

**Completion Report
for Demolition and Disposal
of the South Brick Wall
at the Rifkin Building
Emeryville, California**

**June 24, 1999
3042.95.005**

**Prepared for:
The Sherwin-Williams Company
101 Prospect Avenue
Cleveland, Ohio 44115**



June 24, 1998

3042.95-005

Mr. Mark Johnson
Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, California 94612

Subject: Completion Report for Demolition and Disposal of the South Brick Wall of the Rifkin Building, Emeryville, California

Dear Mr. Johnson:

LFR Levine-Fricke prepared this completion report to provide documentation for the demolition and disposal of the south brick wall, on behalf of The Sherwin-Williams Company on the Rifkin Property in Emeryville, California. A draft of this report was previously submitted to Chiron, and this report incorporates their comments.

If you have any questions or comments, please call Larry Mencin at (216) 566-1768 or me at (510) 596-9512.

Sincerely,



Mark D. Knox, P.E.
Principal Engineer

cc: Larry Mencin, The Sherwin-Williams Company
George Stavnes, The Sherwin-Williams Company
Vera Nelson, Erler and Kalinowski
Jay Grover, Chiron
Susan Hugo, Alameda County Health Department

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CERTIFICATION

All information, conclusions, and recommendations in this document have been prepared under the supervision of and reviewed by an LFR Levine-Fricke (LFR) California Registered Civil Engineer.

Mark D. Knox

6/23/99
Date

Mark D. Knox
Principal Engineer
California Professional Engineer (33194)

1.0 INTRODUCTION

LFR Levine-Fricke (LFR) prepared this completion report on behalf of The Sherwin-Williams Company ("Sherwin-Williams") summarizing the demolition and disposal of the south block and brick wall ("the Wall") on the Rifkin Property ("Rifkin") in Emeryville, California. Rifkin is located at 4525 through 4563 Horton Street and is currently owned by Chiron Corporation ("Chiron"). The Wall was located at 4525 Horton Street, adjacent to the Sherwin-Williams plant at 1450 Sherwin Avenue. This completion report is organized as follows:

- sample collection and laboratory analysis
- general demolition procedures
- disposal procedures and waste management
- dust control
- air monitoring results

Erler and Kalinowski, Inc. (EKI) of San Mateo, conducted sampling of residue present on the interior of the Wall of the Rifkin building during mid-October 1996, as requested by Chiron as part of their pre-demolition activities for Rifkin. In late October 1996, Sherwin-Williams was notified that elevated levels of arsenic, lead, and zinc were detected in the building wall materials. During October, November, and December 1996, Sherwin-Williams and LFR conducted numerous meetings and exchanged correspondence with Chiron and the regulatory agencies to address additional sampling and remedial solutions for the Wall.

LFR submitted several drafts of a work plan for demolition and disposal of the Wall in December 1996, and early January 1997. A revised version of the work plan describing demolition and disposal activities entitled, "Revised Work Plan for Demolition and Disposal of the South Brick Wall at the Rifkin Building," ("the Demolition Work Plan") was submitted to the Alameda County Health Agency on January 10, 1997. This work plan was reviewed by Chiron and approved by the regulatory agencies. Demolition and disposal activities were conducted from January 29 to February 6, 1997, in accordance with the Demolition Work Plan.

Figure 1 is a record drawing of the Wall before demolition activities. The Wall consisted of seven bays, approximately 14 feet by 23 feet high, that were built using hollow bricks and mortar, and a wall, approximately 75 feet by 12.5 feet high, that was built using solid bricks and mortar. Appendix A includes photographs of the demolition activities of the Wall.

Sherwin-Williams contracted Plant Reclamation of Richmond, California, to demolish the Wall (leaving the columns in place) before demolition of the remainder of the Rifkin building by Chiron's demolition contractor. LFR performed air and construction monitoring, and transportation and disposal coordination.

A parking lot was constructed in the southern portion of Rifkin after Chiron's contractor demolished the remainder of the Rifkin building located between 4525 and 4549 Horton Street.

2.0 SAMPLE COLLECTION AND LABORATORY ANALYSIS

The sampling and laboratory analysis were conducted as described in the LFR work plan entitled, "Work Plan for Sample Collection and Laboratory Analysis of Building Material and Precipitate on a Portion of the Rifkin Property, 4525 to 4563 Horton Street, Emeryville, California," dated November 20, 1996 ("the Sampling Work Plan"). This work was conducted to evaluate elevated arsenic, lead, and zinc concentrations and low pH levels in residue and building materials (brick and mortar) of the Wall on Rifkin.

Before sampling and analysis were conducted by LFR, EKI collected samples of residue, mortar, and soil on or near the interior of the Wall of the Rifkin building. The EKI wall sampling results were included in a report dated November 4, 1996 (EKI 1996). EKI and LFR wall sampling results are presented on Figure 2. The following describes the sampling and analysis conducted by LFR.

2.1 Sample Collection

Building materials (brick and mortar), precipitate samples, and paint chips from the interior and exterior of the Wall were included as part of the sample collection. Brick, mortar, precipitate (if any), and paint chip (if any) samples were collected at four locations along the Wall of the building. Sampling was conducted along interior and exterior faces of the Wall at locations approximately 40, 80, 120, and 160 feet from the southeastern corner of the building (Figure 2).

At each of the four locations along the exterior of the Wall, one set of samples (brick, mortar, and precipitate and paint chips, if any) was collected at the following approximate locations:

- 1.5 feet above ground surface of the Sherwin-Williams property
- 8 feet above ground surface of the Sherwin-Williams property

One set of samples from the interior of the Wall was collected at the following approximate locations:

- 1 foot above ground surface of Rifkin
- 5 feet above ground surface of Rifkin (opposite the external sample locations)
- 11.5 feet above ground surface of Rifkin (opposite the external sample locations)

The three easternmost locations along the Wall were within the cinderblock-style brick. The westernmost location on the Wall was within the standard-style brick.

LFR personnel collected 61 samples of brick, mortar, residue, and paint chips. Twelve brick samples, 12 mortar samples, 12 paint samples, and 3 residue samples were collected at locations along the interior of the Wall. Eight brick samples and 8 mortar samples were collected at locations along the exterior of the Wall. Residue or paint chips were not observed along the exterior of the Wall.

In addition, to assess background levels of the chemicals of concern, one sample was collected at a location along the western wall, approximately 100 feet north of the Wall. A second sample was taken from an interior wall, approximately 100 feet north of the Wall. The two locations were inside the Rifkin building, not adjacent to the Sherwin-Williams "arsenic source area." The samples were collected in locations far enough away from the Wall that potential impact from the Sherwin-Williams site would not be expected to have occurred. One location was within standard-style brick (western wall), and the other was within cinderblock-style brick (interior wall).

2.2 Methodology

Sampling was conducted on November 26 and 27, 1996, by a qualified LFR geologist under the supervision of a California Registered Engineer. Sampling equipment was cleaned before each use by washing with Alconox (a laboratory-grade detergent), and rinsing with potable water.

Brick and mortar samples were collected using a clean hammer and chisel. Before collecting samples, the surface of the brick and/or mortar was scraped off, allowing samples to be collected from interior portions of the brick and mortar. Each brick or mortar sample was "chipped off" the Wall and placed directly into properly labeled, laboratory-supplied, 4-ounce glass jars. Each sample was at least 1 inch in diameter.

Residue samples (where present) were collected using a clean trowel and scraped into properly labeled, laboratory-supplied, 4-ounce glass jars. Paint chip samples (where present) were collected using a clean paint scraper tool and placed into properly labeled, laboratory-supplied, 4-ounce glass jars.

The samples were stored in a chilled ice chest, and maintained under strict chain-of-custody protocol until submitted to the analytical laboratory.

2.3 Laboratory Analysis

The brick, mortar, and precipitate samples collected during the investigation were submitted for chemical analysis to American Environmental Network (AEN) of Pleasant Hill, a California state-certified laboratory.

Samples were analyzed for total arsenic, lead, and zinc using Environmental Protection Agency (EPA) Method Series 6000/7000, and for pH. In addition, mortar and precipitate samples were analyzed using the cation-anion scan, which describes general mineral content (e.g., calcium, chloride, copper, iron, magnesium, manganese, sodium, sulfates, and zinc). Analytical results for total arsenic, lead, zinc, and pH are presented in Table 1 and shown on Figure 2. The laboratory analytical results contain the results for the cation-anion scan. The laboratory analytical results are included in Appendix B.

3.0 GENERAL DEMOLITION PROCEDURES

Before starting demolition activities, Plant Reclamation, contracted by Sherwin-Williams, obtained a demolition permit from the City of Emeryville, and Chiron removed and disposed of large objects (i.e., tables, doors) located in the Rifkin building at 4525 Horton Street and shut off utilities in the building. Proposition 65 signs were placed on the Sherwin-Williams fence along Horton Street and on the door to the former Rifkin building before initiation of the work. Plant Reclamation then mobilized personnel and equipment and reviewed the site and health and safety procedures.

Plant Reclamation prepared the Wall for demolition by:

- sweeping smaller debris from the floor of the building
- creating an exclusion zone around the Wall by draping and gluing together sheets of polycurtain inside and outside the Wall. Plant Reclamation repaired or replaced (when necessary) polycurtain sheets that were damaged during demolition activities. Demolition activities occurred within the confines of the polycurtain sheets (the "exclusion zone"). Personnel were required to wear Level C personal protection equipment (PPE) while in the exclusion zone. Appendix A includes photographs of the exclusion zone.
- installing two polycurtain sheets (one on top of the other) on the floor of the exclusion zone to prevent demolition debris from contacting the Rifkin slab. The sheets were rapidly torn by the demolition equipment after which Plant Reclamation decided to decontaminate the Rifkin slab upon project completion instead of repairing the torn sheets.
- placing waste material bins (provided by Denbeste Transportation) outside the exclusion zone to store debris generated during demolition activities. Plant Reclamation connected the top of the bins to the exclusion zone using polycurtains that were taped around the top of the bin. Plant Reclamation designated separate bins to store only hazardous debris or nonhazardous debris generated during the demolition activities. All bins were lined with visqueen that also covered the top of each bin whenever it was not in use. Plant Reclamation clearly labeled the hazardous debris bins using placards. Appendix A includes photographs of bins that were connected to the exclusion zone.

After the exclusion zone was completed, the hollow-brick walls in Bays 2 and 7 were demolished from the top of each bay to approximately 6 feet above Rifkin grade. Plant

Reclamation loaded the debris into bins designated for Forward Landfill, a Class II landfill in Stockton, California. During the demolition of the nonhazardous brick areas, the polycurtain sheet on the outside of the building was removed to allow the excavator access to the bays. Plant Reclamation installed 3-inch by 3-inch angle cross bracing in Bays 2 and 7 below the existing cross bracing, with the angles tack welded to the steel columns (Figure 1).

The hollow-brick walls from Bays 1, 3, 4, 5, 6, and 8 were demolished and loaded in a similar manner to Bays 2 and 7, except Plant Reclamation did not install cross bracing after the walls were removed.

The remaining 6 feet of hollow-brick wall (hazardous area) were demolished and loaded into a waste material bin designated for U.S. Ecology landfill, a Class I landfill in Beatty, Nevada. Plant Reclamation demolished the hazardous brick area using a bobcat in the exclusion zone, which was sealed from the outside using polycurtain sheets.

After the bricks were removed from Bays 1 through 8, Plant Reclamation chipped:

- any remaining brick and concrete from columns between Bays 1 through 8. The concrete on the columns did not scrape off easily with an excavator, as specified in the Demolition Work Plan, so pneumatic hand tools were used.
- concrete from the southern faces of all of the columns from the Rifkin slab to a level slightly above the Sherwin-Williams retaining wall. This left ample space for the installation of a sheet metal barrier on the existing Sherwin-Williams retaining wall (Figures 3, 4, and 5).
- concrete from all faces of the columns between Bays 5 and 6, 6 and 7, and 7 and 8, from the Rifkin slab to approximately 2 to 3 feet high. This chipping, performed at Chiron's request, left only the steel column exposed.

LFR collected concrete samples from the columns between Bays 2 and 3, 3 and 4, and 4 and 5 (the area with the highest arsenic concentrations in the bricks and mortar based on discrete sample analysis) to determine the arsenic concentrations present in the remaining concrete. The samples were analyzed by AEN, and indicated that the concrete on the three columns contained arsenic at an average detected concentration of 10.1 milligrams per kilogram [mg/kg] and a maximum detected concentration of 20 mg/kg. These concentrations are well below levels that would classify the concrete as a hazardous waste and for comparison purposes, are below the shallow soils cleanup goals (i.e. 13 mg/kg average and 22 mg/kg maximum) established for the Horton Street soil excavation project conducted during the summer of 1997. The concrete laboratory analytical results are included in Appendix C and summarized in Table 2.

LFR also collected additional samples at these locations to verify that the concrete removed was nonhazardous. The concrete laboratory analytical results performed by AEN are in Appendix C and summarized in Table 2.

Plant Reclamation prepared the western portion of the Wall of the former Rifkin building for demolition by:

- removing a cyclone separator and blower from the southwest corner of the Rifkin building roof and placing it on Sherwin-Williams' property. The Chiron demolition

contractor subsequently removed the cyclone separator from Sherwin-Williams property during the demolition of the remainder of the Rifkin building.

- shoring up the roof on top of the approximately 75 by 12.5 feet high western wall with two 6-inch by 6-inch steel columns and installing 2-inch by 6-inch angle cross bracing between the 6-inch by 6-inch columns (Figure 1).

The solid brick wall was demolished from the roof to the Rifkin grade and loaded into bins designated for disposal at the Forward landfill in Stockton, California. The polycurtains were removed from inside and outside the building and loaded into a bin designated for disposal at U.S. Ecology landfill in Beatty, Nevada.

Any loose dirt from Bays 1 through 8 in the area immediately above the Rifkin grade to approximately 6 inches below Rifkin grade was removed and loaded into a bin for disposal at U.S. Ecology (Figures 4 and 5). The cavities, where loose soil was excavated, in Bays 1 through 8 were filled with shotcrete, which is a type of concrete that is sprayed onto vertical surfaces using a high pressure hose and nozzle (Figures 4 and 5).

Eleven-gauge sheet metal plates were attached to the Sherwin-Williams retaining wall using anchor bolts. The plates extended from the top of the retaining wall to approximately 6 inches below the Rifkin grade. Plant Reclamation welded the plates together after installing and anchoring them to the retaining wall. The side of the plates that faced the retaining wall and the bottom 6 inches of the opposite side was coated with coal tar urethane before installation. Plant Reclamation caulked the gap between the top of the plates and the retaining wall.

The floor of the exclusion zone was wet broomed after completion of the work to remove any affected dust and debris that may have collected on the Rifkin floor slab. After the floor was wet broomed, six 100-square-centimeter areas were marked on the floor and wiped with Whatman wipes going from left to right then up and down. Three of the columns were also wiped with Whatman wipes. The Whatman wipes were then placed in a container provided by AEN, placed on ice, and submitted to AEN for arsenic analysis on a 48-hour turnaround time. The results are presented in Appendix D and summarized in Table 3. The three column samples and three floor samples collected in the western part of the former exclusion zone resulted in low arsenic concentrations. The three floor samples collected in the eastern part of the former exclusion zone resulted in arsenic concentrations that were slightly elevated relative to the other wipe samples. To address the sampling results for the eastern floor area, Plant Reclamation wet broomed with a cleaning agent (Alconox) the eastern part of the former exclusion zone again. Wipe samples collected after the second wet brooming in the same three eastern areas resulted in arsenic concentrations comparable to those of the other wipe samples. Excess water was not generated during wet brooming. The locations of the wipe samples are shown in Figure 6.

Following attachment of the sheet metal plates to the retaining wall, LFR arranged for UCI Construction, Inc. of Martinez, California, to paint the Rifkin side of the sheet metal using two coats of direct to metal latex paint. The painting was completed on April 29, 1997.

4.0 DISPOSAL PROCEDURES AND WASTE MANAGEMENT

Based on discrete samples collected from the Wall before demolition activities, LFR anticipated that the brick, block, and mortar in the lower portion of the eastern area of the Wall (a section approximately 107 feet by 6 feet high) would be classified as a hazardous waste because of high concentrations of arsenic or other heavy metals. The remainder of the brick, block, and mortar was expected to be classified as nonhazardous and disposed of in a Class II landfill. Representative samples of the suspected hazardous and nonhazardous debris generated during demolition (composite samples of brick, mortar, and precipitate and paint chips, if any, proportional to the debris being sampled) were collected by Plant Reclamation personnel under the direction of a representative of the landfills, and analyzed by AEN of Pleasant Hill, California, to verify the wasteclassification. The debris was classified as expected. The results of the laboratory analyses on the debris are included as Appendix E and summarized in Table 4.

Thirteen bins of nonhazardous waste and two bins of hazardous waste were generated during demolition activities. LFR arranged for transportation and disposal of the debris with U.S. Ecology and Forward Incorporated, the selected Class I and II landfills, respectively. LFR also prepared hazardous waste manifests for transportation of the debris from the Rifkin building to the Class I landfill.

5.0 DECONTAMINATION PROCEDURES

A portable toilet and hand-wash facility were temporarily installed in the former Rifkin building near the exclusion zone to minimize the need for demolition personnel to leave the building. While in the exclusion zone, demolition personnel wore two Tyvek suits. The outer suit was removed from the person before leaving the exclusion zone. Vehicles and equipment working within the exclusion zone were decontaminated using a Hudson sprayer (a compact, pressurized water canister), whenever they left the exclusion zone. As the Hudson sprayer generated insignificant amounts of water during decontamination activities, decontamination water was not collected.

6.0 DUST CONTROL

This project-specific dust control plan followed the format recommended in Chapter Five of the "Handbook - Dust Control at Hazardous Waste Sites" published by the U.S. EPA (U.S. EPA/540/2-85/003, November 1985). Dust levels were measured periodically by LFR as described in Section 7.0.

Plant Reclamation used a water mist to control fugitive dust emissions during demolition activities. Plant Reclamation also scheduled the majority of demolition activities to occur during early morning hours to take advantage of foggy conditions at the Site.

7.0 AIR MONITORING

Air and dust monitoring were implemented during dust generating activities. The objectives of air and dust monitoring were to evaluate the potential for worker exposure to contaminants, to determine appropriate levels of respiratory protection, to verify protection of off-site public and nearby residents and workers, and to evaluate the effectiveness of dust control measures implemented at the Site.

Perimeter air monitoring, personal air monitoring, and site dust monitoring were conducted using high-volume air samplers, personal air monitors (PAMs), and an MIE miniature real-time aerosol monitor (miniRAM) dust monitoring device.

LFR performed air quality monitoring and sampling, personal sampling, and related recordkeeping.

7.1 Perimeter Ambient Air Monitoring

Action levels for the dust sample results were not established for the perimeter air monitoring prior to beginning the demolition activities. However, LFR installed and operated four Graseby/GMW model GMWL-2000 high-volume air samplers with Whatman EPM-2000 glass microfiber filters (Title 40 of Code of Federal Regulations [CFR] 40, Part 50, Appendix B) to confirm the effectiveness of dust control measures implemented by the demolition contractor and to verify that downwind receptors were not impacted from the dust. Two perimeter high-volume air samplers were located downwind of the demolition area, and one was located upwind of the demolition area. A fourth sampler was located in the Rifkin building, outside of the exclusion zone.

LFR installed and operated a weather station that recorded wind speed and direction upwind from the former Rifkin building. Wind direction and speed were recorded periodically on the upwind high-volume air-sampler data sheets.

LFR recorded the airflow of the high-volume air samplers at the beginning and end of each work day, and periodically throughout the day. If any anomalies were detected, the high-volume air samplers were recalibrated. Air-monitoring records were kept on site for the duration of the field work.

High-volume filter samples were analyzed for arsenic and lead using EPA Methods 7060 and 7421. The analytical results for the high-volume filter samples are presented in Table 5 and Appendix F.

Air concentrations for arsenic and lead presented in Table 5 were compared to health-based air target levels (TLs) established for arsenic and lead of 0.16 ug/m^3 and 1.1 ug/m^3 respectively. These target levels were established for the Horton Street soil excavation activities conducted during the summer of 1997. The arsenic air TL was calculated for residential exposure based on a point of departure for incremental excess lifetime cancer risk of one-in-one million (10^{-6}). The calculation also assumed an

exposure duration of 60 days of dust-generating construction activities. The lead air TL was calculated for residential exposure based on an acceptable blood lead level for a child of 10 ug/dl. Detected arsenic and lead air concentrations in high-volume filter samples were below their respective TLs. Therefore, health risks associated with exposure to arsenic and lead detected in air as a result of demolition activities (with a total of 8 actual days of potential dust-generating activities) are considered to be negligible and below acceptable risk-based target levels.

7.2 Personal Air Monitoring

PAM devices were used to assess the potential for worker exposure to arsenic and lead dust that could become airborne during demolition activities at the Site. One PAM was fastened to the excavator operator, and one PAM was fastened to a worker performing manual labor near the demolition activities.

The PAM devices consisted of a sampling pump manufactured by SKC West, Model 224PCXR7 and a filter cassette that was attached to the pump. Each pump was set for a flow rate of 1.5 liters per minute and generally operated between 6 and 10 hours during the work day. LFR performed pre- and post-use calibration of the pumps in accordance with the manufacturer's specifications.

Filter cassettes were collected and submitted to AEN for arsenic and lead analysis using National Institute for Occupational Safety and Health (NIOSH) Method 7300 after each day of dust-generating activities. Table 6 presents the filter cassette analytical results, and the laboratory analytical results for PAM sampling are included in Appendix C.

7.3 MiniRAM Dust Monitoring

During dust-generating activities, LFR performed dust monitoring using a miniRAM, which is a passive collection dust monitoring instrument capable of monitoring dust to 0.01 milligrams per cubic meter (mg/m^3). LFR personnel performed routine monitoring during site operations to evaluate concentrations of total dust in worker breathing zones.

7.4 Action Levels

Workers performing demolition activities in the exclusion zone wore Level C protection that included two Tyvek suits and a half-face respirator. Following is a table summarizing the total dust equivalent action levels.

Total Dust Equivalent Action Levels

CAL OSHA Arsenic PEL	Total Dust Equivalent Action Level	Action
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0.01 mg/m ³	0 to 0.3 mg/m ³	Evaluate engineering controls Level C with half-face air-purifying respirator
0.01 mg/m ³	0.3 to 1.5 mg/m ³	Re-evaluate engineering controls Level C with full-face air-purifying respirator
0.01 mg/m ³	> 1.5 mg/m ³	Cease operations and evacuate work area. Contact Director of Health and Safety and Project Manager immediately

mg/m³ = milligrams per cubic meter

PEL = permissible exposure limit

In general, miniRAM readings were below 0.3 mg/m³ and the workers wore only a half-face respirator. On February 2, 1997, field personnel were upgraded to a full-face respirator because of miniRAM readings that were greater than 0.3 mg/m³. The workers continued to wear full-face respirators for the remainder of the project.

REFERENCES

Erler & Kalinowski, Inc. 1996. Letter Report. Results of Residue Sampling on Interior of South Wall of Rifkin Building, 4525 Horton Street (EKI 930028.82). Emeryville, California. November 4.

Levine·Fricke·Recon Inc. 1997. Revised Work Plan for Demolition and Disposal of the South Brick Wall at the Rifkin Building. Emeryville, California. January 10.

———. 1996. Work Plan for Sample Collection and Laboratory Analysis of Building Material and Precipitate on a Portion of the Rifkin Property, 4525 to 4563 Horton Street, Emeryville, California. November 20.

U.S. Environmental Protection Agency. 1985. Handbook – Dust Control at Hazardous Waste Sites, Chapter Five, U.S. EPA/540/2-85/003. November.

Table 1
Metal Concentrations and pH Detected in Residue, Paint, Mortar, and Brick Samples
from Rifkin Building South Wall
The Sherwin-Williams Company
Emeryville, California

Sample Number	Location	Feet from East Wall	Height Above Ground ² (feet)	Material Type	As (mg/kg)	Pb (mg/kg)	Zn (mg/kg)	pH
BW-1	Interior	40	1	residue	4100	1400	27000	
BW-2	Interior	40	1	paint	11000	2300	24000	
BW-3	Interior	40	1	mortar	2200	120	430	8.4
BW-4	Interior	40	1	brick	790	17	90	8
BW-5	Interior	80	1	residue	100	180	8900	
BW-6	Interior	80	1	paint	120	4900	27000	3.9
BW-7	Interior	80	1	mortar	60	62	720	8.2
BW-8	Interior	80	1	brick	< 40	13	400	4.4
BW-9	Interior	120	1	residue	200	660	3100	
BW-10	Interior	120	1	paint	< 40	190	290	
BW-11	Interior	120	1	mortar	200	12	100	10.1
BW-12	Interior	120	1	brick	40	4	360	10
BW-13	Interior	160	1	paint	< 40	3400	22000	
BW-14	Interior	160	1	mortar	< 40	32	130	10.1
BW-15	Interior	160	1	brick	< 40	9	60	8.7
BW-16	Interior	40	5	paint	80	3600	14000	5.6
BW-17	Interior	40	5	brick	< 40	<3	20	8.4
BW-18	Interior	40	5	mortar	100	18	120	8.2
BW-19	Interior	80	5	paint	< 40	12000	24000	5.5
BW-20	Interior	80	5	mortar	100	36	92	8.5
BW-21	Interior	80	5	brick	< 40	43	960	3.9
BW-22	Interior	160	5	paint	< 40	3900	16000	5.7
BW-23	Interior	120	5	paint	< 40	3900	8200	6
BW-24	Interior	120	5	mortar	< 40	70	180	8.7
BW-25	Interior	120	5	brick	< 40	12	37	9
BW-26	Interior	160	5	mortar	< 40	20	270	8.6
BW-27	Interior	160	5	brick	< 40	<3	10	8.4
BW-28	Interior	40	11.5	paint	100	8100	42000	6.7

**Metal Concentrations and pH Detected in Residue, Paint, Mortar, and Brick Samples
from Rifkin Building South Wall
The Sherwin-Williams Company
Emeryville, California**

Sample Number	Location ¹	Feet from East Wall	Height Above Ground ² (feet)	Material Type	As (mg/kg)	Pb (mg/kg)	Zn (mg/kg)	pH
BW-29	Interior	40	11.5	mortar	200	15	45	8.1
BW-30	Interior	40	11.5	brick	200	<3	70	7.6
BW-31	Interior	80	11.5	paint	50	16000	8100	5.5
BW-32	Interior	80	11.5	mortar	100	47	91	8.5
BW-33	Interior	80	11.5	brick	60	4	10	6.6
BW-34	Interior	120	11.5	paint	50	23000	9700	5.4
BW-35	Interior	120	11.5	mortar	< 40	17	50	8.2
BW-36	Interior	120	11.5	brick	< 40	11	40	6.8
BW-37	Interior	160	11.5	paint	< 40	3900	5200	6.3
BW-38	Interior	160	11.5	mortar	< 40	<3	20	10.8
BW-39	Interior	160	11.5	brick	< 40	<3	10	9.5
BW-40	Background	west wall	6	paint	< 40	2200	35000	7.8
BW-41	Background	west wall	6	mortar	< 40	49	890	8.6
BW-42	Background	west wall	6	brick	< 40	4	60	8.6
BW-43	Background	midbuilding	5	paint	< 40	1500	33000	6.3
BW-44	Background	midbuilding	5	mortar	< 40	13	220	10.4
BW-45	Background	midbuilding	5	brick	< 40	<3	<10	9.1
BW-46	Exterior	40	5	mortar	70	53	50	8.2
BW-47	Exterior	40	5	brick	250	<3	<10	7.7
BW-48	Exterior	40	11.5	mortar	1200	140	60	8.3
BW-49	Exterior	40	11.5	brick	660	26	20	8.2
BW-50	Exterior	80	5	mortar	750	360	150	8.6
BW-51	Exterior	80	5	brick	60	5	<10	8.3
BW-52	Exterior	80	11.5	mortar	290	100	70	8.5
BW-53	Exterior	80	11.5	brick	< 40	<3	10	7.2
BW-54	Exterior	120	5	mortar	70	33	50	8.5
BW-55	Exterior	120	5	brick	< 40	<3	<10	8.5
BW-56	Exterior	120	11.5	mortar	80	51	40	8.4
BW-57	Exterior	120	11.5	brick	< 40	4	<10	8.1

Table 2
Summary of Concrete Analysis Data
Rifkin South Wall Demolition

Sample ID	Date	Arsenic (mg/kg)
2-3	30-Jan-97	4.1
3-4	30-Jan-97	6.2
4-5	30-Jan-97	20
CHI-5-6	5-Feb-97	44
CHI-6-7	5-Feb-97	7.2
CHI-7-8	5-Feb-97	11

Data entered by TGL. Proofed by ARJ. QA/QC by MDK.

Notes:

Laboratory analyses performed by American Environmental Network, Pleasant Hill, California.
Arsenic analyzed by EPA Method 7060.
mg/kg = milligrams per kilogram

Table 3
Summary of Concrete Wipe Sample Analysis Data
Rifkin South Wall Demolition

Sample ID	Date	Arsenic ⁽¹⁾ (ug)
AF-BLNK	12-Feb-97	< 5
AF-FL-1	12-Feb-97	52
AF-FL-2	12-Feb-97	57
AF-FL-3	12-Feb-97	57
AF-FL-4 (2)	12-Feb-97	660
AF-FL-5 (2)	12-Feb-97	380
AF-FL-6 (2)	12-Feb-97	130
AF-CO-1-2	12-Feb-97	< 5
AF-CO-4-5	12-Feb-97	13
AF-CO-7-8	12-Feb-97	21
FL-01-W (3)	18-Feb-97	11
FL-02-M (3)	18-Feb-97	11
FL-03-E (3)	18-Feb-97	14

Data entered by TGL. Proofed by ART. QA/QC by MDK.

Notes:

Laboratory analyses performed by American Environmental Network, Pleasant Hill, California.
 Arsenic analyzed by EPA Method 6010.

- (1) Arsenic data reported as micrograms per 100-square centimeter wipe area.
- (2) Samples collected after the first time the floor slab was wet-broomed.
- (3) Samples collected after wet-broom and Alconox cleaning for a second time.
 FL-01-W, FL-02-M, and FL-03-E collected at same locations as AF-FL-4, AF-FL-5,
 and AF-FL-6, respectively.

Table 4
Summary of Brick Analysis Data
Rifkin South Wall Demolition

Sample Description	Date	Silver (mg/kg)	Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Mercury (mg/kg)	Lead (mg/kg)	Selenium (mg/kg)
Class I TTLC	4-Feb-97	<0.1	240	26	1.8	2.6	0.06	32	<1
Class I TCLP	4-Feb-97	<0.005	0.49	0.13	0.031	<0.01	<0.0002	0.09	0.007
Class II TTLC	4-Feb-97	<0.1	1.6	28	<0.2	4.5	<0.06	4	<1
Class II TCLP	4-Feb-97	<0.005	0.023	0.16	<0.005	<0.01	<0.0002	<0.04	0.004

Data entered by TGL. Proofed by ARJ. QA/QC by MDK.

Notes:

Laboratory analyses performed by American Environmental Network, Pleasant Hill, California.

Silver, barium, cadmium, chromium, and lead analyzed by EPA Method 6010.

Arsenic, mercury, and selenium analyzed by EPA Methods 7060, 7471/7470, and 7740, respectively.

mg/kg = milligrams per kilogram

Table 5
Summary of High Volume Air Sampler Data
Rifkin South Wall Demolition

Sample ID	Date	Total Air Flow (1) (m ³)	Wet Weight of Arsenic (2) (ug)	Volumetric Arsenic Concentration (3) (ug/m ³)	Wet Weight of Lead (2) (ug)	Volumetric Lead Concentration (3) (ug/m ³)	Sample Location
2687	29-Jan-97	501	3.9 (4)	0.0077	18.8	0.038	South Downwind
2686	29-Jan-97	493	< 1.8	< 0.0037	10.0	0.020	East Downwind
2685	29-Jan-97	446	< 1.8	< 0.0040	9.1	0.020	West Upwind (Background)
2684	29-Jan-97	0	< 1.8	---	< 1.8	---	Trip Blank
2683	30-Jan-97	585	< 1.8	< 0.0031	10.5	0.018	East Downwind
2682	30-Jan-97	520	< 1.8	< 0.0035	11.2	0.022	West Upwind (Background)
2681	30-Jan-97	500	< 1.8	< 0.0036	10.7	0.021	South Downwind
2680	30-Jan-97	0	< 1.8	---	< 1.8	---	Trip Blank
2678	31-Jan-97	678	1.7	0.0025	18.2	0.027	South Downwind
2677	31-Jan-97	646	3.1	0.0048	17.3	0.027	West Upwind (Background)
2676	31-Jan-97	728	2.9	0.0040	21.7	0.030	East Downwind
2675	1-Feb-97	740	< 1.9	< 0.0026	4.5	0.0061	East Downwind
2674	1-Feb-97	669	< 1.8	< 0.0027	4.8	0.0072	West Upwind (Background)
2673	1-Feb-97	507	< 1.8	< 0.0036	2.8	0.0055	South Downwind
2672	3-Feb-97	698	< 1.8	< 0.0026	21.2	0.0304	East Downwind
2671	3-Feb-97	739	< 1.8	< 0.0024	20.6	0.0279	West Upwind (Background)
2670	3-Feb-97	735	4.0	0.0054	30.3	0.0412	South Downwind
2669	3-Feb-97	563	5.5	0.0098	16.2	0.0288	Inside Rifkin Building
2668	3-Feb-97	0	< 1.8	---	< 1.8	---	Trip Blank
2666	4-Feb-97	477	< 1.8	< 0.0038	7.2	0.0151	East Downwind
2665	4-Feb-97	805	< 1.8	< 0.0022	8.9	0.0111	West Upwind (Background)
2664	4-Feb-97	655	< 1.8	< 0.0027	7.7	0.0118	South Downwind
2663	4-Feb-97	462	< 1.8	< 0.0039	5.6	0.0121	Inside Rifkin Building
2662	7-Feb-97	308	< 1.8	< 0.0058	8.6	0.0279	Inside Rifkin Building
2661	7-Feb-97	404	< 1.8	< 0.0045	9.3	0.0230	East Downwind
2660	7-Feb-97	407	9.8 (4)	0.0240	17.5	0.0430	South Downwind
2659	7-Feb-97	458	< 1.8	< 0.0039	11.7	0.0255	West Upwind (Background)
2658	8-Feb-97	663	48.0 (4)	0.0724	30.9	0.0466	South Downwind
2657	8-Feb-97	627	< 1.8	< 0.0029	3.5	0.0056	West Upwind (Background)
2656	8-Feb-97	405	42.7	0.1054	42.0	0.1037	Inside Rifkin Building
2655	8-Feb-97	615	1.9	0.0031	4.6	0.0075	East Downwind

Data entered by TGL . Proofed by ARJ . QA/QC by MDK .

Table 5
Summary of High Volume Air Sampler Data
Rifkin South Wall Demolition

Sample ID	Date	Total Air Flow (1) (m ³)	Wet Weight of Arsenic (2) (ug)	Volumetric Arsenic Concentration (3) (ug/m ³)	Wet Weight of Lead (2) (ug)	Volumetric Lead Concentration (3) (ug/m ³)	Sample Location
-----------	------	---	-----------------------------------	--	--------------------------------	---	-----------------

Notes:

- (1) = Total air flow calculated using high-volume air sampler field data.
 - (2) = Based on results of laboratory analyses performed by Quanterra Environmental Services, Sacramento, California. Arsenic analyzed by EPA Method 7060. Lead analyzed by EPA Method 7421.
 - (3) = Volumetric concentration calculated by dividing the wet weight of lead or arsenic by the total air flow. For comparison with action levels, background (west upwind) volumetric concentration should be subtracted from the raw data.
 - (4) = Arsenic concentration is the average of eight separate analyses on the same filter sample.
- ug/m³ = micrograms per cubic meter

Table 6
Summary of Personal Air Monitor Data
Rifkin South Wall Demolition

Sample ID	Date	Total Air Flow (1) (liters)	Volumetric Arsenic Concentration (2) (mg/m ³)	Volumetric Lead Concentration (2) (mg/m ³)	Operation Performed by Worker Wearing Personal Air Monitor (Percentage of Working Time Spent Inside/Outside Exclusion Zone)
3042-0129-1	29-Jan-97	531	<0.002	0.001	Laborer (50/50)
3042-0129-2	29-Jan-97	519	<0.002	<0.001	Excavator Operator (0/100)
3042-0130-1	30-Jan-97	813	<0.002	0.0011	Laborer (50/50)
3042-0130-2	30-Jan-97	753	<0.002	<0.0007	Excavator Operator (0/100)
3042-0131-1	31-Jan-97	833	<0.002	0.0007	Laborer (50/50)
3042-0131-2	31-Jan-97	912	<0.002	<0.0006	Excavator Operator (0/100)
3042-0201-1	1-Feb-97	486 (3)	0.005	0.005	Laborer (50/50)
3042-0201-2	1-Feb-97	651	0.003	0.002	Bobcat Operator (50/50)
3042-0203-1	3-Feb-97	(4)	(4)	(4)	Laborer (25/75)
3042-0203-2	3-Feb-97	728	<0.002	<0.0007	Excavator Operator (0/100)
3042-0203-3	3-Feb-97	649	0.004	0.003	Bobcat Operator (75/25)
3042-0204-1	4-Feb-97	828 (5)	0.030	0.030	Laborer (100/0)
3042-0204-2	4-Feb-97	616 (3)	<0.002	0.001	Bobcat Operator (100/0)
3042-0205-1	5-Feb-97	492 (6)	0.011	0.008	Laborer (100/0)
3042-0205-2	5-Feb-97	210 (3)	<0.005	0.005	Bobcat Operator (50/50)
3042-0206-1	6-Feb-97	863	0.038	0.024	Laborer (100/0)
3042-0206-2	6-Feb-97	861	0.004	0.0037	Bobcat Operator (75/25)
Trip Blanks (mass in mg)					
3042-0129-B	29-Jan-97	0	<0.001	<0.0005	Trip Blank
3042-0130-B	30-Jan-97	0	<0.001	<0.0005	Trip Blank

Data entered by TGL. Proofed by ARJ. QA/QC by MDK.

