



February 17, 1997

96-2088

Ms. Susan L. Hugo, Environmental Specialist  
Alameda County Department of Environmental Health  
1131 Harbor Bay Parkway, 2nd Floor  
Alameda, California 94502

ENVIRONMENTAL  
PROTECTION  
97 FEB 20 AM 9:14

Re: Site Closure Report for 1258 64th Street, Emeryville, California

Dear Ms. Hugo:

Enclosed is the Site Closure Report which presents the results of remediation activities performed at the vacant lot located at 1258 64th Street in Emeryville, California ("the Site"). SOMA Corporation (SOMA) has prepared this report on behalf of the City of Emeryville Redevelopment Agency, Department of Economic Development and Housing (Redevelopment Agency). Remedial action was undertaken pursuant to Alameda County Department of Environmental Health Services' (ACDEH) request for an evaluation of elevated lead concentrations in on-site soil and subsequent findings indicating that soil remediation would be required. Remedial activities were conducted in accordance with the Corrective Action Plan (CAP) for the Site prepared by SOMA that was approved by ACDEH on November 5, 1996 during a meeting with you that included Dr. Norman Ozaki of SOMA and Ms. Maria Bigornia Poncel of the Redevelopment Agency.

Remedial activities at the Site consisted of soil excavation and off-site disposal of lead-affected soils. The excavation was performed so that residual lead concentrations in soil were below the site-specific target cleanup goal of 320 mg/kg. Based upon the successful completion of remedial excavation activities at the Site and an evaluation of associated analytical soil data, SOMA recommends that no further action be required at the Site. On behalf of the Redevelopment Agency, SOMA is requesting site closure.

The enclosed report is being submitted for your approval of the completion of remediation at the Site. Together with information in the CAP, this report satisfies your requirements for closure as outlined in your letter of May 21, 1996 addressed to Ms. Maria Bigornia Poncel. We look forward to receiving your "No Further Action" letter documenting the acceptance of the remedial activities at



Letter to Susan L. Hugo  
February 17, 1997  
Page 2 of 2

the Site. In order to proceed with the construction of three proposed residential housing units at the Site, the Redevelopment Agency would appreciate receipt of an ACDEH closure/No Further Action letter at your earliest convenience.

Thank you for your expedited review of the enclosed report. If you have any questions regarding the enclosed Site Closure Report, please feel free to contact either of the undersigned at (510) 654-3900.

Sincerely,

A handwritten signature in cursive script, appearing to read "Norman T. Ozaki".

Norman T. Ozaki  
President and Principal Toxicologist

A handwritten signature in cursive script, appearing to read "Alix A. Spivack".

Alix A. Spivack  
Staff Scientist

enclosures

cc: Ms. Maria Bigornia Poncel



**SITE CLOSURE REPORT**  
**1258 64TH STREET**  
**EMERYVILLE, CALIFORNIA**

*J*

ENVIRONMENTAL  
PROTECTION  
97 FEB 20 AM 9:14

February 17, 1997

SOMA 96-2088

Prepared For:

City of Emeryville Redevelopment Agency  
Department of Economic Development and Housing  
2200 Powell Street, Suite 1200  
Emeryville, California 94608-1806

Prepared By:

SOMA Corporation  
1260 B 45th Street

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**SITE CLOSURE REPORT**  
**1258 64TH STREET • EMERYVILLE, CALIFORNIA**

## **1.0 INTRODUCTION**

SOMA Corporation (SOMA) is submitting this Site Closure Report on behalf of the City of Emeryville Redevelopment Agency, Department of Economic Development and Housing (Redevelopment Agency) to the Alameda County Department of Environmental Health Services (ACDEH). This Site Closure Report documents of the completion of remediation of lead-affected soils at the vacant lot located at 1258 64th Street in Emeryville, California (the "Site," Figure 1). Soil remedial activities were performed on December 16 and 17, 1996. Remedial action was undertaken in compliance with the evaluation and remediation requirements contained in ACDEH's May 21, 1996 letter to Ms. Maria Bigornia Poncel of the Redevelopment Agency (Appendix A). Remedial activities were conducted pursuant to the Combined Soil and Ground-Water Investigation and Corrective Action Plan (CAP) prepared by SOMA and submitted to ACDEH for approval on October 29, 1997. The CAP presented a risk-based target cleanup goal (TCG) for lead in Site soils of 320 mg/kg. The CAP was approved by ACDEH during a meeting with Ms. Susan Hugo on November 5, 1996 that was attended by Dr. Norman Ozaki of SOMA and Ms. Maria Bigornia Poncel of the Redevelopment Agency. The TCG was reviewed by Madhulla Logan of ACDEH independently of the CAP and approved by her during a telephone conversation to SOMA on November 7, 1996. This report describes the soil remedial activities which included excavation and off-site disposal of lead-affected soils.

## **2.0 SITE DESCRIPTION**

The subject Site is located on the north side of the street at 1258 64th Street in Emeryville, California, approximately 0.6 miles east of the San Francisco Bay (Figure 1). The Site is currently a vacant undeveloped lot, approximately 107 feet by 50 feet, and secured by chain-link fence (Figure 2). The vacant lot is generally flat and residential houses border the northern and western perimeters

of the Site. An apartment building borders the eastern perimeter of the Site and 64th Street borders the southern perimeter of the Site.

Prior to 1911, the Site and the surrounding area were vacant.<sup>1</sup> A house existed on the Site from 1911 to 1995 and a shed existed on the northern edge of the property from 1911 to approximately the mid 1950s or the mid 1960s.<sup>2</sup> Sometime between the mid 1950s and mid 1960s, the shed was removed and a garage was installed on the southeastern portion of the property. Between September 26, 1995 and October 3, 1995, the house and garage were demolished.<sup>3</sup> Since October 1995, the lot has remained vacant. The City of Emeryville has owned the property since March 2, 1995.<sup>4</sup> Although the adjacent property is residential in nature, commercial and industrial businesses are located as close as one-half block from the Site.

### 3.0 HISTORICAL SITE INVESTIGATIONS

Elevated concentrations of lead in Site soil have been reported by various consultants in the past: Historical environmental studies at the Site can be categorized as occurring prior to demolition of the house and garage at the Site and those which have occurred since demolition.

#### 3.1 Pre-Demolition Investigations

In May 1995, Environmental Services (ES) conducted a Housing and Urban Development (HUD) Evaluation of Lead-Based Paint Hazard Study at the Site. Reportedly, the laboratory results for 4 soil samples collected by ES indicated "...that one of the four soil samples yielded results above our standard (500 ppm)."<sup>5</sup> Additionally, ES stated that "[t]he sample which yielded an elevated result (>500 ppm) was a composite drip line sample."<sup>6</sup>

Environmental Innovations Corporation (EIC) also performed soil sampling at the Site in May 1995. Nine soil samples were collected from 3 soil borings at the Site. Laboratory results indicated

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<sup>1</sup> A R.E.A. 1996.

<sup>2</sup> A R.E.A. 1996.

<sup>3</sup> BAAQMD 1995a.

<sup>4</sup> The Foreclosure Company, Inc. 1995; Redevelopment Agency 1995.

<sup>5</sup> ES 1995.

<sup>6</sup> ES 1995.



that lead concentrations ranged from 258.2 mg/kg (0.0 feet below ground surface [bgs]) to 2,347.3 mg/kg (0.0 feet bgs).<sup>7</sup>

Historical records indicate that KELLCO conducted soil sampling at the Site on August 2, 1995. KELLCO collected 8 laterally composited soil samples from the Site at a depth of approximately 2 inches bgs. Analytical results indicate that lead concentrations ranged from 211.1 mg/kg to 2,634 mg/kg.<sup>8</sup>

### 3.2 Post-Demolition Investigations

Demolition of the house and garage was conducted between September 26, 1995 and October 3, 1995. On October 9, 1995, KELLCO collected 6 soil samples from the Site. Analytical results indicated that concentrations of lead ranged from 144.5 mg/kg to 580.7 kg/mg.<sup>9</sup>

In September 1996, SOMA conducted a Phase II Site Investigation to evaluate the extent of residual lead in soil and ground-water at the Site. Eleven soil borings were drilled at the Site, typically to depths of 2 to 4 feet bgs (Figure 3). Two of the borings were drilled to depths of 15 feet and 21 feet respectively, and converted into temporary piezometers. Three soil samples were collected at each sampling location at 0.5-, 1.5- and 4-foot depth intervals to evaluate the vertical and lateral extent of lead at the Site. Selected soil samples from the 11 borings were analyzed for total lead and the 3 soil samples with the highest concentrations of total lead were analyzed for soluble lead by the California Waste Extraction Test (CA Title 22) (CA WET) and EPA Method 7420. Two ground-water samples were collected from the temporary piezometers and analyzed for lead. ✓

Concentrations of lead in surface soil samples ranged from 5 mg/kg to 380 mg/kg. Concentrations of lead in soil samples collected at the 1.5 foot depth interval ranged from 6 mg/kg to 110 mg/kg. Concentrations of lead in soil samples collected at the 4.0 foot depth interval ranged from 5 mg/kg to 17 mg/kg. CA WET results for lead were 0.5 mg/L, 10 mg/L, and 14 mg/L, respectively for the 3

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<sup>7</sup> EIC 1995.

