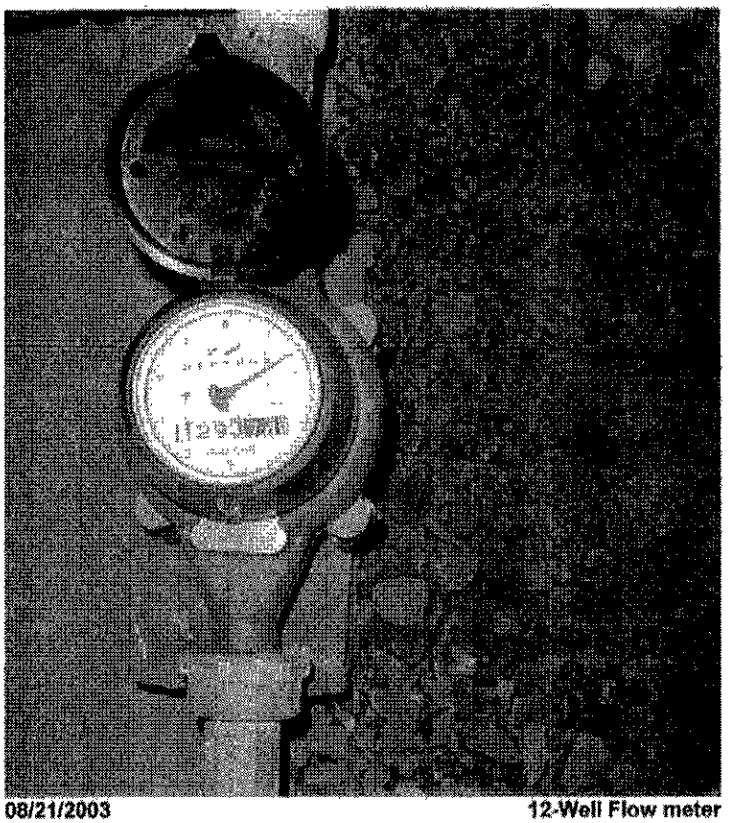
08/21/2003 09a-TBear Electrical Towers



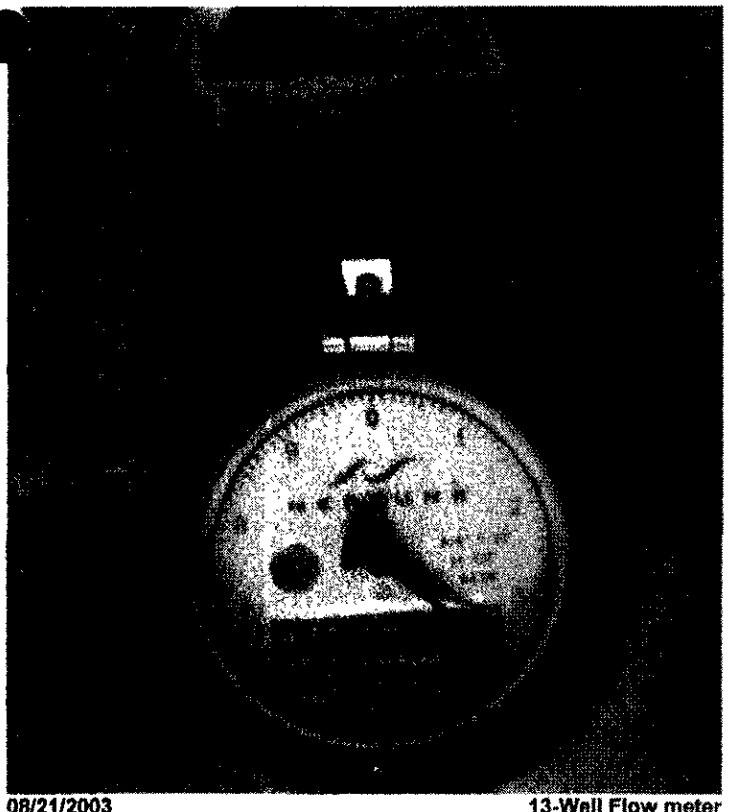
08/21/2003 10-Ranch-Well



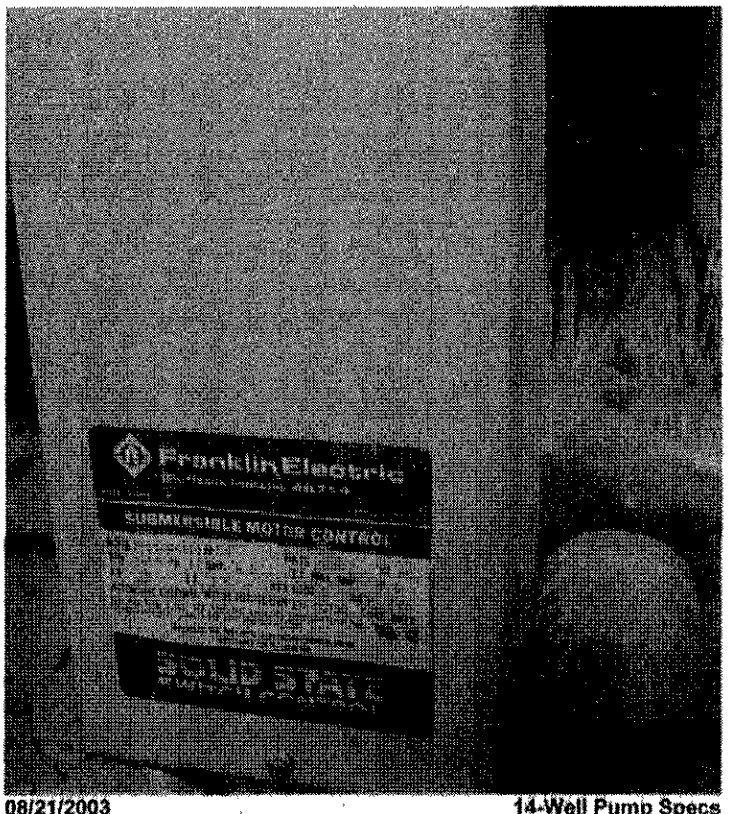
08/21/2003 11-Ranch-Well



08/21/2003 12-Well Flow meter

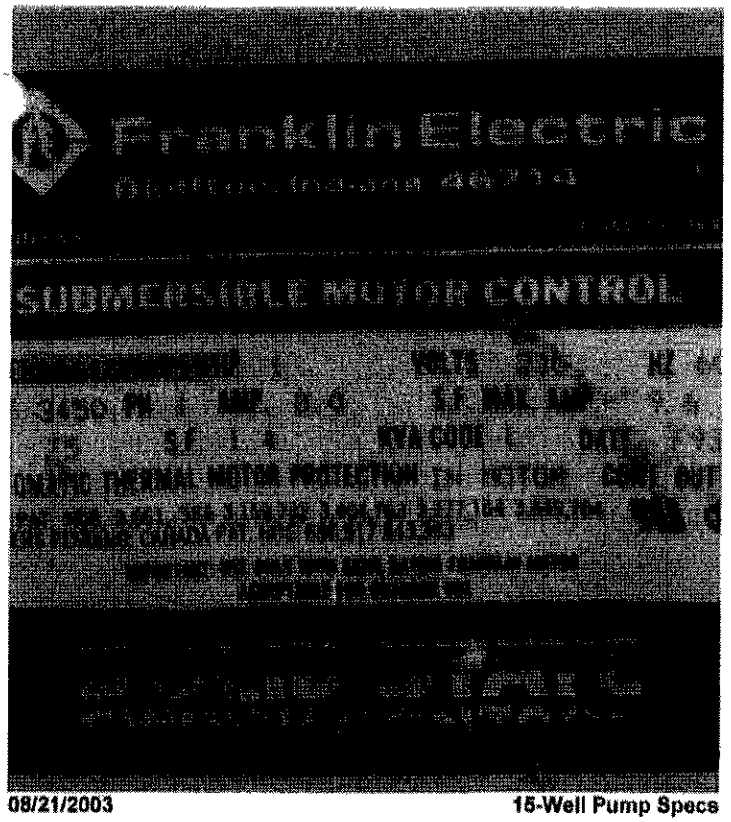


08/21/2003 13-Well Flow meter



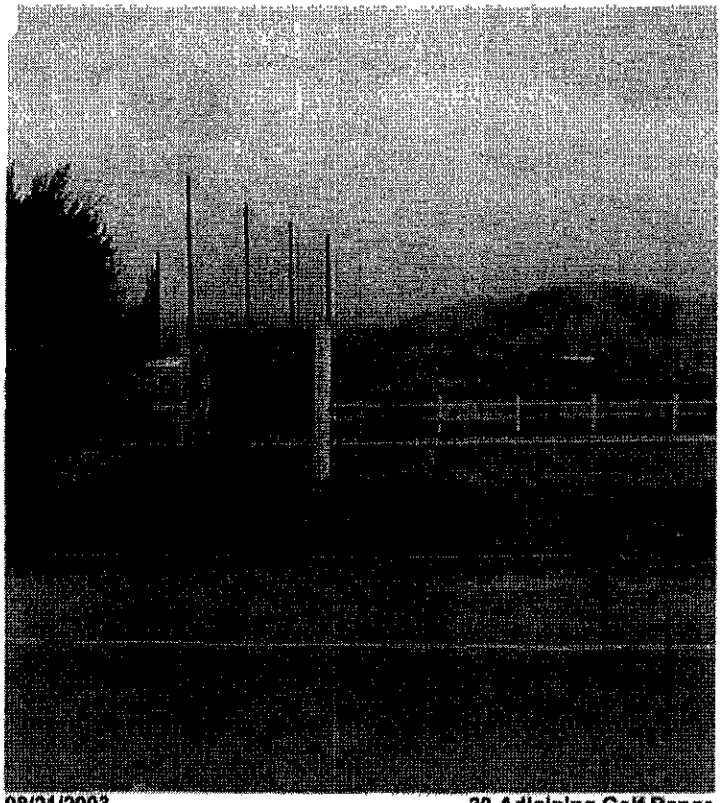
08/21/2003 14-Well Pump Specs

Submersible pump

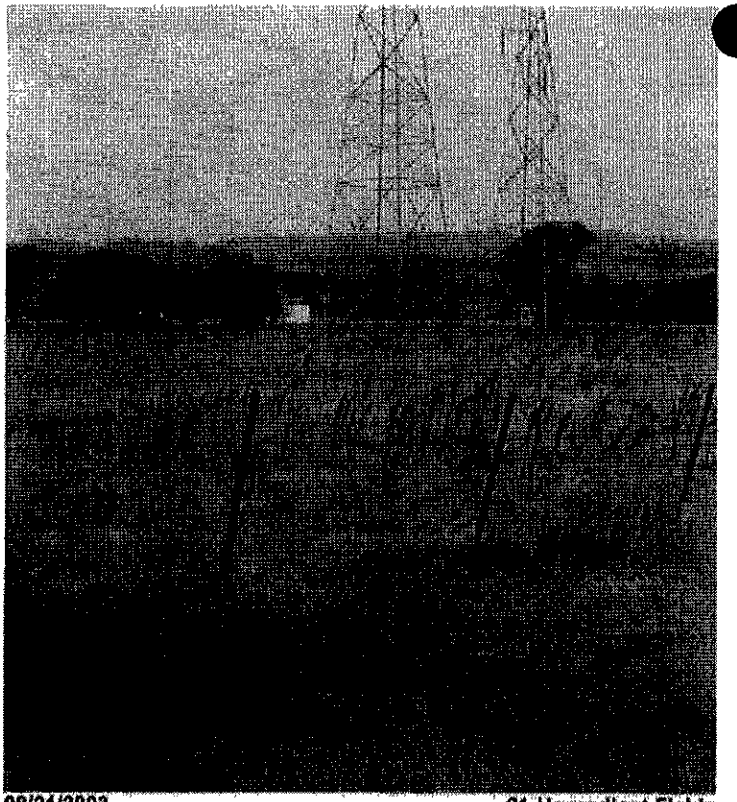


08/21/2003 15-Well Pump Specs

08/21/2003 16-Well Pump Shed

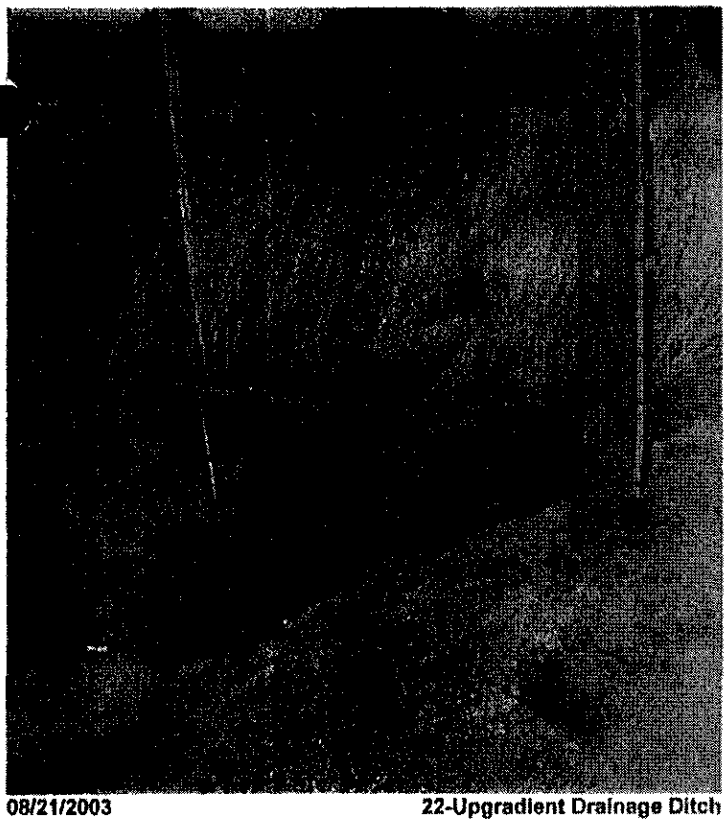


08/21/2003 20-Adjoining Golf Range

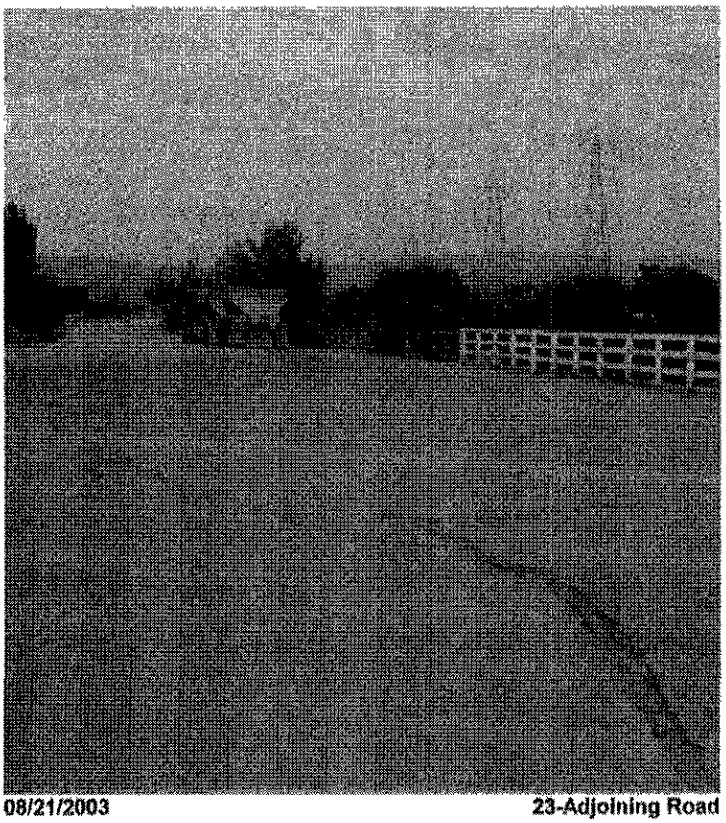


08/21/2003 21-Upgradient Fields

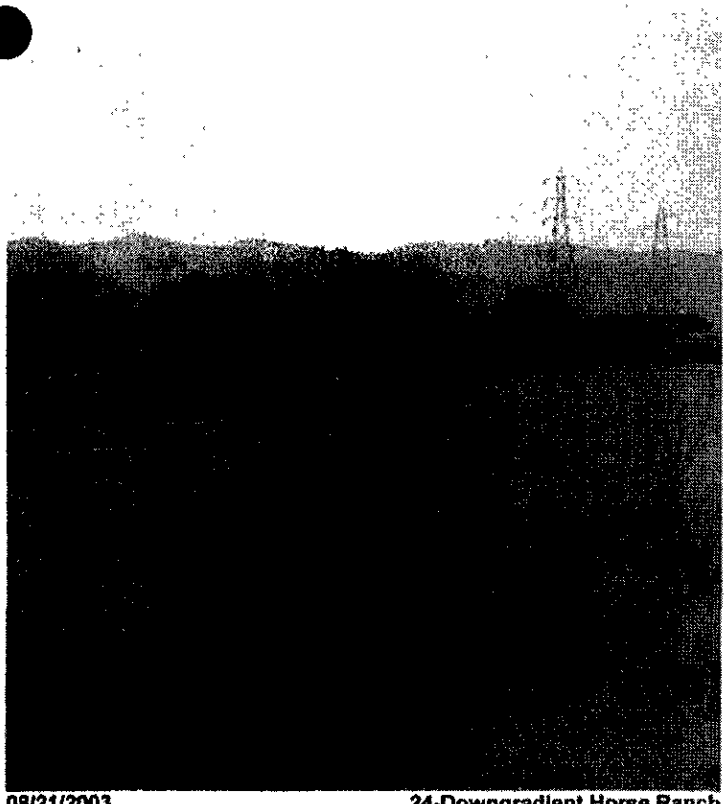
Sidegradient Site
-driving range
well?



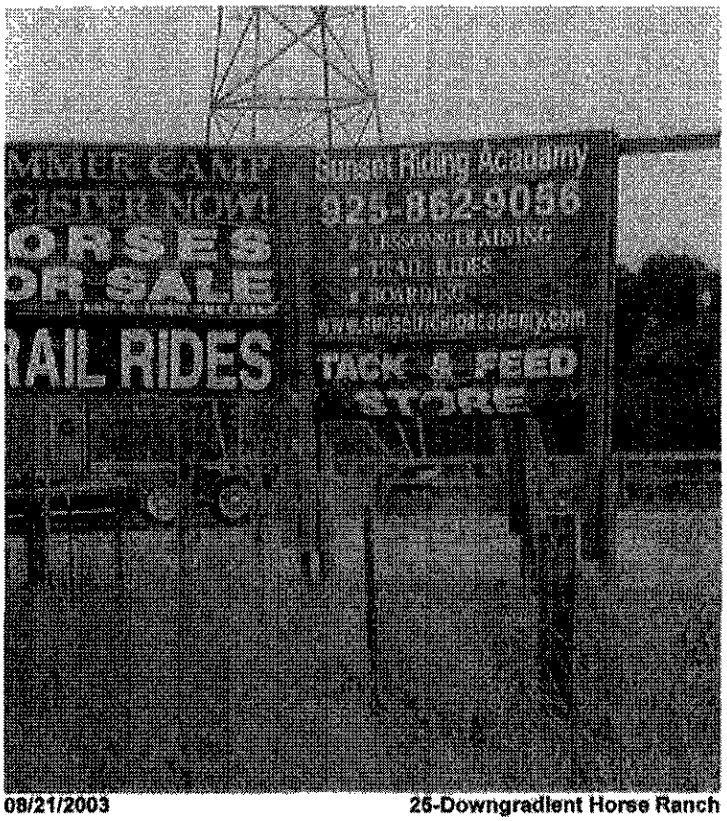
08/21/2003 22-Upgradient Drainage Ditch



08/21/2003 23-Adjoining Road

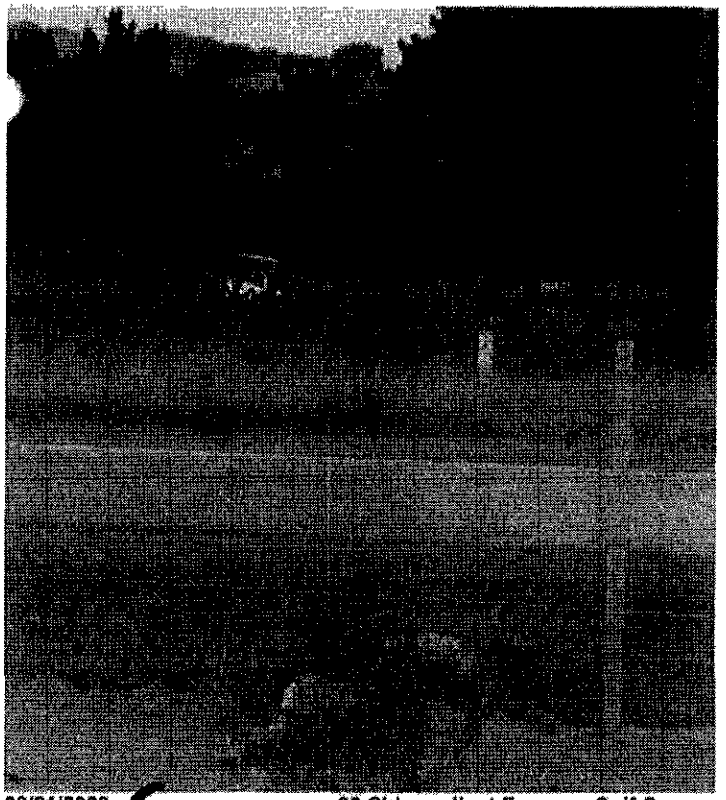


08/21/2003 24-Downgradient Horse Ranch



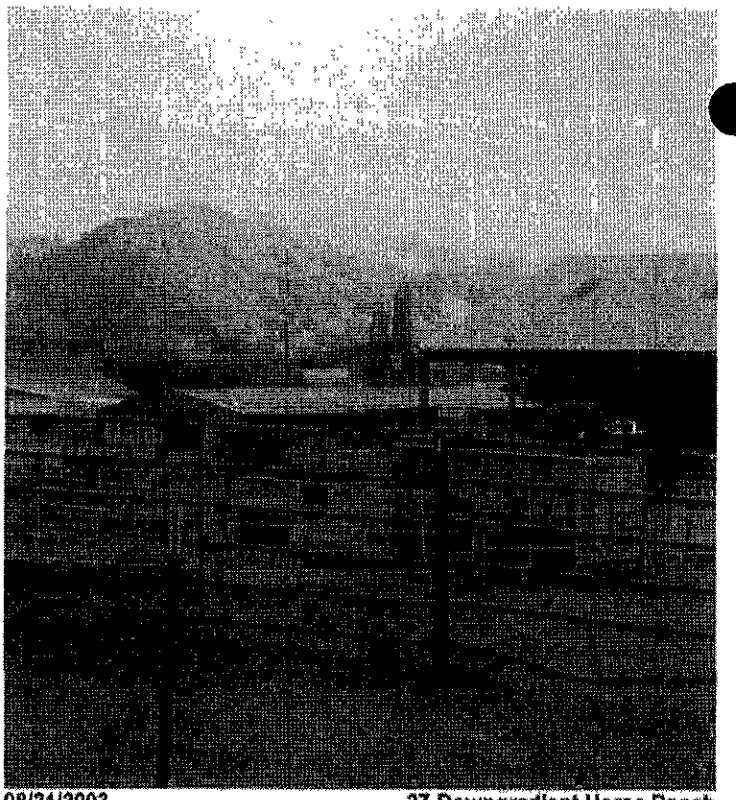
08/21/2003 26-Downgradient Horse Ranch

(well?)



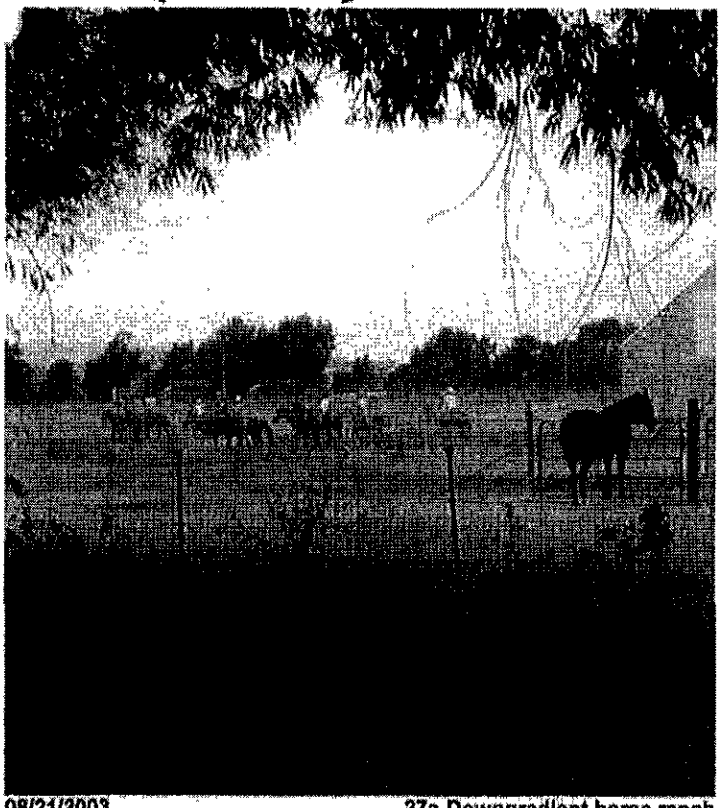
08/21/2003 26-Sidegradient Freeway-Golf Course

(well?)

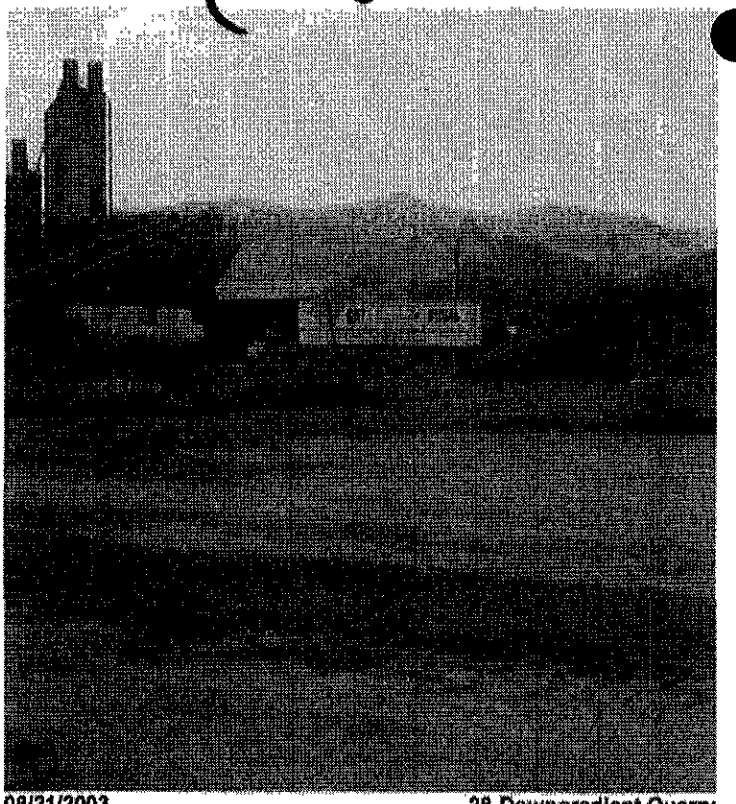


08/21/2003 27-Downgradient Horse Ranch

(well?)

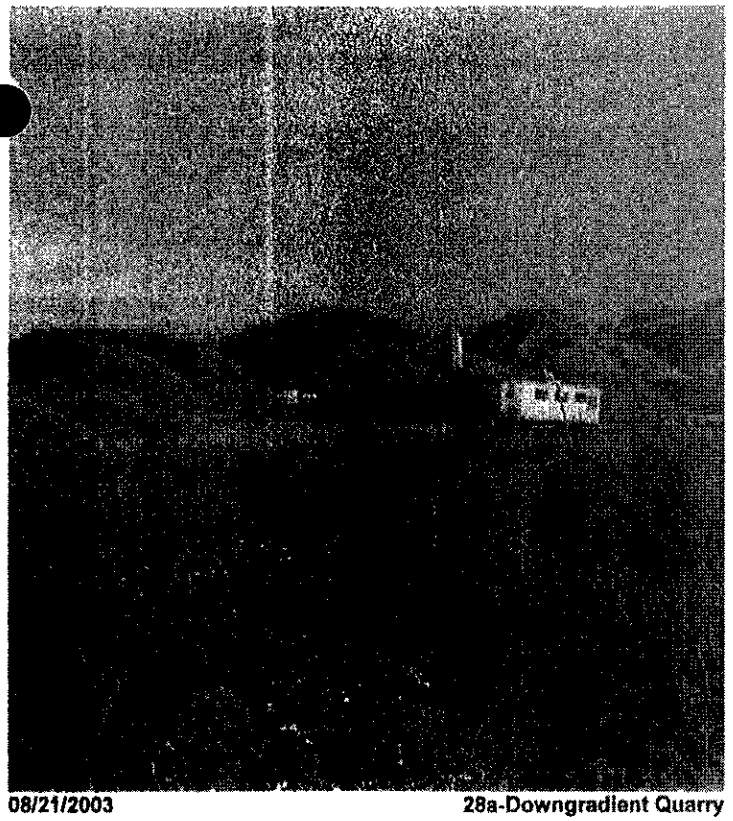


08/21/2003 27a-Downgradient horse ranch

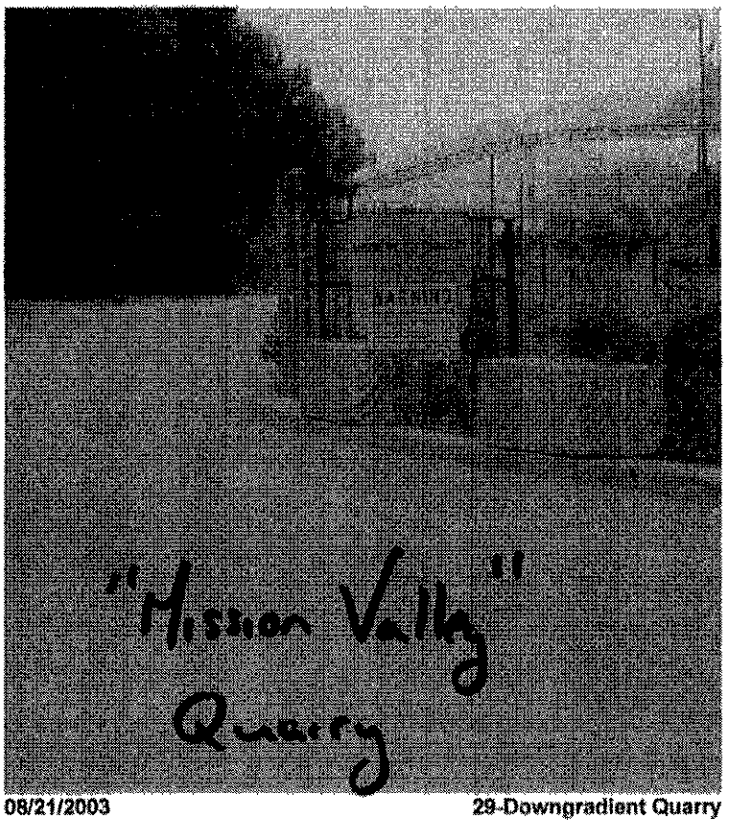


08/21/2003 28-Downgradient Quarry

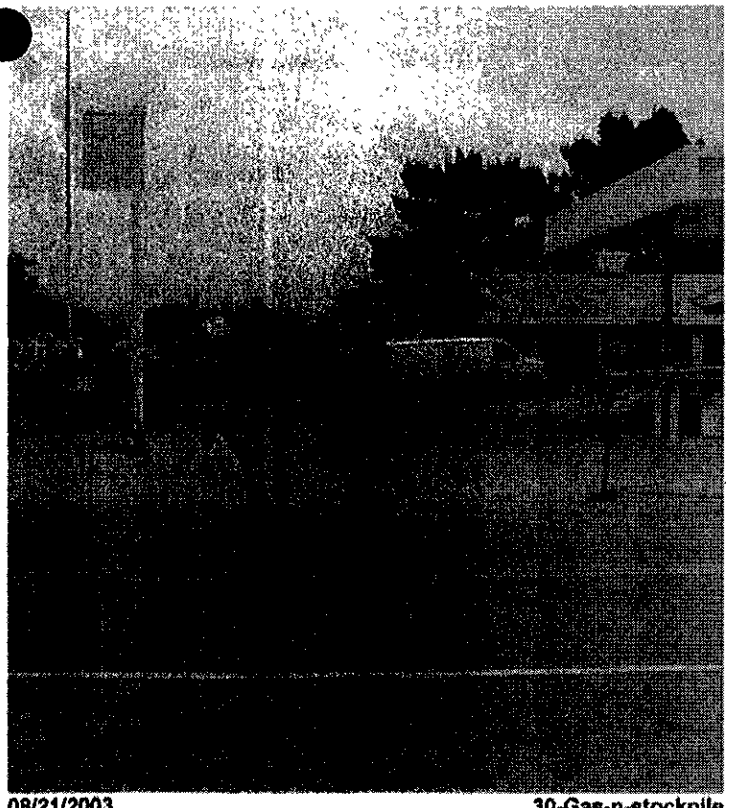
(well?)