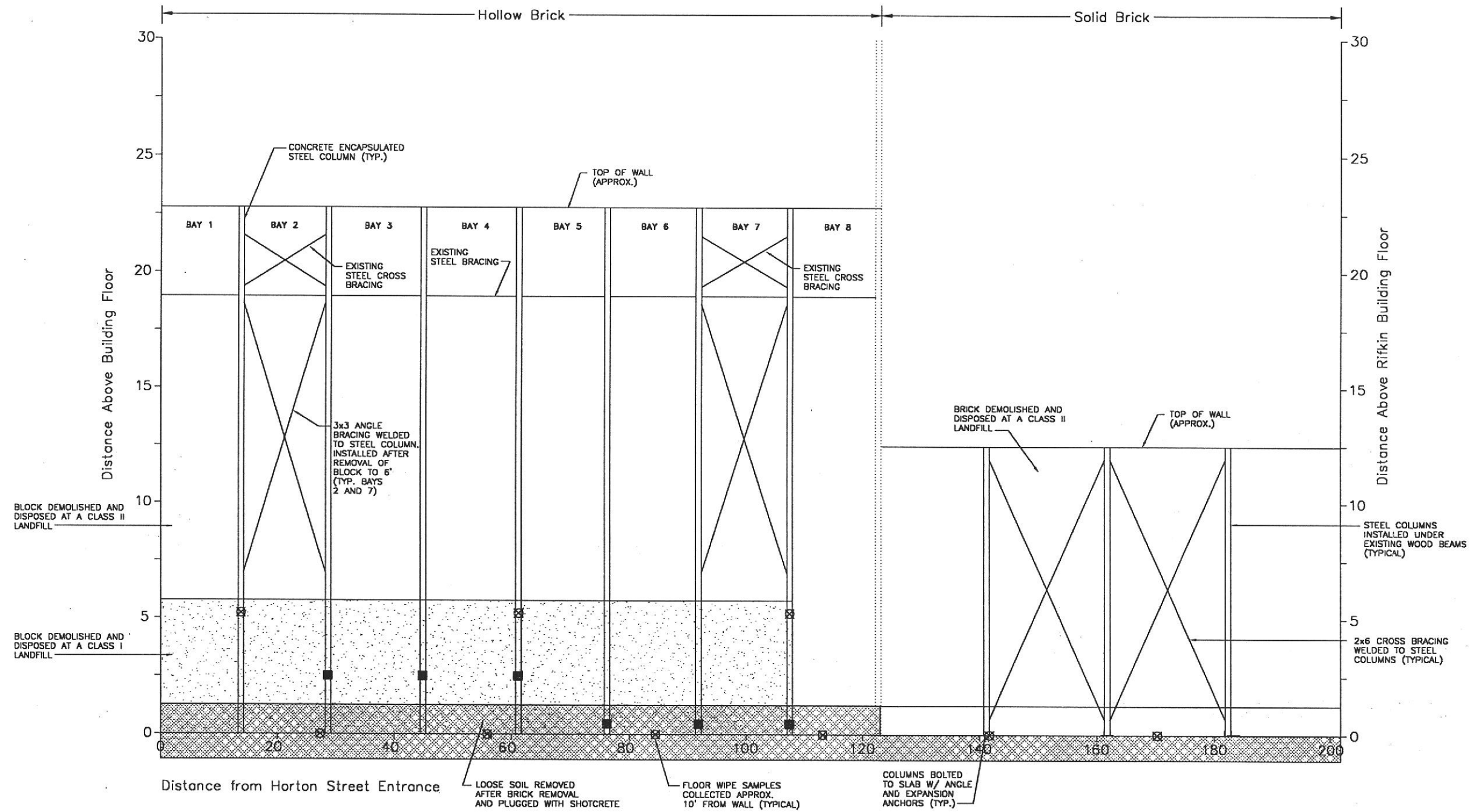
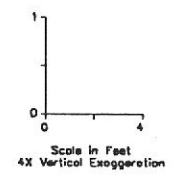
Notes:

- (1) = Total air flow calculated using Personal Air Monitor field data.
 - (2) = Laboratory analyses performed by American Environmental Network, Pleasant Hill, California. Arsenic and lead analyzed by modified NIOSH Method 7300. Volumetric concentration calculated by laboratory given the total air flow. For comparison with action levels, background (west upwind) volumetric concentration should be subtracted from the raw data.
 - (3) = Personal air monitor pump was on hold when received from worker at end of day due to flow fault or low battery.
 - (4) = Personal air monitor pump was on hold when received from worker at end of day. Total air flow determined to be insufficient for required detection limit.
 - (5) = Personal air monitor pump was on hold when received from worker during the day due to flow fault or low battery. Pump was restarted during the day.
 - (6) = Personal air monitor pump was on hold when received from worker during the day due to flow fault or low battery. Pump was restarted during the day. Total air flow data not accurate due to run timer malfunction.
- mg/m³ = milligrams per cubic meter
 NIOSH = National Institute of Occupational Safety and Health

3042-2.DWG

062499

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- LEGEND**
- CONCRETE SAMPLE LOCATION
 - ⊗ WIPE SAMPLE LOCATION

RECORD DRAWING

SHERWIN-WILLIAMS
**DEMOLITION OF SOUTH BRICK WALL
 AT THE FORMER RIFKIN BUILDING**

LFR
 LEVINE • FRICKE

Figure 1

East

West

Sample ID	Sample Material	Arsenic (mg/kg)	Lead (mg/kg)	Zinc (mg/kg)	pH
BW19 (I)	Point	<40	12,000	24,000	5.5
BW20 (I)	Mortar	100	36	92	8.5
BW21 (I)	Brick	<40	4.3	960	3.9
BW50 (E)	Mortar	750	360	150	8.6
BW51 (E)	Brick	80	5	<10	8.3

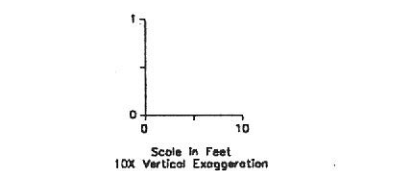
Sample ID
(I) Indicates Building Interior
(E) Indicates Building Exterior

Chemical Concentration (mg/kg)

pH (pH Units)

▲ Sample Collected by Levine-Fricke-Recon (LFR)

■ Sample Collected by Eiler & Kalinowski, Inc (EKI)

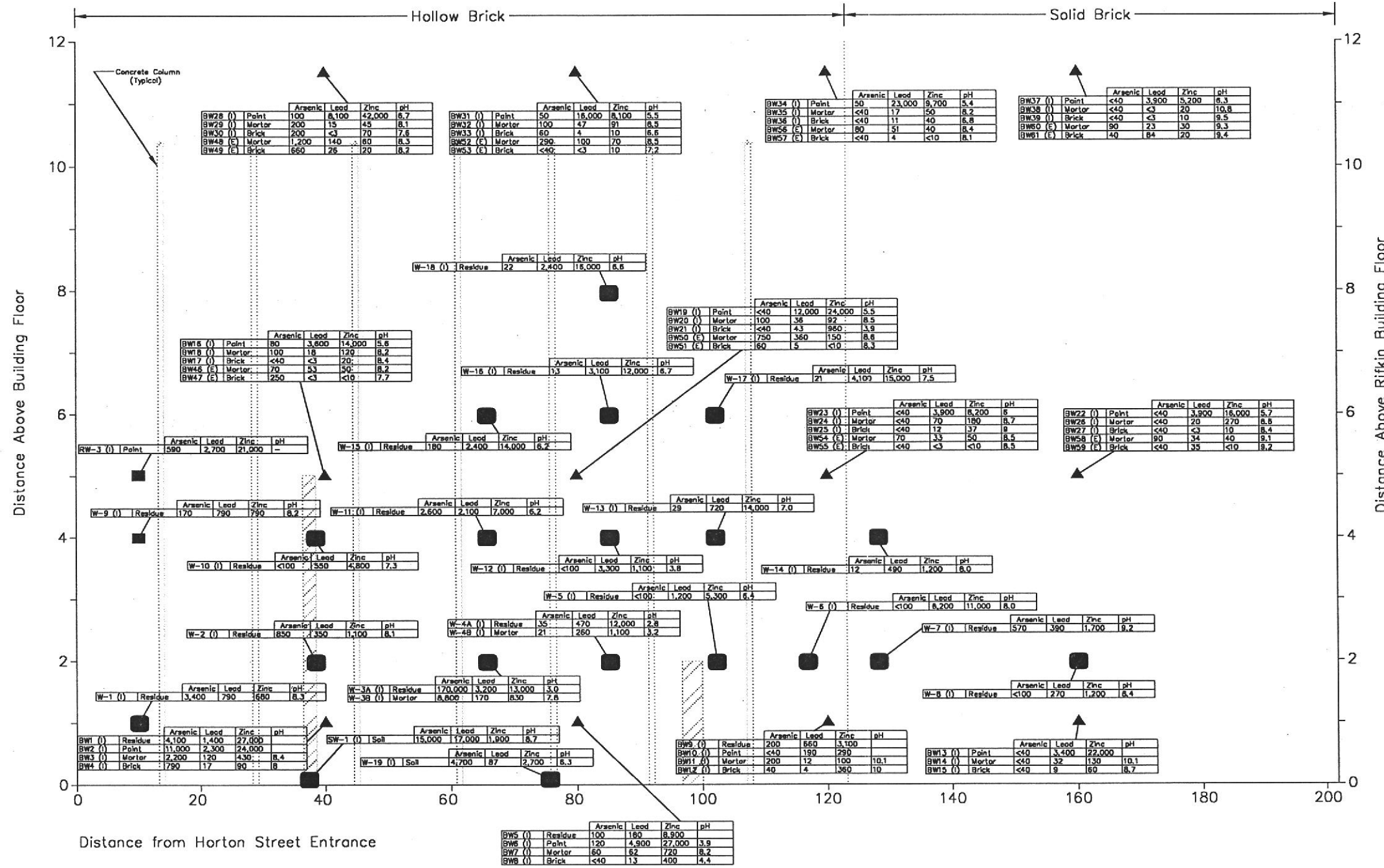


- Notes:
- All locations are approximate
 - Less than symbol ("<") indicates concentration less than the stated laboratory method reporting limit.
 - All Samples collected by (LFR) were collected on 11/26/96 or 11/27/96
 - All Samples collected by (EKI) were collected on 10/21/96

Background Samples Collected by (LFR)

Sample ID	Sample Material	Arsenic (mg/kg)	Lead (mg/kg)	Zinc (mg/kg)	pH
BW45 (I)	Point	<40	2,200	33,000	7.8
BW41 (I)	Mortar	<40	49	890	8.6
BW42 (I)	Brick	<40	4	60	8.6

Sample ID	Sample Material	Arsenic (mg/kg)	Lead (mg/kg)	Zinc (mg/kg)	pH
BW43 (I)	Point	<40	1,500	33,000	6.3
BW44 (I)	Mortar	<40	13	220	10.4
BW45 (I)	Brick	<40	<3	<10	8.1



RECORD DRAWING

SHERWIN-WILLIAMS

Metal Concentrations and pH Detected in Residue, Paint, Mortar, and Brick Samples from Former Rifkin Building South Wall



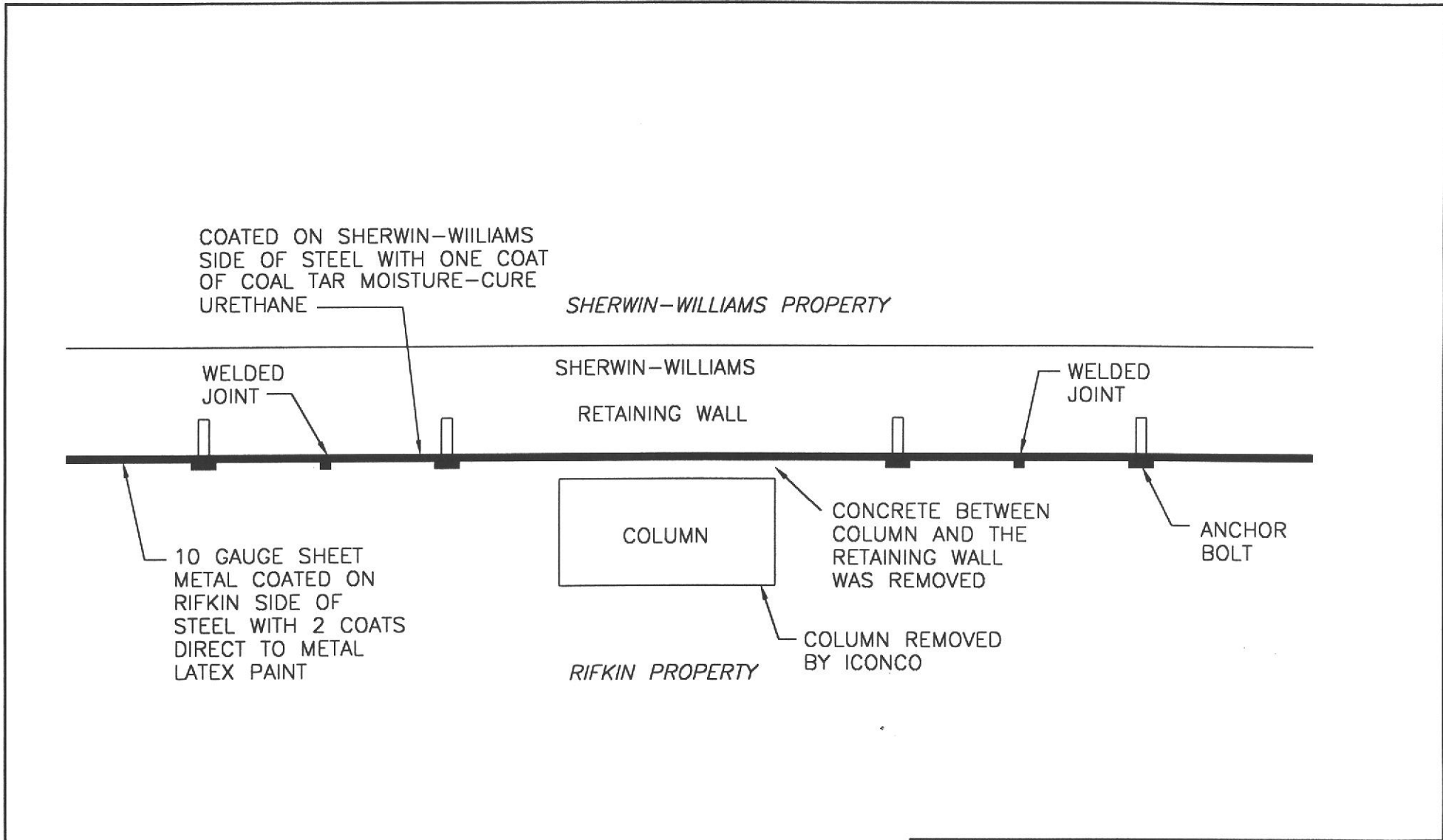
Figure 2

3042-1.DWG

062499

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RECORD DRAWING

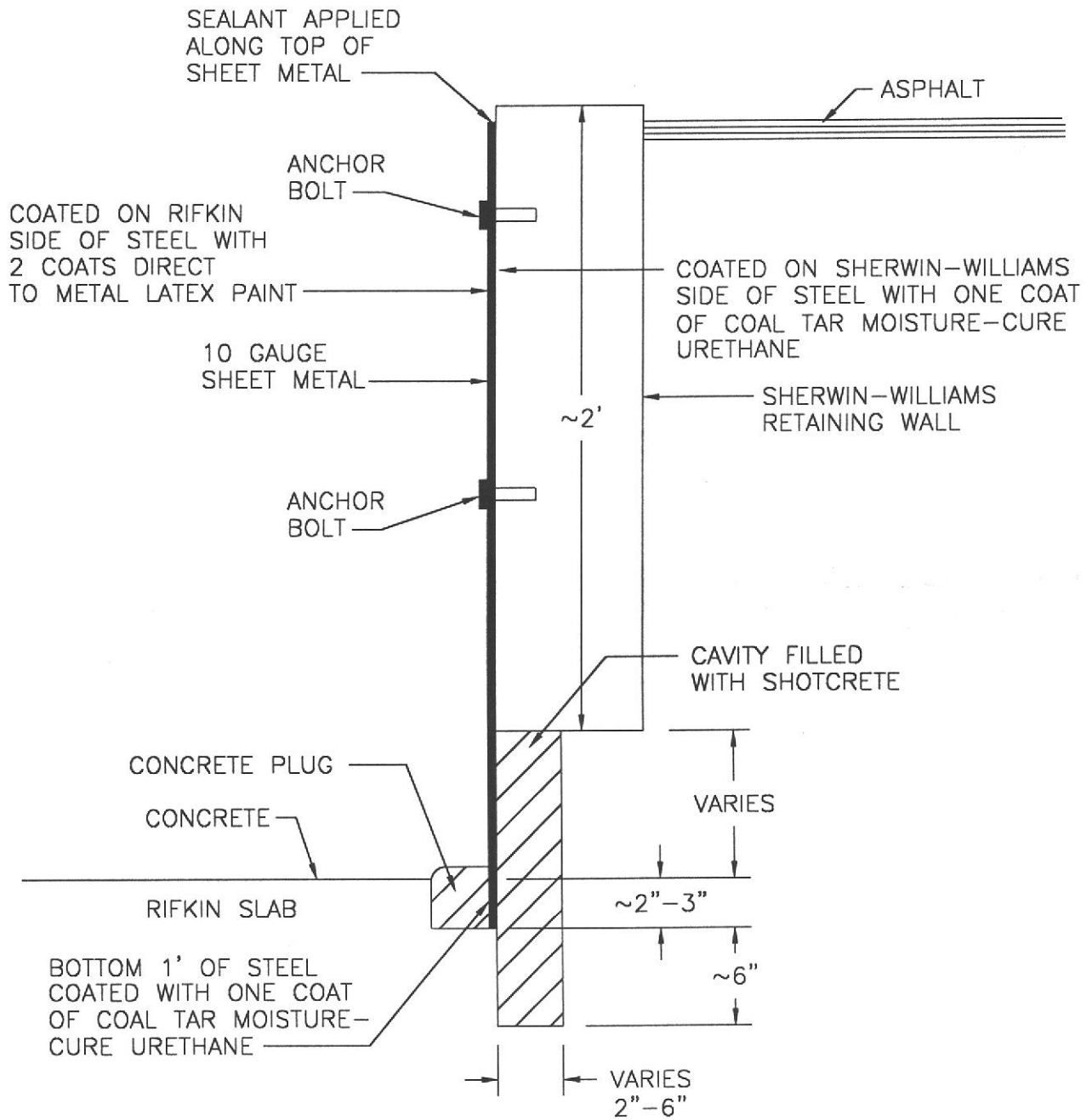
SHERWIN-WILLIAMS
PLAN
FORMER RIFKIN WALL (TYPICAL)
 N.T.S.

LFR
 LEVINE • FRICKE

Figure 3

RIFKIN PROPERTY

SHERWIN-WILLIAMS
PROPERTY



062499

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RECORD DRAWING

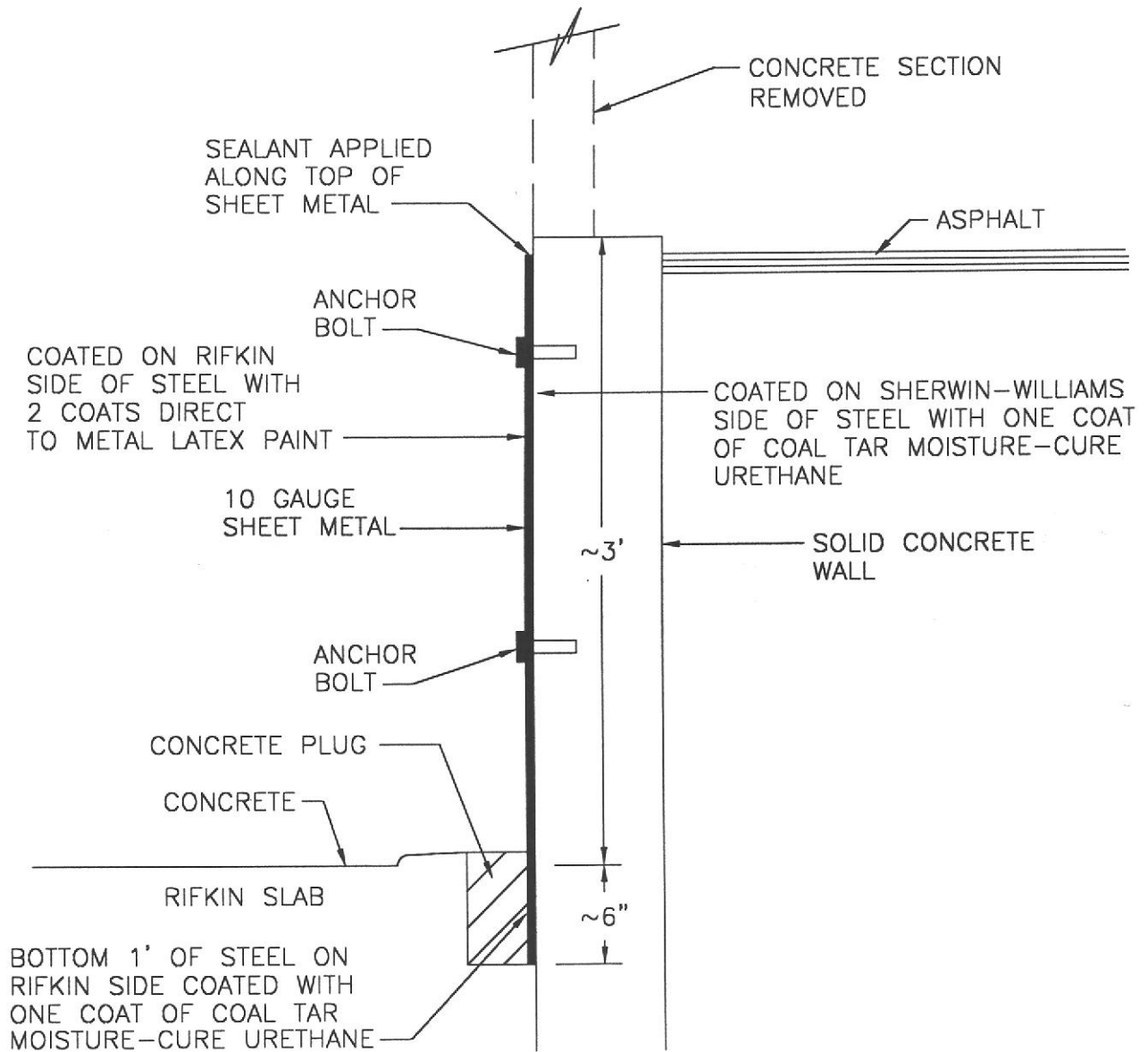
SHERWIN-WILLIAMS
SECTION
FORMER HOLLOW BRICK WALL AREA
(APPROX. 120' LENGTH)
N.T.S.

LFR
LEVINE • FRICKE

Figure 4

RIFKIN PROPERTY

SHERWIN-WILLIAMS
PROPERTY



062499

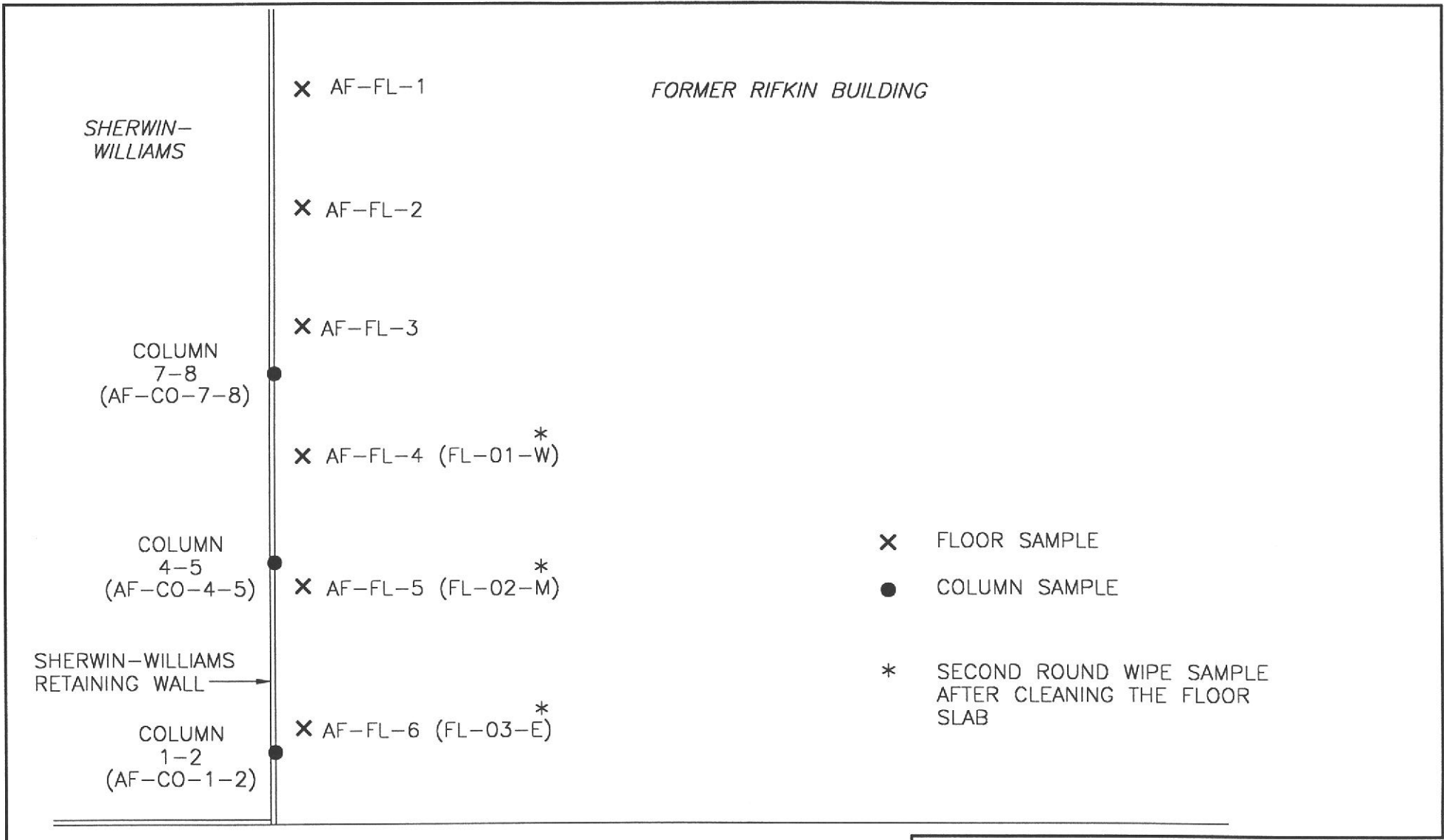
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RECORD DRAWING

SHERWIN-WILLIAMS
SECTION
FORMER SOLID BRICK WALL AREA
(APPROX. 80' LENGTH)
N.T.S.

LFR
LEVINE • FRICKE

Figure 5



HORTON STREET

SHERWIN-WILLIAMS
**WIPE SAMPLE LOCATIONS
 AT THE FORMER RIFKIN BUILDING**



Figure 6

Appendix A

Wall Photographs of Demolition Activities



Photograph #1: East wall of the former Rifkin building. The first three bays are covered by polycurtains.



Photograph #2: West wall of the former Rifkin building. Note the cyclone separator on top of the building.



Photograph #3: Excavator demolishing the first bay of the east wall of the former Rifkin building. Note the laborer performing dust control in Level C personal protective equipment.



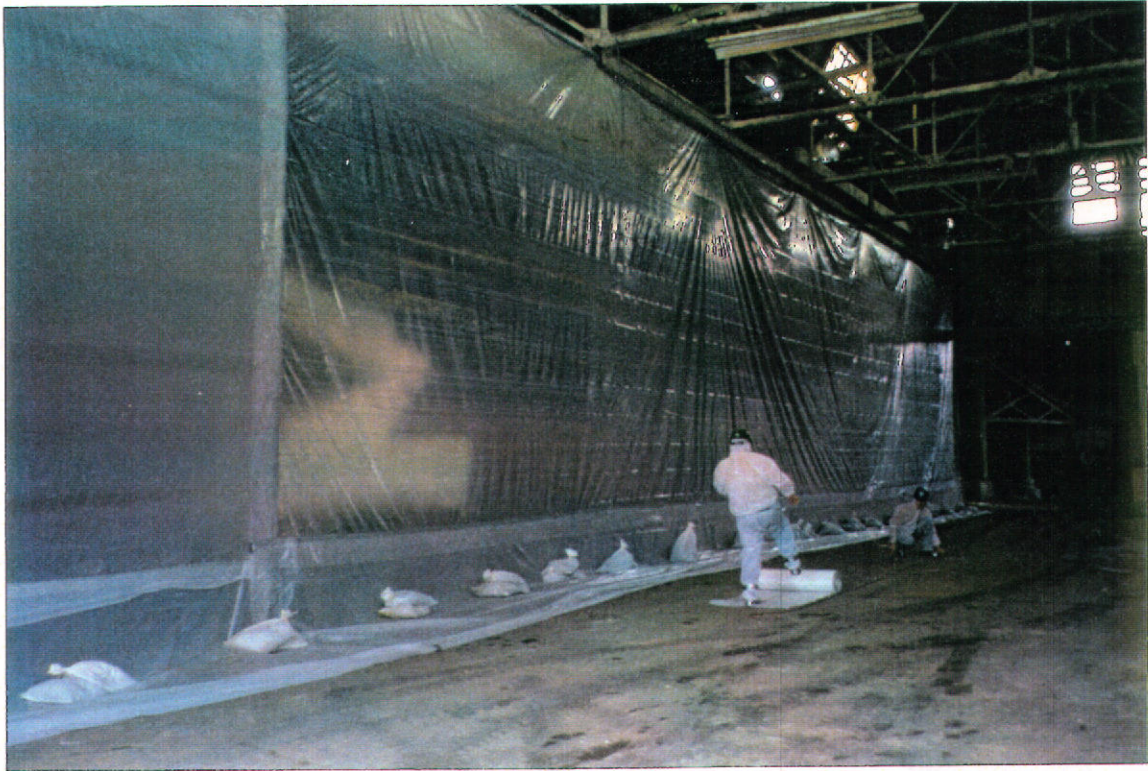
Photograph #4: Excavator demolishing the west wall of the former Rifkin building.



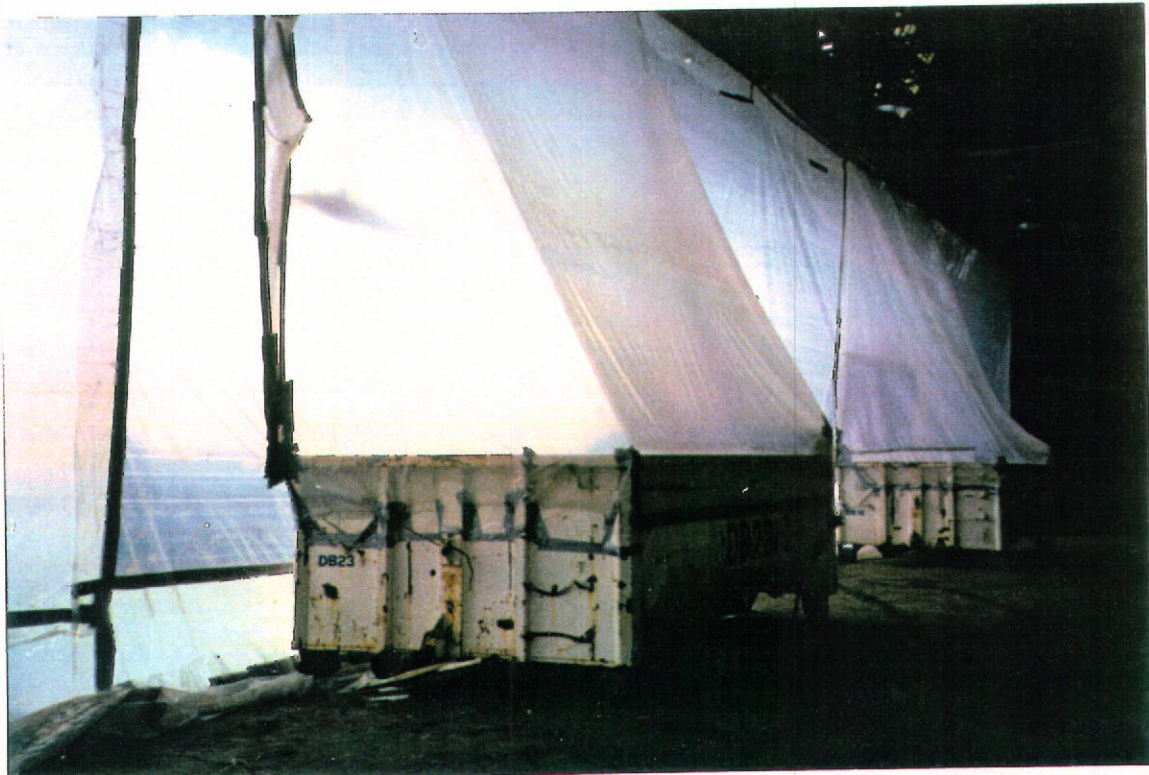
Photograph #5: East wall of the former Rifkin building after the non-hazardous bricks were removed.



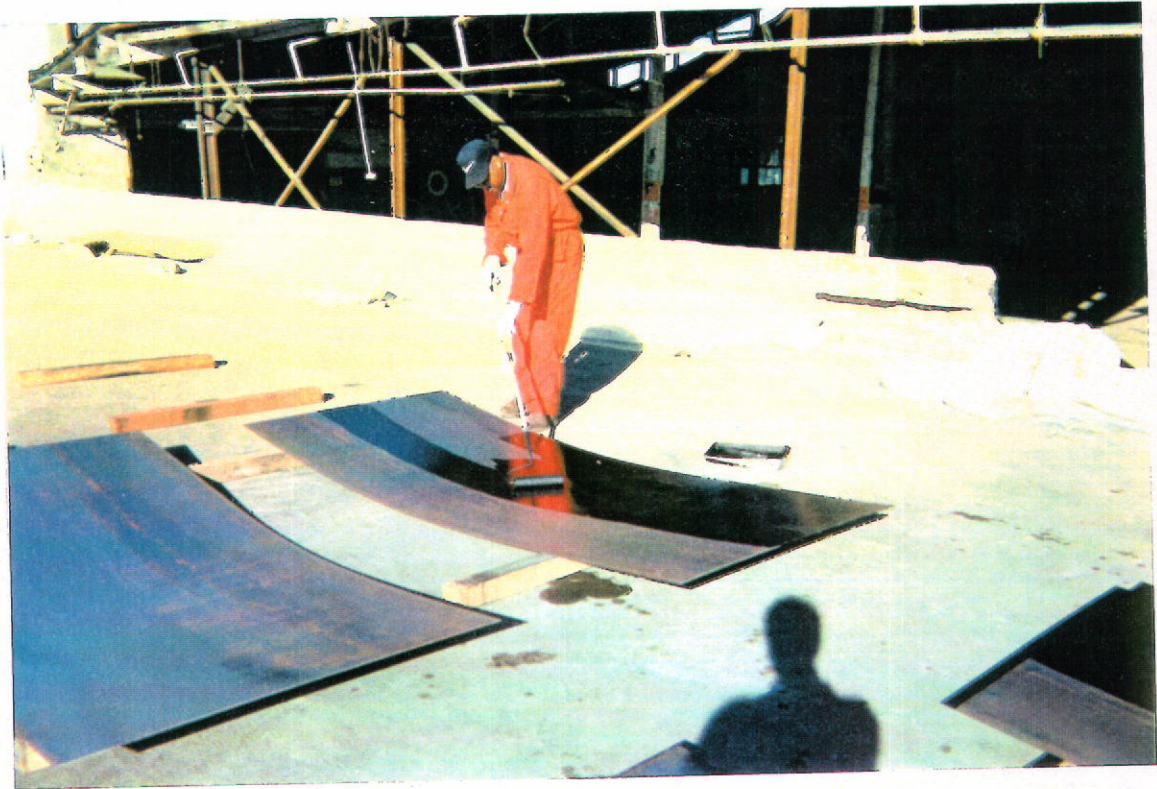
Photograph #6: Laborer in a bobcat removing hazardous bricks from the east wall of the former Rifkin building.



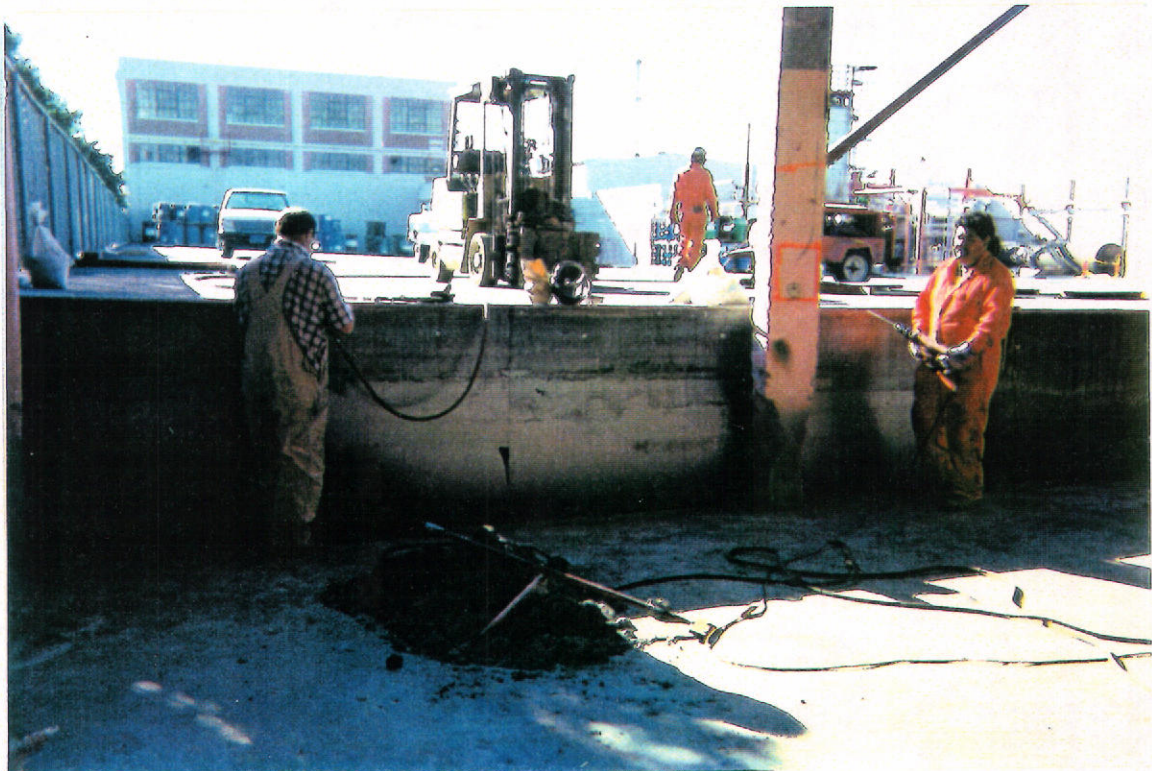
Photograph #7: Exclusion zone as seen for the inside of the former Rifkin building.



Photograph #8: Waste material bin connected to the exclusion zone.



Photograph #9: Laborer applying cold-tar urethane to steel plates.



Photograph #10: Laborers welding the steel plates together and anchoring them to the retaining wall. Note the orange square on the column. This is where wipe sample AF-CO-1-2 was collected.

Appendix B

Laboratory Analytical Results for Wall Sampling

American Environmental Network

ISOHS Certification: 1172

NIHA Accreditation

PAGE 1

LEVINE-FRICKE-RECON
1900 POWELL ST. 12TH FL.
EMERYVILLE, CA 94608

REPORT DATE: 12/12/96
DATE(S) SAMPLED: 11/27/96
DATE RECEIVED: 11/27/96
AEN WORK ORDER: 9611400

ATTN: KENTON GEE
CLIENT PROJ. ID: 3042.95-004
CLIENT PROJ. NAME: SHERWIN WMS
C.O.C. NUMBER: 15177

PROJECT SUMMARY:

On November 27, 1996, this laboratory received 16 solid 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

LEVINE - FRICKE - RECON

SAMPLE ID: BW-46
 AEN LAB NO: 9611400-01
 AEN WORK ORDER: 9611400
 CLIENT PROJ. ID: 3042.95-004

DATE SAMPLED: 11/27/96
 DATE RECEIVED: 11/27/96
 REPORT DATE: 12/12/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	8.2		S.U.	12/03/96
Lead	EPA 7420	53 *	3 mg/kg		12/03/96
#Digestion, Metals by GFAA	EPA 3050	-	Prep Date		12/01/96
Arsenic	EPA 7060	52 *	0.5 mg/kg		12/06/96
#Digestion, Metals AA/ICP	EPA 3050	-	Prep Date		12/01/96
Anion Scan in Soil by IC	EPA 300				
Fluoride, F	EPA 300	ND	10 mg/kg		12/03/96
Chloride, Cl	EPA 300	2,600 *	50 mg/kg		12/03/96
Nitrite, NO2-N	EPA 300	ND	10 mg/kg		12/03/96
Nitrate, NO3-N	EPA 300	4,000 *	10 mg/kg		12/03/96
Phosphate, PO4-P	EPA 300	ND	50 mg/kg		12/03/96
Sulfate, SO4	EPA 300	1,300 *	50 mg/kg		12/03/96
Calcium	EPA 6010	110,000 *	40 mg/kg		12/03/96
Magnesium	EPA 6010	7,600 *	50 mg/kg		12/03/96
Potassium	EPA 6010	1,100 *	20 mg/kg		12/03/96
Sodium	EPA 6010	2,400 *	30 mg/kg		12/03/96
Zinc	EPA 6010	50 *	10 mg/kg		12/03/96

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

LEVINE-FRICKE-RECON

SAMPLE ID: BW-47
 AEN LAB NO: 9611400-02
 AEN WORK ORDER: 9611400
 CLIENT PROJ. ID: 3042.95-004

DATE SAMPLED: 11/27/96
 DATE RECEIVED: 11/27/96
 REPORT DATE: 12/12/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	7.7		S.U.	12/03/96
Lead	EPA 7420	ND		3 mg/kg	12/03/96
#Digestion, Metals by GFAA	EPA 3050	-		Prep Date	12/01/96
Arsenic	EPA 7060	240 *	0.5 mg/kg		12/06/96
#Digestion, Metals AA/ICP	EPA 3050	-		Prep Date	12/01/96
Zinc	EPA 6010	ND		10 mg/kg	12/03/96

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

LEVINE-FRICKE-RECON

SAMPLE ID: BW-48
 AEN LAB NO: 9611400-03
 AEN WORK ORDER: 9611400
 CLIENT PROJ. ID: 3042.95-004

DATE SAMPLED: 11/27/96
 DATE RECEIVED: 11/27/96
 REPORT DATE: 12/12/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	8.3		S.U.	12/03/96
Lead	EPA 7420	140 *	3 mg/kg		12/03/96
#Digestion, Metals by GFAA	EPA 3050	-		Prep Date	12/01/96
Arsenic	EPA 7060	1,300 *	0.5 mg/kg		12/06/96
#Digestion, Metals AA/ICP	EPA 3050	-		Prep Date	12/01/96
Anion Scan in Soil by IC	EPA 300				
Fluoride, F	EPA 300	ND	5 mg/kg		12/03/96
Chloride, Cl	EPA 300	190 *	30 mg/kg		12/03/96
Nitrite, NO2-N	EPA 300	ND	5 mg/kg		12/03/96
Nitrate, NO3-N	EPA 300	310 *	5 mg/kg		12/03/96
Phosphate, PO4-P	EPA 300	ND	30 mg/kg		12/03/96
Sulfate, SO4	EPA 300	1,700 *	30 mg/kg		12/03/96
Calcium	EPA 6010	94,000 *	40 mg/kg		12/03/96
Magnesium	EPA 6010	7,600 *	50 mg/kg		12/03/96
Potassium	EPA 6010	810 *	20 mg/kg		12/03/96
Sodium	EPA 6010	380 *	30 mg/kg		12/03/96
Zinc	EPA 6010	60 *	10 mg/kg		12/03/96

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

LEVINE-FRICKE-RECON

SAMPLE ID: BW-49
AEN LAB NO: 9611400-04
AEN WORK ORDER: 9611400
CLIENT PROJ. ID: 3042.95-004

DATE SAMPLED: 11/27/96
DATE RECEIVED: 11/27/96
REPORT DATE: 12/12/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	8.2		S.U.	12/03/96
Lead	EPA 7420	26 *		3 mg/kg	12/03/96
#Digestion, Metals by GFAA	EPA 3050	-		Prep Date	12/01/96
Arsenic	EPA 7060	660 *		0.5 mg/kg	12/06/96
#Digestion, Metals AA/ICP	EPA 3050	-		Prep Date	12/01/96
Zinc	EPA 6010	20 *		10 mg/kg	12/03/96

ND = Not detected at or above the reporting limit

* = Value at or above reporting limit

LEVINE - FRICKE - RECON

SAMPLE ID: BW-50
 AEN LAB NO: 9611400-05
 AEN WORK ORDER: 9611400
 CLIENT PROJ. ID: 3042.95-004

DATE SAMPLED: 11/27/96
 DATE RECEIVED: 11/27/96
 REPORT DATE: 12/12/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	8.6		S.U.	12/03/96
Lead	EPA 7420	360 *	3 mg/kg		12/03/96
#Digestion, Metals by GFAA	EPA 3050	-	Prep Date		12/01/96
Arsenic	EPA 7060	750 *	0.5 mg/kg		12/06/96
#Digestion, Metals AA/ICP	EPA 3050	-	Prep Date		12/01/96
Anion Scan in Soil by IC	EPA 300				
Fluoride, F	EPA 300	9 *	5 mg/kg		12/03/96
Chloride, Cl	EPA 300	230 *	30 mg/kg		12/03/96
Nitrite, NO2-N	EPA 300	ND	5 mg/kg		12/03/96
Nitrate, NO3-N	EPA 300	86 *	5 mg/kg		12/03/96
Phosphate, PO4-P	EPA 300	ND	30 mg/kg		12/03/96
Sulfate, SO4	EPA 300	4,000 *	30 mg/kg		12/03/96
Calcium	EPA 6010	110,000 *	40 mg/kg		12/03/96
Magnesium	EPA 6010	7,300 *	50 mg/kg		12/03/96
Potassium	EPA 6010	920 *	20 mg/kg		12/03/96
Sodium	EPA 6010	680 *	30 mg/kg		12/03/96
Zinc	EPA 6010	150 *	10 mg/kg		12/03/96

ND = Not detected at or above the reporting limit

* = Value at or above reporting limit

LEVINE-FRICKE-RECON

SAMPLE ID: BW-51
 AEN LAB NO: 9611400-06
 AEN WORK ORDER: 9611400
 CLIENT PROJ. ID: 3042.95-004

DATE SAMPLED: 11/27/96
 DATE RECEIVED: 11/27/96
 REPORT DATE: 12/12/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	8.3		S.U.	12/03/96
Lead	EPA 7420	5 *	3 mg/kg		12/03/96
#Digestion, Metals by GFAA	EPA 3050	-	Prep Date		12/01/96
Arsenic	EPA 7060	43 *	0.5 mg/kg		12/06/96
#Digestion, Metals AA/ICP	EPA 3050	-	Prep Date		12/01/96
Zinc	EPA 6010	ND	10 mg/kg		12/03/96

ND = Not detected at or above the reporting limit

* = Value at or above reporting limit

LEVINE-FRICKE-RECON

SAMPLE ID: BW-52
 AEN LAB NO: 9611400-07
 AEN WORK ORDER: 9611400
 CLIENT PROJ. ID: 3042.95-004

DATE SAMPLED: 11/27/96
 DATE RECEIVED: 11/27/96
 REPORT DATE: 12/12/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	8.5		S.U.	12/03/96
Lead	EPA 7420	100 *	3 mg/kg		12/03/96
#Digestion, Metals by GFAA	EPA 3050	-	Prep Date		12/01/96
Arsenic	EPA 7060	290 *	0.5 mg/kg		12/06/96
#Digestion, Metals AA/ICP	EPA 3050	-	Prep Date		12/01/96
Anion Scan in Soil by IC	EPA 300				
Fluoride, F	EPA 300	ND	10 mg/kg		12/03/96
Chloride, Cl	EPA 300	710 *	50 mg/kg		12/03/96
Nitrite, NO2-N	EPA 300	ND	10 mg/kg		12/03/96
Nitrate, NO3-N	EPA 300	190 *	10 mg/kg		12/03/96
Phosphate, PO4-P	EPA 300	ND	50 mg/kg		12/03/96
Sulfate, SO4	EPA 300	4,600 *	50 mg/kg		12/03/96
Calcium	EPA 6010	84,000 *	40 mg/kg		12/03/96
Magnesium	EPA 6010	7,200 *	50 mg/kg		12/03/96
Potassium	EPA 6010	760 *	20 mg/kg		12/03/96
Sodium	EPA 6010	940 *	30 mg/kg		12/03/96
Zinc	EPA 6010	70 *	10 mg/kg		12/03/96