<sup>8</sup> KELLCO 1995.

<sup>9</sup> KELLCO 1995.

soil samples analyzed.<sup>10</sup> The Soluble Threshold Limit Concentration (STLC) for lead is 5.0 mg/L.<sup>11</sup> Lead was not detected in ground-water.<sup>12</sup>

The Phase II Site Investigation results indicated that the highest concentrations of lead in Site soils were present in the near surface depth interval (0.0 to 0.5 feet bgs) in the central and northern portions of the Site (Figure 3). The magnitude of the distribution of lead in the near surface soil was not uniform and differed by as much as two orders of magnitude between sampling locations. In general, lead concentrations in the soil decreased with depth. The highest detected concentrations of lead in the Phase II Site Investigation (380 mg/kg and 310 mg/kg) did not confirm the highest concentrations reported by EIC (2,347.3 mg/kg) and KELLCO (2,634 mg/kg). Based upon the available analytical results, elevated lead concentrations in soil are suspected to be the result of weathering of lead-based paints that were applied to the exterior surfaces of the structures at the Site.

A conservative target cleanup goal (TCG) for lead in soil was developed identified based on risk using the Cal EPA Department of Toxic Substances Control bio-uptake model known as the Lead Risk Assessment Spreadsheet, Version Pb6. The model predicts lead concentrations in blood, or blood lead, based upon lead in the environment (including lead in soil). SOMA used a blood lead concentration of 10 ug/dL, as the model criterion for developing the TCG. A TCG of 320 mg/kg was calculated for the Site.<sup>13</sup>

Comparison of the Phase II analytical results and the calculated TCG for lead indicated that only 1 sample collected from SB-9 exceeded the TCG of 320 (Figure 3). Since the amount of soil associated with the area represented by this sampling location was relatively small, an extensive evaluation of remedial alternatives was not undertaken. SOMA's CAP indicated the following recommendations for addressing the remediation of the elevated lead concentration at SB-9:

- 1) Remedial Action. Excavate soil that exceed the TCG of 320 mg/kg of lead and dispose off site at an appropriate landfill or rebury on site under building pads and driveways. The TCG is exceeded in only one location, SB-9, at a concentration of 380 mg/kg. In addition, SOMA recommends that soil from sampling location SB-5 be excavated and disposed since the concentration at SB-5 of 310 mg/kg is relatively close to the TCG of 320 mg/kg. The soil

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<sup>10</sup> SOMA 1996.

<sup>11</sup> CCR Title 22.

<sup>12</sup> SOMA 1996.

<sup>13</sup> SOMA 1996.

sample at SB-5 was a surface sample from the 6-inch depth interval at an uncovered area of the backyard of Unit 3. Its proximity made it a suspect location for direct contact exposures. Given the heterogeneity of soil, SOMA felt it was prudent to remove SB-5.

A 10-foot diameter surround the two sampling locations to a depth of 1-foot will be excavated. Less than 10 cubic yards are estimated to be generated from the selected excavations. Stockpile the soil and collect a 4-point composite soil sample to determine appropriate disposal alternatives. In addition, a second sample will be taken to evaluate the possibility that the soil may be considered a RCRA waste. A total of five confirmation soil samples from the side walls and floor of each excavation location will be collected to confirm the attainment of the TCG.

- 2) Geotechnical Requirement. Excavate the top six inches of soil at the Site and transport it to an appropriate land fill for disposal (Class I or Class II landfill). The geotechnical report by Geotechnical Engineering Inc. recommends that all existing vegetation and debris be removed from the Site prior to construction. The report estimates that the stripping depth would be approximately six inches. Approximately 150 cubic yards of soil are estimated to be generated from the excavation.

Remedial Action. In order to accommodate geotechnical requirements, and at the same time, accomplish site remediation, SOMA recommends that the top 10 inches of soil be excavated from the entire Site. This depth is considered to take into consideration the heterogeneity of soil and account for the fact that both KELLCO and EIC reported lead concentrations in excess of 2000 mg/kg in the surface soil. Approximately 200 yd<sup>3</sup> of soil are estimated to be generated from the excavation. Two samples, each consisting of a composite of four discrete samples will be taken from this excavated soil to evaluate disposal options. An additional sample will be taken to evaluate the possibility that the soil may be considered a RCRA waste.

After the soil removal has been completed and stockpiled on site, 8 confirmation samples will be collected from the Site. Surface soil samples from the 3-inch depth interval from the following sample locations will be collected: SB-1, SB-2, SB-4, SB-5, SB-6, SB-7, SB-9, and SB-11. If the 95 percent UCL concentration for the confirmation lead samples are less than the TCG of 320 mg/kg, lead remediation will be assumed to be complete and in compliance with the ACDEH requirements for site closure. If any of the 8 discrete samples exceed the

TCG, remediation will be considered complete as long as the sample(s) are beneath building pads and concrete driveways and walkways.

- 3) As an option to off-site soil disposal, evaluate the geotechnical feasibility of placing excavated soil below the proposed building slabs and driveways.

#### **4.0 REMEDIAL ACTIVITIES**

Remedial activities at the Site consisted of excavation and off-site disposal of lead-affected soils on December 16 and 17, 1996. Due to rain, the soil removal date was postponed several times prior to the actual excavation date. Because of the inclement weather conditions, the boundaries of the soil to be excavated around soil borings SB-5 and SB-9 were identified prior to the initiation of soil excavation. The boundaries were identified by collecting confirmation soil samples and submitting the samples for total and soluble lead analyses. The early collection of confirmation samples permitted the excavation of soil and transfer to waiting dump trucks without the necessity of stockpiling prior to transport and off-site disposal.

#### **4.1 Total Lead Confirmation Results**

Four soil samples from the side walls and 1 soil sample from the floor of each marked excavation area (Figure 4) were collected and submitted for laboratory analysis. Side wall samples were collected at a depth of approximately 9 inches bgs and floor samples were collected at a depth of approximately 18 inches bgs directly beneath each respective boring location. These samples served a dual purpose: the identification of the excavation boundaries; and confirmation of residual lead concentrations in the surrounding soil. The approximate locations of the 10 confirmation soil samples are presented on Figure 4.

The soil samples were placed directly into clean glass jars which were then sealed, labeled, and placed in a chilled cooler containing crushed ice for transportation to the analytical laboratory. Proper documentation and field chain-of-custody (COC) procedures were followed.

Chemical analyses were performed by Micro Analytical Laboratories, Inc. (MAL), a laboratory certified by the State of California Department of Health Services under the Environmental Laboratory Accreditation Program (ELAP). The samples were analyzed for total lead by EPA

Methods 3050A/7420. The analytical results are presented below in Table 1. Copies of the original analytical laboratory certificates, laboratory quality control reports, and COC forms associated with the confirmation soil samples are included in Appendix B.

Laboratory analytical results indicated that the total lead confirmation soil samples contained non-detectable to detectable concentrations of lead below the TCG. Based upon these analytical results, the excavation areas as marked around borings SB-5 and SB-9 were considered to be sufficient in size and did not require enlargement.

Table 1. Total Lead Confirmation Sample Results.

Sample Identification	Total Lead Concentration (mg/kg)
EX1-1	149
EX1-2	146
EX1-3	177
EX1-4	218
EX1-5	142
EX2-1	ND < 21
EX2-2	28
EX2-3	19
EX2-4	ND < 25
EX2-5	ND < 24

#### 4.2 Soluble Lead Results

On December 16, 1996, two additional soil samples were collected from SB-1 and SB-5 and analyzed for soluble lead by the California Waste Extraction Test (CA Title 22) (CA WET) and EPA Method 7420. Soil samples were collected at a depth of approximately 6 inches bgs directly beneath former soil boring locations SB-1 and SB-5, respectively (Figure 4). The results of the soluble lead analyses (using the CA WET) were compared to the STLC to conservatively evaluate the solubility of lead in soils and the potential for lead in soil to affect shallow ground-water. The STLC was used as a conservative benchmark for solubility and as an additional criteria for soil excavation.

Soil samples were placed directly into clean glass jars which were then sealed, labeled, and placed in a chilled cooler containing crushed ice for transportation to American Environmental Network (AEN)

for chemical analysis. AEN is a laboratory certified by the State of California Department of Health Services under ELAP. Proper documentation and field COC procedures were followed.

The analytical results are presented below in Table 2. CA WET results for lead in the 2 soil samples were below the STLC of 5.0 mg/L. Copies of the original analytical laboratory certificates, laboratory quality control reports, and COC forms associated with these 2 supplementary soil samples are included in Appendix B.

