



BALLENA ISLE MARINA

Ballena Bay Yacht Harbor
1150 Ballena Boulevard
Alameda, California 94501
(415) 523-5528

93 JUL 29 PM 2:20

JULIET SHIN
ALAMEDA COUNTY HEALTH SERVICES AGENCY
80 SWAN WAY ROOM 200
OAKLAND, CA. 94621

DEAR JULIET,

ENCLOSED PLEASE FIND A REPLACEMENT OF THE MARINA MAP SHOWING THE LOCATION OF THE FORMER FUEL TANKS THAT WERE REMOVED IN 1984 TO ACCOMODATE THE CONSTRUCTION OF BALLENA BAY OFFICE BUILDING #2 (BBOB#2).

ALSO SHOWN AT YOUR REQUEST IS THE LOCATION OF THE SLATTED PVC CASING THAT WAS USED TO COLLECT THE GRAB GROUNDWATER SAMPLE DESIGNATED AS MW #4 AS REFERENCED ON PAGE 6 OF MY REPORT DATED JUNE 1, 1993.

IF I CAN BE OF FURTHER ASSISTANCE PLEASE CALL.

SINCERELY,

DON ANDERSON
HARBORMASTER



BALLENA ISLE MARINA

Ballena Bay Yacht Harbor
1150 Ballena Boulevard, Suite 111
Alameda, California 94501-3682

15107523-5528 (From Dave Anderson)

June 1, 1993

Juliet Shinn
Alameda County Health Care Services
80 Swan Way Room 200
Oakland, CA. 94621

Dear Juliet:

This is a follow up on our conversation of May 6, 1993 regarding your letter of May 4, 1993 relating to our two 12,000 gallon fuel tanks and the ongoing work on the excavation of the removed underground oil tank.

This letter at your request is intended to bring you up to date on the progress of the work and the test results on both projects mentioned above. The letter will also address other areas tested within the facility, test results are attached.

Introduction

Colony Advisor, Inc. as agent to G.A.P. Portfolio Partners engaged Law/Crandall, Inc. (LAW) to perform an environmental site assessment for the Ballena Isle Marina in Alameda, California.

The site occupies a 56-acre man-made peninsula and is located at 1150 Ballena Boulevard. The site is currently managed by Almar Limited (site operators). The site location is shown on Figure 1. The site contains 20 acres of water, a marina with 455 berths, several two-story office buildings, parking lots, and a restaurant. A fuel dock, hoist for pulling boats out of the water, service yard/maintenance shed, tennis court, and the concrete foundation for the former Beau Rivage Restaurant (destroyed by fire in 1990) are also located on the property. A site plan is included as Figure 2.

The Environmental Assessment Report was prepared by LAW on October 13, 1992.

The report identified:

The potential for soil/groundwater petroleum hydrocarbon contamination due to the current and former presence of underground storage tanks (USTs) at three separate locations on

the existing USTs, former USTs, and waste oil UST.

The potential for shallow soil contamination due to the presence of an abandoned above-ground diesel tank and the collection of waste oil in 55-gallon drums.

The potential for contamination, particularly heavy metals, due to the deposition of dredging materials onto a portion of the site.

Additional background on specific areas of environmental concern follows.

Existing USTs

Two 12,000-gallon USTs are located in the parking lot immediately west of Building 1150. These double-walled USTs were installed in 1990 following the October 1989 earthquake to replace damaged USTs which had been installed in 1987. Unleaded gasoline and diesel fuel are stored in the USTs.

During the 1989 earthquake, the existing tanks were displaced upward and the piping connections at the tank were broken. On July 2, 1990, the two single-wall underground fuel tanks were removed from the site by Subsurface Consultants. The tanks did not appear to be damaged or deteriorated. The gasoline and diesel tank were located on the northern and southern side of the tank pit, respectively. Six soil samples were collected at a depth of 5 feet below ground surface from the walls of the tank pit during UST replacement activities. The samples were analyzed for total volatile hydrocarbons (TVH), benzene, toluene, ethylbenzene, and xylenes (BTEX), and total extractable hydrocarbons as diesel (TEH). The soil sample collected from the east side wall of the former diesel tank near the piping connection (approximately 6 feet west of the sidewalk) contained 130 milligrams per kilogram (mg/kg or parts per million) of TEH.

Contaminants were not detected in the five other soil samples.

One groundwater sample was collected from the tank pit before the tank pit was purged; another groundwater sample was collected after approximately two weeks. The initial groundwater sample contained 24 milligrams per liter (mg/l) of TVH, 0.87 mg/l of benzene, 0.52 mg/l of toluene, 4.2 mg/l of xylenes, and 0.0007 mg/l of TEH. The later groundwater sample contained 0.0007 mg/l of toluene. The remaining contaminants were reported to have volatilized from the water.

Former USTs

Four 4,000-gallon USTs for leaded gasoline and diesel fuel were removed in 1984 to allow construction of Building 1150. These tanks were located between the

Whale's Tale restaurant and Building 1150; they are reported to have extended to what is now the southeast corner of Building 1150. Soil and/or groundwater sampling was not conducted when these tanks were removed.

Former Waste Oil Tank

A 250-gallon waste oil UST, formerly located just north of the maintenance building, was removed in July 1991 by the site operators. The excavation associated with the removal of this UST has not been backfilled and excavated soils are stored on site. The tank pit is covered with planks and enclosed by a wooden fence. The soil has been placed on and covered with plastic in the parking lot for the former Beau Rivage restaurant.

On September 27, 1991, one soil sample was collected from the tank pit excavation and two samples were collected from the stockpiled soil in the former Beau Rivage Restaurant parking lot by Trace Analysis Laboratory, Inc. The stockpile soil samples were composited into one sample at the laboratory. The stockpile and tank pit soil samples contained the following concentrations of contaminants, respectively: oil & grease (O&G) at 4,800 mg/kg and 11,000 mg/kg; total petroleum hydrocarbons as diesel (TPH/D) at 1,300 mg/kg and 5,700 mg/kg; total petroleum hydrocarbons as gasoline (TPH/G) at 860 mg/kg and 7.4 mg/kg; xylenes at 3.9 mg/kg and 0.14 mg/kg; toluene at 0.02 mg/kg and 3.9 mg/kg; ethylbenzene at 0.027 mg/kg and 13 mg/kg; chromium (Cr) at 17 mg/kg and 18 mg/kg; lead (Pb) at 51 mg/kg and 55 mg/kg; nickel (Ni) at 14 mg/kg and 14 mg/kg; and zinc (Zn) at 42 mg/kg and 23 mg/kg. The samples were not analyzed for semi-volatile organics or PCBs; volatile organic compounds (VOCs) other than BTEX were not detected.

According to ENSR Consulting and Engineering's May 21, 1992 report to the County, the tank pit was additionally excavated in May 1992 to dimensions of 9.5 feet by 11.5 feet with an approximate depth of 9 feet. During the additional excavation, soil staining appeared to extend beneath the maintenance building adjacent to the pit. The stained soil was noted at a depth of approximately 5 feet. Further excavation of the stained soil was reported to not be possible without incurring possible damage to the foundation of the maintenance building. Groundwater was encountered at a depth of 9.5 feet.

Two soil samples were collected from the tank pit following the additional excavation by ENSR Consulting and Engineering. The soil samples contained the following concentrations of contaminants: O & G from 3,500 to 4,200 mg/kg; TPH/D ranging from 1,800 to 2,200 mg/kg; TPH/G ranging from 79 to 91 mg/kg; xylenes ranging from 1.9 to 9.2 mg/kg; toluene at 1 mg/kg; ethylbenzene at 0.84 mg/kg; Cadmium at 0.41 mg/kg; Cr ranging from 15.8 to 16.2 mg/kg; Pb ranging from 4.5 to 13 mg/kg; Ni ranging from 13.3 to

14 mg/kg; and Zn at 13.7 mg/kg. The samples were not analyzed for semi-volatile organics or PCBs; VOCs (other than BTEX) were not detected.

On July 2, 1992, the County requested that the tank pit be excavated down to groundwater and that a groundwater grab sample be collected and analyzed for TPH/D, TPH/G, O&G, be made to investigate the extent of and remediate soil contamination at the site. A workplan to address the investigation and remediation of the soil contamination was requested within 45 days of the receipt of the County's letter. On August 10, 1992, We requested a 45 day extension to obtain bids and authorization from their parent company, Almar. Law / Crandall was awarded a contract in October 1992 to conduct an environmental site assessment and work was halted pending their analysis and a determination by Alameda County Environmental Health.

Abandoned Above-ground Diesel Tank

An abandoned 250-gallon above-ground diesel tank is also located on the property. The spigot from the tank is located directly above what appears to be a screened sump.

Drummed Waste Oil Storage Area

Waste oil is currently collected in several 55-gallon drums, enclosed by wooden planks located in a woodenshack near the former Beau Rivage restaurant. The drums are hauled off-site by Waste oil Disposal approximately every 2 to 3 months. Oil stains and sorbant-type material were noted on the floor in the vicinity of these drums.

Soil Boring and Monitoring Well Locations

LAW's drilling subcontractor, Great Sierra Exploration, Inc. of Novato, California, drilled a total of eight borings on the site under the supervision of Andrew Muha, a LAW field hydrogeologist, on December 4 and December 7, 1992. Three of the borings were converted to groundwater monitoring wells. Grab groundwater samples were collected from two of the borings, MW-4 and HP-1, using a hand auger and Hydropunch, respectively. LAW also hand augered four other soil borings (SB-5, SB-6, SB-7, and SB-8). Boring and/or monitoring well locations are shown on Figure 2. The rationale for the locations and depth of borings are discussed below.

- * Monitoring wells MW-1, MW-2, and MW-3 were installed in the vicinity of the existing USTs to a depth of 15 feet below ground surface. Well locations are also shown on Figure 3.

- * Soil boring MW-4 was installed in the vicinity of the former USTs between the Whales Tail restaurant and Building 1150; the location is shown on Figure 3. They initially planned to install a monitoring well at this location. However, due to access restrictions and the presence of numerous underground utilities in the area, a drill rig could not be used. The boring was constructed using a hand auger to an approximate depth of 9 feet below ground surface. A clean, slotted PVC casing was placed into the boring and a bailer was lowered into the casing to collect a grab groundwater sample.

- * Soil boring B-1, B-2, B-3, and B-4 were drilled near the former waste oil UST to depths of 15 feet below ground surface to assess the lateral extent of potential contamination. Boring B-1 was located approximately 8 feet west of the tank pit. Boring B-2 was located approximately 18 feet west of the tank pit. Boring B-3 was located approximately 12 feet north of the tank pit. Boring B-4 was located approximately 34 feet east of the tank pit (the presence of underground utilities prevented drilling at a location closer to the tank pit). Boring B-5 was located approximately 10 feet east of the tank pit; boring B-5 was hand augered to an approximate depth of 10 feet below ground surface. A large tree in the area prevented use of drill rig. Boring locations are shown on Figure 4.