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

LEVINE - FRICKE - RECON

SAMPLE ID: BW-53
AEN LAB NO: 9611400-08
AEN WORK ORDER: 9611400
CLIENT PROJ. ID: 3042.95-004

DATE SAMPLED: 11/27/96
DATE RECEIVED: 11/27/96
REPORT DATE: 12/12/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	7.2		S.U.	12/03/96
Lead	EPA 7420	ND	3 mg/kg		12/03/96
#Digestion, Metals by GFAA	EPA 3050	-	Prep Date		12/01/96
Arsenic	EPA 7060	31 *	0.5 mg/kg		12/06/96
#Digestion, Metals AA/ICP	EPA 3050	-	Prep Date		12/01/96
Zinc	EPA 6010	10 *	10 mg/kg		12/03/96

ND = Not detected at or above the reporting limit

* = Value at or above reporting limit

LEVINE - FRICKE - RECON

SAMPLE ID: BW-54
 AEN LAB NO: 9611400-09
 AEN WORK ORDER: 9611400
 CLIENT PROJ. ID: 3042.95-004

DATE SAMPLED: 11/27/96
 DATE RECEIVED: 11/27/96
 REPORT DATE: 12/12/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	8.5		S.U.	12/03/96
Lead	EPA 7420	33 *	3 mg/kg		12/03/96
#Digestion, Metals by GFAA	EPA 3050	-	Prep Date		12/01/96
Arsenic	EPA 7060	80 *	0.5 mg/kg		12/06/96
#Digestion, Metals AA/ICP	EPA 3050	-	Prep Date		12/01/96
Anion Scan in Soil by IC	EPA 300				
Fluoride, F	EPA 300	15 *	5 mg/kg		12/03/96
Chloride, Cl	EPA 300	140 *	30 mg/kg		12/03/96
Nitrite, NO2-N	EPA 300	ND	5 mg/kg		12/03/96
Nitrate, NO3-N	EPA 300	110 *	5 mg/kg		12/03/96
Phosphate, PO4-P	EPA 300	ND	30 mg/kg		12/03/96
Sulfate, SO4	EPA 300	6,900 *	30 mg/kg		12/03/96
Calcium	EPA 6010	110,000 *	40 mg/kg		12/03/96
Magnesium	EPA 6010	7,200 *	50 mg/kg		12/03/96
Potassium	EPA 6010	790 *	20 mg/kg		12/03/96
Sodium	EPA 6010	860 *	30 mg/kg		12/03/96
Zinc	EPA 6010	50 *	10 mg/kg		12/03/96

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

LEVINE-FRICKE-RECON

SAMPLE ID: BW-55
AEN LAB NO: 9611400-10
AEN WORK ORDER: 9611400
CLIENT PROJ. ID: 3042.95-004

DATE SAMPLED: 11/27/96
DATE RECEIVED: 11/27/96
REPORT DATE: 12/12/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	8.5		S.U.	12/03/96
Lead	EPA 7420	ND	3 mg/kg		12/03/96
#Digestion, Metals by GFAA	EPA 3050	-	Prep Date		12/01/96
Arsenic	EPA 7060	9.6 *	0.5 mg/kg		12/06/96
#Digestion, Metals AA/ICP	EPA 3050	-	Prep Date		12/01/96
Zinc	EPA 6010	ND	10 mg/kg		12/03/96

ND = Not detected at or above the reporting limit

* = Value at or above reporting limit

LEVINE-FRICKE-RECON

SAMPLE ID: BW-56
 AEN LAB NO: 9611400-11
 AEN WORK ORDER: 9611400
 CLIENT PROJ. ID: 3042.95-004

DATE SAMPLED: 11/27/96
 DATE RECEIVED: 11/27/96
 REPORT DATE: 12/12/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	8.4		S.U.	12/03/96
Lead	EPA 7420	51 *	3 mg/kg		12/03/96
#Digestion, Metals by GFAA	EPA 3050	-		Prep Date	12/01/96
Arsenic	EPA 7060	110 *	0.5 mg/kg		12/06/96
#Digestion, Metals AA/ICP	EPA 3050	-		Prep Date	12/01/96
Anion Scan in Soil by IC	EPA 300				
Fluoride, F	EPA 300	ND	10 mg/kg		12/03/96
Chloride, Cl	EPA 300	880 *	50 mg/kg		12/03/96
Nitrite, NO2-N	EPA 300	ND	10 mg/kg		12/03/96
Nitrate, NO3-N	EPA 300	470 *	10 mg/kg		12/03/96
Phosphate, PO4-P	EPA 300	ND	50 mg/kg		12/03/96
Sulfate, SO4	EPA 300	7,800 *	50 mg/kg		12/03/96
Calcium	EPA 6010	110,000 *	40 mg/kg		12/03/96
Magnesium	EPA 6010	7,300 *	50 mg/kg		12/03/96
Potassium	EPA 6010	610 *	20 mg/kg		12/03/96
Sodium	EPA 6010	2,100 *	30 mg/kg		12/03/96
Zinc	EPA 6010	40 *	10 mg/kg		12/03/96

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

LEVINE-FRICKE-RECON

SAMPLE ID: BW-57
AEN LAB NO: 9611400-12
AEN WORK ORDER: 9611400
CLIENT PROJ. ID: 3042.95-004

DATE SAMPLED: 11/27/96
DATE RECEIVED: 11/27/96
REPORT DATE: 12/12/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	8.1		S.U.	12/03/96
Lead	EPA 7420	4 *	3 mg/kg		12/03/96
#Digestion, Metals by GFAA	EPA 3050	-	Prep Date		12/01/96
Arsenic	EPA 7060	15 *	0.5 mg/kg		12/06/96
#Digestion, Metals AA/ICP	EPA 3050	-	Prep Date		12/01/96
Zinc	EPA 6010	ND	10 mg/kg		12/03/96

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

LEVINE-FRICKE-RECON

SAMPLE ID: BW-58
 AEN LAB NO: 9611400-13
 AEN WORK ORDER: 9611400
 CLIENT PROJ. ID: 3042.95-004

DATE SAMPLED: 11/27/96
 DATE RECEIVED: 11/27/96
 REPORT DATE: 12/12/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	9.1		S.U.	12/03/96
Lead	EPA 7420	34 *	3 mg/kg		12/03/96
#Digestion, Metals by GFAA	EPA 3050	-		Prep Date	12/01/96
Arsenic	EPA 7060	110 *	0.5 mg/kg		12/06/96
#Digestion, Metals AA/ICP	EPA 3050	-		Prep Date	12/01/96
Anion Scan in Soil by IC	EPA 300				
Fluoride, F	EPA 300	ND	1 mg/kg		12/03/96
Chloride, Cl	EPA 300	10 *	5 mg/kg		12/03/96
Nitrite, NO2-N	EPA 300	ND	1 mg/kg		12/03/96
Nitrate, NO3-N	EPA 300	11 *	1 mg/kg		12/03/96
Phosphate, PO4-P	EPA 300	ND	5 mg/kg		12/03/96
Sulfate, SO4	EPA 300	110 *	5 mg/kg		12/03/96
Calcium	EPA 6010	110,000 *	40 mg/kg		12/03/96
Magnesium	EPA 6010	3,300 *	50 mg/kg		12/03/96
Potassium	EPA 6010	470 *	20 mg/kg		12/03/96
Sodium	EPA 6010	610 *	30 mg/kg		12/03/96
Zinc	EPA 6010	40 *	10 mg/kg		12/03/96

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

LEVINE-FRICKE-RECON

SAMPLE ID: BW-59
AEN LAB NO: 9611400-14
AEN WORK ORDER: 9611400
CLIENT PROJ. ID: 3042.95-004

DATE SAMPLED: 11/27/96
DATE RECEIVED: 11/27/96
REPORT DATE: 12/12/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	9.2		S.U.	12/03/96
Lead	EPA 7420	35 *	3 mg/kg		12/03/96
#Digestion, Metals by GFAA	EPA 3050	-	Prep Date		12/01/96
Arsenic	EPA 7060	21 *	0.5 mg/kg		12/06/96
#Digestion, Metals AA/ICP	EPA 3050	-	Prep Date		12/01/96
Zinc	EPA 6010	ND	10 mg/kg		12/03/96

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

LEVINE - FRICKE - RECON

SAMPLE ID: BW-60
 AEN LAB NO: 9611400-15
 AEN WORK ORDER: 9611400
 CLIENT PROJ. ID: 3042.95-004

DATE SAMPLED: 11/27/96
 DATE RECEIVED: 11/27/96
 REPORT DATE: 12/12/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	9.3		S.U.	12/03/96
Lead	EPA 7420	23 *	3 mg/kg		12/03/96
#Digestion, Metals by GFAA	EPA 3050	-	Prep Date		12/01/96
Arsenic	EPA 7060	110 *	0.5 mg/kg		12/06/96
#Digestion, Metals AA/ICP	EPA 3050	-	Prep Date		12/01/96
Anion Scan in Soil by IC	EPA 300				
Fluoride, F	EPA 300	ND	1 mg/kg		12/03/96
Chloride, Cl	EPA 300	7 *	5 mg/kg		12/03/96
Nitrite, NO2-N	EPA 300	ND	1 mg/kg		12/03/96
Nitrate, NO3-N	EPA 300	5 *	1 mg/kg		12/03/96
Phosphate, PO4-P	EPA 300	ND	5 mg/kg		12/03/96
Sulfate, SO4	EPA 300	78 *	5 mg/kg		12/03/96
Calcium	EPA 6010	110,000 *	40 mg/kg		12/03/96
Magnesium	EPA 6010	3,600 *	50 mg/kg		12/03/96
Potassium	EPA 6010	520 *	20 mg/kg		12/03/96
Sodium	EPA 6010	560 *	30 mg/kg		12/03/96
Zinc	EPA 6010	30 *	10 mg/kg		12/03/96

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

LEVINE-FRICKE-RECON

SAMPLE ID: BW-61
AEN LAB NO: 9611400-16
AEN WORK ORDER: 9611400
CLIENT PROJ. ID: 3042.95-004

DATE SAMPLED: 11/27/96
DATE RECEIVED: 11/27/96
REPORT DATE: 12/12/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	9.4		S.U.	12/03/96
Lead	EPA 7420	84 *	3 mg/kg		12/03/96
#Digestion, Metals by GFAA	EPA 3050	-	Prep Date		12/01/96
Arsenic	EPA 7060	50 *	0.5 mg/kg		12/06/96
#Digestion, Metals AA/ICP	EPA 3050	-	Prep Date		12/01/96
Zinc	EPA 6010	20 *	10 mg/kg		12/03/96

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

AEN (CALIFORNIA)
QUALITY CONTROL REPORT

AEN JOB NUMBER: 9611400
CLIENT PROJECT ID: 3042.95-004

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.

D: Surrogates diluted out.

!: Indicates result outside of established laboratory QC limits.

WORK ORDER: 9611400

QUALITY CONTROL REPORT

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ANALYSIS: Arsenic

MATRIX: Soil/Bulk

METHOD BLANK SAMPLES

SAMPLE TYPE: BBlank-Method/Media blank		LAB ID: GFS_BLNK_T		INSTR RUN: 4000\961206200500/1/				
INSTRUMENT: TJA 4000, GFAA		PREPARED:		BATCH ID: GFS113096-T				
UNITS: mg/kg		ANALYZED: 12/06/96		DILUTION: 1.000000				
METHOD:								
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)	RPD (%)	RPD LIMIT (%)
						LOW HIGH		
Arsenic in soil EPA 7060	ND		0.5					

METHOD SPIKE SAMPLES

SAMPLE TYPE: Spike-Method/Media blank		LAB ID: GFS_MD_T		INSTR RUN: 4000\961206200500/3/1				
INSTRUMENT: TJA 4000, GFAA		PREPARED:		BATCH ID: GFS113096-T				
UNITS: mg/kg		ANALYZED: 12/06/96		DILUTION: 1.000000				
METHOD:								
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)	RPD (%)	RPD LIMIT (%)
						LOW HIGH		
Arsenic in soil EPA 7060	11.0	ND	0.5	10.0	110	77 141		

SAMPLE TYPE: Spike-Method/Media blank		LAB ID: GFS_MS_T		INSTR RUN: 4000\961206200500/2/1				
INSTRUMENT: TJA 4000, GFAA		PREPARED:		BATCH ID: GFS113096-T				
UNITS: mg/kg		ANALYZED: 12/06/96		DILUTION: 1.000000				
METHOD:								
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)	RPD (%)	RPD LIMIT (%)
						LOW HIGH		
Arsenic in soil EPA 7060	10.6	ND	0.5	10.0	106	77 141		

SAMPLE TYPE: Spike-Method/Media blank		LAB ID: MD11391-42A		INSTR RUN: 4000\961206200500/7/5				
INSTRUMENT: TJA 4000, GFAA		PREPARED:		BATCH ID: GFS113096-T				
UNITS: mg/kg		ANALYZED: 12/06/96		DILUTION: 1.000000				
METHOD:								
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)	RPD (%)	RPD LIMIT (%)
						LOW HIGH		
Arsenic in soil EPA 7060	11.4	1.07	0.5	10.0	103	77 141		

METHOD SPIKE DUPLICATES

SAMPLE TYPE: Method Spike Sample Duplicate		LAB ID: GFS_MR_T		INSTR RUN: 4000\961206200500/4/2				
INSTRUMENT: TJA 4000, GFAA		PREPARED:		BATCH ID: GFS113096-T				
UNITS: mg/kg		ANALYZED: 12/06/96		DILUTION: 1.000000				
METHOD:								
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)	RPD (%)	RPD LIMIT (%)
						LOW HIGH		
Arsenic in soil EPA 7060	11.0	10.6	0.5				3.70	15

WORK ORDER: 9611400

QUALITY CONTROL REPORT

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ANALYSIS: Lead

MATRIX: Soil/Bulk

METHOD BLANK SAMPLES

SAMPLE TYPE: Blank-Method/Media blank		LAB ID: IFS_BLNK_U		INSTR RUN: AA V12\961203152300/1/			
INSTRUMENT: Video 12 aa spectrometer		PREPARED:		BATCH ID: IFS120196-U			
UNITS: mg/kg		ANALYZED: 12/03/96		DILUTION: 1.000000			
METHOD:							
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)	RPD LIMIT (%)
Lead in soil-flame	ND		3			LOW HIGH RPD (%)	

METHOD SPIKE SAMPLES

SAMPLE TYPE: Spike-Method/Media blank		LAB ID: IFS_MD_U		INSTR RUN: AA V12\961203152300/3/1			
INSTRUMENT: Video 12 aa spectrometer		PREPARED:		BATCH ID: IFS120196-U			
UNITS: mg/kg		ANALYZED: 12/03/96		DILUTION: 1.000000			
METHOD:							
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)	RPD LIMIT (%)
Lead in soil-flame	53.1	ND	3	50.0	106	LOW HIGH RPD (%)	

SAMPLE TYPE: Spike-Method/Media blank		LAB ID: IFS_MS_U		INSTR RUN: AA V12\961203152300/2/1			
INSTRUMENT: Video 12 aa spectrometer		PREPARED:		BATCH ID: IFS120196-U			
UNITS: mg/kg		ANALYZED: 12/03/96		DILUTION: 1.000000			
METHOD:							
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)	RPD LIMIT (%)
Lead in soil-flame	50.9	ND	3	50.0	102	LOW HIGH RPD (%)	

METHOD SPIKE DUPLICATES

SAMPLE TYPE: Method Spike Sample Duplicate		LAB ID: IFS_MR_U		INSTR RUN: AA V12\961203152300/4/2			
INSTRUMENT: Video 12 aa spectrometer		PREPARED:		BATCH ID: IFS120196-U			
UNITS: mg/kg		ANALYZED: 12/03/96		DILUTION: 1.000000			
METHOD:							
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)	RPD LIMIT (%)
Lead in soil-flame	53.1	50.9	3			LOW HIGH RPD (%)	10.5

MATRIX SPIKE SAMPLES

SAMPLE TYPE: Spike-Sample/Matrix		LAB ID: MD11400-09A		INSTR RUN: AA V12\961203152300/11/9			
INSTRUMENT: Video 12 aa spectrometer		PREPARED:		BATCH ID: IFS120196-U			
UNITS: mg/kg		ANALYZED: 12/03/96		DILUTION: 1.000000			
METHOD:							
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)	RPD LIMIT (%)
Lead in soil-flame	80.8	33.2	3	50.0	95.2	LOW HIGH RPD (%)	

SAMPLE TYPE: Spike-Sample/Matrix		LAB ID: MS11400-09A		INSTR RUN: AA V12\961203152300/10/9			
INSTRUMENT: Video 12 aa spectrometer		PREPARED:		BATCH ID: IFS120196-U			
UNITS: mg/kg		ANALYZED: 12/03/96		DILUTION: 1.000000			
METHOD:							
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)	RPD LIMIT (%)
Lead in soil-flame	83.8	33.2	3	50.0	101	LOW HIGH RPD (%)	

WORK ORDER: 9611400

QUALITY CONTROL REPORT

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ANALYSIS: Lead

MATRIX: Soil/Bulk

MATRIX SPIKE DUPLICATES

SAMPLE TYPE: Spiked Sample Duplicate		LAB ID: MR11400-09A		INSTR RUN: AA V12\961203152300/12/10				
INSTRUMENT: Video 12 aa spectrometer		PREPARED:		BATCH ID: IFS120196-U				
UNITS: mg/kg		ANALYZED: 12/03/96		DILUTION: 1.000000				
METHOD:								
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD LIMIT (%)
Lead in soil-flame	80.8	83.8	3	50.0		LOW	HIGH	RPD (%)
								23

WORK ORDER: 9611400

QUALITY CONTROL REPORT

PAGE QR-5

ANALYSIS: Major Anions

MATRIX: Water

METHOD BLANK SAMPLES

SAMPLE TYPE: Blank-Method/Media blank
 INSTRUMENT: Dionex ion chromatograph
 UNITS: mg/L
 METHOD:

LAB ID: ICS_BLNK
 PREPARED:
 ANALYZED: 12/03/96

INSTR RUN: IC\961203000000/1/
 BATCH ID: ICS120396
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Fluoride, F	ND		0.1						
Chloride, Cl	ND		0.5						
Nitrate, NO3-N	ND		0.1						
Nitrite, NO2-N	ND		0.1						
Phosphate, PO4-P	ND		0.5						
Sulfate, SO4	ND		0.5						

METHOD SPIKE SAMPLES

SAMPLE TYPE: Spike-Method/Media blank
 INSTRUMENT: Dionex ion chromatograph
 UNITS: mg/L
 METHOD:

LAB ID: ICS_MD
 PREPARED:
 ANALYZED: 12/03/96

INSTR RUN: IC\961203000000/3/1
 BATCH ID: ICS120396
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Fluoride, F	2.09	ND	0.1	2.00	105	80	120		
Chloride, Cl	9.88	ND	0.5	10.0	98.8	80	120		
Nitrate, NO3-N	2.13	ND	0.1	2.00	107	80	120		
Nitrite, NO2-N	1.91	ND	0.1	2.00	95.5	80	120		
Phosphate, PO4-P	3.84	ND	0.5	4.00	96.0	80	120		
Sulfate, SO4	10.4	ND	0.5	10.0	104	80	120		

SAMPLE TYPE: Spike-Method/Media blank
 INSTRUMENT: Dionex ion chromatograph
 UNITS: mg/L
 METHOD:

LAB ID: ICS_MS
 PREPARED:
 ANALYZED: 12/03/96

INSTR RUN: IC\961203000000/2/1
 BATCH ID: ICS120396
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Fluoride, F	2.00	ND	0.1	2.00	100	80	120		
Chloride, Cl	9.89	ND	0.5	10.0	98.9	80	120		
Nitrate, NO3-N	2.03	ND	0.1	2.00	102	80	120		
Nitrite, NO2-N	1.90	ND	0.1	2.00	95.0	80	120		
Phosphate, PO4-P	3.99	ND	0.5	4.00	99.8	80	120		
Sulfate, SO4	10.6	ND	0.5	10.0	106	80	120		

METHOD SPIKE DUPLICATES

SAMPLE TYPE: Method Spike Sample Duplicate
 INSTRUMENT: Dionex ion chromatograph
 UNITS: mg/L
 METHOD:

LAB ID: ICS_MR
 PREPARED:
 ANALYZED: 12/03/96

INSTR RUN: IC\961203000000/4/2
 BATCH ID: ICS120396
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Fluoride, F	2.09	2.00	0.1					4.40	15
Chloride, Cl	9.88	9.89	0.5					0.101	15
Nitrate, NO3-N	2.13	2.03	0.1					4.81	15
Nitrite, NO2-N	1.91	1.90	0.1					0.525	15
Phosphate, PO4-P	3.84	3.99	0.5					3.83	15
Sulfate, SO4	10.4	10.6	0.5					1.90	15

WORK ORDER: 9611400

QUALITY CONTROL REPORT

PAGE QR-6

ANALYSIS: Metals Scan by ICP

MATRIX: Soil/Bulk

METHOD BLANK SAMPLES

SAMPLE TYPE: Blank-Method/Media blank LAB ID: IFS_BLNK_X INSTR RUN: ICP\961204131200/1/
 INSTRUMENT: TJA Enviro 36 PREPARED: BATCH ID: IFS120396-X
 UNITS: mg/kg ANALYZED: 12/04/96 DILUTION: 1.000000
 METHOD:

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Ag Silver	ND		0.1						
Ba Barium	ND		1						
Be Beryllium	ND		0.1						
Ca Calcium	ND		4						
Cd Cadmium	ND		0.2						
Co Cobalt	ND		0.2						
Cr Chromium	ND		0.5						
Cu Copper	ND		0.5						
K Potassium	ND		2						
Mg Magnesium	ND		5						
Mo Molybdenum	ND		0.2						
Na Sodium	ND		3						
Ni Nickel	ND		1						
Pb Lead	ND		1						
Sb Antimony	ND		1						
Tl Thallium	ND		1						
V Vanadium	ND		0.5						
Zn Zinc	ND		1						

METHOD SPIKE SAMPLES

SAMPLE TYPE: Spike-Method/Media blank LAB ID: IFS_MD_3X INSTR RUN: ICP\961204131200/18/1
 INSTRUMENT: TJA Enviro 36 PREPARED: BATCH ID: IFS120396-3X
 UNITS: mg/kg ANALYZED: 12/10/96 DILUTION: 1.000000
 METHOD:

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Ca Calcium	4442	ND	4		88.84	75	125		
K Potassium	4293	ND	2		85.86	75	125		
Mg Magnesium	4421	ND	5		88.42	75	125		
Na Sodium	4623	ND	3		92.46	75	125		

SAMPLE TYPE: Spike-Method/Media blank LAB ID: IFS_MS_3X INSTR RUN: ICP\961204131200/17/1
 INSTRUMENT: TJA Enviro 36 PREPARED: BATCH ID: IFS120396-3X
 UNITS: mg/kg ANALYZED: 12/10/96 DILUTION: 1.000000
 METHOD:

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Ca Calcium	4544	ND	4		90.88	75	125		
K Potassium	4454	ND	2		89.08	75	125		
Mg Magnesium	4529	ND	5		90.58	75	125		
Na Sodium	4816	ND	3		96.32	75	125		

METHOD SPIKE DUPLICATES

SAMPLE TYPE: Method Spike Sample Duplicate LAB ID: IFS_MR_3X INSTR RUN: ICP\961204131200/28/17
 INSTRUMENT: TJA Enviro 36 PREPARED: BATCH ID: IFS120396-3X
 UNITS: mg/kg ANALYZED: 12/04/96 DILUTION: 1.00
 METHOD:

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Ca Calcium	4442	4544	4					2.270	15
K Potassium	4293	4454	2					3.681	15
Mg Magnesium	4421	4529	5					2.413	15
Na Sodium	4623	4816	3					4.089	15

WORK ORDER: 9611400

QUALITY CONTROL REPORT

PAGE QR-7

ANALYSIS: Zinc

MATRIX: Soil/Bulk

METHOD BLANK SAMPLES

SAMPLE TYPE: Blank-Method/Media blank		LAB ID: IFS_BLNK_U		INSTR RUN: ICP\961203222200/1/				
INSTRUMENT: TJA Enviro 36		PREPARED:		BATCH ID: IFS120196-U				
UNITS: mg/kg		ANALYZED: 12/03/96		DILUTION: 1.000000				
METHOD:								
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD LIMIT (%)
ZINC IN SOIL BY ICP	ND		1			LOW	HIGH	RPD (%)

METHOD SPIKE SAMPLES

SAMPLE TYPE: Spike-Method/Media blank		LAB ID: IFS_MD_U		INSTR RUN: ICP\961203222200/3/1				
INSTRUMENT: TJA Enviro 36		PREPARED:		BATCH ID: IFS120196-U				
UNITS: mg/kg		ANALYZED: 12/03/96		DILUTION: 1.000000				
METHOD:								
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD LIMIT (%)
ZINC IN SOIL BY ICP	48.3	ND	1	50.0	96.6	LOW	HIGH	RPD (%)

SAMPLE TYPE: Spike-Method/Media blank		LAB ID: IFS_MS_U		INSTR RUN: ICP\961203222200/2/1				
INSTRUMENT: TJA Enviro 36		PREPARED:		BATCH ID: IFS120196-U				
UNITS: mg/kg		ANALYZED: 12/03/96		DILUTION: 1.000000				
METHOD:								
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD LIMIT (%)
ZINC IN SOIL BY ICP	48.3	ND	1	50.0	96.6	LOW	HIGH	RPD (%)

METHOD SPIKE DUPLICATES

SAMPLE TYPE: Method Spike Sample Duplicate		LAB ID: IFS_MR_U		INSTR RUN: ICP\961203222200/4/2				
INSTRUMENT: TJA Enviro 36		PREPARED:		BATCH ID: IFS120196-U				
UNITS: mg/kg		ANALYZED: 12/03/96		DILUTION: 1.000000				
METHOD:								
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD LIMIT (%)
ZINC IN SOIL BY ICP	48.3	48.3	1			LOW	HIGH	RPD (%)

MATRIX SPIKE SAMPLES

SAMPLE TYPE: Spike-Sample/Matrix		LAB ID: MD11400-09A		INSTR RUN: ICP\961203222200/11/9				
INSTRUMENT: TJA Enviro 36		PREPARED:		BATCH ID: IFS120196-U				
UNITS: mg/kg		ANALYZED: 12/03/96		DILUTION: 10.0				
METHOD:								
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD LIMIT (%)
ZINC IN SOIL BY ICP	100	54.8	10	50.0	90.4	LOW	HIGH	RPD (%)

SAMPLE TYPE: Spike-Sample/Matrix		LAB ID: MS11400-09A		INSTR RUN: ICP\961203222200/10/9				
INSTRUMENT: TJA Enviro 36		PREPARED:		BATCH ID: IFS120196-U				
UNITS: mg/kg		ANALYZED: 12/03/96		DILUTION: 10.0				
METHOD:								
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD LIMIT (%)
ZINC IN SOIL BY ICP	99.6	54.8	10	50.0	89.6	LOW	HIGH	RPD (%)

WORK ORDER: 9611400

QUALITY CONTROL REPORT

PAGE QR-8

ANALYSIS: Zinc

MATRIX: Soil/Bulk

MATRIX SPIKE DUPLICATES

SAMPLE TYPE: Spiked Sample Duplicate	LAB ID: MR11400-09A	INSTR RUN: ICP\961203222200/12/10
INSTRUMENT: TJA Enviro 36	PREPARED:	BATCH ID: IFS120196-U
UNITS: mg/kg	ANALYZED: 12/03/96	DILUTION: 10.0
METHOD:		

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)	RPD (%)	RPD LIMIT (%)
						LOW HIGH		
ZINC IN SOIL BY ICP	100	99.6	10				0.401	25

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

R-57-D

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

9611400

Project No.: 3042.95-004	Field Logbook No.:	Date: 11-27-96	Serial No.:
Project Name: Sherwin-Williams	Project Location: Emeryville, Ca.		No 15177

Sampler (Signature): *[Signature]* ANALYSES
 Hold RUSH
 Samplers: KAG/SRC

SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	ANALYSES										REMARKS		
						Total As Pb	Zinc (Pb 600)	PH	Carbon-union									
BW-46	11-27-96	1035	01A	1	mortar	X	X	X										
BW-47		1036	02A		brick													results by
BW-48		1045	03A		mortar				X									12-4-96
BW-49		1046	04A		brick													
BW-50		1048	05A		mortar				X									
BW-51		1049	06A		brick													results to [Signature]
BW-52		1052	07A		mortar				X									[Signature]
BW-53		1053	08A		brick													
BW-54		1054	09A		mortar				X									
BW-55		1100	10A		brick													
BW-56		1102	11A		mortar				X									
BW-57		1103	12A		brick													
BW-58		1110	13A		mortar				X									
BW-59		1115	14A		brick													
BW-60		1120	15A		mortar				X									
BW-61	✓	1122	16A	✓	brick	✓	✓											

RELINQUISHED BY: (Signature) <i>[Signature]</i>	DATE 11-27-96	TIME 12:10	RECEIVED BY: (Signature) <i>[Signature]</i>	DATE 11/27/96	TIME 15:45
RELINQUISHED BY: (Signature) <i>[Signature]</i>	DATE 11/27/96	TIME 16:35	RECEIVED BY: (Signature) <i>[Signature]</i>	DATE 11/27/96	TIME 16:40
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME

METHOD OF SHIPMENT: DATE TIME LAB COMMENTS:

Sample Collector: LEVINE-FRICKE
 1900 Powell Street, 12th Floor
 Emeryville, California 94608
 (510) 652-4500

Analytical Laboratory: AEN

American Environmental Network

Contract Documents

OOHS Certification: 1172

ISO Accredited

PAGE 1

LEVINE-FRICKE-RECON
1900 POWELL ST. 12TH FL.
EMERYVILLE, CA 94608

REPORT DATE: 12/12/96

DATE(S) SAMPLED: 11/26/96

DATE RECEIVED: 11/27/96

ATTN: KENTON GEE
CLIENT PROJ. ID: 3042.95-004
CLIENT PROJ. NAME: SHERWIN WMS
C.O.C. NUMBER: 15174

AEN WORK ORDER: 9611391

PROJECT SUMMARY:

On November 27, 1996, this laboratory received 45 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

LEVINE-FRICKE-RECON

SAMPLE ID: BW-1
 AEN LAB NO: 9611391-01
 AEN WORK ORDER: 9611391
 CLIENT PROJ. ID: 3042.95-004

DATE SAMPLED: 11/26/96
 DATE RECEIVED: 11/27/96
 REPORT DATE: 12/12/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Lead	EPA 7420	1,400 *	3 mg/kg		12/03/96
#Digestion, Metals by GFAA	EPA 3050	-	Prep Date		11/27/96
Arsenic	EPA 7060	4,200 *	0.5 mg/kg		12/09/96
#Digestion, Metals AA/ICP	EPA 3050	-	Prep Date		11/27/96
Calcium	EPA 6010	110,000 *	40 mg/kg		12/04/96
Magnesium	EPA 6010	4,300 *	50 mg/kg		12/04/96
Potassium	EPA 6010	1,400 *	20 mg/kg		12/04/96
Sodium	EPA 6010	3,600 *	30 mg/kg		12/04/96
Zinc	EPA 6010	27,000 *	10 mg/kg		12/04/96

Insufficient amount of sample for pH and anion analysis.

ND = Not detected at or above the reporting limit

* = Value at or above reporting limit

LEVINE - FRICKE - RECON

SAMPLE ID: BW-2
 AEN LAB NO: 9611391-02
 AEN WORK ORDER: 9611391
 CLIENT PROJ. ID: 3042.95-004

DATE SAMPLED: 11/26/96
 DATE RECEIVED: 11/27/96
 REPORT DATE: 12/12/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Lead	EPA 7420	2,300 *	3 mg/kg		12/03/96
#Digestion, Metals by GFAA	EPA 3050	-	Prep Date		11/27/96
Arsenic	EPA 7060	12,000 *	0.5 mg/kg		12/06/96
#Digestion, Metals AA/ICP	EPA 3050	-	Prep Date		11/27/96
Zinc	EPA 6010	24,000 *	10 mg/kg		12/04/96

Insufficient amount of sample for pH analysis.

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

LEVINE - FRICKE - RECON

SAMPLE ID: BW-3
 AEN LAB NO: 9611391-03
 AEN WORK ORDER: 9611391
 CLIENT PROJ. ID: 3042.95-004

DATE SAMPLED: 11/26/96
 DATE RECEIVED: 11/27/96
 REPORT DATE: 12/12/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	8.4		S.U.	12/03/96
Lead	EPA 7420	120 *	3 mg/kg		12/03/96
#Digestion, Metals by GFAA	EPA 3050	-	Prep Date		11/27/96
Arsenic	EPA 7060	2,700 *	0.5 mg/kg		12/06/96
#Digestion, Metals AA/ICP	EPA 3050	-	Prep Date		11/27/96
Anion Scan in Soil by IC	EPA 300				
Fluoride, F	EPA 300	20 *	10 mg/kg		12/02/96
Chloride, Cl	EPA 300	810 *	50 mg/kg		12/02/96
Nitrite, NO2-N	EPA 300	ND	10 mg/kg		12/02/96
Nitrate, NO3-N	EPA 300	1,700 *	10 mg/kg		12/02/96
Phosphate, PO4-P	EPA 300	ND	50 mg/kg		12/02/96
Sulfate, SO4	EPA 300	6,500 *	50 mg/kg		12/02/96
Calcium	EPA 6010	120,000 *	40 mg/kg		12/03/96
Magnesium	EPA 6010	7,100 *	50 mg/kg		12/03/96
Potassium	EPA 6010	1,600 *	20 mg/kg		12/03/96
Sodium	EPA 6010	2,500 *	30 mg/kg		12/03/96
Zinc	EPA 6010	430 *	10 mg/kg		12/03/96

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

LEVINE - FRICKE - RECON

SAMPLE ID: BW-4
 AEN LAB NO: 9611391-04
 AEN WORK ORDER: 9611391
 CLIENT PROJ. ID: 3042.95-004

DATE SAMPLED: 11/26/96
 DATE RECEIVED: 11/27/96
 REPORT DATE: 12/12/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	8.0		S.U.	12/03/96
Lead	EPA 7420	17 *	3 mg/kg		12/03/96
#Digestion, Metals by GFAA	EPA 3050	-	Prep Date		11/27/96
Arsenic	EPA 7060	840 *	0.5 mg/kg		12/06/96
#Digestion, Metals AA/ICP	EPA 3050	-	Prep Date		11/27/96
Zinc	EPA 6010	90 *	10 mg/kg		12/03/96

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

LEVINE-FRICKE-RECON

SAMPLE ID: BW-5
 AEN LAB NO: 9611391-05
 AEN WORK ORDER: 9611391
 CLIENT PROJ. ID: 3042.95-004

DATE SAMPLED: 11/26/96
 DATE RECEIVED: 11/27/96
 REPORT DATE: 12/12/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Lead	EPA 7420	180 *	3	mg/kg	12/03/96
#Digestion, Metals by GFAA	EPA 3050	-		Prep Date	11/27/96
Arsenic	EPA 7060	59 *	0.5	mg/kg	12/09/96
#Digestion, Metals AA/ICP	EPA 3050	-		Prep Date	11/27/96
Anion Scan in Soil by IC	EPA 300				
Fluoride, F	EPA 300	ND	100	mg/kg	12/02/96
Chloride, Cl	EPA 300	ND	500	mg/kg	12/02/96
Nitrite, NO2-N	EPA 300	ND	100	mg/kg	12/02/96
Nitrate, NO3-N	EPA 300	200 *	100	mg/kg	12/02/96
Phosphate, PO4-P	EPA 300	ND	500	mg/kg	12/02/96
Sulfate, SO4	EPA 300	270,000 *	500	mg/kg	12/02/96
Calcium	EPA 6010	9,100 *	40	mg/kg	12/04/96
Magnesium	EPA 6010	2,200 *	50	mg/kg	12/04/96
Potassium	EPA 6010	290 *	20	mg/kg	12/04/96
Sodium	EPA 6010	2,200 *	30	mg/kg	12/04/96
Zinc	EPA 6010	8,900 *	10	mg/kg	12/04/96

Insufficient amount of sample for pH analysis.

ND = Not detected at or above the reporting limit

* = Value at or above reporting limit

LEVINE-FRICKE-RECON

SAMPLE ID: BW-6
AEN LAB NO: 9611391-06
AEN WORK ORDER: 9611391
CLIENT PROJ. ID: 3042.95-004

DATE SAMPLED: 11/26/96
DATE RECEIVED: 11/27/96
REPORT DATE: 12/12/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	3.9		S.U.	12/03/96
Lead	EPA 7420	4,900 *	3 mg/kg		12/03/96
#Digestion, Metals by GFAA	EPA 3050	-	Prep Date		11/27/96
Arsenic	EPA 7060	56 *	0.5 mg/kg		12/06/96
#Digestion, Metals AA/ICP	EPA 3050	-	Prep Date		11/27/96
Zinc	EPA 6010	27,000 *	10 mg/kg		12/04/96

ND = Not detected at or above the reporting limit

* = Value at or above reporting limit

LEVINE - FRICKE - RECON

SAMPLE ID: BW-7
 AEN LAB NO: 9611391-07
 AEN WORK ORDER: 9611391
 CLIENT PROJ. ID: 3042.95-004

DATE SAMPLED: 11/26/96
 DATE RECEIVED: 11/27/96
 REPORT DATE: 12/12/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	8.2		S.U.	12/03/96
Lead	EPA 7420	62 *	3 mg/kg		12/03/96
#Digestion, Metals by GFAA	EPA 3050	-		Prep Date	11/27/96
Arsenic	EPA 7060	62 *	0.5 mg/kg		12/06/96
#Digestion, Metals AA/ICP	EPA 3050	-		Prep Date	11/27/96
Anion Scan in Soil by IC	EPA 300				
Fluoride, F	EPA 300	20 *	10 mg/kg		12/02/96
Chloride, Cl	EPA 300	450 *	50 mg/kg		12/02/96
Nitrite, NO2-N	EPA 300	ND	10 mg/kg		12/02/96
Nitrate, NO3-N	EPA 300	180 *	10 mg/kg		12/02/96
Phosphate, PO4-P	EPA 300	ND	50 mg/kg		12/02/96
Sulfate, SO4	EPA 300	10,000 *	50 mg/kg		12/02/96
Calcium	EPA 6010	98,000 *	40 mg/kg		12/03/96
Magnesium	EPA 6010	8,800 *	50 mg/kg		12/03/96
Potassium	EPA 6010	840 *	20 mg/kg		12/03/96
Sodium	EPA 6010	1,000 *	30 mg/kg		12/03/96
Zinc	EPA 6010	720 *	10 mg/kg		12/03/96

ND = Not detected at or above the reporting limit

* = Value at or above reporting limit

LEVINE-FRICKE-RECON

SAMPLE ID: BW-8
AEN LAB NO: 9611391-08
AEN WORK ORDER: 9611391
CLIENT PROJ. ID: 3042.95-004

DATE SAMPLED: 11/26/96
DATE RECEIVED: 11/27/96
REPORT DATE: 12/12/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	4.4		S.U.	12/03/96
Lead	EPA 7420	13 *	3 mg/kg		12/03/96
#Digestion, Metals by GFAA	EPA 3050	-	Prep Date		11/27/96
Arsenic	EPA 7060	8.9 *	0.5 mg/kg		12/08/96
#Digestion, Metals AA/ICP	EPA 3050	-	Prep Date		11/27/96
Zinc	EPA 6010	400 *	10 mg/kg		12/03/96

ND = Not detected at or above the reporting limit

* = Value at or above reporting limit

LEVINE - FRICKE - RECON

SAMPLE ID: BW-9
 AEN LAB NO: 9611391-09
 AEN WORK ORDER: 9611391
 CLIENT PROJ. ID: 3042.95-004

DATE SAMPLED: 11/26/96
 DATE RECEIVED: 11/27/96
 REPORT DATE: 12/12/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Lead	EPA 7420	660 *	3 mg/kg		12/03/96
#Digestion, Metals by GFAA	EPA 3050	-	Prep Date		11/27/96
Arsenic	EPA 7060	210 *	0.5 mg/kg		12/06/96
#Digestion, Metals AA/ICP	EPA 3050	-	Prep Date		11/27/96
Anion Scan in Soil by IC	EPA 300				
Fluoride, F	EPA 300	60 *	10 mg/kg		12/02/96
Chloride, Cl	EPA 300	290 *	50 mg/kg		12/02/96
Nitrite, NO2-N	EPA 300	ND	10 mg/kg		12/02/96
Nitrate, NO3-N	EPA 300	650 *	10 mg/kg		12/02/96
Phosphate, PO4-P	EPA 300	ND	50 mg/kg		12/02/96
Sulfate, SO4	EPA 300	130,000 *	50 mg/kg		12/02/96
Calcium	EPA 6010	63,000 *	40 mg/kg		12/03/96
Magnesium	EPA 6010	2,400 *	50 mg/kg		12/03/96
Potassium	EPA 6010	280 *	20 mg/kg		12/03/96
Sodium	EPA 6010	64,000 *	30 mg/kg		12/03/96
Zinc	EPA 6010	3,100 *	10 mg/kg		12/03/96

Insufficient amount of sample for pH analysis.

ND = Not detected at or above the reporting limit

* = Value at or above reporting limit

LEVINE-FRICKE-RECON

SAMPLE ID: BW-10
 AEN LAB NO: 9611391-10
 AEN WORK ORDER: 9611391
 CLIENT PROJ. ID: 3042.95-004

DATE SAMPLED: 11/26/96
 DATE RECEIVED: 11/27/96
 REPORT DATE: 12/12/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Lead	EPA 7420	190 *	3	mg/kg	12/03/96
#Digestion, Metals by GFAA	EPA 3050	-		Prep Date	11/27/96
Arsenic	EPA 7060	36 *	0.5	mg/kg	12/06/96
#Digestion, Metals AA/ICP	EPA 3050	-		Prep Date	11/27/96
Zinc	EPA 6010	290 *	10	mg/kg	12/03/96

Insufficient amount of sample for pH analysis.