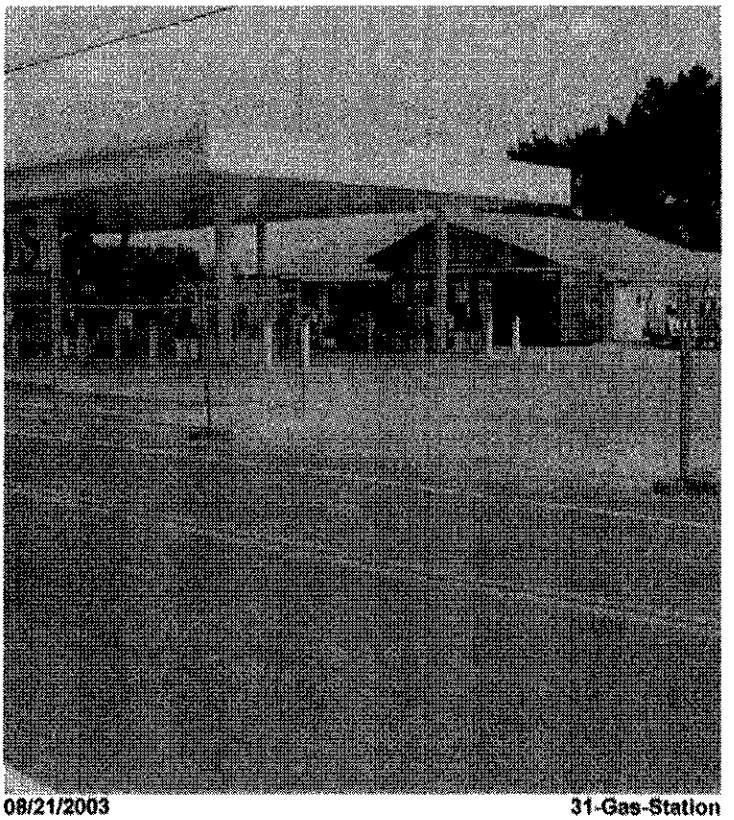
08/21/2003 28a-Downgradient Quarry



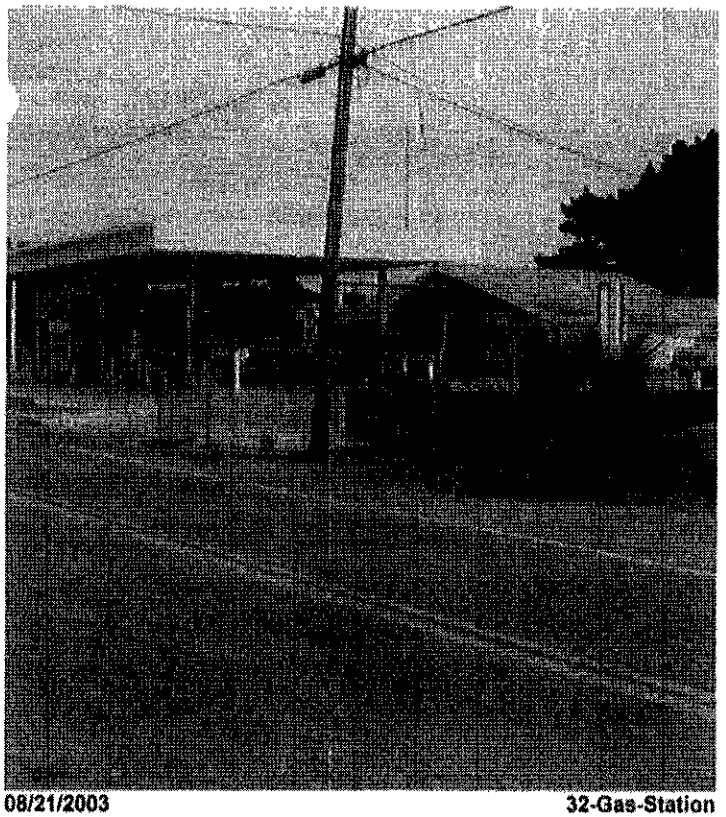
08/21/2003 29-Downgradient Quarry



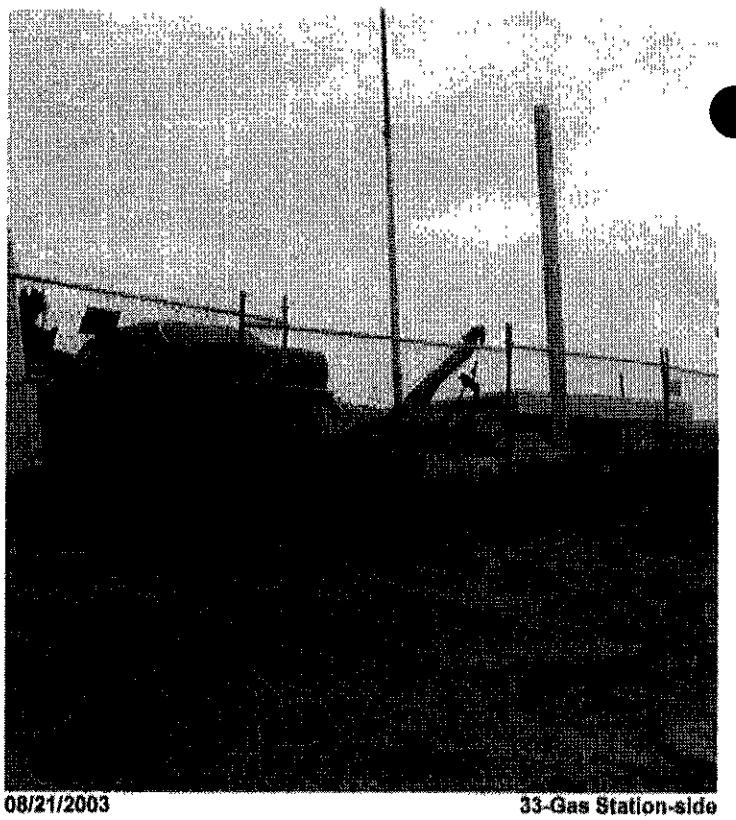
08/21/2003 30-Gas-n-stockpile



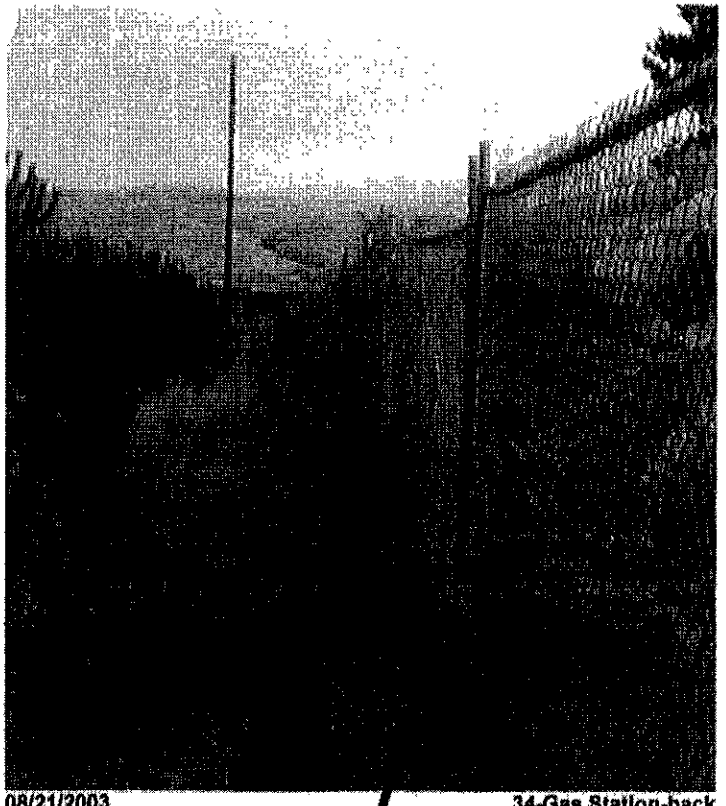
08/21/2003 31-Gas-Station



08/21/2003 32-Gas-Station



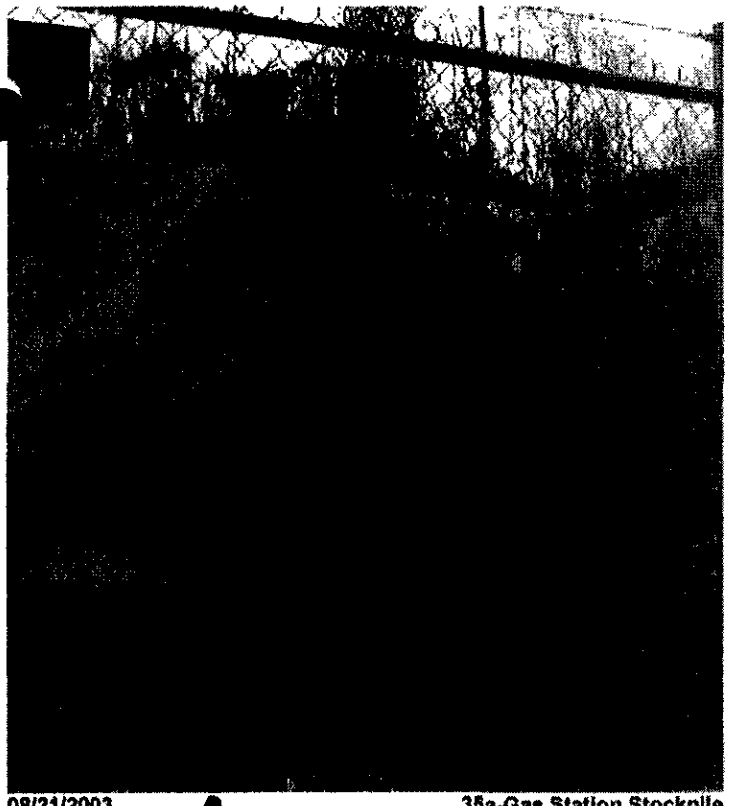
08/21/2003 33-Gas Station-side



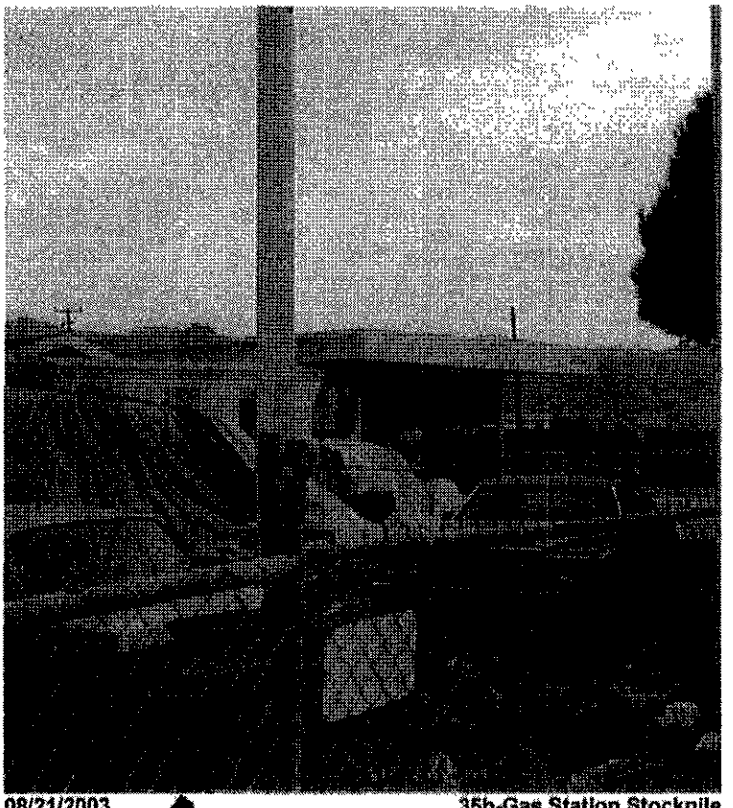
08/21/2003 34-Gas Station-back

08/21/2003 35-Gas Station Stockpile

Stockpiled Soil

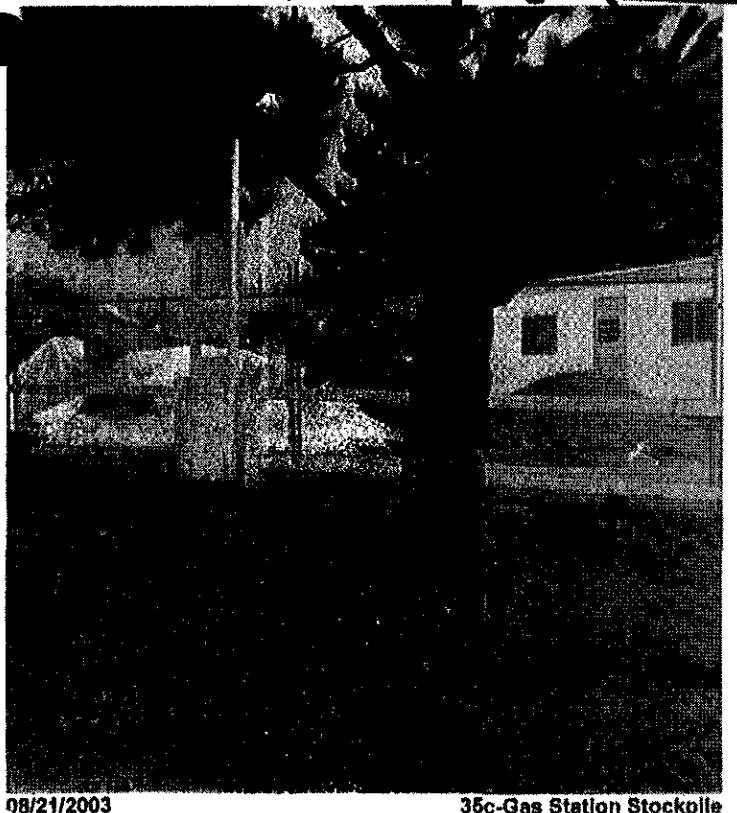


08/21/2003 35a-Gas Station Stockpile

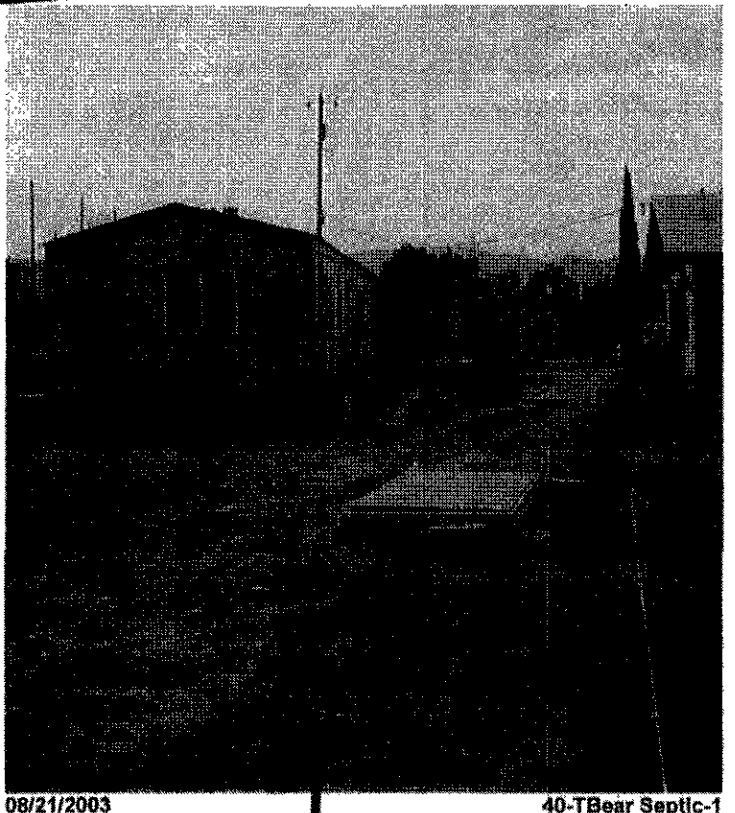


08/21/2003 35b-Gas Station Stockpile

Stockpile

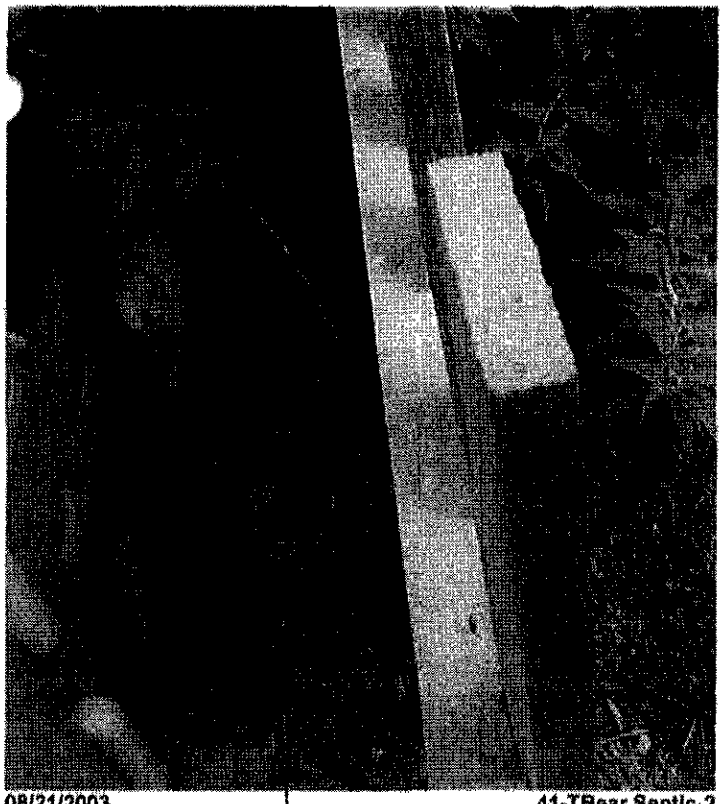


08/21/2003 35c-Gas Station Stockpile



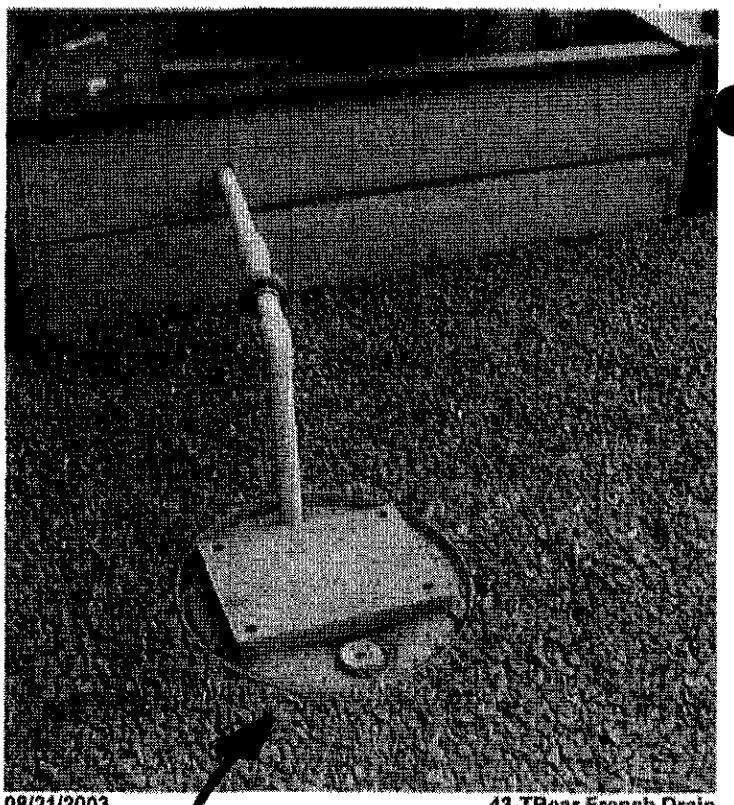
08/21/2003 40-TBear Septic-1

Septic Tank



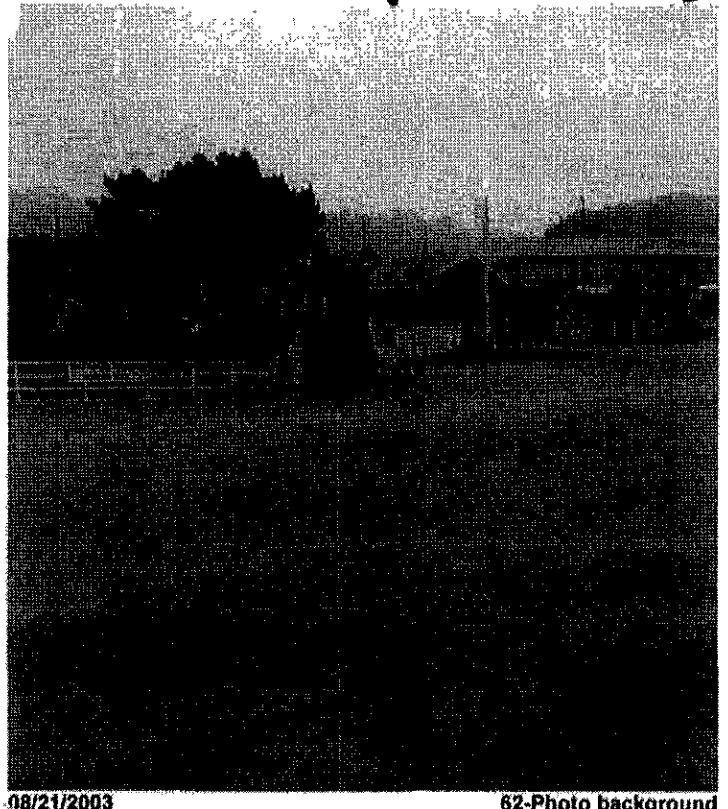
08/21/2003 41-TBear Septic-2

Septic Tank #2

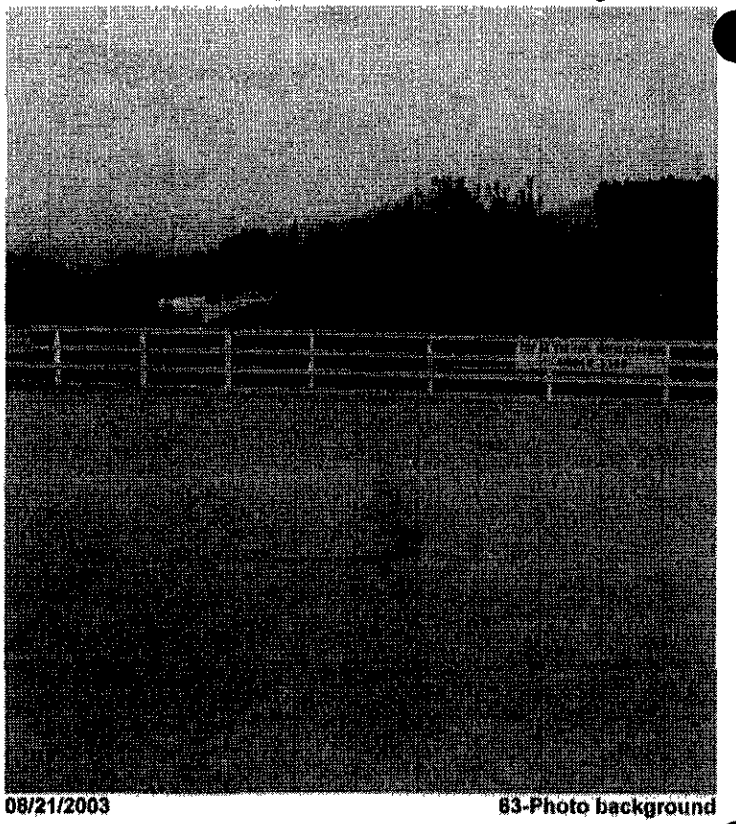


08/21/2003 43-TBear French Drain

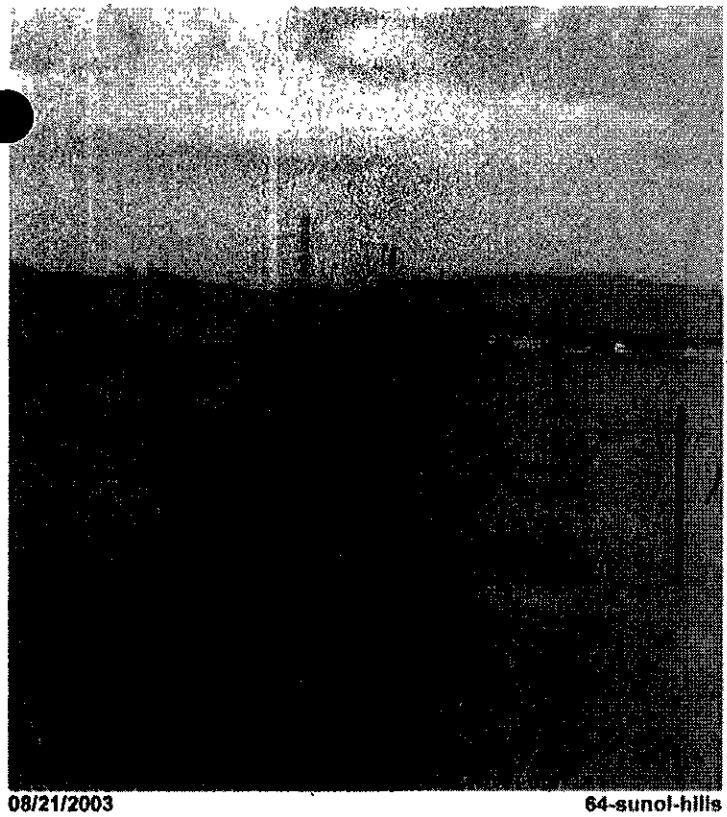
French Drain



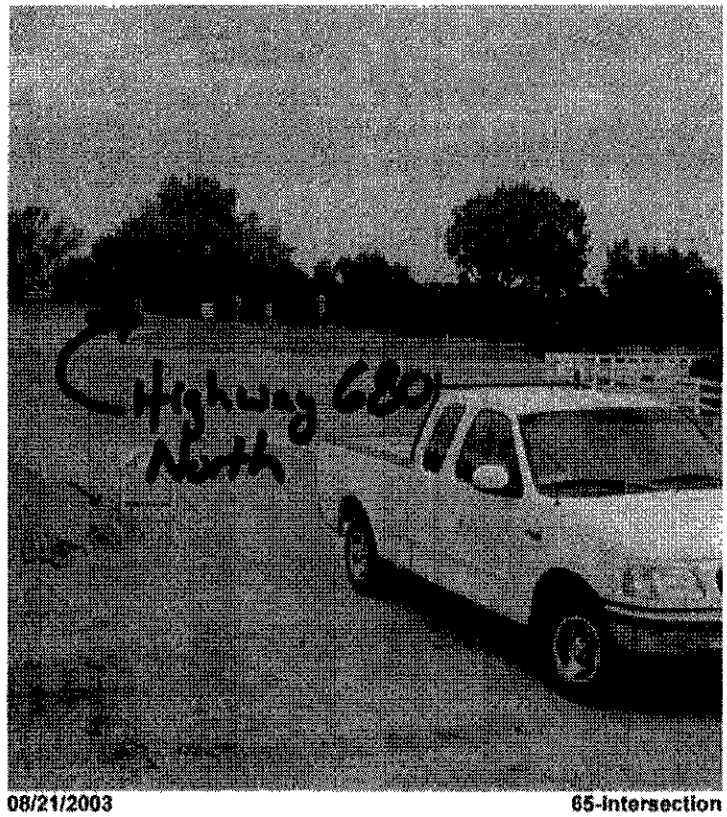
08/21/2003 62-Photo background



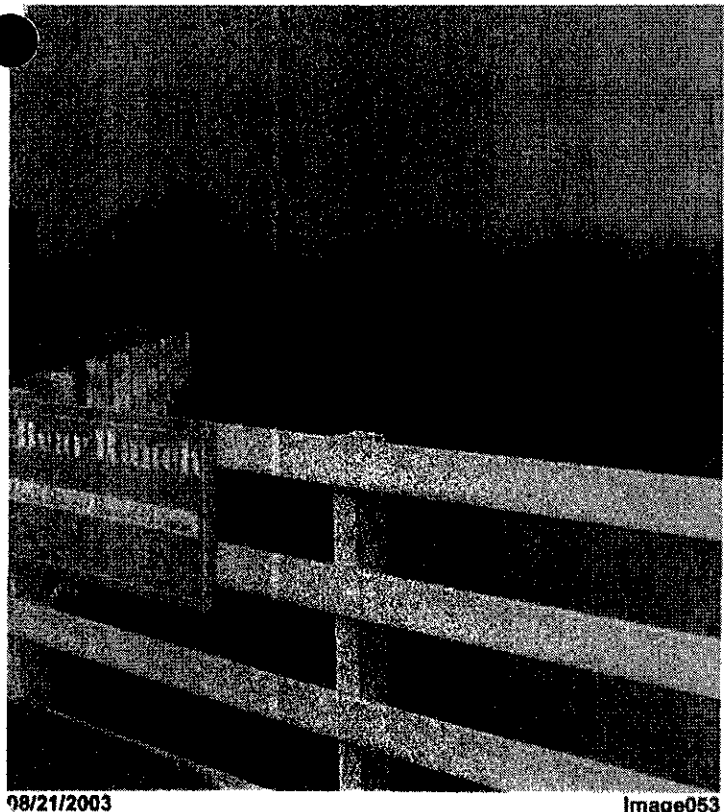
08/21/2003 63-Photo background



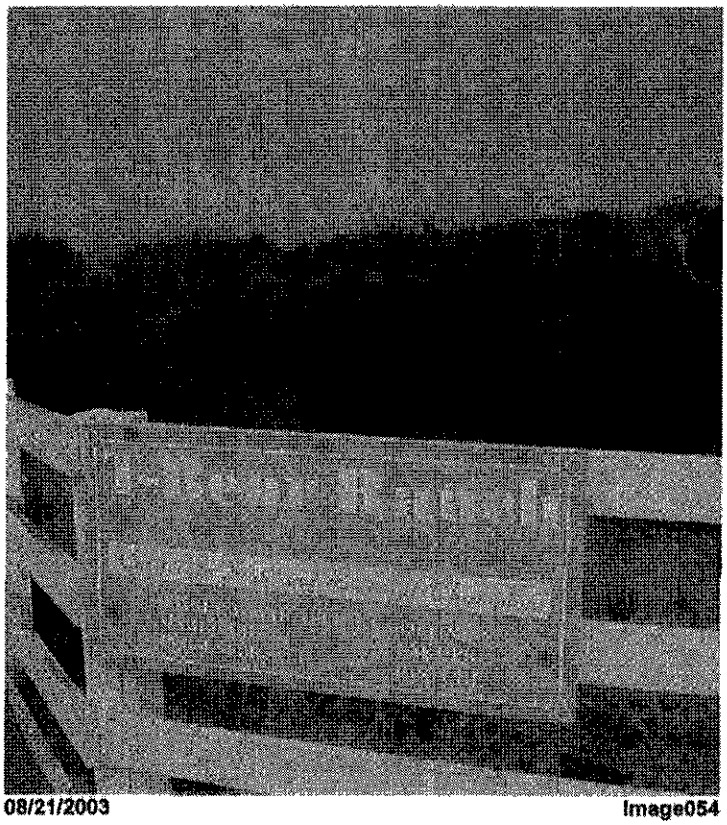
08/21/2003 64-sunol-hills



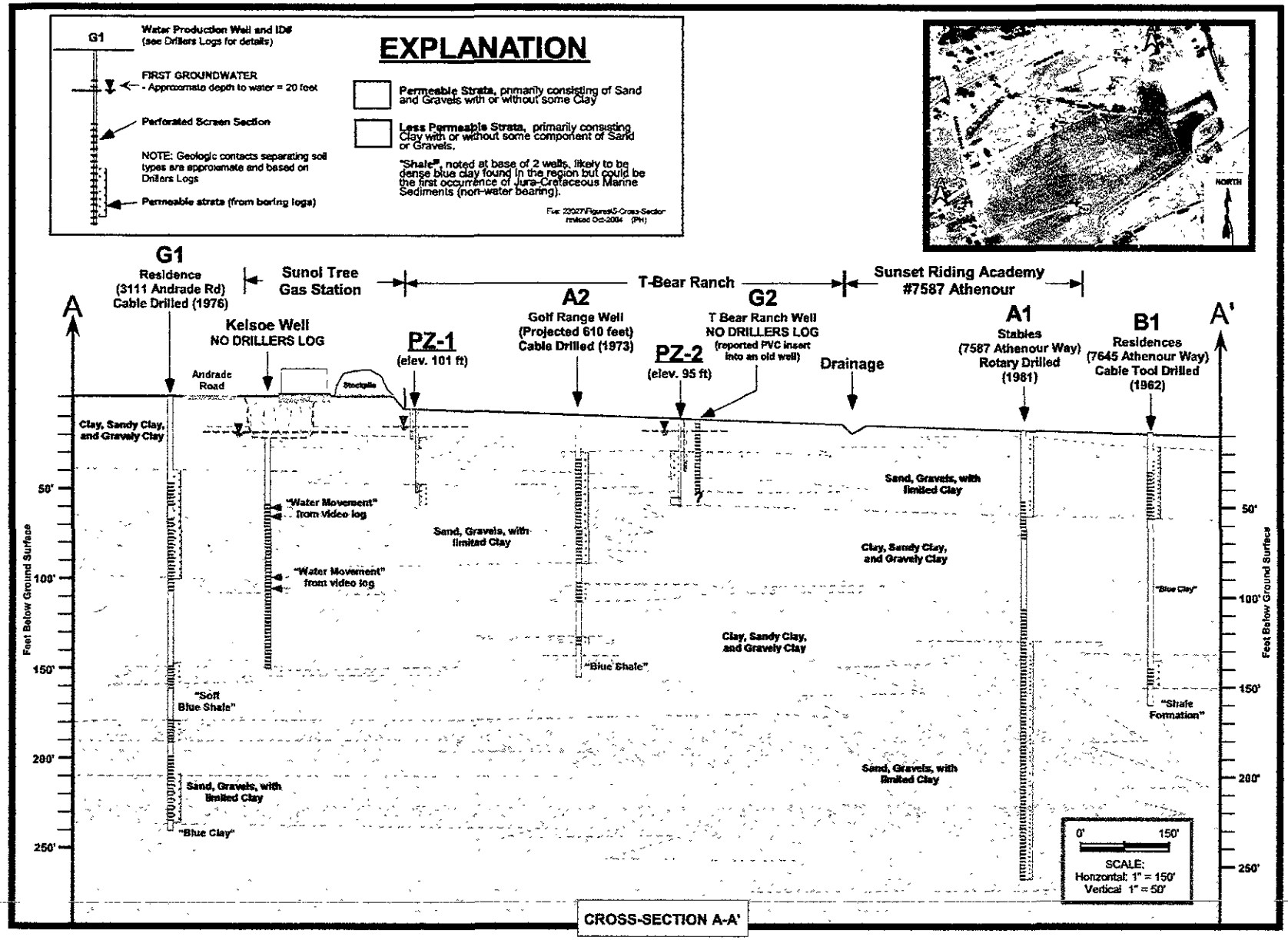
08/21/2003 65-intersection



08/21/2003 Image053



08/21/2003 Image054



CROSS-SECTION A-A'