- * Hydropunch location HP-1 was located approximately 2 feet north of the former waste oil UST to a depth of 10 feet below ground surface (Figure 4).

- * Soil boring SB-6 was hand augered near the abandoned above-ground diesel tank approximately 2 feet southwest of the sump to depth of 5 feet below ground surface

- * Soil boring SB-7 was hand augered near the drums of waste oil. The boring was augered at an approximate 45 degree angle to a depth of approximately 4 feet below ground surface. The barrels were stored on a concrete pad; the concrete coring equipment

- * Soil boring SB-8 was hand augered in the dredged tailings disposal area to a depth of 5 feet below ground surface.

Existing USTs

Figure 3 attached shows the location of the three monitoring wells that were installed by Great Sierra Exploration Inc. of Novato, CA. on December 7, 1992 in the area of the 2 12,000 gallon USTs.

Soil Boring and Sampling Procedures

The borings constructed by Great Sierra Exploration were advanced using a truck-mounted drill rig equipped with 8-inch diameter hollow stem augers, with the exception of MW-4. Boring MW-4 and those borings installed by LAW were advanced by hand using a 3.5-inch diameter stainless steel auger.

Soil samples were collected with a California modified split-spoon sampler or equivalent. Samples were retained in six-inch-long brass tubes. One tube from each sampling interval was capped with teflon liners, plastic end caps, wrapped with duct tape, sealed in a plastic bag and placed on ice in a thermally insulated cooler pending selection of samples for laboratory analysis. The remaining sample tubes were used in the soil classification and laboratory screening processes. Selected samples were shipped to a state-certified analytical laboratory with chain-of-custody documentation.

Soils encountered in the borings were classified according to the Unified Soil Classification System. Soil samples were collected at 5-foot intervals and significant lithologic changes. They screened soil samples in the field with a Foxboro flame-ionization Organic Vapor Analyzer (OVA). One sample from each boring showing visible evidence of potential contamination and/or the highest readings on the OVA was to be selected for analysis. If soil samples in a particular boring did not exhibit visible evidence of contamination or elevated OVA readings above the soil/groundwater interface, the deepest soil sample encountered in the boring prior to the soil/groundwater interface was to be analyzed. Using this protocol, the samples selected for analysis were the deepest soil sample encountered prior to the soil/groundwater interface.

Downhole drilling equipment was steam cleaned prior to use and between borings. Soil sampling and hand auger equipment was washed in an Alconox soap solution after each use. All drill cuttings and wash water were placed into D.O.T.-approved, watertight 55-gallon drums and stored on site pending the receipt of laboratory analyses.

Construction and Sampling of Monitoring Wells

Three of the soil borings were converted to monitoring wells. The wells were necessary to evaluate groundwater conditions in the vicinity of the existing USTs. The wells were located would occur approximately 10 feet below ground surface, its flow would be influenced by tidal actions, and the gradient would be relatively flat.

The monitoring wells were constructed with 2-inch diameter, Schedule 40 PVC screen and riser sections. Great Sierra Exploration installed a sandpack. The wells were sealed to the ground surface with bentonite chips. Boring logs and monitoring well construction details are presented in Appendix B. The wells were finished at the surface with flush-mounted, traffic-rated protective vaults.

On December 8, 1992, they used a KVA submersible pump to develop the monitoring well. The wells were developed until the clarity of the discharge water stabilized. Purging continued until the field-measured parameters of pH, temperature and electrical conductivity stabilized with less than a 10 percent variance. Approximately 45 to 50 gallons of water (at least four well casing volumes) were removed from each well during the development process. Following development, they collected one set of groundwater samples from each well with a new disposable bailer after the water level in each well had recovered to approximately 80 percent of its initial level. The groundwater samples were poured into laboratory-supplied glass bottles, placed on ice in a thermally insulated container, and delivered along with a chain-of-custody form to a state-certified laboratory for analysis. The well development purge water was placed into D.O.T.-approved, watertight 55-gallon drums and stored on-site pending receipt of laboratory analytical results. The development and purge water was subsequently moved to another location at the site at our request. Drums have since been removed from property by Law/Crandall. On December 11, 1992, they measured the water levels in the wells to within 0.01 foot using a solinst water level meter. They also surveyed the top-of-casing elevation of each well and referenced the elevation to a temporary benchmark located at the southwest corner of the concrete pad which overlaid the USTs.

Soil and groundwater samples collected near the former and existing USTs (1 through MW-4) were analyzed for TPH/G, TPH/D, BTEX, and Pb.

Soil samples collected from the five soil borings near the former waste oil UST (B-1 through B-5) and the one soil sample near the waste oil drum storage are (SB-7) were analyzed for TPH/G, TPH/D, BTEX, VOCs, O&G, semi-volatile organics, pesticides and PCB's, and soluble Cd, Cr, Pb, Zn, and Ni. The grab groundwater sample collected near the former waste oil UST was

analyzed for the same constituents except the metals were analyzed for total rather than soluble constituents.

The soil sample from boring SB-6 (near the abandoned above-ground diesel tank sump) was analyzed for TPH/D and BTEX.

The soil sample from boring SB-8 (the dredged soil disposal area) was analyzed for semivolatile organics, O&G, and seventeen metals.

Analysis of Soil and Groundwater Samples

Soil and groundwater samples were delivered to Superior Precision Analytical, Inc. in San Francisco, California for chemical analysis on a 5-day turnaround basis. With the exception of the dredged soil disposal area, the selected laboratory analyses addressed requirements contained in the Tri-Regional Board Staff Recommendations for Preliminary Evaluation and Investigation of Underground Tank Sites, California Regional Water Quality Control Board, San Francisco Bay Region, dated August 10, 1990 (Regional Board Guidelines). Analyses for the dredged soil disposal area were based on typical non-volatile contaminants found in dredge tailings.

Field Assessment Results

Laboratory Analytical Results -

Results of the laboratory analyses of soil samples for the waste oil and existing UST area are summarized on Table 4.3. The complete laboratory report and chain-of-custody documents are presented in Appendix C. Laboratory analytical results are presented below by location.

Existing USTs -

The soil samples collected from the three monitoring wells (MW-1 through MW-3) at a depth of 10 feet did not contain concentrations of TPH/G, TPH/D, BTEX, or total lead in excess of laboratory detection limits. The groundwater sample from well MW-1 contained 0.5 micrograms per liter (ug/l or ppb) of toluene and 0.6 ug/l of xylenes. The groundwater sample from well MW-3 contained TPH/G, toluene, and xylenes were not detected in the groundwater sample from well MW-2. TPH/D, benzene, ethylbenzene, and soluble or total lead were not detected in any of the soil or groundwater samples.

Former USTs -

TPH/G, BTEX, TPH/D, and soluble or total lead were not detected in the soil or grab groundwater samples (MW-4) collected near the location of the former USTs.

Former Waste Oil Tank -

The five soil samples (B-1 through B-5)

collected at locations ranging from 8 to 34 feet away from the perimeter of the former waste oil UST excavation at depths of 10 feet contained total O&G concentrations ranging from 53 mg/kg in B-5 to 110 mg/kg in B-1. TPH/G, BTEX, TPH/D, VOCs, semi-volatile organics, pesticides, PCBs, and soluble metals (Zn, Cd Cr, Pb, and Ni), were not detected.

Abandoned Above-ground Diesel Tank -

The soil sample (SB-6) collected at a depth of 5 feet near the sump associated with the abandoned above-ground diesel tank did not contain concentrations of TPH/D or BTEX in excess of laboratory detection limits.

Drummed Waste Oil Storage Area -

The soil sample (SB-7) collected beneath the drums of waste oil contained 83 mb/kg of O&G. TPH/G, BTEX, TPH/D, VOCs, semi-volatile organics, pesticides, PCBs and soluble metals (Zn, Cd Cr, Pb, and Ni), were not detected.

Dredge Tailings Disposal Area -

The soil sample (SB-8) collected at a depth of 5 feet in the dredge tailings disposal area contained 130 mb/kg of total oil and grease. Antimony, arsenic, barium, chromium, copper, lead, mercury, nickel, vanadium, and zinc were detected at concentrations ranging from 0.19 to 80 mg/kg. Concentrations were well below California Administrative Code's Threshold Limit Concentration (TTL) Values. Semi-volatile organic compounds were not detected.

Subsequent Analyses -

Subsequent to the discovery of O&G in soil samples from other areas of the site, the soil samples from MW-1 through MW-4 were also analyzed for O&G. The samples did not contain O&G in excess of laboratory detection limits.

Groundwater Gradient

As shown on Figure 3, the groundwater gradient was calculated to be towards the northwest at 0.0025 feet per foot. As previously stated, the groundwater gradient is expected to fluctuate due to tidal influences. Groundwater level measurements and top of casing elevations are summarized on Table 4.4.

Conclusion and Recommendations

See Field Assessment results above.

Former Waste Oil Tank

Due to no outward movement of the former contamination from the central point of the UST excavated area as evidenced from samples B1, B2, B3, and B4. We

recommend the pit be closed as recommended by ENSR's project engineer Brian Ho in his letter to Mr. Arulanantham, Alameda County Environmental Health on May 21, 1992.

Upon approval for closure of the former waste oil tank the excavated material stored on the site would be removed to an approved contaminated material site.

Existing UST's

Based on Law / Crandall's field assessment results of the two twelve thousand gallon fuel tanks as outlined above we would recommend your consideration for closure.

Abandoned Above Ground Diesel Tank

Sample (SB-6) did not contain concentrations of TPH/D or BTEX in excess of laboratory detection limits.

The tank has not been in operation for many years and our intention is to dispose of it in due course.

Drummed Waste Oil Storage Area

With reference to (SB-7) the only contamination revealed in the sample was 83 MB/KG of oil and grease. The drums have been in this location for only a short period of time and will be replaced with an approved above ground waste oil tank with a concrete catch basin at the former underground oil tank location.

I will call you within the week to seek your response to our recommendation above. If you have any questions or comments please do not hesitate to give me a call at (510)523-5528.

Sincerely,



Don R. Anderson
Project Manager
Ballena Isle Marina

attachments:

cc: Harry L. Nelson Jr.