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

LEVINE-FRICKE-RECON

SAMPLE ID: BW-11
 AEN LAB NO: 9611391-11
 AEN WORK ORDER: 9611391
 CLIENT PROJ. ID: 3042.95-004

DATE SAMPLED: 11/26/96
 DATE RECEIVED: 11/27/96
 REPORT DATE: 12/12/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	10.1		S.U.	12/03/96
Lead	EPA 7420	12 *	3	mg/kg	12/03/96
#Digestion, Metals by GFAA	EPA 3050	-		Prep Date	11/27/96
Arsenic	EPA 7060	180 *	0.5	mg/kg	12/06/96
#Digestion, Metals AA/ICP	EPA 3050	-		Prep Date	11/27/96
Anion Scan in Soil by IC	EPA 300				
Fluoride, F	EPA 300	20 *	10	mg/kg	12/02/96
Chloride, Cl	EPA 300	870 *	50	mg/kg	12/02/96
Nitrite, NO2-N	EPA 300	ND	10	mg/kg	12/02/96
Nitrate, NO3-N	EPA 300	1,400 *	10	mg/kg	12/02/96
Phosphate, PO4-P	EPA 300	ND	50	mg/kg	12/02/96
Sulfate, SO4	EPA 300	4,900 *	50	mg/kg	12/02/96
Calcium	EPA 6010	130,000 *	40	mg/kg	12/03/96
Magnesium	EPA 6010	4,500 *	50	mg/kg	12/03/96
Potassium	EPA 6010	880 *	20	mg/kg	12/03/96
Sodium	EPA 6010	10,000 *	30	mg/kg	12/03/96
Zinc	EPA 6010	100 *	10	mg/kg	12/03/96

ND = Not detected at or above the reporting limit

* = Value at or above reporting limit

LEVINE-FRICKE-RECON

SAMPLE ID: BW-12
 AEN LAB NO: 9611391-12
 AEN WORK ORDER: 9611391
 CLIENT PROJ. ID: 3042.95-004

DATE SAMPLED: 11/26/96
 DATE RECEIVED: 11/27/96
 REPORT DATE: 12/12/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	10.0		S.U.	12/03/96
Lead	EPA 7420	4 *		3 mg/kg	12/03/96
#Digestion, Metals by GFAA	EPA 3050	-		Prep Date	11/27/96
Arsenic	EPA 7060	32 *		0.5 mg/kg	12/06/96
#Digestion, Metals AA/ICP	EPA 3050	-		Prep Date	11/27/96
Zinc	EPA 6010	360 *		10 mg/kg	12/03/96

ND = Not detected at or above the reporting limit

* = Value at or above reporting limit

LEVINE-FRICKE-RECON

SAMPLE ID: BW-13
 AEN LAB NO: 9611391-13
 AEN WORK ORDER: 9611391
 CLIENT PROJ. ID: 3042.95-004

DATE SAMPLED: 11/26/96
 DATE RECEIVED: 11/27/96
 REPORT DATE: 12/12/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Lead	EPA 7420	3,400 *	3 mg/kg		12/04/96
#Digestion, Metals by GFAA	EPA 3050	-	Prep Date		11/27/96
Arsenic	EPA 7060	37 *	0.5 mg/kg		12/06/96
#Digestion, Metals AA/ICP	EPA 3050	-	Prep Date		11/27/96
Zinc	EPA 6010	22,000 *	10 mg/kg		12/04/96

Insufficient amount of sample for pH analysis.

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

LEVINE-FRICKE-RECON

SAMPLE ID: BW-14
 AEN LAB NO: 9611391-14
 AEN WORK ORDER: 9611391
 CLIENT PROJ. ID: 3042.95-004

DATE SAMPLED: 11/26/96
 DATE RECEIVED: 11/27/96
 REPORT DATE: 12/12/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	10.1		S.U.	12/03/96
Lead	EPA 7420	32 *	3 mg/kg		12/03/96
#Digestion, Metals by GFAA	EPA 3050	-	Prep Date		11/27/96
Arsenic	EPA 7060	8.0 *	0.5 mg/kg		12/06/96
#Digestion, Metals AA/ICP	EPA 3050	-	Prep Date		11/27/96
Anion Scan in Soil by IC	EPA 300				
Fluoride, F	EPA 300	ND	10 mg/kg		12/02/96
Chloride, Cl	EPA 300	330 *	50 mg/kg		12/02/96
Nitrite, NO2-N	EPA 300	10 *	10 mg/kg		12/02/96
Nitrate, NO3-N	EPA 300	630 *	10 mg/kg		12/02/96
Phosphate, PO4-P	EPA 300	ND	50 mg/kg		12/02/96
Sulfate, SO4	EPA 300	3,100 *	50 mg/kg		12/02/96
Calcium	EPA 6010	140,000 *	40 mg/kg		12/03/96
Magnesium	EPA 6010	4,700 *	50 mg/kg		12/03/96
Potassium	EPA 6010	720 *	20 mg/kg		12/03/96
Sodium	EPA 6010	4,500 *	30 mg/kg		12/03/96
Zinc	EPA 6010	130 *	10 mg/kg		12/03/96

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

LEVINE-FRICKE-RECON

SAMPLE ID: BW-15
 AEN LAB NO: 9611391-15
 AEN WORK ORDER: 9611391
 CLIENT PROJ. ID: 3042.95-004

DATE SAMPLED: 11/26/96
 DATE RECEIVED: 11/27/96
 REPORT DATE: 12/12/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	8.7		S.U.	12/03/96
Lead	EPA 7420	9 *	3	mg/kg	12/03/96
#Digestion, Metals by GFAA	EPA 3050	-		Prep Date	11/27/96
Arsenic	EPA 7060	2.7 *	0.5	mg/kg	12/06/96
#Digestion, Metals AA/ICP	EPA 3050	-		Prep Date	11/27/96
Zinc	EPA 6010	60 *	10	mg/kg	12/03/96

ND = Not detected at or above the reporting limit

* = Value at or above reporting limit

LEVINE-FRICKE-RECON

SAMPLE ID: BW-16
 AEN LAB NO: 9611391-16
 AEN WORK ORDER: 9611391
 CLIENT PROJ. ID: 3042.95-004

DATE SAMPLED: 11/26/96
 DATE RECEIVED: 11/27/96
 REPORT DATE: 12/12/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	5.6		S.U.	12/03/96
Lead	EPA 7420	3.600 *		3 mg/kg	12/03/96
#Digestion, Metals by GFAA	EPA 3050	-		Prep Date	11/27/96
Arsenic	EPA 7060	30 *		0.5 mg/kg	12/06/96
#Digestion, Metals AA/ICP	EPA 3050	-		Prep Date	11/27/96
Zinc	EPA 6010	14,000 *		10 mg/kg	12/04/96

ND = Not detected at or above the reporting limit.

* = Value at or above reporting limit

LEVINE - FRICKE - RECON

SAMPLE ID: BW-17
AEN LAB NO: 9611391-17
AEN WORK ORDER: 9611391
CLIENT PROJ. ID: 3042.95-004

DATE SAMPLED: 11/26/96
DATE RECEIVED: 11/27/96
REPORT DATE: 12/12/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	8.4		S.U.	12/03/96
Lead	EPA 7420	ND		3 mg/kg	12/03/96
#Digestion, Metals by GFAA	EPA 3050	-		Prep Date	11/27/96
Arsenic	EPA 7060	11 *	0.5 mg/kg		12/06/96
#Digestion, Metals AA/ICP	EPA 3050	-		Prep Date	11/27/96
Zinc	EPA 6010	20 *	10 mg/kg		12/03/96

ND = Not detected at or above the reporting limit

* = Value at or above reporting limit

LEVINE - FRICKE - RECON

SAMPLE ID: BW-18
 AEN LAB NO: 9611391-18
 AEN WORK ORDER: 9611391
 CLIENT PROJ. ID: 3042.95-004

DATE SAMPLED: 11/26/96
 DATE RECEIVED: 11/27/96
 REPORT DATE: 12/12/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	8.2		S.U.	12/03/96
Lead	EPA 7420	18 *		3 mg/kg	12/03/96
#Digestion, Metals by GFAA	EPA 3050	-		Prep Date	11/27/96
Arsenic	EPA 7060	73 *		0.5 mg/kg	12/06/96
#Digestion, Metals AA/ICP	EPA 3050	-		Prep Date	11/27/96
Anion Scan in Soil by IC	EPA 300				
Fluoride, F	EPA 300	10 *		10 mg/kg	12/03/96
Chloride, Cl	EPA 300	1,300 *		50 mg/kg	12/03/96
Nitrite, NO2-N	EPA 300	ND		10 mg/kg	12/03/96
Nitrate, NO3-N	EPA 300	1,500 *		10 mg/kg	12/02/96
Phosphate, PO4-P	EPA 300	ND		50 mg/kg	12/03/96
Sulfate, SO4	EPA 300	2,000 *		50 mg/kg	12/03/96
Calcium	EPA 6010	110,000 *		40 mg/kg	12/03/96
Magnesium	EPA 6010	7,700 *		50 mg/kg	12/03/96
Potassium	EPA 6010	930 *		20 mg/kg	12/03/96
Sodium	EPA 6010	1,600 *		30 mg/kg	12/03/96
Zinc	EPA 6010	120 *		10 mg/kg	12/03/96

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

LEVINE-FRICKE-RECON

SAMPLE ID: BW-19
 AEN LAB NO: 9611391-19
 AEN WORK ORDER: 9611391
 CLIENT PROJ. ID: 3042.95-004

DATE SAMPLED: 11/26/96
 DATE RECEIVED: 11/27/96
 REPORT DATE: 12/12/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	5.5		S.U.	12/04/96
Lead	EPA 7420	12,000 *	3 mg/kg		12/03/96
#Digestion, Metals by GFAA	EPA 3050	-	Prep Date		11/27/96
Arsenic	EPA 7060	26 *	0.5 mg/kg		12/06/96
#Digestion, Metals AA/ICP	EPA 3050	-	Prep Date		11/27/96
Zinc	EPA 6010	24,000 *	10 mg/kg		12/04/96

ND = Not detected at or above the reporting limit

* = Value at or above reporting limit

LEVINE-FRICKE-RECON

SAMPLE ID: BW-20
 AEN LAB NO: 9611391-20
 AEN WORK ORDER: 9611391
 CLIENT PROJ. ID: 3042.95-004

DATE SAMPLED: 11/26/96
 DATE RECEIVED: 11/27/96
 REPORT DATE: 12/12/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	8.5		S.U.	12/03/96
Lead	EPA 7420	36 *		3 mg/kg	12/03/96
#Digestion, Metals by GFAA	EPA 3050	-		Prep Date	11/27/96
Arsenic	EPA 7060	120 *		0.5 mg/kg	12/06/96
#Digestion, Metals AA/ICP	EPA 3050	-		Prep Date	11/27/96
Anion Scan in Soil by IC	EPA 300				
Fluoride, F	EPA 300	40 *		10 mg/kg	12/03/96
Chloride, Cl	EPA 300	1,500 *		50 mg/kg	12/03/96
Nitrite, NO2-N	EPA 300	20 *		10 mg/kg	12/03/96
Nitrate, NO3-N	EPA 300	350 *		10 mg/kg	12/02/96
Phosphate, PO4-P	EPA 300	ND		50 mg/kg	12/03/96
Sulfate, SO4	EPA 300	4,700 *		50 mg/kg	12/03/96
Calcium	EPA 6010	110,000 *		40 mg/kg	12/03/96
Magnesium	EPA 6010	8,800 *		50 mg/kg	12/03/96
Potassium	EPA 6010	1,000 *		20 mg/kg	12/03/96
Sodium	EPA 6010	1,300 *		30 mg/kg	12/03/96
Zinc	EPA 6010	92 *		10 mg/kg	12/03/96

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

LEVINE-FRICKE-RECON

SAMPLE ID: BW-21
 AEN LAB NO: 9611391-21
 AEN WORK ORDER: 9611391
 CLIENT PROJ. ID: 3042.95-004

DATE SAMPLED: 11/26/96
 DATE RECEIVED: 11/27/96
 REPORT DATE: 12/12/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	3.9		S.U.	12/03/96
Lead	EPA 7420	43 *	3 mg/kg		12/03/96
#Digestion, Metals by GFAA	EPA 3050	-	Prep Date		11/27/96
Arsenic	EPA 7060	6.1 *	0.5 mg/kg		12/06/96
#Digestion, Metals AA/ICP	EPA 3050	-	Prep Date		11/27/96
Zinc	EPA 6010	960 *	10 mg/kg		12/03/96

ND = Not detected at or above the reporting limit

* = Value at or above reporting limit

LEVINE - FRICKE - RECON

SAMPLE ID: BW-23
 AEN LAB NO: 9611391-22
 AEN WORK ORDER: 9611391
 CLIENT PROJ. ID: 3042.95-004

DATE SAMPLED: 11/26/96
 DATE RECEIVED: 11/27/96
 REPORT DATE: 12/12/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	6.0		S.U.	12/03/96
Lead	EPA 7420	3,900 *	3 mg/kg		12/03/96
#Digestion, Metals by GFAA	EPA 3050	-	Prep Date		11/27/96
Arsenic	EPA 7060	30 *	0.5 mg/kg		12/06/96
#Digestion, Metals AA/ICP	EPA 3050	-	Prep Date		11/27/96
Zinc	EPA 6010	8,200 *	10 mg/kg		12/03/96

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

LEVINE - FRICKE - RECON

SAMPLE ID: BW-24
 AEN LAB NO: 9611391-23
 AEN WORK ORDER: 9611391
 CLIENT PROJ. ID: 3042.95-004

DATE SAMPLED: 11/26/96
 DATE RECEIVED: 11/27/96
 REPORT DATE: 12/12/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	8.7		S.U.	12/03/96
Lead	EPA 7420	70 *	3 mg/kg		12/03/96
#Digestion, Metals by GFAA	EPA 3050	-		Prep Date	11/27/96
Arsenic	EPA 7060	6.3 *	0.5 mg/kg		12/08/96
#Digestion, Metals AA/ICP	EPA 3050	-		Prep Date	11/27/96
Anion Scan in Soil by IC	EPA 300				
Fluoride, F	EPA 300	ND	10 mg/kg		12/03/96
Chloride, Cl	EPA 300	280 *	50 mg/kg		12/03/96
Nitrite, NO2-N	EPA 300	10 *	10 mg/kg		12/03/96
Nitrate, NO3-N	EPA 300	240 *	10 mg/kg		12/03/96
Phosphate, P04-P	EPA 300	ND	50 mg/kg		12/03/96
Sulfate, S04	EPA 300	7,300 *	50 mg/kg		12/03/96
Calcium	EPA 6010	120,000 *	40 mg/kg		12/03/96
Magnesium	EPA 6010	4,200 *	50 mg/kg		12/03/96
Potassium	EPA 6010	590 *	20 mg/kg		12/03/96
Sodium	EPA 6010	2,200 *	30 mg/kg		12/03/96
Zinc	EPA 6010	180 *	10 mg/kg		12/03/96

ND = Not detected at or above the reporting limit

* = Value at or above reporting limit

LEVINE-FRICKE-RECON

SAMPLE ID: BW-25
AEN LAB NO: 9611391-24
AEN WORK ORDER: 9611391
CLIENT PROJ. ID: 3042.95-004

DATE SAMPLED: 11/26/96
DATE RECEIVED: 11/27/96
REPORT DATE: 12/12/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	9.0		S.U.	12/03/96
Lead	EPA 7420	12 *	3 mg/kg		12/03/96
#Digestion, Metals by GFAA	EPA 3050	-	Prep Date		11/27/96
Arsenic	EPA 7060	3.0 *	0.5 mg/kg		12/08/96
#Digestion, Metals AA/ICP	EPA 3050	-	Prep Date		11/27/96
Zinc	EPA 6010	37 *	10 mg/kg		12/03/96

ND = Not detected at or above the reporting limit

* = Value at or above reporting limit

LEVINE - FRICKE - RECON

SAMPLE ID: BW-22
AEN LAB NO: 9611391-25
AEN WORK ORDER: 9611391
CLIENT PROJ. ID: 3042.95-004

DATE SAMPLED: 11/26/96
DATE RECEIVED: 11/27/96
REPORT DATE: 12/12/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	5.7		S.U.	12/03/96
Lead	EPA 7420	3,900 *	3 mg/kg		12/03/96
#Digestion, Metals by GFAA	EPA 3050	-	Prep Date		11/27/96
Arsenic	EPA 7060	7.1 *	0.5 mg/kg		12/08/96
#Digestion, Metals AA/ICP	EPA 3050	-	Prep Date		11/27/96
Zinc	EPA 6010	16,000 *	10 mg/kg		12/04/96

ND = Not detected at or above the reporting limit

* = Value at or above reporting limit

LEVINE - FRICKE - RECON

SAMPLE ID: BW-26
 AEN LAB NO: 9611391-26
 AEN WORK ORDER: 9611391
 CLIENT PROJ. ID: 3042.95-004

DATE SAMPLED: 11/26/96
 DATE RECEIVED: 11/27/96
 REPORT DATE: 12/12/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	8.6		S.U.	12/03/96
Lead	EPA 7420	20 *	3 mg/kg		12/03/96
#Digestion, Metals by GFAA	EPA 3050	-	Prep Date		11/27/96
Arsenic	EPA 7060	3.6 *	0.5 mg/kg		12/08/96
#Digestion, Metals AA/ICP	EPA 3050	-	Prep Date		11/27/96
Anion Scan in Soil by IC	EPA 300				
Fluoride, F	EPA 300	ND	10 mg/kg		12/03/96
Chloride, Cl	EPA 300	120 *	50 mg/kg		12/03/96
Nitrite, NO2-N	EPA 300	ND	10 mg/kg		12/03/96
Nitrate, NO3-N	EPA 300	120 *	10 mg/kg		12/03/96
Phosphate, PO4-P	EPA 300	ND	50 mg/kg		12/03/96
Sulfate, SO4	EPA 300	2,500 *	50 mg/kg		12/03/96
Calcium	EPA 6010	110,000 *	40 mg/kg		12/03/96
Magnesium	EPA 6010	3,800 *	50 mg/kg		12/03/96
Potassium	EPA 6010	520 *	20 mg/kg		12/03/96
Sodium	EPA 6010	1,500 *	30 mg/kg		12/03/96
Zinc	EPA 6010	270 *	10 mg/kg		12/03/96

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

LEVINE-FRICKE-RECON

SAMPLE ID: BW-27
 AEN LAB NO: 9611391-27
 AEN WORK ORDER: 9611391
 CLIENT PROJ. ID: 3042.95-004

DATE SAMPLED: 11/26/96
 DATE RECEIVED: 11/27/96
 REPORT DATE: 12/12/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	8.4		S.U.	12/03/96
Lead	EPA 7420	ND		3 mg/kg	12/03/96
#Digestion, Metals by GFAA	EPA 3050	-		Prep Date	11/27/96
Arsenic	EPA 7060	ND		0.5 mg/kg	12/08/96
#Digestion, Metals AA/ICP	EPA 3050	-		Prep Date	11/27/96
Zinc	EPA 6010	10 *		10 mg/kg	12/03/96

ND = Not detected at or above the reporting limit

* = Value at or above reporting limit

LEVINE-FRICKE-RECON

SAMPLE ID: BW-28
AEN LAB NO: 9611391-28
AEN WORK ORDER: 9611391
CLIENT PROJ. ID: 3042.95-004

DATE SAMPLED: 11/26/96
DATE RECEIVED: 11/27/96
REPORT DATE: 12/12/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	6.7		S.U.	12/03/96
Lead	EPA 7420	8,100 *		3 mg/kg	12/03/96
#Digestion, Metals by GFAA	EPA 3050	-		Prep Date	11/27/96
Arsenic	EPA 7060	100 *		0.5 mg/kg	12/08/96
#Digestion, Metals AA/ICP	EPA 3050	-		Prep Date	11/27/96
Zinc	EPA 6010	42,000 *		10 mg/kg	12/04/96

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

LEVINE-FRICKE-RECON

SAMPLE ID: BW-29
 AEN LAB NO: 9611391-29
 AEN WORK ORDER: 9611391
 CLIENT PROJ. ID: 3042.95-004

DATE SAMPLED: 11/26/96
 DATE RECEIVED: 11/27/96
 REPORT DATE: 12/12/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	8.1		S.U.	12/03/96
Lead	EPA 7420	15 *	3 mg/kg		12/03/96
#Digestion, Metals by GFAA	EPA 3050	-	Prep Date		11/27/96
Arsenic	EPA 7060	290 *	0.5 mg/kg		12/08/96
#Digestion, Metals AA/ICP	EPA 3050	-	Prep Date		11/27/96
Anion Scan in Soil by IC	EPA 300				
Fluoride, F	EPA 300	40 *	10 mg/kg		12/03/96
Chloride, Cl	EPA 300	890 *	50 mg/kg		12/03/96
Nitrite, NO2-N	EPA 300	ND	10 mg/kg		12/03/96
Nitrate, NO3-N	EPA 300	1,400 *	10 mg/kg		12/03/96
Phosphate, PO4-P	EPA 300	ND	50 mg/kg		12/03/96
Sulfate, SO4	EPA 300	4,000 *	50 mg/kg		12/03/96
Calcium	EPA 6010	83,000 *	40 mg/kg		12/03/96
Magnesium	EPA 6010	7,200 *	50 mg/kg		12/03/96
Potassium	EPA 6010	900 *	20 mg/kg		12/03/96
Sodium	EPA 6010	680 *	30 mg/kg		12/03/96
Zinc	EPA 6010	45 *	10 mg/kg		12/03/96

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

LEVINE - FRICKE - RECON

SAMPLE ID: BW-30
AEN LAB NO: 9611391-30
AEN WORK ORDER: 9611391
CLIENT PROJ. ID: 3042.95-004

DATE SAMPLED: 11/26/96
DATE RECEIVED: 11/27/96
REPORT DATE: 12/12/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	7.6		S.U.	12/03/96
Lead	EPA 7420	ND		3 mg/kg	12/03/96
#Digestion, Metals by GFAA	EPA 3050	-		Prep Date	11/27/96
Arsenic	EPA 7060	180 *	0.5 mg/kg		12/08/96
#Digestion, Metals AA/ICP	EPA 3050	-		Prep Date	11/27/96
Zinc	EPA 6010	70 *	10 mg/kg		12/03/96

ND = Not detected at or above the reporting limit

* = Value at or above reporting limit

LEVINE-FRICKE-RECON

SAMPLE ID: BW-31
AEN LAB NO: 9611391-31
AEN WORK ORDER: 9611391
CLIENT PROJ. ID: 3042.95-004

DATE SAMPLED: 11/26/96
DATE RECEIVED: 11/27/96
REPORT DATE: 12/12/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	5.5		S.U.	12/03/96
Lead	EPA 7420	16,000 *	3 mg/kg		12/03/96
#Digestion, Metals by GFAA	EPA 3050	-	Prep Date		11/27/96
Arsenic	EPA 7060	18 *	0.5 mg/kg		12/08/96
#Digestion, Metals AA/ICP	EPA 3050	-	Prep Date		11/27/96
Zinc	EPA 6010	8,100 *	10 mg/kg		12/04/96

ND = Not detected at or above the reporting limit

* = Value at or above reporting limit

LEVINE - FRICKE - RECON

SAMPLE ID: BW-32
 AEN LAB NO: 9611391-32
 AEN WORK ORDER: 9611391
 CLIENT PROJ. ID: 3042.95-004

DATE SAMPLED: 11/26/96
 DATE RECEIVED: 11/27/96
 REPORT DATE: 12/12/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	8.5		S.U.	12/03/96
Lead	EPA 7420	47 *	3 mg/kg		12/03/96
#Digestion, Metals by GFAA	EPA 3050	-	Prep Date		11/27/96
Arsenic	EPA 7060	120 *	0.5 mg/kg		12/08/96
#Digestion, Metals AA/ICP	EPA 3050	-	Prep Date		11/27/96
Anion Scan in Soil by IC	EPA 300				
Fluoride, F	EPA 300	10 *	10 mg/kg		12/03/96
Chloride, Cl	EPA 300	640 *	50 mg/kg		12/03/96
Nitrite, NO2-N	EPA 300	ND	10 mg/kg		12/03/96
Nitrate, NO3-N	EPA 300	180 *	10 mg/kg		12/03/96
Phosphate, PO4-P	EPA 300	ND	50 mg/kg		12/03/96
Sulfate, SO4	EPA 300	5,900 *	50 mg/kg		12/03/96
Calcium	EPA 6010	85,000 *	40 mg/kg		12/03/96
Magnesium	EPA 6010	7,600 *	50 mg/kg		12/03/96
Potassium	EPA 6010	840 *	20 mg/kg		12/03/96
Sodium	EPA 6010	820 *	30 mg/kg		12/03/96
Zinc	EPA 6010	94 *	10 mg/kg		12/03/96

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

LEVINE - FRICKE - RECON

SAMPLE ID: BW-33
AEN LAB NO: 9611391-33
AEN WORK ORDER: 9611391
CLIENT PROJ. ID: 3042.95-004

DATE SAMPLED: 11/26/96
DATE RECEIVED: 11/27/96
REPORT DATE: 12/12/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	6.6		S.U.	12/03/96
Lead	EPA 7420	4 *	3 mg/kg		12/03/96
#Digestion, Metals by GFAA	EPA 3050	-	Prep Date		11/27/96
Arsenic	EPA 7060	51 *	0.5 mg/kg		12/06/96
#Digestion, Metals AA/ICP	EPA 3050	-	Prep Date		11/27/96
Zinc	EPA 6010	10 *	10 mg/kg		12/03/96

ND = Not detected at or above the reporting limit

* = Value at or above reporting limit

LEVINE-FRICKE-RECON

SAMPLE ID: BW-34
AEN LAB NO: 9611391-34
AEN WORK ORDER: 9611391
CLIENT PROJ. ID: 3042.95-004

DATE SAMPLED: 11/26/96
DATE RECEIVED: 11/27/96
REPORT DATE: 12/12/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	5.4		S.U.	12/03/96
Lead	EPA 7420	23,000 *		3 mg/kg	12/03/96
#Digestion, Metals by GFAA	EPA 3050	-		Prep Date	11/27/96
Arsenic	EPA 7060	36 *		0.5 mg/kg	12/06/96
#Digestion, Metals AA/ICP	EPA 3050	-		Prep Date	11/27/96
Zinc	EPA 6010	9,700 *		10 mg/kg	12/04/96

ND = Not detected at or above the reporting limit

* = Value at or above reporting limit

LEVINE-FRICKE-RECON

SAMPLE ID: BW-35
 AEN LAB NO: 9611391-35
 AEN WORK ORDER: 9611391
 CLIENT PROJ. ID: 3042.95-004

DATE SAMPLED: 11/26/96
 DATE RECEIVED: 11/27/96
 REPORT DATE: 12/12/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	8.2		S.U.	12/03/96
Lead	EPA 7420	17 *	3 mg/kg		12/03/96
#Digestion, Metals by GFAA	EPA 3050	-		Prep Date	11/27/96
Arsenic	EPA 7060	26 *	0.5 mg/kg		12/06/96
#Digestion, Metals AA/ICP	EPA 3050	-		Prep Date	11/27/96
Anion Scan in Soil by IC	EPA 300				
Fluoride, F	EPA 300	30 *	10 mg/kg		12/03/96
Chloride, Cl	EPA 300	2,200 *	50 mg/kg		12/03/96
Nitrite, NO2-N	EPA 300	ND	10 mg/kg		12/03/96
Nitrate, NO3-N	EPA 300	990 *	10 mg/kg		12/03/96
Phosphate, PO4-P	EPA 300	ND	50 mg/kg		12/03/96
Sulfate, SO4	EPA 300	4,900 *	50 mg/kg		12/03/96
Calcium	EPA 6010	93,000 *	40 mg/kg		12/03/96
Magnesium	EPA 6010	7,100 *	50 mg/kg		12/03/96
Potassium	EPA 6010	600 *	20 mg/kg		12/03/96
Sodium	EPA 6010	1,800 *	30 mg/kg		12/03/96
Zinc	EPA 6010	50 *	10 mg/kg		12/03/96

ND = Not detected at or above the reporting limit

* = Value at or above reporting limit

LEVINE-FRICKE-RECON

SAMPLE ID: BW-36
 AEN LAB NO: 9611391-36
 AEN WORK ORDER: 9611391
 CLIENT PROJ. ID: 3042.95-004

DATE SAMPLED: 11/26/96
 DATE RECEIVED: 11/27/96
 REPORT DATE: 12/12/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	6.8		S.U.	12/03/96
Lead	EPA 7420	11 *	3	mg/kg	12/03/96
#Digestion, Metals by GFAA	EPA 3050	-		Prep Date	12/01/96
Arsenic	EPA 7060	3.1 *	0.5	mg/kg	12/06/96
#Digestion, Metals AA/ICP	EPA 3050	-		Prep Date	12/01/96
Zinc	EPA 6010	40 *	10	mg/kg	12/03/96

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

LEVINE - FRICKE - RECON

SAMPLE ID: BW-37
 AEN LAB NO: 9611391-37
 AEN WORK ORDER: 9611391
 CLIENT PROJ. ID: 3042.95-004

DATE SAMPLED: 11/26/96
 DATE RECEIVED: 11/27/96
 REPORT DATE: 12/12/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	6.3		S.U.	12/03/96
Lead	EPA 7420	3,900 *	3 mg/kg		12/03/96
#Digestion, Metals by GFAA	EPA 3050	-	Prep Date		12/01/96
Arsenic	EPA 7060	15 *	0.5 mg/kg		12/06/96
#Digestion, Metals AA/ICP	EPA 3050	-	Prep Date		12/01/96
Zinc	EPA 6010	5,200 *	10 mg/kg		12/03/96

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

LEVINE-FRICKE-RECON

SAMPLE ID: BW-38
 AEN LAB NO: 9611391-38
 AEN WORK ORDER: 9611391
 CLIENT PROJ. ID: 3042.95-004

DATE SAMPLED: 11/26/96
 DATE RECEIVED: 11/27/96
 REPORT DATE: 12/12/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	10.8		S.U.	12/03/96
Lead	EPA 7420	ND		3 mg/kg	12/03/96
#Digestion, Metals by GFAA	EPA 3050	-		Prep Date	12/01/96
Arsenic	EPA 7060	4.6 *	0.5 mg/kg		12/06/96
#Digestion, Metals AA/ICP	EPA 3050	-		Prep Date	12/01/96
Anion Scan in Soil by IC	EPA 300				
Fluoride, F	EPA 300	ND	5 mg/kg		12/03/96
Chloride, Cl	EPA 300	150 *	30 mg/kg		12/03/96
Nitrite, NO2-N	EPA 300	ND	5 mg/kg		12/03/96
Nitrate, NO3-N	EPA 300	50 *	5 mg/kg		12/03/96
Phosphate, PO4-P	EPA 300	ND	30 mg/kg		12/03/96
Sulfate, SO4	EPA 300	1,600 *	30 mg/kg		12/03/96
Calcium	EPA 6010	130,000 *	40 mg/kg		12/03/96
Magnesium	EPA 6010	3,900 *	50 mg/kg		12/03/96
Potassium	EPA 6010	670 *	20 mg/kg		12/03/96
Sodium	EPA 6010	1,700 *	30 mg/kg		12/03/96
Zinc	EPA 6010	20 *	10 mg/kg		12/03/96

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

LEVINE - FRICKE - RECON

SAMPLE ID: BW-39
AEN LAB NO: 9611391-39
AEN WORK ORDER: 9611391
CLIENT PROJ. ID: 3042.95-004

DATE SAMPLED: 11/26/96
DATE RECEIVED: 11/27/96
REPORT DATE: 12/12/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	9.5		S.U.	12/03/96
Lead	EPA 7420	ND	3 mg/kg		12/03/96
#Digestion, Metals by GFAA	EPA 3050	-	Prep Date		12/01/96
Arsenic	EPA 7060	1.3 *	0.5 mg/kg		12/06/96
#Digestion, Metals AA/ICP	EPA 3050	-	Prep Date		12/01/96
Zinc	EPA 6010	10 *	10 mg/kg		12/03/96

ND = Not detected at or above the reporting limit

* = Value at or above reporting limit

LEVINE-FRICKE-RECON

SAMPLE ID: BW-40
AEN LAB NO: 9611391-40
AEN WORK ORDER: 9611391
CLIENT PROJ. ID: 3042.95-004

DATE SAMPLED: 11/26/96
DATE RECEIVED: 11/27/96
REPORT DATE: 12/12/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	7.8		S.U.	12/03/96
Lead	EPA 7420	2,200 *	3	mg/kg	12/03/96
#Digestion, Metals by GFAA	EPA 3050	-		Prep Date	12/01/96
Arsenic	EPA 7060	6.0 *	0.5	mg/kg	12/06/96
#Digestion, Metals AA/ICP	EPA 3050	-		Prep Date	12/01/96
Zinc	EPA 6010	35,000 *	10	mg/kg	12/03/96

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

LEVINE-FRICKE-RECON

SAMPLE ID: BW-41
 AEN LAB NO: 9611391-41
 AEN WORK ORDER: 9611391
 CLIENT PROJ. ID: 3042.95-004

DATE SAMPLED: 11/26/96
 DATE RECEIVED: 11/27/96
 REPORT DATE: 12/12/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	8.6		S.U.	12/03/96
Lead	EPA 7420	49 *		3 mg/kg	12/03/96
#Digestion, Metals by GFAA	EPA 3050	-		Prep Date	12/01/96
Arsenic	EPA 7060	3.8 *		0.5 mg/kg	12/06/96
#Digestion, Metals AA/ICP	EPA 3050	-		Prep Date	12/01/96
Anion Scan in Soil by IC	EPA 300				
Fluoride, F	EPA 300	ND		10 mg/kg	12/03/96
Chloride, Cl	EPA 300	140 *		50 mg/kg	12/03/96
Nitrite, NO2-N	EPA 300	ND		10 mg/kg	12/03/96
Nitrate, NO3-N	EPA 300	60 *		10 mg/kg	12/03/96
Phosphate, PO4-P	EPA 300	ND		50 mg/kg	12/03/96
Sulfate, SO4	EPA 300	2,300 *		50 mg/kg	12/03/96
Calcium	EPA 6010	110,000 *		40 mg/kg	12/03/96
Magnesium	EPA 6010	4,400 *		50 mg/kg	12/03/96
Potassium	EPA 6010	560 *		20 mg/kg	12/03/96
Sodium	EPA 6010	1,500 *		30 mg/kg	12/03/96
Zinc	EPA 6010	890 *		10 mg/kg	12/03/96

ND = Not detected at or above the reporting limit

* = Value at or above reporting limit

LEVINE-FRICKE-RECON

SAMPLE ID: BW-42
 AEN LAB NO: 9611391-42
 AEN WORK ORDER: 9611391
 CLIENT PROJ. ID: 3042.95-004

DATE SAMPLED: 11/26/96
 DATE RECEIVED: 11/27/96
 REPORT DATE: 12/12/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	8.6		S.U.	12/03/96
Lead	EPA 7420	4 *		3 mg/kg	12/03/96
#Digestion, Metals by GFAA	EPA 3050	-		Prep Date	12/01/96
Arsenic	EPA 7060	1.1 *		0.5 mg/kg	12/06/96
#Digestion, Metals AA/ICP	EPA 3050	-		Prep Date	12/01/96
Zinc	EPA 6010	60 *		10 mg/kg	12/03/96

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

LEVINE - FRICKE - RECON

SAMPLE ID: BW-43
AEN LAB NO: 9611391-43
AEN WORK ORDER: 9611391
CLIENT PROJ. ID: 3042.95-004

DATE SAMPLED: 11/26/96
DATE RECEIVED: 11/27/96
REPORT DATE: 12/12/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	6.3		S.U.	12/03/96
Lead	EPA 7420	1,500 *	3 mg/kg		12/03/96
#Digestion, Metals by GFAA	EPA 3050	-	Prep Date		12/01/96
Arsenic	EPA 7060	5.9 *	0.5 mg/kg		12/06/96
#Digestion, Metals AA/ICP	EPA 3050	-	Prep Date		12/01/96
Zinc	EPA 6010	33,000 *	10 mg/kg		12/03/96

ND = Not detected at or above the reporting limit

* = Value at or above reporting limit

LEVINE-FRICKE-RECON

SAMPLE ID: BW-44
 AEN LAB NO: 9611391-44
 AEN WORK ORDER: 9611391
 CLIENT PROJ. ID: 3042.95-004

DATE SAMPLED: 11/26/96
 DATE RECEIVED: 11/27/96
 REPORT DATE: 12/12/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	10.4		S.U.	12/03/96
Lead	EPA 7420	13 *		3 mg/kg	12/03/96
#Digestion, Metals by GFAA	EPA 3050	-		Prep Date	12/01/96
Arsenic	EPA 7060	5.8 *		0.5 mg/kg	12/06/96
#Digestion, Metals AA/ICP	EPA 3050	-		Prep Date	12/01/96
Anion Scan in Soil by IC	EPA 300				
Fluoride, F	EPA 300	50 *		10 mg/kg	12/03/96
Chloride, Cl	EPA 300	90 *		50 mg/kg	12/03/96
Nitrite, NO2-N	EPA 300	50 *		10 mg/kg	12/03/96
Nitrate, NO3-N	EPA 300	20 *		10 mg/kg	12/03/96
Phosphate, PO4-P	EPA 300	ND		50 mg/kg	12/03/96
Sulfate, SO4	EPA 300	1,500 *		50 mg/kg	12/03/96
Calcium	EPA 6010	88,000 *		40 mg/kg	12/03/96
Magnesium	EPA 6010	7,000 *		50 mg/kg	12/03/96
Potassium	EPA 6010	610 *		20 mg/kg	12/03/96
Sodium	EPA 6010	320 *		30 mg/kg	12/03/96
Zinc	EPA 6010	220 *		10 mg/kg	12/03/96

ND = Not detected at or above the reporting limit

* = Value at or above reporting limit

LEVINE - FRICKE - RECON

SAMPLE ID: BW-45
 AEN LAB NO: 9611391-45
 AEN WORK ORDER: 9611391
 CLIENT PROJ. ID: 3042.95-004

DATE SAMPLED: 11/26/96
 DATE RECEIVED: 11/27/96
 REPORT DATE: 12/12/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Soil pH measured in water	EPA 9045A	9.1		S.U.	12/03/96
Lead	EPA 7420	ND		3 mg/kg	12/03/96
#Digestion, Metals by GFAA	EPA 3050	-		Prep Date	12/01/96
Arsenic	EPA 7060	1.8 *	0.5 mg/kg		12/06/96
#Digestion, Metals AA/ICP	EPA 3050	-		Prep Date	12/01/96
Zinc	EPA 6010	ND		10 mg/kg	12/03/96

ND = Not detected at or above the reporting limit

* = Value at or above reporting limit

AEN (CALIFORNIA)
QUALITY CONTROL REPORT

AEN JOB NUMBER: 9611391
CLIENT PROJECT ID: 3042.95-004

Quality Control and Project Summary

Matrix spike recoveries for zinc are outside laboratory QC limits. This appears to be a matrix effect as method spikes are within established limits.

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

Definitions

Laboratory Control Sample (LCS)/Method Spike(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 analysis.

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 behavior, 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 instrumental performance.

D: Surrogates diluted out.

!: Indicates result outside of established laboratory QC limits.