FIGURE
5
Job #
23027

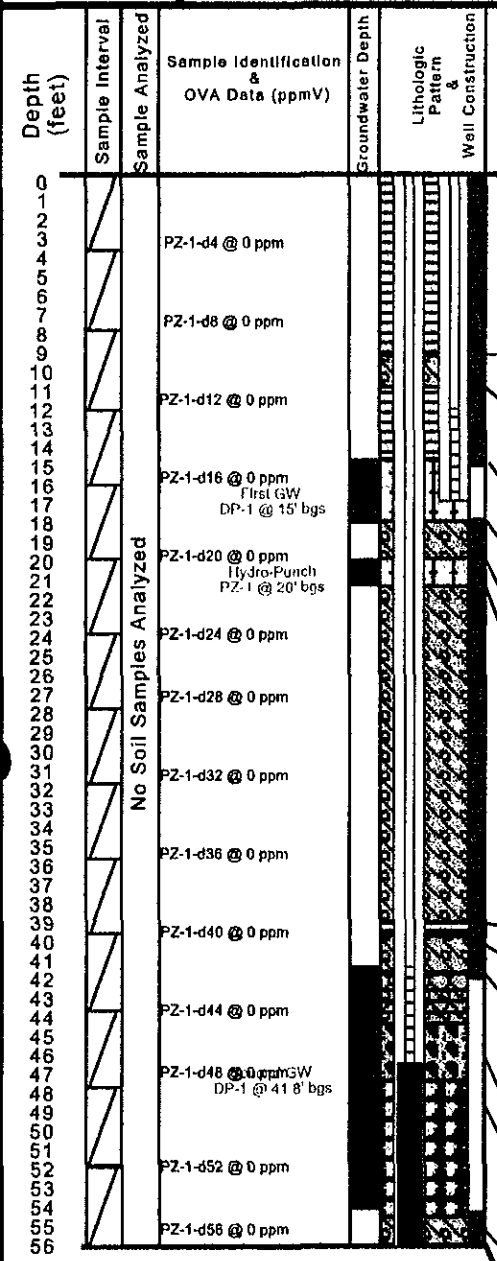
SIMPLIFIED GEOLOGIC CROSS SECTION
SUNOL TREE GAS STATION
3004 Andrade Road
Sunol, Alameda County

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Drive, Watsonville, Ca 95076
(831) 722 - 3580 (831) 662 - 3100

GEOLOGIC LOG
PIEZOMETER
Hydraulic Driven Geo-Probe Boring

JOB NO.: 23027 DATE: July 21, 2004
CLIENT: Alameda County Environmental Health Services (ACEHS)
LOCATION: 3000, Andrade Road, Sunol, CA.
LOGGED BY: A. Bierman, RG #7490
DRILLER: Enprob Environmental Inc., C-57: 777007
DRILL METHOD: Hydraulic Driven Dual Tube, Large-Bore & Macro-Core Probes

BORING # **PZ-1**
Sheet 1 of 1



SOIL DESCRIPTION & CLASSIFICATION
(Lithologic name, color, moisture, density/consistency, grain size%, other descriptors, HC odor.)

CL **CLAY, gray (10YR 4/1) to black (10YR 2/1) at 0.5' bgs, dry, hard, friable, non plastic,** 90% silt and clay fines, 10% fine sand clasts within clay, no odor no discoloration.
-Color change at 4.4' just below 0.4' thick fine subrounded gravel stringer, very dark grayish brown (10YR 3/2), damp at 7.5' bgs, and becoming very stiff vs hard, low plasticity, no odor, no discoloration.

-Gradational contact at 9.2' bgs.

SC **Sandy Gravelly CLAY,** yellowish brown (10YR 5/4), dry to damp, stiff, friable, low to no plasticity, non sticky, 70% clay binder, 20% medium to coarse subrounded gravel clasts, 10% fine sands, with 0.5" thick fine sand at upper contact, no odor, no discoloration, abrupt contact at 10.3' bgs.

CL to CH **CLAY,** dark yellowish brown (10YR 4/4), damp to moist at 11' bgs, stiff, moderate plasticity, 90% clay binder with 10% fine subrounded mudstone and sandstone clasts, with fine to medium subrounded gravel stringer from 14.5 to 15' bgs, gradational contact at 15' bgs (sandy silt stringer at 12-13 feet interbedded in clay for at shallow well location).

MH **Sandy Clayey SILT,** yellowish brown (10YR 4/4), very moist to wet, soft to very soft, moderate to high plasticity, slightly to non sticky, 70% silts, 20% clays, 10% fine subrounded gravels, gradational contact 18' bgs.

SC **Sandy Gravelly CLAY,** yellowish brown (10YR 5/4), damp, medium stiff, slightly friable, low to no plasticity, slightly sticky, 70% clay binder, 20% medium to coarse subrounded gravel clasts, trace fine subrounded cobble, 10% fine sands, coarsening downward, no odor, no discoloration, abrupt contact at 20' bgs

MH **Sandy Clayey SILT,** dark yellowish brown (10YR 4/4), very moist, very soft to soft, moderate to high plasticity, non sticky, 70% silts, 20% clays, 10% coarse subrounded sands, gradational contact at 21.3' bgs.

GC **Gravelly CLAY,** dark yellowish brown (10YR 4/4), dry, hard, low to no plasticity, non sticky, 90% clay binder, 10% fine subrounded gravel clasts decreasing and fining to coarse sands with depth. slightly moist at 26-27' bgs, and at 29-29.5' bgs.
-Slightly moist from 36-39.5' bgs, with medium to coarse sand stringer in clayey matrix at 39-39.5' bgs, with yellowish brown (10YR 5/4) mottling.
-Abrupt contact at 39.5' bgs.

CL **CLAY,** dark grayish brown (10YR 4/2), dry, hard, low to no plasticity, friable, 95% clay binder with 5% medium subrounded sand clasts, abrupt contact at 40' bgs.

SC **Sandy Gravelly CLAY,** dark grayish brown (10YR 4/2), dry to very moist at 41.2' bgs (cap fringe), medium stiff, low to no plasticity, friable, 70% clay binder, 20% medium to coarse subrounded gravel clasts, trace fine subrounded cobbles, 10% fine to medium sands, abrupt contact at 41.8' bgs.

SC **Clayey GRAVEL with Sandy Gravelly Clay,** dark yellowish brown (10YR 4/2), saturated, loose, 80% medium to coarse subrounded to rounded gravels, 15% clay fines, 5% fine sands with sandy gravelly clay interbeds (as logged above), at 42.4-43.5, 43.7-44, and 44.2-44.6', wet between gravel grain contacts, otherwise moist. Abrupt contact at 44.6' bgs.

SP **Gravelly SAND,** yellowish brown (10YR 5/4), saturated, loose, 90% fine sands, 10% fine to medium subrounded gravels, abrupt contact at 47.9' bgs.

GW **Well Graded GRAVEL,** dark yellowish brown (10YR 4/2), saturated, loose, 80% coarse subrounded gravels, 20% fine to coarse sands.
-Gradational contact at 54 8' bgs.

GC **Sandy Gravelly CLAY,** dark graylsh brown (10YR 4/2), with thin lens of dark greenish gray (5BG 3/1) from 55.2-55.4' bgs, moist, to very moist between gravel grain contact, very stiff, low to no plasticity, friable, 70% clay binder, 20% medium to coarse subrounded clasts, trace fine subrounded cobbles, 10% fine to medium sands.

Low Permeability, Non-Saturated

Higher Permeability, Saturated/wet

Terminate boring at 56 feet bgs. Backfill boring with TR-30 bentonite pellets from 56-to 46.5' bgs, thereafter set Piezometer PZ-1.
Move five feet west and set Shallow Piezometer PZ-1.

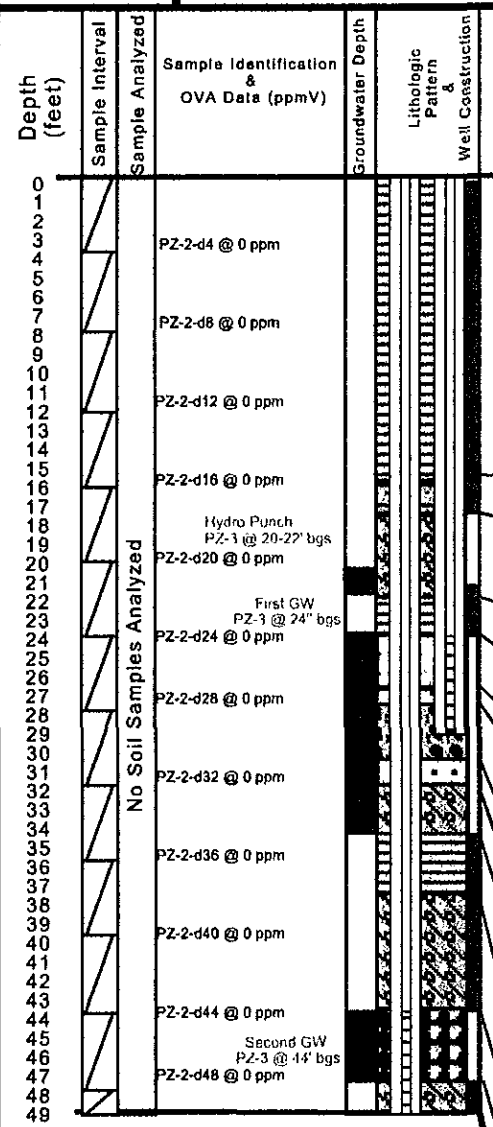
Deep Piezometer Construction Details:
Screen: 41-5 to 46.5' bgs
Sand: #3 RMC Lonestar from 40.5 to 46.5' bgs.
Bentonite: TR-30 from 38.5 to 40.5' bgs
Cement: Portland cement from ground surface to 38.5' bgs.

Shallow Piezometer Construction Details:
Screen: 12 to 17' bgs
Sand: #3 RMC Lonestar from 11 to 17' bgs.
Bentonite: TR-30 from 9 to 11' bgs
Cement: Portland cement from ground surface to 9' bgs.

GEOLOGIC LOG
PIEZOMETER
Hydraulic Driven Geo-Probe Boring

JOB NO.: 23027 DATE: July 22, 2004
CLIENT: Alameda County Environmental Health Services (ACEHS)
LOCATION: 3000, Andrade Road, Sunol, CA.
LOGGED BY: A. Bierman, RG #7490
DRILLER: Enprob Environmental Inc., C-57: 777007
DRILL METHOD: Hydraulic Driven Dual Tube, Large-Bore & Macro-Core ProbeS

BORING # **PZ-2**
Sheet 1 of 1



USCS	SOIL DESCRIPTION & CLASSIFICATION (Lithologic name, color, moisture, density/consistency, grain size%, other descriptors, HC odor.)
CL	**CLAY,** black (10YR 2/1), dry, hard, non plastic, friable, 90% silt and clay fines, 10% coarse sand clasts within clay dissipating at 5.3' bgs to 5% clasts, no odor no discoloration.
	-At 7.5' bgs, 0.2' thick fine subrounded gravel stringer, -Color change to very dark grayish brown (10YR 3/2), becoming very stiff vs hard, low plasticity, no odor, no discoloration. -At 10.5' bgs clasts increase to 10%. -At 12' bgs color changes to brown (10YR 4/3), clasts decrease to 0-5%, medium stiff becoming very stiff at 14' bgs, low plasticity, friable.
CL	-Abrupt contact.
ML	**Sandy Silty CLAY,** brown (10YR 5/3), with gray (10YR 5/1), motling, dry, medium stiff, moderate plasticity, 70% clay fines, 30 % silts and fine sands.
GC	**Sandy Gravelly CLAY,** yellowish brown (10YR 5/4), damp to moist at 20' bgs, medium stiff, soft from 21' to 22' bgs, low plasticity, friable, non sticky, 70% clay binder, 20% medium to coarse subrounded gravel clasts, 10% fine to medium sands.
CL	**CLAY,** dark yellowish brown (10YR 4/4), damp, stiff, moderate plasticity, 90% clay binder with 10% fine subrounded mudstone and sandstone clasts. -Gradational contact at 24' bgs.
SM SC	**Sandy Clayey SILT,** yellowish brown (10YR 4/4), with gray (10YR 6/1) mottling, very moist to wet, soft to very soft, moderate to high plasticity, non sticky, 70% silts, 20% clay binder, 10% fine sands, abrupt contact at 26.5' bgs.
SP	**Poorly Graded SAND,** dark brown (10YR 3/3) saturated loose, 95% medium to fine sand, 5% silts and fines, gradational contact at 27.5' bgs
GC	**Clayey Sandy GRAVEL,** dark yellowish brown (10YR 4/2), wet, medium dense to loose, friable, 70% medium to coarse subrounded to rounded gravels, 20% medium to fine sands, 10% clay fines with thin lens of dark greenish gray (5BG 3/1) from 28.5-29' bgs with increase in fine rounded cobbles at 29' bgs to 5%, and decrease in sands to 15%
SP	**Poorly Graded SAND,** dark brown (10YR 3/3) saturated loose, 90% sands, 5% silts and fines, 5% coarse subrounded gravels. abrupt contact at 31.7' bgs.
GC	**Sandy Gravelly CLAY,** yellowish brown (10YR 5/4), moist in upper 0.5' becoming damp, dry at 34' bgs, medium stiff, slightly friable, low to no plasticity, slightly sticky, 70% clay binder, 20% medium to coarse subrounded gravels, trace fine subrounded cobble, 10% fine to medium sands, abrupt contact at 34.2' bgs.
CL	**CLAY,** yellowish brown (10YR 5/4), damp to dry, very stiff, high plasticity, non sticky, 95% fines, 5% fine sands to silt, gradational contact at 37.5' bgs.
GC	**Sandy Gravelly CLAY,** dark grayish brown (10YR 4/2), damp to very moist to wet between gravel grain contact, medium stiff, low to no plasticity, friable, 70% clay binder, 20% medium to coarse subrounded gravels, 10% fine to coarse sands, trace fine subrounded cobbles.
GW	**Well Graded GRAVEL,** dark yellowish brown (10YR 4/2), saturated loose, 80% fine to coarse subrounded gravels, 15% medium to coarse sands, 5% fines. -Gradational contact at 47.5' bgs.
GC	**Sandy Gravelly CLAY,** dark grayish brown (10YR 4/2), damp to very moist to wet between gravel grain contact, medium stiff, low to no plasticity, friable, 70% clay binder, 20% medium to coarse subrounded gravels, 10% fine to coarse sands, trace fine subrounded cobbles.

Terminate boring at 49 feet bgs.
Construct Deep Piezometer PZ-2.
Move five feet west and construct Shallow Piezometer PZ-2.

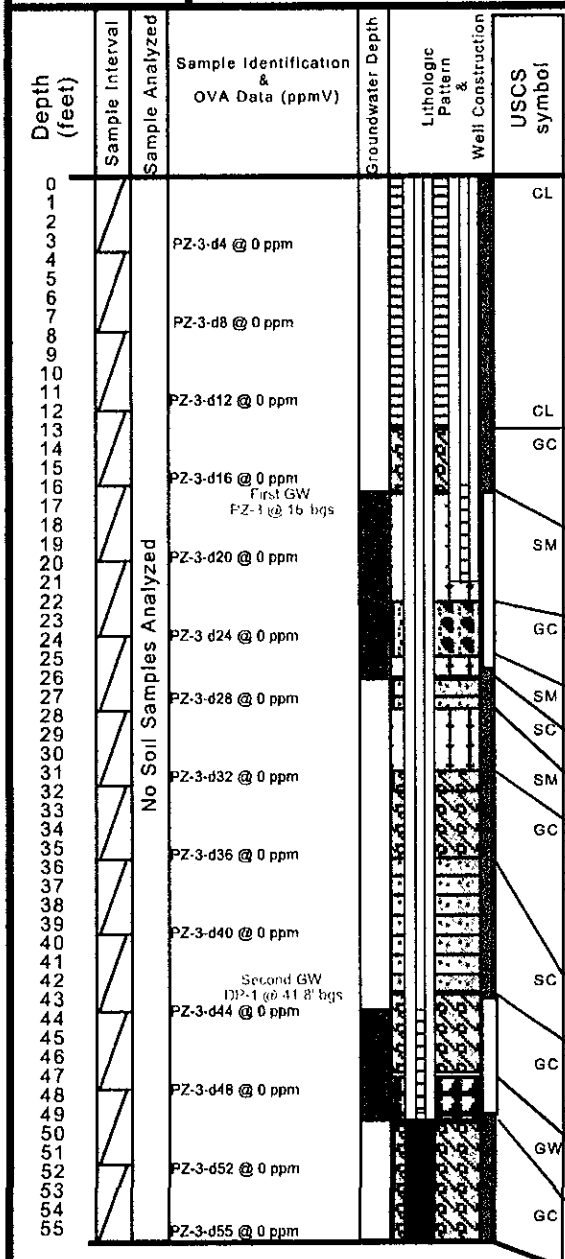
Deep Piezometer Construction Details:
Screen: 44 to 49' bgs
Sand: #3 RMC Lonestar from 42 to 49' bgs.
Bentonite: TR-30 from 39 to 42' bgs
Cement: Portland cement from ground surface to 39' bgs.

Shallow Piezometer Construction Details:
Screen: 24 to 29' bgs
Sand: #3 RMC Lonestar from 23 to 29' bgs.
Bentonite: TR-30 from 21 to 23' bgs
Cement: Portland cement from ground surface to 21' bgs.

GEOLOGIC LOG
PIEZOMETER
Hydraulic Driven Geo-Probe Boring

JOB NO.: 23027 DATE: July 23, 2004
CLIENT: Alameda County Environmental Health Services (ACEHS)
LOCATION: 3000, Andrade Road, Sunol, CA.
LOGGED BY. A. Bierman, RG #7490
DRILLER: Enprob Environmental Inc., C-57: 777007
DRILL METHOD: Hydraulic Driven Dual Tube, Large-Bore & Macro-Core ProbeS

BORING # **PZ-3**
Sheet 1 of 1



USCS	SOIL DESCRIPTION & CLASSIFICATION (Lithologic name, color, moisture, density/consistency, grain size%, other descriptors, HC odor.)
CL	**CLAY**, black (10YR 2/1), dry, hard, non plastic, friable, 90% silt and clay fines, 5% coarse sand clasts, no odor no discoloration. -Color change to very dark grayish brown (10YR 3/2), becoming very stiff vs hard, and clasts increase to 10%. low plasticity, no odor, no discoloration. -Clasts decrease to 5% from 8-9.7' bgs. -At 9.7' color changes to brown (10YR 4/3), and increase to 10%, very stiff, low plasticity, friable.
CL	-Gradational contact at 13' bgs.
GC	**Sandy Gravelly CLAY**, yellowish brown (10YR 5/4), damp to moist at 14' bgs bgs, medium stiff, low plasticity, friable, non sticky, 70% clay binder, 20% medium to coarse subrounded gravel clasts, 10% fine to medium sands, with clayey silt stringer at 14.9-15.7' bgs, moist, moderate plasticity, gradational contact.
SM	**Sandy Clayey SILT**, brown (10YR 5/3), with gray (10YR 5/1), mottling, saturated, very soft with medium stiffness from 21.2 to 21.6', moderate plasticity, 70% silts, 20% clay binder, 10% medium to coarse sands to fine subrounded gravels from 16.3-17' bgs, thereafter only fine sands, gradtional contact at 22.2' bgs
GC	**Clayey Sandy GRAVEL**, dark yellowish brown (10YR 4/2), very moist, medium dense to loose, friable, 70% medium to coarse subrounded to rounded gravels, 20% medium to fine sands, 10% clay fines, gradational contact at 25' bgs
SM	**Sandy Clayey SILT**, brown (10YR 5/3), saturated, very soft, moderate plasticity, 70% silts, 20% clay binder, 10% fine sands, gradational contact at 26' bgs
SC	**Sandy CLAY**, dark yellowish brown (10YR 4/4), damp to dry, stiff, high plasticity, non sticky, 90% fines, 10% fine sands, gradational contact at 28'.
SM	**Sandy Clayey SILT**, brown (10 YR 5/3), very moist, very soft, moderate plasticity, 70% silts, 20% clay binder, 10% fine to medium sands, abrupt contact.
GC	**Sandy Gravelly CLAY**, yellowish brown (10YR 5/4), damp to moist, stiff, slightly friable, high plasticity, non sticky, 70% clay binder, 20% medium to coarse subrounded gravels, 10% fine to medium sands, gradational contact at 31.7' bgs, -From 34-34.8, moist, medium dense to dense otherwise medium dense to soft, slightly friable, coarsening downward to 60% clay fines, 30% medium to coarse subrounded to rounded gravels, 10% medium to fine sands. -Gradational contact at 36' bgs
SC	**Sandy CLAY**, dark yellowish brown (10 YR 4/4), damp to dry, very stiff, moderate plasticity, non sticky, 90% fines, 10% fine sands, at 41.5' bgs increasing fine sands to 20%, moist, stiff, abrupt contact at 43' bgs.
GC	**Sandy Gravelly CLAY**, dark yellowish brown (10YR 4/2), very moist to wet between gravel grain contact, saturated from 44-44.5' bgs, medium dense, friable, 60% clay fines, 20% medium to coarse subrounded gravels, 20% medium to coarse sands, trace cobbles 46'-47', gradational contact.
GW	**Well Graded GRAVEL**, dark yellowish brown (10YR 4/2), saturated, loose, 80% fine to coarse subrounded gravels, 15% medium to coarse sands, 5% fines. *-Gradational contact at 49.2' bgs*
GC	**Sandy Gravelly CLAY**, dark yellowish brown (10YR 4/2), moist, medium dense, friable, 60% fine to coarse subrounded gravels, 20% medium to coarse sands, 20% fines.

Terminate boring at 55 feet bgs
Backfill with TR-30 bentonite from 55-49' bgs.
Construct Deep Piezometer PZ-3.
Move five feet west and construct Shallow Piezometer PZ-3

Deep Piezometer Construction Details:
Screen: 44 to 49' bgs
Sand: #3 RMC Lonestar from 42 to 49' bgs.
Bentonite. TR-30 from 40 to 42' bgs
Cement: Portland cement from ground surface to 40' bgs.

Shallow Piezometer Construction Details:
Screen: 16 to 21' bgs
Sand: #3 RMC Lonestar from 15 to 21' bgs.
Bentonite: TR-30 from 13 to 15' bgs
Cement: Portland cement from ground surface to 13' bgs.

GEOLOGIC LOG

Hydraulic Driven Geo-Probe Boring

JOB NO.: 23027 DATE: July, 21, 2004
CLIENT: Alameda County Environmental Health Services (ACEHS)
LOCATION: 3000 Andrade Road, Sunol, CA.
LOGGED BY: A. Bierman, RG #7490
DRILLER: Enprob Environmental Inc., C-57: 777007
DRILL METHOD: Hydraulic Driven Dual Tube, Large-Bore & Macro-Core ProbeS

BORING # **DP-1**
Sheet 1 of 1

Depth (feet)	Sample Interval	Sample Analyzed	Sample Identification & OVA Data (ppmV)	Groundwater Depth	Lithologic Pattern & Well Construction	USCS symbol	SOIL DESCRIPTION & CLASSIFICATION (Lithologic name, color, moisture, density/consistency, grain size%, other descriptors, HC odor.)
0-2		No Soil Samples Analyzed				SP	**Poorly Graded SAND.** (ARENA FILL SAND) light gray, (10YR 7/2), dry loose, 95% fine to medium sands, 5% fines.
3			DP-1-d4 @ 0 ppm			CL	**CLAY**, black (10YR 2/1), dry, hard, friable, non plastic, friable, 90% silt and clay fines, 10% fine subrounded sand clasts within clay, many medium to fine root-lets decreasing with depth, no odor no discoloration. -Color change to very dark grayish brown (10YR 3/2) at 5.7' bgs, dry, hard, low plasticity to friable, 90% clay binder with 10% of medium to fine subrounded mudstone and sandstone clasts, damp at 8.3' bgs, very stiff, low plasticity, no odor, no discoloration, gradational contact at 9.2' bgs.
7-8			DP-1-d8 @ 0 ppm				
10-12			DP-1-d12 @ 0 ppm			SC	**Sandy Gravelly CLAY**, yellowish brown (10YR 5/4), dry to damp, stiff, friable, low to no plasticity, slightly sticky, 70% clay binder, 20% medium to coarse subrounded mudstone clasts, 10% fine sands, with 0.4' thick fine subrounded gravel at lower contact, no odor, no discoloration, abrupt contact at 13.7' bgs.
15			DP-1-d16 @ 0 ppm			CL	**CLAY**, dark yellowish brown (10YR 4/4), damp to moist at 15' bgs, stiff to medium stiff at 15' bgs, moderate plasticity, 90% clay binder with 10% of fine subrounded sand clasts, gradational contact at 16' bgs.
16			First GW DP-1 @ 16' bgs				
19-20			DP-1-d20 @ 0 ppm			MH	**Sandy Clayey SILT**, yellowish brown (10YR 4/4), saturated, soft to very soft, moderate to high plasticity, slightly to non sticky, 70% silts, 20% clays, 10% coarse subrounded sands, gradational contact at 17.5' bgs.
23-24			DP-1-d24 @ 0 ppm			SC	**Sandy CLAY**, yellowish brown (10YR 5/4), damp to moist, medium stiff, slightly friable, low to no plasticity, slightly sticky, 80% clay binder, 30% medium to coarse subrounded sands, no odor, no discoloration, abrupt contact at 18.1'bgs.
27-28			DP-1-d28 @ 0 ppm			MH	**Sandy Clayey SILT**, dark yellowish brown (10YR 4/4), moist to damp at 19.5' bgs, soft to medium stiff at 19.5' bgs, moderate to high plasticity, non sticky, 70% silts, 20% clays, 10% fine subrounded sands, gradational at 19.5' bgs.
31-32			DP-1-d32 @ 0 ppm			GC	**Gravelly CLAY**, dark yellowish brown (10YR 4/4), dry, hard, low to no plasticity, non sticky, 90% clay binder, 10% fine subrounded gravels, gradational contact at 21.4' bgs.
35			DP-1-d36 @ 0 ppm			GC	**Sandy Gravelly CLAY**, dark grayish brown (10YR 4/2), damp to very moist at 29-29.5' bgs, thereafter damp to 30' bgs, medium stiff, low to no plasticity, friable, 70% clay binder, 20% medium to coarse subrounded gravels, trace fine subrounded cobbles, 10% fine to medium sands, abrupt contact at 30' bgs.
39-40			DP-1-d40 @ 0 ppm			GC	**Gravelly Sandy CLAY**, dark yellowish brown (10YR 4/4), dry, hard, low to no plasticity, non sticky, 90% clay binder, 10% fine subrounded gravel clasts decreasing at 31' bgs and fining to coarse sands from 31-36' bgs, fine sands from 36-41' bgs. Gradational contact at 41' bgs.
42			Second GW DP-1 @ 41' bgs			MH	**Sandy Clayey SILT**, dark yellowish brown (10YR 4/4), saturated, very soft, low to moderate plasticity, slightly sticky, 70% silts, 20% clays, 10% fine subrounded sands.
44			DP-1-d44 @ 0 ppm				
45							

Terminate boring at 45' bgs, by grouting with portland cement to groundsuface. Move north 4 feet and hydropunch to 45' bgs, with 4' feet of screen from 41-45' bgs.

Low Permeability, Non-Saturated

Higher Permeability, Saturated/wet

R0244

WellSpy
WATER WELL SURVEYS

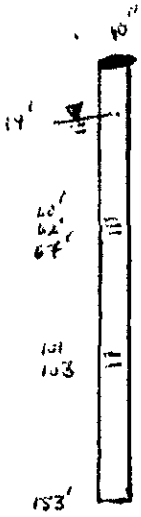
December 13, 2002

Clear Water Group
229 Tewksbury Ave.
Richmond, CA 94801

Attn: Brian Pierskalla

Video Log of Sunol Tree Gas Station Water Production Well (10" diam, domestic)

Observation report on survey performed December 12, 2002 for Sunol Tree Gasoline Station, located at 3004 Andrade rd in Alameda County.



1) Well ID on top is 10". The well is under a diamond plate cover and is 12" below the level of the surounding concrete driveway.
2) Zero datum marked at top of the concrete driveway. All side view depths are 18" less than indicated on the monitor.
3) 19' Static water level.
4) 53' Casing appears to be slightly oblong in this area.
5) 55' Clean spot on the casing. Layer of rust was broke off the casing wall.
6) 60' First evidence of Mills knife perforations in the casing.
7) 62' One perforation is evident with water movement.
8) 67' One perforation is evident with water movement.
9) 101' One perforation is evident with water movement.
10) 103' One perforation is evident with water movement.
11) 153' Bottom of the well.
12) Note: There appears to be some biological growth on the casing walls.
13) Note: There may be more perforations in the well that are plugged or encrusted but not visible.

Thank you for choosing WellSpy for your well video service.

WellSpy

Bruce Hunter

2/27/03

☑ COMPLETED

CUSTOMER COPY

DE LUCCHI WELL & PUMP, INC.