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TABLES

TABLE 4.1: SOIL SAMPLE RESULTS FOR WASTE OIL AREAS
 BALLENA ISLE MARINA, ALAMEDA, CA
 CONTROL NUMBER 1026, GREAT AMERICAN PORTFOLIO
 LAW/CRANDALL PROJECT NO. 2123-20669-1

TOG (ppm)	110	60	100	80	53
Sample ID:	B-1	B-2	B-3	B-4	B-7
Sample Depth, Feet:	10	10	10	10	5
Sample Date:	12/7/92	12/7/92	12/7/92	12/7/92	12/7/92
TPH/G	ND<1	ND<1	ND<1	ND<1	ND<1
TPH/D	ND<10	ND<10	ND<10	ND<10	ND<10
VOCs	ND	ND	ND	ND	ND
BTEX					
Benzene	ND<0.003	ND<0.003	ND<0.003	ND<0.003	ND<0.003
Toluene	ND<0.003	ND<0.003	ND<0.003	ND<0.003	ND<0.003
Ethylbenzene	ND<0.003	ND<0.003	ND<0.003	ND<0.003	ND<0.003
Xylenes	ND<0.003	ND<0.003	ND<0.003	ND<0.003	ND<0.003
Semi-volatiles	ND	ND	ND	ND	ND
Pesticides and PCBs	ND	ND	ND	ND	ND
Metals					
Cadmium	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
Chromium	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
Lead	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
Nickel	ND<1	ND<1	ND<1	ND<1	ND<1
Zinc	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5

Notes:

All analytical results in mg/kg except lead.

TPH/D: Total Petroleum Hydrocarbons as Diesel by EPA Method Mod. 8015.

TPH/G: Total Petroleum Hydrocarbons as Gasoline by EPA Method 5030/Mod. 8015.

Pesticides/PCB: Polychlorinated biphenyls by EPA Method 8080.

VOC: Volatile Organics by EPA Method 8240.

BTEX: By EPA Method 8020.

Oil & Grease: By EPA Method 413.1 (5520 D & F).

Pesticides: By EPA Method 8080.

Semi-Volatile: By EPA Method 8270.

Metals: By California Administrative Code Title 22 and SW0846 Method 6010; results in mg/l.

**TABLE 4.2: SOIL SAMPLE RESULTS FOR UST AREAS
 BALLENA ISLE MARINA, ALAMEDA, CA
 CONTROL NUMBER 1026, GREAT AMERICAN PORTFOLIO
 LAW/CRANDALL PROJECT NO. 2123-20669-1**

Sample ID:	MW-1	MW-2	MW-3	MW-4
Sample Depth, Feet:	5	5	5	5
Sample Date:	12/4/92	12/4/92	12/4/92	12/4/92
TPH/G	ND<1	ND<1	ND<1	ND<1
TPH/D	ND<10	ND<10	ND<10	ND<10
Oil and Grease	ND<50	ND<50	ND<50	ND<50
BTEX				
Benzene	ND<0.003	ND<0.003	ND<0.003	ND<0.003
Toluene	ND<0.003	ND<0.003	ND<0.003	ND<0.003
Ethylbenzene	ND<0.003	ND<0.003	ND<0.003	ND<0.003
Xylenes	ND<0.003	ND<0.003	ND<0.003	ND<0.003
Lead	ND<0.5	ND<0.5	ND<0.5	ND<0.5

Notes:

All analytical results in mg/kg except lead.

TPH/D: Total Petroleum Hydrocarbons as Diesel by EPA Method Mod. 8015.

TPH/G: Total Petroleum Hydrocarbons as Gasoline by EPA Method 5030/Mod. 8015.

BTEX: By EPA Method 8020.

Lead: By California Administrative Code Title 22 and SW-846 Method 6010; results in mg/l.

Oil and Grease: By EPA Method 413.1(5520 D&F).

**TABLE 4.3: GROUNDWATER SAMPLE RESULTS FOR UST AREAS
 BALLENA ISLE MARINA, ALAMEDA, CA
 CONTROL NUMBER 1026, GREAT AMERICAN PORTFOLIO
 LAW/CRANDALL PROJECT NO. 2123-20669-1**

Sample ID:	MW-1	MW-2	MW-3	MW-4
Sample Date:	12/8/92	12/8/92	12/8/92	12/4/92
TPH/G	ND<50	ND<50	52	ND<50
TPH/D	ND<50	ND<50	ND<50	ND<50
BTEX				
Benzene	ND<0.3	ND<0.003	ND<0.3	ND<0.003
Toluene	0.5	ND<0.003	0.5	ND<0.003
Ethylbenzene	ND<0.3	ND<0.003	ND<0.3	ND<0.003
Xylenes	0.6	ND<0.003	0.6	ND<0.003
Lead	ND<0.1	ND<0.1	ND<0.1	ND<0.1

Notes:

All analytical results in ~~mg/l~~ ppb.

TPH/D: Total Petroleum Hydrocarbons as Diesel by EPA Method Mod. 3550/8015.

TPH/G: Total Petroleum Hydrocarbons as Gasoline by EPA Method 5030/Mod. 8015.

BTEX: By EPA Method 8020.

Lead: By SW-846 Method 6010.

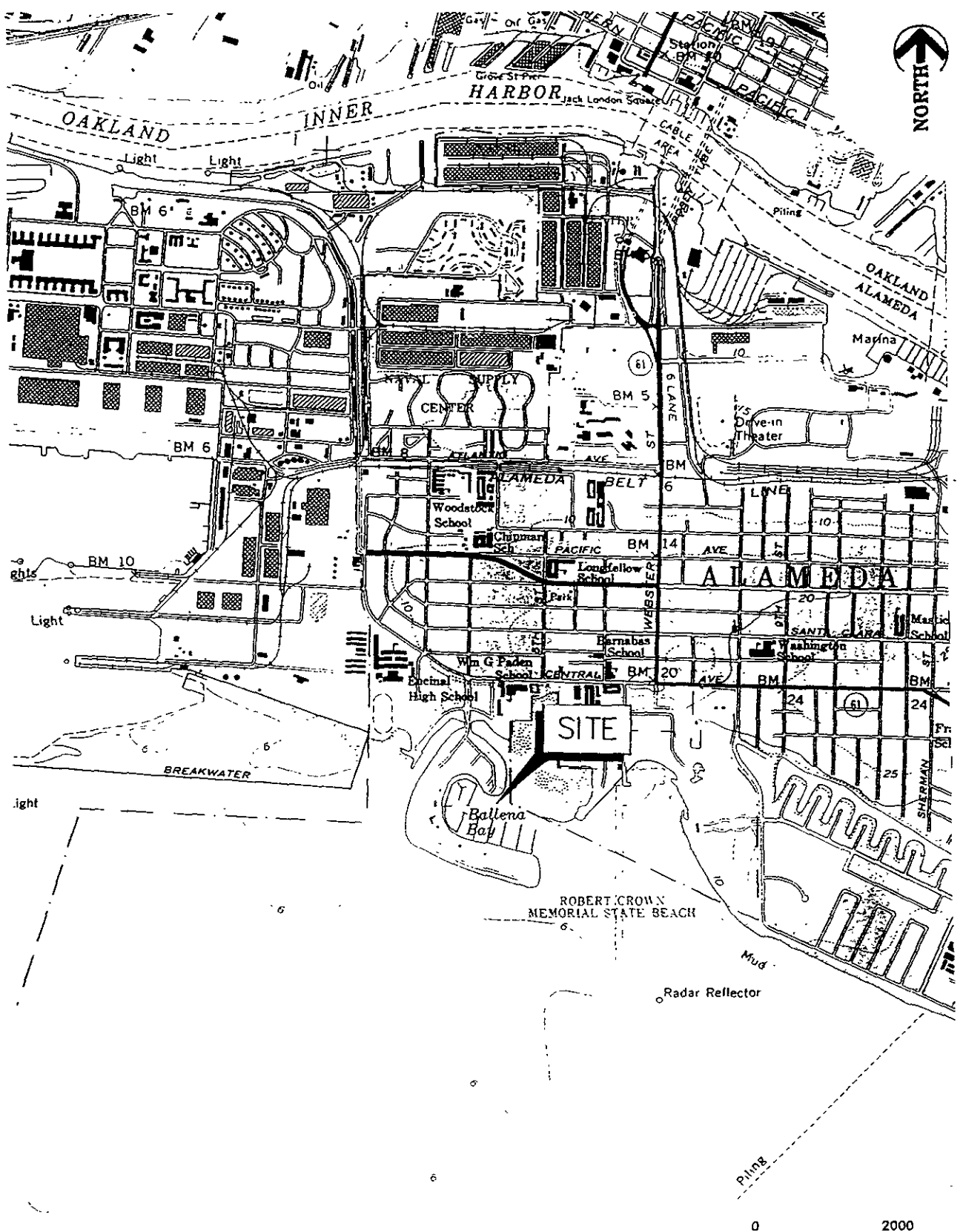
TABLE 4.4: GROUNDWATER ELEVATIONS
 BALLENA ISLE MARINA, ALAMEDA, CA
 CONTROL NUMBER 1026, GREAT AMERICAN PORTFOLIO
 LAW/CRANDALL PROJECT NO. 2123-20669-1

MONITORING WELL	DEPTH TO WATER (FT)	TOP OF CASING ELEVATION (FT)	GROUNDWATER ELEVATION (FT)
MW-1	4.16	9.66	5.50
MW-2	4.68	10.06	5.38
MW-3	4.56	9.99	5.43

Notes:

- 1) Top of casing elevations and groundwater elevations were calculated based on a temporary benchmark located at the southwest corner of the concrete pad which overlies the UST; the benchmark had an assumed elevation of 10 feet.
- 2) Groundwater levels were measured on 12/11/92.

FIGURES



REFERENCE: BASE MAP FROM USGS 7.5 MINUTE TOPOGRAPHIC QUADRANGLE OAKLAND WEST, CALIFORNIA 1959 (PHOTOREVISED 1980).