**Table 2. Analytical Results for Soluble Lead (CA WET) in Soil Samples SB-1-0.5 and SB-5-0.5.**

Sample Identification	CA WET Lead Concentration (mg/L)	Lead STLC (mg/L)
SB-1-0.5	ND < 0.1	5.0
SB-5-0.5	0.1	5.0

#### 4.3 On-Site Excavation and Off-Site Disposal

The soil excavation performed at the Site involved two separate activities: the excavation of elevated lead-affected soils and the clearing and grubbing of the entire Site. All site activities were conducted under the supervision of a California Registered Civil Engineer. The soil excavation activities were performed in accordance with the Health and Safety Plan prepared by SOMA, dated December 16, 1996.

##### 4.3.1 Elevated Lead-Affected Soil Excavation

Excavation of lead-affected soils from SB-5 and SB-9 was performed by MBM & Daughters Inc. of Redwood City, California on December 16 and 17. The lead-affected soil was excavated using a track-mounted excavator. A track-mounted excavator was used instead of a backhoe to bridge the soft on-site rain-saturated soil. Each excavation area was circular, with an approximate radius of 7.0 feet measured from its centroid (i.e., boring location) and a depth of approximately 22 inches bgs. Figure 5 illustrates the perimeters of the two excavation areas surrounding SB-5 and SB-9. Approximately 16 cubic yards of lead-affected soil was removed from SB-5 and SB-9.

Prior to excavation, Underground Services Alert (USA) was contacted to assess the potential presence of underground utilities at the Site. USA reported that the Site was clear of underground utilities. Other precautionary measures included the construction of a berm along the edges of the excavations to prevent off-site migration of rain and surface runoff in the event of rain showers during excavation activities. The areas were graded such that rain and surface runoff were contained within the excavations during remedial activities. Dust control measures were not required since soils within the excavation limits were saturated. Airborne dust was not generated during excavation and loading activities.

#### 4.3.1.1 Waste Characterization

In order to evaluate the potential classification of the excavated soil as a RCRA hazardous waste, sample SB-5-0.5 was re-analyzed by AEN for the 8 toxicity characteristic RCRA metals in accordance with Toxicity Characteristic Leaching Procedure (TCLP) extraction method (EPA Method 1311) and EPA Method 6010/7000. The analytical result for lead is presented below in Table 3. The results of the lead analysis based on a TCLP extraction indicated that the lead-affected soil was not classified as a RCRA hazardous waste by toxicity characteristics. Copies of the original analytical laboratory certificates, laboratory quality control reports, and COC forms associated with this soil sample are included in Appendix B.

Table 3. TCLP Extraction Analytical Results for Lead.

Sample Identification	TCLP Lead Concentration (mg/L)	Toxicity Characteristic Level (mg/L)
SB-5-0.5	0.05	5

#### 4.3.1.2 Off-Site Disposal

The lead-affected soil surrounding soil boring locations SB-5 and SB-9 was excavated and loaded onto a dump truck for off-site disposal at the U.S. Ecology, Inc. Class I landfill located in Beatty, Nevada. The truck trailer was tarped during transportation to the landfill. Approximately 18.35 tons (i.e., 1 truck load) of non-RCRA hazardous solid waste were transported by MBM & Daughters, Inc. and delivered to the Class I disposal facility on December 17, 1996 under State Manifest Document Number 93053047. Appendix C contains a copy of the Manifest.

Waste soil generated during SOMA's Phase II Site Investigation in September 1996 had been stored on-site. Approximately 45 pounds of drill cutting soil was stored in a 5-gallon capacity container. These soils were also transported and disposed of at the U.S. Ecology, Inc. Class I landfill.

#### 4.3.2 Site-Wide Clearing and Grubbing

After the excavation and removal of the lead-affected soils from around SB-5 and SB-9, clearing and grubbing activities were performed at the Site at the request of the Redevelopment Agency. Surficial soil to a depth of approximately 9 inches bgs was removed from the entire surface area of the Site. This was performed to remove the surface growth of plants and weeds in preparation for soil compaction and grading. The excavated soil was loaded onto dump trucks for off-site disposal at the Altamont Landfill Class II disposal facility in Livermore, California. A Class II disposal facility was selected based upon the analytical results for total lead in soil samples collected from the 1.5 foot depth interval at the Site during the Phase II Site Investigation (see Section 3.2). The truck trailers were tarped during transportation to the landfill. Approximately 183.5 tons (i.e., 11 truck loads) of soil were transported by MBM & Daughters, Inc. and delivered to the disposal facility on December 16 and December 17, 1996.

## 5.0 CONCLUSIONS

Confirmation soil sample analytical results collected from the side walls and floors of the excavation areas surrounding SB-5 and SB-9 are presented in Table 1. They indicate that residual lead concentrations on-site are well below the TCG of 320 mg/kg.

Current concentrations of lead in on-site soil are represented by the analytical results associated with samples originally collected from the 1.5 foot depth interval during the Phase II Site Investigation. Six soil samples were originally collected from the 1.5 foot depth interval and were associated with concentrations of lead ranging from 6 mg/kg to 110 mg/kg.<sup>14</sup> The arithmetic mean concentration of lead in those soils is approximately 33 mg/kg. Comparison of the arithmetic mean concentration (33 mg/kg) and the maximum detected concentration (110 mg/kg) to the TCG (320 mg/kg) indicates that the concentrations of lead in the current Site surface soils (defined as 0 - 9 inches bgs) are well below the TCG.

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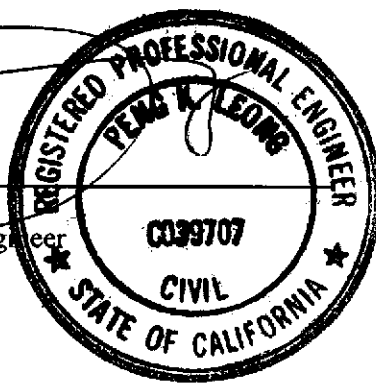
<sup>14</sup> SOMA 1996.



Based upon the CA WET lead results for soil samples collected from SB-1 and SB-5, soluble lead concentrations in on-site soil are less than the STLC criterion.

In consideration of the remedial actions performed at the Site in December 1996, the analytical results associated with soil samples collected during the Phase II Site Investigation, and the analytical results of the confirmation samples, SOMA concludes that remediation has been successfully completed and no further action is warranted at the subject Site. On behalf of the Redevelopment Agency, SOMA requests site closure for the vacant lot at 1258 64th Street in Emeryville, California. Upon receipt of formal documentation of site closure from ACDEH, the Redevelopment Agency intends to commence residential redevelopment of the Site.

Peng Leong, P.E.  
Registered Civil Engineer



*Feb 17/97*

## 6.0 REFERENCES

Alameda County Department of Environmental Health (ACDEH). 1996. Letter from Susan L. Hugo, Senior Hazardous Materials Specialist, ACDEH to Ms. Maria Bigornia Poncel of the City of Emeryville, Redevelopment Agency. Subject: 1258 - 64th Street, Emeryville, California 94608. May 21.

A R.E.A. Environmental Services (A R.E.A.). 1996. Phase I Environmental Site Assessment, Vacant Lot, Alameda County APN 049-1470-005-01, 1258 64th Street, Emeryville, California. March 26.

Bay Area Air Quality Management District (BAAQMD). 1995. Demolition Notification Form.

City of Emeryville, Redevelopment Agency (Redevelopment Agency). 1995. Certificate of Acceptance. March 8.

California Code of Regulations (CCR). Title 22.

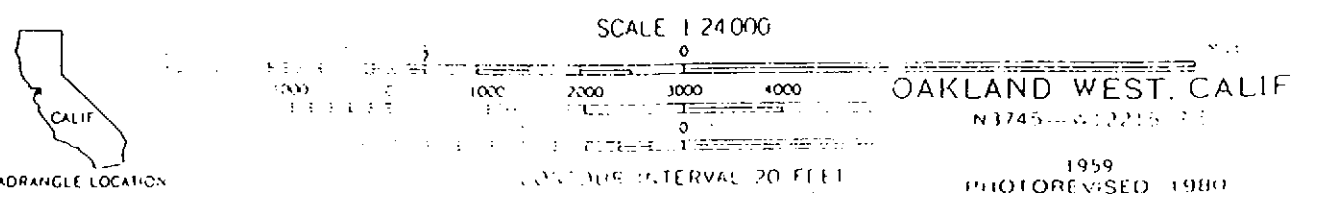
Environmental Innovations Corporation (EIC). 1995. Building Inspection for ACM & Soil Sampling for Existing Lead Contamination. June 9.

Environmental Services. 1995. Memorandum to HRS Team from Ralph Ray II of Environmental Services. Subject: 1258 64th Street, Emeryville. May 8.

The Foreclosure Company, Inc. 1995. Trustee's Deed. March 2.

KELLCO. 1995. Pre-demolition and Post-demolition Soil Sampling and Lead Analysis Report. August and October.

SOMA Corporation (SOMA). 1996. Combined Soil and Ground-water Investigation and Corrective Action Plan (CAP), Vacant Lot, 1258 64th Street, Emeryville, California. SOMA 96-2088. October 29.