WORK ORDER: 9611391

QUALITY CONTROL REPORT

PAGE QR-2

ANALYSIS: Anion Scan in Soil by IC

MATRIX: Soil/Bulk

MATRIX SPIKE SAMPLES

SAMPLE TYPE: Spike-Sample/Matrix
 INSTRUMENT: Dionex ion chromatograph
 UNITS: mg/kg
 METHOD: EPA 300

LAB ID: MS11391-14A
 PREPARED:
 ANALYZED: 12/02/96

INSTR RUN: IC\961202000000/6/5
 BATCH ID: ICS120296
 DILUTION: 10.0

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Fluoride, F	110	ND	10	100	110	75	125		
Chloride, Cl	853	333	50	500	104	75	125		
Nitrite, NO2-N	110	13.3	10	100	96.7	75	125		
Phosphate, PO4-P	464	ND	10	400	116	75	125		
Sulfate, SO4	4180	3150	50	1000	103.0	75	125		

SAMPLE TYPE: Spike-Sample/Matrix
 INSTRUMENT: Dionex ion chromatograph
 UNITS: mg/kg
 METHOD: EPA 300

LAB ID: MS11391-26A
 PREPARED:
 ANALYZED: 12/03/96

INSTR RUN: IC\961203000000/6/5
 BATCH ID: ICS120396
 DILUTION: 10.0

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Fluoride, F	90.0	ND	10	100	90.0	75	125		
Chloride, Cl	574	118	50	500	91.2	75	125		
Nitrite, NO2-N	92.6	ND	10	100	92.6	75	125		
Nitrate, NO3-N	213	121	10	100	92.0	75	125		
Phosphate, PO4-P	445	ND	50	400	111	75	125		
Sulfate, SO4	3410	2460	50	1000	95.00	75	125		

SAMPLE TYPE: Spike-Sample/Matrix
 INSTRUMENT: Dionex ion chromatograph
 UNITS: mg/kg
 METHOD: EPA 300

LAB ID: MS11391-38A
 PREPARED:
 ANALYZED: 12/03/96

INSTR RUN: IC\961203000000/8/7
 BATCH ID: ICS120396
 DILUTION: 5.00

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Fluoride, F	52.0	ND	5	50.0	104	75	125		
Chloride, Cl	392	148	30	250	97.6	75	125		
Nitrite, NO2-N	55.0	ND	5	50.0	110	75	125		
Nitrate, NO3-N	95.7	49.4	5	50.0	92.6	75	125		
Phosphate, PO4-P	187	ND	30	200	93.5	75	125		
Sulfate, SO4	2110	1620	30	500	98.0	75	125		

WORK ORDER: 9611391

QUALITY CONTROL REPORT

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ANALYSIS: Arsenic

MATRIX: Soil/Bulk

METHOD BLANK SAMPLES

SAMPLE TYPE: Blank-Method/Media blank
 INSTRUMENT: TJA 4000, GFAA
 UNITS: mg/kg
 METHOD: EPA 7060

LAB ID: GFS_BLNK_Q
 PREPARED:
 ANALYZED: 12/06/96

INSTR RUN: 4000\961206143000/1/
 BATCH ID: GFS112996-Q
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Arsenic in soil EPA 7060	ND		0.5						

SAMPLE TYPE: Blank-Method/Media blank
 INSTRUMENT: TJA 4000, GFAA
 UNITS: mg/kg
 METHOD: EPA 7060

LAB ID: GFS_BLNK_T
 PREPARED:
 ANALYZED: 12/06/96

INSTR RUN: 4000\961206200500/1/
 BATCH ID: GFS113096-T
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Arsenic in soil EPA 7060	ND		0.5						

METHOD SPIKE SAMPLES

SAMPLE TYPE: Spike-Method/Media blank
 INSTRUMENT: TJA 4000, GFAA
 UNITS: mg/kg
 METHOD: EPA 7060

LAB ID: GFS_MD_Q
 PREPARED:
 ANALYZED: 12/06/96

INSTR RUN: 4000\961206143000/3/1
 BATCH ID: GFS112996-Q
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Arsenic in soil EPA 7060	22.8	ND	0.5	20.0	114	77	141		

SAMPLE TYPE: Spike-Method/Media blank
 INSTRUMENT: TJA 4000, GFAA
 UNITS: mg/kg
 METHOD: EPA 7060

LAB ID: GFS_MS_Q
 PREPARED:
 ANALYZED: 12/06/96

INSTR RUN: 4000\961206143000/2/1
 BATCH ID: GFS112996-Q
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Arsenic in soil EPA 7060	23.3	ND	0.5	20.0	117	77	141		

SAMPLE TYPE: Spike-Method/Media blank
 INSTRUMENT: TJA 4000, GFAA
 UNITS: mg/kg
 METHOD: EPA 7060

LAB ID: GFS_MD_T
 PREPARED:
 ANALYZED: 12/06/96

INSTR RUN: 4000\961206200500/3/1
 BATCH ID: GFS113096-T
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Arsenic in soil EPA 7060	11.0	ND	0.5	10.0	110	77	141		

SAMPLE TYPE: Spike-Method/Media blank
 INSTRUMENT: TJA 4000, GFAA
 UNITS: mg/kg
 METHOD: EPA 7060

LAB ID: GFS_MS_T
 PREPARED:
 ANALYZED: 12/06/96

INSTR RUN: 4000\961206200500/2/1
 BATCH ID: GFS113096-T
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Arsenic in soil EPA 7060	10.6	ND	0.5	10.0	106	77	141		

SAMPLE TYPE: Spike-Method/Media blank
 INSTRUMENT: TJA 4000, GFAA
 UNITS: mg/kg
 METHOD: EPA 7060

LAB ID: MD11391-42A
 PREPARED:
 ANALYZED: 12/06/96

INSTR RUN: 4000\961206200500/7/5
 BATCH ID: GFS113096-T
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Arsenic in soil EPA 7060	11.4	1.07	0.5	10.0	103	77	141		

WORK ORDER: 9611391

QUALITY CONTROL REPORT

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ANALYSIS: Arsenic

MATRIX: Soil/Bulk

METHOD SPIKE DUPLICATES

SAMPLE TYPE: Method Spike Sample Duplicate
 INSTRUMENT: TJA 4000, GFAA
 UNITS: mg/kg
 METHOD: EPA 7060

LAB ID: GFS_MR_Q
 PREPARED:
 ANALYZED: 12/06/96

INSTR RUN: 4000\961206143000/4/2
 BATCH ID: GFS112996-Q
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Arsenic in soil EPA 7060	22.8	23.3	0.5					2.17	15

SAMPLE TYPE: Method Spike Sample Duplicate
 INSTRUMENT: TJA 4000, GFAA
 UNITS: mg/kg
 METHOD: EPA 7060

LAB ID: GFS_MR_T
 PREPARED:
 ANALYZED: 12/06/96

INSTR RUN: 4000\961206200500/4/2
 BATCH ID: GFS113096-T
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Arsenic in soil EPA 7060	11.0	10.6	0.5					3.70	15

MATRIX SPIKE SAMPLES

SAMPLE TYPE: Spike-Sample/Matrix
 INSTRUMENT: TJA 4000, GFAA
 UNITS: mg/kg
 METHOD: EPA 7060

LAB ID: MD11391-08A
 PREPARED:
 ANALYZED: 12/06/96

INSTR RUN: 4000\961206143000/7/5
 BATCH ID: GFS112996-Q
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Arsenic in soil EPA 7060	37.4	5.87	0.5	20.0	158	12	168		

SAMPLE TYPE: Spike-Sample/Matrix
 INSTRUMENT: TJA 4000, GFAA
 UNITS: mg/kg
 METHOD: EPA 7060

LAB ID: MS11391-08A
 PREPARED:
 ANALYZED: 12/06/96

INSTR RUN: 4000\961206143000/6/5
 BATCH ID: GFS112996-Q
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Arsenic in soil EPA 7060	31.3	5.87	0.5	20.0	127	12	168		

SAMPLE TYPE: Spike-Sample/Matrix
 INSTRUMENT: TJA 4000, GFAA
 UNITS: mg/kg
 METHOD: EPA 7060

LAB ID: MS11391-42A
 PREPARED:
 ANALYZED: 12/06/96

INSTR RUN: 4000\961206200500/6/5
 BATCH ID: GFS113096-T
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Arsenic in soil EPA 7060	10.7	1.07	0.5	10.0	96.3	12	168		

MATRIX SPIKE DUPLICATES

SAMPLE TYPE: Spiked Sample Duplicate
 INSTRUMENT: TJA 4000, GFAA
 UNITS: mg/kg
 METHOD: EPA 7060

LAB ID: MR11391-08A
 PREPARED:
 ANALYZED: 12/06/96

INSTR RUN: 4000\961206143000/8/6
 BATCH ID: GFS112996-Q
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Arsenic in soil EPA 7060	37.4	31.3	0.5					17.8	18

SAMPLE TYPE: Spiked Sample Duplicate
 INSTRUMENT: TJA 4000, GFAA
 UNITS: mg/kg
 METHOD: EPA 7060

LAB ID: MR11391-42A
 PREPARED:
 ANALYZED: 12/06/96

INSTR RUN: 4000\961206200500/8/6
 BATCH ID: GFS113096-T
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Arsenic in soil EPA 7060	11.4	10.7	0.5					6.33	18

WORK ORDER: 9611391

QUALITY CONTROL REPORT

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ANALYSIS: Lead

MATRIX: Soil/Bulk

METHOD BLANK SAMPLES

SAMPLE TYPE: Blank-Method/Media blank
 INSTRUMENT: Video 12 aa spectrometer
 UNITS: mg/kg
 METHOD: EPA 7420

LAB ID: IFS_BLNK_P
 PREPARED:
 ANALYZED: 12/03/96

INSTR RUN: AA V12\961203131900/1/
 BATCH ID: IFS112796-P
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Lead in soil-flame	ND		3						

SAMPLE TYPE: Blank-Method/Media blank
 INSTRUMENT: Video 12 aa spectrometer
 UNITS: mg/kg
 METHOD: EPA 7420

LAB ID: IFS_BLNK_U
 PREPARED:
 ANALYZED: 12/03/96

INSTR RUN: AA V12\961203152300/1/
 BATCH ID: IFS120196-U
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Lead in soil-flame	ND		3						

METHOD SPIKE SAMPLES

SAMPLE TYPE: Spike-Method/Media blank
 INSTRUMENT: Video 12 aa spectrometer
 UNITS: mg/kg
 METHOD: EPA 7420

LAB ID: IFS_MD_P
 PREPARED:
 ANALYZED: 12/03/96

INSTR RUN: AA V12\961203131900/3/1
 BATCH ID: IFS112796-P
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Lead in soil-flame	53.3	ND	3	50.0	107	80	119		

SAMPLE TYPE: Spike-Method/Media blank
 INSTRUMENT: Video 12 aa spectrometer
 UNITS: mg/kg
 METHOD: EPA 7420

LAB ID: IFS_MS_P
 PREPARED:
 ANALYZED: 12/03/96

INSTR RUN: AA V12\961203131900/2/1
 BATCH ID: IFS112796-P
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Lead in soil-flame	54.6	ND	3	50.0	109	80	119		

SAMPLE TYPE: Spike-Method/Media blank
 INSTRUMENT: Video 12 aa spectrometer
 UNITS: mg/kg
 METHOD: EPA 7420

LAB ID: IFS_MD_U
 PREPARED:
 ANALYZED: 12/03/96

INSTR RUN: AA V12\961203152300/3/1
 BATCH ID: IFS120196-U
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Lead in soil-flame	53.1	ND	3	50.0	106	80	119		

SAMPLE TYPE: Spike-Method/Media blank
 INSTRUMENT: Video 12 aa spectrometer
 UNITS: mg/kg
 METHOD: EPA 7420

LAB ID: IFS_MS_U
 PREPARED:
 ANALYZED: 12/03/96

INSTR RUN: AA V12\961203152300/2/1
 BATCH ID: IFS120196-U
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Lead in soil-flame	50.9	ND	3	50.0	102	80	119		

METHOD SPIKE DUPLICATES

SAMPLE TYPE: Method Spike Sample Duplicate
 INSTRUMENT: Video 12 aa spectrometer
 UNITS: mg/kg
 METHOD: EPA 7420

LAB ID: IFS_MR_P
 PREPARED:
 ANALYZED: 12/03/96

INSTR RUN: AA V12\961203131900/4/2
 BATCH ID: IFS112796-P
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Lead in soil-flame	53.3	54.6	3					2.41	10.5

ANALYSIS: Lead

MATRIX: Soil/Bulk

METHOD SPIKE DUPLICATES

SAMPLE TYPE: Method Spike Sample Duplicate LAB ID: IFS_MR_U INSTR RUN: AA V12\961203152300/4/2
 INSTRUMENT: Video 12 aa spectrometer PREPARED: BATCH ID: IFS120196-U
 UNITS: mg/kg ANALYZED: 12/03/96 DILUTION: 1.000000
 METHOD: EPA 7420

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Lead in soil-flame	53.1	50.9	3					4.23	10.5

MATRIX SPIKE SAMPLES

SAMPLE TYPE: Spike-Sample/Matrix LAB ID: MD11391-12A INSTR RUN: AA V12\961203131900/7/5
 INSTRUMENT: Video 12 aa spectrometer PREPARED: BATCH ID: IFS112796-P
 UNITS: mg/kg ANALYZED: 12/03/96 DILUTION: 1.000000
 METHOD: EPA 7420

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Lead in soil-flame	50.4	3.80	3	50.0	93.2	21	178		

SAMPLE TYPE: Spike-Sample/Matrix LAB ID: MD11391-21A INSTR RUN: AA V12\961203131900/11/9
 INSTRUMENT: Video 12 aa spectrometer PREPARED: BATCH ID: IFS112796-P
 UNITS: mg/kg ANALYZED: 12/03/96 DILUTION: 1.000000
 METHOD: EPA 7420

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Lead in soil-flame	90.6	43.4	3	50.0	94.4	21	178		

SAMPLE TYPE: Spike-Sample/Matrix LAB ID: MD11391-30A INSTR RUN: AA V12\961203131900/15/13
 INSTRUMENT: Video 12 aa spectrometer PREPARED: BATCH ID: IFS112796-P
 UNITS: mg/kg ANALYZED: 12/03/96 DILUTION: 1.000000
 METHOD: EPA 7420

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Lead in soil-flame	54.0	ND	3	50.0	108	21	178		

SAMPLE TYPE: Spike-Sample/Matrix LAB ID: MS11391-12A INSTR RUN: AA V12\961203131900/6/5
 INSTRUMENT: Video 12 aa spectrometer PREPARED: BATCH ID: IFS112796-P
 UNITS: mg/kg ANALYZED: 12/03/96 DILUTION: 1.000000
 METHOD: EPA 7420

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Lead in soil-flame	47.2	3.80	3	50.0	86.8	21	178		

SAMPLE TYPE: Spike-Sample/Matrix LAB ID: MS11391-21A INSTR RUN: AA V12\961203131900/10/9
 INSTRUMENT: Video 12 aa spectrometer PREPARED: BATCH ID: IFS112796-P
 UNITS: mg/kg ANALYZED: 12/03/96 DILUTION: 1.000000
 METHOD: EPA 7420

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Lead in soil-flame	90.3	43.4	3	50.0	93.8	21	178		

SAMPLE TYPE: Spike-Sample/Matrix LAB ID: MS11391-30A INSTR RUN: AA V12\961203131900/14/1
 INSTRUMENT: Video 12 aa spectrometer PREPARED: BATCH ID: IFS112796-P
 UNITS: mg/kg ANALYZED: 12/03/96 DILUTION: 1.000000
 METHOD: EPA 7420

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Lead in soil-flame	54.4	ND	3	50.0	109	21	178		

WORK ORDER: 9611391

QUALITY CONTROL REPORT

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ANALYSIS: Lead

MATRIX: Soil/Bulk

MATRIX SPIKE SAMPLES

SAMPLE TYPE: Spike-Sample/Matrix
 INSTRUMENT: Video 12 aa spectrometer
 UNITS: mg/kg
 METHOD: EPA 7420

LAB ID: MD11391-42A
 PREPARED:
 ANALYZED: 12/03/96

INSTR RUN: AA V12\961203152300/7/5
 BATCH ID: IFS120196-U
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Lead in soil-flame	56.9	4.16	3	50.0	105	21	178		

SAMPLE TYPE: Spike-Sample/Matrix
 INSTRUMENT: Video 12 aa spectrometer
 UNITS: mg/kg
 METHOD: EPA 7420

LAB ID: MS11391-42A
 PREPARED:
 ANALYZED: 12/03/96

INSTR RUN: AA V12\961203152300/6/5
 BATCH ID: IFS120196-U
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Lead in soil-flame	55.4	4.16	3	50.0	102	21	178		

MATRIX SPIKE DUPLICATES

SAMPLE TYPE: Spiked Sample Duplicate
 INSTRUMENT: Video 12 aa spectrometer
 UNITS: mg/kg
 METHOD: EPA 7420

LAB ID: MR11391-12A
 PREPARED:
 ANALYZED: 12/03/96

INSTR RUN: AA V12\961203131900/8/6
 BATCH ID: IFS112796-P
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Lead in soil-flame	50.4	47.2	3	50.0			6.56	23	

SAMPLE TYPE: Spiked Sample Duplicate
 INSTRUMENT: Video 12 aa spectrometer
 UNITS: mg/kg
 METHOD: EPA 7420

LAB ID: MR11391-21A
 PREPARED:
 ANALYZED: 12/03/96

INSTR RUN: AA V12\961203131900/12/10
 BATCH ID: IFS112796-P
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Lead in soil-flame	90.6	90.3	3	50.0			0.332	23	

SAMPLE TYPE: Spiked Sample Duplicate
 INSTRUMENT: Video 12 aa spectrometer
 UNITS: mg/kg
 METHOD: EPA 7420

LAB ID: MR11391-30A
 PREPARED:
 ANALYZED: 12/03/96

INSTR RUN: AA V12\961203131900/16/14
 BATCH ID: IFS112796-P
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Lead in soil-flame	54.0	54.4	3	50.0			0.738	23	

SAMPLE TYPE: Spiked Sample Duplicate
 INSTRUMENT: Video 12 aa spectrometer
 UNITS: mg/kg
 METHOD: EPA 7420

LAB ID: MR11391-42A
 PREPARED:
 ANALYZED: 12/03/96

INSTR RUN: AA V12\961203152300/8/6
 BATCH ID: IFS120196-U
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Lead in soil-flame	56.9	55.4	3	50.0			2.67	23	

ANALYSIS: Major Anions

MATRIX: Water

METHOD BLANK SAMPLES

SAMPLE TYPE: Blank-Method/Media blank
 INSTRUMENT: Dionex ion chromatograph
 UNITS: mg/L
 METHOD:

LAB ID: ICS_BLNK
 PREPARED:
 ANALYZED: 12/02/96

INSTR RUN: IC\961202000000/1/
 BATCH ID: ICS120296
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Fluoride, F	ND		0.1						
Chloride, Cl	ND		0.5						
Nitrate, NO3-N	ND		0.1						
Nitrite, NO2-N	ND		0.1						
Phosphate, PO4-P	ND		0.5						
Sulfate, SO4	ND		0.5						

SAMPLE TYPE: Blank-Method/Media blank
 INSTRUMENT: Dionex ion chromatograph
 UNITS: mg/L
 METHOD:

LAB ID: ICS_BLNK
 PREPARED:
 ANALYZED: 12/03/96

INSTR RUN: IC\961203000000/1/
 BATCH ID: ICS120396
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Fluoride, F	ND		0.1						
Chloride, Cl	ND		0.5						
Nitrate, NO3-N	ND		0.1						
Nitrite, NO2-N	ND		0.1						
Phosphate, PO4-P	ND		0.5						
Sulfate, SO4	ND		0.5						

METHOD SPIKE SAMPLES

SAMPLE TYPE: Spike-Method/Media blank
 INSTRUMENT: Dionex ion chromatograph
 UNITS: mg/L
 METHOD:

LAB ID: ICS_MD
 PREPARED:
 ANALYZED: 12/02/96

INSTR RUN: IC\961202000000/3/1
 BATCH ID: ICS120296
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Fluoride, F	2.02	ND	0.1	2.00	101	80	120		
Chloride, Cl	9.84	ND	0.5	10.0	98.4	80	120		
Nitrate, NO3-N	2.01	ND	0.1	2.00	101	80	120		
Nitrite, NO2-N	1.90	ND	0.1	2.00	95.0	80	120		
Phosphate, PO4-P	4.00	ND	0.5	4.00	100	80	120		
Sulfate, SO4	11.1	ND	0.5	10.0	111	80	120		

SAMPLE TYPE: Spike-Method/Media blank
 INSTRUMENT: Dionex ion chromatograph
 UNITS: mg/L
 METHOD:

LAB ID: ICS_MS
 PREPARED:
 ANALYZED: 12/02/96

INSTR RUN: IC\961202000000/2/1
 BATCH ID: ICS120296
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Fluoride, F	2.04	ND	0.1	2.00	102	80	120		
Chloride, Cl	9.89	ND	0.5	10.0	98.9	80	120		
Nitrate, NO3-N	2.01	ND	0.1	2.00	101	80	120		
Nitrite, NO2-N	1.91	ND	0.1	2.00	95.5	80	120		
Phosphate, PO4-P	4.02	ND	0.5	4.00	101	80	120		
Sulfate, SO4	11.2	ND	0.5	10.0	112	80	120		

SAMPLE TYPE: Spike-Method/Media blank
 INSTRUMENT: Dionex ion chromatograph
 UNITS: mg/L
 METHOD:

LAB ID: ICS_MD
 PREPARED:
 ANALYZED: 12/03/96

INSTR RUN: IC\961203000000/3/1
 BATCH ID: ICS120396
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Fluoride, F	2.09	ND	0.1	2.00	105	80	120		
Chloride, Cl	9.88	ND	0.5	10.0	98.8	80	120		
Nitrate, NO3-N	2.13	ND	0.1	2.00	107	80	120		
Nitrite, NO2-N	1.91	ND	0.1	2.00	95.5	80	120		

WORK ORDER: 9611391

QUALITY CONTROL REPORT

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ANALYSIS: Major Anions

MATRIX: Water

METHOD SPIKE SAMPLES

SAMPLE TYPE: Spike-Method/Media blank
 INSTRUMENT: Dionex ion chromatograph
 UNITS: mg/L
 METHOD:

LAB ID: ICS_MD
 PREPARED:
 ANALYZED: 12/03/96

INSTR RUN: IC\961203000000/3/1
 BATCH ID: ICS120396
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Phosphate, PO4-P	3.84	ND	0.5	4.00	96.0	80	120		
Sulfate, SO4	10.4	ND	0.5	10.0	104	80	120		

SAMPLE TYPE: Spike-Method/Media blank
 INSTRUMENT: Dionex ion chromatograph
 UNITS: mg/L
 METHOD:

LAB ID: ICS_MS
 PREPARED:
 ANALYZED: 12/03/96

INSTR RUN: IC\961203000000/2/1
 BATCH ID: ICS120396
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Fluoride, F	2.00	ND	0.1	2.00	100	80	120		
Chloride, Cl	9.89	ND	0.5	10.0	98.9	80	120		
Nitrate, NO3-N	2.03	ND	0.1	2.00	102	80	120		
Nitrite, NO2-N	1.90	ND	0.1	2.00	95.0	80	120		
Phosphate, PO4-P	3.99	ND	0.5	4.00	99.8	80	120		
Sulfate, SO4	10.6	ND	0.5	10.0	106	80	120		

METHOD SPIKE DUPLICATES

SAMPLE TYPE: Method Spike Sample Duplicate
 INSTRUMENT: Dionex ion chromatograph
 UNITS: mg/L
 METHOD:

LAB ID: ICS_MR
 PREPARED:
 ANALYZED: 12/02/96

INSTR RUN: IC\961202000000/4/2
 BATCH ID: ICS120296
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Fluoride, F	2.02	2.04	0.1					0.985	15
Chloride, Cl	9.84	9.89	0.5					0.507	15
Nitrate, NO3-N	2.01	2.01	0.1					0	15
Nitrite, NO2-N	1.90	1.91	0.1					0.525	15
Phosphate, PO4-P	4.00	4.02	0.5					0.499	15
Sulfate, SO4	11.1	11.2	0.5					0.897	15

SAMPLE TYPE: Method Spike Sample Duplicate
 INSTRUMENT: Dionex ion chromatograph
 UNITS: mg/L
 METHOD:

LAB ID: ICS_MR
 PREPARED:
 ANALYZED: 12/03/96

INSTR RUN: IC\961203000000/4/2
 BATCH ID: ICS120396
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Fluoride, F	2.09	2.00	0.1					4.40	15
Chloride, Cl	9.88	9.89	0.5					0.101	15
Nitrate, NO3-N	2.13	2.03	0.1					4.81	15
Nitrite, NO2-N	1.91	1.90	0.1					0.525	15
Phosphate, PO4-P	3.84	3.99	0.5					3.83	15
Sulfate, SO4	10.4	10.6	0.5					1.90	15

WORK ORDER: 9611391

QUALITY CONTROL REPORT

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ANALYSIS: Metals Scan by ICP

MATRIX: Soil/Bulk

METHOD BLANK SAMPLES

SAMPLE TYPE: Blank-Method/Media blank
 INSTRUMENT: TJA Enviro 36
 UNITS: mg/kg
 METHOD:

LAB ID: IFS_BLNK_X
 PREPARED:
 ANALYZED: 12/04/96

INSTR RUN: ICP\961204131200/1/
 BATCH ID: IFS120396-X
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Ag Silver	ND		0.1						
Ba Barium	ND		1						
Be Beryllium	ND		0.1						
Ca Calcium	ND		4						
Cd Cadmium	ND		0.2						
Co Cobalt	ND		0.2						
Cr Chromium	ND		0.5						
Cu Copper	ND		0.5						
K Potassium	ND		2						
Mg Magnesium	ND		5						
Mo Molybdenum	ND		0.2						
Na Sodium	ND		3						
Ni Nickel	ND		1						
Pb Lead	ND		1						
Sb Antimony	ND		1						
Tl Thallium	ND		1						
V Vanadium	ND		0.5						
Zn Zinc	ND		1						

METHOD SPIKE SAMPLES

SAMPLE TYPE: Spike-Method/Media blank
 INSTRUMENT: TJA Enviro 36
 UNITS: mg/kg
 METHOD:

LAB ID: IFS_MD_3X
 PREPARED:
 ANALYZED: 12/10/96

INSTR RUN: ICP\961204131200/18/1
 BATCH ID: IFS120396-3X
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Ca Calcium	4442	ND	4		88.84	75	125		
K Potassium	4293	ND	2		85.86	75	125		
Mg Magnesium	4421	ND	5		88.42	75	125		
Na Sodium	4623	ND	3		92.46	75	125		

SAMPLE TYPE: Spike-Method/Media blank
 INSTRUMENT: TJA Enviro 36
 UNITS: mg/kg
 METHOD:

LAB ID: IFS_MS_3X
 PREPARED:
 ANALYZED: 12/10/96

INSTR RUN: ICP\961204131200/17/1
 BATCH ID: IFS120396-3X
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Ca Calcium	4544	ND	4		90.88	75	125		
K Potassium	4454	ND	2		89.08	75	125		
Mg Magnesium	4529	ND	5		90.58	75	125		
Na Sodium	4816	ND	3		96.32	75	125		

METHOD SPIKE DUPLICATES

SAMPLE TYPE: Method Spike Sample Duplicate
 INSTRUMENT: TJA Enviro 36
 UNITS: mg/kg
 METHOD:

LAB ID: IFS_MR_3X
 PREPARED:
 ANALYZED: 12/04/96

INSTR RUN: ICP\961204131200/28/17
 BATCH ID: IFS120396-3X
 DILUTION: 1.00

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Ca Calcium	4442	4544	4					2.270	15
K Potassium	4293	4454	2					3.681	15
Mg Magnesium	4421	4529	5					2.413	15
Na Sodium	4623	4816	3					4.089	15

WORK ORDER: 9611391

QUALITY CONTROL REPORT

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ANALYSIS: Metals Scan by ICP

MATRIX: Soil/Bulk

MATRIX SPIKE SAMPLES

SAMPLE TYPE: Spike-Sample/Matrix
 INSTRUMENT: TJA Enviro 36
 UNITS: mg/kg
 METHOD:

LAB ID: MD11391-07A
 PREPARED:
 ANALYZED: 12/10/96

INSTR RUN: ICP\961204131200/21/19
 BATCH ID: IFS120396-3X
 DILUTION: 10.0

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
K Potassium	5729	844	20		97.7	50	150		
Mg Magnesium	13450	8838	50		92.24	50	150		
Na Sodium	6237	1039	30		104.0	50	150		

SAMPLE TYPE: Spike-Sample/Matrix
 INSTRUMENT: TJA Enviro 36
 UNITS: mg/kg
 METHOD:

LAB ID: MD11391-26A
 PREPARED:
 ANALYZED: 12/10/96

INSTR RUN: ICP\961204131200/25/23
 BATCH ID: IFS120396-3X
 DILUTION: 10.0

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Ca Calcium	112000	110000	40		40.00	50	150		
K Potassium	5050	517	20		90.7	50	150		
Mg Magnesium	8750	3760	50		99.80	50	150		
Na Sodium	6300	1490	30		96.20	50	150		

SAMPLE TYPE: Spike-Sample/Matrix
 INSTRUMENT: TJA Enviro 36
 UNITS: mg/kg
 METHOD:

LAB ID: MS11391-07A
 PREPARED:
 ANALYZED: 12/10/96

INSTR RUN: ICP\961204131200/20/19
 BATCH ID: IFS120396-3X
 DILUTION: 10.0

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
K Potassium	5714	844	20		97.4	50	150		
Mg Magnesium	13420	8838	50		91.64	50	150		
Na Sodium	6189	1039	30		103.0	50	150		

SAMPLE TYPE: Spike-Sample/Matrix
 INSTRUMENT: TJA Enviro 36
 UNITS: mg/kg
 METHOD:

LAB ID: MS11391-26A
 PREPARED:
 ANALYZED: 12/10/96

INSTR RUN: ICP\961204131200/24/23
 BATCH ID: IFS120396-3X
 DILUTION: 10.0

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
K Potassium	5070	517	20		91.1	50	150		
Mg Magnesium	8800	3760	50		100.8	50	150		
Na Sodium	6360	1490	30		97.40	50	150		

MATRIX SPIKE DUPLICATES

SAMPLE TYPE: Spiked Sample Duplicate
 INSTRUMENT: TJA Enviro 36
 UNITS: mg/kg
 METHOD:

LAB ID: MR11391-07A
 PREPARED:
 ANALYZED: 12/10/96

INSTR RUN: ICP\961204131200/22/20
 BATCH ID: IFS120396-3X
 DILUTION: 10.0

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
K Potassium	5729	5714	20					0.2622	30
Mg Magnesium	13450	13420	50					0.2233	30
Na Sodium	6237	6189	30					0.7726	30

SAMPLE TYPE: Spiked Sample Duplicate
 INSTRUMENT: TJA Enviro 36
 UNITS: mg/kg
 METHOD:

LAB ID: MR11391-26A
 PREPARED:
 ANALYZED: 12/10/96

INSTR RUN: ICP\961204131200/26/24
 BATCH ID: IFS120396-3X
 DILUTION: 10.0

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
K Potassium	5050	5070	20					0.3953	30
Mg Magnesium	8750	8800	50					0.5698	30
Na Sodium	6300	6360	30					0.9479	30

WORK ORDER: 9611391

QUALITY CONTROL REPORT

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ANALYSIS: Zinc

MATRIX: Soil/Bulk

METHOD BLANK SAMPLES

SAMPLE TYPE: Blank-Method/Media blank
 INSTRUMENT: TJA Enviro 36
 UNITS: mg/kg
 METHOD: EPA 6010

LAB ID: IFS_BLNK_P
 PREPARED:
 ANALYZED: 12/02/96

INSTR RUN: ICP\961202203000/1/
 BATCH ID: IFS112796-P
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)			RPD LIMIT (%)
						LOW	HIGH	RPD (%)	
ZINC IN SOIL BY ICP	ND		1						

SAMPLE TYPE: Blank-Method/Media blank
 INSTRUMENT: TJA Enviro 36
 UNITS: mg/kg
 METHOD: EPA 6010

LAB ID: IF_BLNK_U
 PREPARED:
 ANALYZED: 12/03/96

INSTR RUN: ICP\961203222200/1/
 BATCH ID: IFS120196-U
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)			RPD LIMIT (%)
						LOW	HIGH	RPD (%)	
ZINC IN SOIL BY ICP	ND		1						

METHOD SPIKE SAMPLES

SAMPLE TYPE: Spike-Method/Media blank
 INSTRUMENT: TJA Enviro 36
 UNITS: mg/kg
 METHOD: EPA 6010

LAB ID: IFS_MD_P
 PREPARED:
 ANALYZED: 12/02/96

INSTR RUN: ICP\961202203000/3/1
 BATCH ID: IFS112796-P
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)			RPD LIMIT (%)
						LOW	HIGH	RPD (%)	
ZINC IN SOIL BY ICP	48.5	ND	1	50.0	97.0	90	115		

SAMPLE TYPE: Spike-Method/Media blank
 INSTRUMENT: TJA Enviro 36
 UNITS: mg/kg
 METHOD: EPA 6010

LAB ID: IFS_MS_P
 PREPARED:
 ANALYZED: 12/02/96

INSTR RUN: ICP\961202203000/2/1
 BATCH ID: IFS112796-P
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)			RPD LIMIT (%)
						LOW	HIGH	RPD (%)	
ZINC IN SOIL BY ICP	47.8	ND	1	50.0	95.6	90	115		

SAMPLE TYPE: Spike-Method/Media blank
 INSTRUMENT: TJA Enviro 36
 UNITS: mg/kg
 METHOD: EPA 6010

LAB ID: IFS_MD_U
 PREPARED:
 ANALYZED: 12/03/96

INSTR RUN: ICP\961203222200/3/1
 BATCH ID: IFS120196-U
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)			RPD LIMIT (%)
						LOW	HIGH	RPD (%)	
ZINC IN SOIL BY ICP	48.3	ND	1	50.0	96.6	90	115		

SAMPLE TYPE: Spike-Method/Media blank
 INSTRUMENT: TJA Enviro 36
 UNITS: mg/kg
 METHOD: EPA 6010

LAB ID: IFS_MS_U
 PREPARED:
 ANALYZED: 12/03/96

INSTR RUN: ICP\961203222200/2/1
 BATCH ID: IFS120196-U
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)			RPD LIMIT (%)
						LOW	HIGH	RPD (%)	
ZINC IN SOIL BY ICP	48.3	ND	1	50.0	96.6	90	115		

METHOD SPIKE DUPLICATES

SAMPLE TYPE: Method Spike Sample Duplicate
 INSTRUMENT: TJA Enviro 36
 UNITS: mg/kg
 METHOD: EPA 6010

LAB ID: IFS_MR_P
 PREPARED:
 ANALYZED: 12/02/96

INSTR RUN: ICP\961202203000/4/2
 BATCH ID: IFS112796-P
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)			RPD LIMIT (%)
						LOW	HIGH	RPD (%)	
ZINC IN SOIL BY ICP	48.5	47.8	1					1.45	10

WORK ORDER: 9611391

QUALITY CONTROL REPORT

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ANALYSIS: Zinc

MATRIX: Soil/Bulk

METHOD SPIKE DUPLICATES

SAMPLE TYPE: Method Spike Sample Duplicate		LAB ID: IFS_MR_U		INSTR RUN: ICP\961203222200/4/2				
INSTRUMENT: TJA Enviro 36		PREPARED:		BATCH ID: IFS120196-U				
UNITS: mg/kg		ANALYZED: 12/03/96		DILUTION: 1.000000				
METHOD:								
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%) LOW HIGH	RPD (%)	RPD LIMIT (%)
ZINC IN SOIL BY ICP	48.3	48.3	1				0	10

MATRIX SPIKE SAMPLES

SAMPLE TYPE: Spike-Sample/Matrix		LAB ID: MD11391-12A		INSTR RUN: ICP\961202203000/7/5				
INSTRUMENT: TJA Enviro 36		PREPARED:		BATCH ID: IFS112796-P				
UNITS: mg/kg		ANALYZED: 12/03/96		DILUTION: 10.0				
METHOD:								
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%) LOW HIGH	RPD (%)	RPD LIMIT (%)
ZINC IN SOIL BY ICP	366	360	10	50.0	12.0 !	31 134		

SAMPLE TYPE: Spike-Sample/Matrix		LAB ID: MD11391-21A		INSTR RUN: ICP\961202203000/11/9				
INSTRUMENT: TJA Enviro 36		PREPARED:		BATCH ID: IFS112796-P				
UNITS: mg/kg		ANALYZED: 12/03/96		DILUTION: 10.0				
METHOD:								
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%) LOW HIGH	RPD (%)	RPD LIMIT (%)
ZINC IN SOIL BY ICP	985	965	10	50.0	40.0	31 134		

SAMPLE TYPE: Spike-Sample/Matrix		LAB ID: MD11391-30A		INSTR RUN: ICP\961202203000/15/13				
INSTRUMENT: TJA Enviro 36		PREPARED:		BATCH ID: IFS112796-P				
UNITS: mg/kg		ANALYZED: 12/03/96		DILUTION: 10.0				
METHOD:								
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%) LOW HIGH	RPD (%)	RPD LIMIT (%)
ZINC IN SOIL BY ICP	117	71.6	10	50.0	90.8	31 134		

SAMPLE TYPE: Spike-Sample/Matrix		LAB ID: MS11391-12A		INSTR RUN: ICP\961202203000/6/5				
INSTRUMENT: TJA Enviro 36		PREPARED:		BATCH ID: IFS112796-P				
UNITS: mg/kg		ANALYZED: 12/03/96		DILUTION: 10.0				
METHOD:								
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%) LOW HIGH	RPD (%)	RPD LIMIT (%)
ZINC IN SOIL BY ICP	398	360	10	50.0	76.0	31 134		

SAMPLE TYPE: Spike-Sample/Matrix		LAB ID: MS11391-21A		INSTR RUN: ICP\961202203000/10/9				
INSTRUMENT: TJA Enviro 36		PREPARED:		BATCH ID: IFS112796-P				
UNITS: mg/kg		ANALYZED: 12/03/96		DILUTION: 10.0				
METHOD:								
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%) LOW HIGH	RPD (%)	RPD LIMIT (%)
ZINC IN SOIL BY ICP	950	965	10	50.0	-30.0	31 134		

SAMPLE TYPE: Spike-Sample/Matrix		LAB ID: MS11391-30A		INSTR RUN: ICP\961202203000/14/13				
INSTRUMENT: TJA Enviro 36		PREPARED:		BATCH ID: IFS112796-P				
UNITS: mg/kg		ANALYZED: 12/03/96		DILUTION: 10.0				
METHOD:								
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%) LOW HIGH	RPD (%)	RPD LIMIT (%)
ZINC IN SOIL BY ICP	125	71.6	10	50.0	107	31 134		

ANALYSIS: Zinc

MATRIX: Soil/Bulk

MATRIX SPIKE SAMPLES

SAMPLE TYPE: Spike-Sample/Matrix
 INSTRUMENT: TJA Enviro 36
 UNITS: mg/kg
 METHOD: EPA 6010

LAB ID: MD11391-42A
 PREPARED:
 ANALYZED: 12/03/96

INSTR RUN: ICP\961203222200/7/5
 BATCH ID: IFS120196-U
 DILUTION: 10.0

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
ZINC IN SOIL BY ICP	117	60.8	10	50.0	112	31	134		

SAMPLE TYPE: Spike-Sample/Matrix
 INSTRUMENT: TJA Enviro 36
 UNITS: mg/kg
 METHOD: EPA 6010

LAB ID: MS11391-42A
 PREPARED:
 ANALYZED: 12/03/96

INSTR RUN: ICP\961203222200/6/5
 BATCH ID: IFS120196-U
 DILUTION: 10.0

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
ZINC IN SOIL BY ICP	110	60.8	10	50.0	98.4	31	134		

MATRIX SPIKE DUPLICATES

SAMPLE TYPE: Spiked Sample Duplicate
 INSTRUMENT: TJA Enviro 36
 UNITS: mg/kg
 METHOD: EPA 6010

LAB ID: MR11391-12A
 PREPARED:
 ANALYZED: 12/03/96

INSTR RUN: ICP\961202203000/8/6
 BATCH ID: IFS112796-P
 DILUTION: 10.0

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
ZINC IN SOIL BY ICP	366	398	10					8.38	25

SAMPLE TYPE: Spiked Sample Duplicate
 INSTRUMENT: TJA Enviro 36
 UNITS: mg/kg
 METHOD: EPA 6010

LAB ID: MR11391-21A
 PREPARED:
 ANALYZED: 12/03/96

INSTR RUN: ICP\961202203000/12/10
 BATCH ID: IFS112796-P
 DILUTION: 10.0

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
ZINC IN SOIL BY ICP	985	950	10					3.62	25

SAMPLE TYPE: Spiked Sample Duplicate
 INSTRUMENT: TJA Enviro 36
 UNITS: mg/kg
 METHOD: EPA 6010

LAB ID: MR11391-30A
 PREPARED:
 ANALYZED: 12/03/96

INSTR RUN: ICP\961202203000/16/14
 BATCH ID: IFS112796-P
 DILUTION: 10.0

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
ZINC IN SOIL BY ICP	117	125	10					6.61	25

SAMPLE TYPE: Spiked Sample Duplicate
 INSTRUMENT: TJA Enviro 36
 UNITS: mg/kg
 METHOD: EPA 6010

LAB ID: MR11391-42A
 PREPARED:
 ANALYZED: 12/03/96

INSTR RUN: ICP\961203222200/8/6
 BATCH ID: IFS120196-U
 DILUTION: 10.0

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
ZINC IN SOIL BY ICP	117	110	10					6.17	25

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

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

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Project No.: 3042.95-004 Field Logbook No.: TAM-2 Date: 11/26/96 Serial No.:
 Project Name: Shawin Williams Project Location: Emeryville No 15174

Sampler (Signature): [Signature] ANALYSES Samplers: TAM/SRC

SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	ANALYSES							REMARKS			
						TOTAL AS Pb, Zn (SEPARATED)	PH	CATION - AMMON							HOLD	RUSH
BW-1	11/24/96	0917	01A	1	PRECI.	X	X	X								
BW-2		0931	02A	1	PAINT	X	X									Need Results w 12/1/96
BW-3		0943	03A	1	MORTAR	X	X	X								
BW-4		0946	04A	1	BRICK	X	X									
BW-5		1047	05A	1	PRECIP	X	X	X								Results to Kenton Cree
BW-6		1052	06A	1	PAINT	X	X									
BW-7		1045	07A	1	MORTAR	X	X	X								
BW-8		1048	08A	1	BRICK	X	X									
BW-9		1118	09A	1	PRECIP	X	X	X								
BW-10		1126	10A	1	PAINT	X	X									
BW-11		1134	11A	1	MORTAR	X	X	X								
BW-12		1138	12A	1	BRICK	X	X									
BW-13		1200	13A	1	PAINT	X	X									
BW-14		1208	14A	1	MORTAR	X	X	X								
BW-15		1213	15A	1	BRICK	X	X									
BW-16	✓	1316	16A	1	PAINT	X	X									

RELINQUISHED BY: (Signature) <u>[Signature]</u>	DATE: 11/27/96	TIME: 10:16	RECEIVED BY: (Signature) <u>[Signature]</u>	DATE: 11-27-96	TIME: 17:16
RELINQUISHED BY: (Signature) <u>[Signature]</u>	DATE: 11-27-96	TIME: 13:30	RECEIVED BY: (Signature) <u>[Signature]</u>	DATE: 11-27-96	TIME: 13:50
RELINQUISHED BY: (Signature)	DATE:	TIME:	RECEIVED BY: (Signature)	DATE:	TIME:
METHOD OF SHIPMENT:	DATE:	TIME:	LAB COMMENTS:		

Sample Collector: LEVINE-FRICKE
 1900 Powell Street, 12th Floor
 Emeryville, California 94608
 (510) 652-4500

Analytical Laboratory:
 AEN, Pleasanton

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Page 2 of 3 9611391 cont

Project No.: <u>3042.95-004</u>	Field Logbook No.: <u>TAM-2</u>	Date: <u>11/26/96</u>	Serial No.:
Project Name: <u>Shewin-Williams</u>	Project Location: <u>Emeryville</u>		No <u>15175</u>

SAMPLER (Signature): <u>[Signature]</u>					ANALYSES										SAMPLERS:			
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	PH										HOLD	RUSH	REMARKS
						[Diagonal lines for PH analysis]												
BW-17	<u>11/26/96</u>	<u>1318</u>	<u>17A</u>	<u>1</u>	<u>BRICK</u>	<u>X</u>	<u>X</u>											
BW-18		<u>1320</u>	<u>18A</u>	<u>1</u>	<u>MORTAR</u>	<u>X</u>	<u>X</u>	<u>X</u>									Need Results w/ 12/4/96	
BW-19		<u>1330</u>	<u>19A</u>	<u>1</u>	<u>PAINT</u>	<u>X</u>	<u>Y</u>											
BW-20		<u>1332</u>	<u>20A</u>	<u>1</u>	<u>MORTAR</u>	<u>X</u>	<u>X</u>	<u>X</u>										
BW-21		<u>1334</u>	<u>21A</u>	<u>1</u>	<u>BRICK</u>	<u>X</u>	<u>X</u>										Results to Kenton. GEL	
BW-23		<u>1350</u>	<u>22A</u>	<u>1</u>	<u>PAINT</u>	<u>X</u>	<u>Y</u>											
BW-24		<u>1358</u>	<u>23A</u>	<u>1</u>	<u>MORTAR</u>	<u>X</u>	<u>X</u>	<u>X</u>										
BW-25		<u>1404</u>	<u>24A</u>	<u>1</u>	<u>BRICK</u>	<u>X</u>	<u>X</u>											
BW-22		<u>1415</u>	<u>25A</u>	<u>1</u>	<u>PAINT</u>	<u>X</u>	<u>Y</u>											
BW-26		<u>1420</u>	<u>26A</u>	<u>1</u>	<u>MORTAR</u>	<u>X</u>	<u>X</u>	<u>X</u>										
BW-27		<u>1425</u>	<u>27A</u>	<u>1</u>	<u>BRICK</u>	<u>X</u>	<u>X</u>											
BW-28		<u>1445</u>	<u>28A</u>	<u>1</u>	<u>PAINT</u>	<u>X</u>	<u>Y</u>											
BW-29		<u>1455</u>	<u>29A</u>	<u>1</u>	<u>MORTAR</u>	<u>X</u>	<u>X</u>	<u>X</u>										
BW-30		<u>1500</u>	<u>30A</u>	<u>1</u>	<u>BRICK</u>	<u>X</u>	<u>X</u>											
BW-31		<u>1510</u>	<u>31A</u>	<u>1</u>	<u>PAINT</u>	<u>X</u>	<u>X</u>											
BW-32		<u>1517</u>	<u>32A</u>	<u>1</u>	<u>MORTAR</u>	<u>X</u>	<u>X</u>	<u>X</u>										

RELINQUISHED BY: (Signature) <u>[Signature]</u>	DATE: <u>11/27/96</u>	TIME: <u>10:16</u>	RECEIVED BY: (Signature) <u>[Signature]</u>	DATE: <u>11-27-96</u>	TIME: <u>10:16</u>
RELINQUISHED BY: (Signature) <u>[Signature]</u>	DATE: <u>11/27/96</u>	TIME: <u>13:30</u>	RECEIVED BY: (Signature) <u>[Signature]</u>	DATE: <u>11/27/96</u>	TIME: <u>13:50</u>
RELINQUISHED BY: (Signature)	DATE:	TIME:	RECEIVED BY: (Signature)	DATE:	TIME:
METHOD OF SHIPMENT:	DATE:	TIME:	LAB COMMENTS:		

Sample Collector: LEVINE-FRICKE 1900 Powell Street, 12th Floor Emeryville, California 94608 (510) 652-4500	Analytical Laboratory: <p style="text-align: right; font-size: 1.2em;">AEN, Pleasanton</p>
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CHAIN OF CUSTODY / ANALYSES REQUEST FORM Page 3 of 3

9611391 cont.