Invoice No. **24812**

DRILLING, CLEANING & REPAIR

SALES, SERVICE & SUPPLIES

35137 MISSION BLVD. PHONE (415) 793-2822 FREMONT, CALIFORNIA 94536

Well G2
T-Bear Pump Test, 3000 Andrade Road

APN 96-0001-007-06

45/1E 20G2

BILLING DATE March 4,1983

ORDER DATE March 3,1983

TO Helen Hayes
251 Arguello
San Francisco, CA. 94118

Joanne Blott- 862-2309

CUSTOMER'S ORDER NO.

Mr.Tovani- 991-9299 Till 9:30A.
387-1632 Evenings

PHONE

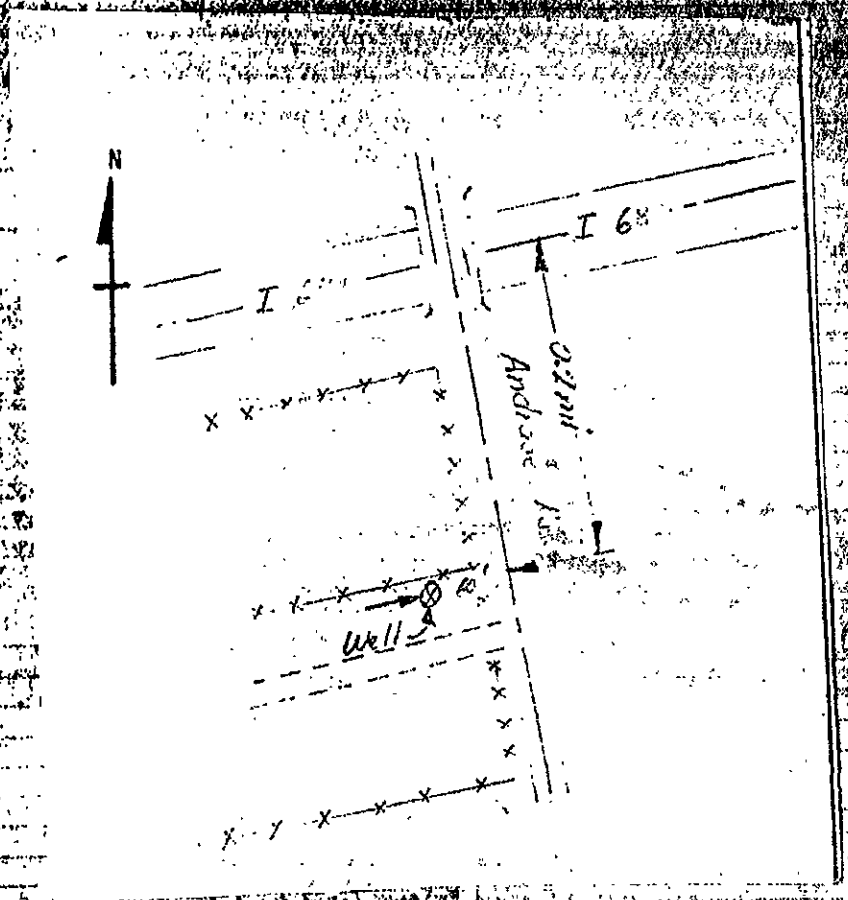
WORK ORDERED BY	ORDER TAKEN BY	HOW	LOCATION OF JOB
	JHD	phone	3000 Andrade Rd. Sunol T-Bear Ranch

WORK TO BE DONE: Run well test if pump yields more than 5 gpm.

QUANTITY	DESCRIPTION	UNIT PRICE	AMOUNT
	On March 4,1983 a serviceman from DeLucchi Well & Pump, Inc. conducted a well test at 3000 Andrade Rd., Sunol.		
	He began pumping at a rate of 22 gallons per minute with a static level of 1 foot above ground level. After pumping for 4 hours at that rate, the water level was 2'6" below ground level.		
	5 hrs. labor 1 man $42.00 per hr to run test on well.		$ 210.-
	Pd 3/7/83 ck #267 [signature]		

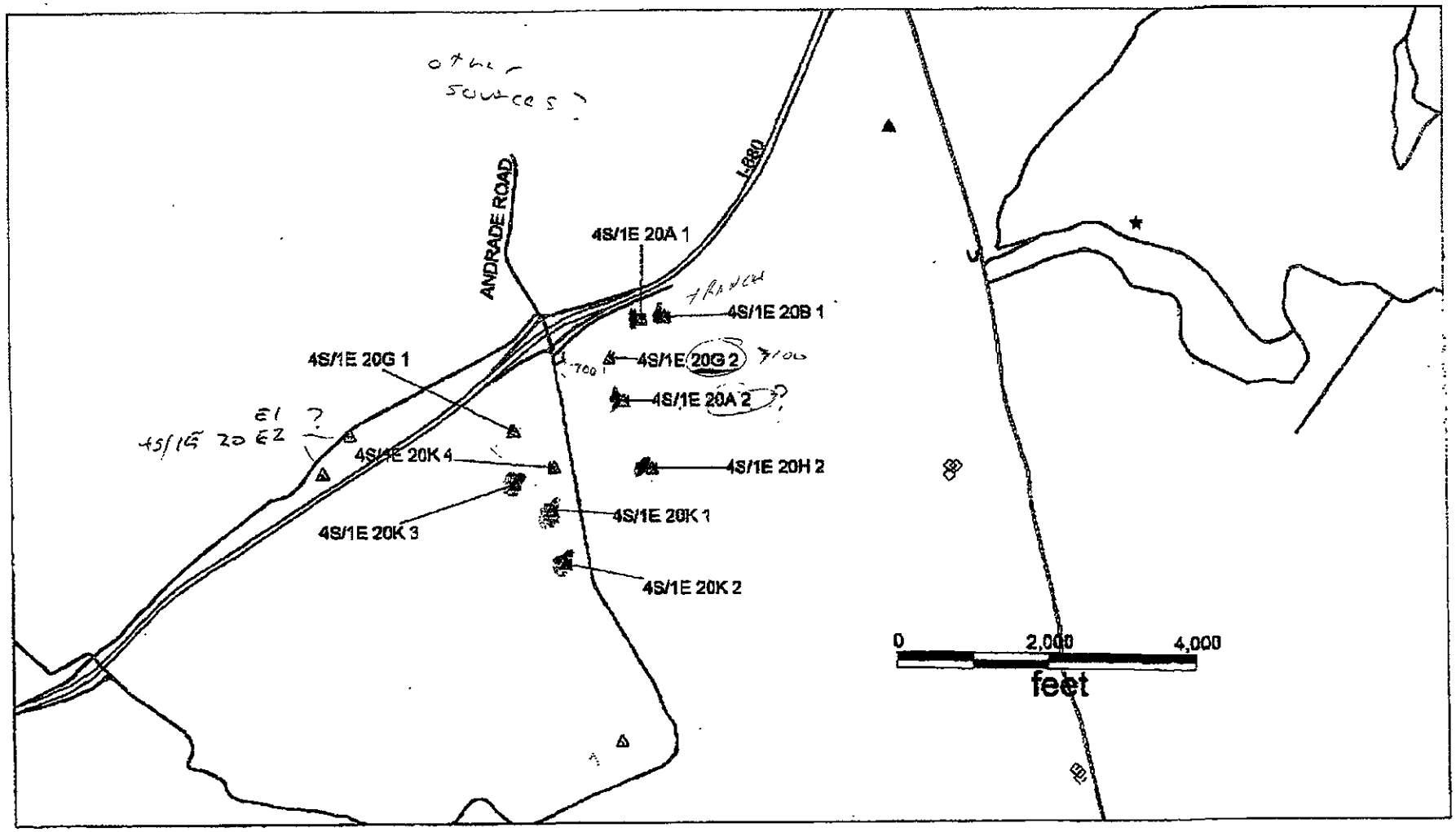
RECEIVED ____________ TOTAL $ 210.-

TERMS: 30 DAYS – NET.



NOV 6 1972

DEPARTMENT OF WATER RESOURCES


other sources?
ANDRADE ROAD
I-680
4S/1E 20A 1
4S/1E 20B 1
4S/1E 20G 1
4S/1E 20G 2
4S/1E 20A 2
4S/1E 20K 4
4S/1E 20H 2
4S/1E 20K 1
4S/1E 20K 3
4S/1E 20K 2
0
2,000
4,000
feet

■ : from DWR

Zone 7
Alameda County Flood Control
&
Water Conservation District

6997 Parkside Drive ■ Pleasanton, California 94588-5127 ■ Phone (925) 484-2600 ■ Fax (925) 462-3914

Telefax Transmittal

Date: 2-27-03

Deliver To: Scott Seery

Name of Firm: ACEHS

Fax Number: 510-337-9335

From: Colleen Winey

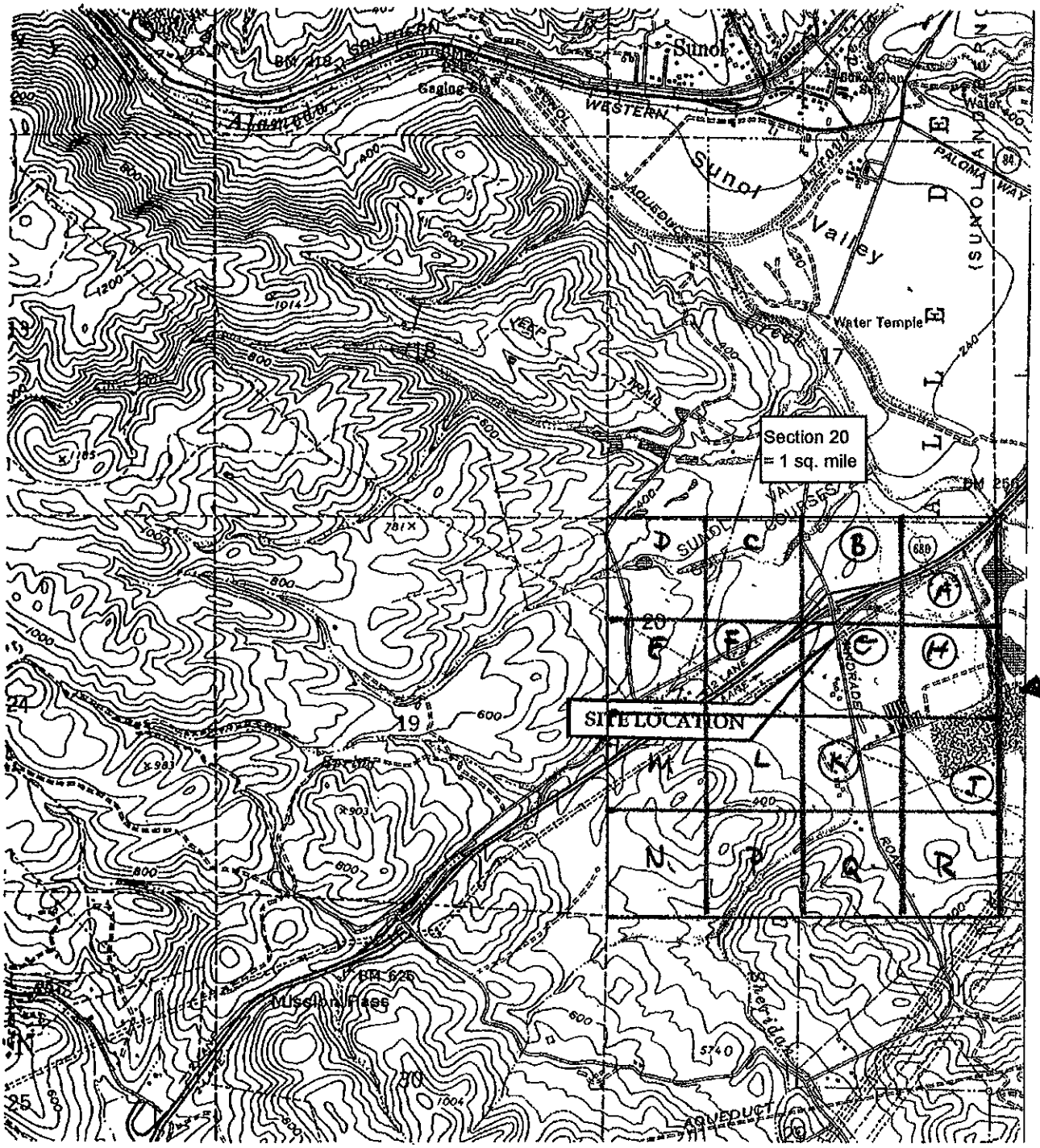
Number of Pages: 5
(Including Cover Page)

For Voice Contact Call: (925) 484-2600, Extension:

For Return Fax: (925) 462-3914

Remarks: Scott,
Here's a map. I threw in a couple more logs of nearby wells.
If you need anything else let me know.
C —

WELL LOGS 2



SOURCE: U.S.G.S. 7.5 MINUTE TOPOGRAPHIC MAPS
NILES, CALIFORNIA, 1961, PHOTOREVISED 1980

SITE LOCATION MAP

Sunol Tree Gas Service Station
3400 Andrade Road,
Sunol, California

CLEARWATER GROUP, INC.

Project No.	Figure Date	Figure
CB021C	5/03	1

Ro244

WellSpy
WATER WELL SURVEYS

December 13, 2002

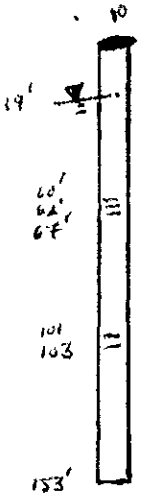
DEC 18 2002
BR

Clear Water Group
229 Tewksbury Ave.
Richmond, CA 94801

Attn: Brian Pierskalla

Video Log of Sunol Tree Gas Station Water Production Well (10"-diam, domestic)

Observation report on survey performed December 12, 2002 for Sunol Tree Gasoline Station, located at 3004 Andrade rd in Alameda County.



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Thank you for choosing WellSpy for your well video service.

WellSpy

Bruce Hunter

PSA_R_2003-2-27

CLEARWATER GROUP

Environmental Services

FACSIMILE TRANSMITTAL SHEET

TO: Scott Seery	FROM: Brian Pierskalla
COMPANY: ACHCSA	DATE: 2/27/2003
FAX NUMBER: 510-337-9335	TOTAL NO. OF PAGES INCLUDING COVER: 2
PHONE NUMBER: 510-567-6783	SENDER'S REFERENCE NUMBER: 510-307-9943 x 231
RE: Sunol Tree Gas Preliminary Site Assessment Well Spy Log	YOUR REFERENCE NUMBER: CP032F

☐ URGENT ☑ FOR REVIEW ☐ PLEASE COMMENT ☐ PLEASE REPLY ☐ PLEASE RECYCLE

NOTES/COMMENTS:

Dear Scott:

Please see attached Preliminary Site Assessment Log from Well Spy for the Sunol Tree Gas site on Andrade Road, Sunol. We also have a VCR tape of the down-well camera, which I have perused about half of the tape. The well looked very flocculated with rust/iron scaling. No evidence of vertical damage was apparent. Please call me with any questions at (510) 307-9943 x 231.

Regards,

BP

Brian Pierskalla

Project Manager

229 Tewksbury Avenue ◆ Point Richmond, California 94801 ◆ Telephone: 510-307-9943 ◆ Fax: 510-232-2823

Entech Analytical Labs, Inc.

3334 Victor Court • Santa Clara, CA 95054 • (408) 588-0200 • Fax (408) 588-0201

Aaron Bierman
Weber, Hayes and Associates
120 Westgate Drive
Watsonville, CA 95076

Certificate ID: 40319 - 9/15/2004 4:11:53 PM

Order:	40319	**Date Collected:**	9/8/2004
Project Name:	T-Bear Ranch - Carbon Treatment System Testing	**Date Received:**	9/8/2004
Project Number:	23027.C (Pre/Mid/Post)	**P.O. Number:**	23027.C

Certificate of Analysis - Final Report

On September 08, 2004, samples were received under chain of custody for analysis. Entech analyzes samples "as received" unless otherwise noted. The following results are included:

Matrix	Test	Method	Comments
Liquid	8260Petroleum	EPA 8260B	
	TPH as Gasoline - GC/MS	GC-MS	

Entech Analytical Labs, Inc. is certified for environmental analyses by the State of California (#2346).
If you have any questions regarding this report, please call us at 408-588-0200 ext. 225.

Sincerely,

Laurie Glantz-Murphy
Laboratory Director

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Weber, Hayes and Associates
120 Westgate Drive
Watsonville, CA 95076
Attn: Aaron Bierman

Project Number: 23027.C
Project Name: T-Bear Ranch
Date Received: 9/8/2004
P.O. Number: 23027.C
Sampled By: Client

Certificate of Analysis - Data Report

Lab # : 40319-001 **Sample ID: PRE** **Matrix:** Liquid **Sample Date:** 9/8/2004 11:58 AM

Method: EPA 8260B / EPA 5030B / Purge-and-trap

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	ND		1	0.5	µg/L	N/A	N/A	09/13/2004	WMS5040913
Toluene	ND		1	0.5	µg/L	N/A	N/A	09/13/2004	WMS5040913
Ethyl Benzene	ND		1	0.5	µg/L	N/A	N/A	09/13/2004	WMS5040913
Xylenes, Total	ND		1	1	µg/L	N/A	N/A	09/13/2004	WMS5040913
Methyl-t-butyl Ether	14		1	1	µg/L	N/A	N/A	09/13/2004	WMS5040913
Ethyl-t-butyl Ether	ND		1	5	µg/L	N/A	N/A	09/13/2004	WMS5040913
tert-Butanol (TBA)	ND		1	10	µg/L	N/A	N/A	09/13/2004	WMS5040913
Diisopropyl Ether	ND		1	5	µg/L	N/A	N/A	09/13/2004	WMS5040913
tert-Amyl Methyl Ether	ND		1	5	µg/L	N/A	N/A	09/13/2004	WMS5040913
Ethanol	ND		1	100	µg/L	N/A	N/A	09/13/2004	WMS5040913

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	88.8	64 - 125
Dibromofluoromethane	89.1	23 - 172
Toluene-d8	83.8	70 - 134

Analyzed by: Jhsiang
Reviewed by: BDHABALIA

Method: GC-MS

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	ND		1	25	µg/L	N/A	N/A	09/13/2004	WMS5040913

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	88.8	64 - 125
Dibromofluoromethane	89.1	23 - 172
Toluene-d8	83.8	70 - 134

Analyzed by: Jhsiang
Reviewed by: BDHABALIA

Detection Limit = Detection Limit for Reporting. ND = Not Detected at or above the Detection Limit. DF = Dilution and/or Prep Factor

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Weber, Hayes and Associates
120 Westgate Drive
Watsonville, CA 95076
Attn: Aaron Bierman

Project Number: 23027.C
Project Name: T-Bear Ranch
Date Received: 9/8/2004
P.O. Number: 23027.C
Sampled By: Client

Certificate of Analysis - Data Report

Lab # : 40319-002 **Sample ID: MID** **Matrix:** Liquid **Sample Date:** 9/8/2004 11:55 AM

Method: EPA 8260B / EPA 5030B / Purge-and-trap

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	ND		1	0.5	µg/L	N/A	N/A	09/13/2004	WMS5040913
Toluene	ND		1	0.5	µg/L	N/A	N/A	09/13/2004	WMS5040913
Ethyl Benzene	ND		1	0.5	µg/L	N/A	N/A	09/13/2004	WMS5040913
Xylenes, Total	ND		1	1	µg/L	N/A	N/A	09/13/2004	WMS5040913
Methyl-t-butyl Ether	ND		1	1	µg/L	N/A	N/A	09/13/2004	WMS5040913
Ethyl-t-butyl Ether	ND		1	5	µg/L	N/A	N/A	09/13/2004	WMS5040913
tert-Butanol (TBA)	ND		1	10	µg/L	N/A	N/A	09/13/2004	WMS5040913
Diisopropyl Ether	ND		1	5	µg/L	N/A	N/A	09/13/2004	WMS5040913
tert-Amyl Methyl Ether	ND		1	5	µg/L	N/A	N/A	09/13/2004	WMS5040913
Ethanol	ND		1	100	µg/L	N/A	N/A	09/13/2004	WMS5040913

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	88.3	64 - 125
Dibromofluoromethane	88.5	23 - 172
Toluene-d8	83.7	70 - 134

Analyzed by: Jhsiang
Reviewed by: BDHABALIA

Method: GC-MS

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	ND		1	25	µg/L	N/A	N/A	09/13/2004	WMS5040913

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	88.3	64 - 125
Dibromofluoromethane	88.5	23 - 172
Toluene-d8	83.7	70 - 134

Analyzed by: Jhsiang
Reviewed by: BDHABALIA

Detection Limit = Detection Limit for Reporting. ND = Not Detected at or above the Detection Limit. DF = Dilution and/or Prep Factor

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Quality Control - Method Blank

Liquid

Validated by: BDHABALIA - 09/15/04

QC Batch ID: WMS5040913

Analysis Date: 9/13/2004

Method Blank

Method: EPA 8260B

Parameter	Result	DF	PQL	PQLR	Units
Benzene	ND	1	0.5	0.5	µg/L
Diisopropyl Ether	ND	1	5	5	µg/L
Ethanol	ND	1	100	100	µg/L
Ethyl Benzene	ND	1	0.5	0.5	µg/L
Ethyl-t-butyl Ether	ND	1	5	5	µg/L
Methyl-t-butyl Ether	ND	1	1	1	µg/L
tert-Amyl Methyl Ether	ND	1	5	5	µg/L
tert-Butanol (TBA)	ND	1	10	10	µg/L
Toluene	ND	1	0.5	0.5	µg/L
Xylene, m+p	ND	1	1	1	µg/L
Xylene, o	ND	1	0.5	0.5	µg/L
Xylenes, Total	ND	1	1	1	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	**88.5**	64 - 125
Dibromofluoromethane	**83.9**	23 - 172
Toluene-d8	**85.5**	70 - 134

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Quality Control - Laboratory Control Spike / Duplicate Results

Liquid

Reviewed by: BDHABALIA - 09/15/04

QC Batch ID: WMS5040913

Analysis Date: 9/13/2004

LCS **Method: EPA 8260B** **Conc. Units: µg/L**

Parameter	Blank	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
1,1-Dichloroethene	<0.5	20.0	18.7	LCS	9/13/2004	**94**			60 - 132
Benzene	<0.5	20.0	21.4	LCS	9/13/2004	**110**			77 - 154
Chlorobenzene	<0.5	20.0	21.1	LCS	9/13/2004	**110**			66 - 141
Methyl-t-butyl Ether	<1	20.0	21.2	LCS	9/13/2004	**110**			58 - 127
Toluene	<0.5	20.0	19.1	LCS	9/13/2004	**96**			47 - 137
Trichloroethene	<0.5	20.0	25.3	LCS	9/13/2004	**130**			57 - 159

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**95.9**	64 - 125
Dibromofluoromethane	**94.4**	23 - 172
Toluene-d8	**80.8**	70 - 134

LCSD **Method: EPA 8260B** **Conc. Units: µg/L**

Parameter	Blank	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
1,1-Dichloroethene	<0.5	20.0	17.2	LCSD	9/13/2004	**86**	**8.4**	25	60 - 132
Benzene	<0.5	20.0	20.2	LCSD	9/13/2004	**100**	**5.8**	25	77 - 154
Chlorobenzene	<0.5	20.0	19.9	LCSD	9/13/2004	**100**	**5.9**	25	66 - 141
Methyl-t-butyl Ether	<1	20.0	20.6	LCSD	9/13/2004	**100**	**2.9**	25	58 - 127
Toluene	<0.5	20.0	18.0	LCSD	9/13/2004	**90**	**5.9**	25	47 - 137
Trichloroethene	<0.5	20.0	24.0	LCSD	9/13/2004	**120**	**5.3**	25	57 - 159

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**96.2**	64 - 125
Dibromofluoromethane	**91.0**	23 - 172
Toluene-d8	**80.4**	70 - 134

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Quality Control - Method Blank

Liquid

Validated by: BDHABALIA - 09/15/04

QC Batch ID: WMS5040913

Analysis Date: 9/13/2004

Method Blank

Method: GC-MS

Parameter	Result	DF	PQL	PQLR	Units
TPH as Gasoline	ND	1	25	25	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	88.5	64 - 125
Dibromofluoromethane	83.9	23 - 172
Toluene-d8	85.5	70 - 134

Quality Control - Laboratory Control Spike / Duplicate Results

Liquid

Reviewed by: BDHABALIA - 09/15/04

QC Batch ID: WMS5040913

Analysis Date: 9/13/2004

LCS **Method: GC-MS** **Conc. Units: µg/L**

Parameter	Blank	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Gasoline	<25	250	265	LCS	9/13/2004	110			65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	91.7	64 - 125
Dibromofluoromethane	85.0	23 - 172
Toluene-d8	82.0	70 - 134

LCSD **Method: GC-MS** **Conc. Units: µg/L**

Parameter	Blank	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Gasoline	<25	250	260	LCSD	9/13/2004	100	1.9	25	65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	93.2	64 - 125
Dibromofluoromethane	84.6	23 - 172
Toluene-d8	85.1	70 - 134

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Dr., Watsonville, CA 95076
(831) 722-3580 (831) 662-3100
Fax: (831) 722-1159

CHAIN -OF-CUSTODY RECORD

PROJECT NAME AND JOB #: T-Bear Ranch / ~~23027~~ 23027.C

SEND CERTIFIED RESULTS TO: Weber, Hayes and Associates - Attention. Aaron Bierman

ELECTRONIC DELIVERABLE FORMAT: [ ] YES [X] NO

LABORATORY: Entech Analytical Laboratory

TURNAROUND TIME: (Standard Five-Day) 24hr Rush 48hr Rush 72hr Rush

GLOBAL I.D.: NA

Sampler: Aaron Bierman (AB)

Date: 9.8.04

Sample Identification	Sample Depth	Date Sampled	Time Sampled	Matrix	SAMPLE CONTAINERS: 40 mL VOAs (preserved)	1 Liter Amber Jars	___mL Poly Bottle	Liner Acetate or Brass	REQUESTED ANALYSIS: Total Petroleum Hydrocarbons: TEPH: Diesel, Motor Oil with Standard Silica Gel Cleanup	TRPH as TOG with Standard Silica Gel Cleanup	TPH-gasoline + BTEX by EPA Method# 8260	Volatile Organics: VOCs EPA Method# 8260B	Solvents by EPA Method# 8010	Fuel Oxygenates + ETHANOL EPA Method# 8260	Additional Analysis: PNA's by EPA Method# 8270 SIM	HVOCs by EPA Method# 8270 SIM	LUFT 5 Metals
PRE	GRAB	9.8.04	11:58	H_2O	x3						HOLD			HOLD	408169-001		
MID	GRAB	9.8.04	11:55	H_2O	x3						X			X			002
POST	GRAB	9.8.04	11:50	H_2O	x3						X			X			003

	RELEASED BY:	Date & Time	RECEIVED BY:	Date & Time
1)	Aaron Bierman	9/8/04 @ 4:30	Quadrado	9/8/04 1631
2)				
3)				
4)				
5)				

SAMPLE CONDITION: (circle 1)

Ambient	(Refrigerated)	Frozen
Ambient	Refrigerated	Frozen
Ambient	Refrigerated	Frozen
Ambient	Refrigerated	Frozen
Ambient	Refrigerated	Frozen

NOTES:

[ ] If MTBE is detected by EPA Method 8020, please confirm detections by EPA Method 8260 with a minimum detection limit of 5 ug/L, and report only confirmed 8260 detections.

[ ] For MTBE-analyzed samples with non-detectable results (ND) but having elevated detection limits, please confirm by EPA Method #8260.

[ ] Please use MDL (Minimum Detection Limit) for any diluted samples

-Please send certified results via *.pdf to laboratory@weber-hayes.com.

-T-BEAR WELL MONTHLY CARBON TREATMENT SAMPLES

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Dr., Watsonville, CA 95076
(831) 722-3580 (831) 662-3100
Fax (831) 722-1159

CHAIN -OF-CUSTODY RECORD

Revised COC

PAGE 1 OF 1

PROJECT NAME AND JOB #: T-Bear Ranch / ~~Granite~~ 23027.C

SEND CERTIFIED RESULTS TO: Weber, Hayes and Associates - Attention Aaron Bleiman

ELECTRONIC DELIVERABLE FORMAT: ☐ YES ☒ NO

LABORATORY: Entech Analytical Laboratory

TURNAROUND TIME: (Standard Five-Day) 24hr Rush 48hr Rush 72hr Rush

GLOBAL I.D.: NA

Sampler: Aaron Bleiman (AB)

Date: 9-8-04

40319

Sample Identification	Sample Depth	Date Sampled	Time Sampled	Matrix	SAMPLE CONTAINERS: 40 ml. VOAs (preserved)	1 Liter Amber Jars	___ml. Poly Bottle	Liner Acetate or Brass	REQUESTED ANALYSIS: Total Petroleum Hydrocarbons: TEPH: Diesel, Motor Oil with Standard Silica Gel Cleanup	TRPH as 100 with Standard Silica Gel Cleanup	EPH-gasoline T-BTEX by EPA Method 8260	Volatile Organics: VOCs EPA Method 8260B	Solvents by EPA Method 8010	Fuel Oxygenates EPA Method 8260	Additional Analysis: PNA's by EPA Methods 8270 SIM	HVOCs by EPA Method 8270 SIM	LUFT 5 Metals
PRE	GRAB	9-8-04	11:58	H_2O	X3						HOLD X	9-9-04		HOLD X	9-9-04		001
MID	GRAB	9-8-04	11:35	H_2O	X3						X			X			002
POST	GRAB	9-8-04	11:50	H_2O	X3						X HOLD 9-9-04			X HOLD	9-9-04		003

	RELEASED BY:	Date & Time	RECEIVED BY:	Date & Time
1)	Aaron Bleiman	9/8/04 1630	Lmadrid	9/8/04 1631
2)				
3)				
4)				
5)				

SAMPLE CONDITION: (circle 1)

Ambient	(Refrigerated)	Frozen
Ambient	Refrigerated	Frozen
Ambient	Refrigerated	Frozen
Ambient	Refrigerated	Frozen
Ambient	Refrigerated	Frozen

NOTES:

☐ If MTBE is detected by EPA Method 8020, please confirm detections by EPA Method 8260 with a minimum detection limit of 5 ug/L, and report only confirmed 8260 detections.

☐ For MTBE-analyzed samples with non-detectable results (ND) but having elevated detection limits, please confirm by EPA Method 8260.

☐ Please use MDL (Minimum Detection Limit) for any diluted samples.

Please send certified results via *.pdf to laboratory@weber-hayes.com.

T-BEAR WELL MONTHLY CARBON TREATMENT SAMPLES

Changed Order Rec'd 9/9/04

Sheet.xls

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Dr., Watsonville, CA 95076
(831) 722-3580 (831) 662-3100
Fax: (831) 722-1159

FAX TRANSMISSION

To: *Entech Analytical -*
Fax #: *(408) 588-0201*

Date: *September 9, 2004*

From: *Aaron Bierman*

Subject: Change In Samples for Analysis

Attached to this FAX is a **REVISED** Chain Of Custody (COC) form.

The samples listed on this COC's were transported to your lab yesterday (9/8/04). The revisions include:

1) HOLD the "post" sample
2) As per COC, analyze the "mid" sample
3) Analyze the "pre" sample

The analysis remains the same, the change is for which samples to analyze. Please see revised chain for any further details.

Please call with any comments or questions.

Aaron Bierman
Senior Staff Geologist RG #7490

Office: (831) 722-3580
Cell:(831) 334-2237

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Dr., Watsonville, CA 95076
(831) 722-3580 (831) 662-3100
Fax: (831) 722-1159

CHAIN-OF-CUSTODY RECORD

PROJECT NAME AND JOB #: T-Bear Ranch ~~23027~~ 23027.C

SEND CERTIFIED RESULTS TO: Weber, Hayes and Associates - Attention: Aaron Bierman

ELECTRONIC DELIVERABLE FORMAT: [ ] YES [X] NO

Sampler: Aaron Bierman (AB)

Date: 9.8.04

LABORATORY: Entech Analytical Laboratory

TURNAROUND TIME: (Standard Five-Day) 24hr Rush 48hr Rush 72hr Rush

GLOBAL I.D.: NA

Sample Identification	Sample Depth	Date Sampled	Time Sampled	Matrix	SAMPLE CONTAINERS: 40 mL VOAs (preserved)	1 Liter Amber Jars	___mL Poly Bottle	Liner Acetate or Brass	REQUESTED ANALYSIS: Total Petroleum Hydrocarbons: TEPH: Diesel, Motor Oil with Standard Silica Gel Cleanup	TRPH as TOG with Standard Silica Gel Cleanup	TPH-gasoline + BTEX by EPA Method# 8260	Volatile Organics: VOCs EPA Method# 8260B	Solvents by EPA Method# 8010	Fuel Oxygenates + ETHANOL EPA Method# 8260	Additional Analysis: PNA's by EPA Method# 8270 SIM	HVOCs by EPA Method# 8270 SIM	LUFT 5 Metals
PRE	GRAB	9.8.04	11:58	H_2O	x3						HOLD			HOLD	40319-001		
MID	GRAB	9.8.04	11:55	H_2O	x3						X			X			002
POST	GRAB	9.8.04	11:50	H_2O	x3						X			X			003

RELEASED BY:
1.) Aaron Bierman — Date & Time 9/8/04 @ 1530
2.)
3.)
4.)
5.)