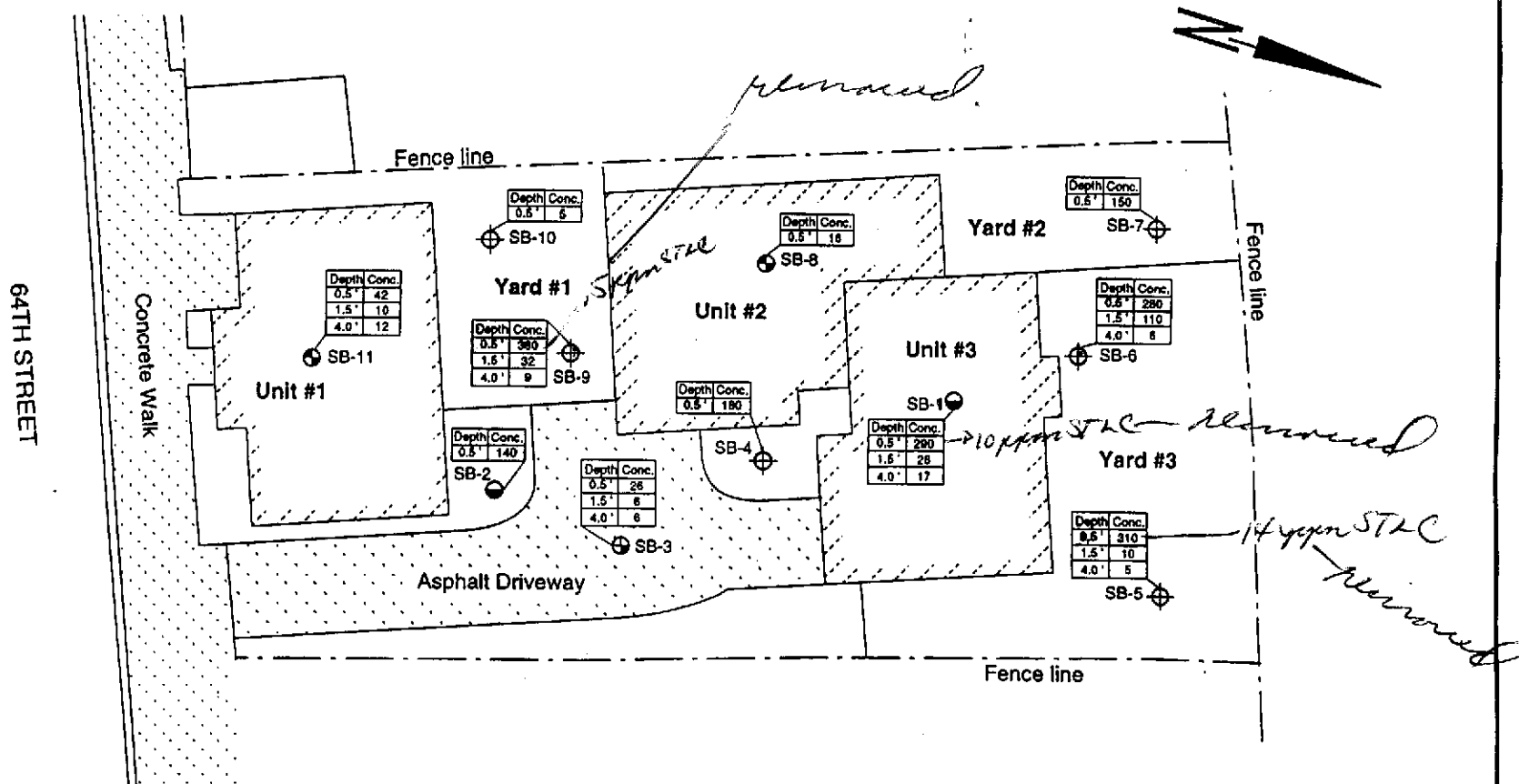
Source: U.S.G.S. Map presented as Figure 2 in A.R.E.A. 1996. Scale: 1" = 2000'



**Site Location Map**  
 1258 64th Street • Emeryville, California

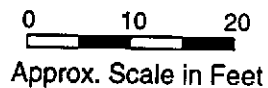
Project. No. 96-2088	February 1997	Figure 1
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**EXPLANATION**

- ⊕ Soil boring in proposed exposed area
- ⊙ Soil boring in proposed capped/covered area (concrete building pad / asphalt)
- Soil and Ground-Water sampling location



Note: Lead concentrations are in the units of mg/kg (ppm)

Source: Site Plan based on proposed redevelopment plan by Siegel&Strain (October 1995) and Lot Line Adjustment Survey by Humann Co., Inc. (March 1996).

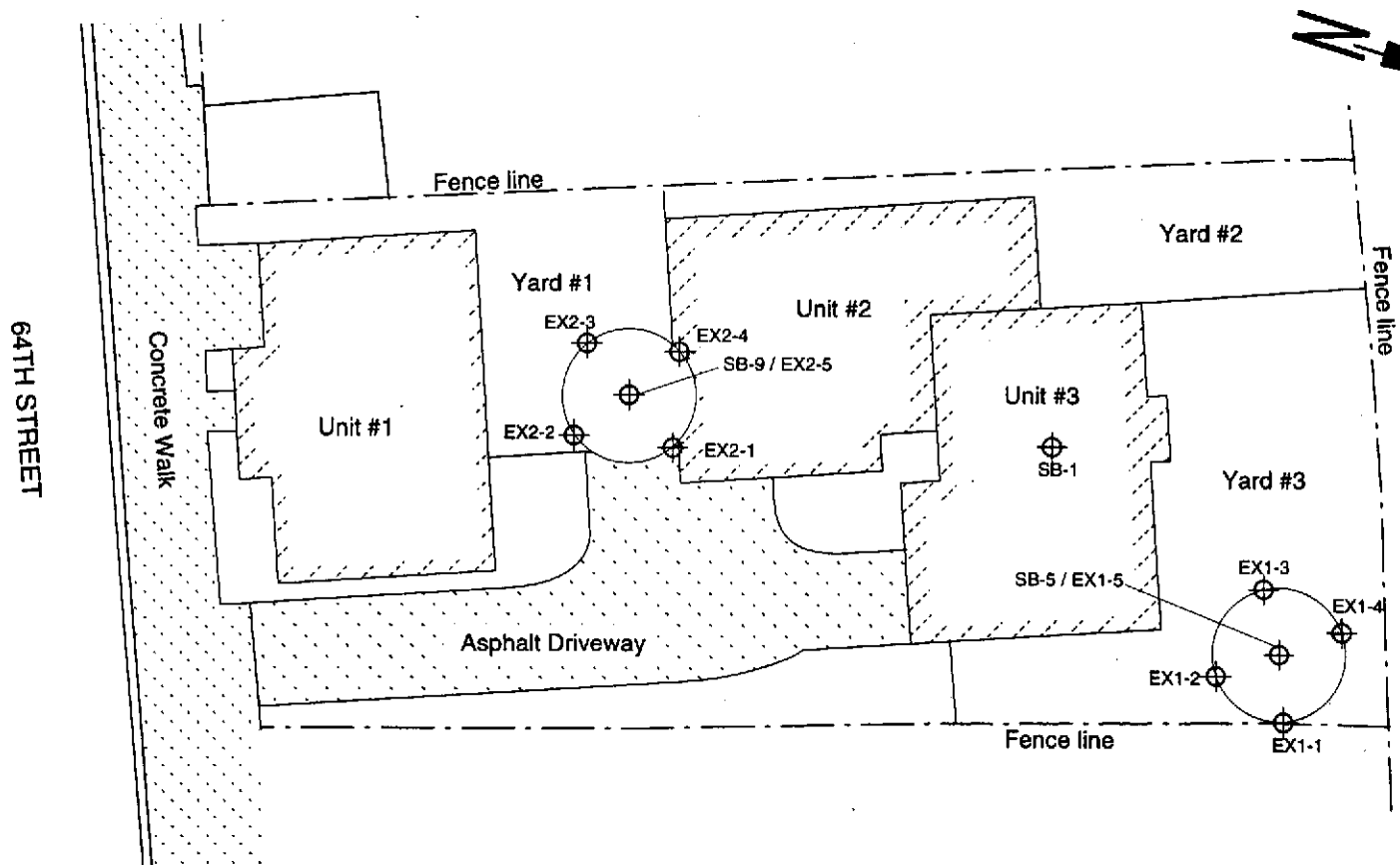


**Phase II Site Investigation Soil Boring Locations  
and Detected Concentrations of Lead in Site Soil  
1258 64th Street • Emeryville, California**

February 1997

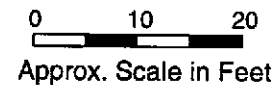
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**Figure 3**