Project No.: 3042.95.004	Field Logbook No.: TAM-2	Date: 11/26/96	Serial No.:
Project Name: Sheridan-Williams	Project Location: Emeryville	No 15176	

Sampler (Signature): *John A. Mill*

ANALYSES

Samplers: TAM/SRC

SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	ANALYSES										REMARKS		
						As Pb, Zn	As Pb, Zn	PH	Cation - Lead								HOLD	RUSH
BW-33	11/26/96	1520	33A	1	BRICK	X	X											
BW-34		1538	34A	1	PAINT	X	X											
BW-35		1540	35A	1	MORTAR	X	X	X										Need Results w 12/4/96
BW-36		1542	36A	1	BRICK	X	X											
BW-37		1545	37A	1	PAINT	X	X											
BW-38		1555	38A	1	MORTAR	X	X	X										Results to Kenton Gel
BW-39		1600	39A	1	BRICK	X	X											
BW-40		1615	40A	1	PAINT	X	X											
BW-41		1622	41A	1	MORTAR	X	X	X										
BW-42		1623	42A	1	BRICK	X	X											
BW-43		1630	43A	1	PAINT	X	X											
BW-44		1635	44A	1	MORTAR	X	X	X										
BW-45		1633	45A	1	BRICK	X	X											

RELINQUISHED BY: (Signature) <i>John A. Mill</i>	DATE 11/27/96	TIME 10:16	RECEIVED BY: (Signature) <i>[Signature]</i>	DATE 11/27/96	TIME 10:16
RELINQUISHED BY: (Signature) <i>[Signature]</i>	DATE 11/27/96	TIME /	RECEIVED BY: (Signature) <i>[Signature]</i>	DATE 11/27/96	TIME 13:50
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME

METHOD OF SHIPMENT: _____ DATE: _____ TIME: _____ LAB COMMENTS: _____

Sample Collector: LEVINE-FRICKE 1900 Powell Street, 12th Floor Emeryville, California 94608 (510) 652-4500	Analytical Laboratory: <i>AEN, Pleasanton</i>
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Appendix C

Laboratory Analytical Results for Concrete Samples

American Environmental Network

ISO 9001 Certified

PAGE 1

LEVINE-FRICKE-RECON
1900 POWELL ST. 12TH FL.
EMERYVILLE, CA 94608

REPORT DATE: 02/03/97
DATE(S) SAMPLED: 01/30/97
DATE RECEIVED: 01/30/97
AEN WORK ORDER: 9701317

ATTN: A. JENKINS/R. MILELLI/M. KNOX
CLIENT PROJ. ID: [REDACTED]
CLIENT PROJ. NAME: RIFKIN WALL
C.O.C. NUMBER: 15167

PROJECT SUMMARY:

On January 30, 1997, this laboratory received 6 concrete sample(s).

Client requested sample(s) be composited and 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

LEVINE-FRICKE-RECON

SAMPLE ID: 2-3
AEN LAB NO: 9701317-01
AEN WORK ORDER: 9701317
CLIENT PROJ. ID: 3042.95-005

DATE SAMPLED: 01/30/97
DATE RECEIVED: 01/30/97
REPORT DATE: 02/03/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Arsenic	EPA 7060	4.1 *	0.5	mg/kg	02/01/97
#Digestion, Metals AA/ICP	EPA 3050	-		Prep Date	01/31/97

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

LEVINE-FRICKE-RECON

SAMPLE ID: 3-4
 AEN LAB NO: 9701317-02
 AEN WORK ORDER: 9701317
 CLIENT PROJ. ID: 3042.95-005

DATE SAMPLED: 01/30/97
 DATE RECEIVED: 01/30/97
 REPORT DATE: 02/03/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Arsenic	EPA 7060	6.2 *	0.5	mg/kg	02/01/97
#Digestion, Metals AA/ICP	EPA 3050	-		Prep Date	01/31/97

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

LEVINE-FRICKE-RECON

SAMPLE ID: 4-5
 AEN LAB NO: 9701317-03
 AEN WORK ORDER: 9701317
 CLIENT PROJ. ID: 3042.95-005

DATE SAMPLED: 01/30/97
 DATE RECEIVED: 01/30/97
 REPORT DATE: 02/03/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Arsenic	EPA 7060	20 *	0.5	mg/kg	02/01/97
#Digestion, Metals AA/ICP	EPA 3050	-		Prep Date	01/31/97

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

AEN (CALIFORNIA)
QUALITY CONTROL REPORT

AEN JOB NUMBER: 9701317
CLIENT PROJECT ID: 3042.95-005

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.

D: Surrogates diluted out.

I: Interference.

!: Indicates result outside of established laboratory QC limits.

WORK ORDER: 9701317

QUALITY CONTROL REPORT

PAGE QR-2

ANALYSIS: Arsenic

MATRIX: Soil/Bulk

METHOD BLANK SAMPLES

SAMPLE TYPE: Blank-Method/Media blank			LAB ID: GFS_BLANK_P			INSTR RUN: 4000\970201121600/1/		
INSTRUMENT: TJA 4000, GFAA			PREPARED:			BATCH ID: GFS020197-P		
UNITS: mg/kg			ANALYZED: 02/01/97			DILUTION: 1.000000		
METHOD: EPA 7060								
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD LIMIT (%)
						LOW	HIGH	RPD (%)
Arsenic in soil EPA 7060	ND		0.5					

METHOD SPIKE SAMPLES

SAMPLE TYPE: Spike-Method/Media blank			LAB ID: GFS_MD_P			INSTR RUN: 4000\970201121600/3/1		
INSTRUMENT: TJA 4000, GFAA			PREPARED:			BATCH ID: GFS020197-P		
UNITS: mg/kg			ANALYZED: 02/01/97			DILUTION: 1.000000		
METHOD: EPA 7060								
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD LIMIT (%)
						LOW	HIGH	RPD (%)
Arsenic in soil EPA 7060	12.0	ND	0.5	10.0	120	77	141	

SAMPLE TYPE: Spike-Method/Media blank			LAB ID: GFS_MS_P			INSTR RUN: 4000\970201121600/2/1		
INSTRUMENT: TJA 4000, GFAA			PREPARED:			BATCH ID: GFS020197-P		
UNITS: mg/kg			ANALYZED: 02/01/97			DILUTION: 1.000000		
METHOD: EPA 7060								
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD LIMIT (%)
						LOW	HIGH	RPD (%)
Arsenic in soil EPA 7060	11.7	ND	0.5	10.0	117	77	141	

METHOD SPIKE DUPLICATES

SAMPLE TYPE: Method Spike Sample Duplicate			LAB ID: GFS_MR_P			INSTR RUN: 4000\970201121600/4/2		
INSTRUMENT: TJA 4000, GFAA			PREPARED:			BATCH ID: GFS020197-P		
UNITS: mg/kg			ANALYZED: 02/01/97			DILUTION: 1.000000		
METHOD: EPA 7060								
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD LIMIT (%)
						LOW	HIGH	RPD (%)
Arsenic in soil EPA 7060	12.0	11.7	0.5					2.53
								15

MATRIX SPIKE SAMPLES

SAMPLE TYPE: Spike-Sample/Matrix			LAB ID: MD01317-02A			INSTR RUN: 4000\970201121600/7/5		
INSTRUMENT: TJA 4000, GFAA			PREPARED:			BATCH ID: GFS020197-P		
UNITS: mg/kg			ANALYZED: 02/01/97			DILUTION: 1.000000		
METHOD: EPA 7060								
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD LIMIT (%)
						LOW	HIGH	RPD (%)
Arsenic in soil EPA 7060	16.4	6.24	0.5	10.0	102	12	168	

SAMPLE TYPE: Spike-Sample/Matrix			LAB ID: MS01317-02A			INSTR RUN: 4000\970201121600/6/5		
INSTRUMENT: TJA 4000, GFAA			PREPARED:			BATCH ID: GFS020197-P		
UNITS: mg/kg			ANALYZED: 02/01/97			DILUTION: 1.000000		
METHOD: EPA 7060								
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD LIMIT (%)
						LOW	HIGH	RPD (%)
Arsenic in soil EPA 7060	16.8	6.24	0.5	10.0	106	12	168	

WORK ORDER: 9701317

QUALITY CONTROL REPORT

PAGE QR-3

ANALYSIS: Arsenic

MATRIX: Soil/Bulk

MATRIX SPIKE DUPLICATES

SAMPLE TYPE: Spiked Sample Duplicate
INSTRUMENT: TJA 4000, GFAA
UNITS: mg/kg
METHOD: EPA 7060

LAB ID: MR01317-02A
PREPARED:
ANALYZED: 02/01/97

INSTR RUN: 4000\970201121600/8/6
BATCH ID: GFS020197-P
DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Arsenic in soil EPA 7060	16.4	16.8	0.5					2.41	18

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

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

R-75-
9701317

Project No.: 3042.95-005	Field Logbook No.:	Date: 1/30/97	Serial No.:
Project Name: RIFKIN WALL DEMO	Project Location: EMERYVILLE, CA		No. 15167

Sampler (Signature): Alastair R. Jelin					ANALYSES					Samplers: ARJ		
SAMPLES										REMARKS		
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	ARSENIC	LEAD				HOLD	RUSH
2-3	1/30/97	1530	01 AA	2	CONCRETE	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3-4	↓	↓	02 AA	2	↓	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4-5	↓	↓	03 AA	2	↓	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<p>48 HOUR TAT</p> <p>RESULTS TO A. JENKINS / R. MILELLI / M. KNOX / S. SHIU</p> <p><i>01/31/97 Per Rick Milelli, comp. each sample (2 int'l) before digesting & analyzing.</i></p>												

RELINQUISHED BY: (Signature) Alastair R. Jelin	DATE 1/30/97	TIME 1650	RECEIVED BY: (Signature) Michael J. Miller	DATE 1/30/97	TIME 1650
RELINQUISHED BY: (Signature) Michael J. Miller	DATE 1/30/97	TIME 1730	RECEIVED BY: (Signature) Jurena Rodhouse	DATE 1/30/97	TIME 1740
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT:	DATE	TIME	LAB COMMENTS:		

Sample Collector: LEVINE-FRICKE 1900 Powell Street, 12th Floor Emeryville, California 94608 (510) 652-4500	Analytical Laboratory: <h2 style="text-align: center;">AEN</h2>
--	--

American Environmental Network

Certificate of Analysis

MINI-CERTIFICATE

FORM AEN-102

PAGE 1

LEVINE-FRICKE-RECON
1900 POWELL ST. 12TH FL.
EMERYVILLE, CA 94608

REPORT DATE: 02/10/97
DATE(S) SAMPLED: 02/05/97
DATE RECEIVED: 02/06/97
AEN WORK ORDER: 9702066

ATTN: A. JENKINS/R. MILELLI/M. KNOX
CLIENT PROJ. ID: 3042.95-005
CLIENT PROJ. NAME: RIFKIN WALL
C.O.C. NUMBER: 1091

PROJECT SUMMARY:

On February 6, 1997, this laboratory received 5 (2 MCE filter & 3 concrete) 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

LEVINE - FRICKE - RECON

SAMPLE ID: 3042-0205-1
AEN LAB NO: 9702066-01
AEN WORK ORDER: 9702066
CLIENT PROJ. ID: 3042.95-005

DATE SAMPLED: 02/05/97
DATE RECEIVED: 02/06/97
REPORT DATE: 02/10/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Sample Volume		492		Liters	
#Digestion		-	-	Prep Date	02/06/97
Arsenic in Air	NIOSH 7300M	0.011		mg/m3	02/07/97
Lead in Air	NIOSH 7300M	0.008		mg/m3	02/07/97

LEVINE - FRICKE - RECON

SAMPLE ID: 3042-0205-2
AEN LAB NO: 9702066-02
AEN WORK ORDER: 9702066
CLIENT PROJ. ID: 3042.95-005

DATE SAMPLED: 02/05/97
DATE RECEIVED: 02/06/97
REPORT DATE: 02/10/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Sample Volume		210		Liters	
#Digestion		-	-	Prep Date	02/06/97
Arsenic in Air	NIOSH 7300M	<0.005		mg/m3	02/07/97
Lead in Air	NIOSH 7300M	0.005		mg/m3	02/07/97

LEVINE - FRICKE - RECON

SAMPLE ID: CHI-5-6
AEN LAB NO: 9702066-03
AEN WORK ORDER: 9702066
CLIENT PROJ. ID: 3042.95-005

DATE SAMPLED: 02/05/97
DATE RECEIVED: 02/06/97
REPORT DATE: 02/10/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Arsenic	EPA 7060	44 *	0.5 mg/kg		02/07/97
#Digestion, Metals AA/ICP	EPA 3050	-	Prep Date		02/06/97

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

LEVINE - FRICKE - RECON

SAMPLE ID: CHI-6-7
AEN LAB NO: 9702066-04
AEN WORK ORDER: 9702066
CLIENT PROJ. ID: 3042.95-005

DATE SAMPLED: 02/05/97
DATE RECEIVED: 02/06/97
REPORT DATE: 02/10/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Arsenic	EPA 7060	7.2 *	0.5 mg/kg		02/07/97
#Digestion, Metals AA/ICP	EPA 3050	-		Prep Date	02/06/97

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

LEVINE-FRICKE-RECON

SAMPLE ID: CHI-7-8
AEN LAB NO: 9702066-05
AEN WORK ORDER: 9702066
CLIENT PROJ. ID: 3042.95-005

DATE SAMPLED: 02/05/97
DATE RECEIVED: 02/06/97
REPORT DATE: 02/10/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Arsenic	EPA 7060	11 *	0.5 mg/kg		02/07/97
#Digestion, Metals AA/ICP	EPA 3050	-		Prep Date	02/06/97

ND = Not detected at or above the reporting limit

* = Value at or above reporting limit

AEN (CALIFORNIA)
QUALITY CONTROL REPORT

AEN JOB NUMBER: 9702066
CLIENT PROJECT ID: 3042.95-005

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.

D: Surrogates diluted out.

I: Interference.

!: Indicates result outside of established laboratory QC limits.

WORK ORDER: 9702066

QUALITY CONTROL REPORT

PAGE QR-2

ANALYSIS: Arsenic

MATRIX: Soil/Bulk

METHOD BLANK SAMPLES

SAMPLE TYPE: Blank-Method/Media blank			LAB ID: GFS_BLNK_G			INSTR RUN: 4000\970207115400/1/		
INSTRUMENT: TJA 4000, GFAA			PREPARED:			BATCH ID: GFS020697-G		
UNITS: mg/kg			ANALYZED: 02/07/97			DILUTION: 1.000000		
METHOD: EPA 7060								
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD LIMIT (%)
Arsenic in soil EPA 7060	ND		0.5			LOW	HIGH	RPD (%)

METHOD SPIKE SAMPLES

SAMPLE TYPE: Spike-Method/Media blank			LAB ID: GFS_MD_G			INSTR RUN: 4000\970207115400/3/1		
INSTRUMENT: TJA 4000, GFAA			PREPARED:			BATCH ID: GFS020697-G		
UNITS: mg/kg			ANALYZED: 02/07/97			DILUTION: 1.000000		
METHOD: EPA 7060								
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD LIMIT (%)
Arsenic in soil EPA 7060	12.0	ND	0.5	10.0	120	LOW	HIGH	RPD (%)

SAMPLE TYPE: Spike-Method/Media blank			LAB ID: GFS_MS_G			INSTR RUN: 4000\970207115400/2/1		
INSTRUMENT: TJA 4000, GFAA			PREPARED:			BATCH ID: GFS020697-G		
UNITS: mg/kg			ANALYZED: 02/07/97			DILUTION: 1.000000		
METHOD: EPA 7060								
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD LIMIT (%)
Arsenic in soil EPA 7060	12.2	ND	0.5	10.0	122	LOW	HIGH	RPD (%)

METHOD SPIKE DUPLICATES

SAMPLE TYPE: Method Spike Sample Duplicate			LAB ID: GFS_MR_G			INSTR RUN: 4000\970207115400/4/2		
INSTRUMENT: TJA 4000, GFAA			PREPARED:			BATCH ID: GFS020697-G		
UNITS: mg/kg			ANALYZED: 02/07/97			DILUTION: 1.000000		
METHOD: EPA 7060								
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD LIMIT (%)
Arsenic in soil EPA 7060	12.0	12.2	0.5			LOW	HIGH	RPD (%)

WORK ORDER: 9702066

QUALITY CONTROL REPORT

PAGE QR-3

ANALYSIS: Metals NIOSH 7300M

MATRIX: Air

METHOD BLANK SAMPLES

SAMPLE TYPE: Blank-Method/Media blank			LAB ID: IFA_BLNK			INSTR RUN: ICP\970207105700/1/			
INSTRUMENT: TJA Enviro 36			PREPARED:			BATCH ID: IFA020697			
UNITS: ug			ANALYZED: 02/07/97			DILUTION: 1.000000			
METHOD:									
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD	
						LOW	HIGH	RPD (%)	LIMIT (%)
Arsenic, MCEF	<1								
Lead, MCEF	<0.5								

METHOD SPIKE SAMPLES

SAMPLE TYPE: Spike-Method/Media blank			LAB ID: IFA_MD			INSTR RUN: ICP\970207105700/3/1			
INSTRUMENT: TJA Enviro 36			PREPARED:			BATCH ID: IFA020697			
UNITS: ug			ANALYZED: 02/07/97			DILUTION: 1.000000			
METHOD:									
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD	
						LOW	HIGH	RPD (%)	LIMIT (%)
Arsenic, MCEF	6.30	<1		6.00	105	68	127		
Lead, MCEF	7.50	<0.5		7.50	100	72	121		

SAMPLE TYPE: Spike-Method/Media blank			LAB ID: IFA_MS			INSTR RUN: ICP\970207105700/2/1			
INSTRUMENT: TJA Enviro 36			PREPARED:			BATCH ID: IFA020697			
UNITS: ug			ANALYZED: 02/07/97			DILUTION: 1.000000			
METHOD:									
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD	
						LOW	HIGH	RPD (%)	LIMIT (%)
Arsenic, MCEF	6.14	<1		6.00	102	68	127		
Lead, MCEF	7.30	<0.5		7.50	97.3	72	121		

METHOD SPIKE DUPLICATES

SAMPLE TYPE: Method Spike Sample Duplicate			LAB ID: IFA_MR			INSTR RUN: ICP\970207105700/4/2			
INSTRUMENT: TJA Enviro 36			PREPARED:			BATCH ID: IFA020697			
UNITS: ug			ANALYZED: 02/07/97			DILUTION: 1.000000			
METHOD:									
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD	
						LOW	HIGH	RPD (%)	LIMIT (%)
Arsenic, MCEF	6.30	6.14						2.57	10
Lead, MCEF	7.50	7.30						2.70	10

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

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

9702066

Project No.: 3042.95-005			Project Location: EMERYVILLE, CA			Date: 2/5/97			Serial No.: No 1091														
Project Name: RIFKIN WALL DEMO						Field Logbook No.:																	
Sampler (Signature): <i>Alfred R. Jelin</i>						ANALYSES			Samplers: ARJ														
SAMPLES						ARSENIC NIOSH 7300			LEAD NIOSH 7300			MERCURY EPA 7060			HOLD			RUSH			REMARKS		
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE																		
3042-0205-1	2/5/97	17:00	01A	1	AIR	XX	XX							72-HR	XX								V = 492 L V = 210 L
3042-0205-2	↓	↓	02A	1	↓	XX	XX								XX								
CHI-5-6	2/5/97	15:45	03A	1	CONCRETE									24-HR	XX								72-HOUR TAT FOR AIR SAMPLES RESULTS TO A. JENKINS/ R. MILELLI / M. KNOX / S. SHIU
CHI-6-7	↓	↓	04A	1	↓										XX								24-HOUR TAT FOR CONCRETE SAMPLES
CHI-7-8	↓	↓	05A	1	↓										XX								
RELINQUISHED BY: (Signature) <i>Alfred R. Jelin</i>			DATE	TIME	RECEIVED BY: (Signature) <i>Michael E. Kelle</i>			DATE	TIME	RECEIVED BY: (Signature) <i>Ronald C. Jensen</i>			DATE	TIME									
RELINQUISHED BY: (Signature) <i>Michael E. Kelle</i>			DATE	TIME	RECEIVED BY: (Signature) <i>Ronald C. Jensen</i>			DATE	TIME	RECEIVED BY: (Signature)			DATE	TIME									
RELINQUISHED BY: (Signature)			DATE	TIME	RECEIVED BY: (Signature)			DATE	TIME	RECEIVED BY: (Signature)			DATE	TIME									
METHOD OF SHIPMENT:			DATE	TIME	LAB COMMENTS:																		
Sample Collector: LEVINE•FRICKE•RECON 1900 Powell Street, 12th Floor Emeryville, California 94608-1827 (510) 652-4500						Analytical Laboratory: AEN																	

Appendix D

Laboratory Analytical Results for Whatman Wipe Samples

American Environmental Network

Certificate of Analysis

AMERICAN ENVIRONMENTAL NETWORK

AMERICAN ENVIRONMENTAL NETWORK

PAGE 1

LEVINE-FRICKE-RECON
1900 POWELL ST. 12TH FL.
EMERYVILLE, CA 94608

REPORT DATE: 02/15/97

DATE(S) SAMPLED: 02/12/97

DATE RECEIVED: 02/12/97

ATTN: A. JENKINS/R. MILELLI/M. KNOX
CLIENT PROJ. ID: 3042.95-005
CLIENT PROJ. NAME: RIFKIN WALL
C.O.C. NUMBER: 1089

AEN WORK ORDER: 9702129

PROJECT SUMMARY:

On February 12, 1997, this laboratory received 10 wipe 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

LEVINE - FRICKE - RECON

SAMPLE ID: AF-BLNK
AEN LAB NO: 9702129-01
AEN WORK ORDER: 9702129
CLIENT PROJ. ID: 3042.95-005

DATE SAMPLED: 02/12/97
DATE RECEIVED: 02/12/97
REPORT DATE: 02/15/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Digestion on wipe	EPA 3050	-		Prep Date	02/12/97
Arsenic on wipe	EPA 6010	<5		ug	02/13/97

LEVINE-FRICKE-RECON

SAMPLE ID: AF-FL-1
AEN LAB NO: 9702129-02
AEN WORK ORDER: 9702129
CLIENT PROJ. ID: 3042.95-005

DATE SAMPLED: 02/12/97
DATE RECEIVED: 02/12/97
REPORT DATE: 02/15/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Digestion on wipe	EPA 3050	-		Prep Date	02/12/97
Arsenic on wipe	EPA 6010	52		ug	02/13/97

LEVINE - FRICKE - RECON

SAMPLE ID: AF-FL-2
AEN LAB NO: 9702129-03
AEN WORK ORDER: 9702129
CLIENT PROJ. ID: 3042.95-005

DATE SAMPLED: 02/12/97
DATE RECEIVED: 02/12/97
REPORT DATE: 02/15/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Digestion on wipe	EPA 3050	-		Prep Date	02/12/97
Arsenic on wipe	EPA 6010	57		ug	02/13/97

LEVINE-FRICKE-RECON

SAMPLE ID: AF-FL-5
AEN LAB NO: 9702129-06
AEN WORK ORDER: 9702129
CLIENT PROJ. ID: 3042.95-005

DATE SAMPLED: 02/12/97
DATE RECEIVED: 02/12/97
REPORT DATE: 02/15/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Digestion on wipe	EPA 3050	-		Prep Date	02/12/97
Arsenic on wipe	EPA 6010	380		ug	02/13/97

LEVINE - FRICKE - RECON

SAMPLE ID: AF-CO-4-5
AEN LAB NO: 9702129-09
AEN WORK ORDER: 9702129
CLIENT PROJ. ID: 3042.95-005

DATE SAMPLED: 02/12/97
DATE RECEIVED: 02/12/97
REPORT DATE: 02/15/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Digestion on wipe	EPA 3050	-		Prep Date	02/12/97
Arsenic on wipe	EPA 6010	13		ug	02/13/97

LEVINE - FRICKE - RECON

SAMPLE ID: AF-CO-7-8
AEN LAB NO: 9702129-10
AEN WORK ORDER: 9702129
CLIENT PROJ. ID: 3042.95-005

DATE SAMPLED: 02/12/97
DATE RECEIVED: 02/12/97
REPORT DATE: 02/15/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Digestion on wipe	EPA 3050	-		Prep Date	02/12/97
Arsenic on wipe	EPA 6010	21		ug	02/13/97

AEN (CALIFORNIA)
QUALITY CONTROL REPORT

AEN JOB NUMBER: 9702129
CLIENT PROJECT ID: 3042.95-005

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.

D: Surrogates diluted out.

I: Interference.

!: Indicates result outside of established laboratory QC limits.

WORK ORDER: 9702129

QUALITY CONTROL REPORT

PAGE QR-2

ANALYSIS: Arsenic on wipes

MATRIX: Wipe

METHOD BLANK SAMPLES

SAMPLE TYPE: Blank-Method/Media blank			LAB ID: IFP_BLNK		INSTR RUN: ICP\970213185100/1/				
INSTRUMENT: TJA Enviro 36			PREPARED:		BATCH ID: IFP021297				
UNITS: ug			ANALYZED: 02/13/97		DILUTION: 1.000000				
METHOD: EPA 6010									
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Arsenic on wipes	<5		5						

METHOD SPIKE SAMPLES

SAMPLE TYPE: Spike-Method/Media blank			LAB ID: IFP_MD		INSTR RUN: ICP\970213185100/3/1				
INSTRUMENT: TJA Enviro 36			PREPARED:		BATCH ID: IFP021297				
UNITS: ug			ANALYZED: 02/13/97		DILUTION: 1.000000				
METHOD: EPA 6010									
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Arsenic on wipes	16.6	<5	5	20.0	83.0	75	125		

SAMPLE TYPE: Spike-Method/Media blank			LAB ID: IFP_MS		INSTR RUN: ICP\970213185100/2/1				
INSTRUMENT: TJA Enviro 36			PREPARED:		BATCH ID: IFP021297				
UNITS: ug			ANALYZED: 02/13/97		DILUTION: 1.000000				
METHOD: EPA 6010									
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Arsenic on wipes	17.3	<5	5	20.0	86.5	75	125		

METHOD SPIKE DUPLICATES

SAMPLE TYPE: Method Spike Sample Duplicate			LAB ID: IFP_MR		INSTR RUN: ICP\970213185100/4/2				
INSTRUMENT: TJA Enviro 36			PREPARED:		BATCH ID: IFP021297				
UNITS: ug			ANALYZED: 02/13/97		DILUTION: 1.000000				
METHOD: EPA 6010									
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Arsenic on wipes	16.6	17.3	5					4.13	20

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

INORG.

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

9702129

Project No.: 3042.95-005	Project Location: EMERYVILLE, CA	Date: 2/12/97	Serial No.: N ^o 1089
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Project Name: RIFKIN WALL DEMO	Field Logbook No.:
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Sampler (Signature): <i>R. Milelli</i>	ANALYSES	Samplers: Rjm
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SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	ASSEMBLY			HOLD	RUSH	REMARKS
AF-BLNK	2/12/97	1300	01A	1	WIPE	X	X	X			48-TAT
AF-FL-1	↓	↓	02A	↓	↓	X	X	X			
AF-FL-2	↓	↓	03A	↓	↓	X	X	X			
AF-FL-3	↓	↓	04A	↓	↓	X	X	X			
AF-FL-4	↓	↓	05A	↓	↓	X	X	X			
AF-FL-5	↓	↓	06A	↓	↓	X	X	X			
AF-FL-6	↓	↓	07A	↓	↓	X	X	X			
AF-CO-1-2	↓	↓	08A	↓	↓	X	X	X			
AF-CO-4-5	↓	↓	09A	↓	↓	X	X	X			
AF-CO-7-8	↓	↓	10A	↓	↓	X	X	X			

RESULTS TO A. JENKINS/
R. MILELLI / M. KNOX/
S. SHIU

RELINQUISHED BY: (Signature) <i>R. Milelli</i>	DATE: 2-12-97	TIME: 1545	RECEIVED BY: (Signature) <i>[Signature]</i>	DATE: 2-12-97	TIME: 15:45
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RELINQUISHED BY: (Signature) <i>[Signature]</i>	DATE: 2-12-97	TIME: 16:15	RECEIVED BY: (Signature) <i>[Signature]</i>	DATE: 2-12-97	TIME: 16:30
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RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
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METHOD OF SHIPMENT:	DATE	TIME	LAB COMMENTS:
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Sample Collector: LEVINE•FRICKE•RECON 1900 Powell Street, 12th Floor Emeryville, California 94608-1827 (510) 652-4500	Analytical Laboratory: AEN
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American Environmental Network

Certificate of Analysis

DOHS Certification: 1172

ANTA Accreditation: 0113

PAGE 1

LEVINE-FRICKE-RECON
1900 POWELL ST. 12TH FL.
EMERYVILLE, CA 94608

REPORT DATE: 02/21/97

DATE(S) SAMPLED: 02/18/97

DATE RECEIVED: 02/19/97

ATTN: R.MILELLI/M.KNOX/S.SHIU
CLIENT PROJ. ID: 3042.95-05
CLIENT PROJ. NAME: RIFKIN WALL
C.O.C. NUMBER: 1114

AEN WORK ORDER: 9702199

PROJECT SUMMARY:

On February 19, 1997, this laboratory received 3 wipe 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

FEB 24

LEVINE-FRICKE-RECON

SAMPLE ID: FL-01-W
AEN LAB NO: 9702199-01
AEN WORK ORDER: 9702199
CLIENT PROJ. ID: 3042.95-05

DATE SAMPLED: 02/18/97
DATE RECEIVED: 02/19/97
REPORT DATE: 02/21/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Digestion on wipe	EPA 3050	-		Prep Date	02/20/97
Arsenic on wipe	EPA 6010	11		ug	02/21/97

LEVINE-FRICKE-RECON

SAMPLE ID: FL-02-M
AEN LAB NO: 9702199-02
AEN WORK ORDER: 9702199
CLIENT PROJ. ID: 3042.95-05

DATE SAMPLED: 02/18/97
DATE RECEIVED: 02/19/97
REPORT DATE: 02/21/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Digestion on wipe	EPA 3050	-		Prep Date	02/20/97
Arsenic on wipe	EPA 6010	11		ug	02/21/97

LEVINE-FRICKE-RECON

SAMPLE ID: FL-03-E
AEN LAB NO: 9702199-03
AEN WORK ORDER: 9702199
CLIENT PROJ. ID: 3042.95-05

DATE SAMPLED: 02/18/97
DATE RECEIVED: 02/19/97
REPORT DATE: 02/21/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Digestion on wipe	EPA 3050	-		Prep Date	02/20/97
Arsenic on wipe	EPA 6010	14		ug	02/21/97

AEN (CALIFORNIA)
QUALITY CONTROL REPORT

AEN JOB NUMBER: 9702199
CLIENT PROJECT ID: 3042.95-05

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.

D: Surrogates diluted out.

I: Interference.

!: Indicates result outside of established laboratory QC limits.

WORK ORDER: 9702199

QUALITY CONTROL REPORT

PAGE QR-2

ANALYSIS: Arsenic on wipes

MATRIX: Wipe

METHOD BLANK SAMPLES

SAMPLE TYPE: Blank-Method/Media blank		LAB ID: IFP_BLNK		INSTR RUN: ICP\970221112300/1/			
INSTRUMENT: TJA Enviro 36		PREPARED:		BATCH ID: IFP022097			
UNITS: ug		ANALYZED: 02/21/97		DILUTION: 1.000000			
METHOD: EPA 6010							

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Arsenic on wipes	<5		5						

METHOD SPIKE SAMPLES

SAMPLE TYPE: Spike-Method/Media blank		LAB ID: IFP_MD		INSTR RUN: ICP\970221112300/3/1			
INSTRUMENT: TJA Enviro 36		PREPARED:		BATCH ID: IFP022097			
UNITS: ug		ANALYZED: 02/21/97		DILUTION: 1.000000			
METHOD: EPA 6010							

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Arsenic on wipes	19.1	<5	5	20.0	95.5	75	125		

SAMPLE TYPE: Spike-Method/Media blank		LAB ID: IFP_MS		INSTR RUN: ICP\970221112300/2/1			
INSTRUMENT: TJA Enviro 36		PREPARED:		BATCH ID: IFP022097			
UNITS: ug		ANALYZED: 02/21/97		DILUTION: 1.000000			
METHOD: EPA 6010							

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Arsenic on wipes	19.7	<5	5	20.0	98.5	75	125		

METHOD SPIKE DUPLICATES

SAMPLE TYPE: Method Spike Sample Duplicate		LAB ID: IFP_MR		INSTR RUN: ICP\970221112300/4/2			
INSTRUMENT: TJA Enviro 36		PREPARED:		BATCH ID: IFP022097			
UNITS: ug		ANALYZED: 02/21/97		DILUTION: 1.000000			
METHOD: EPA 6010							

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Arsenic on wipes	19.1	19.7	5					3.09	20

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

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

9702199

Project No.: 3042.95-05		Project Location: EMERYVILLE CA		Date: 2/18/97		Serial No.: N ^o 1114			
Project Name: RIFKIN WALL DEMO				Field Logbook No.:					
Sampler (Signature): <i>R. Mueller</i>				ANALYSES				Samplers:	
SAMPLES									
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	ARSENIC	HOLD	RUSH	REMARKS
FL-01-W	2/18/97	1100	O1A	1	WHATMAN WIPE	X	X		Fax Results to: Rick Mirelli Mark Knox; Susan Shui
FL-02-M	↓	↓	O2A	1	↓	↓	↓		
FL-03-E	↓	↓	O3A	1	↓	↓	↓		
24-hr TAT Best TAT will can do is 2/21/97 noon Dist notified R. Byas									
RELINQUISHED BY: <i>R. Mueller</i>		DATE: 2-19-97	TIME: 16:35	RECEIVED BY: <i>[Signature]</i>		DATE: 2-19-97	TIME: 16:35		
RELINQUISHED BY: <i>[Signature]</i>		DATE: 2-19-97	TIME: 17:00	RECEIVED BY: <i>Laura Rodhouse</i>		DATE: 2/19/97	TIME: 17:10		
RELINQUISHED BY: (Signature)		DATE	TIME	RECEIVED BY: (Signature)		DATE	TIME		
METHOD OF SHIPMENT:		DATE	TIME	LAB COMMENTS:					
Sample Collector: LEVINE•FRICKE•RECON 1900 Powell Street, 12th Floor Emeryville, California 94608-1827 (510) 652-4500				Analytical Laboratory: AEN					

Appendix E

Laboratory Analytical Results for Debris Samples

LEVINE-FRICKE-RECON

SAMPLE ID: AF-CO-1-2
AEN LAB NO: 9702129-08
AEN WORK ORDER: 9702129
CLIENT PROJ. ID: 3042.95-005

DATE SAMPLED: 02/12/97
DATE RECEIVED: 02/12/97
REPORT DATE: 02/15/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Digestion on wipe	EPA 3050	-		Prep Date	02/12/97
Arsenic on wipe	EPA 6010	<5		ug	02/13/97

LEVINE-FRICKE-RECON

SAMPLE ID: AF-CO-4-5
AEN LAB NO: 9702129-09
AEN WORK ORDER: 9702129
CLIENT PROJ. ID: 3042.95-005

DATE SAMPLED: 02/12/97
DATE RECEIVED: 02/12/97
REPORT DATE: 02/15/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Digestion on wipe	EPA 3050	-		Prep Date	02/12/97
Arsenic on wipe	EPA 6010	13		ug	02/13/97

LEVINE-FRICKE-RECON

SAMPLE ID: AF-CO-7-8
AEN LAB NO: 9702129-10
AEN WORK ORDER: 9702129
CLIENT PROJ. ID: 3042.95-005

DATE SAMPLED: 02/12/97
DATE RECEIVED: 02/12/97
REPORT DATE: 02/15/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Digestion on wipe	EPA 3050	-		Prep Date	02/12/97
Arsenic on wipe	EPA 6010	21		ug	02/13/97

AEN (CALIFORNIA)
QUALITY CONTROL REPORT

AEN JOB NUMBER: 9702129
CLIENT PROJECT ID: 3042.95-005

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.

D: Surrogates diluted out.

I: Interference.

!: Indicates result outside of established laboratory QC limits.

WORK ORDER: 9702129

QUALITY CONTROL REPORT

PAGE QR-2

ANALYSIS: Arsenic on wipes

MATRIX: Wipe

METHOD BLANK SAMPLES

SAMPLE TYPE: Blank-Method/Media blank			LAB ID: IFP_BLNK			INSTR RUN: ICP\970213185100/1/		
INSTRUMENT: TJA Enviro 36			PREPARED:			BATCH ID: IFP021297		
UNITS: ug			ANALYZED: 02/13/97			DILUTION: 1.000000		
METHOD: EPA 6010								

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%) LOW HIGH	RPD (%)	RPD LIMIT (%)
Arsenic on wipes	<5		5					

METHOD SPIKE SAMPLES

SAMPLE TYPE: Spike-Method/Media blank			LAB ID: IFP_MD			INSTR RUN: ICP\970213185100/3/1		
INSTRUMENT: TJA Enviro 36			PREPARED:			BATCH ID: IFP021297		
UNITS: ug			ANALYZED: 02/13/97			DILUTION: 1.000000		
METHOD: EPA 6010								

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%) LOW HIGH	RPD (%)	RPD LIMIT (%)
Arsenic on wipes	16.6	<5	5	20.0	83.0	75 125		

SAMPLE TYPE: Spike-Method/Media blank			LAB ID: IFP_MS			INSTR RUN: ICP\970213185100/2/1		
INSTRUMENT: TJA Enviro 36			PREPARED:			BATCH ID: IFP021297		
UNITS: ug			ANALYZED: 02/13/97			DILUTION: 1.000000		
METHOD: EPA 6010								

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%) LOW HIGH	RPD (%)	RPD LIMIT (%)
Arsenic on wipes	17.3	<5	5	20.0	86.5	75 125		

METHOD SPIKE DUPLICATES

SAMPLE TYPE: Method Spike Sample Duplicate			LAB ID: IFP_MR			INSTR RUN: ICP\970213185100/4/2		
INSTRUMENT: TJA Enviro 36			PREPARED:			BATCH ID: IFP021297		
UNITS: ug			ANALYZED: 02/13/97			DILUTION: 1.000000		
METHOD: EPA 6010								

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%) LOW HIGH	RPD (%)	RPD LIMIT (%)
Arsenic on wipes	16.6	17.3	5				4.13	20

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

INORG.

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

9702129

Project No.: 3042.95-005			Project Location: EMERYVILLE, CA			Date: 2/12/97		Serial No.: N ^o 1089		
Project Name: RIFKIN WALL DEMO			Field Logbook No.:							
Sampler (Signature): <i>R. Milelli</i>			ANALYSES						Samplers: Rjm	
SAMPLES			REMARKS							
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	ARSENIC		HOLD	RUSH	
AF-BLNK	2/12/97	1300	01A	1	WIPE	XXXXXX				
AF-FL-1	↓	↓	02A	↓	↓	XXXXXX				
AF-FL-2	↓	↓	03A	↓	↓	XXXXXX				
AF-FL-3	↓	↓	04A	↓	↓	XXXXXX				
AF-FL-4	↓	↓	05A	↓	↓	XXXXXX				
AF-FL-5	↓	↓	06A	↓	↓	XXXXXX				
AF-FL-6	↓	↓	07A	↓	↓	XXXXXX				
AF-CO-1-2	↓	↓	08A	↓	↓	XXXXXX				
AF-CO-4-5	↓	↓	09A	↓	↓	XXXXXX				
AF-CO-7-8	↓	↓	10A	↓	↓	XXXXXX				
RELINQUISHED BY: <i>R. Milelli</i>			DATE: 2-12-97	TIME: 1545	RECEIVED BY: <i>[Signature]</i>			DATE: 2-12-97	TIME: 1545	
RELINQUISHED BY: <i>[Signature]</i>			DATE: 2-12-97	TIME: 1615	RECEIVED BY: <i>Juan Rodriguez</i>			DATE: 2-12-97	TIME: 1630	
RELINQUISHED BY: (Signature)			DATE:	TIME:	RECEIVED BY: (Signature)			DATE:	TIME:	
METHOD OF SHIPMENT:			DATE:	TIME:	LAB COMMENTS:					
Sample Collector: LEVINE•FRICKE•RECON 1900 Powell Street, 12th Floor Emeryville, California 94608-1827 (510) 652-4500					Analytical Laboratory: AEN					

Shipping Copy (White)

Lab Copy (Yellow)

File Copy (Pink)

Field Copy (Goldenrod)

CCC CDR 101596RYL

American Environmental Network

Certificate of Analysis

DOHS Certification: 1172

AHFA Accreditation: 1173

PAGE 1

LEVINE-FRICKE-RECON
1900 POWELL ST. 12TH FL.
EMERYVILLE, CA 94608

REPORT DATE: 02/21/97

DATE(S) SAMPLED: 02/18/97

DATE RECEIVED: 02/19/97

ATTN: R.MILELLI/M.KNOX/S.SHIU
CLIENT PROJ. ID: 3042.95-05
CLIENT PROJ. NAME: RIFKIN WALL
C.O.C. NUMBER: 1114

AEN WORK ORDER: 9702199

PROJECT SUMMARY:

On February 19, 1997, this laboratory received 3 wipe 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

FEB 24

LEVINE-FRICKE-RECON

SAMPLE ID: FL-01-W
AEN LAB NO: 9702199-01
AEN WORK ORDER: 9702199
CLIENT PROJ. ID: 3042.95-05

DATE SAMPLED: 02/18/97
DATE RECEIVED: 02/19/97
REPORT DATE: 02/21/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Digestion on wipe	EPA 3050	-		Prep Date	02/20/97
Arsenic on wipe	EPA 6010	11		ug	02/21/97

LEVINE-FRICKE-RECON

SAMPLE ID: FL-02-M
AEN LAB NO: 9702199-02
AEN WORK ORDER: 9702199
CLIENT PROJ. ID: 3042.95-05

DATE SAMPLED: 02/18/97
DATE RECEIVED: 02/19/97
REPORT DATE: 02/21/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Digestion on wipe	EPA 3050	-		Prep Date	02/20/97
Arsenic on wipe	EPA 6010	11		ug	02/21/97

LEVINE-FRICKE-RECON

SAMPLE ID: FL-03-E
AEN LAB NO: 9702199-03
AEN WORK ORDER: 9702199
CLIENT PROJ. ID: 3042.95-05

DATE SAMPLED: 02/18/97
DATE RECEIVED: 02/19/97
REPORT DATE: 02/21/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Digestion on wipe	EPA 3050	-		Prep Date	02/20/97
Arsenic on wipe	EPA 6010	14		ug	02/21/97

AEN (CALIFORNIA)
QUALITY CONTROL REPORT

AEN JOB NUMBER: 9702199
CLIENT PROJECT ID: 3042.95-05

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.

D: Surrogates diluted out.

I: Interference.

!: Indicates result outside of established laboratory QC limits.