RECEIVED BY:
Rmadrid — Date & Time 9/8/04 1631

SAMPLE CONDITION: (circle 1)

Ambient	(Refrigerated)	Frozen
Ambient	Refrigerated	Frozen
Ambient	Refrigerated	Frozen
Ambient	Refrigerated	Frozen
Ambient	Refrigerated	Frozen

NOTES:

[ ] If MTBE is detected by EPA Method 8020, please confirm detections by EPA Method 8260 with a minimum detection limit of 5 ug/L, and report only confirmed 8260 detections

[ ] For MTBE-analyzed samples with non-detectable results (ND) but having elevated detection limits, please confirm by EPA Method #8260.

[ ] Please use MDL (Minimum Detection Limit) for any diluted samples.

Please send certified results via *.pdf to laboratory@weber-hayes.com.

T-BEAR WELL MONTHLY CARBON TREATMENT SAMPLES

Sunol xls

Entech Analytical Labs, Inc.

3334 Victor Court • Santa Clara, CA 95054 • (408) 588-0200 • Fax (408) 588-0201

Aaron Bierman
Weber, Hayes and Associates
120 Westgate Drive
Watsonville, CA 95076

Certificate ID: 40046 - 8/19/2004 3:25:03 PM

Order:	40046	**Date Collected:**	8/13/2004
Project Name:	T-Bear Ranch - Purge Water From Geophysical Pumping	**Date Received:**	8/13/2004
Project Number:	23027.C	**P.O. Number:**	23027.C

Certificate of Analysis - Final Report

On August 13, 2004, sample was received under chain of custody for analysis. Entech analyzes samples "as received" unless otherwise noted. The following results are included:

Matrix	Test	Method	Comments
Liquid	8260Petroleum	EPA 8260B	
	PDF	PDF	
	TPH as Gasoline - GC/MS	GC-MS	

Entech Analytical Labs, Inc. is certified for environmental analyses by the State of California (#2346).
If you have any questions regarding this report, please call me at 408-588-0200.

Sincerely,

Laurie Glantz-Murphy
Laboratory Director

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Weber, Hayes and Associates
120 Westgate Drive
Watsonville, CA 95076
Attn: Aaron Bierman

Date: 8/19/2004
Date Received: 8/13/2004
Project Name: T-Bear Ranch
Project Number: 23027.C
P.O. Number: 23027.C
Sampled By: Client

Certified Analytical Report

Lab # : 40046-001 **Sample ID: Purge Water** **Matrix:** Liquid **Sample Date:** 8/13/2004 12:30 PM

Method: EPA 8260B / EPA 5030B / Purge & Trap

Parameter	Result	Flag	DF	PQL	PQLR	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	ND		1	0.5	0.5	µg/L	N/A	N/A	08/18/2004	WMS1040818B
Toluene	ND		1	0.5	0.5	µg/L	N/A	N/A	08/18/2004	WMS1040818B
Ethyl Benzene	ND		1	0.5	0.5	µg/L	N/A	N/A	08/18/2004	WMS1040818B
Xylenes, Total	ND		1	1	1	µg/L	N/A	N/A	08/18/2004	WMS1040818B
Methyl-t-butyl Ether	ND		1	1	1	µg/L	N/A	N/A	08/18/2004	WMS1040818B

Surrogate	Surrogate Recovery	Control Limits (%)	Analyzed by: Xbian
4-Bromofluorobenzene	91.4	64 - 125	Reviewed by. MTU
Dibromofluoromethane	107.0	23 - 172	
Toluene-d8	102.0	70 - 134	

TPH as Gasoline	ND		1	25	25	µg/L	N/A	N/A	08/18/2004	WMS1040818B

Surrogate	Surrogate Recovery	Control Limits (%)	Analyzed by: Xbian
4-Bromofluorobenzene	108.0	64 - 125	Reviewed by· MTU
Dibromofluoromethane	101.0	23 - 172	
Toluene-d8	109.0	70 - 134	

ND = Not Detected at or above the PQL
PQL = Practical Quantitation Limit (No Dilution)
DF = Dilution and/or Prep Factor
PQLR = Practical Quantitation Limit for Reporting (Includes Dilution)

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Quality Control - Method Blank

Validated by: MTU - 08/19/04

QC Batch ID: WMS1040818B
Matrix: Liquid
Date of Analysis: 8/18/2004

Method: EPA 8260B

Parameter	Result	DF	PQL	PQLR	Units
Benzene	ND	1	0.5	0.5	µg/L
Ethyl Benzene	ND	1	0.5	0.5	µg/L
Methyl-t-butyl Ether	ND	1	1	1	µg/L
Toluene	ND	1	0.5	0.5	µg/L
Xylene, m+p	ND	1	1	1	µg/L
Xylene, o	ND	1	0.5	0.5	µg/L
Xylenes, Total	ND	1	1	1	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	91.7	64 - 125
Dibromofluoromethane	101.0	23 - 172
Toluene-d8	100.0	70 - 134

Quality Control - Laboratory Control Spike / Duplicate Results

Reviewed by: MTU - 08/19/04

QC Batch ID: WMS1040818B
Date of Analysis: 8/18/2004

Method EPA 8260B — **Liquid** — **Conc. Units: µg/L**

Parameter	Blank	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
1,1-Dichloroethene	<0.5	20.0	19.4	LCS	8/18/2004	**97.0**			60 - 132
Benzene	<0.5	20.0	22.2	LCS	8/18/2004	**111.0**			77 - 154
Chlorobenzene	<0.5	20.0	21.2	LCS	8/18/2004	**106.0**			66 - 141
Methyl-t-butyl Ether	<1	20.0	19.4	LCS	8/18/2004	**97.0**			58 - 127
Toluene	<0.5	20.0	19.9	LCS	8/18/2004	**99.5**			47 - 137
Trichloroethene	<0.5	20.0	20.9	LCS	8/18/2004	**104.5**			57 - 159

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**91.8**	64 - 125
Dibromofluoromethane	**99.8**	23 - 172
Toluene-d8	**92.5**	70 - 134

1,1-Dichloroethene	<0.5	20.0	18.8	LCSD	8/18/2004	**94.0**	**3.1**	25	60 - 132
Benzene	<0.5	20.0	21.5	LCSD	8/18/2004	**107.5**	**3.2**	25	77 - 154
Chlorobenzene	<0.5	20.0	20.8	LCSD	8/18/2004	**104.0**	**1.9**	25	66 - 141
Methyl-t-butyl Ether	<1	20.0	19.7	LCSD	8/18/2004	**98.5**	**1.5**	25	58 - 127
Toluene	<0.5	20.0	19.6	LCSD	8/18/2004	**98.0**	**1.5**	25	47 - 137
Trichloroethene	<0.5	20.0	20.5	LCSD	8/18/2004	**102.5**	**1.9**	25	57 - 159

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**90.1**	64 - 125
Dibromofluoromethane	**99.2**	23 - 172
Toluene-d8	**93.0**	70 - 134

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Quality Control - Matrix Spike / Duplicate Results

Reviewed by: MTU - 08/19/04

QC Batch ID: WMS1040818B

Date of Analysis: 8/18/2004

Method EPA 8260B Liquid Conc. Units: µg/L

Parameter	Sample Result	Spike Amount	Spike Result	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
MS **SampleNumber: 39956-002**									
Benzene	ND	20.0	21.7464	MS	8/18/2004	**108.7**			73 - 134
Methyl-t-butyl Ether	17.1	20.0	36.4	MS	8/18/2004	**96.5**			42 - 157
Toluene	ND	20.0	20.1637	MS	8/18/2004	**100.8**			79 - 117

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**86.4**	64 - 125
Dibromofluoromethane	**105.9**	23 - 172
Toluene-d8	**98.3**	70 - 134

MSD **SampleNumber: 39956-002**									
Benzene	ND	20.0	21.4461	MSD	8/18/2004	**107.2**	**1.4**	25	73 - 134
Methyl-t-butyl Ether	17.1	20.0	36.6	MSD	8/18/2004	**97.5**	**1.0**	25	42 - 157
Toluene	ND	20.0	19.7234	MSD	8/18/2004	**98.6**	**2.2**	25	79 - 117

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**88.0**	64 - 125
Dibromofluoromethane	**103.4**	23 - 172
Toluene-d8	**97.0**	70 - 134

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Quality Control - Method Blank

Validated by: MTU - 08/19/04

QC Batch ID: WMS1040818B
Matrix: Liquid
Date of Analysis: 8/18/2004

Method: GC-MS

Parameter	Result	DF	PQL	PQLR	Units
TPH as Gasoline	ND	1	25	25	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	**108.0**	64 - 125
Dibromofluoromethane	**95.1**	23 - 172
Toluene-d8	**108.0**	70 - 134

Quality Control - Laboratory Control Spike / Duplicate Results

Reviewed by: MTU - 08/19/04

QC Batch ID: WMS1040818B
Date of Analysis: 8/18/2004

Method GC-MS — **Liquid** — **Conc. Units: µg/L**

Parameter	Blank	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Gasoline	<25	125.0	145.3	LCS	8/18/2004	**116.2**			65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**109.0**	64 - 125
Dibromofluoromethane	**93.6**	23 - 172
Toluene-d8	**108.0**	70 - 134

TPH as Gasoline	<25	125.0	140.2	LCSD	8/18/2004	**112.2**	**3.6**	25	65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**110.0**	64 - 125
Dibromofluoromethane	**92.9**	23 - 172
Toluene-d8	**108.0**	70 - 134

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering

120 Westgate Dr., Watsonville, CA 95076
(831) 722-3580 (831) 662-3100
Fax: (831) 722-1159

CHAIN -OF-CUSTODY RECORD

PROJECT NAME AND JOB #: T-Bear Ranch / ~~98027.D~~ 23027.C

SEND CERTIFIED RESULTS TO: Weber, Hayes and Associates - Attention: Aaron Bierman

ELECTRONIC DELIVERABLE FORMAT: [ ] YES [X] NO

Sampler: Aaron Bierman

Date: 8-13-04

LABORATORY: Entech Analytical Laboratory

TURNAROUND TIME: (Standard Five-Day) 24hr Rush 48hr Rush 72hr Rush

GLOBAL I.D.: NA

Sample Identification	Sample Depth	Date Sampled	Time Sampled	Matrix	SAMPLE CONTAINERS: 40 mL VOAs (preserved)	1 Liter Amber Jars	___mL Poly Bottle	Liner Acetate or Brass	REQUESTED ANALYSIS: Total Petroleum Hydrocarbons: TEPH: Diesel, Motor Oil with Standard Silica Gel Cleanup	TRPH as TOG with Standard Silica Gel Cleanup	TPH-gasoline & M-BTEX by EPA Method# 8260	Volatile Organics: VOCs EPA Method# 8260B	Solvents by EPA Method# 8010	Fuel Oxygenates EPA Method# 8260	Additional Analysis: PNA's by EPA Method# 8270 SIM	HVOCs by EPA Method# 8270 SIM	LUFT 5 Metals
PURGE WATER	GRAB	8-13-04	1230 pm	H2O	X3						X			X		40946-001	

	RELEASED BY:	Date & Time	RECEIVED BY:	Date & Time
1.)		8/13/04 1250		8/13/04 1325
2.)				
3.)				
4.)				
5.)				

SAMPLE CONDITION: (circle 1)

Ambient	(Refrigerated)	Frozen
Ambient	Refrigerated	Frozen
Ambient	Refrigerated	Frozen
Ambient	Refrigerated	Frozen
Ambient	Refrigerated	Frozen

NOTES:

- [ ] *If MTBE is detected by EPA Method 8020, please confirm detections by EPA Method 8260 with a minimum detection limit of 5 ug/L, and report only confirmed 8260 detections*
- [ ] *For MTBE-analyzed samples with non-detectable results (ND) but having elevated detection limits, please confirm by EPA Method #8260*
- [ ] *Please use MDL (Minimum Detection Limit) for any diluted samples*

-Please send certified results via *.pdf to laboratory@weber-hayes.com.

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Dr., Watsonville, CA 95076
(831) 722-3580 (831) 662-3100
Fax: (831) 722-1159

CHAIN -OF-CUSTODY RECORD

PAGE 1 OF 1

PROJECT NAME AND JOB #: T-Bear Ranch / ~~83027.B~~ 23027.C

SEND CERTIFIED RESULTS TO: Weber, Hayes and Associates - Attention. Aaron Bierman

ELECTRONIC DELIVERABLE FORMAT: ☐ YES ☒ NO

Sampler: Aaron Bierman

Date: 8-13-04

LABORATORY: Entech Analytical Laboratory

TURNAROUND TIME: (Standard Five-Day) 24hr Rush 48hr Rush 72hr Rush

GLOBAL I.D.: NA

Sample Identification	Sample Depth	Date Sampled	Time Sampled	Matrix	SAMPLE CONTAINERS: 40 mL VOAs (preserved)	1 Liter Amber Jars	___mL Poly Bottle	Liner Acetate or Brass	REQUESTED ANALYSIS: Total Petroleum Hydrocarbons: TEPH: Diesel, Motor Oil with Standard Silica Gel Cleanup	TRPH as TOG with Standard Silica Gel Cleanup	TPH-gasoline + MTBE by EPA Method# 8260	Volatile Organics: VOCs EPA Method# 8260B	Solvents by EPA Method# 8010	Fuel Oxygenates EPA Method# 8260	Additional Analysis: PNA's by EPA Method# 8270 SIM	HVOCs by EPA Method# 8270 SIM	LUFT 5 Metals
PURGE WATER	GRAB	8-13-04	1230pm	H2O	X3						X X			X		40946-001	

RELEASED BY:

1.) [signature] Date & Time 8/13/04 @ 1:25pm

2.)

3.)

4.)

5.)

RECEIVED BY:

1.) [signature] Date & Time 8/13/04 1325

2.)

3.)

4.)

5.)

SAMPLE CONDITION: (circle 1)

Ambient	(Refrigerated)	Frozen
Ambient	Refrigerated	Frozen
Ambient	Refrigerated	Frozen
Ambient	Refrigerated	Frozen
Ambient	Refrigerated	Frozen

NOTES:

☐ *If MTBE is detected by EPA Method 8020, please confirm detections by EPA Method 8260 with a minimum detection limit of 5 ug/L, and report only confirmed 8260 detections.*

☐ *For MTBE-analyzed samples with non-detectable results (ND) but having elevated detection limits, please confirm by EPA Method #8260.*

☐ *Please use MDL (Minimum Detection Limit) for any diluted samples.*

-Please send certified results via *.pdf to laboratory@weber-hayes.com.

Entech Analytical Labs, Inc.

3334 Victor Court • Santa Clara, CA 95054 • (408) 588-0200 • Fax (408) 588-0201

Pat Hoban
Weber, Hayes and Associates
120 Westgate Drive
Watsonville, CA 95076

Certificate ID: 39789 - 8/5/2004 3:18:51 PM

Order:	39789		
Project Name:	T-Bear Ranch	PZ-2 @ 20' & 24'	
Project Number:	23027.D	PZ-3 @ 16 & 44'	
Date Collected:	7/23/2004		
Date Received:	7/26/2004		
P.O. Number:			

Certificate of Analysis - Final Report

On July 26, 2004, samples were received under chain of custody for analysis. Entech analyzes samples "as received" unless otherwise noted. The following results are included:

Matrix	Test	Method	Comments
Liquid	8260Petroleum	EPA 8260B	
	TPH as Gasoline - GC/MS	GC-MS	

Entech Analytical Labs, Inc. is certified for environmental analyses by the State of California (#2346).
If you have any questions regarding this report, please call me at 408-588-0200.

Sincerely,

Laurie Glantz-Murphy
Laboratory Director

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Weber, Hayes and Associates
120 Westgate Drive
Watsonville, CA 95076
Attn: Pat Hoban

Date: 8/5/2004
Date Received: 7/26/2004
Project Name: T-Bear Ranch
Project Number: 23027.D
P.O. Number:
Sampled By:

Certified Analytical Report

Lab # : 39789-001 **Sample ID: PZ-2@20** **Matrix:** Liquid **Sample Date:** 7/23/2004

Method: EPA 8260B

Parameter	Result	Flag	DF	PQL	PQLR	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	ND		1	0.5	0.5	µg/L	N/A	N/A	07/28/2004	WMS1040728
Toluene	ND		1	0.5	0.5	µg/L	N/A	N/A	07/28/2004	WMS1040728
Ethyl Benzene	ND		1	0.5	0.5	µg/L	N/A	N/A	07/28/2004	WMS1040728
Xylenes, Total	ND		1	1	1	µg/L	N/A	N/A	07/28/2004	WMS1040728
Methyl-t-butyl Ether	65		1	1	1	µg/L	N/A	N/A	07/28/2004	WMS1040728
Ethyl-t-butyl Ether	ND		1	5	5	µg/L	N/A	N/A	07/28/2004	WMS1040728
tert-Amyl Methyl Ether	ND		1	5	5	µg/L	N/A	N/A	07/28/2004	WMS1040728
tert-Butanol (TBA)	ND		1	10	10	µg/L	N/A	N/A	07/28/2004	WMS1040728
Diisopropyl Ether	ND		1	5	5	µg/L	N/A	N/A	07/28/2004	WMS1040728
Ethanol	ND		1	100	100	µg/L	N/A	N/A	07/28/2004	WMS1040728

Comment: Ethanol analysed on GCMS#3, On 08/03/04 and Batch # WMS3040803.

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	97.6	64 - 125
Dibromofluoromethane	110.1	23 - 172
Toluene-d8	100.0	70 - 134

Analyzed by: TFulton
Reviewed by: MTU

TPH as Gasoline	66	x	1	25	25	µg/L	N/A	N/A	07/28/2004	WMS1040728

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	115.1	64 - 125
Dibromofluoromethane	103.6	23 - 172
Toluene-d8	115.1	70 - 134

Analyzed by: TFulton
Reviewed by: MTU

*** TPH as Gasoline value is due to MTBE.

ND = Not Detected at or above the PQL
PQL = Practical Quantitation Limit (No Dilution)
DF = Dilution and/or Prep Factor
PQLR = Practical Quantitation Limit for Reporting (Includes Dilution)

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Weber, Hayes and Associates
120 Westgate Drive
Watsonville, CA 95076
Attn: Pat Hoban

Date: 8/5/2004
Date Received: 7/26/2004
Project Name: T-Bear Ranch
Project Number: 23027.D
P.O. Number:
Sampled By:

Certified Analytical Report

Lab # : 39789-002 **Sample ID: PZ-2@24** **Matrix:** Liquid **Sample Date:** 7/23/2004

Method: EPA 8260B

Parameter	Result	Flag	DF	PQL	PQLR	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	ND		1	0.5	0.5	µg/L	N/A	N/A	07/28/2004	WMS1040728
Toluene	ND		1	0.5	0.5	µg/L	N/A	N/A	07/28/2004	WMS1040728
Ethyl Benzene	ND		1	0.5	0.5	µg/L	N/A	N/A	07/28/2004	WMS1040728
Xylenes, Total	ND		1	1	1	µg/L	N/A	N/A	07/28/2004	WMS1040728
Methyl-t-butyl Ether	74		1	1	1	µg/L	N/A	N/A	07/28/2004	WMS1040728
Ethyl-t-butyl Ether	ND		1	5	5	µg/L	N/A	N/A	07/28/2004	WMS1040728
tert-Amyl Methyl Ether	ND		1	5	5	µg/L	N/A	N/A	07/28/2004	WMS1040728
tert-Butanol (TBA)	ND		1	10	10	µg/L	N/A	N/A	07/28/2004	WMS1040728
Diisopropyl Ether	ND		1	5	5	µg/L	N/A	N/A	07/28/2004	WMS1040728
Ethanol	ND		1	100	100	µg/L	N/A	N/A	07/28/2004	WMS1040728

Comment: Ethanol analysed on GCMS#3, On 08/03/04 and Batch # WMS3040803

Surrogate	Surrogate Recovery	Control Limits (%)	Analyzed by: TFulton
4-Bromofluorobenzene	97.4	64 - 125	Reviewed by: MTU
Dibromofluoromethane	108.1	23 - 172	
Toluene-d8	100.0	70 - 134	

TPH as Gasoline	73	x	1	25	25	µg/L	N/A	N/A	07/28/2004	WMS1040728

Surrogate	Surrogate Recovery	Control Limits (%)	Analyzed by: TFulton
4-Bromofluorobenzene	114.9	64 - 125	Reviewed by: MTU
Dibromofluoromethane	101.7	23 - 172	
Toluene-d8	107.5	70 - 134	

*** TPH as Gasoline value is due to MTBE.

ND = Not Detected at or above the PQL
PQL = Practical Quantitation Limit (No Dilution)
DF = Dilution and/or Prep Factor
PQLR = Practical Quantitation Limit for Reporting (Includes Dilution)

Entech Analytical Labs, Inc.

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Weber, Hayes and Associates
120 Westgate Drive
Watsonville, CA 95076
Attn: Pat Hoban

Date: 8/5/2004
Date Received: 7/26/2004
Project Name: T-Bear Ranch
Project Number: 23027.D
P.O. Number:
Sampled By:

Certified Analytical Report

Lab # : 39789-003 **Sample ID: PZ-3@16** **Matrix:** Liquid **Sample Date:** 7/23/2004

Method: EPA 8260B

Parameter	Result	Flag	DF	PQL	PQLR	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	ND		1	0.5	0.5	µg/L	N/A	N/A	07/28/2004	WMS1040728
Toluene	ND		1	0.5	0.5	µg/L	N/A	N/A	07/28/2004	WMS1040728
Ethyl Benzene	ND		1	0.5	0.5	µg/L	N/A	N/A	07/28/2004	WMS1040728
Xylenes, Total	ND		1	1	1	µg/L	N/A	N/A	07/28/2004	WMS1040728
Methyl-t-butyl Ether	ND		1	1	1	µg/L	N/A	N/A	07/28/2004	WMS1040728
Ethyl-t-butyl Ether	ND		1	5	5	µg/L	N/A	N/A	07/28/2004	WMS1040728
tert-Amyl Methyl Ether	ND		1	5	5	µg/L	N/A	N/A	07/28/2004	WMS1040728
tert-Butanol (TBA)	ND		1	10	10	µg/L	N/A	N/A	07/28/2004	WMS1040728
Diisopropyl Ether	ND		1	5	5	µg/L	N/A	N/A	07/28/2004	WMS1040728
Ethanol	ND		1	100	100	µg/L	N/A	N/A	07/28/2004	WMS1040728

Comment: Ethanol analysed on GCMS#3, On 08/03/04 and Batch # WMS3040803.

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	97 0	64 - 125
Dibromofluoromethane	110.3	23 - 172
Toluene-d8	100.2	70 - 134

Analyzed by: TFulton
Reviewed by: MTU

TPH as Gasoline	44	x	1	25	25	µg/L	N/A	N/A	07/28/2004	WMS1040728

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	114.5	64 - 125
Dibromofluoromethane	103 9	23 - 172
Toluene-d8	107 7	70 - 134

Analyzed by: TFulton
Reviewed by: MTU

*** TPH as Gasoline value is due to MTBE.

ND = Not Detected at or above the PQL
PQL = Practical Quantitation Limit (No Dilution)
DF = Dilution and/or Prep Factor
PQLR = Practical Quantitation Limit for Reporting (Includes Dilution)

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Weber, Hayes and Associates
120 Westgate Drive
Watsonville, CA 95076
Attn: Pat Hoban

Date: 8/5/2004
Date Received: 7/26/2004
Project Name: T-Bear Ranch
Project Number: 23027.D
P.O. Number:
Sampled By:

Certified Analytical Report

Lab # : 39789-004 **Sample ID:** PZ-3@44 **Matrix:** Liquid **Sample Date:** 7/23/2004

Method: EPA 8260B

Parameter	Result	Flag	DF	PQL	PQLR	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	ND		1	0.5	0.5	µg/L	N/A	N/A	07/28/2004	WMS1040728
Toluene	ND		1	0.5	0.5	µg/L	N/A	N/A	07/28/2004	WMS1040728
Ethyl Benzene	ND		1	0.5	0.5	µg/L	N/A	N/A	07/28/2004	WMS1040728
Xylenes, Total	ND		1	1	1	µg/L	N/A	N/A	07/28/2004	WMS1040728
Methyl-t-butyl Ether	ND		1	1	1	µg/L	N/A	N/A	07/28/2004	WMS1040728
Ethyl-t-butyl Ether	ND		1	5	5	µg/L	N/A	N/A	07/28/2004	WMS1040728
tert-Amyl Methyl Ether	ND		1	5	5	µg/L	N/A	N/A	07/28/2004	WMS1040728
tert-Butanol (TBA)	ND		1	10	10	µg/L	N/A	N/A	07/28/2004	WMS1040728
Diisopropyl Ether	ND		1	5	5	µg/L	N/A	N/A	07/28/2004	WMS1040728
Ethanol	ND		1	100	100	µg/L	N/A	N/A	07/28/2004	WMS1040728

Comment: Ethanol analysed on GCMS#3, On 08/03/04 and Batch # WMS3040803.

Surrogate	Surrogate Recovery	Control Limits (%)	Analyzed by: TFulton
4-Bromofluorobenzene	97.0	64 - 125	Reviewed by: MTU
Dibromofluoromethane	111.8	23 - 172	
Toluene-d8	100.0	70 - 134	

TPH as Gasoline	ND		1	25	25	µg/L	N/A	N/A	07/28/2004	WMS1040728

Surrogate	Surrogate Recovery	Control Limits (%)	Analyzed by: TFulton
4-Bromofluorobenzene	114.4	64 - 125	Reviewed by: MTU
Dibromofluoromethane	105.3	23 - 172	
Toluene-d8	107.4	70 - 134	

ND = Not Detected at or above the PQL
PQL = Practical Quantitation Limit (No Dilution)
DF = Dilution and/or Prep Factor
PQLR = Practical Quantitation Limit for Reporting (Includes Dilution)

Entech Analytical Labs, Inc.

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Quality Control - Method Blank

QC Batch ID: WMS1040728
Matrix: Liquid
Date of Analysis: 7/28/2004

Method: EPA 8260B

Parameter	Result	DF	PQL	PQLR	Units
Diisopropyl Ether	ND	1	5	5	µg/L
Ethyl Benzene	ND	1	0.5	0.5	µg/L
Ethyl-t-butyl Ether	ND	1	5	5	µg/L
Methyl-t-butyl Ether	ND	1	1	1	µg/L
tert-Amyl Methyl Ether	ND	1	5	5	µg/L
tert-Butanol (TBA)	ND	1	10	10	µg/L
Toluene	ND	1	0.5	0.5	µg/L
Trichloroethene	ND	1	0.5	0.5	µg/L
Xylene, m+p	ND	1	1	1	µg/L
Xylene, o	ND	1	0.5	0.5	µg/L
Xylenes, Total	ND	1	1	1	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	**100.5**	64 - 125
Dibromofluoromethane	**107.0**	23 - 172
Toluene-d8	**99.1**	70 - 134

Quality Control - Laboratory Control Spike / Duplicate Results

QC Batch ID: WMS1040728
Date of Analysis: 7/28/2004

Method EPA 8260B — Liquid — Conc. Units: µg/L

Parameter	Blank	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
1,1-Dichloroethene	<0.5	20.0	17.87	LCS	7/28/2004	**89.4**			60 - 132
Benzene	<0.5	20.0	21.03	LCS	7/28/2004	**105.2**			77 - 154
Chlorobenzene	<0.5	20.0	19.67	LCS	7/28/2004	**98.4**			66 - 141
Methyl-t-butyl Ether	<1	20.0	21.28	LCS	7/28/2004	**106.4**			58 - 127
Toluene	<0.5	20.0	18.58	LCS	7/28/2004	**92.9**			47 - 137
Trichloroethene	<0.5	20.0	19.62	LCS	7/28/2004	**98.1**			57 - 159

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**97.1**	64 - 125
Dibromofluoromethane	**105.6**	23 - 172
Toluene-d8	**94.5**	70 - 134

1,1-Dichloroethene	<0.5	20.0	17.97	LCSD	7/28/2004	**89.8**	**0.6**	25	60 - 132
Benzene	<0.5	20.0	21.64	LCSD	7/28/2004	**108.2**	**2.9**	25	77 - 154
Chlorobenzene	<0.5	20.0	19.97	LCSD	7/28/2004	**99.8**	**1.5**	25	66 - 141
Methyl-t-butyl Ether	<1	20.0	22.04	LCSD	7/28/2004	**110.2**	**3.5**	25	58 - 127
Toluene	<0.5	20.0	19.08	LCSD	7/28/2004	**95.4**	**2.7**	25	47 - 137
Trichloroethene	<0.5	20.0	20.01	LCSD	7/28/2004	**100.1**	**2.0**	25	57 - 159

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**96.7**	64 - 125
Dibromofluoromethane	**105.1**	23 - 172
Toluene-d8	**94.4**	70 - 134

Entech Analytical Labs, Inc.

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Quality Control - Method Blank

QC Batch ID: WMS1040728
Matrix: Liquid
Date of Analysis: 7/28/2004

Method: GC-MS

Parameter	Result	DF	PQL	PQLR	Units
TPH as Gasoline	ND	1	25	25	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	118.5	64 - 125
Dibromofluoromethane	100.7	23 - 172
Toluene-d8	106.4	70 - 134

Quality Control - Laboratory Control Spike / Duplicate Results

QC Batch ID: WMS1040728
Date of Analysis: 7/28/2004

Method GC-MS Liquid Conc. Units: µg/L

Parameter	Blank	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Gasoline	<25	250.0	242.99	LCS	7/28/2004	97.2			65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	117.9	64 - 125
Dibromofluoromethane	101.7	23 - 172
Toluene-d8	105.3	70 - 134

TPH as Gasoline	<25	250.0	248.3	LCSD	7/28/2004	99.3	2.2	25	65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	118.7	64 - 125
Dibromofluoromethane	100.2	23 - 172
Toluene-d8	105.8	70 - 134

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Dr., Watsonville, CA 95076
(831) 722-3580 (831) 662-3100
Fax: (831) 722-1159

CHAIN -OF-CUSTODY RECORD

PROJECT NAME AND JOB #: T-Bear Ranch / 23027.D

SEND CERTIFIED RESULTS TO: Weber, Hayes and Associates - Attention: Aaron Bierman

ELECTRONIC DELIVERABLE FORMAT: [ ] YES [X] NO

LABORATORY: Entech Analytical Laboratory

TURNAROUND TIME: ~~Standard Five-Day~~ 24hr Rush 48hr Rush 72hr Rush

GLOBAL I.D.: NA

Sampler: Aaron Bierman AB

Date: 7/23/04

39789

Sample Identification	Sample Depth (Ft. bgs)	Date Sampled	Time Sampled	Matrix	SAMPLE CONTAINERS: 40 mL VOAs (preserved)	1 Liter Amber Jars	___mL Poly Bottle	Liner Acetate or Brass	REQUESTED ANALYSIS: TEPH Diesel, Motor Oil with Standard Silica Gel Cleanup	TRPH as TOG with Standard Silica Gel Cleanup	TPH-gasoline by EPA Method# 8260	VOCs EPA Method# 8260B	Solvents by EPA Method# 8010	Fuel Oxygenates EPA Method# 8260	PNA's by EPA Method# 8270 SIM	HVOCs by EPA Method# 8270 SIM	LUFT 5 Metals
PZ-2 @ 20'	20'	7/23/04	am	H_2O	x3		-001				X			X			
PZ-2 @ 24'	24'	7-23-04	am	H_2O	x5		-002				X			X			
PZ-3 @ 16'	16'	7-23-04	am	H_2O	x5		-003				X			X			
PZ-3 @ 44'	44'	7-23-04	pm	H_2O	x5		-004				X			X			

3 DAYS

RELEASED BY:

1.) Aaron Bierman — Date & Time 7/23/04 @ 7:15pm
2.) _____ — Date & Time _____
3.) _____ — Date & Time _____
4.) _____ — Date & Time _____
5.) _____ — Date & Time _____

RECEIVED BY:

1.) _____ — Date & Time 7/23/04 @ 10:07pm
2.) _____ — Date & Time _____
3.) _____ — Date & Time _____
4.) _____ — Date & Time _____
5.) _____ — Date & Time _____

SAMPLE CONDITION: (circle 1)

Ambient	Refrigerated	Frozen
Ambient	Refrigerated 13.6°C	Frozen
Ambient	Refrigerated AR	Frozen
Ambient	Refrigerated	Frozen
Ambient	Refrigerated	Frozen

NOTES:

[ ] *If MTBE is detected by EPA Method 8020, please confirm detections by EPA Method 8260 with a minimum detection limit of 5 ug/L, and report only confirmed 8260 detections.*

[ ] *For MTBE-analyzed samples with non-detectable results (ND) but having elevated detection limits, please confirm by EPA Method #8260*

[ ] *Please use MDL (Minimum Detection Limit) for any diluted samples*

-Please send certified results via *.pdf to laboratory@weber-hayes.com.