G.A.P. PORTFOLIO PARTNERS
C/O COLONY ADVISORS, INC.
LOS ANGELES, CALIFORNIA



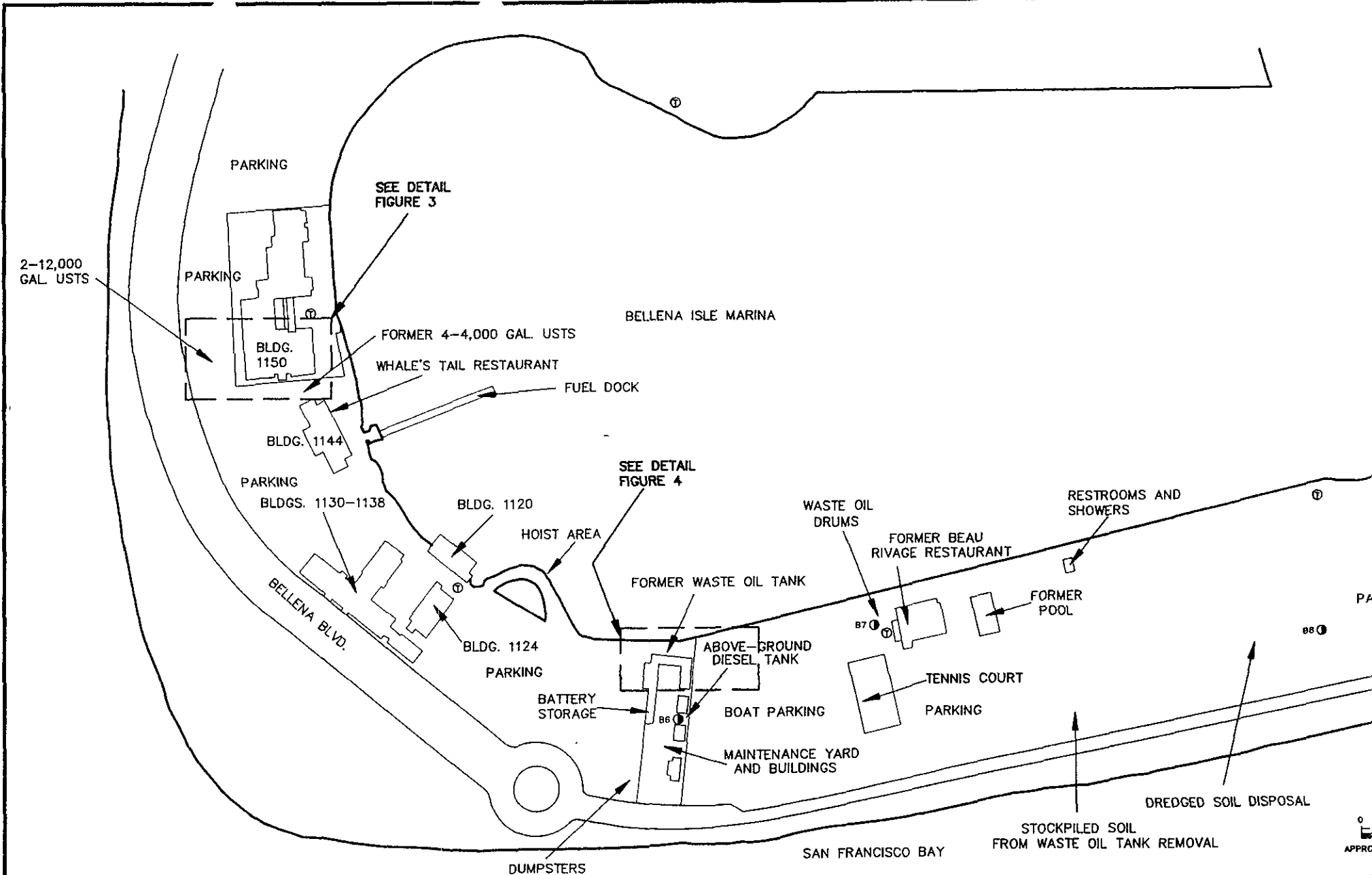
LAW/CRANDALL, INC.

SITE LOCATION MAP
GE SITE # 1026
BALLENA ISLE MARINA
ALAMEDA, CALIFORNIA

JOB NO. 2123-20669-1

FIGURE 1


C:\DWGS\GECAPTOR\LA\0669F1 M.A.H. R11 12/21/92



LEGEND

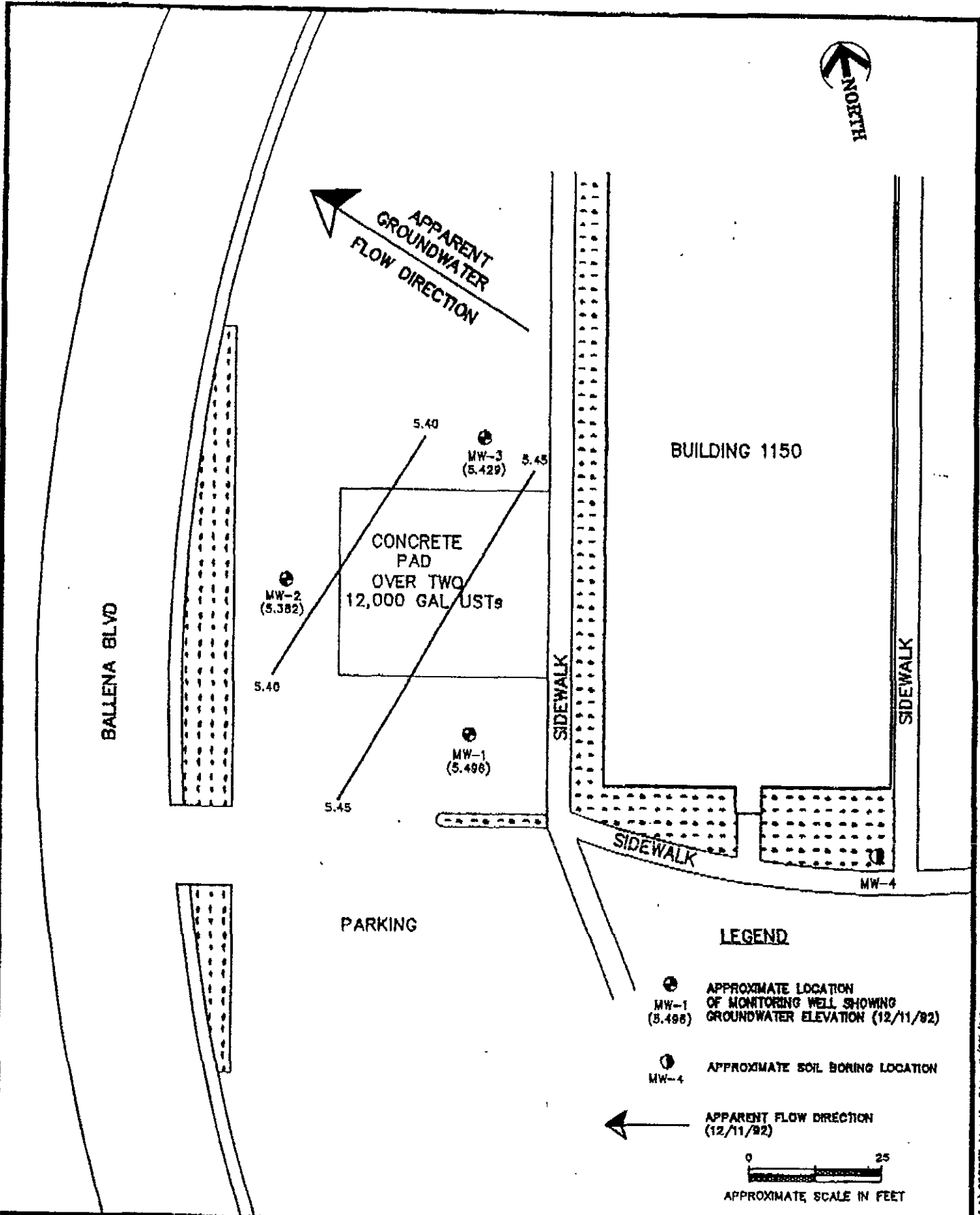
- ⊙ TRANSFORMER
- SOIL BORING

G.A.P. PORTFOLIO PARTNERS
 C/O COLONY ADVISORS, INC.
 LOS ANGELES, CALIFORNIA



LAW/CRANDALL, INC.

SITE
 GE ST
 BELLENA
 ALAMEDA.
 JOB NO 2123-20889-1



G.A.P. PORTFOLIO PARTNERS
 C/O COLONY ADVISORS, INC.
 LOS ANGELES, CALIFORNIA



LAW/CRANDALL, INC.

EXISTING UST AREA
 GE SITE # 1028
 BALLENA ISLE MARINA
 ALAMEDA, CALIFORNIA

C:\DWG\GECAPITOL\LA\086883 M.A.H. R11 12/23/92



MARINA (DOCKS)

SHORELINE

EMBANKMENT

B-3

UTILITY VAULTS

B-2

B-1

HP-1

ASPHALT WALKWAY

STORAGE AREA

B-5

B-4

FORMER WASTE OIL UST EXCAVATION

LARGE TREE

ASPHALT PAVED PARKING LOT

MAINTENANCE YARD AND BUILDING

LEGEND

B-1



APPROXIMATE SOIL BORING LOCATION

HP-1



APPROXIMATE HYDROPUNCH LOCATION



APPROXIMATE SCALE IN FEET

G.A.P. PORTFOLIO PARTNERS
C/O COLONY ADVISORS, INC.
LOS ANGELES, CALIFORNIA



LAW/CRANDALL, INC.

FORMER WASTE OIL
UST AREA
GE SITE # 1026
BALLENA ISLE MARINA
ALAMEDA, CALIFORNIA

JOB NO. 2123-20669-1

FIGURE 4

APPENDIX A

SOIL BORING AND WELL CONSTRUCTION PERMIT



ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

5897 PARKSIDE DRIVE PLEASANTON, CALIFORNIA 94588 (415) 484-2600

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT RALLENDA ISLE MARINA 1150 RALLENDA BLVD. ALAMEDA, CA

PERMIT NUMBER 92611 LOCATION NUMBER

CLIENT Name GENERAL ELECTRIC CAPITAL CORP. Address 260 WOOD RIDGE RD Phone (415) 499-1422 C/O LAW GRANDALL City STAMFORD, CT Zip 06927-9100

PERMIT CONDITIONS

Circled Permit Requirements Apply

APPLICANT Name PAUL BURRAGE LAW/GRANDALL INC. Address 4000 CIVIC CENTER DR Phone (415) 499-1422 City SAN RAFAEL, CA Zip 94903

TYPE OF PROJECT We Construction Geotechnical Investigation Carnadite Protection General Water Supply Contamination Monitoring Well Destruction

PROPOSED WATER SUPPLY WELL USE Domestic Industrial Other Municipal Irrigation

DRILLING METHOD: Mud Rotary Air Rotary Auger Cable Other

DRILLER'S LICENSE NO. C-57 610487

WELL PROJECTS Drill Hole Diameter 8 in. Casing Diameter 2 in. Surface Seal Depth 3 ft. Maximum Depth 15 ft. Number 4

GEOTECHNICAL PROJECTS Number of Borings 6 Hole Diameter 8 in. Maximum Depth 15 ft.

ESTIMATED STARTING DATE 12/1/92 COMPLETION DATE 12/4/92

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-88.

APPLICANT'S SIGNATURE Paul Burrage

- A. GENERAL 1. A permit application should be submitted so as to arrive at the Zone 7 office five days prior to proposed starting date. 2. Submit to Zone 7 within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well projects, or drilling logs and location sketch for geotechnical projects. 3. Permit is void if project not begun within 90 days of approval date. B. WATER WELLS, INCLUDING PIEZOMETERS 1. Minimum surface seal thickness is two inches of cement grout placed by tremie. 2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet. C. GEOTECHNICAL. Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremie cement grout shall be used in place of compacted cuttings. D. CATHODIC. Fill hole above anode zone with concrete placed by tremie. E. WELL DESTRUCTION. See attached.