WORK ORDER: 9702199

QUALITY CONTROL REPORT

PAGE QR-2

ANALYSIS: Arsenic on wipes

MATRIX: Wipe

METHOD BLANK SAMPLES

SAMPLE TYPE: Blank-Method/Media blank
 INSTRUMENT: TJA Enviro 36
 UNITS: ug
 METHOD: EPA 6010

LAB ID: IFP_BLNK
 PREPARED:
 ANALYZED: 02/21/97

INSTR RUN: ICP\970221112300/1/
 BATCH ID: IFP022097
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Arsenic on wipes	<5		5						

METHOD SPIKE SAMPLES

SAMPLE TYPE: Spike-Method/Media blank
 INSTRUMENT: TJA Enviro 36
 UNITS: ug
 METHOD: EPA 6010

LAB ID: IFP_MD
 PREPARED:
 ANALYZED: 02/21/97

INSTR RUN: ICP\970221112300/3/1
 BATCH ID: IFP022097
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Arsenic on wipes	19.1	<5	5	20.0	95.5	75	125		

SAMPLE TYPE: Spike-Method/Media blank
 INSTRUMENT: TJA Enviro 36
 UNITS: ug
 METHOD: EPA 6010

LAB ID: IFP_MS
 PREPARED:
 ANALYZED: 02/21/97

INSTR RUN: ICP\970221112300/2/1
 BATCH ID: IFP022097
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Arsenic on wipes	19.7	<5	5	20.0	98.5	75	125		

METHOD SPIKE DUPLICATES

SAMPLE TYPE: Method Spike Sample Duplicate
 INSTRUMENT: TJA Enviro 36
 UNITS: ug
 METHOD: EPA 6010

LAB ID: IFP_MR
 PREPARED:
 ANALYZED: 02/21/97

INSTR RUN: ICP\970221112300/4/2
 BATCH ID: IFP022097
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Arsenic on wipes	19.1	19.7	5					3.09	20

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

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

9702199

Project No.: 3042.95-05			Project Location: EMERYVILLE CA			Date: 2/18/97			Serial No.: N ^o 1114			
Project Name: RIFKIN WALL DEMO						Field Logbook No.:						
Sampler (Signature): <i>R. Mueller</i>						ANALYSES						
SAMPLES						SAMPLERS:						
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	ARSENIC				HOLD	RUSH	REMARKS
FL-01-W	2/18/97	1100	O1A	1	WHATMAN WIPE	X				X		Fax results to: Rick Mikelli Mark Knox; Susan Shui
FL-02-M	↓	↓	O2A	1	↓	↓				↓		
FL-03-E	↓	↓	O3A	1	↓	↓				↓		
												24-hr TAT
												Best TAT we can do is 2/21/97 noon Client notified R. Byes
RELINQUISHED BY: <i>R. Mueller</i>			DATE: 2-19-97	TIME: 16:35	RECEIVED BY: <i>[Signature]</i>			DATE: 2-19-97	TIME: 16:35			
RELINQUISHED BY: <i>[Signature]</i>			DATE: 2-19-97	TIME: 17:00	RECEIVED BY: <i>Laura Rodhouse</i>			DATE: 2/19/97	TIME: 17:10			
RELINQUISHED BY: (Signature)			DATE	TIME	RECEIVED BY: (Signature)			DATE	TIME			
METHOD OF SHIPMENT:			DATE	TIME	LAB COMMENTS:							
Sample Collector: LEVINE•FRICKE•RECON 1900 Powell Street, 12th Floor Emeryville, California 94608-1827 (510) 652-4500					Analytical Laboratory: AEN							

Appendix E

Laboratory Analytical Results for Debris Samples

American Environmental Network

Certificate of Analysis

DOHS Certificate # 1172

1000 A. Street, Suite 100

PAGE 1

LEVINE-FRICKE-RECON
1900 POWELL ST. 12TH FL.
EMERYVILLE, CA 94608

REPORT DATE: 02/12/97

DATE(S) SAMPLED: 02/04/97

DATE RECEIVED: 02/04/97

ATTN: A.JENKINS/R.MILELLI/S.SHIU
CLIENT PROJ. ID: 3042.95-05
CLIENT PROJ. NAME: RIFKIN WALL
C.O.C. NUMBER: 1034

AEN WORK ORDER: 9702018

PROJECT SUMMARY:

On February 4, 1997, this laboratory received 2 brick 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

1/2

LEVINE - FRICKE - RECON

SAMPLE ID: CLASS I
 AEN LAB NO: 9702018-01A
 AEN WORK ORDER: 9702018
 CLIENT PROJ. ID: 3042.95-05

DATE SAMPLED: 02/04/97
 DATE RECEIVED: 02/04/97
 REPORT DATE: 02/12/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
RCRA Metals					
Ag	Silver	EPA 6010	ND	0.1 mg/kg	02/07/97
As	Arsenic	EPA 7060	240 *	0.5 mg/kg	02/06/97
Ba	Barium	EPA 6010	26 *	1 mg/kg	02/07/97
Cd	Cadmium	EPA 6010	1.8 *	0.2 mg/kg	02/07/97
Cr	Chromium	EPA 6010	2.6 *	0.5 mg/kg	02/07/97
Hg	Mercury	EPA 7471	0.06 *	0.06 mg/kg	02/06/97
Pb	Lead	EPA 6010	32 *	1 mg/kg	02/07/97
Se	Selenium	EPA 7740	ND	1 mg/kg	02/05/97

#Digestion, Metals by GFAA EPA 3050 - Prep Date 02/04/97

#Digestion, Metals AA/ICP EPA 3050 - Prep Date 02/04/97

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

LEVINE - FRICKE - RECON

SAMPLE ID: CLASS I
 AEN LAB NO: 9702018-01B
 AEN WORK ORDER: 9702018
 CLIENT PROJ. ID: 3042.95-05

DATE SAMPLED: 02/04/97
 DATE RECEIVED: 02/04/97
 REPORT DATE: 02/12/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Digestion for GFAA (TCLP)	EPA 3020	-		Prep Date	02/05/97
#Digestion for ICP (TCLP)	EPA 3010	-		Prep Date	02/05/97
#TCLP Extraction	EPA 1311	-		Extrn Date	02/04/97
RCRA Metals in TCLP Extr	EPA6010/7000				
Ag Silver	EPA 6010	ND	0.005	mg/L	02/06/97
As Arsenic	EPA 7060	0.49 *	0.002	mg/L	02/06/97
Ba Barium	EPA 6010	0.13 *	0.01	mg/L	02/06/97
Cd Cadmium	EPA 6010	0.031 *	0.005	mg/L	02/06/97
Cr Chromium	EPA 6010	ND	0.01	mg/L	02/06/97
Hg Mercury	EPA 7470	ND	0.0002	mg/L	02/06/97
Pb Lead	EPA 6010	0.09 *	0.04	mg/L	02/06/97
Se Selenium	EPA 7740	0.007 *	0.004	mg/L	02/06/97

ND = Not detected at or above the reporting limit

* = Value at or above reporting limit

LEVINE - FRICKE - RECON

SAMPLE ID: CLASS II
 AEN LAB NO: 9702018-02A
 AEN WORK ORDER: 9702018
 CLIENT PROJ. ID: 3042.95-05

DATE SAMPLED: 02/04/97
 DATE RECEIVED: 02/04/97
 REPORT DATE: 02/12/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
RCRA Metals					
Ag	Silver	EPA 6010	ND	0.1 mg/kg	02/07/97
As	Arsenic	EPA 7060	1.6 *	0.5 mg/kg	02/06/97
Ba	Barium	EPA 6010	28 *	1 mg/kg	02/07/97
Cd	Cadmium	EPA 6010	ND	0.2 mg/kg	02/07/97
Cr	Chromium	EPA 6010	4.5 *	0.5 mg/kg	02/07/97
Hg	Mercury	EPA 7471	ND	0.06 mg/kg	02/06/97
Pb	Lead	EPA 6010	4 *	1 mg/kg	02/07/97
Se	Selenium	EPA 7740	ND	1 mg/kg	02/05/97
#Digestion, Metals by GFAA	EPA 3050	-		Prep Date	02/04/97
#Digestion, Metals AA/ICP	EPA 3050	-		Prep Date	02/04/97

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

LEVINE-FRICKE-RECON

SAMPLE ID: CLASS II
 AEN LAB NO: 9702018-02B
 AEN WORK ORDER: 9702018
 CLIENT PROJ. ID: 3042.95-05

DATE SAMPLED: 02/04/97
 DATE RECEIVED: 02/04/97
 REPORT DATE: 02/12/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Digestion for GFAA (TCLP)	EPA 3020	-		Prep Date	02/05/97
#Digestion for ICP (TCLP)	EPA 3010	-		Prep Date	02/05/97
#TCLP Extraction	EPA 1311	-		Extrn Date	02/04/97
RCRA Metals in TCLP Extr	EPA6010/7000				
Ag Silver	EPA 6010	ND	0.005	mg/L	02/06/97
As Arsenic	EPA 7060	0.023 *	0.002	mg/L	02/06/97
Ba Barium	EPA 6010	0.16 *	0.01	mg/L	02/06/97
Cd Cadmium	EPA 6010	ND	0.005	mg/L	02/06/97
Cr Chromium	EPA 6010	ND	0.01	mg/L	02/06/97
Hg Mercury	EPA 7470	ND	0.0002	mg/L	02/06/97
Pb Lead	EPA 6010	ND	0.04	mg/L	02/06/97
Se Selenium	EPA 7740	0.004 *	0.004	mg/L	02/06/97

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

AEN (CALIFORNIA)
QUALITY CONTROL REPORT

AEN JOB NUMBER: 9702018
CLIENT PROJECT ID: 3042.95-05

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.

D: Surrogates diluted out.

I: Interference.

!: Indicates result outside of established laboratory QC limits.

WORK ORDER: 9702018

QUALITY CONTROL REPORT

PAGE QR-2

ANALYSIS: Arsenic

MATRIX: TCLP Extract

METHOD BLANK SAMPLES

SAMPLE TYPE: Blank-Method/Media blank		LAB ID: TCLP_BLNK		INSTR RUN: 4000\970206110600/15/				
INSTRUMENT: TJA 4000, GFAA		PREPARED:		BATCH ID: GFW020597-B				
UNITS: mg/L		ANALYZED: 02/06/97		DILUTION: 1.000000				
METHOD:								
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD LIMIT (%)
Arsenic in water by GFAA	ND		0.002			LOW	HIGH	RPD (%)

MATRIX SPIKE SAMPLES

SAMPLE TYPE: Spike-Sample/Matrix		LAB ID: MS02018-01B		INSTR RUN: 4000\970206110600/17/16				
INSTRUMENT: TJA 4000, GFAA		PREPARED:		BATCH ID: GFW020597-B				
UNITS: mg/L		ANALYZED: 02/06/97		DILUTION: 1.000000				
METHOD:								
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD LIMIT (%)
Arsenic in water by GFAA	0.557	0.485		0.0400	180	LOW	HIGH	RPD (%)

MATRIX: Soil/Bulk

METHOD BLANK SAMPLES

SAMPLE TYPE: Blank-Method/Media blank		LAB ID: GFS_BLANK_X		INSTR RUN: 4000\970205172600/1/				
INSTRUMENT: TJA 4000, GFAA		PREPARED:		BATCH ID: GFS020497-X				
UNITS: mg/kg		ANALYZED: 02/05/97		DILUTION: 1.000000				
METHOD:								
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD LIMIT (%)
Arsenic in soil EPA 7060	ND		0.5			LOW	HIGH	RPD (%)

METHOD SPIKE SAMPLES

SAMPLE TYPE: Spike-Method/Media blank		LAB ID: GFS_MD_X		INSTR RUN: 4000\970205172600/3/1				
INSTRUMENT: TJA 4000, GFAA		PREPARED:		BATCH ID: GFS020497-X				
UNITS: mg/kg		ANALYZED: 02/05/97		DILUTION: 1.000000				
METHOD:								
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD LIMIT (%)
Arsenic in soil EPA 7060	11.4	ND	0.5	10.0	114	77	141	RPD (%)

SAMPLE TYPE: Spike-Method/Media blank		LAB ID: GFS_MS_X		INSTR RUN: 4000\970205172600/2/1				
INSTRUMENT: TJA 4000, GFAA		PREPARED:		BATCH ID: GFS020497-X				
UNITS: mg/kg		ANALYZED: 02/05/97		DILUTION: 1.000000				
METHOD:								
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD LIMIT (%)
Arsenic in soil EPA 7060	11.2	ND	0.5	10.0	112	77	141	RPD (%)

WORK ORDER: 9702018

QUALITY CONTROL REPORT

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ANALYSIS: Mercury

MATRIX: TCLP Extract

METHOD BLANK SAMPLES

SAMPLE TYPE: Blank-Method/Media blank
 INSTRUMENT: Coleman Hg Analyzer 50D
 UNITS: mg/L
 METHOD:

LAB ID: TCLP_BLNK
 PREPARED:
 ANALYZED: 02/06/97

INSTR RUN: HG\970206110009/5/
 BATCH ID: HGW020597
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Mercury in water	ND		0.0002						

MATRIX SPIKE SAMPLES

SAMPLE TYPE: Spike-Sample/Matrix
 INSTRUMENT: Coleman Hg Analyzer 50D
 UNITS: mg/L
 METHOD:

LAB ID: MS02018-01B
 PREPARED:
 ANALYZED: 02/06/97

INSTR RUN: HG\970206110009/7/6
 BATCH ID: HGW020597
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Mercury in water	0.00205	ND	0.0002	0.00200	103				

MATRIX: Soil/Bulk

METHOD BLANK SAMPLES

SAMPLE TYPE: Blank-Method/Media blank
 INSTRUMENT: Coleman Hg Analyzer 50D
 UNITS: mg/kg
 METHOD:

LAB ID: HGS_BLNK
 PREPARED:
 ANALYZED: 02/06/97

INSTR RUN: HG\970206210000/1/
 BATCH ID: HGS020697
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Mercury in soil EPA 7471	ND		0.06						

METHOD SPIKE SAMPLES

SAMPLE TYPE: Spike-Method/Media blank
 INSTRUMENT: Coleman Hg Analyzer 50D
 UNITS: mg/kg
 METHOD:

LAB ID: HGS_MD
 PREPARED:
 ANALYZED: 02/06/97

INSTR RUN: HG\970206210000/3/1
 BATCH ID: HGS020697
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Mercury in soil EPA 7471	0.342	ND	0.06	0.400	85.5	79	118		

SAMPLE TYPE: Spike-Method/Media blank
 INSTRUMENT: Coleman Hg Analyzer 50D
 UNITS: mg/kg
 METHOD:

LAB ID: HGS_MS
 PREPARED:
 ANALYZED: 02/06/97

INSTR RUN: HG\970206210000/2/1
 BATCH ID: HGS020697
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Mercury in soil EPA 7471	0.366	ND	0.06	0.400	91.5	79	118		

WORK ORDER: 9702018

QUALITY CONTROL REPORT

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ANALYSIS: Arsenic

MATRIX: Soil/Bulk

METHOD SPIKE DUPLICATES

SAMPLE TYPE: Method Spike Sample Duplicate		LAB ID: GFS_MR_X		INSTR RUN: 4000\970205172600/4/2				
INSTRUMENT: TJA 4000, GFAA		PREPARED:		BATCH ID: GFS020497-X				
UNITS: mg/kg		ANALYZED: 02/05/97		DILUTION: 1.000000				
METHOD:								
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%) LOW HIGH	RPD (%)	RPD LIMIT (%)
Arsenic in soil EPA 7060	11.4	11.2	0.5			1.77	15	

MATRIX SPIKE SAMPLES

SAMPLE TYPE: Spike-Sample/Matrix		LAB ID: MD02018-02A		INSTR RUN: 4000\970205172600/7/5				
INSTRUMENT: TJA 4000, GFAA		PREPARED:		BATCH ID: GFS020497-X				
UNITS: mg/kg		ANALYZED: 02/06/97		DILUTION: 1.000000				
METHOD:								
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%) LOW HIGH	RPD (%)	RPD LIMIT (%)
Arsenic in soil EPA 7060	14.3	1.61	0.5	10.0	127	12 168		

SAMPLE TYPE: Spike-Sample/Matrix		LAB ID: MS02018-02A		INSTR RUN: 4000\970205172600/6/5				
INSTRUMENT: TJA 4000, GFAA		PREPARED:		BATCH ID: GFS020497-X				
UNITS: mg/kg		ANALYZED: 02/06/97		DILUTION: 1.000000				
METHOD:								
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%) LOW HIGH	RPD (%)	RPD LIMIT (%)
Arsenic in soil EPA 7060	14.8	1.61	0.5	10.0	132	12 168		

MATRIX SPIKE DUPLICATES

SAMPLE TYPE: Spiked Sample Duplicate		LAB ID: MR02018-02A		INSTR RUN: 4000\970205172600/8/6				
INSTRUMENT: TJA 4000, GFAA		PREPARED:		BATCH ID: GFS020497-X				
UNITS: mg/kg		ANALYZED: 02/06/97		DILUTION: 1.000000				
METHOD:								
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%) LOW HIGH	RPD (%)	RPD LIMIT (%)
Arsenic in soil EPA 7060	14.3	14.8	0.5			3.44	18	

WORK ORDER: 9702018

QUALITY CONTROL REPORT

PAGE QR-

ANALYSIS: Mercury

MATRIX: Soil/Bulk

METHOD SPIKE DUPLICATES

SAMPLE TYPE: Method Spike Sample Duplicate			LAB ID: HGS_MR			INSTR RUN: HG\970206210000/4/2			
INSTRUMENT: Coleman Hg Analyzer 50D			PREPARED:			BATCH ID: HGS020697			
UNITS: mg/kg			ANALYZED: 02/06/97			DILUTION: 1.000000			
METHOD:									
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Mercury in soil EPA 7471	0.342	0.366	0.06					6.78	15

MATRIX SPIKE SAMPLES

SAMPLE TYPE: Spike-Sample/Matrix			LAB ID: MD02018-02A			INSTR RUN: HG\970206210000/7/5			
INSTRUMENT: Coleman Hg Analyzer 50D			PREPARED:			BATCH ID: HGS020697			
UNITS: mg/kg			ANALYZED: 02/06/97			DILUTION: 1.000000			
METHOD:									
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Mercury in soil EPA 7471	0.373	ND	0.06	0.400	93.3	44	153		

SAMPLE TYPE: Spike-Sample/Matrix			LAB ID: MS02018-02A			INSTR RUN: HG\970206210000/6/5			
INSTRUMENT: Coleman Hg Analyzer 50D			PREPARED:			BATCH ID: HGS020697			
UNITS: mg/kg			ANALYZED: 02/06/97			DILUTION: 1.000000			
METHOD:									
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Mercury in soil EPA 7471	0.373	ND	0.06	0.400	93.3	44	153		

MATRIX SPIKE DUPLICATES

SAMPLE TYPE: Spiked Sample Duplicate			LAB ID: MR02018-02A			INSTR RUN: HG\970206210000/8/5			
INSTRUMENT: Coleman Hg Analyzer 50D			PREPARED:			BATCH ID: HGS020697			
UNITS: mg/kg			ANALYZED: 02/06/97			DILUTION: 1.000000			
METHOD:									
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Mercury in soil EPA 7471	0.373	0.373	0.06					0	15

WORK ORDER: 9702018

QUALITY CONTROL REPORT

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ANALYSIS: RCRA Metals

MATRIX: Soil/Bulk

METHOD BLANK SAMPLES

SAMPLE TYPE: Blank-Method/Media blank			LAB ID: IFS_BLNK_W			INSTR RUN: ICP\970206181900/1/				
INSTRUMENT: TJA Enviro 36			PREPARED:			BATCH ID: IFS020497-W				
UNITS: mg/kg			ANALYZED: 02/06/97			DILUTION: 1.000000				
METHOD:										
ANALYTE		RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
							LOW	HIGH		
Ag	Silver	ND		0.1						
Ba	Barium	ND		1						
Cd	Cadmium	ND		0.2						
Cr	Chromium	ND		0.5						
Pb	Lead	ND		1						

METHOD SPIKE SAMPLES

SAMPLE TYPE: Spike-Method/Media blank			LAB ID: IFS_MD_W			INSTR RUN: ICP\970206181900/4/2				
INSTRUMENT: TJA Enviro 36			PREPARED:			BATCH ID: IFS020497-W				
UNITS: mg/kg			ANALYZED: 02/06/97			DILUTION: 1.000000				
METHOD:										
ANALYTE		RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
							LOW	HIGH		
Ag	Silver	4.91	ND	0.1	5.00	98.2	60	120		
Ba	Barium	105	1.48	1	100	104	80	115		
Cd	Cadmium	10.2	ND	0.2	10.0	102	90	120		
Cr	Chromium	52.4	1.72	0.5	50.0	101	90	120		
Pb	Lead	53.1	1.34	1	50.0	104	90	120		

SAMPLE TYPE: Spike-Method/Media blank			LAB ID: IFS_MS_W			INSTR RUN: ICP\970206181900/3/2				
INSTRUMENT: TJA Enviro 36			PREPARED:			BATCH ID: IFS020497-W				
UNITS: mg/kg			ANALYZED: 02/06/97			DILUTION: 1.000000				
METHOD:										
ANALYTE		RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
							LOW	HIGH		
Ag	Silver	4.97	ND	0.1	5.00	99.4	60	120		
Ba	Barium	106	1.48	1	100	105	80	115		
Cd	Cadmium	10.3	ND	0.2	10.0	103	90	120		
Cr	Chromium	52.7	1.72	0.5	50.0	102	90	120		
Pb	Lead	53.4	1.34	1	50.0	104	90	120		

METHOD SPIKE DUPLICATES

SAMPLE TYPE: Method Spike Sample Duplicate			LAB ID: IFS_MR_W			INSTR RUN: ICP\970206181900/5/3				
INSTRUMENT: TJA Enviro 36			PREPARED:			BATCH ID: IFS020497-W				
UNITS: mg/kg			ANALYZED: 02/06/97			DILUTION: 1.000000				
METHOD:										
ANALYTE		RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
							LOW	HIGH		
Ag	Silver	4.91	4.97	0.1					1.21	10
Ba	Barium	105	106	1					0.948	10
Cd	Cadmium	10.2	10.3	0.2					0.976	10
Cr	Chromium	52.4	52.7	0.5					0.571	10
Pb	Lead	53.1	53.4	1					0.563	10

WORK ORDER: 9702018

QUALITY CONTROL REPORT

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ANALYSIS: RCRA Metals

MATRIX: Soil/Bulk

MATRIX SPIKE SAMPLES

SAMPLE TYPE: Spike-Sample/Matrix LAB ID: MD02018-02A INSTR RUN: ICP\970206181900/8/6
 INSTRUMENT: TJA Enviro 36 PREPARED: BATCH ID: IFS020497-W
 UNITS: mg/kg ANALYZED: 02/06/97 DILUTION: 1.000000
 METHOD:

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Ag Silver	4.13	ND	0.1	5.00	82.6	2	118		
Ba Barium	134	28.45	1	100	106	45	139		
Cd Cadmium	10.6	ND	0.2	10.0	106	57	112		
Cr Chromium	56.0	4.54	0.5	50.0	103	49	125		
Pb Lead	55.3	4.00	1	50.0	103	24	153		

SAMPLE TYPE: Spike-Sample/Matrix LAB ID: MS02018-02A INSTR RUN: ICP\970206181900/7/6
 INSTRUMENT: TJA Enviro 36 PREPARED: BATCH ID: IFS020497-W
 UNITS: mg/kg ANALYZED: 02/06/97 DILUTION: 1.000000
 METHOD:

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Ag Silver	3.75	ND	0.1	5.00	75.0	2	118		
Ba Barium	135	28.45	1	100	107	45	139		
Cd Cadmium	10.4	ND	0.2	10.0	104	57	112		
Cr Chromium	56.5	4.54	0.5	50.0	104	49	125		
Pb Lead	53.3	4.00	1	50.0	98.6	24	153		

MATRIX SPIKE DUPLICATES

SAMPLE TYPE: Spiked Sample Duplicate LAB ID: MR02018-02A INSTR RUN: ICP\970206181900/9/7
 INSTRUMENT: TJA Enviro 36 PREPARED: BATCH ID: IFS020497-W
 UNITS: mg/kg ANALYZED: 02/06/97 DILUTION: 1.000000
 METHOD:

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Ag Silver	4.13	3.75	0.1					9.64	25
Ba Barium	134	135	1					0.743	25
Cd Cadmium	10.6	10.4	0.2					1.90	25
Cr Chromium	56.0	56.5	0.5					0.889	25
Pb Lead	55.3	53.3	1					3.68	25

WORK ORDER: 9702018

QUALITY CONTROL REPORT

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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\970206160600/5/					
INSTRUMENT: TJA Enviro 36		PREPARED:	BATCH ID: IFW020597-C					
UNITS: mg/L		ANALYZED: 02/06/97	DILUTION: 1.000000					
METHOD: EPA6010/7000								
ANALYTE		REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD LIMIT (%)
						LOW	HIGH	RPD (%)
Ba	Barium	ND	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: MS02018-02B	INSTR RUN: ICP\970206160600/7/6					
INSTRUMENT: TJA Enviro 36		PREPARED:	BATCH ID: IFW020597-C					
UNITS: mg/L		ANALYZED: 02/06/97	DILUTION: 1.000000					
METHOD: EPA6010/7000								
ANALYTE		REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD LIMIT (%)
						LOW	HIGH	RPD (%)
Ba	Barium	1.19	0.165	1.00	103			
Cd	Cadmium	0.0598	ND	0.0500	120			
Cr	Chromium	0.0995	ND	0.100	99.5			
Pb	Lead	0.539	ND	0.500	108			

WORK ORDER: 9702018

QUALITY CONTROL REPORT

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ANALYSIS: Selenium

MATRIX: TCLP Extract

METHOD BLANK SAMPLES

SAMPLE TYPE: Blank-Method/Media blank			LAB ID: TCLP_BLNK			INSTR RUN: 4000\970206110700/9/		
INSTRUMENT: TJA 4000, GFAA			PREPARED:			BATCH ID: GFW020597-B		
UNITS: mg/L			ANALYZED: 02/06/97			DILUTION: 1.000000		
METHOD:								
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD LIMIT (%)
Selenium in water by GFAA	ND		0.004			LOW	HIGH	RPD (%)

MATRIX SPIKE SAMPLES

SAMPLE TYPE: Spike-Sample/Matrix			LAB ID: MS02018-01B			INSTR RUN: 4000\970206110700/11/10		
INSTRUMENT: TJA 4000, GFAA			PREPARED:			BATCH ID: GFW020597-B		
UNITS: mg/L			ANALYZED: 02/06/97			DILUTION: 1.000000		
METHOD:								
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD LIMIT (%)
Selenium in water by GFAA	0.0653	0.00667	0.004	0.0800	73.3	LOW	HIGH	RPD (%)

MATRIX: Soil/Bulk

METHOD BLANK SAMPLES

SAMPLE TYPE: Blank-Method/Media blank			LAB ID: GFS_BLANK_X			INSTR RUN: 4000\970205172700/1/		
INSTRUMENT: TJA 4000, GFAA			PREPARED:			BATCH ID: GFS020497-X		
UNITS: mg/kg			ANALYZED: 02/05/97			DILUTION: 1.000000		
METHOD:								
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD LIMIT (%)
Selenium in soil EPA 7740	ND		1			LOW	HIGH	RPD (%)

METHOD SPIKE SAMPLES

SAMPLE TYPE: Spike-Method/Media blank			LAB ID: GFS_MD_X			INSTR RUN: 4000\970205172700/3/1		
INSTRUMENT: TJA 4000, GFAA			PREPARED:			BATCH ID: GFS020497-X		
UNITS: mg/kg			ANALYZED: 02/05/97			DILUTION: 1.000000		
METHOD:								
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD LIMIT (%)
Selenium in soil EPA 7740	20.8	ND	1	20.0	104	LOW	HIGH	RPD (%)

SAMPLE TYPE: Spike-Method/Media blank			LAB ID: GFS_MS_X			INSTR RUN: 4000\970205172700/2/1		
INSTRUMENT: TJA 4000, GFAA			PREPARED:			BATCH ID: GFS020497-X		
UNITS: mg/kg			ANALYZED: 02/05/97			DILUTION: 1.000000		
METHOD:								
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD LIMIT (%)
Selenium in soil EPA 7740	20.3	ND	1	20.0	102	LOW	HIGH	RPD (%)

WORK ORDER: 9702018

QUALITY CONTROL REPORT

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ANALYSIS: Selenium

MATRIX: Soil/Bulk

METHOD SPIKE DUPLICATES

SAMPLE TYPE: Method Spike Sample Duplicate			LAB ID: GFS_MR_X		INSTR RUN: 4000\970205172700/4/2				
INSTRUMENT: TJA 4000, GFAA			PREPARED:		BATCH ID: GFS020497-X				
UNITS: mg/kg			ANALYZED: 02/05/97		DILUTION: 1.000000				
METHOD:									
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Selenium in soil EPA 7740	20.8	20.3	1					2.43	13

MATRIX SPIKE SAMPLES

SAMPLE TYPE: Spike-Sample/Matrix			LAB ID: MD02018-02A		INSTR RUN: 4000\970205172700/7/5				
INSTRUMENT: TJA 4000, GFAA			PREPARED:		BATCH ID: GFS020497-X				
UNITS: mg/kg			ANALYZED: 02/05/97		DILUTION: 1.000000				
METHOD:									
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Selenium in soil EPA 7740	20.4	ND	1	20.0	102	1	156		

SAMPLE TYPE: Spike-Sample/Matrix			LAB ID: MS02018-02A		INSTR RUN: 4000\970205172700/6/5				
INSTRUMENT: TJA 4000, GFAA			PREPARED:		BATCH ID: GFS020497-X				
UNITS: mg/kg			ANALYZED: 02/05/97		DILUTION: 1.000000				
METHOD:									
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Selenium in soil EPA 7740	20.9	ND	1	20.0	105	1	156		

MATRIX SPIKE DUPLICATES

SAMPLE TYPE: Spiked Sample Duplicate			LAB ID: MR02018-02A		INSTR RUN: 4000\970205172700/8/6				
INSTRUMENT: TJA 4000, GFAA			PREPARED:		BATCH ID: GFS020497-X				
UNITS: mg/kg			ANALYZED: 02/05/97		DILUTION: 1.000000				
METHOD:									
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Selenium in soil EPA 7740	20.4	20.9	1					2.42	21

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

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CHAIN OF CUSTODY / ANALYSES REQUEST FORM

9702018

Project No.: 3042.95-05	Project Location: Emeryville, CA	Date: 2/4/97	Serial No.: Nº 1034
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Project Name: RIFKIN WALL DEMO	Field Logbook No.:
--------------------------------	--------------------

Sampler (Signature): R. Milelli	ANALYSES	Samplers: RJM
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SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	ANALYSES				HOLD	RUSH	REMARKS
						PCRB Metals	TILC	PCRB Metals	TCLP			
CLASS I	2/4/97	0730	DIA	1	brick	X	X					
CLASS II	↓	↓	OZA	1	↓	↓	↓					
												24-hr TAT
												Results to A. Jenkins/ R. Milelli/S. Shiu
												02/04/97 1315 A. Jenkins & R. Milelli informed that the best TAT the lab can provide is 3 day. Results by 2/7. JAT

RELINQUISHED BY: (Signature) R. Milelli	DATE 2-4-97	TIME 10:30	RECEIVED BY: (Signature) [Signature]	DATE 2-4-97	TIME 10:20
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RELINQUISHED BY: (Signature) [Signature]	DATE 2-4-97	TIME 12:05	RECEIVED BY: (Signature) Gina Zulligie	DATE 2-4-97	TIME 12:05
--	-------------	------------	--	-------------	------------

RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
------------------------------	------	------	--------------------------	------	------

METHOD OF SHIPMENT:	DATE	TIME	LAB COMMENTS:
---------------------	------	------	---------------

Sample Collector: LEVINE•FRICKE•RECON 1900 Powell Street, 12th Floor Emeryville, California 94608-1827 (510) 652-4500	Analytical Laboratory: AEN
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Appendix F

Laboratory Analytical Results for High-Volume Air Samplers

Quanterra Incorporated
880 Riverside Parkway
West Sacramento, California 95605

916 373-5600 Telephone
916 372-1059 Fax

February 19, 1997

QUANTERRA PROJECT NUMBER: 091642

Rick Millelli
Levine-Fricke
1900 Powell St. 12th
Emeryville, CA 94608

Dear Mr Millelli:

This report contains the analytical results for the thirty filter samples which were received under chain of custody by Quanterra Environmental Services on 29 January 1997 through 04 February 1997. This sample set is associated with your Rifkin Wall Demo project.

The case narrative is an integral part of this report.

If you have any questions, please call me at (916)374-4411.

Sincerely,



Patrick Rainey
Project Manager

PR/ct

MAR 10

Enclosures

TABLE OF CONTENTS

QUANTERRA PROJECT NUMBER 091642

Case Narrative

Quanterra's Quality Assurance Program

Sample Description Information

Chain of Custody Documentation

Total Metals - Various Methods

Includes Samples: 1 - 30

Sample Data

Method Blank

Duplicate Control Sample Report

CASE NARRATIVE

QUANTERRA PROJECT NUMBER 091642

Total Metals

Samples were received in 5 batches. The dates of receipt were January 30, 31, 1997 and February 3, 4, 5, 1997.

Preliminary results were sent via facsimile to Rick Millelli.

Samples 091642-0001 through 0014 and 0022 through 0026 were prepared and analyzed on a 24-48 hr TAT. Samples 0015 through 0021 are the analysis of additional filter strip from sample 091642-0001. These filter strips were analyzed for Arsenic only. Sample 0027 through 0030 were prepared and analyzed on a 72 hr TAT.

No anomalies were associated with this report.

QUANTERRA'S QUALITY ASSURANCE PROGRAM

Quanterra has implemented an extensive Quality Assurance (QA) program to ensure the production of scientifically sound, legally defensible data of known documentable quality. A key element of this program is Quanterra's Laboratory Control Sample (LCS) system. Controlling lab operations with LCS (as opposed to matrix spike/matrix spike duplicate samples), allows the lab to differentiate between bias as a result of procedural errors versus bias due to matrix effects. The analyst can then identify and implement the appropriate corrective actions at the bench level, without waiting for extensive senior level review or costly and time-consuming sample re-analyses. The LCS program also provides our client with information to assess batch, and overall laboratory performance.

Laboratory Control Samples - (LCS)

Laboratory Control Samples (LCS) are well-characterized, laboratory generated samples used to monitor the laboratory's day-to-day performance of routine analytical methods. The results of the LCS are compared to well-defined laboratory acceptance criteria to determine whether the laboratory system is "in control". Three types of LCS are routinely analyzed: Duplicate Control Samples (DCS), Single Control Samples (SCS), and method blanks. Each of these LCS are described below.

Duplicate Control Samples. A DCS is a well-characterized matrix (blank water, sand, sodium sulfate or celite) which is spiked with certain target parameters and analyzed at approximately 10% of the sample load in order to establish method-specific control limits.

Single Control Samples. An SCS consists of a control matrix that is spiked with surrogate compounds appropriate to the method being used. In cases where no surrogate is available, (e.g. metals or conventional analyses) a single control sample identical to the DCS serves as the control sample. An SCS is prepared for each sample lot. Accuracy is calculated identically to the DCS.

Method Blank Results. A method blank is a laboratory-generated sample which assesses the degree to which laboratory operations and procedures cause false-positive analytical results for your samples.



Environmental
Services

SAMPLE DESCRIPTION INFORMATION
for
Levine-Fricke

Lab ID	Client ID	Matrix	Sampled		Received	
			Date	Time	Date	Date
091642-0001-SA	2687	FILTER	29 JAN 97	16:45	30 JAN 97	97
091642-0002-SA	2686	FILTER	29 JAN 97	17:35	30 JAN 97	97
091642-0003-SA	2685	FILTER	29 JAN 97	17:20	30 JAN 97	97
091642-0004-SA	2684	FILTER	29 JAN 97	17:20	30 JAN 97	97
091642-0005-SA	2683	FILTER	30 JAN 97	18:10	31 JAN 97	97
091642-0006-SA	2682	FILTER	30 JAN 97	17:40	31 JAN 97	97
091642-0007-SA	2681	FILTER	30 JAN 97	17:50	31 JAN 97	97
091642-0008-SA	2680	FILTER	30 JAN 97	20:00	31 JAN 97	97
091642-0009-SA	2676	FILTER	31 JAN 97	17:50	03 FEB 97	97
091642-0010-SA	2677	FILTER	31 JAN 97	17:20	03 FEB 97	97
091642-0011-SA	2678	FILTER	31 JAN 97	17:00	03 FEB 97	97
091642-0012-SA	2673	FILTER	01 FEB 97	17:02	03 FEB 97	97
091642-0013-SA	2674	FILTER	01 FEB 97	16:42	03 FEB 97	97
091642-0014-SA	2675	FILTER	01 FEB 97	17:13	03 FEB 97	97
091642-0015-SA	2687-Strip A	FILTER	29 JAN 97	16:45	30 JAN 97	97
091642-0016-SA	2687-Strip B	FILTER	29 JAN 97	16:45	30 JAN 97	97
091642-0017-SA	2687-Strip C	FILTER	29 JAN 97	16:45	30 JAN 97	97
091642-0018-SA	2687-Strip D	FILTER	29 JAN 97	16:45	30 JAN 97	97
091642-0019-SA	2687-Strip E	FILTER	29 JAN 97	16:45	30 JAN 97	97
091642-0020-SA	2687-Strip F	FILTER	29 JAN 97	16:45	30 JAN 97	97
091642-0021-SA	2687-Strip G	FILTER	29 JAN 97	16:45	30 JAN 97	97
091642-0022-SA	2668	FILTER	03 FEB 97	18:05	04 FEB 97	97
091642-0023-SA	2669	FILTER	03 FEB 97	17:00	04 FEB 97	97
091642-0024-SA	2670	FILTER	03 FEB 97	18:00	04 FEB 97	97
091642-0025-SA	2671	FILTER	03 FEB 97	17:45	04 FEB 97	97
091642-0026-SA	2672	FILTER	03 FEB 97	16:35	04 FEB 97	97
091642-0027-SA	2663	FILTER	04 FEB 97	16:45	05 FEB 97	97
091642-0028-SA	2664	FILTER	04 FEB 97	18:25	05 FEB 97	97
091642-0029-SA	2665	FILTER	04 FEB 97	18:15	05 FEB 97	97
091642-0030-SA	2666	FILTER	04 FEB 97	17:50	05 FEB 97	97

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.: 3042.95-005	Field Logbook No.:	Date: 1/29/97	Serial No.:
Project Name: RIFKIN WALL DEMO	Project Location: EMERYVILLE, CA		No 15166

SAMPLER (Signature):						ANALYSES						SAMPLERS:				
SAMPLES												ARJ				
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	LEAD EPA 7421	ARSENIC EPA 7421							HOLD	RUSH	REMARKS
2687	1/29/97	1645		1	AIR									<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	V = 501 m ³
2686		1735		1	↓									<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	V = 493 m ³
2685		1720		1	↓									<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	V = 446 m ³
2684		1750		1	↓									<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	V = 0 m ³
															48-HOUR TAT	
															<u>24-HOUR TAT IF POSSIBLE</u>	
															RESULTS TO A. JENKINS / R. MILELLI / M. KNOX / S. SHIU	

RELINQUISHED BY: (Signature) <i>Alberto R. Juli</i>	DATE	TIME	RECEIVED BY: (Signature) <i>[Signature]</i>	DATE	TIME
RELINQUISHED BY: (Signature) <i>[Signature]</i>	DATE	TIME	RECEIVED BY: (Signature) <i>[Signature]</i>	DATE	TIME
RELINQUISHED BY: (Signature) <i>[Signature]</i>	DATE	TIME	RECEIVED BY: (Signature) <i>[Signature]</i>	DATE	TIME
METHOD OF SHIPMENT:	DATE	TIME	LAB COMMENTS:		

Sample Collector: LEVINE-FRICKE 1900 Powell Street, 12th Floor Emeryville, California 94608 (510) 652-4500	Analytical Laboratory: <div style="font-size: 1.5em; font-weight: bold; text-align: center;">QUANTERRA</div>
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CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.: 3042.95-005			Project Location: EMERYVILLE, CA			Date: 1/30/97		Serial No.: N ^o 1090		
Project Name: RIFKIN WALL DEMO			Field Logbook No.:							
Sampler (Signature): <i>Alexander R. Jahn</i>					ANALYSES			Samplers: ARJ		
SAMPLES										
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	ARSENIC EPA 7060	LEAD EPA 7460	HOLD	RUSH	REMARKS
2683	1/30/97	1810		1	AIR	X	X	X	X	4 = 585 m ³
2682	↓	1740		1	↓	X	X	X	X	4 = 520 m ³
2681	↓	1750		1	↓	X	X	X	X	4 = 500 m ³
2680	↓	2000		1	↓	X	X	X	X	4 = 0 m ³
TURNAROUND TIME DEPENDS ON RESULTS OF SAMPLES COLLECTED ON 1/29/97 - CALL RICK MILELLI AT (510) 546-9594										
RESULTS TO A. JENKINS / R. MILELLI / M. KNOX / S. SHIU										
RELINQUISHED BY: (Signature) <i>Alexander R. Jahn</i>			DATE	TIME	RECEIVED BY: (Signature) <i>[Signature]</i>			DATE	TIME	
RELINQUISHED BY: (Signature) <i>[Signature]</i>			DATE	TIME	RECEIVED BY: (Signature) <i>[Signature]</i>			DATE	TIME	
RELINQUISHED BY: (Signature)			DATE	TIME	RECEIVED BY: (Signature)			DATE	TIME	
METHOD OF SHIPMENT:			DATE	TIME	LAB COMMENTS:					
Sample Collector: LEVINE•FRICKE•RECON 1900 Powell Street, 12th Floor Emeryville, California 94608-1827 (510) 652-4500					Analytical Laboratory: QUANTERRA					

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.: 3042.95-005			Project Location: EMERYVILLE, CA			Date: 1/31/97			Serial No.: No 1088		
Project Name: RIFKIN WALL DEMO			Field Logbook No.:								
Sampler (Signature): <i>Olaf R. Jelin</i>						ANALYSES			Samplers: ARJ/RJM		
SAMPLES						HOLD			RUSH		
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	ARSENIC	EPA 7060	LEAD	PAHs	REMARKS	
2676	1/31/97	17:50		1	AIR	X	X			V = 728 m ³	
2677	↓	17:20		1	↓	↓	↓			V = 646 m ³	
2678	↓	17:00		1	↓	↓	↓			V = 678 m ³	
2673	2/1/97	17:02		1	↓	↓	↓			V = 507 m ³	
2674	↓	16:42		1	↓	↓	↓			V = 669 m ³	
2675	↓	17:13		1	↓	↓	↓			V = 740 m ³	
24-HOUR TAT IF POSSIBLE; OTHERWISE 48-HOUR TAT RESULTS TO A. JENKINS/ R. MILELLI / M. KNOX / S. SHIU											
RELINQUISHED BY: (Signature) <i>Olaf R. Jelin</i>			DATE	TIME	RECEIVED BY: (Signature) <i>[Signature]</i>			DATE	TIME		
			2/3/97	10:45				2/3/97	10:45		
RELINQUISHED BY: (Signature) <i>[Signature]</i>			DATE	TIME	RECEIVED BY: (Signature) <i>[Signature]</i>			DATE	TIME		
			2/3/97	11:50				020397	1215		
RELINQUISHED BY: (Signature)			DATE	TIME	RECEIVED BY: (Signature)			DATE	TIME		
METHOD OF SHIPMENT:			DATE	TIME	LAB COMMENTS:						
Sample Collector: LEVINE•FRICKE•RECON 1900 Powell Street, 12th Floor Emeryville, California 94608-1827 (510) 652-4500					Analytical Laboratory: QUANTERRA						

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.: 3042.95-005			Project Location: EMERYVILLE, CA			Date: 2/3/97		Serial No.: Nº 1096				
Project Name: RIFKIN WALL DEMO			Field Logbook No.:									
Sampler (Signature): Archie R. Jali			ANALYSES						Samplers: ARJ			
SAMPLES												
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	ARSENIC EPA 7060	LEAD EPA 7421			HOLD	RUSH	REMARKS
2668	2/3/97	18:05		1	AIR	XX	XX			XX		* = 0 m ³
2669	↓	17:00		1	↓	XX	XX			XX		* = 563 m ³
2670	↓	18:00		1	↓	XX	XX			XX		* = 735 m ³
2671	↓	17:45		1	↓	XX	XX			XX		* = 739 m ³
2672	↓	16:35		1	↓	XX	XX			XX		* = 698 m ³
24-HOUR TAT IF POSSIBLE OTHERWISE 48-HOUR TAT												
RESULTS TO A. JENKINS/ B. MILELLI / M. KNOX / S. SHIU												
RELINQUISHED BY: (Signature) Archie R. Jali			DATE 2/4/97	TIME 9:45	RECEIVED BY: (Signature) [Signature]			DATE 2/4/97	TIME 9:45			
RELINQUISHED BY: (Signature) [Signature]			DATE 2/4/97	TIME 11:20	RECEIVED BY: (Signature)			DATE	TIME			
RELINQUISHED BY: (Signature)			DATE	TIME	RECEIVED BY: (Signature) [Signature]			DATE 020497	TIME 1120			
METHOD OF SHIPMENT:			DATE	TIME	LAB COMMENTS: Received in good condition. MCO 020497							
Sample Collector: LEVINE•FRICKE•RECON 1900 Powell Street, 12th Floor Emeryville, California 94608-1827 (510) 652-4500					Analytical Laboratory: QUANTERRA							

Total Metals

Client Name: Levine-Fricke
 Client ID: 2687
 Lab ID: 091642-0001-SA
 Matrix: FILTER
 Authorized: 30 JAN 97

Sampled: 29 JAN 97
 Prepared: See Below

Received: 30 JAN 97
 Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	4.3	total ug	1.8	7060	31 JAN 97	31 JAN 97 S
Lead	18.8	total ug	1.8	7421	31 JAN 97	31 JAN 97

Note S : Reported value determined by method of standard addition.