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Dr., Watsonville, CA 95076
(831) 722-3580 (831) 662-3100
Fax: (831) 722-1159

CHAIN -OF-CUSTODY RECORD

PROJECT NAME AND JOB #: T-Bear Ranch / 23027.D

SEND CERTIFIED RESULTS TO: Weber, Hayes and Associates - Attention: Aaron Bierman

ELECTRONIC DELIVERABLE FORMAT: ☐ YES ☒ NO

LABORATORY: Entech Analytical Laboratory

TURNAROUND TIME: ~~Standard Five Day~~ 24hr Rush 48hr Rush 72hr Rush

GLOBAL I.D.: NA

Sampler: Aaron Bierman AB

Date: 7/23/04

39789

Sample Identification	Sample Depth (Ft. bgs)	Date Sampled	Time Sampled	Matrix	SAMPLE CONTAINERS: 40 mL VOAs (preserved)	1 Liter Amber Jars	___mL Poly Bottle	Liner Acetate or Brass	REQUESTED ANALYSIS: Total Petroleum Hydrocarbons: TEPH: Diesel, Motor Oil with Standard Silica Gel Cleanup	TRPH as TOG with Standard Silica Gel Cleanup	TPH-gasoline by EPA Method# 8260	Volatile Organics: VOCs EPA Method# 8260B	Solvents by EPA Method# 8010	Fuel Oxygenates EPA Method# 8260	Additional Analysis: PNA's by EPA Method# 8270 SIM	HVOCs by EPA Method# 8270 SIM	LUFT 5 Metals
PZ-2 @ 20'	20'	7/23/04	am	H_2O	x3		-001				X			X			
PZ-2 @ 24'	24'	7-23-04	am	H_2O	x5		-002				X			X			
PZ-3 @ 16'	16'	7-23-04	am	H_2O	x5		-003				X			X			
PZ-3 @ 44'	44'	7-23-04	am	H_2O	x5		-004				X			X			

3 DAYS

	RELEASED BY:	Date & Time	RECEIVED BY:	Date & Time
1)	Aaron Bierman	7/23/04 @ 3:10 pm		7/23 10:07:00 pm
2)				
3.)				
4)				
5.)				

SAMPLE CONDITION: (circle 1)

Ambient Refrigerated Frozen
Ambient Refrigerated 23.6°C Frozen
Ambient Refrigerated AR Frozen
Ambient Refrigerated Frozen
Ambient Refrigerated Frozen

NOTES:

- ☐ If MTBE is detected by EPA Method 8020, please confirm detections by EPA Method 8260 with a minimum detection limit of 5 ug/L, and report only confirmed 8260 detections.
- ☐ For MTBE-analyzed samples with non-detectable results (ND) but having elevated detection limits, please confirm by EPA Method #8260.
- ☐ Please use MDL (Minimum Detection Limit) for any diluted samples.

Please send certified results via *.pdf to laboratory@weber-hayes.com.

Sunol xls

Entech Analytical Labs, Inc.

3334 Victor Court • Santa Clara, CA 95054 • (408) 588-0200 • Fax (408) 588-0201

CHANGE ORDER FORM

Date Requested: 7-29-04
Date Needed: 5-Day
Client: Weber

Workorder #: 39751, 39770, 39789
Project Name or #: Various
Ordered by: Ref Holden

Laboratory ID#	Client ID#	Matrix	Change Requested
			Add BTEX to all samples previously analyzed

Comments: Thank You SI

Date Test Added:

Test Added By:

Distribution:
Original in the Workorder Folder. Accounting and all involved departments must get a copy of this form.

Entech Analytical Labs, Inc.

3334 Victor Court • Santa Clara, CA 95054 • (408) 588-0200 • Fax (408) 588-0201

Aaron Bierman
Weber, Hayes and Associates
120 Westgate Drive
Watsonville, CA 95076

Certificate ID: 39770 - 8/5/2004 3:38:43 PM

Order:	39770	**Date Collected:**	7/22/2004
Project Name:	T-Bear Ranch - PZ-2 @ → 44'	**Date Received:**	7/23/2004
Project Number:	23027.D - PZ-1 @ 20'	**P.O. Number:**	23027.D

Certificate of Analysis - Final Report

On July 23, 2004, samples were received under chain of custody for analysis. Entech analyzes samples "as received" unless otherwise noted. The following results are included:

Matrix	Test	Method	Comments
Liquid	8260Petroleum	EPA 8260B	8260Petroleum=Oxy's ONLY. No ethanol
	PDF	PDF	
	TPH as Gasoline - GC/MS	GC-MS	Gas by GCMS

Entech Analytical Labs, Inc. is certified for environmental analyses by the State of California (#2346).
If you have any questions regarding this report, please call me at 408-588-0200.

Sincerely,

Laurie Glantz-Murphy
Laboratory Director

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Weber, Hayes and Associates
120 Westgate Drive
Watsonville, CA 95076
Attn: Aaron Bierman

Date: 8/5/2004
Date Received: 7/23/2004
Project Name: T-Bear Ranch
Project Number: 23027.D
P.O. Number: 23027.D
Sampled By: Client

Certified Analytical Report

Lab # : 39770-001 **Sample ID: PZ-1 @ 20'** **Matrix:** Liquid **Sample Date:** 7/22/2004

Method: EPA 8260B / EPA 5030B / Purge & Trap

Parameter	Result	Flag	DF	PQL	PQLR	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	ND		1	0.5	0.5	µg/L	N/A	N/A	07/28/2004	WMS5040728
Toluene	ND		1	0.5	0.5	µg/L	N/A	N/A	07/28/2004	WMS5040728
Ethyl Benzene	ND		1	0.5	0.5	µg/L	N/A	N/A	07/28/2004	WMS5040728
Xylenes, Total	ND		1	1	1	µg/L	N/A	N/A	07/28/2004	WMS5040728
Methyl-t-butyl Ether	13		1	1	1	µg/L	N/A	N/A	07/28/2004	WMS5040728
Ethyl-t-butyl Ether	ND		1	5	5	µg/L	N/A	N/A	07/28/2004	WMS5040728
tert-Butanol (TBA)	ND		1	10	10	µg/L	N/A	N/A	07/28/2004	WMS5040728
Diisopropyl Ether	ND		1	5	5	µg/L	N/A	N/A	07/28/2004	WMS5040728
Ethanol	ND		1	100	100	µg/L	N/A	N/A	07/28/2004	WMS5040728

Surrogate	Surrogate Recovery	Control Limits (%)	Analyzed by: JHsiang
4-Bromofluorobenzene	94.0	64 - 125	Reviewed by: MTU
Dibromofluoromethane	93.8	23 - 172	
Toluene-d8	98 7	70 - 134	

TPH as Gasoline	34	x	1	25	25	µg/L	N/A	N/A	07/28/2004	WMS5040728

Comment: TPH as Gasoline reported value is a result of Acetone and MTBE which are within the TPH as Gasoline quantitation range.

Surrogate	Surrogate Recovery	Control Limits (%)	Analyzed by: JHsiang
4-Bromofluorobenzene	94.0	64 - 125	Reviewed by: MTU
Dibromofluoromethane	93.8	23 - 172	
Toluene-d8	98.7	70 - 134	

ND = Not Detected at or above the PQL
PQL = Practical Quantitation Limit (No Dilution)
DF = Dilution and/or Prep Factor
PQLR = Practical Quantitation Limit for Reporting (Includes Dilution)

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Weber, Hayes and Associates
120 Westgate Drive
Watsonville, CA 95076
Attn: Aaron Bierman

Date: 8/5/2004
Date Received: 7/23/2004
Project Name: T-Bear Ranch
Project Number: 23027.D
P.O. Number: 23027.D
Sampled By: Client

Certified Analytical Report

Lab # : 39770-002 **Sample ID: PZ-2 @ 44'** **Matrix:** Liquid **Sample Date:** 7/22/2004

Method: EPA 8260B / EPA 5030B / Purge-and-trap

Parameter	Result	Flag	DF	PQL	PQLR	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	ND		1	0.5	0.5	µg/L	N/A	N/A	07/28/2004	WMS5040728
Toluene	ND		1	0.5	0.5	µg/L	N/A	N/A	07/28/2004	WMS5040728
Ethyl Benzene	ND		1	0.5	0.5	µg/L	N/A	N/A	07/28/2004	WMS5040728
Xylenes, Total	ND		1	1	1	µg/L	N/A	N/A	07/28/2004	WMS5040728
Methyl-t-butyl Ether	90		1	1	1	µg/L	N/A	N/A	07/28/2004	WMS5040728
Ethyl-t-butyl Ether	ND		1	5	5	µg/L	N/A	N/A	07/28/2004	WMS5040728
tert-Butanol (TBA)	ND		1	10	10	µg/L	N/A	N/A	07/28/2004	WMS5040728
Diisopropyl Ether	ND		1	5	5	µg/L	N/A	N/A	07/28/2004	WMS5040728
Ethanol	ND		1	100	100	µg/L	N/A	N/A	07/28/2004	WMS5040728

Surrogate	Surrogate Recovery	Control Limits (%)	Analyzed by: JHsiang
4-Bromofluorobenzene	94.5	64 - 125	Reviewed by: MTU
Dibromofluoromethane	95.3	23 - 172	
Toluene-d8	98.2	70 - 134	

[redacted]s Gasoline	65	x	1	25	25	µg/L	N/A	N/A	07/28/2004	WMS5040728

Comment. TPH as Gasoline reported value due to high concentration of MTBE present in the TPH as Gasoline quantitation range.

Surrogate	Surrogate Recovery	Control Limits (%)	Analyzed by: JHsiang
4-Bromofluorobenzene	94.5	64 - 125	Reviewed by: MTU
Dibromofluoromethane	95.3	23 - 172	
Toluene-d8	98.2	70 - 134	

ND = Not Detected at or above the PQL
PQL = Practical Quantitation Limit (No Dilution)
DF = Dilution and/or Prep Factor
PQLR = Practical Quantitation Limit for Reporting (Includes Dilution)

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Quality Control - Method Blank

Validated by: MTU - 07/28/04

QC Batch ID: WMS5040728
Matrix: Liquid
Date of Analysis: 7/28/2004

Method: EPA 8260B

Parameter	Result	DF	PQL	PQLR	Units
Diisopropyl Ether	ND	1	5	5	µg/L
Ethyl-t-butyl Ether	ND	1	5	5	µg/L
Methyl-t-butyl Ether	ND	1	1	1	µg/L
tert-Amyl Methyl Ether	ND	1	5	5	µg/L
tert-Butanol (TBA)	ND	1	10	10	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	**91.8**	64 - 125
Dibromofluoromethane	**98.3**	23 - 172
Toluene-d8	**99.3**	70 - 134

Quality Control - Laboratory Control Spike / Duplicate Results

Reviewed by: MTU - 07/28/04

QC Batch ID: WMS5040728
Date of Analysis: 7/28/2004

Method EPA 8260B — **Liquid** — **Conc. Units: µg/L**

Parameter	Blank	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
Benzene	<0.5	20.0	22.13	LCS	7/28/2004	**110.6**			77 - 154
Chlorobenzene	<0.5	20 0	23.5	LCS	7/28/2004	**117.5**			66 - 141
Methyl-t-butyl Ether	<1	20.0	18.4	LCS	7/28/2004	**92.0**			58 - 127
Toluene	<0.5	20 0	23.5	LCS	7/28/2004	**117.5**			47 - 137
Trichloroethene	<0.5	20.0	25.2	LCS	7/28/2004	**126.0**			57 - 159

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**99.1**	64 - 125
Dibromofluoromethane	**107.3**	23 - 172
Toluene-d8	**94.8**	70 - 134

1,1-Dichloroethene	<0.5	20.0	19.2	LCSD	7/28/2004	**96.0**	**14.2**	25	60 - 132
Benzene	<0.5	20.0	19.4	LCSD	7/28/2004	**97.0**	**13.1**	25	77 - 154
Chlorobenzene	<0.5	20.0	21.1	LCSD	7/28/2004	**105.5**	**10.8**	25	66 - 141
Methyl-t-butyl Ether	<1	20.0	15.8	LCSD	7/28/2004	**79.0**	**15.2**	25	58 - 127
Toluene	<0.5	20.0	20.6	LCSD	7/28/2004	**103.0**	**13.2**	25	47 - 137
Trichloroethene	<0.5	20.0	21 9	LCSD	7/28/2004	**109.5**	**14.0**	25	57 - 159

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**98.9**	64 - 125
Dibromofluoromethane	**87.7**	23 - 172
Toluene-d8	**96.9**	70 - 134

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Quality Control - Method Blank

Validated by: MTU - 07/28/04

QC Batch ID: WMS5040728
Matrix: Liquid
Date of Analysis: 7/28/2004

Method: GC-MS

Parameter	Result	DF	PQL	PQLR	Units
TPH as Gasoline	ND	1	25	25	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	91.8	64 - 125
Dibromofluoromethane	98.3	23 - 172
Toluene-d8	99.3	70 - 134

Quality Control - Laboratory Control Spike / Duplicate Results

Reviewed by: MTU - 07/28/04

QC Batch ID: WMS5040728
Date of Analysis: 7/28/2004

Method GC-MS Liquid Conc. Units: µg/L

Parameter	Blank	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Gasoline	<25	125.0	133.6	LCS	7/28/2004	106.9			65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	96.1	64 - 125
Dibromofluoromethane	90.7	23 - 172
Toluene-d8	99.1	70 - 134

TPH as Gasoline	<25	125.0	136.	LCSD	7/28/2004	108.8	1.8	25	65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	92.5	64 - 125
Dibromofluoromethane	90.7	23 - 172
Toluene-d8	99.8	70 - 134

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Dr., Watsonville, CA 95076
(831) 722-3580 (831) 662-3100
Fax: (831) 722-1159

CHAIN -OF-CUSTODY RECORD

PROJECT NAME AND JOB #: T-Bear Ranch / 23027.D

SEND CERTIFIED RESULTS TO: Weber, Hayes and Associates - Attention Aaron Bierman

ELECTRONIC DELIVERABLE FORMAT: ☐ YES ☒ NO

Sampler: Aaron Bierman

Date: 7.22.04

LABORATORY: Entech Analytical Laboratory

TURNAROUND TIME: ~~Normal Turnaround~~ 24hr Rush 48hr Rush 72hr Rush

GLOBAL I.D.: NA

Sample Identification	Sample Depth (Ft, BGS)	Date Sampled	Time Sampled	Matrix	SAMPLE CONTAINERS: 40 mL VOAs (preserved)	1 Liter Amber Jars	___mL Poly Bottle	Liner Acetate or Brass	REQUESTED ANALYSIS: TEPH: Diesel, Motor Oil with Standard Silica Gel Cleanup	TRPH as TOG with Standard Silica Gel Cleanup	TPH-gasoline by EPA Method# 8260	VOCs EPA Method# 8260B	Solvents by EPA Method# 8010	Fuel Oxygenates EPA Method# 8260	PNA's by EPA Method# 8270 SIM	HVOCs by EPA Method# 8270 SIM	LUFT 5 Metals
PZ-1 @ 20'	20'	7.22.04	AM	H_2O	x2	39770-001					X			X	7.8, 9.3 Temp.		
PZ-2 @ 44'	44'	7.22.04	PM	H_2O	x5		-002				X			X	1.7		

3 DAYS

	RELEASED BY:	Date & Time	RECEIVED BY:	Date & Time	SAMPLE CONDITION: (circle 1)		
1.)	Aaron Bierman	7/22/04 @ 845pm		7-22-04 8:45 PM	Ambient	Refrigerated	Frozen
2.)				7/23/04 900	Ambient	Refrigerated	Frozen
3.)					Ambient	Refrigerated	Frozen
4.)					Ambient	Refrigerated	Frozen
5.)					Ambient	Refrigerated	Frozen

NOTES:

- ☐ *If MTBE is detected by EPA Method 8020, please confirm detections by EPA Method 8260 with a minimum detection limit of 5 ug/L, and report only confirmed 8260 detections.*
- ☐ *For MTBE-analyzed samples with non-detectable results (ND) but having elevated detection limits, please confirm by EPA Method #8260.*
- ☐ *Please use MDL (Minimum Detection Limit) for any diluted samples*

-Please send certified results via *.pdf to laboratory@weber-hayes.com.

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Dr., Watsonville, CA 95076
(831) 722-3580 (831) 662-3100
Fax: (831) 722-1159

CHAIN -OF-CUSTODY RECORD

PROJECT NAME AND JOB #: T-Bear Ranch / 23027.D

SEND CERTIFIED RESULTS TO: Weber, Hayes and Associates - Attention: Aaron Bierman

ELECTRONIC DELIVERABLE FORMAT: [ ] YES [X] NO

LABORATORY: Entech Analytical Laboratory

TURNAROUND TIME: ~~Normal~~ 24hr Rush 48hr Rush 72hr Rush

GLOBAL I.D.: NA

Sampler: Aaron Bierman

Date: 7.22.04

Sample Identification	Sample Depth (FT, BGS)	Date Sampled	Time Sampled	Matrix	SAMPLE CONTAINERS: 40 mL VOAs (preserved)	1 Liter Amber Jars	___mL Poly Bottle	Liner Acetate or Brass	REQUESTED ANALYSIS: TEPH Diesel, Motor Oil with Standard Silica Gel Cleanup	TRPH as TOG with Standard Silica Gel Cleanup	TPH-gasoline by EPA Method# 8260	VOCs EPA Method# 8260B	Solvents by EPA Method# 8010	Fuel Oxygenates EPA Method# 8260	PNA's by EPA Method# 8270 SIM	HVOCs by EPA Method# 8270 SIM	LUFT 5 Metals
PZ-1 @ 20'	20'	7.22.04	AM	H_2O	x2	39770-001					X			X	7.8 9.3 Temp.		
PZ-2 @ 44'	44'	7.22.04	PM	H_2O	x5		-002				X			X	7.7		

3 DAYS

	RELEASED BY:	Date & Time	RECEIVED BY:	Date & Time
1.)	Aaron Bierman	7/22/04 @ 845pm	Jennifer Quadrado	7-22-04 8:45PM
2.)				7/23/04 900
3.)				
4.)				
5.)				

SAMPLE CONDITION:

Ambient	(Refrigerated)	Frozen	(circle 1)
Ambient	Refrigerated	Frozen	
Ambient	Refrigerated	Frozen	
Ambient	Refrigerated	Frozen	
Ambient	Refrigerated	Frozen	

NOTES:

- [ ] *If MTBE is detected by EPA Method 8020, please confirm detections by EPA Method 8260 with a minimum detection limit of 5 ug/L, and report only confirmed 8260 detections*
- [ ] *For MTBE-analyzed samples with non-detectable results (ND) but having elevated detection limits, please confirm by EPA Method #8260.*
- [ ] *Please use MDL (Minimum Detection Limit) for any diluted samples.*

-Please send certified results via *.pdf to laboratory@weber-hayes.com.

Entech Analytical Labs, Inc.

3334 Victor Court • Santa Clara, CA 95054 • (408) 588-0200 • Fax (408) 588-0201

CHANGE ORDER FORM

Date Requested: 7-29-04
Date Needed: 5-Day
Client: Weber

Workorder #: 39751, 39770, 39789
Project Name or #: Various
Ordered by: Pat Holden

Laboratory ID#	Client ID#	Matrix	Change Requested
			Add BTEX to all samples previously analyzed
			5 Day TAT

Comments: Thank You SF

Dawn

Date Test Added:

Test Added By:

Distribution:
Original in the Workorder Folder. Accounting and all involved departments must get a copy of this form.

Entech Analytical Labs, Inc.

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Aaron Bierman
Weber, Hayes and Associates
120 Westgate Drive
Watsonville, CA 95076

Certificate ID: 39751 - 8/5/2004 1:23:37 PM

Order:	39751	**Date Collected:**	7/21/2004
Project Name:	T-Bear Ranch - PZ-1 @ 12' & 42'	**Date Received:**	7/22/2004
Project Number:	23027.D - DP-1 @ 16' & 41'	**P.O. Number:**	23027.D

Certificate of Analysis - Revision

Note: This is a revision of the original 7/23/2004 issue to include additional analytes on all samples.

On July 22, 2004, samples were received under chain of custody for analysis. Entech analyzes samples "as received" unless otherwise noted. The following results are included:

Matrix	Test	Method	Comments
Liquid	8260Petroleum	EPA 8260B	
	PDF	PDF	Gas by GCMS
	TPH as Gasoline - GC/MS	GC-MS	

Entech Analytical Labs, Inc. is certified for environmental analyses by the State of California (#2346).
If you have any questions regarding this report, please call me at 408-588-0200.

Sincerely,

Laurie Glantz-Murphy
Laboratory Director

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Weber, Hayes and Associates
120 Westgate Drive
Watsonville, CA 95076
Attn: Aaron Bierman

Date: 8/5/2004
Date Received: 7/22/2004
Project Name: T-Bear Ranch
Project Number: 23027.D
P.O. Number: 23027.D
Sampled By: Client

Certified Analytical Report

Lab # : 39751-001 **Sample ID: PZ-1 @ 12'** **Matrix:** Liquid **Sample Date:** 7/21/2004

Method: EPA 8260B / EPA 5030B / Purge & Trap

Parameter	Result	Flag	DF	PQL	PQLR	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	ND		2	0.5	1	µg/L	N/A	N/A	07/23/2004	WMS5040723
Toluene	ND		2	0.5	1	µg/L	N/A	N/A	07/23/2004	WMS5040723
Ethyl Benzene	ND		2	0.5	1	µg/L	N/A	N/A	07/23/2004	WMS5040723
Xylenes, Total	ND		2	1	2	µg/L	N/A	N/A	07/23/2004	WMS5040723
Methyl-t-butyl Ether	230		2	1	2	µg/L	N/A	N/A	07/23/2004	WMS5040723
Ethyl-t-butyl Ether	ND		2	5	10	µg/L	N/A	N/A	07/23/2004	WMS5040723
tert-Amyl Methyl Ether	ND		2	5	10	µg/L	N/A	N/A	07/23/2004	WMS5040723
tert-Butanol (TBA)	ND		2	10	20	µg/L	N/A	N/A	07/23/2004	WMS5040723
Diisopropyl Ether	ND		2	5	10	µg/L	N/A	N/A	07/23/2004	WMS5040723
Ethanol	ND		2	100	200	µg/L	N/A	N/A	07/23/2004	WMS5040723

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	90.2	64 - 125
Dibromofluoromethane	94.3	23 - 172
Toluene-d8	98.8	70 - 134

Analyzed by: JHsiang
Reviewed by: MTU

TPH as Gasoline	130	x	2	25	50	µg/L	N/A	N/A	07/23/2004	WMS5040723

Comment: TPH as Gasoline reported value due to high concentration of MTBE present in the TPH as Gasoline quantitation range.

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	90.2	64 - 125
Dibromofluoromethane	94.3	23 - 172
Toluene-d8	98.8	70 - 134

Analyzed by: JHsiang
Reviewed by: MTU

ND = Not Detected at or above the PQL
PQL = Practical Quantitation Limit (No Dilution)
DF = Dilution and/or Prep Factor
PQLR = Practical Quantitation Limit for Reporting (Includes Dilution)

Entech Analytical Labs, Inc.

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Weber, Hayes and Associates
120 Westgate Drive
Watsonville, CA 95076
Attn: Aaron Bierman

Date: 8/5/2004
Date Received: 7/22/2004
Project Name: T-Bear Ranch
Project Number: 23027.D
P.O. Number: 23027.D
Sampled By: Client

Certified Analytical Report

Lab #: 39751-002 **Sample ID: PZ-1 @ 42'** **Matrix:** Liquid **Sample Date:** 7/21/2004

Method: EPA 8260B / EPA 5030B / Purge-and-trap

Parameter	Result	Flag	DF	PQL	PQLR	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	ND		1	0.5	0.5	µg/L	N/A	N/A	07/22/2004	WMS5040722
Toluene	ND		1	0.5	0.5	µg/L	N/A	N/A	07/22/2004	WMS5040722
Ethyl Benzene	ND		1	0.5	0.5	µg/L	N/A	N/A	07/22/2004	WMS5040722
Xylenes, Total	ND		1	1	1	µg/L	N/A	N/A	07/22/2004	WMS5040722
Methyl-t-butyl Ether	ND		1	1	1	µg/L	N/A	N/A	07/22/2004	WMS5040722
Ethyl-t-butyl Ether	ND		1	5	5	µg/L	N/A	N/A	07/22/2004	WMS5040722
tert-Amyl Methyl Ether	ND		1	5	5	µg/L	N/A	N/A	07/22/2004	WMS5040722
tert-Butanol (TBA)	ND		1	10	10	µg/L	N/A	N/A	07/22/2004	WMS5040722
Diisopropyl Ether	ND		1	5	5	µg/L	N/A	N/A	07/22/2004	WMS5040722
Ethanol	ND		1	100	100	µg/L	N/A	N/A	07/22/2004	WMS5040722

Surrogate	Surrogate Recovery	Control Limits (%)	Analyzed by: JHsiang
4-Bromofluorobenzene	97.9	64 - 125	Reviewed by: MTU
Dibromofluoromethane	99.2	23 - 172	
Toluene-d8	97.9	70 - 134	

TPH as Gasoline	ND		1	25	25	µg/L	N/A	N/A	07/22/2004	WMS5040722

Surrogate	Surrogate Recovery	Control Limits (%)	Analyzed by: JHsiang
4-Bromofluorobenzene	97.9	64 - 125	Reviewed by: MTU
Dibromofluoromethane	99.2	23 - 172	
Toluene-d8	97.9	70 - 134	

ND = Not Detected at or above the PQL
PQL = Practical Quantitation Limit (No Dilution)
DF = Dilution and/or Prep Factor
PQLR = Practical Quantitation Limit for Reporting (Includes Dilution)

Entech Analytical Labs, Inc.

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Weber, Hayes and Associates
120 Westgate Drive
Watsonville, CA 95076
Attn: Aaron Bierman

Date: 8/5/2004
Date Received: 7/22/2004
Project Name: T-Bear Ranch
Project Number: 23027.D
P.O. Number: 23027.D
Sampled By: Client

Certified Analytical Report

Lab # : 39751-003 **Sample ID: DP-1 @ 16'** **Matrix:** Liquid **Sample Date:** 7/21/2004

Method: EPA 8260B / EPA 5030B / Purge-and-trap

Parameter	Result	Flag	DF	PQL	PQLR	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	ND		1	0.5	0.5	µg/L	N/A	N/A	07/22/2004	WMS5040722
Toluene	ND		1	0.5	0.5	µg/L	N/A	N/A	07/22/2004	WMS5040722
Ethyl Benzene	ND		1	0.5	0.5	µg/L	N/A	N/A	07/22/2004	WMS5040722
Xylenes, Total	ND		1	1	1	µg/L	N/A	N/A	07/22/2004	WMS5040722
Methyl-t-butyl Ether	9.2		1	1	1	µg/L	N/A	N/A	07/22/2004	WMS5040722
Ethyl-t-butyl Ether	ND		1	5	5	µg/L	N/A	N/A	07/22/2004	WMS5040722
tert-Amyl Methyl Ether	ND		1	5	5	µg/L	N/A	N/A	07/22/2004	WMS5040722
tert-Butanol (TBA)	ND		1	10	10	µg/L	N/A	N/A	07/22/2004	WMS5040722
Diisopropyl Ether	ND		1	5	5	µg/L	N/A	N/A	07/22/2004	WMS5040722
Ethanol	ND		1	100	100	µg/L	N/A	N/A	07/22/2004	WMS5040722

Surrogate	Surrogate Recovery	Control Limits (%)	Analyzed by: JHsiang
4-Bromofluorobenzene	96.8	64 - 125	Reviewed by: MTU
Dibromofluoromethane	97.0	23 - 172	
Toluene-d8	98.7	70 - 134	

TPH as Gasoline	ND		1	25	25	µg/L	N/A	N/A	07/22/2004	WMS5040722

Surrogate	Surrogate Recovery	Control Limits (%)	Analyzed by: JHsiang
4-Bromofluorobenzene	96.8	64 - 125	Reviewed by: MTU
Dibromofluoromethane	97.0	23 - 172	
Toluene-d8	98.7	70 - 134	

ND = Not Detected at or above the PQL
PQL = Practical Quantitation Limit (No Dilution)
DF = Dilution and/or Prep Factor
PQLR = Practical Quantitation Limit for Reporting (Includes Dilution)

Entech Analytical Labs, Inc.