**EXPLANATION**

⊕ Sampling location



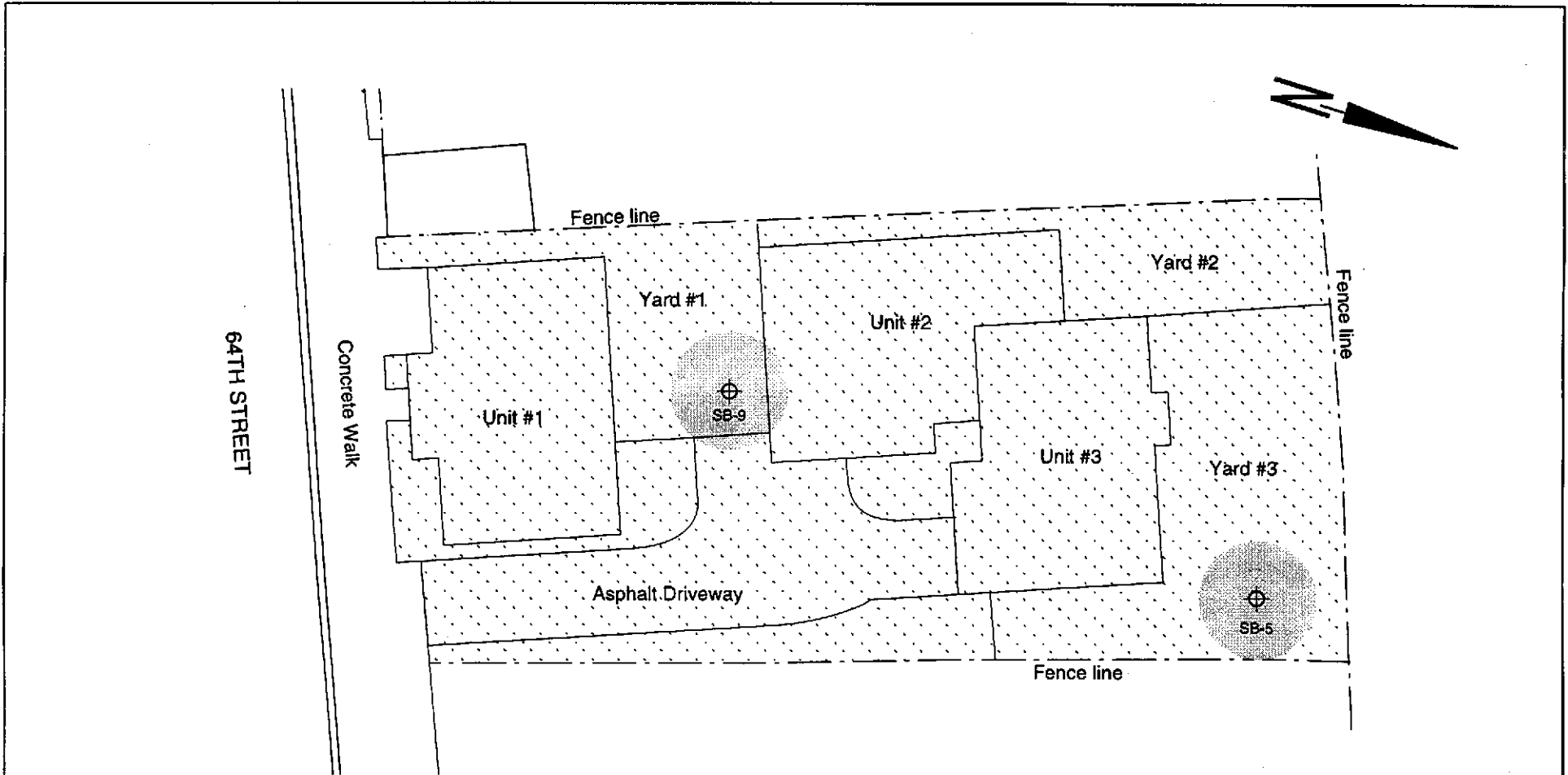
Source: Site Plan based on proposed redevelopment plan by Siegel&Strain (October 1995) and Lot Line Adjustment Survey by Humann Co., Inc. (March 1996).





**Confirmation Soil Sampling Locations**  
 1258 64th Street • Emeryville, California

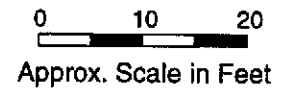
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**Figure 4**



**EXPLANATION**

-  Area excavated to a depth of 22 " below ground surface (bgs).
-  Area excavated to a depth of 9 " bgs during clearing and grubbing.



Source: Site Plan based on proposed redevelopment plan by Siegel&Strain (October 1995) and Lot Line Adjustment Survey by Humann Co., Inc. (March 1996).

	<b>Remedial Action Excavation Areas</b> 1258 64th Street • Emeryville, California		February 1997	<b>Figure 5</b>
			Proj. No.96-2088	

**APPENDIX A**

**Letter from Susan L. Hugo of the Alameda County Department of Environmental Health to Ms. Maria Bigornia Poncel of the City of Emeryville Redevelopment Agency. Subject: 1258 - 64th Street, Emeryville, California 94608. Dated May 21, 1996.**



ALAMEDA COUNTY  
HEALTH CARE SERVICES



AGENCY  
DAVID J. KEARS, Agency Director

Alameda County CC4580  
Environmental Health Services  
1131 Harbor Bay Pkwy., #250  
Alameda CA 94502-6577  
(510)567-6700 FAX(510)337-9335

May 21, 1996

Ms. Maria Bigornia Poncel  
City of Emeryville, Redevelopment Agency  
2200 Powell Street, Suite 1200  
Emeryville, California 94608

RE: 1258 - 64th Street, Emeryville, California 94608

Dear Ms. Poncel:

I have reviewed the Phase I Report (Environmental Site Assessment) dated March 26, 1996 prepared by A R.E.A. Environmental Services for the above referenced site. A deteriorated house and garage were at the site at the time the Redevelopment Agency acquired the property.

Eight soil samples were collected at the site prior to demolition activities and found elevated levels of lead ranging from 211 ppm to 2634 ppm. Six additional soil samples were collected after the demolition of the structure and lead (144 ppm to 452 ppm) was detected in the samples.

It is my understanding that the Redevelopment Agency plans to develop three housing units at the site. The following issues must be addressed concerning the elevated lead found at the site:

- 1) Identify the source of contamination.
- 2) Determine the vertical and lateral extent of the lead contamination in soil.
- 3) Determine the threat/or impact to groundwater.
- 4) Submit a corrective action plan which should include target cleanup levels, an evaluation of alternative treatment methods, and a cost effective plan which adequately protect human health, safety and the environment.

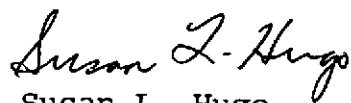
Additionally, you will need to submit a deposit of \$540.00 payable to Environmental Health Services. This deposit is authorized under Section 3-141.6 of the Ordinance Code of the County of Alameda and is used to cover the expenses incurred by the County personnel in the execution of their oversight responsibilities associated with the project. Records of the time

Ms. Maria Bigornia Poncel  
RE: 1258 64th Street, Emeryville, CA 94608  
May 21, 1996  
Page 2 of 2

County employees commit to the project are maintained and the deposit is charged an hourly rate of \$90.00. Upon completion of the project, the balance of the deposit will be refunded to the responsible party or their designee.

If you have any questions concerning this letter, please contact me at (510) 567-6780.

Sincerely,



Susan L. Hugo  
Senior Hazardous Materials Specialist

c: Mee Ling Tung, Director, Environmental Health  
Gordon Coleman, Acting Chief, Environmental Protection / file  
Sum Arigala, San Francisco Bay RWQCB

**APPENDIX B**

**Laboratory Analytical Certificates,  
Laboratory Quality Control Reports,  
and Chain-Of-Custody (COC) Forms**

**Analytical Results for Total Lead  
in Confirmation Soil Samples**

# MICRO ANALYTICAL LABORATORIES, INC.

## FLAME AA - LEAD IN SOIL - EPA SW-846

1046  
 Innovative & Creative  
 Environmental Solutions  
 P.O. Box 11582  
 Berkeley, CA 94701

JOB SITE:  
 64TH STREET

Micro Log In 39948  
 Total Samples 10  
 Date Sampled 12/3/96  
 Date Received 12/4/96  
 Date Analyzed 12/5/96

Sample ID	Lead Concentration mg/kg (ppm)	Detection Limit (mg/kg)	Comments
Client EX1-1 Micro 39948-01 EXC SIDEWALL	149	21	
Client EX1-2 Micro 39948-02 EXC SIDEWALL	146	24	
Client EX1-3 Micro 39948-03 EXC SIDEWALL	177	17	
Client EX1-4 Micro 39948-04 EXC SIDEWALL	218	20	
Client EX1-5 Micro 39948-05 EXC FLOOR	142	17	

Technical Supervisor: \_\_\_\_\_

Weiping Xia, M. S.

12/5/96

Analyst: \_\_\_\_\_

HL

AIHA ELLAP Accredited Laboratory, ID #11150. California Department of Health Services, Environmental Laboratory Accreditation Program (ELAP), Certificate #1037. Samples are analyzed by Flame Atomic Absorption Spectrometry in accordance with EPA Methods 3050A for Acid Digestion (SW 846, 1992 edition) and 7420 for AAS Analysis (SW-846, 1986 edition). This report must not be reproduced except in full, with the approval of Micro Analytical Laboratories, Inc. and pertains only to the samples analyzed herein. Unit explanations: mg = milligrams; kg = kilograms; ppm = parts per million.