Approved Wynne Hong Date 24 Nov 92

APPENDIX B

SOIL BORING AND MONITORING WELL CONSTRUCTION LOGS

MW-1 TEST BORING RECORD

DEPTH (FEET)	DESCRIPTION	LITH	S	DIAGRAM	MATERIALS	OVA READINGS
0.0	Asphalt 3 in., Gravel Base 3 in.				Locking vault and watertight well cap	
0.5	FILL-SAND (SP): tan - light grey; 90-95% fine sand; 5-10% silt; poorly graded; subangular; very loose; slightly moist; no unusual odors or discoloration				Grout Seal	
	NOTE: Sand becoming light - medium grey, no unusual odors or discoloration.		SA		Bentonite pellets	
					2" dia. PVC blank Schedule 40 casing	0
					#3 filter sand	
	NOTE: Soil is light-medium grey; 80% fine sand; 20% shell fragments; very loose; very wet; no unusual odors or discoloration; fill				2" dia. PVC slotted Schedule 40 casing (0.02 inch slots)	0
15.0	Boring terminated at approximately 15 feet, groundwater encountered at a depth of approximately 7 feet. Some sloughing of sands, no unusual odors or discoloration.				Threaded pointed endcap	0

REMARKS:

- 1) Boring advanced using 8-inch hollow stem augers.
- Groundwater encountered at depth of approximately 7 feet.
- 3) SA = Sample Analyzed
- 4) ≡ = Stabilized groundwater level
- 5) ∴ = Drilling water level

DRILLED BY	G. SIERRA	BORING NUMBER	MW-1
LOGGED BY	ATM	DATE STARTED	12/4/92
CHECKED BY	MIM	DATE COMPLETED	12/4/92
		JOB NUMBER	2123-20669-1



MW-2 TEST BORING RECORD

DEPTH (FEET)	DESCRIPTION	LITH	S	DIAGRAM	MATERIALS	OVA READINGS
0.0	Asphalt 6 in., Gravel Base 3 in.				Locking vault and watertight well cap	
0.8	FILL-SAND (SP): Tan-light grey; 90% fine grained sand; 10% silt; some silt lenses; poorly graded; subangular; loose; moist; no unusual odors or discoloration NOTE: Becoming light - medium grey at 3 feet NOTE: Sand is light-medium grey; 90% fine - medium sand; 5-10% silt; trace shell fragments; poorly graded; subangular; loose-very loose; wet; no unusual odors or discoloration, fill NOTE: Shell fragments make up 15% of soil		SA		Grout seal Bentonite pellets 2" dia. PVC blank Schedule 40 casing #3 filter sand 2" dia. PVC slotted Schedule 40 casing (0.02 inch slots)	20 120
15.0	Boring terminated at approximately 15 feet, groundwater encountered at a depth of approximately 7 feet. Some sloughing of sands, no unusual odors or discoloration.				Threaded pointed endcap	15

REMARKS:

- 1) Boring advanced using 8-inch hollow stem augers.
- 2) Groundwater encountered at a depth of approximately 7 feet.
- 3) SA = Sample Analyzed
- 4) ≡ = Stabilized groundwater level
- 5) ≡ = Drilling water level

DRILLED BY	G. SIERRA	BORING NUMBER	MW-2
LOGGED BY	ATM	DATE STARTED	12/4/92
CHECKED BY	MIM	DATE COMPLETED	12/4/92
		JOB NUMBER	2123-20669-1



MW-3 TEST BORING RECORD

DEPTH (FEET)	DESCRIPTION	LITH	S	DIAGRAM	MATERIALS	OVA READINGS
0.0	Asphalt 4 in., Gravel base 3 in.				Locking vault and watertight well cap	
0.6	FILL-SAND (SP) tan-light grey; 90% fine sand; 10% silt; poorly graded; subangular; loose; slightly moist; no unusual odors or discoloration				Grout seal	
					Bentonite pellets	
					2' dia. PVC blank Schedule 40 casing	
	NOTE: Sand becoming light - medium grey, no unusual odors or discoloration		SA		#3 filter sand	0
	NOTE: Silt content is decreasing; trace shell fragments; no unusual odors or discoloration.				2' dia. PVC slotted Schedule 40 casing (0.02 inch slots)	0
15.0	Boring terminated at approximately 15 feet, groundwater encountered at a depth of approximately 7 feet. Some sloughing of sands. No unusual odors or discoloration.				Threaded pointed endcap	0

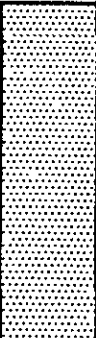

REMARKS:

- 1) Boring advanced using 8-inch hollow stem augers.
- 2) Groundwater encountered at a depth of approximately 7 feet.
- 3) SA = Sample Analyzed
- 4) ≡ = Stabilized groundwater level
- 5) ≡ = Drilling water level

DRILLED BY	G. SIERRA	BORING NUMBER	MW-3
LOGGED BY	ATM	DATE STARTED	12/4/92
CHECKED BY	MIM	DATE COMPLETED	12/4/92
		JOB NUMBER	2123-20669-1



MW-4 TEST BORING RECORD

DEPTH (FEET)	DESCRIPTION	LITH	S	DIAGRAM	MATERIALS	OVA READINGS
0.0	FILL-SAND (SP): light-medium grey; 90% fine sand; 10% shell fragments; poorly graded; subangular; very loose; wet; no unusual odors or discoloration		SA		Bentonite pellets	0
9.0	Hand augering terminated at approximately 9 feet. Groundwater encountered at a depth of approximately 7.3 feet. Some sloughing of sands, no unusual odors or discoloration.					

REMARKS:

- 1) Boring advanced using 3.5-inch hand auger
- 2) Groundwater encountered at a depth of 7.3 feet
- 3) SA = Sample analyzed
- 4) ☼ = Drilling water level

DRILLED BY	G. SIERRA	BORING NUMBER	MW-4 ?
LOGGED BY	ATM	DATE STARTED	12/4/92
CHECKED BY	MIM	DATE COMPLETED	12/4/92
		JOB NUMBER	2123-20669-1



B-1 TEST BORING RECORD

DEPTH (FEET)	DESCRIPTION	LTH	S	DIAGRAM	MATERIALS	OVA READINGS
0.0	Asphalt 4 in., Gravel Base 3 in.					
0.6	FILL-SILTY SAND (SM): Tan-light grey; 70% fine sand; 10% silt; 20% shell fragments; poorly graded; subangular; very loose; moist; no unusual odors or discoloration NOTE: Color becoming light - medium grey				Neat Cement/Grout Seal	0
10.0	FILL-SAND (SP): light-medium grey; 90% fine sand; 10% shell fragments; poorly graded; subangular; very loose; wet; no unusual odors or discoloration		SA			0
15.0	Boring terminated at approximately 15 feet. Groundwater encountered at 10.6 feet. No unusual odors or discoloration.					0

REMARKS:

- 1) Boring advanced using 8-inch hollow stem augers.
- 2) Groundwater encountered at a depth of 10.6 feet.
- 3) SA = Sample Analyzed
- 4) ☼ = Drilling water level

DRILLED BY	G. SIERRA	BORING NUMBER	B-1
LOGGED BY	ATM	DATE STARTED	12/7/92
CHECKED BY	MIM	DATE COMPLETED	12/7/92
		JOB NUMBER	2123-20669-1



B-2 TEST BORING RECORD

DEPTH (FEET)	DESCRIPTION	LITH	S	DIAGRAM	MATERIALS	OVA READINGS
0.0	Asphalt 4 in., Gravel Base 3 in.					
0.6	FILL-SILTY SAND (SM): Tan-light grey; 70% fine sand; 10% silt; 20% shell fragments; poorly graded; subangular; very loose; moist; no unusual odors or discoloration NOTE: Color becoming light - medium grey				Neat Cement/Grout Seal	0
10.0	FILL-SAND (SP): light-medium grey; 90% fine sand; 10% shell fragments; poorly graded; subangular; very loose; wet; no unusual odors or discoloration		SA			0
15.0	Boring terminated at approximately 15 feet. Groundwater encountered at 10.6 feet. No unusual odors or discoloration.					0

REMARKS:

- 1) Boring advanced using 8-inch hollow stem augers.
- 2) Groundwater encountered at a depth of 10.6 feet.
- 3) SA = Sample Analyzed
- 4) ☼ = Drilling water level

DRILLED BY	G. SIERRA	BORING NUMBER	B-2
LOGGED BY	ATM	DATE STARTED	12/7/92
CHECKED BY	MIM	DATE COMPLETED	12/7/92
		JOB NUMBER	2123-20669-1



B-3 TEST BORING RECORD

DEPTH (FEET)	DESCRIPTION	LITH	S	DIAGRAM	MATERIALS	OVA READINGS
0.0	Asphalt 4 in., Gravel Base 3 in.					
0.6	FILL-SILTY SAND (SM): Tan-light grey; 70% fine sand; 10% silt; 20% shell fragments; poorly graded; subangular; very loose; moist; no unusual odors or discoloration NOTE: Color becoming light - medium grey				Neat Cement/Grout Seal	0
10.0	FILL-SAND (SP): light-medium grey; 90% fine sand; 10% shell fragments; poorly graded; subangular; very loose; wet; no unusual odors or discoloration		SA			0
15.0	Boring terminated at approximately 15 feet. Groundwater encountered at 10.6 feet. No unusual odors or discoloration.					0

REMARKS:

- 1) Boring advanced using 8-inch hollow stem augers.
- 2) Groundwater encountered at a depth of 10.8 feet.
- 3) SA = Sample Analyzed
- 4) ∇ = Drilling water level

DRILLED BY	G. SIERRA	BORING NUMBER	B-3
LOGGED BY	ATM	DATE STARTED	12/7/92
CHECKED BY	MIM	DATE COMPLETED	12/7/92
		JOB NUMBER	2123-20669-1



B-4 TEST BORING RECORD

DEPTH (FEET)	DESCRIPTION	LITH	S	DIAGRAM	MATERIALS	OVA READINGS
0.0	Asphalt 4 in., Gravel Base 3 in.					
0.6	FILL-SILTY SAND (SM): Tan-light grey; 70% fine sand; 10% silt; 20% shell fragments; poorly graded; subangular; very loose; moist; no unusual odors or discoloration NOTE: Color becoming light - medium grey				Neat Cement/Grout Seal	0
10.0	FILL-SAND (SP): light-medium grey; 90% fine sand; 10% shell fragments; poorly graded; subangular; very loose; wet; no unusual odors or discoloration		SA			0
15.0	Boring terminated at approximately 15 feet. Groundwater encountered at 10.6 feet. No unusual odors or discoloration.					0

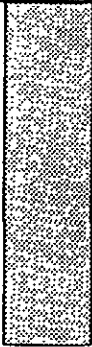

REMARKS:

- 1) Boring advanced using 8-inch hollow stem augers.
- 2) Groundwater encountered at a depth of 10.8 feet.
- 3) SA = Sample Analyzed
- 4) ☼ = Drilling water level