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Weber, Hayes and Associates
120 Westgate Drive
Watsonville, CA 95076
Attn: Aaron Bierman

Date: 8/5/2004
Date Received: 7/22/2004
Project Name: T-Bear Ranch
Project Number: 23027.D
P.O. Number: 23027.D
Sampled By: Client

Certified Analytical Report

Lab # : 39751-004 **Sample ID: DP-1 @ 41'** **Matrix:** Liquid **Sample Date:** 7/21/2004

Method: EPA 8260B / EPA 5030B / Soil direct purge & trap

Parameter	Result	Flag	DF	PQL	PQLR	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	ND		1	0.5	0.5	µg/L	N/A	N/A	07/22/2004	WMS5040722
Toluene	ND		1	0.5	0.5	µg/L	N/A	N/A	07/22/2004	WMS5040722
Ethyl Benzene	ND		1	0.5	0.5	µg/L	N/A	N/A	07/22/2004	WMS5040722
Xylenes, Total	ND		1	1	1	µg/L	N/A	N/A	07/22/2004	WMS5040722
Methyl-t-butyl Ether	ND		1	1	1	µg/L	N/A	N/A	07/22/2004	WMS5040722
Ethyl-t-butyl Ether	ND		1	5	5	µg/L	N/A	N/A	07/22/2004	WMS5040722
tert-Amyl Methyl Ether	ND		1	5	5	µg/L	N/A	N/A	07/22/2004	WMS5040722
tert-Butanol (TBA)	ND		1	10	10	µg/L	N/A	N/A	07/22/2004	WMS5040722
Diisopropyl Ether	ND		1	5	5	µg/L	N/A	N/A	07/22/2004	WMS5040722
Ethanol	ND		1	100	100	µg/L	N/A	N/A	07/22/2004	WMS5040722

Surrogate	Surrogate Recovery	Control Limits (%)	Analyzed by: JHsiang
4-Bromofluorobenzene	97.7	64 - 125	Reviewed by: MTU
Dibromofluoromethane	95.9	23 - 172	
Toluene-d8	100.1	70 - 134	

TPH as Gasoline	ND		1	25	25	µg/L	N/A	N/A	07/22/2004	WMS5040722

Surrogate	Surrogate Recovery	Control Limits (%)	Analyzed by: JHsiang
4-Bromofluorobenzene	97.7	64 - 125	Reviewed by: MTU
Dibromofluoromethane	95.9	23 - 172	
Toluene-d8	100.1	70 - 134	

ND = Not Detected at or above the PQL
PQL = Practical Quantitation Limit (No Dilution)
DF = Dilution and/or Prep Factor
PQLR = Practical Quantitation Limit for Reporting (Includes Dilution)

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Quality Control - Method Blank

Validated by: MTU - 07/23/04

QC Batch ID: WMS5040722
Matrix: Liquid
Date of Analysis: 7/22/2004

Method: EPA 8260B

Parameter	Result	DF	PQL	PQLR	Units
Benzene	ND	1	0.5	0.5	µg/L
Diisopropyl Ether	ND	1	5	5	µg/L
Ethanol	ND	1	100	100	µg/L
Ethyl Benzene	ND	1	0.5	0.5	µg/L
Ethyl-t-butyl Ether	ND	1	5	5	µg/L
Methyl-t-butyl Ether	ND	1	1	1	µg/L
tert-Amyl Methyl Ether	ND	1	5	5	µg/L
tert-Butanol (TBA)	ND	1	10	10	µg/L
Toluene	ND	1	0.5	0.5	µg/L
Xylene, m+p	ND	1	1	1	µg/L
Xylene, o	ND	1	0.5	0.5	µg/L
Xylenes, Total	ND	1	1	1	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	**92.0**	64 - 125
Dibromofluoromethane	**93.4**	23 - 172
Toluene-d8	**98.4**	70 - 134

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Quality Control - Method Blank

QC Batch ID: WMS5040722

Validated by: MTU - 07/23/04

Matrix: Liquid

Date of Analysis: 7/22/2004

Method: GC-MS

Parameter	Result	DF	PQL	PQLR	Units
TPH as Gasoline	ND	1	25	25	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	92.0	64 - 125
Dibromofluoromethane	93.4	23 - 172
Toluene-d8	98.4	70 - 134

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Quality Control - Method Blank

Validated by: MTU - 07/23/04

QC Batch ID: WMS5040723
Matrix: Liquid
Date of Analysis: 7/23/2004

Method: EPA 8260B

Parameter	Result	DF	PQL	PQLR	Units
Benzene	ND	1	0.5	0.5	µg/L
Diisopropyl Ether	ND	1	5	5	µg/L
Ethanol	ND	1	100	100	µg/L
Ethyl Benzene	ND	1	0.5	0.5	µg/L
Ethyl-t-butyl Ether	ND	1	5	5	µg/L
Methyl-t-butyl Ether	ND	1	1	1	µg/L
tert-Amyl Methyl Ether	ND	1	5	5	µg/L
tert-Butanol (TBA)	ND	1	10	10	µg/L
Toluene	ND	1	0.5	0.5	µg/L
Xylene, m+p	ND	1	1	1	µg/L
Xylene, o	ND	1	0.5	0.5	µg/L
Xylenes, Total	ND	1	1	1	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	**89.4**	64 - 125
Dibromofluoromethane	**96.4**	23 - 172
Toluene-d8	**97.0**	70 - 134

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Quality Control - Method Blank

Validated by: MTU - 07/23/04

QC Batch ID: WMS5040723
Matrix: Liquid
Date of Analysis: 7/23/2004

Method: GC-MS

Parameter	Result	DF	PQL	PQLR	Units
TPH as Gasoline	ND	1	25	25	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	89.4	64 - 125
Dibromofluoromethane	96.4	23 - 172
Toluene-d8	97.0	70 - 134

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Quality Control - Laboratory Control Spike / Duplicate Results

Reviewed by: MTU - 07/23/04

QC Batch ID: WMS5040722

Date of Analysis: 7/22/2004

Method EPA 8260B — **Liquid** — **Conc. Units: µg/L**

Parameter	Blank	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
1,1-Dichloroethene	<0.5	20.0	23.63	LCS	7/22/2004	**118.1**			60 - 132
Benzene	<0.5	20.0	20.82	LCS	7/22/2004	**104.1**			77 - 154
Chlorobenzene	<0.5	20.0	23 49	LCS	7/22/2004	**117.4**			66 - 141
Methyl-t-butyl Ether	<1	20.0	15.47	LCS	7/22/2004	**77.4**			58 - 127
Toluene	<0.5	20.0	23.91	LCS	7/22/2004	**119.6**			47 - 137
Trichloroethene	<0.5	20.0	22.91	LCS	7/22/2004	**114.6**			57 - 159

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**100.0**	64 - 125
Dibromofluoromethane	**102.3**	23 - 172
Toluene-d8	**99.1**	70 - 134

1,1-Dichloroethene	<0.5	20.0	20.67	LCSD	7/22/2004	**103.4**	**13.4**	25	60 - 132
Benzene	<0.5	20.0	18.85	LCSD	7/22/2004	**94.3**	**9.9**	25	77 - 154
Chlorobenzene	<0.5	20.0	21.27	LCSD	7/22/2004	**106.3**	**9.9**	25	66 - 141
Methyl-t-butyl Ether	<1	20.0	15.61	LCSD	7/22/2004	**78.0**	**0.9**	25	58 - 127
Toluene	<0.5	20.0	20.82	LCSD	7/22/2004	**104.1**	**13.8**	25	47 - 137
Trichloroethene	<0.5	20.0	23.54	LCSD	7/22/2004	**117.7**	**2.7**	25	57 - 159

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**97.0**	64 - 125
Dibromofluoromethane	**88.4**	23 - 172
Toluene-d8	**95.7**	70 - 134

Method GC-MS — **Liquid** — **Conc. Units: µg/L**

Parameter	Blank	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Gasoline	<25	125.0	152.6	LCS	7/22/2004	**122.1**			65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**97.2**	64 - 125
Dibromofluoromethane	**88.7**	23 - 172
Toluene-d8	**100.6**	70 - 134

TPH as Gasoline	<25	125.0	144.3	LCSD	7/22/2004	**115.4**	**5.6**	25	65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**91.2**	64 - 125
Dibromofluoromethane	**94.5**	23 - 172
Toluene-d8	**98.7**	70 - 134

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Quality Control - Laboratory Control Spike / Duplicate Results

Reviewed by: MTU - 07/23/04

QC Batch ID: WMS5040723

Date of Analysis: 7/23/2004

Method EPA 8260B — Liquid — Conc. Units: µg/L

Parameter	Blank	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
1,1-Dichloroethene	<0.5	20.0	21.85	LCS	7/23/2004	**109.3**			60 - 132
Benzene	<0.5	20.0	20.65	LCS	7/23/2004	**103.2**			77 - 154
Chlorobenzene	<0.5	20.0	23.12	LCS	7/23/2004	**115.6**			66 - 141
Methyl-t-butyl Ether	<1	20.0	17.8	LCS	7/23/2004	**89.0**			58 - 127
Toluene	<0.5	20.0	22.81	LCS	7/23/2004	**114.1**			47 - 137
Trichloroethene	<0.5	20.0	24.53	LCS	7/23/2004	**122.7**			57 - 159

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**98.4**	64 - 125
Dibromofluoromethane	***110.6***	23 - 172
Toluene-d8	**97.8**	70 - 134

1,1-Dichloroethene	<0.5	20.0	22.76	LCSD	7/23/2004	**113.8**		25	60 - 132
Benzene	<0.5	20.0	21.02	LCSD	7/23/2004	**105.1**		25	77 - 154
Chlorobenzene	<0.5	20.0	23.52	LCSD	7/23/2004	**117.6**		25	66 - 141
Methyl-t-butyl Ether	<1	20.0	16.49	LCSD	7/23/2004	**82.4**		25	58 - 127
Toluene	<0.5	20.0	23.3	LCSD	7/23/2004	**116.5**		25	47 - 137
Trichloroethene	<0.5	20.0	25.26	LCSD	7/23/2004	**126.3**		25	57 - 159

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**97.6**	64 - 125
Dibromofluoromethane	**87.6**	23 - 172
Toluene-d8	***98.4***	70 - 134

Method GC-MS — Liquid — Conc. Units: µg/L

Parameter	Blank	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Gasoline	<25	125.0	155.3	LCS	7/23/2004	**124.2**			65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**93.7**	64 - 125
Dibromofluoromethane	**90.6**	23 - 172
Toluene-d8	**98.1**	70 - 134

TPH as Gasoline	<25	125.0	149.	LCSD	7/23/2004	**119.2**	4.1	25	65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**93.7**	64 - 125
Dibromofluoromethane	**92.9**	23 - 172
Toluene-d8	**98.4**	70 - 134

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Quality Control - Matrix Spike / Duplicate Results

Reviewed by: MTU - 07/27/04

QC Batch ID: WMS5040723

Date of Analysis: 7/23/2004

Method EPA 8260B Liquid Conc. Units: µg/L

Parameter	Sample Result	Spike Amount	Spike Result	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
MS SampleNumber: 39773-001									
1,1-Dichloroethene	ND	20.0	21.35	MS	7/23/2004	**106.8**			59 - 133
Benzene	ND	20.0	22.51	MS	7/23/2004	**112.6**			73 - 134
Chlorobenzene	ND	20.0	23.07	MS	7/23/2004	**115.4**			86 - 121
Methyl-t-butyl Ether	ND	20.0	16.89	MS	7/23/2004	**84.5**			42 - 157
Toluene	ND	20.0	23.06	MS	7/23/2004	**115.3**			79 - 117
Trichloroethene	ND	20.0	26.01	MS	7/23/2004	**130.1*** **			71 - 119

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**99.5**	64 - 125
Dibromofluoromethane	**94.5**	23 - 172
Toluene-d8	**94.8**	70 - 134

MSD SampleNumber: 39773-001									
1,1-Dichloroethene	ND	20.0	20.58	MSD	7/23/2004	**102.9**	**3.7**	25	59 - 133
Benzene	ND	20.0	20.76	MSD	7/23/2004	**103.8**	**8.1**	25	73 - 134
Chlorobenzene	ND	20.0	22.52	MSD	7/23/2004	**112.6**	**2.4**	25	86 - 121
Methyl-t-butyl Ether	ND	20.0	16 74	MSD	7/23/2004	**83.7**	**0.9**	25	42 - 157
Toluene	ND	20.0	21.74	MSD	7/23/2004	**108.7**	**5.9**	25	79 - 117
Trichloroethene	ND	20.0	24.09	MSD	7/23/2004	**120.5*** **	7.7	25	71 - 119

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**98.6**	64 - 125
Dibromofluoromethane	**94.5**	23 - 172
Toluene-d8	**95.1**	70 - 134

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering

120 Westgate Dr., Watsonville, CA 95076
(831) 722-3580 (831) 662-3100
Fax: (831) 722-1159

CHAIN -OF-CUSTODY RECORD

PAGE 1 OF 1

2 DAYS

PROJECT NAME AND JOB #: T-Bear Ranch / 23027.D

LABORATORY: Entech Analytical Laboratory

SEND CERTIFIED RESULTS TO: Weber, Hayes and Associates - Attention: [illegible]man

TURNAROUND TIME: ~~Standard five day~~ 24hr Rush (48hr Rush) 72hr Rush

ELECTRONIC DELIVERABLE FORMAT: ☐ YES ☒ NO

GLOBAL I.D.: NA

CHARGE FOR 72hr REV Simon

Sampler: Aaron Bierman (AB)

Date: 7.21.04

Sample Identification	Sample Depth (Ft, BGS)	Date Sampled	Time Sampled	Matrix	SAMPLE CONTAINERS: 40 mL VOAs (preserved)	1 Liter Amber Jars	___mL Poly Bottle	Liner Acetate or Brass	REQUESTED ANALYSIS: Total Petroleum Hydrocarbons: TEPH: Diesel, Motor Oil with Standard Silica Gel Cleanup	TRPH as TOG with Standard Silica Gel Cleanup	TPH-gasoline by EPA Method# 8260	Volatile Organics: VOCs EPA Method# 8260B	Solvents by EPA Method# 8010	Fuel Oxygenates EPA Method# 8260	Additional Analysis: PNA's by EPA Method# 8270 SIM	HVOCs by EPA Method# 8270 SIM	LUFT 5 Metals
PZ-1 @ 12'	12'	7.21.04	PM	H_2O	x2	34751-001					X			X			
PZ-1 @ 42'	42'	7.21.04	PM	H_2O	x5			002			X			X			
DP-1 @ 16'	16'	7.21.04	PM	H_2O	x5			003			X			X			
DP-1 @ 41'	41'	7.21.04	PM	H_2O	x5			004			X			X			

	RELEASED BY:	Date & Time		RECEIVED BY:	Date & Time
1.)	Aaron Bierman	7/21/04 @ 8:30	→	[signature]	7/21/04 @ 8:20
2.)			→	[signature]	7/22/04 900
3.)			→		
4.)			→		
5.)			→		

SAMPLE CONDITION: (circle 1)

Ambient	(Refrigerated)	Frozen
Ambient	Refrigerated	Frozen
Ambient	Refrigerated	Frozen
Ambient	Refrigerated	Frozen
Ambient	Refrigerated	Frozen

NOTES:

- If MTBE is detected by EPA Method 8020, please confirm detections by EPA Method 8260 with a minimum detection limit of 5 ug/L, and report only confirmed 8260 detections.
- For MTBE-analyzed samples with non-detectable results (ND) but having elevated detection limits, please confirm by EPA Method #8260
- Please use MDL (Minimum Detection Limit) for any diluted samples.

-Please send certified results via *.pdf to laboratory@weber-hayes.com.

- Bill @ 3day rate per Simon

Entech Analytical Labs, Inc.

3334 Victor Court • Santa Clara, CA 95054 • (408) 588-0200 • Fax (408) 588-0201

CHANGE ORDER FORM

Date Requested: 7-29-04
Date Needed: 5-Day
Client: Weber

Workorder #: 39751, 39770, 39789
Project Name or #: Davidos
Ordered by: Pat Holden

Laboratory ID#	Client ID#	Matrix	Change Requested
			Add BTEX to all samples previously analyzed
			5 Day TAT

Comments: Thank You SH

Brand

Date Test Added:

Test Added By:

Distribution:
Original in the Workorder Folder. Accounting and all involved departments must get a copy of this form.

Entech Analytical Labs, Inc.

3334 Victor Court • Santa Clara, CA 95054 • (408) 588-0200 • Fax (408) 588-0201

Aaron Bierman
Weber, Hayes and Associates
120 Westgate Drive
Watsonville, CA 95076

Certificate ID: 39742 - 7/22/2004 2:48:44 PM

Order:	39742	**Date Collected:**	7/21/2004
Project Name:	T-Bear Ranch - Water Well G1	**Date Received:**	7/21/2004
Project Number:	23027.D (311 Andrade Rd, Residence)	**P.O. Number:**	23027.D

Certificate of Analysis - Final Report

On July 21, 2004, sample was received under chain of custody for analysis. Entech analyzes samples "as received" unless otherwise noted. The following results are included:

Matrix	Test	Method	Comments
Liquid	8260Petroleum	EPA 8260B	8260Petroleum=Oxy's ONLY. No Ethanol
	PDF	PDF	
	TPH as Gasoline - GC/MS	GC-MS	Gas by GCMS

Entech Analytical Labs, Inc. is certified for environmental analyses by the State of California (#2346).
If you have any questions regarding this report, please call me at 408-588-0200.

Sincerely,

Laurie Glantz-Murphy
Laboratory Director

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Weber, Hayes and Associates
120 Westgate Drive
Watsonville, CA 95076
Attn: Aaron Bierman

Date: 7/22/2004
Date Received: 7/21/2004
Project Name: T-Bear Ranch
Project Number: 23027.D
P.O. Number: 23027.D
Sampled By: Client

Certified Analytical Report

Lab # : 39742-001 **Sample ID:** **Well G1** **Matrix:** Liquid **Sample Date:** 7/21/2004 7:45 AM

Method: EPA 8260B / EPA 5030B / Soil direct purge & trap

Parameter	Result	Flag	DF	PQL	PQLR	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Methyl-t-butyl Ether	ND		1	1	1	µg/L	N/A	N/A	07/21/2004	WMS2040721
Ethyl-t-butyl Ether	ND		1	5	5	µg/L	N/A	N/A	07/21/2004	WMS2040721
tert-Butanol (TBA)	ND		1	10	10	µg/L	N/A	N/A	07/21/2004	WMS2040721
Diisopropyl Ether	ND		1	5	5	µg/L	N/A	N/A	07/21/2004	WMS2040721
tert-Amyl Methyl Ether	ND		1	5	5	µg/L	N/A	N/A	07/21/2004	WMS2040721

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	95.0	64 - 125
Dibromofluoromethane	108 6	23 - 172
Toluene-d8	99.2	70 - 134

Analyzed by: TFulton - 07/21/2004
Reviewed by: MTU - 07/22/04

Method: GC-MS

Parameter	Result	Flag	DF	PQL	PQLR	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	ND		1	25	25	µg/L	N/A	N/A	07/21/2004	WMS2040721

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	94.4	64 - 125
Dibromofluoromethane	117.5	23 - 172
Toluene-d8	97.1	70 - 134

Analyzed by: TFulton - 07/21/2004
Reviewed by: MTU - 07/22/04

ND = Not Detected at or above the PQL
PQL = Practical Quantitation Limit (No Dilution)
DF = Dilution Factor
PQLR = Practical Quantitation Limit for Reporting (Includes Dilution)

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Quality Control - Method Blank

Validated by: MTU - 07/22/04

QC Batch ID: WMS2040721
Matrix: Liquid
Date of Analysis: 7/21/2004

Method: EPA 8260B

Parameter	Result	DF	PQL	PQLR	Units
Diisopropyl Ether	ND	1	5	5	µg/L
Ethyl-t-butyl Ether	ND	1	5	5	µg/L
Methyl-t-butyl Ether	ND	1	1	1	µg/L
tert-Amyl Methyl Ether	ND	1	5	5	µg/L
tert-Butanol (TBA)	ND	1	10	10	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	97.6	64 - 125
Dibromofluoromethane	109.3	23 - 172
Toluene-d8	103.3	70 - 134

Quality Control - Laboratory Control Spike / Duplicate Results

Reviewed by: MTU - 07/22/04

QC Batch ID: WMS2040721
Date of Analysis: 7/21/2004

Method EPA 8260B — **Liquid** — **Conc. Units: µg/L**

Parameter	Blank	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
1,1-Dichloroethene	<0.5	20.0	20.878	LCS	7/21/2004	**104.4**			60 - 132
Benzene	<0.5	20.0	22.311	LCS	7/21/2004	**111.6**			77 - 154
Chlorobenzene	<0.5	20.0	20.313	LCS	7/21/2004	**101.6**			66 - 141
Methyl-t-butyl Ether	<1	20.0	22.371	LCS	7/21/2004	**111.9**			58 - 127
Toluene	<0.5	20.0	20.136	LCS	7/21/2004	**100.7**			47 - 137
Trichloroethene	<0.5	20.0	22.156	LCS	7/21/2004	**110.8**			57 - 159

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**104.0**	64 - 125
Dibromofluoromethane	**112.9**	23 - 172
Toluene-d8	**99.6**	70 - 134

1,1-Dichloroethene	<0.5	20.0	19.583	LCSD	7/21/2004	**97.9**	**6.4**	25	60 - 132
Benzene	<0.5	20.0	21.565	LCSD	7/21/2004	**107.8**	**3.4**	25	77 - 154
Chlorobenzene	<0.5	20.0	19.206	LCSD	7/21/2004	**96.0**	**5.6**	25	66 - 141
Methyl-t-butyl Ether	<1	20.0	21.622	LCSD	7/21/2004	**108.1**	**3.4**	25	58 - 127
Toluene	<0.5	20 0	19.395	LCSD	7/21/2004	**97.0**	**3.7**	25	47 - 137
Trichloroethene	<0.5	20.0	21.747	LCSD	7/21/2004	**108.7**	**1.9**	25	57 - 159

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**100.5**	64 - 125
Dibromofluoromethane	**112.6**	23 - 172
Toluene-d8	**100.5**	70 - 134

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Quality Control - Method Blank

Validated by: MTU - 07/22/04

QC Batch ID: WMS2040721
Matrix: Liquid
Date of Analysis: 7/21/2004

Method: GC-MS

Parameter	Result	DF	PQL	PQLR	Units
TPH as Gasoline	ND	1	25	25	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	97.7	64 - 125
Dibromofluoromethane	118.3	23 - 172
Toluene-d8	101.2	70 - 134

Quality Control - Laboratory Control Spike / Duplicate Results

Reviewed by: MTU - 07/22/04

QC Batch ID: WMS2040721
Date of Analysis: 7/21/2004

Method GC-MS Liquid Conc. Units: µg/L

Parameter	Blank	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Gasoline	<25	250.0	259.6	LCS	7/21/2004	103.8			65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	98.1	64 - 125
Dibromofluoromethane	117.4	23 - 172
Toluene-d8	100.8	70 - 134

Parameter	Blank	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Gasoline	<25	250.0	267.8	LCSD	7/21/2004	107.1	3.1	25	65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	99.0	64 - 125
Dibromofluoromethane	113.4	23 - 172
Toluene-d8	101.8	70 - 134

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Dr., Watsonville, CA 95076
(831) 722-3580 (831) 662-3100
Fax: (831) 722-1159

CHAIN -OF-CUSTODY RECORD

PROJECT NAME AND JOB #: T-Bear Ranch / 23027 D

SEND CERTIFIED RESULTS TO: Weber, Hayes and Associates - Attention Aaron Bierman

ELECTRONIC DELIVERABLE FORMAT: [ ] YES [X] NO

LABORATORY: Entech Analytical Laboratory

TURNAROUND TIME: (Standard Five-Day) 24hr Rush 48hr Rush 72hr Rush

GLOBAL I.D.: NA

Sampler: Aaron Bierman

Date: 7.21.04

Sample Identification	Sample Depth	Date Sampled	Time Sampled	Matrix	SAMPLE CONTAINERS: 40 mL VOAs (preserved)	1 Liter Amber Jars	___mL Poly Bottle	Liner Acetate or Brass	REQUESTED ANALYSIS: Total Petroleum Hydrocarbons: TEPH Diesel, Motor Oil with Standard Silica Gel Cleanup	TRPH as TOG with Standard Silica Gel Cleanup	TPH-gasoline by EPA Method# 8260	Volatile Organics: VOCs EPA Method# 8260B	Solvents by EPA Method# 8010	Fuel Oxygenates & MTBE EPA Method# 8260	Additional Analysis: PNA's by EPA Method# 8270 SIM	HVOCs by EPA Method# 8270 SIM	LUFT 5 Metals
WELL G1	GRAB	7.21.04	745 am	H_2O	x5						X			X			34742-001

1 DAY

	RELEASED BY:	Date & Time	RECEIVED BY:	Date & Time
1)	Aaron Bierman	7/21/04 @ 10:00		7/21/04 16:40
2)	Pat Hahn	7/21/04 @ 12:30		7/21/04 1230
3)				
4.)				
5.)				

SAMPLE CONDITION: (circle 1)

Ambient	(Refrigerated)	Frozen
Ambient	Refrigerated	Frozen
Ambient	Refrigerated	Frozen
Ambient	Refrigerated	Frozen
Ambient	Refrigerated	Frozen

NOTES:

- [ ] *If MTBE is detected by EPA Method 8020, please confirm detections by EPA Method 8260 with a minimum detection limit of 5 ug/L, and report only confirmed 8260 detections.*
- [ ] *For MTBE-analyzed samples with non-detectable results (ND) but having elevated detection limits, please confirm by EPA Method #8260*
- [ ] *Please use MDL (Minimum Detection Limit) for any diluted samples.*

-Please send certified results via *.pdf to laboratory@weber-hayes.com.

24-hr rush

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Dr., Watsonville, CA 95076
(831) 722-3580 (831) 662-3100
Fax: (831) 722-1159

CHAIN -OF-CUSTODY RECORD

PROJECT NAME AND JOB #: T-Bear Ranch / 23027.D

SEND CERTIFIED RESULTS TO: Weber, Hayes and Associates - Attention: Aaron Bierman

ELECTRONIC DELIVERABLE FORMAT: [ ] YES [X] NO

LABORATORY: Entech Analytical Laboratory

TURNAROUND TIME: (Standard Five-Day) / 24hr Rush 48hr Rush 72hr Rush

GLOBAL I.D.: NA

Sampler: Aaron Bierman

Date: 7.21.04

Sample Identification	Sample Depth	Date Sampled	Time Sampled	Matrix	SAMPLE CONTAINERS: 40 mL VOAs (preserved)	1 Liter Amber Jars	___mL Poly Bottle	Liner Acetate or Brass	REQUESTED ANALYSIS: Total Petroleum Hydrocarbons: TEPH: Diesel, Motor Oil with Standard Silica Gel Cleanup	TRPH as TOG with Standard Silica Gel Cleanup	TPH-gasoline by EPA Method# 8260	Volatile Organics: VOCs EPA Method# 8260B	Solvents by EPA Method# 8010	Fuel Oxygenates & MTBE EPA Method# 8260	Additional Analysis: PNA's by EPA Method# 8270 SIM	HVOCs by EPA Method# 8270 SIM	LUFT 5 Metals
WELL 91	GRAB	7-21-04	7⁴⁵ am	H_2O	x5						X			X		34742-001	

1 DAY

	RELEASED BY:	Date & Time	RECEIVED BY:	Date & Time
1.)	Aaron Bierman	7/21/04 @ 10:00		
2.)	Pat John	7/21/04 @ 12:30		7/21/04 1230
3.)				
4.)				
5.)				

SAMPLE CONDITION: (circle 1)

Ambient	(Refrigerated)	Frozen
Ambient	Refrigerated	Frozen
Ambient	Refrigerated	Frozen
Ambient	Refrigerated	Frozen
Ambient	Refrigerated	Frozen

NOTES:

- [ ] If MTBE is detected by EPA Method 8020, please confirm detections by EPA Method 8260 with a minimum detection limit of 5 ug/L, and report only confirmed 8260 detections.
- [ ] For MTBE-analyzed samples with non-detectable results (ND) but having elevated detection limits, please confirm by EPA Method #8260
- [ ] Please use MDL (Minimum Detection Limit) for any diluted samples

Please send certified results via *.pdf to laboratory@weber-hayes.com.

24-hr rush

Sunoi xls

Entech Analytical Labs, Inc.

3334 Victor Court • Santa Clara, CA 95054 • (408) 588-0200 • Fax (408) 588-0201

Aaron Bierman
Weber, Hayes and Associates
120 Westgate Drive
Watsonville, CA 95076

Certificate ID: 39710 - 7/29/2004 9:43:17 PM

Order:	39710	**Date Collected:**	7/19/2004
Project Name:	T-Bear Ranch - Water Well #2 - MDL Reporting - (3220 Andrade Rd, Range Well)	**Date Received:**	7/19/2004
Project Number:	23027	**P.O. Number:**	23027

Certificate of Analysis - Revision

Note: This is a revision of the original 7/21/2004 issue to report the re-analysis and report to the MDL.

On July 19, 2004, sample was received under chain of custody for analysis. Entech analyzes samples "as received" unless otherwise noted. The following results are included:

Matrix	Test	Method	Comments
Liquid	8260Petroleum	EPA 8260B	

Entech Analytical Labs, Inc. is certified for environmental analyses by the State of California (#2346).
If you have any questions regarding this report, please call me at 408-588-0200.

Sincerely,

Laurie Glantz-Murphy
Laboratory Director

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Weber, Hayes and Associates
120 Westgate Drive
Watsonville, CA 95076
Attn: Aaron Bierman

Date Received: 7/19/2004
Project Name: T-Bear Ranch
Project Number: 23027
P.O. Number: 23027
Sampled By: Client

Certified Analytical Report

Laboratory ID: 39710-001 **Sample ID:** Well A2 **Matrix:** Liquid **Sample Date:** 7/19/2004 8:35 AM

Method: EPA 8260B / EPA 5030B

Parameter	Result	Flag	DF	MDL	MDLR	PQLR	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	ND		1	0.2	0.2	0.5	µg/L	N/A	N/A	07/20/2004	WMS2040720
Toluene	ND		1	0.2	0.2	0.5	µg/L	N/A	N/A	07/20/2004	WMS2040720
Ethyl Benzene	ND		1	0.2	0.2	0.5	µg/L	N/A	N/A	07/20/2004	WMS2040720
Xylenes, Total	ND		1	0.6	0.6	1	µg/L	N/A	N/A	07/20/2004	WMS2040720
Methyl-t-butyl Ether	ND		1	0.3	0.3	1	µg/L	N/A	N/A	07/20/2004	WMS2040720
Ethyl-t-butyl Ether	ND		1	0.2	0.2	5	µg/L	N/A	N/A	07/20/2004	WMS2040720
tert-Butanol (TBA)	ND		1	3	3	10	µg/L	N/A	N/A	07/20/2004	WMS2040720
Diisopropyl Ether	ND		1	0.2	0.2	5	µg/L	N/A	N/A	07/20/2004	WMS2040720
tert-Amyl Methyl Ether	ND		1	0.2	0.2	5	µg/L	N/A	N/A	07/20/2004	WMS2040720

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	96.5	64 - 125
Dibromofluoromethane	107.1	23 - 172
Toluene-d8	103.5	70 - 134

Analyzed by. Tfulton - 07/20/2004
Reviewed by. MTU - 07/21/04

MDL = Method Detection Limit as defined by the EPA, is the minimum concentration of a substance that can be identified, measured, and reported with 99% confidence that the analyte concentration is greater than zero. This minimum concentration is statistically determined by the laboratory.

J = Estimated value greater the the MDLR but less that the PQLR. Use this value with caution particularly if B or L flags are present for this analyte.

MDLR = MDL for reporting which includes sample dilution in the calculation.

PQLR = Practical Quantitation Limit for reporting which includes sample dilution in the calculation.

B = Analyte was also found in the Method Blank associated with this sample.

DF = Dilution Factor

ND = Not Detected at or above the PQL

L = Possible laboratory contaiminant.

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Quality Control - Method Blank

Validated by: MTU - 07/21/04

QC Batch ID WMS2040720

Date of Analysis: 7/20/2004

Method: EPA 8260B

Matrix: Liquid

Parameter	Result	DF	PQL	MDL	Units
1,2-Dibromoethane (EDB)	<0.2	1	0.5	0 2	µg/L
1,2-Dichloroethane	<0.2	1	0.5	0.2	µg/L
Benzene	<0.2	1	0.5	0.2	µg/L
Diisopropyl Ether	<0.2	1	5	0.2	µg/L
Ethanol	<40	1	100	40	µg/L
Ethyl Benzene	<0.2	1	0.5	0.2	µg/L
Ethyl-t-butyl Ether	<0.2	1	5	0.2	µg/L
Methyl-t-butyl Ether	<0.3	1	1	0.3	µg/L
tert-Amyl Methyl Ether	<0.2	1	5	0.2	µg/L
tert-Butanol (TBA)	<3	1	10	3	µg/L
Toluene	<0.2	1	0.5	0.2	µg/L
Xylenes, Total	<0.6	1	1	0.6	µg/L

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**99.8**	64 - 125
Dibromofluoromethane	**108.4**	23 - 172
Toluene-d8	**101.7**	70 - 134

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Quality Control - Laboratory Control Spike / Duplicate Results

Reviewed by: MTU - 07/22/04

QC Batch ID: WMS2040720
Date of Analysis: 7/20/2004

Method EPA 624

Liquid — Conc. Units: µg/L

Parameter	Blank	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
Bromoform	<0.5	20.0	16.4	LCS	7/20/2004	**82.0**			65 - 135
Chloroform	<0.5	20.0	21.9	LCS	7/20/2004	**109.5**			65 - 135
Bromoform	<0.5	20.0	16.1	LCSD	7/20/2004	**80.4**	**1.9**	25	65 - 135
Chloroform	<0.5	20.0	21.5	LCSD	7/20/2004	**107.7**	**1.6**	25	65 - 135

Method EPA 8260B

Liquid — Conc. Units: µg/L

Parameter	Blank	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
1,1-Dichloroethene	<0.5	20.0	19.5	LCS	7/20/2004	**97.7**			60 - 132
Benzene	<0.5	20.0	20.4	LCS	7/20/2004	**101.9**			77 - 154
Chlorobenzene	<0.5	20.0	19.8	LCS	7/20/2004	**98.9**			66 - 141
Methyl-t-butyl Ether	<1	20.0	17.1	LCS	7/20/2004	**85.3**			58 - 127
Toluene	<0.5	20.0	19.4	LCS	7/20/2004	**97.0**			47 - 137
Trichloroethene	<0.5	20.0	19.9	LCS	7/20/2004	**99.5**			57 - 159
1,1-Dichloroethene	<0.5	20.0	19.4	LCSD	7/20/2004	**97.0**	**0.7**	25	60 - 132
Benzene	<0.5	20.0	20.6	LCSD	7/20/2004	**102.9**	**1.0**	25	77 - 154
Chlorobenzene	<0.5	20.0	18.9	LCSD	7/20/2004	**94.6**	**4.4**	25	66 - 141
Methyl-t-butyl Ether	<1	20.0	19.8	LCSD	7/20/2004	**99.1**	**15.0**	25	58 - 127
Toluene	<0.5	20.0	19.1	LCSD	7/20/2004	**95.3**	**1.8**	25	47 - 137
Trichloroethene	<0.5	20.0	20.7	LCSD	7/20/2004	**103.4**	**3.9**	25	57 - 159

Method GC-MS

Liquid — Conc. Units: µg/L

Parameter	Blank	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Gasoline	<25	250.0	247	LCS	7/20/2004	**98.8**			65 - 135
TPH as Gasoline	<25	250.0	263	LCSD	7/20/2004	**105.3**	**6.3**	25	65 - 135

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Quality Control - Matrix Spike / Duplicate Results

Reviewed by: MTU - 06/28/04

QC Batch ID: WMS2040720

Date of Analysis: 7/20/2004

Method EPA 8260B Liquid **Conc. Units:** µg/L

Parameter	Sample Result	Spike Amount	Spike Result	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
MS **SampleNumber:** 39710-001									
Benzene	<0.5	20.0	22.0323	MS	7/20/2004	**110.2**			73 - 134
Methyl-t-butyl Ether	<1	20.0	15.0368	MS	7/20/2004	**75.2**			42 - 157
Toluene	<0.5	20.0	24.4	MS	7/20/2004	**118.3*** **			79 - 117
MSD **SampleNumber:** 39710-001									
Benzene	<0.5	20.0	19.8	MSD	7/20/2004	**99.0**	**1.0**	25	73 - 134
Methyl-t-butyl Ether	<1	20.0	23 2755	MSD	7/20/2004	**116.4**	**3.2**	25	42 - 157
Toluene	<0.5	20.0	20.4	MSD	7/20/2004	**102.0**	**0.0**	25	79 - 117

***The % recovery for the MS for Toluene is outside of laboratory control but within % RPD limits. No corrective action required.