# MICRO ANALYTICAL LABORATORIES, INC.

## FLAME AA - LEAD IN SOIL - EPA SW-846

1046  
 Innovative & Creative  
 Environmental Solutions  
 P.O. Box 11582  
 Berkeley, CA 94701

JOB SITE:  
 64TH STREET

Micro Log In 39948  
 Total Samples 10  
 Date Sampled 12/3/96  
 Date Received 12/4/96  
 Date Analyzed 12/4/96

Sample ID	Lead Concentration mg/kg (ppm)	Detection Limit (mg/kg)	Comments
Client EX2-1 Micro 39948-06 EXC SIDEWALL	< 21	21	
Client EX2-2 Micro 39948-07 EXC SIDEWALL	28	23	
Client EX2-3 Micro 39948-08 EXC SIDEWALL	19	17	
Client EX2-4 Micro 39948-09 EXC SIDEWALL	< 25	25	
Client EX2-5 Micro 39948-10 EXC FLOOR	< 24	24	

Technical Supervisor: \_\_\_\_\_

12/5/96

Analyst: \_\_\_\_\_ HL

Weiping Xia, M. S.

AIHA ELLAP Accredited Laboratory, ID #11150. California Department of Health Services, Environmental Laboratory Accreditation Program (ELAP), Certificate #1037. Samples are analyzed by Flame Atomic Absorption Spectrometry in accordance with EPA Methods 3050A for Acid Digestion (SW 846, 1992 edition) and 7420 for AAS Analysis (SW-846, 1986 edition). This report must not be reproduced except in full, with the approval of Micro Analytical Laboratories, Inc., and pertains only to the samples analyzed herein. Unit explanations: mg = milligrams; kg = kilograms; ppm = parts per million.

**MICRO ANALYTICAL LABORATORIES, INC.**  
 5900 HOLLIS STREET, SUITE M, EMERYVILLE, CALIFORNIA 94608  
 (510) 653-0824 - (510) 653-1361 - FAX

39948

CLIENT INFORMATION

Job Site

P.O. Number

Contact:

PENG LEONG  
 ICES

64TH STREET

Type

TEM PLM PCM AA

Number of Samples

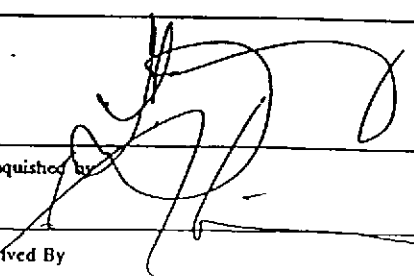
Turn Around Time

Fax 510-652-3555

Micro ID #	Client ID#	Location / Description	Date Sampled	Time Total	on/off Minutes	Average L.P.M.	Total Liters	Filter Pore Size
39948-01	EX1-1	EXC SIDEWALK	12-3-96	:	:			
-02	EX1-2	"		:	:			
-03	EX1-3	"		:	:			
-04	EX1-4	"		:	:			
-05	EX1-5	EXC FLR		:	:			
-06	EX2-1	EXC SIDEWALK		:	:			
-07	EX2-2	"		:	:			
-08	EX2-3	"		:	:			
-09	EX2-4	"		:	:			
-10	EX2-5	EXC FLR		:	:			

Return Samples to Client: Yes  No

Notes: \_\_\_\_\_

Relinquished by  Date / Time 12/3/96  
 Received By \_\_\_\_\_ Date / Time 1833

Relinquished by \_\_\_\_\_ Date / Time \_\_\_\_\_  
 Received By \_\_\_\_\_ Date / Time \_\_\_\_\_

**Analytical Results for RCRA Metals using TCLP Extraction  
for Soil Sample SB-5-0.5**



# American Environmental Network

## Certificate of Analysis

DOHS Certification: 1172

AIHA Accreditation: 11134

PAGE 1

ICES  
P.O. BOX 11582  
BERKELEY, CA 94712

ATTN: GARY WONG  
CLIENT PROJ. ID: 64TH STREET

REPORT DATE: 12/23/96  
DATE(S) SAMPLED: 12/16/96  
DATE RECEIVED: 12/17/96  
AEN WORK ORDER: 9612260


### PROJECT SUMMARY:

On December 17, 1996, this laboratory received 2 soil sample(s).

Client requested sample(s) be analyzed for chemical parameters. Results of analysis are summarized on the following page(s). Please see quality control report for a summary of QC data pertaining to this project.

Samples will be stored for 30 days after completion of analysis, then disposed of in accordance with State and Federal regulations. Samples may be archived by prior arrangement.

If you have any questions, please contact Client Services at (510) 930-9090.

  
Larry Klein  
Laboratory Director

ICES

SAMPLE ID: SB-1-0.5  
AEN LAB NO: 9612260-01  
AEN WORK ORDER: 9612260  
CLIENT PROJ. ID: 64TH STREET

DATE SAMPLED: 12/16/96  
DATE RECEIVED: 12/17/96  
REPORT DATE: 12/23/96

---

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#CA Waste Extraction	CA Title 22	-		Extrn Date	12/17/96
Lead in WET Extract	EPA 7420	ND	0.1 mg/L		12/19/96

---

ND = Not detected at or above the reporting limit  
\* = Value at or above reporting limit

ICES

SAMPLE ID: SB-5-0.5  
AEN LAB NO: 9612260-02  
AEN WORK ORDER: 9612260  
CLIENT PROJ. ID: 64TH STREET

DATE SAMPLED: 12/16/96  
DATE RECEIVED: 12/17/96  
REPORT DATE: 12/23/96

---

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#CA Waste Extraction	CA Title 22	-		Extrn Date	12/17/96
Lead in WET Extract	EPA 7420	0.1 *	0.1 mg/L		12/19/96

---

ND = Not detected at or above the reporting limit  
\* = Value at or above reporting limit

AEN (CALIFORNIA)  
QUALITY CONTROL REPORT

AEN JOB NUMBER: 9612260  
CLIENT PROJECT ID: 64TH STREET

Quality Control and Project Summary

All laboratory quality control parameters were found to be within established limits.

Definitions

Laboratory Control Sample (LCS)/Method Spikes(s): Control samples of known composition. LCS and Method Spike data are used to validate batch analytical results.

Matrix Spike(s): Aliquot of a sample (aqueous or solid) with added quantities of specific compounds and subjected to the entire analytical procedure. Matrix spike and matrix spike duplicate QC data are advisory.

Method Blank: An analytical control consisting of all reagents, internal standards, and surrogate standards carried through the entire analytical process. Used to monitor laboratory background and reagent contamination.

Not Detected (ND): Not detected at or above the reporting limit.

Relative Percent Difference (RPD): An indication of method precision based on duplicate analyses.

Reporting Limit (RL): The lowest concentration routinely determined during laboratory operations. The RL is generally 1 to 10 times the Method Detection Limit (MDL). Reporting limits are matrix, method, and analyte dependent and take into account any dilutions performed as part of the analysis.

Surrogates: Organic compounds which are similar to analytes of interest in chemical behaviour, but are not found in environmental samples. Surrogates are added to all blanks, calibration and check standards, samples, and spiked samples. Surrogate recovery is monitored as an indication of acceptable sample preparation and instrument performance.

0: Surrogates diluted out.

!: Indicates result outside of established laboratory QC limits.

WORK ORDER: 9612260

QUALITY CONTROL REPORT

PAGE QR-2

ANALYSIS: Lead in WET Extract

MATRIX: WET Extract

METHOD BLANK SAMPLES

SAMPLE TYPE: Blank-Method/Media blank		LAB ID: WET_BLNK	INSTR RUN: AA V12\961219210000/1/	
INSTRUMENT: Video 12 aa spectrometer		PREPARED:	BATCH ID: WET121796	
UNITS: mg/L		ANALYZED: 12/19/96	DILUTION: 1.000000	
METHOD: EPA 7420				

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)	RPD (%)	RPD LIMIT (%)
						LOW HIGH		
Lead in WET Extract	ND		0.1					

MATRIX SPIKE SAMPLES

SAMPLE TYPE: Spike-Sample/Matrix		LAB ID: MD12260-02B	INSTR RUN: AA V12\961219210000/4/2	
INSTRUMENT: Video 12 aa spectrometer		PREPARED:	BATCH ID: WET121796	
UNITS: mg/L		ANALYZED: 12/19/96	DILUTION: 1.000000	
METHOD: EPA 7420				

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)	RPD (%)	RPD LIMIT (%)
						LOW HIGH		
Lead in WET Extract	1.28	0.114	0.1	1.00	117			

SAMPLE TYPE: Spike-Sample/Matrix		LAB ID: MS12260-02B	INSTR RUN: AA V12\961219210000/3/2	
INSTRUMENT: Video 12 aa spectrometer		PREPARED:	BATCH ID: WET121796	
UNITS: mg/L		ANALYZED: 12/19/96	DILUTION: 1.000000	
METHOD: EPA 7420				