DRILLED BY	G. SIERRA	BORING NUMBER	B-4
LOGGED BY	ATM	DATE STARTED	12/7/92
CHECKED BY	MIM	DATE COMPLETED	12/7/92
		JOB NUMBER	2123-20669-1



B-5 TEST BORING RECORD

DEPTH (FEET)	DESCRIPTION	LITH	S	DIAGRAM	MATERIALS	OVA READINGS
0.0	FILL-SILTY SAND (SM): Light-medium grey; 80% fine sand; 10% silt; 10% shell fragments and roots; poorly graded; subangular; very loose; no unusual stains or discoloration				Neat Cement/Grout Seal	
5.0	FILL-SAND (SP): Light-medium grey; 90% fine sand; 10% shell fragments; poorly graded; subangular; very loose; no unusual odors or discoloration		SA			0
9.0	Hand augering terminated at approximately 9 feet, no unusual odors or discoloration					0

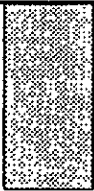
REMARKS:

- 1) Boring advanced using 3.5 inch hand auger due to presence of large tree
- 2) groundwater not encountered
- 3) SA = Sample Analyzed

DRILLED BY	G.SIERRA	BORING NUMBER	B-5
LOGGED BY	ATM	DATE STARTED	12/7/92
CHECKED BY	MIM	DATE COMPLETED	12/7/92
		JOB NUMBER	2123-20669-1



B-6 TEST BORING RECORD

DEPTH (FEET)	DESCRIPTION	LITH	S	DIAGRAM	MATERIALS	OVA READINGS
0.0	Concrete 3 in., Gravel Base 3 in.					
0.5	FILL-SILTY SAND (SM): Tan-light grey; 80% fine sand; 10% silt; 10% shell fragments; poorly graded; subangular; very loose; moist; no unusual stains or discoloration				Neat Cement/Grout Seal	
5.0	Hand augering terminated at approximately 5 feet		SA			0

REMARKS:

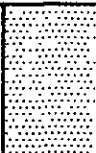
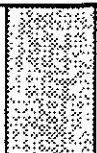
- 1) Boring advanced using 3.5 inch hand auger.
- 2) Groundwater not encountered
-)SA = Sample analyzed

DRILLED BY L/C
 LOGGED BY ATM
 CHECKED BY MIM

BORING NUMBER B-6
 DATE STARTED 12/7/92
 DATE COMPLETED 12/7/92
 JOB NUMBER 2123-20669-1



B-7 TEST BORING RECORD

DEPTH (FEET)	DESCRIPTION	LITH	S	DIAGRAM	MATERIALS	OVA READINGS
0.0	FILL-SAND (SP): Tan-light grey; 85% fine sand; 15% shell fragments and roots; poorly graded; subangular; very loose; moist; no unusual odors or discoloration		SA		Backfill	0
4.0	Boring terminated at 4.00 feet					
	NOTE: Angled boring					

REMARKS:

- 1) Hand augering terminated at 4 feet
- 2) Groundwater not encountered
- 3) SA = Sample analyzed

DRILLED BY
LOGGED BY
CHECKED BY

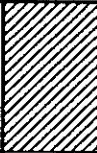
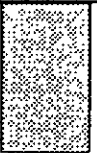
L/C
ATM
MIM

BORING NUMBER
DATE STARTED
DATE COMPLETED
JOB NUMBER

B-7
12/8/92
12/8/92
2123-20669-1



B-8 TEST BORING RECORD

DEPTH (FEET)	DESCRIPTION	LITH	S	DIAGRAM	MATERIALS	OVA READINGS
0.0	CLAY (CL): Dark brown - dark grey brown; high plasticity fines; trace fine sand; moist; no unusual odors or discoloration				Backfill	
4.0	Hand augering terminated at 4 feet.		SA			0

REMARKS:

- 1) Hand augering terminated at 4 feet.
- 2) Groundwater not encountered
-) SA = Sample analyzed

DRILLED BY	L/C	BORING NUMBER	B-8
LOGGED BY	ATM	DATE STARTED	12/8/92
CHECKED BY	MIM	DATE COMPLETED	12/8/92
		JOB NUMBER	2123-20669-1



APPENDIX C
LABORATORY ANALYTICAL RESULTS
AND
CHAIN-OF-CUSTODY DOCUMENTATION



Superior Precision Analytical, Inc.

1555 Burke, Unit 1 • San Francisco, California 94124 • (415) 647-2081 / fax (415) 821-7123

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO.: 55903
 CLIENT: LAW/CRANDALL, INC.
 CLIENT JOB NO.: 2123206630001

DATE RECEIVED: 12/18/92
 DATE REPORTED: 12/23/92

ANALYSIS FOR TOTAL PETROLEUM OIL AND GREASE by Method 5520F (formerly 503E)

LAB #	Sample Identification	Concentration (mg/kg) Total Petroleum Oil & Grease
1	MW1 @ 5'	ND<50
2	MW2 @ 5'	ND<50
3	MW3 @ 5'	ND<50
4	MW4 @ 5'	ND<50

mg/kg - parts per million (ppm)

Minimum Detection Limit for oil & grease in Soil: 50mg/kg

QAQC Summary:
 MS/MSD Average Recovery = 99%
 Duplicate RPD = 6%

Richard Srna, Ph.D.

Onyia A. Anogwu
 Laboratory Director



Superior Precision Analytical, Inc.

1555 Burke, Unit I • San Francisco, California 94124 • (415) 647-2081 / fax (415) 821-7123

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO.: 55863
CLIENT: LAW/CRANDALL, INC.
CLIENT JOB NO.: 2123206630001

DATE RECEIVED: 12/04/92
DATE REPORTED: 12/15/92

ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS by Modified EPA SW-846 Method 5030 and 8015

LAB #	Sample Identification	Concentration Gasoline Range
1	MW1 @ 5'	ND<1 mg/kg
2	MW2 @ 5'	ND<1 mg/kg
3	MW3 @ 5'	ND<1 mg/kg
4	MW4 @ 5'	ND<1 mg/kg
5	MW4	ND<50 ug/L

ug/L - parts per billion (ppb)
mg/kg - parts per million (ppm)

Method Detection Limit for Gasoline in Water: 50 ug/L
Method Detection Limit for Gasoline in Soil : 1 mg/kg

QAQC Summary:

Daily Standard run at 2mg/L: %Diff Gasoline = <15
MS/MSD Recovery = 95%: Duplicate RPD = 1%

Richard Srna, Ph.D.

Orly A. Vucogin
Laboratory Manager

RECEIVED

DEC 16 1992

LAW ENVIRONMENTAL INC.



Superior Precision Analytical, Inc.

1555 Burke, Unit I • San Francisco, California 94124 • (415) 647-2081 / fax (415) 821-7123

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO.: 55863
CLIENT: LAW/CRANDALL, INC.
CLIENT JOB NO.: 2123206630001

DATE RECEIVED: 12/04/92
DATE REPORTED: 12/15/92
DATE REVISED : 12/17/92

ANALYSIS FOR BENZENE, TOLUENE, ETHYL BENZENE & XYLENES
by EPA SW-846 Methods 5030 and 8020

LAB #	Sample Identification	Concentration			
		Benzene	Toluene	Ethyl Benzene	Xylenes
1	MW1 @ 5'	ND<.003	ND<.003	ND<.003	ND<.003 mg/kg
2	MW2 @ 5'	ND<.003	ND<.003	ND<.003	ND<.003 mg/kg
3	MW3 @ 5'	ND<.003	ND<.003	ND<.003	ND<.003 mg/kg
4	MW4 @ 5'	ND<.003	ND<.003	ND<.003	ND<.003 mg/kg
5	MW4	ND<0.3	ND<0.3	ND<0.3	ND<0.3 ug/L

ug/L - parts per billion (ppb)
g/kg - parts per million (ppm)

Method Detection Limit in Water: 0.3 ug/L
Method Detection Limit in Soil : 0.003 mg/kg

QAQC Summary:

Daily Standard run at 20ug/L: %Diff 8020 = <15%
MS/MSD Average Recovery = 91%: Duplicate RPD = 4%

Richard Srna, Ph.D.

Cecilia G. Jouquin (for)
Laboratory Manager



Superior Precision Analytical, Inc.

1555 Burke, Unit I • San Francisco, California 94124 • (415) 647-2081 / fax (415) 821 7123

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO.: 55863
CLIENT: LAW/CRANDALL
CLIENT JOB NO.: 2123206630001

DATE RECEIVED: 12/04/92
DATE REPORTED: 12/15/92

ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS by Modified EPA SW-846 Method 8015

LAB #	Sample Identification	Concentration (mg/kg) Diesel Range	
1	MW1 @ 5'	ND<10	mg/kg
2	MW2 @ 5'	ND<10	mg/kg
3	MW3 @ 5'	ND<10	mg/kg
4	MW4 @ 5'	ND<10	mg/kg
5	MW4	ND<50	ug/L

mg/kg - parts per million (ppm)

ug/L - parts per billion (ppb)

Minimum Detection Limit for Diesel in Soil: 10mg/kg

Minimum Detection Limit for Diesel in Water : 50ug/L

QAQC Summary:

Daily Standard run at 200mg/L: %DIFF Diesel = <15%
MS/MSD Average Recovery = 88%: Duplicate RPD = 1%

Richard Srna, Ph.D.

Richard A. Srna (for)
Laboratory Director



Superior Precision Analytical, Inc.

825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO.: 87362
CLIENT: LAW/CRANDALL
CLIENT JOB NO.: 2123206630001

DATE RECEIVED: 12/04/92
DATE REPORTED: 12/14/92
DATE SAMPLED : 12/04/92

ANALYSIS FOR STLC LEAD
by Calif. Admin. Code Title 22, Paragraph 66700 (WET)
and by EPA SW-846 Method 6010

LAB #	Sample Identification	Concentration (mg/L) Lead
1	MW1 @5'	ND<0.5
2	MW2 @5'	ND<0.5
3	MW3 @5'	ND<0.5
4	MW4 @5'	ND<0.5

mg/L = parts per million in extract

Method Detection Limit for Extractable Lead in Soil: 0.5 mg/L

QAQC Summary: MS/MSD Average Recovery : 92%
Duplicate RPD : 1%

Richard Srna, Ph.D.

Nancy A. Nelson
Laboratory Manager

RECEIVED

DEC 16 1992

LAW ENVIRONMENTAL INC.



Superior Precision Analytical, Inc.

825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO.: 87362
CLIENT: Law/Crandall
CLIENT JOB NO.: 2123206630001

DATE RECEIVED: 12/04/92
DATE REPORTED: 12/14/92
DATE SAMPLED: 12/4/92

ANALYSIS FOR TOTAL LEAD by SW-846 Method 6010

LAB #	Sample Identification	Concentration (mg/l) Total Lead
5	MW4	ND<0.1

mg/l - parts per million (ppm)

Method Detection Limit for Lead in Water: 0.1 mg/L

QAQC Summary: MS/MSD Average Recovery : 92%
Duplicate RPD : 2%

Richard Srna, Ph.D.