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering

120 Westgate Dr., Watsonville, CA 95076
(831) 722-3580 (831) 662-3100
Fax: (831) 722-1159

CHAIN -OF-CUSTODY RECORD

PROJECT NAME AND JOB #: [redacted] T. BEAR RANCH / 23027

SEND CERTIFIED RESULTS TO: Weber, Hayes and Associates - Attention: Aaron Bierman

ELECTRONIC DELIVERABLE FORMAT: [ ] YES [X] NO

LABORATORY: Entech Analytical Laboratory

TURNAROUND TIME: (Standard Five-Day) 24hr Rush 48hr Rush 72hr Rush

GLOBAL I.D.: NA

Sampler: Aaron Bierman AB

Date: 7.19.04

Field Point Name (GeoTracker)	Sample Identification	Sample Depth	Date Sampled	Time Sampled	Matrix	SAMPLE CONTAINERS: 40 mL VOAs (preserved)	1 Liter Amber Jars	___mL Poly Bottle	Liner Acetate or Brass	REQUESTED ANALYSIS: Total Petroleum Hydrocarbons: TEPH: Diesel with Standard Silica Gel Cleanup	Total Recoverable Petroleum Hydrocarbons	TPH-gasoline, BTEX & MTBE 8260 by EPA Method# ~~8015M & 8020~~	Volatile Organics: 1,2-DCA by EPA Method# 8010	Solvents by EPA Method# 8010	Fuel Oxygenates EPA Method# 8260	Additional Analysis: Total Suspended Solids	Total Dissolved Solids	Metals: Al, Ar, Cd, Cr, Cu, Pb, Ni, Se, Zn, Hg, Nitrate as N
NA	WELL A2	1st Water	7-19-04	8:35am	H_2O	x4		39710-001				X			X			

Change TAT to 48 HR From 7-20 Due 7-22 Sioti 7-20-04 Rev A Bierman

RELEASED BY:

1) Aaron Bierman — Date & Time: 7/19/04 @ 5:00pm — RECEIVED BY: [illegible] — Date & Time: 7/19/04 1705

2) _____ — _____ — _____ — _____

3) _____ — _____ — _____ — _____

4) _____ — _____ — _____ — _____

5) _____ — _____ — _____ — _____

SAMPLE CONDITION: (circle 1)

Ambient	(Refrigerated)	Frozen
Ambient	Refrigerated	Frozen
Ambient	Refrigerated	Frozen
Ambient	Refrigerated	Frozen
Ambient	Refrigerated	Frozen

NOTES:

[ ] *If MTBE is detected by EPA Method 8020, please confirm detections by EPA Method 8260 with a minimum detection limit of 5 ug/L, and report only confirmed 8260 detections*

[ ] *For MTBE-analyzed samples with non-detectable results (ND) but having elevated detection limits, please confirm by EPA Method #8260*

[ ] *Please use MDL (Minimum Detection Limit) for any diluted samples.*

-Please send certified results via *.pdf to laboratory@weber-hayes.com.

Entech Analytical Labs, Inc.

3334 Victor Court • Santa Clara, CA 95054 • (408) 588-0200 • Fax (408) 588-0201

Aaron Bierman
Weber, Hayes and Associates
120 Westgate Drive
Watsonville, CA 95076

Certificate ID: 39710 - 7/21/2004 2:16:33 PM

Order: 39710
Project Name: T-Bear Ranch - Water Well #2 (3220 Andrade, Range Well)
Project Number: 23027

Date Collected: 7/19/2004
Date Received: 7/19/2004
P.O. Number: 23027

Certificate of Analysis - Final Report

On July 19, 2004, sample was received under chain of custody for analysis. Entech analyzes samples "as received" unless otherwise noted. The following results are included:

Matrix	Test	Method	Comments
Liquid	8260Petroleum	EPA 8260B	8260Petroleum=Btex+Oxy's ONLY. No Ethanol
	PDF	PDF	
	TPH as Gasoline - GC/MS	GC-MS	Gas by GCMS

Entech Analytical Labs, Inc. is certified for environmental analyses by the State of California (#2346).
If you have any questions regarding this report, please call me at 408-588-0200.

Sincerely,

Laurie Glantz-Murphy
Laboratory Director

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Weber, Hayes and Associates
120 Westgate Drive
Watsonville, CA 95076
Attn: Aaron Bierman

Date: 7/21/2004
Date Received: 7/19/2004
Project Name: T-Bear Ranch
Project Number: 23027
P.O. Number: 23027
Sampled By: Client

Certified Analytical Report

Lab # : 39710-001 **Sample ID:** Well A2 **Matrix:** Liquid **Sample Date:** 7/19/2004 8:35 AM

Method: EPA 8260B / EPA 5030B / Purge-and-trap

Parameter	Result	Flag	DF	PQL	PQLR	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	ND		1	0.5	0.5	µg/L	N/A	N/A	07/20/2004	WMS2040720
Toluene	ND		1	0.5	0.5	µg/L	N/A	N/A	07/20/2004	WMS2040720
Ethyl Benzene	ND		1	0.5	0.5	µg/L	N/A	N/A	07/20/2004	WMS2040720
Xylenes, Total	ND		1	1	1	µg/L	N/A	N/A	07/20/2004	WMS2040720
Methyl-t-butyl Ether	ND		1	1	1	µg/L	N/A	N/A	07/20/2004	WMS2040720
Ethyl-t-butyl Ether	ND		1	5	5	µg/L	N/A	N/A	07/20/2004	WMS2040720
tert-Butanol (TBA)	ND		1	10	10	µg/L	N/A	N/A	07/20/2004	WMS2040720
Diisopropyl Ether	ND		1	5	5	µg/L	N/A	N/A	07/20/2004	WMS2040720
tert-Amyl Methyl Ether	ND		1	5	5	µg/L	N/A	N/A	07/20/2004	WMS2040720

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	96.5	64 - 125
Dibromofluoromethane	107.1	23 - 172
Toluene-d8	103.5	70 - 134

Analyzed by: Tfulton - 07/20/2004
Reviewed by: MTU - 07/21/04

Method: GC-MS

Parameter	Result	Flag	DF	PQL	PQLR	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	ND		1	25	25	µg/L	N/A	N/A	07/20/2004	WMS2040720

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	96.5	64 - 125
Dibromofluoromethane	115.8	23 - 172
Toluene-d8	101.3	70 - 134

Analyzed by: Tfulton - 07/20/2004
Reviewed by: MTU - 07/21/04

ND = Not Detected at or above the PQL
PQL = Practical Quantitation Limit (No Dilution)
DF = Dilution Factor
PQLR = Practical Quantitation Limit for Reporting (Includes Dilution)

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Quality Control - Method Blank

Validated by: MTU - 07/21/04

QC Batch ID: WMS2040720
Matrix: Liquid
Date of Analysis: 7/20/2004

Method: EPA 8260B

Parameter	Result	DF	PQL	PQLR	Units
Benzene	ND	1	0.5	0.5	µg/L
Diisopropyl Ether	ND	1	5	5	µg/L
Ethyl Benzene	ND	1	0.5	0.5	µg/L
Ethyl-t-butyl Ether	ND	1	5	5	µg/L
Methyl-t-butyl Ether	ND	1	1	1	µg/L
tert-Amyl Methyl Ether	ND	1	5	5	µg/L
tert-Butanol (TBA)	ND	1	10	10	µg/L
Toluene	ND	1	0.5	0.5	µg/L
Xylene, m+p	ND	1	1	1	µg/L
Xylene, o	ND	1	0.5	0.5	µg/L
Xylenes, Total	ND	1	1	1	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	99.8	64 - 125
Dibromofluoromethane	108.4	23 - 172
Toluene-d8	101.7	70 - 134

Quality Control - Laboratory Control Spike / Duplicate Results

Reviewed by: MTU - 07/21/04

QC Batch ID: WMS2040720
Date of Analysis: 7/20/2004

Method EPA 8260B — Liquid — Conc. Units: µg/L

Parameter	Blank	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
1,1-Dichloroethene	<0.5	20.0	19.534	LCS	7/20/2004	97.7			60 - 132
Benzene	<0.5	20.0	20.387	LCS	7/20/2004	101.9			77 - 154
Chlorobenzene	<0.5	20.0	19.775	LCS	7/20/2004	98.9			66 - 141
Methyl-t-butyl Ether	<1	20.0	17.052	LCS	7/20/2004	85.3			58 - 127
Toluene	<0.5	20.0	19.401	LCS	7/20/2004	97.0			47 - 137
Trichloroethene	<0 5	20.0	19.9	LCS	7/20/2004	99.5			57 - 159

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	101.2	64 - 125
Dibromofluoromethane	109.5	23 - 172
Toluene-d8	101.7	70 - 134

1,1-Dichloroethene	<0.5	20.0	19.397	LCSD	7/20/2004	97.0	0.7	25	60 - 132
Benzene	<0.5	20.0	20.584	LCSD	7/20/2004	102.9	1.0	25	77 - 154
Chlorobenzene	<0.5	20.0	18.918	LCSD	7/20/2004	94.6	4.4	25	66 - 141
Methyl-t-butyl Ether	<1	20.0	19.825	LCSD	7/20/2004	99.1	15.0	25	58 - 127
Toluene	<0.5	20.0	19.058	LCSD	7/20/2004	95.3	1.8	25	47 - 137
Trichloroethene	<0.5	20.0	20.688	LCSD	7/20/2004	103.4	3.9	25	57 - 159

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	100.1	64 - 125
Dibromofluoromethane	111.1	23 - 172
Toluene-d8	100.9	70 - 134

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Quality Control - Method Blank

Validated by: MTU - 07/21/04

QC Batch ID: WMS2040720
Matrix: Liquid
Date of Analysis: 7/20/2004

Method: GC-MS

Parameter	Result	DF	PQL	PQLR	Units
TPH as Gasoline	ND	1	25	25	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	98.8	64 - 125
Dibromofluoromethane	117.3	23 - 172
Toluene-d8	99.4	70 - 134

Quality Control - Laboratory Control Spike / Duplicate Results

Reviewed by: MTU - 07/21/04

QC Batch ID: WMS2040720
Date of Analysis: 7/20/2004

Method GC-MS Liquid Conc. Units: µg/L

Parameter	Blank	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Gasoline	<25	250.0	247.1	LCS	7/20/2004	98.8			65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	98.4	64 - 125
Dibromofluoromethane	118.9	23 - 172
Toluene-d8	100.1	70 - 134

Parameter	Blank	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Gasoline	<25	250.0	263.3	LCSD	7/20/2004	105.3	6.3	25	65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	98.7	64 - 125
Dibromofluoromethane	115.7	23 - 172
Toluene-d8	100.3	70 - 134

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Dr., Watsonville, CA 95076
(831) 722-3580 (831) 662-3100
Fax: (831) 722-1159

CHAIN -OF-CUSTODY RECORD

PROJECT NAME AND JOB #: [redacted] T. BEAR RANCH / 23027

SEND CERTIFIED RESULTS TO: Weber, Hayes and Associates - Attention Aaron Bierman

ELECTRONIC DELIVERABLE FORMAT: [ ] YES [X] NO

Sampler: Aaron Bierman AB

Date: 7.19.04

LABORATORY: Entech Analytical Laboratory

TURNAROUND TIME: (Standard Five-Day) 24hr Rush 48hr Rush 72hr Rush

GLOBAL I.D.: NA

Field Point Name (GeoTracker)	Sample Identification	Sample Depth	Date Sampled	Time Sampled	Matrix	SAMPLE CONTAINERS: 40 mL VOAs (preserved)	1 Liter Amber Jars	___mL Poly Bottle	Liner Acetate or Brass	REQUESTED ANALYSIS: Total Petroleum Hydrocarbons: TEPH. Diesel with Standard Silica Gel Cleanup	Total Recoverable Petroleum Hydrocarbons	TPH-gasoline, BTEX & MTBE 8260 by EPA Method# ~~8015M & 8020~~	Volatile Organics: 1,2-DCA by EPA Method# 8010	Solvents by EPA Method# 8010	Fuel Oxygenates EPA Method# 8260	Additional Analysis: Total Suspended Solids	Total Dissolved Solids	Metals: Al, Ar, Cd, Cr, Cu, Pb, Ni, Se, Zn, Hg, Nitrate as N
NA	WELL A2	AT PROP PIPE	7-19-04	8:35am	H_2O	xY		37710-001				X			X			

Change TAT to 48 HR From 7-20 Due 7-22 Sioh 7-20-04 per A. Bierman

RELEASED BY:

1.) Aaron Bierman — Date & Time 7/19/04 @ 5:00pm → **RECEIVED BY:** Rmadueño — Date & Time 7/19/04 1705

2.) _____ — Date & Time _____ → _____ — Date & Time _____

3.) _____ — Date & Time _____ → _____ — Date & Time _____

4.) _____ — Date & Time _____ → _____ — Date & Time _____

5.) _____ — Date & Time _____ → _____ — Date & Time _____

SAMPLE CONDITION: (circle 1)

Ambient	(Refrigerated)	Frozen
Ambient	Refrigerated	Frozen
Ambient	Refrigerated	Frozen
Ambient	Refrigerated	Frozen
Ambient	Refrigerated	Frozen

NOTES:

- [ ] *If MTBE is detected by EPA Method 8020, please confirm detections by EPA Method 8260 with a minimum detection limit of 5 ug/L, and report only confirmed 8260 detections*
- [ ] *For MTBE-analyzed samples with non-detectable results (ND) but having elevated detection limits, please confirm by EPA Method #8260*
- [ ] *Please use MDL (Minimum Detection Limit) for any diluted samples*

-Please send certified results via *.pdf to laboratory@weber-hayes.com.

Entech Analytical Labs, Inc.

3334 Victor Court • Santa Clara, CA 95054 • (408) 588-0200 • Fax (408) 588-0201

CHANGE ORDER FORM

Date Requested: 7-20-04
Date Needed: 7-22-04
Client: WHT

Workorder #: 3971O
Project Name or #: T-Beach
Ordered by: Aaron

Laboratory ID#	Client ID#	Matrix	Change Requested
~~3971O-01~~	Well A7		change TAT to 48 hr's Due 7-22-04
			8260 Petroleum = Btex + Oxy's ONLY Run by GCMS

2 DAYS

Due: 7/22/04

Comments:

Date Test Added: 7/20/04

Test Added By: JGradert

Distribution:
Original in the Workorder Folder. Accounting and all involved departments must get a copy of this form.

Environmental Analysis Since 1983

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Dr., Watsonville, CA 95076
(831) 722-3580 (831) 662-3100
Fax: (831) 722-1159

CHAIN -OF-CUSTODY RECORD

PROJECT NAME AND JOB #: [redacted] T. BEAR RANCH / 23027

SEND CERTIFIED RESULTS TO: Weber, Hayes and Associates - Attention, Aaron Bierman

ELECTRONIC DELIVERABLE FORMAT: [ ] YES [X] NO

LABORATORY: Entech Analytical Laboratory

TURNAROUND TIME: (Standard Five-Day) 24hr Rush 48hr Rush 72hr Rush

GLOBAL I.D.: NA

Sampler: Aaron Bierman AB

Date: 7.19.04

144

Field Point Name (GeoTracker)	Sample Identification	Sample Depth	Date Sampled	Time Sampled	Matrix	SAMPLE CONTAINERS: 40 mL VOAs (preserved)	1 Liter Amber Jars	___mL Poly Bottle	Liner Acetate or Brass	REQUESTED ANALYSIS: Total Petroleum Hydrocarbons: TEPH: Diesel with Silica Gel Cleanup	Total Recoverable Petroleum Hydrocarbons	TPH-gasoline, BTEX & MTBE 8260 by EPA Method# ~~8015/M 8020~~	Volatile Organics: 1,2-DCA by EPA Method# 8010	Solvents by EPA Method# 8010	Fuel Oxygenates EPA Method# 8260	Additional Analysis: Total Suspended Solids	Total Dissolved Solids	Metals: Al, Ar, Cd, Cr, Cu, Pb, Ni, Se, Zn, Hg, Nitrate as N
NA	WELL A2	AT DEEP PIPE	7.19.04	8:35am	H_2O	x4		39710-001				X			X			

	RELEASED BY:	Date & Time	RECEIVED BY:	Date & Time
1.)	[signature]	7/19/04 @ 5:00pm	[signature]	7/19/04 1705
2.)				
3.)				
4.)				
5.)				

SAMPLE CONDITION: (circle 1)

Ambient	(Refrigerated)	Frozen
Ambient	Refrigerated	Frozen
Ambient	Refrigerated	Frozen
Ambient	Refrigerated	Frozen
Ambient	Refrigerated	Frozen

NOTES:

[ ] *If MTBE is detected by EPA Method 8020, please confirm detections by EPA Method 8260 with a minimum detection limit of 5 ug/L, and report only confirmed 8260 detections*

[ ] *For MTBE-analyzed samples with non-detectable results (ND) but having elevated detection limits, please confirm by EPA Method #8260.*

[ ] *Please use MDL (Minimum Detection Limit) for any diluted samples*

-Please send certified results via *.pdf to laboratory@weber-hayes.com.

Entech Analytical Labs, Inc.

3334 Victor Court • Santa Clara, CA 95054 • (408) 588-0200 • Fax (408) 588-0201

CHANGE ORDER FORM

Date Requested: 7-20-04
Date Needed: 7-22-04
Client: WHI

Workorder #: 39710
Project Name or #: T-Beach
Ordered by: Ackou

Laboratory ID#	Client ID#	Matrix	Change Requested
~~39710-00~~	Well A2		change TAT to 48 Hr's
			Due 7-22-04
			8260 Petroleum = Btex + Oxy's ONLY
			Gas by GCMS

2 DAYS

Due: 7/22/04

Comments:

Date Test Added: 7/20/04

Test Added By: JHudick

Distribution:
Original in the Workorder Folder. Accounting and all involved departments must get a copy of this form.

Entech Analytical Labs, Inc.

3334 Victor Court • Santa Clara, CA 95054 • (408) 588-0200 • Fax (408) 588-0201

Aaron Bierman
Weber, Hayes and Associates
120 Westgate Drive
Watsonville, CA 95076

Certificate ID: 39709 - 7/23/2004 1:12:35 PM

Order:	39709	**Date Collected:**	7/19/2004
Project Name:	T-Bear Ranch - Franco Well - 351 Andrade Rd (Well K-)	**Date Received:**	7/19/2004
Project Number:	23027	**P.O. Number:**	23027

Certificate of Analysis - Final Report

On July 19, 2004, samples were received under chain of custody for analysis. Entech analyzes samples "as received" unless otherwise noted. The following results are included:

Matrix	Test	Method	Comments
Liquid	8260Petroleum	EPA 8260B	8260Petroleum=Btex+Oxy's ONLY. No Ethanol
	PDF	PDF	
	TPH as Gasoline - GC/MS	GC-MS	Gas by GCMS

Entech Analytical Labs, Inc. is certified for environmental analyses by the State of California (#2346).
If you have any questions regarding this report, please call me at 408-588-0200.

Sincerely,

Laurie Glantz-Murphy
Laboratory Director

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Weber, Hayes and Associates
120 Westgate Drive
Watsonville, CA 95076
Attn: Aaron Bierman

Date: 7/23/2004
Date Received: 7/19/2004
Project Name: T-Bear Ranch
Project Number: 23027
P.O. Number: 23027
Sampled By: Client

Certified Analytical Report

Lab # : 39709-001 **Sample ID:** **Franco #1** **Matrix:** Liquid **Sample Date:** 7/19/2004 9:30 AM

Method: EPA 8260B / EPA 5030B / Purge-and-trap

Parameter	Result	Flag	DF	PQL	PQLR	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	ND		1	0.5	0.5	µg/L	N/A	N/A	07/22/2004	WMS2040721
Toluene	ND		1	0.5	0.5	µg/L	N/A	N/A	07/22/2004	WMS2040721
Ethyl Benzene	ND		1	0.5	0.5	µg/L	N/A	N/A	07/22/2004	WMS2040721
Xylenes, Total	ND		1	1	1	µg/L	N/A	N/A	07/22/2004	WMS2040721
Methyl-t-butyl Ether	ND		1	1	1	µg/L	N/A	N/A	07/22/2004	WMS2040721
Ethyl-t-butyl Ether	ND		1	5	5	µg/L	N/A	N/A	07/22/2004	WMS2040721
tert-Butanol (TBA)	ND		1	10	10	µg/L	N/A	N/A	07/22/2004	WMS2040721
Diisopropyl Ether	ND		1	5	5	µg/L	N/A	N/A	07/22/2004	WMS2040721
tert-Amyl Methyl Ether	ND		1	5	5	µg/L	N/A	N/A	07/22/2004	WMS2040721

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	98.7	64 - 125
Dibromofluoromethane	113.3	23 - 172
Toluene-d8	103.5	70 - 134

Analyzed by: TFulton - 07/22/2004
Reviewed by MTU - 07/23/04

Method: GC-MS

Parameter	Result	Flag	DF	PQL	PQLR	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	ND		1	25	25	µg/L	N/A	N/A	07/22/2004	WMS2040721

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	98.4	64 - 125
Dibromofluoromethane	122.3	23 - 172
Toluene-d8	101.2	70 - 134

Analyzed by: TFulton - 07/22/2004
Reviewed by: MTU - 07/23/04

ND = Not Detected at or above the PQL
PQL = Practical Quantitation Limit (No Dilution)
DF = Dilution Factor
PQLR = Practical Quantitation Limit for Reporting (Includes Dilution)

Entech Analytical Labs, Inc.

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Quality Control - Method Blank

Validated by: MTU - 07/22/04

QC Batch ID: WMS2040721
Matrix: Liquid
Date of Analysis: 7/21/2004

Method: EPA 8260B

Parameter	Result	DF	PQL	PQLR	Units
Benzene	ND	1	0.5	0.5	µg/L
Diisopropyl Ether	ND	1	5	5	µg/L
Ethyl Benzene	ND	1	0.5	0.5	µg/L
Ethyl-t-butyl Ether	ND	1	5	5	µg/L
Methyl-t-butyl Ether	ND	1	1	1	µg/L
tert-Amyl Methyl Ether	ND	1	5	5	µg/L
tert-Butanol (TBA)	ND	1	10	10	µg/L
Toluene	ND	1	0.5	0.5	µg/L
Xylene, m+p	ND	1	1	1	µg/L
Xylene, o	ND	1	0.5	0.5	µg/L
Xylenes, Total	ND	1	1	1	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	97.6	64 - 125
Dibromofluoromethane	109.3	23 - 172
Toluene-d8	103.3	70 - 134

Quality Control - Laboratory Control Spike / Duplicate Results

Reviewed by: MTU - 07/22/04

QC Batch ID: WMS2040721
Date of Analysis: 7/21/2004

Method EPA 8260B — Liquid — Conc. Units: µg/L

Parameter	Blank	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
1,1-Dichloroethene	<0.5	20.0	20.878	LCS	7/21/2004	104.4			60 - 132
Benzene	<0.5	20.0	22.311	LCS	7/21/2004	111.6			77 - 154
Chlorobenzene	<0.5	20.0	20.313	LCS	7/21/2004	101.6			66 - 141
Methyl-t-butyl Ether	<1	20.0	22.371	LCS	7/21/2004	111.9			58 - 127
Toluene	<0.5	20.0	20.136	LCS	7/21/2004	100.7			47 - 137
Trichloroethene	<0.5	20.0	22.156	LCS	7/21/2004	110.8			57 - 159

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	104.0	64 - 125
Dibromofluoromethane	112.9	23 - 172
Toluene-d8	99.6	70 - 134

1,1-Dichloroethene	<0.5	20.0	19.583	LCSD	7/21/2004	97.9	6.4	25	60 - 132
Benzene	<0.5	20.0	21.565	LCSD	7/21/2004	107.8	3.4	25	77 - 154
Chlorobenzene	<0.5	20.0	19.206	LCSD	7/21/2004	96.0	5.6	25	66 - 141
Methyl-t-butyl Ether	<1	20.0	21.622	LCSD	7/21/2004	108.1	3.4	25	58 - 127
Toluene	<0.5	20.0	19.395	LCSD	7/21/2004	97.0	3.7	25	47 - 137
Trichloroethene	<0.5	20.0	21.747	LCSD	7/21/2004	108.7	1.9	25	57 - 159

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	100.5	64 - 125
Dibromofluoromethane	112.6	23 - 172
Toluene-d8	100.5	70 - 134

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Quality Control - Method Blank

Validated by. MTU - 07/22/04

QC Batch ID: WMS2040721
Matrix: Liquid
Date of Analysis: 7/21/2004

Method: GC-MS

Parameter	Result	DF	PQL	PQLR	Units
TPH as Gasoline	ND	1	25	25	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	**97.7**	64 - 125
Dibromofluoromethane	**118.3**	23 - 172
Toluene-d8	**101.2**	70 - 134

Quality Control - Laboratory Control Spike / Duplicate Results

Reviewed by: MTU - 07/22/04

QC Batch ID: WMS2040721
Date of Analysis: 7/21/2004

Method GC-MS — **Liquid** — **Conc. Units: µg/L**

Parameter	Blank	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Gasoline	<25	250.0	259.6	LCS	7/21/2004	**103.8**			65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**98.1**	64 - 125
Dibromofluoromethane	**117.4**	23 - 172
Toluene-d8	**100.8**	70 - 134

TPH as Gasoline	<25	250.0	267 8	LCSD	7/21/2004	**107.1**	**3.1**	25	65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**99.0**	64 - 125
Dibromofluoromethane	**113.4**	23 - 172
Toluene-d8	**101.8**	70 - 134

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Dr., Watsonville, CA 95076
(831) 722-3580 (831) 662-3100
Fax: (831) 722-1159

CHAIN -OF-CUSTODY RECORD

PROJECT NAME AND JOB #: [redacted] T-BEAR RANCH / 23027

SEND CERTIFIED RESULTS TO: Weber, Hayes and Associates - Attention: Aaron Bierman

ELECTRONIC DELIVERABLE FORMAT: ☐ YES ☒ NO

Sampler: Aaron Bierman (AB)

Date: 7.19.04

LABORATORY: Entech Analytical Laboratory

TURNAROUND TIME: (Standard Five-Day) 24hr Rush 48hr Rush 72hr Rush

GLOBAL I.D.: NA

Field Point Name (GeoTracker)	Sample Identification	Sample Depth (Ft, BTOC)	Date Sampled	Time Sampled	Matrix	SAMPLE CONTAINERS: 40 mL VOAs (preserved)	1 Liter Amber Jars	___mL Poly Bottle	Liner Acetate or Brass	REQUESTED ANALYSIS: Total Petroleum Hydrocarbons: TEPH: Diesel with Standard Silica Gel Cleanup	Total Recoverable Petroleum Hydrocarbons	TPH-gasoline, BTEX & MTBE 8260 by EPA Method# ~~8015M+S-8020~~	Volatile Organics: 1,2-DCA by EPA Method# 8010	Solvents by EPA Method# 8010	Fuel Oxygenates EPA Method# 8260	Additional Analysis: ~~Total Suspended Solids~~ HOLD	Total Dissolved Solids	Metals: Al, Ar, Cd, Cr, Cu, Pb, Ni, Se, Zn, Hg, Nitrate as N
NA	FRANCO #1	13.25'	7.19.04	9:30am	H_2O	x 5				24709-001		X			X			
	FRANCO #2	~60'	7.19.04	9:50	H_2O	x 5				002						X		

RELEASED BY:

1.) [signature]
2.)
3.)
4.)
5.)

Date & Time: 7/19/04 @ 5:00pm

RECEIVED BY:

1.) [signature]
2.)
3.)
4.)
5.)

Date & Time: 7/19/04 1705

SAMPLE CONDITION: (circle 1)

Ambient	(Refrigerated)	Frozen
Ambient	Refrigerated	Frozen
Ambient	Refrigerated	Frozen
Ambient	Refrigerated	Frozen
Ambient	Refrigerated	Frozen

NOTES:

☐ If MTBE is detected by EPA Method 8020, please confirm detections by EPA Method 8260 with a minimum detection limit of 5 ug/L, and report only confirmed 8260 detections.

☐ For MTBE-analyzed samples with non-detectable results (ND) but having elevated detection limits, please confirm by EPA Method #8260.

☐ Please use MDL (Minimum Detection Limit) for any diluted samples

-Please send certified results via *.pdf to laboratory@weber-hayes.com.

FRANCO #1 : 90' DEEP IRRIGATION WELL

FRANCO #2: 245' DEEP IRRIGATION WELL

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering

120 Westgate Dr., Watsonville, CA 95076
(831) 722-3580 (831) 662-3100
Fax: (831) 722-1159

CHAIN -OF-CUSTODY RECORD

PROJECT NAME AND JOB #: [redacted] T-BEAR RANCH / 23027

SEND CERTIFIED RESULTS TO: Weber, Hayes and Associates - Attention: Aaron Bierman

ELECTRONIC DELIVERABLE FORMAT: ☐ YES ☒ NO

LABORATORY: Entech Analytical Laboratory

TURNAROUND TIME: (Standard Five-Day) 24hr Rush 48hr Rush 72hr Rush

GLOBAL I.D.: NA

Sampler: Aaron Bierman

Date: 7.19.04

Field Point Name (GeoTracker)	Sample Identification	Sample Depth (Ft, BTOC)	Date Sampled	Time Sampled	Matrix	SAMPLE CONTAINERS: 40 mL VOAs (preserved)	1 Liter Amber Jars	___mL Poly Bottle	Liner Acetate or Brass	REQUESTED ANALYSIS: Total Petroleum Hydrocarbons: TEPH: Diesel with Standard Silica Gel Cleanup	Total Recoverable Petroleum Hydrocarbons	TPH-gasoline, BTEX & MTBE by EPA Method# 8260	Volatile Organics: 1,2-DCA by EPA Method# 8010	Solvents by EPA Method# 8010	Fuel Oxygenates EPA Method# 8260	Additional Analysis: ~~Total Suspended Solids~~ HOLD	Total Dissolved Solids	Metals: Al, Ar, Cd, Cr, Cu, Pb, Ni, Se, Zn, Hg, Nitrate as N
NA	FRANCO #1	13.25'	7.19.04	9:30am	H2O	X5				24709-001		X			X			
	FRANCO #2	~60'	7.19.04	9:50	H2O	X5				002						X		

RELEASED BY:

1.) [signature] Date & Time 7/19/04 @ 5:00pm

2.) _____ _____

3.) _____ _____

4.) _____ _____

5.) _____ _____

RECEIVED BY:

1.) [signature] Date & Time 7/19/04 1705

2.) _____ _____

3.) _____ _____

4.) _____ _____

5.) _____ _____

SAMPLE CONDITION: (circle 1)

Ambient	(Refrigerated)	Frozen
Ambient	Refrigerated	Frozen
Ambient	Refrigerated	Frozen
Ambient	Refrigerated	Frozen
Ambient	Refrigerated	Frozen

NOTES:

☐ *If MTBE is detected by EPA Method 8020, please confirm detections by EPA Method 8260 with a minimum detection limit of 5 ug/L, and report only confirmed 8260 detections.*

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☐ *Please use MDL (Minimum Detection Limit) for any diluted samples.*

Please send certified results via *.pdf to laboratory@weber-hayes.com.

FRANCO #1 : 90' DEEP IRRIGATION WELL

FRANCO #2: 245' DEEP IRRIGATION WELL