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)	RPD (%)	RPD LIMIT (%)
						LOW HIGH		
Lead in WET Extract	1.19	0.114	0.1	1.00	108			

MATRIX SPIKE DUPLICATES

SAMPLE TYPE: Spiked Sample Duplicate		LAB ID: MR12260-02B	INSTR RUN: AA V12\961219210000/5/3	
INSTRUMENT: Video 12 aa spectrometer		PREPARED:	BATCH ID: WET121796	
UNITS: mg/L		ANALYZED: 12/19/96	DILUTION: 1.000000	
METHOD: EPA 7420				

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)	RPD (%)	RPD LIMIT (%)
						LOW HIGH		
Lead in WET Extract	1.28	1.19	0.1				7.29	

----- End of Quality Control Report -----



**Analytical Results for Soluble Lead using CA WET  
in Soil Samples SB-1-0.5 and SB-5-0.5**





SOMA CORPORATION

SAMPLE ID: SB-5-0.5  
 AEN LAB NO: 9612019-01  
 AEN WORK ORDER: 9612019  
 CLIENT PROJ. ID: 96-2088

DATE SAMPLED: 09/12/96  
 DATE RECEIVED: 09/13/96  
 REPORT DATE: 12/10/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Digestion for GFAA (TCLP)	EPA 3020	-		Prep Date	12/05/96
#Digestion for ICP (TCLP)	EPA 3010	-		Prep Date	12/05/96
#TCLP Extraction	EPA 1311	-		Extrn Date	12/03/96
RCRA Metals in TCLP Extr	EPA6010/7000				
Ag Silver	EPA 6010	ND	0.005	mg/L	12/09/96
As Arsenic	EPA 7060	0.039 *	0.002	mg/L	12/08/96
Ba Barium	EPA 6010	0.95 *	0.05	mg/L	12/09/96
Cd Cadmium	EPA 6010	ND	0.005	mg/L	12/09/96
Cr Chromium	EPA 6010	0.02 *	0.01	mg/L	12/09/96
Hg Mercury	EPA 7470	ND	0.0002	mg/L	12/06/96
Pb Lead	EPA 6010	0.05 *	0.04	mg/L	12/09/96
Se Selenium	EPA 7740	ND	0.004	mg/L	12/08/96

ND = Not detected at or above the reporting limit  
 \* = Value at or above reporting limit



WORK ORDER: 9612019

QUALITY CONTROL REPORT

PAGE QR-2

ANALYSIS: Arsenic

MATRIX: Water

METHOD BLANK SAMPLES

SAMPLE TYPE: Blank-Method/Media blank			LAB ID: GFW_BLNK_E		INSTR RUN: 4000\961208195500/1/			
INSTRUMENT: TJA 4000, GFAA			PREPARED:		BATCH ID: GFW120596-E			
UNITS: mg/L			ANALYZED: 12/08/96		DILUTION: 1.000000			
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD
						LOW	HIGH	RPD (%)
Arsenic in water by GFAA	ND		0.002					

METHOD SPIKE SAMPLES

SAMPLE TYPE: Spike-Method/Media blank			LAB ID: GFW_MD_E		INSTR RUN: 4000\961208195500/3/1			
INSTRUMENT: TJA 4000, GFAA			PREPARED:		BATCH ID: GFW120596-E			
UNITS: mg/L			ANALYZED: 12/08/96		DILUTION: 1.000000			
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD
						LOW	HIGH	RPD (%)
Arsenic in water by GFAA	0.0393	ND	0.002	0.0400	98.3	82	140	

SAMPLE TYPE: Spike-Method/Media blank			LAB ID: GFW_MS_E		INSTR RUN: 4000\961208195500/2/1			
INSTRUMENT: TJA 4000, GFAA			PREPARED:		BATCH ID: GFW120596-E			
UNITS: mg/L			ANALYZED: 12/08/96		DILUTION: 1.000000			
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD
						LOW	HIGH	RPD (%)
Arsenic in water by GFAA	0.0387	ND	0.002	0.0400	96.8	82	140	

METHOD SPIKE DUPLICATES

SAMPLE TYPE: Method Spike Sample Duplicate			LAB ID: GFW_MR_E		INSTR RUN: 4000\961208195500/4/2			
INSTRUMENT: TJA 4000, GFAA			PREPARED:		BATCH ID: GFW120596-E			
UNITS: mg/L			ANALYZED: 12/08/96		DILUTION: 1.000000			
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD
						LOW	HIGH	RPD (%)
Arsenic in water by GFAA	0.0393	0.0387	0.002					1.54

MATRIX: TCLP Extract

METHOD BLANK SAMPLES

SAMPLE TYPE: Blank-Method/Media blank			LAB ID: TCLP_BLNK		INSTR RUN: 4000\961208195500/11/			
INSTRUMENT: TJA 4000, GFAA			PREPARED:		BATCH ID: GFW120596-E			
UNITS: mg/L			ANALYZED: 12/08/96		DILUTION: 1.000000			
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD
						LOW	HIGH	RPD (%)
Arsenic in water by GFAA	ND		0.002					

WORK ORDER: 9612019

QUALITY CONTROL REPORT

PAGE QR-3

ANALYSIS: Arsenic

MATRIX: TCLP Extract

MATRIX SPIKE SAMPLES

SAMPLE TYPE: Spike-Sample/Matrix  
INSTRUMENT: TJA 4000 GFAA  
UNITS: mg/L  
METHOD:

LAB ID: MS12019-01B  
PREPARED:  
ANALYZED: 12/08/96

INSTR RUN: 4000\961208195500/13/12  
BATCH ID: GFW120596-E  
DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Arsenic in water by GFAA	0.0883	0.0394	0.002	0.0400	122				

WORK ORDER: 9612019

QUALITY CONTROL REPORT

PAGE QR-4

ANALYSIS: Mercury

MATRIX: Water

METHOD BLANK SAMPLES

SAMPLE TYPE: Blank-Method/Media blank  
 INSTRUMENT: Coleman Hg Analyzer 500  
 UNITS: ug/L  
 METHOD:

LAB ID: HGM\_BLNK  
 PREPARED:  
 ANALYZED: 12/06/96

INSTR RUN: HG\961206200000/1/  
 BATCH ID: HGM120696  
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Mercury	ND		0.2						

METHOD SPIKE SAMPLES

SAMPLE TYPE: Spike-Method/Media blank  
 INSTRUMENT: Coleman Hg Analyzer 500  
 UNITS: ug/L  
 METHOD:

LAB ID: HGM\_MD  
 PREPARED:  
 ANALYZED: 12/06/96

INSTR RUN: HG\961206200000/3/1  
 BATCH ID: HGM120696  
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Mercury	2.09	ND	0.2	2.00	105	89	121		

SAMPLE TYPE: Spike-Method/Media blank  
 INSTRUMENT: Coleman Hg Analyzer 500  
 UNITS: ug/L  
 METHOD:

LAB ID: HGM\_MS  
 PREPARED:  
 ANALYZED: 12/06/96

INSTR RUN: HG\961206200000/2/1  
 BATCH ID: HGM120696  
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Mercury	1.99	ND	0.2	2.00	99.5	89	121		

METHOD SPIKE DUPLICATES

SAMPLE TYPE: Method Spike Sample Duplicate  
 INSTRUMENT: Coleman Hg Analyzer 500  
 UNITS: ug/L  
 METHOD:

LAB ID: HGM\_MR  
 PREPARED:  
 ANALYZED: 12/06/96

INSTR RUN: HG\961206200000/4/2  
 BATCH ID: HGM120696  
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Mercury	2.09	1.99	0.2					4.90	10

MATRIX: TCLP Extract

METHOD BLANK SAMPLES

SAMPLE TYPE: Blank-Method/Media blank  
 INSTRUMENT: Coleman Hg Analyzer 500  
 UNITS: ug/L  
 METHOD:

LAB ID: TCLP\_BLNK  
 PREPARED:  
 ANALYZED: 12/06/96

INSTR RUN: HG\961206200000/9/  
 BATCH ID: HGM120696  
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Mercury	ND		0.2						



WORK ORDER: 9612019

QUALITY CONTROL REPORT

PAGE QR-6

ANALYSIS: RCRA Metals in TCLP Extr

MATRIX: TCLP Extract

METHOD BLANK SAMPLES

SAMPLE TYPE: Blank-Method/Media blank		LAB ID: TCLP_BLNK		INSTR RUN: ICP\961209112000/5/			
INSTRUMENT: TJA Enviro 36		PREPARED:		BATCH ID: IFW120596-D			
UNITS: mg/L		ANALYZED: 12/09/96		DILUTION: 1.000000			
METHOD: EPA6010/7000							
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%) LOW HIGH RPD (%)	RPD LIMIT (%)
Ag Silver	ND		0.005				
Ba Barium	0.0821		0.05				
Cd Cadmium	ND		0.005				
Cr Chromium	ND		0.01				
Pb Lead	ND		0.04				