Nancy A. Nelson for
Laboratory Manager

CHAIN OF CUSTODY RECORD

558

BCA Log Number _____

Client name LAW/CRANDALL INC				Project or PO# 2123 2063 0001		Analyses required							
Address 400 Civic Center Dr. Suite 305				Phone # 415 499 1422									
City, State, Zip			Report attention SUSAN BARRY										
Lab Sample number	Date sampled	Time sampled	Type* See key below	Sampled by	Number of containers	TPH/6 + BTEX	TPH/D	STLC Lead	Total Lead			Hazardous sample Special handling required	Remarks
				ATM									
	12/4/92	10:00	SO	MW1 at 5ft	1	X	X	X					5 day Turnaround
	12/4/92	11:30	SO	MW2 at 5ft	1	X	X	X					
	12/4/92	1:00	SO	MW3 at 5ft	1	X	X	X					
	12/4/92	3:00	SO	MW4 at 5ft	1	X	X	X					
	12/4/92	3:30	GW	MW4	5	X	X		X				

Signature	Print Name	Company	Date	Time
Relinquished by				
Received by				
Relinquished by				
Received by				
Relinquished by <i>Andrew T. Mulha</i>	<i>Andrew T. Mulha</i>	<i>Law/Crandall</i>	<i>12/4/92</i>	<i>1810</i>
Received by Laboratory <i>Cecilia Joaquin</i>	<i>Cecilia JOAQUIN</i>	<i>Superior LAB</i>	<i>12/4/92</i>	<i>1810</i>

B C ANALYTICAL

1255 Powell Street, Emeryville, CA 94608 (510) 428-2300

801 Western Ave, Berkeley, CA 94701 (818) 247-5737

1200 Gene Autry, Anaheim, CA 92805 (714) 978-0113

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client's expense.

Disposal arrangements: _____

*KEY: WW—Wastewater SU—Surface Water SO—Soil
SL—Sludge PE—Petroleum OT—Other
NA—Nonaqueous GW—Gravel AQ—Aqueous



Superior Precision Analytical, Inc.

1555 Burke, Unit 1 • San Francisco, California 94124 • (415) 647-2081 / fax (415) 821-7123

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO.: 55874
CLIENT: LAW/CRANDALL, INC.
CLIENT JOB NO.: 2123-20663-0001

DATE RECEIVED: 12/08/92
DATE REPORTED: 12/15/92

ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS by Modified EPA SW-846 Method 5030 and 8015

LAB #	Sample Identification	Concentration Gasoline Range
1	SB 7	ND<1 mg/kg
3	MW 1	ND<50 ug/L
4	MW 2	ND<50 ug/L
5	MW 3	52 ug/L

ug/L - parts per billion (ppb)

Method Detection Limit for Gasoline in Soil: 1 mg/kg
Method Detection Limit for Gasoline in Water: 50 ug/L

QAQC Summary:

Daily Standard run at 2mg/L: %Diff Gasoline = <15
MS/MSD Recovery = 94%: Duplicate RPD = 4%

Richard Srna, Ph.D.

Cecilia J. Jouquin (for)
Laboratory Manager



Superior Precision Analytical, Inc.

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C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO.: 55874
CLIENT: LAW/CRANDALL, INC.
CLIENT JOB NO.: 2123-20663-0001

DATE RECEIVED: 12/08/92
DATE REPORTED: 12/15/92

ANALYSIS FOR BENZENE, TOLUENE, ETHYL BENZENE & XYLENES by EPA SW-846 Methods 5030 and 8020

LAB #	Sample Identification	Concentration				
		Benzene	Toluene	Ethyl Benzene	Xylenes	
1	SB 7	ND<.003	ND<.003	ND<.003	ND<.003	mg/kg
3	MW 1	ND<0.3	0.5	ND<0.3	0.6	ug/L
4	MW 2	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ug/L
5	MW 3	ND<0.3	0.5	ND<0.3	0.6	ug/L

ug/L - parts per billion (ppb)
g/kg - parts per million (ppm)

Method Detection Limit in Soil: 0.003 mg/kg
Method Detection Limit in Water: 0.3 ug/L

QAQC Summary:

Daily Standard run at 20ug/L: %Diff 8020 = <15%
MS/MSD Average Recovery = 93%: Duplicate RPD = 5%

Richard Srna, Ph.D.

Cecilia G. Joaquin (for)
Laboratory Manager



Superior Precision Analytical, Inc.

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C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO.: 55874
CLIENT: LAW/CRANDALL, INC.
CLIENT JOB NO.: 2123-20663-0001

DATE RECEIVED: 12/08/92
DATE REPORTED: 12/15/92

ANALYSIS FOR TOTAL PETROLEUM OIL AND GREASE by Method 5520F (formerly 503E)

LAB #	Sample Identification	Concentration (mg/kg) Total Petroleum Oil & Grease
1	SB 7	83
2	SB 8	130

mg/kg - parts per million (ppm)

Minimum Detection Limit for oil & grease in Soil: 50mg/kg

QAQC Summary:

MS/MSD Average Recovery = 98%
Duplicate RPD = 8%

Richard Srna, Ph.D.

Cecilia G. Joaquin (for)
Laboratory Director



Superior Precision Analytical, Inc.

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C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO.: 55874
CLIENT: LAW/CRANDALL, INC.
CLIENT JOB NO.: 2123-20663-0001

DATE RECEIVED: 12/08/92
DATE REPORTED: 12/16/92

ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS by Modified EPA SW-846 Method 8015

LAB #	Sample Identification	Concentration Diesel Range
1	SB 7	ND<10 mg/kg
3	MW 1	ND<50 ug/L
4	MW 2	ND<50 ug/L
5	MW 3	ND<50 ug/L

mg/kg - parts per million (ppm)
ug/L - parts per billion (ppb)

Minimum Detection Limit for Diesel in Water: 50ug/L
Minimum Detection Limit for Diesel in Soil : 10mg/kg

QAQC Summary:

Daily Standard run at 200mg/L: %DIFF Diesel = <15%
MS/MSD Average Recovery = 67%: Duplicate RPD = 9%

Richard Srna, Ph.D.

Cecilia G. Joazeiro (for)
Laboratory Director



Superior Precision Analytical, Inc.

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C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO. 55874-1
CLIENT: LAW/CRANDALL
DATE SAMPLED : 12/08/92
DATE ANALYZED: 12/11/92

DATE RECEIVED: 12/08/92
DATE REPORTED: 12/15/92
PROJECT NO. 2123-20663-0001

EPA SW-846 METHOD 8240 - VOLATILE ORGANICS
by Gas Chromatography/ Mass Spectrometry

SAMPLE: SB7

Compound	MDL	ug/kg	Compound	MDL	ug/kg
Chloromethane	50	ND	Cis-1,3-Dichloropropene	15	ND
Bromomethane	50	ND	Trichloroethene	15	ND
Vinyl Chloride	50	ND	Dibromochloromethane	15	ND
Chloroethane	50	ND	1,1,2-Trichloroethane	15	ND
Methylene Chloride	50	ND	Benzene	5	ND
Acetone	50	ND	Trans-1,3-Dichloropropene	15	ND
Carbon Disulfide	15	ND	2-Chloroethyl vinyl ether	15	ND
Dichlorofluoromethane	15	ND	Bromoform	15	ND
1,1-Dichloroethene	15	ND	4-Methyl-2-Pentanone	50	ND
1,1-Dichloroethane	15	ND	2-Hexanone	50	ND
trans-1,2-Dichloroethene	15	ND	Tetrachloroethene	15	ND
Chloroform	15	ND	1,1,2,2-Tetrachloroethane	15	ND
1,2-Dichloroethane	5	ND	Toluene	15	ND
2-Butanone	100	ND	Chlorobenzene	15	ND
1,1,1-Trichloroethane	15	ND	Ethylbenzene	15	ND
Carbon Tetrachloride	15	ND	Styrene	15	ND
Vinyl Acetate	50	ND	Total Xylenes	15	ND
Bromodichloromethane	15	ND	1,3-Dichlorobenzene	15	ND
1,2-Dichloropropane	15	ND	1,4-Dichlorobenzene	15	ND
cis-1,2-Dichloroethene	15	ND	1,2-Dichlorobenzene	15	ND

ug/kg = parts per billion (ppb)

ND = ANALYTE NOT DETECTED ABOVE QUANTITATION LIMIT

QC DATA:

Surrogate Recoveries

1,2-DCA-d4.....	105%
Toluene-d8.....	104%
Bromofluorobenzene.....	94%

QC LIMITS

soil	
70-121 %	
81-117 %	
74-121 %	

comments:

Richard Srna, Ph.D.

Lucia J. Gonzalez (for)
Laboratory Director

Chain of Custody and Analysis Request

Consultant LAW/CRANDALL
 Address 4000 Civic Center Drive
San Rafael CA 94903
 Phone No. 415 499 1422 Fax No. 415 499 8419
 Project Manager SUSAN Gahmy
 Alternate Contact Andrew Mvha
 Project No. 2123-20663-001 P.O. No. _____

Turn Around Time
 (circle one)
 Same Day 72 Hrs
 24 Hrs 48 Hrs
Normal 5 Day



Superior Precision Analytical, Inc.
 P.O. Box 1545
 Martinez, California 94553
 Martinez 1 (510) 229-1512 Martinez 2 (510) 229-0166
 San Francisco (415) 647-2081

Sampler: AT Mvha
 Regulatory Agency: _____

Section II: Analysis Request

Laboratory Sample Identification	Matrix S = Soil A = Air W = Water	mod 8015 - Gas	mod 8015 - BTEX	mod 8015 - Diesel	8010	8240	CAM17	TCJP Metals:	Metals: <u>Total Lead</u>	418.1 - TPH by IR	O & G	PCBs + Pesticides	8270	Cadmium, Pb, Zn, Ni STLC cad, Cr, Pb, Zn, Ni As, Hg	Date Sampled	Time Sampled	Number of Containers	Preservative (yes or no)	Sampling Remarks				
																			<input type="checkbox"/> Bio-remediation	<input checked="" type="checkbox"/> Underground storage tank	<input type="checkbox"/> Monitoring	<input type="checkbox"/> Recent Contamination	<input checked="" type="checkbox"/> Unknown Compounds
1 SB 7	S	X	X	X		X					X	X	X		12/8	1:30							
2 SB 8	S	X	X	X			X				X	X	X		Please initial: RB: Do not run g/BTEX or Diesel								
3 MW 1	W	X	X	X				X							Samples Stored in ice _____								
4 MW 2	W	X	X	X				X							Appropriate containers _____								
5 MW 3	W	X	X	X				X							Samples Preserved _____								
6															VOCs without headspace _____								
7															Comments _____								
8																							
9																							
10																							
11																							
12																							

Relinquished by <u>Andrew T. Mvha</u> Organization <u>Law/Crandall</u>	Date/Time <u>12/8/92 8:30 PM</u>	Received by _____ Organization _____	Date/Time _____	Lab please initial the following: Samples Stored in Ice <u>Yes</u> Appropriate Containers <u>Yes</u> Samples Preserved <u>Yes</u> VOCs without Headspace <u>Yes</u> Comments _____
Relinquished by _____ Organization _____	Date/Time _____	Received by _____ Organization _____	Date/Time _____	
Relinquished by _____ Organization _____	Date/Time _____	Received by <u>Cecilia Joasun</u> Organization <u>Superior Lab</u>	Date/Time <u>12/8/92 8:30 PM</u>	

Chain of Custody and Analysis Request

Section I

From: Superior Precision Analytical, Inc.
1555 Burke St. Unit I
San Francisco, CA 92124

Phone No. (415) 647-2081 Fax No. (415) 821-7123

Contact: RENE BOONGALIMET

P.O. No. 55874

Turn Around Time
 (circle one)
 Same Day 72 Hrs
 24 Hrs 5 Day
 48 Hrs 10 Day



Superior Precision Analytical, Inc.