MATRIX SPIKE SAMPLES

SAMPLE TYPE: Spike-Sample/Matrix		LAB ID: MS12019-01B		INSTR RUN: ICP\961209112000/7/6			
INSTRUMENT: TJA Enviro 36		PREPARED:		BATCH ID: IFW120596-D			
UNITS: mg/L		ANALYZED: 12/09/96		DILUTION: 1.000000			
METHOD: EPA6010/7000							
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%) LOW HIGH RPD (%)	RPD LIMIT (%)
Ag Silver	0.0253	ND	0.005	0.0250	101		
Ba Barium	1.94	0.953	0.05	1.00	98.7		
Cd Cadmium	0.0503	ND	0.005	0.0500	101		
Cr Chromium	0.103	0.0172	0.01	0.100	85.8		
Pb Lead	0.533	0.0460	0.04	0.500	97.4		

WORK ORDER: 9612019

QUALITY CONTROL REPORT

PAGE QR-7

ANALYSIS: Selenium

MATRIX: Water

METHOD BLANK SAMPLES

SAMPLE TYPE: Blank-Method/Media blank  
 INSTRUMENT: TJA 4000, GFAA  
 UNITS: mg/L  
 METHOD:

LAB ID: GFW\_BLNK\_E  
 PREPARED:  
 ANALYZED: 12/08/96

INSTR RUN: 4000\961208195600/1/  
 BATCH ID: GFW120596-E  
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Selenium in water by GFAA	ND		0.004						

METHOD SPIKE SAMPLES

SAMPLE TYPE: Spike-Method/Media blank  
 INSTRUMENT: TJA 4000, GFAA  
 UNITS: mg/L  
 METHOD:

LAB ID: GFW\_MD\_E  
 PREPARED:  
 ANALYZED: 12/08/96

INSTR RUN: 4000\961208195600/3/1  
 BATCH ID: GFW120596-E  
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Selenium in water by GFAA	0.0774	ND	0.004	0.0800	96.8	79	115		

SAMPLE TYPE: Spike-Method/Media blank  
 INSTRUMENT: TJA 4000, GFAA  
 UNITS: mg/L  
 METHOD:

LAB ID: GFW\_MS\_E  
 PREPARED:  
 ANALYZED: 12/08/96

INSTR RUN: 4000\961208195600/2/1  
 BATCH ID: GFW120596-E  
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Selenium in water by GFAA	0.0741	ND	0.004	0.0800	92.6	79	115		

METHOD SPIKE DUPLICATES

SAMPLE TYPE: Method Spike Sample Duplicate  
 INSTRUMENT: TJA 4000, GFAA  
 UNITS: mg/L  
 METHOD:

LAB ID: GFW\_HR\_E  
 PREPARED:  
 ANALYZED: 12/08/96

INSTR RUN: 4000\961208195600/4/2  
 BATCH ID: GFW120596-E  
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Selenium in water by GFAA	0.0774	0.0741	0.004					4.36	13

MATRIX: TCLP Extract

METHOD BLANK SAMPLES

SAMPLE TYPE: Blank-Method/Media blank  
 INSTRUMENT: TJA 4000, GFAA  
 UNITS: mg/L  
 METHOD:

LAB ID: TCLP\_BLNK  
 PREPARED:  
 ANALYZED: 12/08/96

INSTR RUN: 4000\961208195600/10/  
 BATCH ID: GFW120596-E  
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Selenium in water by GFAA	ND		0.004						





Lab Job Number: 9612019 9009116

Lab Destination: \_\_\_\_\_  
Date Samples Shipped: \_\_\_\_\_  
Lab Contact: \_\_\_\_\_  
Date Results Required: \_\_\_\_\_  
Date Report Required: \_\_\_\_\_  
Client Phone No.: X  
Client FAX No.: X

10 P. TALOT

FEB 04 '97 14:36 FROM: ICES

510-652-3555

T-081 P.12/12 F-214

Contact: Norm Ozaki  
An Contact: Alie Sprack

Phone (510) 930-9090  
FAX (510) 930-0256

Mass Report To: \_\_\_\_\_  
See Above

Send Invoice To: \_\_\_\_\_  
See #1

Report To: 1 or 2 (Circle one)  
Client Project I.D. No.: 96-2088  
Team Member (s): GFM

Lab Number	Client Sample Identification	DATE - Time Volume	Distal Time Collected	Sample Type*	Pres.	No. of Cont.	Type of Cont.	ANALYSIS				Comments / Hazards	
								ESZ/TK/ILC Pb	TC/LP-DACA METALS		Hold #		
5A	SB-5-0.5	9/12/96	2:45	Soil	None	1	gms	X	X				
6A	SB-5-1.5		2:50										* Hold sample for
7A	SB-5-4.0		2:55										X Potential ITC Pb
8A	SB-6-0.5		2:00					X					X and STIC (carried)
9A	SB-6-1.5		3:05										X analysis
10A	SB-6-4.0		3:10										X
11A	SB-7-0.5		3:30					X					X
12A	SB-7-1.5		3:30										** RUSH TAT
13A	SB-7-4.0		3:25										X PLEASE SEND RESULTS
14A	SB-8-0.5		3:40					X					X TO ICES & SOMA.
15A	SB-8-1.5		3:45										X
16A	SB-9-4.0		3:50										X 12/2/96 GFM Hong had

Requested by: (Signature) \_\_\_\_\_ DATE 9/13/96 TIME 10:00  
 Requested by: (Signature) \_\_\_\_\_ DATE 9/10/96 TIME 11:00  
 Requested by: (Signature) \_\_\_\_\_ DATE \_\_\_\_\_ TIME \_\_\_\_\_  
 Mode of Shipment: \_\_\_\_\_

Received by: (Signature) \_\_\_\_\_ DATE 9-13-96 TIME 10:00  
 Received by: (Signature) \_\_\_\_\_ DATE \_\_\_\_\_ TIME \_\_\_\_\_  
 Received by: (Signature) Debbie Harrington DATE 9/13/96 TIME 1110  
 Lab Comments: \_\_\_\_\_

\*Sample type (Specify) 1) 37mm 0.8 µm MCEF 2) 25mm 0.8 µm MCEF 3) 25mm 0.4 µm polycarb. filter  
 4) PVC filter, diam. \_\_\_\_\_ pore size \_\_\_\_\_ 5) Charcoal tube 6) Silica gel tube 7) Water 8) Soil 9) Bulk Sample  
 10) Other \_\_\_\_\_ 11) Other \_\_\_\_\_

COPIES: WHITE - JOB FILE YELLOW - PROJECT FILE PINK - CLIENT

12/2/96 per Norm Ozaki  
SOMA, send original fin  
report & invoice to his a

**APPENDIX C**

**State Manifest Document Number 93053047**

IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802. WITHIN CALIFORNIA, CALL 1-800-852-7550

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No <b>CA0001108024</b>		Manifest Document No <b>001</b>		2. Page 1 of 1					
3. Generator's Name and Mailing Address <b>CITY OF EMERYVILLE REDEVELOPMENT AGENCY 2200 POWELL STREET, 12TH FLOOR, EMERYVILLE, CA 94608</b>						A. State Manifest Document Number <b>9305304</b>					
4. Generator's Phone <b>510 596-4350</b>						B. State Generator's ID					
5. Transporter 1 Company Name <b>CABALLERO</b>				6. US EPA ID Number <b>MT982412900</b>		C. State Transporter's ID					
7. Transporter 2 Company Name						D. Transporter's Phone <b>(408) 729-0196</b>					
9. Designated Facility Name and Site Address <b>U.S. ECOLOGY NEVADA HWY 95 12 MILES S. BEATTY BEATTY NV 89003</b>						10. US EPA ID Number <b>NV1733101101010</b>					
11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)						12. Containers					
a. <b>NON RCRA HAZARDOUS WASTE SOLID</b>  b.  c.  d.						No.	Type	13. Total Quantity	14. Unit Wt. Vol	I. Waste Number	
										State	
										EPA/Other	
										State	
										EPA/Other	
J. Additional Descriptions for Materials Listed Above <b>NEVADA WASTE STREAM # 070125313</b>						K. Handling Codes for Wastes Listed Above					
a. GENERATOR'S CERTIFICATION: I hereby declare that the contents of the containers or the consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable federal, state and international laws.  If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.						a.	b.				
						c.	d.				
						15. Special Handling Instructions and Additional Information					
Printed/Typed Name <b>MARIA BIGORNIA POZEL</b>		Signature <i>MBPozel</i>		Month Day Year <b>12 17 96</b>		17. Transporter 1 Acknowledgement of Receipt of Materials					
Printed/Typed Name <b>DAVID CABALLERO</b>		Signature <i>David Caballero</i>		Month Day Year <b>12 17 96</b>		18. Transporter 2 Acknowledgement of Receipt of Materials					
Printed/Typed Name		Signature		Month Day Year		19. Discrepancy Indication Space					
Printed/Typed Name <b>Tom Dym...</b>		Signature <i>Tom Dym...</i>		Month Day Year <b>12 18 96</b>		20. Facility Owner or Operator Certification: I accept of hazardous materials covered by this manifest except as noted in item 19					

DO NOT WRITE BELOW THIS LINE