P.O. Box 1545
 Martinez, California 94553

Work Subcontracted to: MTZ

Section II: Analysis Request

Laboratory Sample Identification	Matrix B - Soil A - Air W - Water	CAM17	Metals:	418.1	8270	8080 (pest. and PCB's)	STLC Cd, Cr, Pb Bn, Ni	TOTAL LEAD	Client Sample Identification	Number of Containers	Preservative (yes or no)	Sampling Remarks
1 55874-1	S						X			1	N	
2 -2	S	X								1	N	
3 -3	W							X		1	Y	
4 -4	↓							X		1	↓	
5 -5	↓							X		1	↓	
6												
7												
8												
9												
10												
11												
12												

Reinquished by <u>R. Boongalim</u>	Date/Time <u>12/9/92 17:00</u>	Received by _____	Date/Time _____	Lab please initial the following: Samples Stored in Ice _____ Appropriate Containers _____ Samples Preserved _____ VDAs without Headspace _____ Comments _____
Organization <u>SUPERIOR</u>		Organization _____	Date/Time _____	
Reinquished by _____	Date/Time _____	Received by _____	Date/Time _____	
Organization _____		Organization _____		
Reinquished by _____	Date/Time _____	Received by _____	Date/Time _____	
Organization _____		Organization _____		

Chain of Custody and Analysis Request

Section I

From: Superior Precision Analytical, Inc.
1555 Buckle St. Unit I
San Francisco, CA 92124

Phone No. (415) 847-2081 Fax No. (415) 821-7123

Contact: RENE BOONKALING

P.O. No. 55874

Turn Around Time
 (circle one):
 Same Day 72 Hrs
 24 Hrs 5 Day
 48 Hrs 10 Day



Superior Precision Analytical, Inc.
 P.O. Box 1545
 Martinez, California 94553

Work Subcontracted to: CLAYTON

Section II: Analysis Request

Laboratory Sample Identification	Matrix	CAM17	Merch:	418.1	8270	BAPC (pest. and PCB's)	Client Sample Identification	Number of Containers	Preservative (yes or no)	Sampling Remarks
↑ 55874-1	S				X	X		1	N	
2 -2	S				X			1	N	
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										

Sampling Remarks

Chevron
 Non-Chevron

**** Please Fax Results ****

Relinquished by <u>R. Boonkaling</u>	Date/Time <u>12/9/92 5:00 pm</u>	Received by _____	Date/Time _____	Lab please initial the following: Samples Stored in Ice _____ Appropriate Containers _____ Samples Preserved _____ VOA's without Headspace _____ Comments _____
Organization <u>SUPERIOR</u>		Organization _____		
Relinquished by _____	Date/Time _____	Received by _____	Date/Time _____	
Organization _____		Organization _____		
Relinquished by _____	Date/Time _____	Received by _____	Date/Time _____	
Organization _____		Organization _____		



Superior Precision Analytical, Inc.

825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO.: 87386-1
CLIENT: Law/Crandall
CLIENT JOB NO.: 2123-20663-0001

DATE RECEIVED: 12/08/92
DATE REPORTED: 12/15/92
DATE SAMPLED : 12/08/92

Analysis For Soluble Cadmium, Chromium, Lead, Nickel, Zinc
by Calif. Admin. code Title 22, Paragraph 66700
& EPA Method SW-846 6010

LAB #	Sample I.D.	Concentration (mg/L)				
		Cadmium	Chromium	Lead	Nickel	Zinc
1	SB7	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5

mg/L = parts per million in extract

Method Detection Limit for Extractable Cadmium in Soil: 0.5 mg/L
Method Detection Limit for Extractable Chromium in Soil : 0.5 mg/L
Method Detection Limit for Extractable Lead in Soil : 0.5 mg/L
Method Detection Limit for Extractable Nickel in Soil : 1.0 mg/L
Method Detection Limit for Extractable Zinc in Soil : 0.5 mg/L

QAQC Summary: MS/MSD Average Recovery : 90%
Duplicate RPD : 3

Richard Srna, Ph.D.

Nancy A. Nelson for
Laboratory Manager

RECEIVED

DEC 17 1992

LAW ENVIRONMENTAL INC.



Superior Precision Analytical, Inc.

825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229 1512 / fax (510) 229 1526

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO.: 87386 -2
CLIENT: Law/ Crandall
CLIENT JOB NO.: 2123-20663-0001

DATE RECEIVED: 12/08/92
DATE REPORTED: 12/15/92
CLIENT SAMPLE ID: SB8
DATE SAMPLED: 12/08/92

CAM 17 METALS

Methods: EPA SW 846 6000 & 7000 Series
California Administrative Code Title 22

Compound		Results (mg/kg)	Detection Limit (mg/kg)
Antimony	(Sb)	5	5
Arsenic	(As)	3	0.01
Barium	(Ba)	36	5
Beryllium	(Be)	ND	0.5
Cadmium	(Cd)	ND	1
Chromium	(Cr)	50	5
Cobalt	(Co)	ND	10
Copper	(Cu)	40	10
Lead	(Pb)	20	5
Mercury	(Hg)	0.19	0.05
Molybdenum	(Mo)	ND	5
Nickel	(Ni)	50	10
Selenium	(Se)	ND	1
Silver	(Ag)	ND	5
Thallium	(Tl)	ND	5
Vanadium	(V)	40	10
Zinc	(Zn)	80	20

mg/kg = parts per million (ppm)

QAQC Summary: Spike Recovery Range: 62-110%
Duplicate RPD = < 14

Richard Srna, Ph.D.

Nancy A. Nelson for
Laboratory Manager



Superior Precision Analytical, Inc.

825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO.: 87386
CLIENT: Law/Crandall
CLIENT JOB NO.: 2123-20663-0001

DATE RECEIVED: 12/08/92
DATE REPORTED: 12/15/92

ANALYSIS FOR TOTAL LEAD by SW-846 Method 6010

LAB #	Sample Identification	Concentration (mg/L) Total Lead
3	MW1	ND<0.1
4	MW2	ND<0.1
5	MW3	ND<0.1

mg/L - parts per million (ppm)

Method Detection Limit for Lead in Water: 0.1 mg/L

QAQC Summary: MS/MSD Average Recovery : 92 %
Duplicate RPD : 2 %

Richard Srna, Ph.D.

Nancy A. Nelson for
Laboratory Manager

Chain of Custody and Analysis Request

Consultant: LAW/CRANDALL
 Address: 4000 Civic Center Drive
San Rafael CA 94903
 Phone No. 415 499 1422 Fax No. 415 499 8419
 Project Manager: Susan Gehring
 Alternate Contact: Andrew Muka
 Project No. 2123-20663-0001 P.O. No. _____

Turn Around Time
 (circle one)
 Same Day 72 Hrs
 24 Hrs 48 Hrs
Normal 5 Day



Superior Precision Analytical, Inc.
 P.O. Box 1545
 Martinez, California 94553
 Martinez 1 (510) 229-1512 Martinez 2 (510) 229-0166
 San Francisco (415) 647-2081

Sampler: AT Muka
 Regulatory Agency: _____

Section II: Analysis Request

Laboratory Sample Identification	Matrix S = Soil A = Air W = Water	mod 8015 - Gas			8019	8840	QAM17	TC/LR Metals:	Metals: <u>Total Lead</u>	418.1 - TPH by IR	969	PCBs + Pesticides	8270	57LC <u>Cal. Pb, Pd, Ni, Cd, Cr, Cu, Hg, Zn, Mn</u>	Date Sampled	Time Sampled	Number of Containers	Preservative (yes or no)	Sampling Remarks
		mod 8015 - BTEX	mod 8015 - Diesel																
1 SB 7	S	X	X	X	X				X	X	X	X	X	12/8	1:30		N		
2 SB 8	S	X	X	X	X	X			X	X	X	X	X	Please initial: _____ Samples stored in ice _____ Appropriate containers _____ Samples preserved _____ VOA's without headspace _____ Comments _____					
3 MW 1	W	X	X	X				X											Do not run q/BTEX or Diesel
4 MW 2	W	X	X	X				X											
5 MW 3	W	X	X	X				X											
6																			
7																			
8																			
9																			
10																			
11																			
12																			

Relinquished by: <u>Andrew Muka</u> Organization: <u>LAW/CRANDALL</u>	Date/Time: <u>12/8/92 8:30 PM</u>	Received by: _____ Organization: _____	Date/Time: _____	Lab please initial the following: Samples Stored in ice <u>Yes</u> Appropriate Containers <u>Yes</u> Samples Preserved <u>N/A</u> VOAs without Headspace <u>Yes</u> Comments _____
Relinquished by: _____ Organization: _____	Date/Time: _____	Received by: _____ Organization: _____	Date/Time: _____	
Relinquished by: _____ Organization: _____	Date/Time: _____	Received by: <u>Cecilia Johnson</u> Organization: <u>Superior Lab</u>	Date/Time: <u>12/8/92 8:30 PM</u>	



Superior Precision Analytical, Inc.

1555 Burke, Unit I • San Francisco, California 94124 • (415) 647-2081 / fax (415) 821-7123

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO.: 55874
CLIENT: LAW/CRANDALL, INC.
CLIENT PROJECT NO.: 2123206630001

DATE RECEIVED: 12/08/92
DATE REPORTED: 12/17/92

Following is a list of Cross referenced Lab Numbers and Sample I.D.'s for referring to the following reports.

Superior Lab Number	Subbed Lab Number	Customer Sample Identification
55874- 1	9212151-01A	SB7
55874- 2	9212151-02A	SB8

Subbed to: CLAYTON ENVIRONMENTAL CONSULTANTS DOHS#1196.