ND = Not detected
 NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Mei Lai

The cover letter is an integral part of this report.
 Rev 230787



Environmental
Services

Total Metals

Client Name: Levine-Fricke
Client ID: 2686
Lab ID: 091642-0002-SA
Matrix: FILTER
Authorized: 30 JAN 97

Sampled: 29 JAN 97
Prepared: See Below

Received: 30 JAN 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	ND	total ug	1.8	7060	31 JAN 97	31 JAN 97
Lead	10.0	total ug	1.8	7421	31 JAN 97	31 JAN 97

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Mei Lai

The cover letter is an integral part of this report.
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Environmental
Services

Total Metals

Client Name: Levine-Fricke
Client ID: 2685
Lab ID: 091642-0003-SA
Matrix: FILTER
Authorized: 30 JAN 97

Sampled: 29 JAN 97
Prepared: See Below

Received: 30 JAN 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	ND	total ug	1.8	7060	31 JAN 97	31 JAN 97
Lead	9.1	total ug	1.8	7421	31 JAN 97	31 JAN 97

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Mei Lai

The cover letter is an integral part of this report.
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Environmental
Services

Total Metals

Client Name: Levine-Fricke
Client ID: 2684
Lab ID: 091642-0004-SA
Matrix: FILTER
Authorized: 30 JAN 97

Sampled: 29 JAN 97
Prepared: See Below

Received: 30 JAN 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	ND	total ug	1.8	7060	31 JAN 97	31 JAN 97
Lead	ND	total ug	1.8	7421	31 JAN 97	31 JAN 97

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Mei Lai

The cover letter is an integral part of this report.
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Total Metals

Client Name: Levine-Fricke
Client ID: 2683
Lab ID: 091642-0005-SA
Matrix: FILTER
Authorized: 30 JAN 97

Sampled: 30 JAN 97
Prepared: See Below

Received: 31 JAN 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	ND	total ug	1.8	7060	03 FEB 97	03 FEB 97
Lead	10.5	total ug	1.8	7421	03 FEB 97	03 FEB 97

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw

The cover letter is an integral part of this report.

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Total Metals

Client Name: Levine-Fricke
Client ID: 2682
Lab ID: 091642-0006-SA
Matrix: FILTER
Authorized: 30 JAN 97

Sampled: 30 JAN 97
Prepared: See Below

Received: 31 JAN 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	ND	total ug	1.8	7060	03 FEB 97	03 FEB 97
Lead	11.2	total ug	1.8	7421	03 FEB 97	03 FEB 97

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw

The cover letter is an integral part of this report.
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Total Metals

Client Name: Levine-Fricke
Client ID: 2681
Lab ID: 091642-0007-SA
Matrix: FILTER
Authorized: 30 JAN 97

Sampled: 30 JAN 97
Prepared: See Below

Received: 31 JAN 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	ND	total ug	1.8	7060	03 FEB 97	03 FEB 97
Lead	10.7	total ug	1.8	7421	03 FEB 97	03 FEB 97

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw

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Environmental
Services

Total Metals

Client Name: Levine-Fricke
Client ID: 2680
Lab ID: 091642-0008-SA
Matrix: FILTER
Authorized: 30 JAN 97

Sampled: 30 JAN 97
Prepared: See Below

Received: 31 JAN 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	ND	total ug	1.8	7060	03 FEB 97	03 FEB 97
Lead	ND	total ug	1.8	7421	03 FEB 97	03 FEB 97

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw

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Total Metals

Client Name: Levine-Fricke
Client ID: 2676
Lab ID: 091642-0009-SA
Matrix: FILTER
Authorized: 30 JAN 97

Sampled: 31 JAN 97
Prepared: See Below

Received: 03 FEB 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	2.9	total ug	1.8	7060	03 FEB 97	03 FEB 97
Lead	21.7	total ug	1.8	7421	03 FEB 97	03 FEB 97

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw

The cover letter is an integral part of this report.
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Total Metals

Client Name: Levine-Fricke
Client ID: 2677
Lab ID: 091642-0010-SA
Matrix: FILTER
Authorized: 30 JAN 97

Sampled: 31 JAN 97
Prepared: See Below

Received: 03 FEB 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	3.1	total ug	1.8	7060	03 FEB 97	03 FEB 97
Lead	17.3	total ug	1.8	7421	03 FEB 97	03 FEB 97

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw

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Total Metals

Client Name: Levine-Fricke
Client ID: 2678
Lab ID: 091642-0011-SA
Matrix: FILTER
Authorized: 30 JAN 97

Sampled: 31 JAN 97
Prepared: See Below

Received: 03 FEB 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	ND	total ug	1.8	7060	03 FEB 97	03 FEB 97
Lead	18.2	total ug	1.8	7421	03 FEB 97	03 FEB 97

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw

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Total Metals

Client Name: Levine-Fricke
Client ID: 2673
Lab ID: 091642-0012-SA
Matrix: FILTER
Authorized: 30 JAN 97

Sampled: 01 FEB 97
Prepared: See Below

Received: 03 FEB 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	ND	total ug	1.8	7060	03 FEB 97	03 FEB 97
Lead	2.8	total ug	1.8	7421	03 FEB 97	03 FEB 97

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw

The cover letter is an integral part of this report.
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Environmental
Services

Total Metals

Client Name: Levine-Fricke
Client ID: 2674
Lab ID: 091642-0013-SA
Matrix: FILTER
Authorized: 30 JAN 97

Sampled: 01 FEB 97
Prepared: See Below

Received: 03 FEB 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	ND	total ug	1.8	7060	03 FEB 97	03 FEB 97
Lead	4.8	total ug	1.8	7421	03 FEB 97	03 FEB 97

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw

The cover letter is an integral part of this report.
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Total Metals

Client Name: Levine-Fricke
Client ID: 2675
Lab ID: 091642-0014-SA
Matrix: FILTER
Authorized: 30 JAN 97

Sampled: 01 FEB 97
Prepared: See Below

Received: 03 FEB 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	ND	total ug	1.9	7060	03 FEB 97	03 FEB 97
Lead	4.5	total ug	1.8	7421	03 FEB 97	03 FEB 97

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw

The cover letter is an integral part of this report.
Rev 230787

Total Metals

Client Name: Levine-Fricke
Client ID: 2687-Strip A
Lab ID: 091642-0015-SA
Matrix: FILTER
Authorized: 30 JAN 97

Sampled: 29 JAN 97
Prepared: See Below

Received: 30 JAN 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	3.4	total ug	1.8	7060	03 FEB 97	03 FEB 97
Lead	15.9	total ug	1.8	7421	03 FEB 97	03 FEB 97

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw

The cover letter is an integral part of this report.
Rev 230787

Total Metals

Client Name: Levine-Fricke
Client ID: 2687-Strip B
Lab ID: 091642-0016-SA
Matrix: FILTER
Authorized: 30 JAN 97

Sampled: 29 JAN 97
Prepared: See Below

Received: 30 JAN 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	3.5	total ug	1.8	7060	03 FEB 97	03 FEB 97
Lead	16.6	total ug	1.8	7421	03 FEB 97	03 FEB 97

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw

The cover letter is an integral part of this report.
Rev 230787



Environmental
Services

Total Metals

Client Name: Levine-Fricke
Client ID: 2687-Strip C
Lab ID: 091642-0017-SA
Matrix: FILTER
Authorized: 30 JAN 97

Sampled: 29 JAN 97
Prepared: See Below

Received: 30 JAN 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	3.5	total ug	1.8	7060	03 FEB 97	03 FEB 97
Lead	15.9	total ug	1.8	7421	03 FEB 97	03 FEB 97

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw

The cover letter is an integral part of this report.
Rev 230787



Environmental
Services

Total Metals

Client Name: Levine-Fricke
Client ID: 2687-Strip D
Lab ID: 091642-0018-SA
Matrix: FILTER
Authorized: 30 JAN 97

Sampled: 29 JAN 97
Prepared: See Below

Received: 30 JAN 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	3.6	total ug	1.8	7060	03 FEB 97	03 FEB 97
Lead	15.0	total ug	1.8	7421	03 FEB 97	03 FEB 97

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw

The cover letter is an integral part of this report.
Rev 230787

Total Metals

Client Name: Levine-Fricke
Client ID: 2687-Strip E
Lab ID: 091642-0019-SA
Matrix: FILTER
Authorized: 30 JAN 97

Sampled: 29 JAN 97
Prepared: See Below

Received: 30 JAN 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	3.4	total ug	1.8	7060	03 FEB 97	03 FEB 97
Lead	15.3	total ug	1.8	7421	03 FEB 97	03 FEB 97

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw

The cover letter is an integral part of this report.
Rev 230787

Total Metals

Client Name: Levine-Fricke
Client ID: 2687-Strip F
Lab ID: 091642-0020-SA
Matrix: FILTER
Authorized: 30 JAN 97

Sampled: 29 JAN 97
Prepared: See Below

Received: 30 JAN 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	3.9	total ug	1.8	7060	03 FEB 97	04 FEB 97
Lead	17.0	total ug	1.8	7421	03 FEB 97	03 FEB 97

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw

The cover letter is an integral part of this report.
Rev 230787

Total Metals

Client Name: Levine-Fricke
Client ID: 2687-Strip G
Lab ID: 091642-0021-SA
Matrix: FILTER
Authorized: 30 JAN 97

Sampled: 29 JAN 97
Prepared: See Below

Received: 30 JAN 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	5.2	total ug	1.8	7060	03 FEB 97	03 FEB 97
Lead	18.6	total ug	1.8	7421	03 FEB 97	03 FEB 97

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw

The cover letter is an integral part of this report.
Rev 230787

Total Metals

Client Name: Levine-Fricke
Client ID: 2668
Lab ID: 091642-0022-SA
Matrix: FILTER
Authorized: 30 JAN 97

Sampled: 03 FEB 97
Prepared: See Below

Received: 04 FEB 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	ND	total ug	1.8	7060	04 FEB 97	04 FEB 97
Lead	ND	total ug	1.8	7421	04 FEB 97	04 FEB 97

ND = Not detected
NA = Not applicable

Reported By: Steven Spain

Approved By: Barry Votaw

The cover letter is an integral part of this report.
Rev 230787

Total Metals

Client Name: Levine-Fricke
Client ID: 2669
Lab ID: 091642-0023-SA
Matrix: FILTER
Authorized: 30 JAN 97

Sampled: 03 FEB 97
Prepared: See Below

Received: 04 FEB 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	5.5	total ug	1.8	7060	04 FEB 97	04 FEB 97
Lead	16.2	total ug	1.8	7421	04 FEB 97	04 FEB 97

ND = Not detected
NA = Not applicable

Reported By: Steven Spain

Approved By: Barry Votaw

The cover letter is an integral part of this report.
Rev 230787

Total Metals

Client Name: Levine-Fricke
Client ID: 2670
Lab ID: 091642-0024-SA
Matrix: FILTER
Authorized: 30 JAN 97

Sampled: 03 FEB 97
Prepared: See Below

Received: 04 FEB 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	4.0	total ug	1.8	7060	04 FEB 97	04 FEB 97
Lead	30.3	total ug	3.6	7421	04 FEB 97	04 FEB 97 R

Note R : Raised reporting limit(s) due to high analyte level(s).

ND = Not detected
NA = Not applicable

Reported By: Steven Spain

Approved By: Barry Votaw

The cover letter is an integral part of this report.

Rev 230787



Environmental
Services

Total Metals

Client Name: Levine-Fricke
Client ID: 2671
Lab ID: 091642-0025-SA
Matrix: FILTER
Authorized: 30 JAN 97

Sampled: 03 FEB 97
Prepared: See Below

Received: 04 FEB 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	ND	total ug	1.8	7060	04 FEB 97	04 FEB 97
Lead	20.6	total ug	1.8	7421	04 FEB 97	04 FEB 97

ND = Not detected
NA = Not applicable

Reported By: Steven Spain

Approved By: Barry Votaw

The cover letter is an integral part of this report.
Rev 230787

Total Metals

Client Name: Levine-Fricke
Client ID: 2672
Lab ID: 091642-0026-SA
Matrix: FILTER
Authorized: 30 JAN 97

Sampled: 03 FEB 97
Prepared: See Below

Received: 04 FEB 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	ND	total ug	1.8	7060	04 FEB 97	04 FEB 97
Lead	21.2	total ug	1.8	7421	04 FEB 97	04 FEB 97

ND = Not detected
NA = Not applicable

Reported By: Steven Spain

Approved By: Barry Votaw

The cover letter is an integral part of this report.
Rev 230787

Total Metals

Client Name: Levine-Fricke
Client ID: 2663
Lab ID: 091642-0027-SA
Matrix: FILTER
Authorized: 30 JAN 97

Sampled: 04 FEB 97
Prepared: See Below

Received: 05 FEB 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	ND	total ug	1.8	7060	06 FEB 97	06 FEB 97
Lead	5.6	total ug	1.8	7421	06 FEB 97	06 FEB 97

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Mei Lai

The cover letter is an integral part of this report.
Rev 230787

Total Metals

Client Name: Levine-Fricke
Client ID: 2664
Lab ID: 091642-0028-SA
Matrix: FILTER
Authorized: 30 JAN 97

Sampled: 04 FEB 97
Prepared: See Below

Received: 05 FEB 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	ND	total ug	1.8	7060	06 FEB 97	06 FEB 97
Lead	7.7	total ug	1.8	7421	06 FEB 97	06 FEB 97

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Mei Lai

The cover letter is an integral part of this report.
Rev 230787



Environmental
Services

Total Metals

Client Name: Levine-Fricke
Client ID: 2665
Lab ID: 091642-0029-SA
Matrix: FILTER
Authorized: 30 JAN 97

Sampled: 04 FEB 97
Prepared: See Below

Received: 05 FEB 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	ND	total ug	1.8	7060	06 FEB 97	06 FEB 97
Lead	8.9	total ug	1.8	7421	06 FEB 97	06 FEB 97

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Mei Lai

The cover letter is an integral part of this report.
Rev 230787



Environmental
Services

Total Metals

Client Name: Levine-Fricke
Client ID: 2666
Lab ID: 091642-0030-SA
Matrix: FILTER
Authorized: 30 JAN 97

Sampled: 04 FEB 97
Prepared: See Below

Received: 05 FEB 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	ND	total ug	1.8	7060	06 FEB 97	06 FEB 97
Lead	7.2	total ug	1.8	7421	06 FEB 97	06 FEB 97

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Mei Lai

The cover letter is an integral part of this report.
Rev 230787



Environmental
Services

QC LOT ASSIGNMENT REPORT
Metals Analysis and Preparation

Laboratory Sample Number	QC Matrix	QC Category	QC Lot Number (DCS)	QC Run Number (SCS/BLANK)
091642-0001-SA	AQUEOUS	AS-FAA-AT	30 JAN 97-R	30 JAN 97-R
091642-0001-SA	AQUEOUS	PB-FAA-AT	30 JAN 97-R	30 JAN 97-R
091642-0002-SA	AQUEOUS	AS-FAA-AT	30 JAN 97-R	30 JAN 97-R
091642-0002-SA	AQUEOUS	PB-FAA-AT	30 JAN 97-R	30 JAN 97-R
091642-0003-SA	AQUEOUS	AS-FAA-AT	30 JAN 97-R	30 JAN 97-R
091642-0003-SA	AQUEOUS	PB-FAA-AT	30 JAN 97-R	30 JAN 97-R
091642-0004-SA	AQUEOUS	AS-FAA-AT	30 JAN 97-R	30 JAN 97-R
091642-0004-SA	AQUEOUS	PB-FAA-AT	30 JAN 97-R	30 JAN 97-R
091642-0005-SA	AQUEOUS	AS-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0005-SA	AQUEOUS	PB-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0006-SA	AQUEOUS	AS-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0006-SA	AQUEOUS	PB-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0007-SA	AQUEOUS	AS-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0007-SA	AQUEOUS	PB-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0008-SA	AQUEOUS	AS-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0008-SA	AQUEOUS	PB-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0009-SA	AQUEOUS	AS-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0009-SA	AQUEOUS	PB-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0010-SA	AQUEOUS	AS-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0010-SA	AQUEOUS	PB-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0011-SA	AQUEOUS	AS-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0011-SA	AQUEOUS	PB-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0012-SA	AQUEOUS	AS-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0012-SA	AQUEOUS	PB-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0013-SA	AQUEOUS	AS-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0013-SA	AQUEOUS	PB-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0014-SA	AQUEOUS	AS-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0014-SA	AQUEOUS	PB-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0015-SA	AQUEOUS	AS-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0015-SA	AQUEOUS	PB-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0016-SA	AQUEOUS	AS-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0016-SA	AQUEOUS	PB-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0017-SA	AQUEOUS	AS-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0017-SA	AQUEOUS	PB-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0018-SA	AQUEOUS	AS-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0018-SA	AQUEOUS	PB-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0019-SA	AQUEOUS	AS-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0019-SA	AQUEOUS	PB-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0020-SA	AQUEOUS	AS-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0020-SA	AQUEOUS	PB-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0021-SA	AQUEOUS	AS-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0021-SA	AQUEOUS	PB-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0022-SA	AQUEOUS	AS-FAA-AT	04 FEB 97-S	04 FEB 97-S
091642-0022-SA	AQUEOUS	PB-FAA-AT	04 FEB 97-S	04 FEB 97-S
091642-0023-SA	AQUEOUS	AS-FAA-AT	04 FEB 97-S	04 FEB 97-S
091642-0023-SA	AQUEOUS	PB-FAA-AT	04 FEB 97-S	04 FEB 97-S
091642-0024-SA	AQUEOUS	AS-FAA-AT	04 FEB 97-S	04 FEB 97-S



Environmental
Services

QC LOT ASSIGNMENT REPORT
Metals Analysis and Preparation (cont.)

Laboratory Sample Number	QC Matrix	QC Category	QC Lot Number (DCS)	QC Run Number (SCS/BLANK)
091642-0024-SA	AQUEOUS	PB-FAA-AT	04 FEB 97-S	04 FEB 97-S
091642-0025-SA	AQUEOUS	AS-FAA-AT	04 FEB 97-S	04 FEB 97-S
091642-0025-SA	AQUEOUS	PB-FAA-AT	04 FEB 97-S	04 FEB 97-S
091642-0026-SA	AQUEOUS	AS-FAA-AT	04 FEB 97-S	04 FEB 97-S
091642-0026-SA	AQUEOUS	PB-FAA-AT	04 FEB 97-S	04 FEB 97-S
091642-0027-SA	AQUEOUS	AS-FAA-AT	06 FEB 97-Q	06 FEB 97-Q
091642-0027-SA	AQUEOUS	PB-FAA-AT	06 FEB 97-Q	06 FEB 97-Q
091642-0028-SA	AQUEOUS	AS-FAA-AT	06 FEB 97-Q	06 FEB 97-Q
091642-0028-SA	AQUEOUS	PB-FAA-AT	06 FEB 97-Q	06 FEB 97-Q
091642-0029-SA	AQUEOUS	AS-FAA-AT	06 FEB 97-Q	06 FEB 97-Q
091642-0029-SA	AQUEOUS	PB-FAA-AT	06 FEB 97-Q	06 FEB 97-Q
091642-0030-SA	AQUEOUS	AS-FAA-AT	06 FEB 97-Q	06 FEB 97-Q
091642-0030-SA	AQUEOUS	PB-FAA-AT	06 FEB 97-Q	06 FEB 97-Q

METHOD BLANK REPORT
Metals Analysis and Preparation

Analyte	Result	Units	Reporting Limit
Test: AS-FAA-FILTER Matrix: FILTER QC Lot: 30 JAN 97-R QC Run: 30 JAN 97-R			
Arsenic	ND	total ug	1.8
Test: PB-FAA-FILTER Matrix: FILTER QC Lot: 30 JAN 97-R QC Run: 30 JAN 97-R			
Lead	ND	total ug	1.8
Test: AS-FAA-FILTER Matrix: FILTER QC Lot: 03 FEB 97-Q QC Run: 03 FEB 97-Q			
Arsenic	ND	total ug	1.8
Test: PB-FAA-FILTER Matrix: FILTER QC Lot: 03 FEB 97-Q QC Run: 03 FEB 97-Q			
Lead	ND	total ug	1.8
Test: AS-FAA-FILTER Matrix: FILTER QC Lot: 04 FEB 97-S QC Run: 04 FEB 97-S			
Arsenic	ND	total ug	1.8
Test: PB-FAA-FILTER Matrix: FILTER QC Lot: 04 FEB 97-S QC Run: 04 FEB 97-S			
Lead	ND	total ug	1.8

METHOD BLANK REPORT
Metals Analysis and Preparation (cont.)

Analyte	Result	Units	Reporting Limit
Test: AS-FAA-FILTER Matrix: FILTER QC Lot: 06 FEB 97-Q QC Run: 06 FEB 97-Q			
Arsenic	ND	total ug	1.8
Test: PB-FAA-FILTER Matrix: FILTER QC Lot: 06 FEB 97-Q QC Run: 06 FEB 97-Q			
Lead	ND	total ug	1.8



Environmental
Services

DUPLICATE CONTROL SAMPLE REPORT
Metals Analysis and Preparation

Analyte	Spiked	Concentration			Accuracy		Precision	
		DCS1	Measured DCS2	AVG	Average (%) DCS	Limits	(RPD) DCS	Limit
Category: AS-FAA-AT Matrix: AQUEOUS QC Lot: 30 JAN 97-R Concentration Units: mg/L								
Arsenic	0.040	0.0404	0.0423	0.0414	103	79-120	4.6	16.0
Category: PB-FAA-AT Matrix: AQUEOUS QC Lot: 30 JAN 97-R Concentration Units: mg/L								
Lead	0.020	0.0203	0.0208	0.0206	103	83-124	2.4	20.0
Category: AS-FAA-AT Matrix: AQUEOUS QC Lot: 03 FEB 97-Q Concentration Units: mg/L								
Arsenic	0.040	0.0393	0.0400	0.0396	99	79-120	1.8	16.0
Category: PB-FAA-AT Matrix: AQUEOUS QC Lot: 03 FEB 97-Q Concentration Units: mg/L								
Lead	0.020	0.0198	0.0201	0.0200	100	83-124	1.5	20.0
Category: AS-FAA-AT Matrix: AQUEOUS QC Lot: 04 FEB 97-S Concentration Units: mg/L								
Arsenic	0.040	0.0448	0.0444	0.0446	112	79-120	0.9	16.0

Calculations are performed before rounding to avoid round-off errors in calculated results.



Environmental
Services

DUPLICATE CONTROL SAMPLE REPORT
Metals Analysis and Preparation (cont.)

Analyte	Spiked	Concentration		AVG	Accuracy		Precision	
		DCS1	Measured DCS2		Average(%) DCS	Limits	(RPD) DCS	Limit
Category: PB-FAA-AT Matrix: AQUEOUS QC Lot: 04 FEB 97-S Concentration Units: mg/L								
Lead	0.020	0.0184	0.0175	0.0180	90	83-124	5.0	20.0
Category: AS-FAA-AT Matrix: AQUEOUS QC Lot: 06 FEB 97-Q Concentration Units: mg/L								
Arsenic	0.040	0.0360	0.0372	0.0366	91	79-120	3.3	16.0
Category: PB-FAA-AT Matrix: AQUEOUS QC Lot: 06 FEB 97-Q Concentration Units: mg/L								
Lead	0.020	0.0192	0.0190	0.0191	96	83-124	1.3	20.0

Calculations are performed before rounding to avoid round-off errors in calculated results.



Environmental
Services

Total Metals

Client Name: Levine-Fricke
Client ID: 2687
Lab ID: 091642-0001-SA
Matrix: FILTER
Authorized: 30 JAN 97

Sampled: 29 JAN 97
Prepared: See Below

Received: 30 JAN 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	4.3	total ug	1.8	7060	31 JAN 97	31 JAN 97 S
Lead	18.8	total ug	1.8	7421	31 JAN 97	31 JAN 97

Note S : Reported value determined by method of standard addition.

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Mei Lai

The cover letter is an integral part of this report.
Rev 230787

Total Metals

Client Name: Levine-Fricke
Client ID: 2686
Lab ID: 091642-0002-SA
Matrix: FILTER
Authorized: 30 JAN 97

Sampled: 29 JAN 97
Prepared: See Below

Received: 30 JAN 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	ND	total ug	1.8	7060	31 JAN 97	31 JAN 97
Lead	10.0	total ug	1.8	7421	31 JAN 97	31 JAN 97

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Mei Lai

The cover letter is an integral part of this report.
Rev 230787

Total Metals

Client Name: Levine-Fricke
Client ID: 2685
Lab ID: 091642-0003-SA
Matrix: FILTER
Authorized: 30 JAN 97

Sampled: 29 JAN 97
Prepared: See Below

Received: 30 JAN 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	ND	total ug	1.8	7060	31 JAN 97	31 JAN 97
Lead	9.1	total ug	1.8	7421	31 JAN 97	31 JAN 97

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Mei Lai

The cover letter is an integral part of this report.
Rev 230787



Environmental
Services

Total Metals

Client Name: Levine-Fricke
Client ID: 2684
Lab ID: 091642-0004-SA
Matrix: FILTER
Authorized: 30 JAN 97

Sampled: 29 JAN 97
Prepared: See Below

Received: 30 JAN 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	ND	total ug	1.8	7060	31 JAN 97	31 JAN 97
Lead	ND	total ug	1.8	7421	31 JAN 97	31 JAN 97

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Mei Lai

The cover letter is an integral part of this report.
Rev 230787

Total Metals

Client Name: Levine-Fricke
Client ID: 2683
Lab ID: 091642-0005-SA
Matrix: FILTER
Authorized: 30 JAN 97

Sampled: 30 JAN 97
Prepared: See Below

Received: 31 JAN 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	ND	total ug	1.8	7060	03 FEB 97	03 FEB 97
Lead	10.5	total ug	1.8	7421	03 FEB 97	03 FEB 97

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw

The cover letter is an integral part of this report.
Rev 230787



Environmental
Services

Total Metals

Client Name: Levine-Fricke
Client ID: 2682
Lab ID: 091642-0006-SA
Matrix: FILTER
Authorized: 30 JAN 97

Sampled: 30 JAN 97
Prepared: See Below

Received: 31 JAN 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	ND	total ug	1.8	7060	03 FEB 97	03 FEB 97
Lead	11.2	total ug	1.8	7421	03 FEB 97	03 FEB 97

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw

The cover letter is an integral part of this report.
Rev 230787



Environmental
Services

Total Metals

Client Name: Levine-Fricke
Client ID: 2681
Lab ID: 091642-0007-SA
Matrix: FILTER
Authorized: 30 JAN 97

Sampled: 30 JAN 97
Prepared: See Below

Received: 31 JAN 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	ND	total ug	1.8	7060	03 FEB 97	03 FEB 97
Lead	10.7	total ug	1.8	7421	03 FEB 97	03 FEB 97

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw

The cover letter is an integral part of this report.
Rev 230787

Total Metals

Client Name: Levine-Fricke
Client ID: 2680
Lab ID: 091642-0008-SA
Matrix: FILTER
Authorized: 30 JAN 97

Sampled: 30 JAN 97
Prepared: See Below

Received: 31 JAN 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	ND	total ug	1.8	7060	03 FEB 97	03 FEB 97
Lead	ND	total ug	1.8	7421	03 FEB 97	03 FEB 97

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw

The cover letter is an integral part of this report.
Rev 230787

Total Metals

Client Name: Levine-Fricke
Client ID: 2676
Lab ID: 091642-0009-SA
Matrix: FILTER
Authorized: 30 JAN 97

Sampled: 31 JAN 97
Prepared: See Below

Received: 03 FEB 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	2.9	total ug	1.8	7060	03 FEB 97	03 FEB 97
Lead	21.7	total ug	1.8	7421	03 FEB 97	03 FEB 97

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw

The cover letter is an integral part of this report.
Rev 230787

Total Metals

Client Name: Levine-Fricke
Client ID: 2677
Lab ID: 091642-0010-SA
Matrix: FILTER
Authorized: 30 JAN 97

Sampled: 31 JAN 97
Prepared: See Below

Received: 03 FEB 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	3.1	total ug	1.8	7060	03 FEB 97	03 FEB 97
Lead	17.3	total ug	1.8	7421	03 FEB 97	03 FEB 97

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw

The cover letter is an integral part of this report.
Rev 230787

Total Metals

Client Name: Levine-Fricke
Client ID: 2678
Lab ID: 091642-0011-SA
Matrix: FILTER
Authorized: 30 JAN 97

Sampled: 31 JAN 97
Prepared: See Below

Received: 03 FEB 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	ND	total ug	1.8	7060	03 FEB 97	03 FEB 97
Lead	18.2	total ug	1.8	7421	03 FEB 97	03 FEB 97

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw

The cover letter is an integral part of this report.
Rev 230787



Environmental
Services

Total Metals

Client Name: Levine-Fricke
Client ID: 2673
Lab ID: 091642-0012-SA
Matrix: FILTER
Authorized: 30 JAN 97

Sampled: 01 FEB 97
Prepared: See Below

Received: 03 FEB 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	ND	total ug	1.8	7060	03 FEB 97	03 FEB 97
Lead	2.8	total ug	1.8	7421	03 FEB 97	03 FEB 97

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw

The cover letter is an integral part of this report.
Rev 230787

Total Metals

Client Name: Levine-Fricke
Client ID: 2674
Lab ID: 091642-0013-SA
Matrix: FILTER
Authorized: 30 JAN 97

Sampled: 01 FEB 97
Prepared: See Below

Received: 03 FEB 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	ND	total ug	1.8	7060	03 FEB 97	03 FEB 97
Lead	4.8	total ug	1.8	7421	03 FEB 97	03 FEB 97

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw

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Rev 230787



Environmental
Services

Total Metals

Client Name: Levine-Fricke
Client ID: 2675
Lab ID: 091642-0014-SA
Matrix: FILTER
Authorized: 30 JAN 97

Sampled: 01 FEB 97
Prepared: See Below

Received: 03 FEB 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	ND	total ug	1.9	7060	03 FEB 97	03 FEB 97
Lead	4.5	total ug	1.8	7421	03 FEB 97	03 FEB 97

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw

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Rev 230787

Total Metals

Client Name: Levine-Fricke
Client ID: 2687-Strip A
Lab ID: 091642-0015-SA
Matrix: FILTER
Authorized: 30 JAN 97

Sampled: 29 JAN 97
Prepared: See Below

Received: 30 JAN 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	3.4	total ug	1.8	7060	03 FEB 97	03 FEB 97
Lead	15.9	total ug	1.8	7421	03 FEB 97	03 FEB 97

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw

The cover letter is an integral part of this report.
Rev 230787

Total Metals

Client Name: Levine-Fricke
Client ID: 2687-Strip B
Lab ID: 091642-0016-SA
Matrix: FILTER
Authorized: 30 JAN 97

Sampled: 29 JAN 97
Prepared: See Below

Received: 30 JAN 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	3.5	total ug	1.8	7060	03 FEB 97	03 FEB 97
Lead	16.6	total ug	1.8	7421	03 FEB 97	03 FEB 97

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw

The cover letter is an integral part of this report.
Rev 230787



Environmental
Services

Total Metals

Client Name: Levine-Fricke
Client ID: 2687-Strip C
Lab ID: 091642-0017-SA
Matrix: FILTER
Authorized: 30 JAN 97

Sampled: 29 JAN 97
Prepared: See Below

Received: 30 JAN 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	3.5	total ug	1.8	7060	03 FEB 97	03 FEB 97
Lead	15.9	total ug	1.8	7421	03 FEB 97	03 FEB 97

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw

The cover letter is an integral part of this report.
Rev 230787



Environmental
Services

Total Metals

Client Name: Levine-Fricke
Client ID: 2687-Strip D
Lab ID: 091642-0018-SA
Matrix: FILTER
Authorized: 30 JAN 97

Sampled: 29 JAN 97
Prepared: See Below

Received: 30 JAN 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	3.6	total ug	1.8	7060	03 FEB 97	03 FEB 97
Lead	15.0	total ug	1.8	7421	03 FEB 97	03 FEB 97

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw

The cover letter is an integral part of this report.
Rev 230787

Total Metals

Client Name: Levine-Fricke
 Client ID: 2687-Strip E
 Lab ID: 091642-0019-SA
 Matrix: FILTER
 Authorized: 30 JAN 97

Sampled: 29 JAN 97
 Prepared: See Below

Received: 30 JAN 97
 Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	3.4	total ug	1.8	7060	03 FEB 97	03 FEB 97
Lead	15.3	total ug	1.8	7421	03 FEB 97	03 FEB 97

ND = Not detected
 NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw

The cover letter is an integral part of this report.
 Rev 230787

Total Metals

Client Name: Levine-Fricke
Client ID: 2687-Strip F
Lab ID: 091642-0020-SA
Matrix: FILTER
Authorized: 30 JAN 97

Sampled: 29 JAN 97
Prepared: See Below

Received: 30 JAN 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	3.9	total ug	1.8	7060	03 FEB 97	04 FEB 97
Lead	17.0	total ug	1.8	7421	03 FEB 97	03 FEB 97

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw

The cover letter is an integral part of this report.
Rev 230787

Total Metals

Client Name: Levine-Fricke
Client ID: 2687-Strip G
Lab ID: 091642-0021-SA
Matrix: FILTER
Authorized: 30 JAN 97

Sampled: 29 JAN 97
Prepared: See Below

Received: 30 JAN 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	5.2	total ug	1.8	7060	03 FEB 97	03 FEB 97
Lead	18.6	total ug	1.8	7421	03 FEB 97	03 FEB 97

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw

The cover letter is an integral part of this report.
Rev 230787

Total Metals

Client Name: Levine-Fricke
Client ID: 2668
Lab ID: 091642-0022-SA
Matrix: FILTER
Authorized: 30 JAN 97

Sampled: 03 FEB 97
Prepared: See Below

Received: 04 FEB 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	ND	total ug	1.8	7060	04 FEB 97	04 FEB 97
Lead	ND	total ug	1.8	7421	04 FEB 97	04 FEB 97

ND = Not detected
NA = Not applicable

Reported By: Steven Spain

Approved By: Barry Votaw

The cover letter is an integral part of this report.
Rev 230787

Total Metals

Client Name: Levine-Fricke
Client ID: 2669
Lab ID: 091642-0023-SA
Matrix: FILTER
Authorized: 30 JAN 97

Sampled: 03 FEB 97
Prepared: See Below

Received: 04 FEB 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	5.5	total ug	1.8	7060	04 FEB 97	04 FEB 97
Lead	16.2	total ug	1.8	7421	04 FEB 97	04 FEB 97

ND = Not detected
NA = Not applicable

Reported By: Steven Spain

Approved By: Barry Votaw

The cover letter is an integral part of this report.
Rev 230787

Total Metals

Client Name: Levine-Fricke
Client ID: 2670
Lab ID: 091642-0024-SA
Matrix: FILTER
Authorized: 30 JAN 97

Sampled: 03 FEB 97
Prepared: See Below

Received: 04 FEB 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	4.0	total ug	1.8	7060	04 FEB 97	04 FEB 97
Lead	30.3	total ug	3.6	7421	04 FEB 97	04 FEB 97 R

Note R : Raised reporting limit(s) due to high analyte level(s).

ND = Not detected
NA = Not applicable

Reported By: Steven Spain

Approved By: Barry Votaw

The cover letter is an integral part of this report.
Rev 230787

Total Metals

Client Name: Levine-Fricke
Client ID: 2671
Lab ID: 091642-0025-SA
Matrix: FILTER
Authorized: 30 JAN 97

Sampled: 03 FEB 97
Prepared: See Below

Received: 04 FEB 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	ND	total ug	1.8	7060	04 FEB 97	04 FEB 97
Lead	20.6	total ug	1.8	7421	04 FEB 97	04 FEB 97

ND = Not detected
NA = Not applicable

Reported By: Steven Spain

Approved By: Barry Votaw

The cover letter is an integral part of this report.
Rev 230787

Total Metals

Client Name: Levine-Fricke
Client ID: 2672
Lab ID: 091642-0026-SA
Matrix: FILTER
Authorized: 30 JAN 97

Sampled: 03 FEB 97
Prepared: See Below

Received: 04 FEB 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	ND	total ug	1.8	7060	04 FEB 97	04 FEB 97
Lead	21.2	total ug	1.8	7421	04 FEB 97	04 FEB 97

ND = Not detected
NA = Not applicable

Reported By: Steven Spain

Approved By: Barry Votaw

The cover letter is an integral part of this report.
Rev 230787

QC LOT ASSIGNMENT REPORT
Metals Analysis and Preparation

Laboratory Sample Number	QC Matrix	QC Category	QC Lot Number (DCS)	QC Run Number (LCS/BLANK)
091642-0001-SA	AQUEOUS	AS-FAA-AT	30 JAN 97-R	30 JAN 97-R
091642-0001-SA	AQUEOUS	PB-FAA-AT	30 JAN 97-R	30 JAN 97-R
091642-0002-SA	AQUEOUS	AS-FAA-AT	30 JAN 97-R	30 JAN 97-R
091642-0002-SA	AQUEOUS	PB-FAA-AT	30 JAN 97-R	30 JAN 97-R
091642-0003-SA	AQUEOUS	AS-FAA-AT	30 JAN 97-R	30 JAN 97-R
091642-0003-SA	AQUEOUS	PB-FAA-AT	30 JAN 97-R	30 JAN 97-R
091642-0004-SA	AQUEOUS	AS-FAA-AT	30 JAN 97-R	30 JAN 97-R
091642-0004-SA	AQUEOUS	PB-FAA-AT	30 JAN 97-R	30 JAN 97-R
091642-0005-SA	AQUEOUS	AS-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0005-SA	AQUEOUS	PB-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0006-SA	AQUEOUS	AS-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0006-SA	AQUEOUS	PB-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0007-SA	AQUEOUS	AS-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0007-SA	AQUEOUS	PB-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0008-SA	AQUEOUS	AS-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0008-SA	AQUEOUS	PB-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0009-SA	AQUEOUS	AS-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0009-SA	AQUEOUS	PB-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0010-SA	AQUEOUS	AS-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0010-SA	AQUEOUS	PB-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0011-SA	AQUEOUS	AS-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0011-SA	AQUEOUS	PB-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0012-SA	AQUEOUS	AS-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0012-SA	AQUEOUS	PB-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0013-SA	AQUEOUS	AS-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0013-SA	AQUEOUS	PB-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0014-SA	AQUEOUS	AS-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0014-SA	AQUEOUS	PB-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0015-SA	AQUEOUS	AS-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0015-SA	AQUEOUS	PB-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0016-SA	AQUEOUS	AS-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0016-SA	AQUEOUS	PB-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0017-SA	AQUEOUS	AS-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0017-SA	AQUEOUS	PB-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0018-SA	AQUEOUS	AS-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0018-SA	AQUEOUS	PB-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0019-SA	AQUEOUS	AS-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0019-SA	AQUEOUS	PB-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0020-SA	AQUEOUS	AS-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0020-SA	AQUEOUS	PB-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0021-SA	AQUEOUS	AS-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0021-SA	AQUEOUS	PB-FAA-AT	03 FEB 97-Q	03 FEB 97-Q
091642-0022-SA	AQUEOUS	AS-FAA-AT	04 FEB 97-S	04 FEB 97-S
091642-0022-SA	AQUEOUS	PB-FAA-AT	04 FEB 97-S	04 FEB 97-S
091642-0023-SA	AQUEOUS	AS-FAA-AT	04 FEB 97-S	04 FEB 97-S
091642-0023-SA	AQUEOUS	PB-FAA-AT	04 FEB 97-S	04 FEB 97-S
091642-0024-SA	AQUEOUS	AS-FAA-AT	04 FEB 97-S	04 FEB 97-S
091642-0024-SA	AQUEOUS	PB-FAA-AT	04 FEB 97-S	04 FEB 97-S

QC LOT ASSIGNMENT REPORT
Metals Analysis and Preparation
(cont.)

Laboratory Sample Number	QC Matrix	QC Category	QC Lot Number (DCS)	QC Run Number (LCS/BLANK)
091642-0025-SA	AQUEOUS	AS-FAA-AT	04 FEB 97-S	04 FEB 97-S
091642-0025-SA	AQUEOUS	PB-FAA-AT	04 FEB 97-S	04 FEB 97-S
091642-0026-SA	AQUEOUS	AS-FAA-AT	04 FEB 97-S	04 FEB 97-S
091642-0026-SA	AQUEOUS	PB-FAA-AT	04 FEB 97-S	04 FEB 97-S

METHOD BLANK REPORT
Metals Analysis and Preparation
Project: 091642

Test: AS-FAA-FILTER Arsenic, Furnace AA
Method: 7060
Matrix: AQUEOUS
QC Lot: 30 JAN 97-R QC Run: 30 JAN 97-R

Analyte	Result	Units	Reporting Limit
Arsenic	ND	total ug	1.8

Test: AS-FAA-FILTER Arsenic, Furnace AA
Method: 7060
Matrix: AQUEOUS
QC Lot: 03 FEB 97-Q QC Run: 03 FEB 97-Q

Analyte	Result	Units	Reporting Limit
Arsenic	ND	total ug	1.8

Test: AS-FAA-FILTER Arsenic, Furnace AA
Method: 7060
Matrix: AQUEOUS
QC Lot: 04 FEB 97-S QC Run: 04 FEB 97-S

Analyte	Result	Units	Reporting Limit
Arsenic	ND	total ug	1.8

Test: PB-FAA-FILTER Lead, Furnace AA
Method: 7421
Matrix: AQUEOUS
QC Lot: 30 JAN 97-R QC Run: 30 JAN 97-R

Analyte	Result	Units	Reporting Limit
Lead	ND	total ug	1.8

ND = Not Detected

METHOD BLANK REPORT
Metals Analysis and Preparation
Project: 091642

(cont.)

Test: PB-FAA-FILTER Lead, Furnace AA
Method: 7421
Matrix: AQUEOUS
QC Lot: 03 FEB 97-Q QC Run: 03 FEB 97-Q

Analyte	Result	Units	Reporting Limit
Lead	ND	total ug	1.8

Test: PB-FAA-FILTER Lead, Furnace AA
Method: 7421
Matrix: AQUEOUS
QC Lot: 04 FEB 97-S QC Run: 04 FEB 97-S

Analyte	Result	Units	Reporting Limit
Lead	ND	total ug	1.8

DUPLICATE CONTROL SAMPLE REPORT
Metals Analysis and Preparation
Project: 091642

Category: AS-FAA-A Arsenic, Furnace AA
Testcode: AS-FAA-FILTER
Matrix: AQUEOUS
QC Lot: 30 JAN 97-R
Method: 7060
Concentration Units: mg/L
Analyzed Date: 31 JAN 97
Time: 09:36

Analyte	-----Concentration-----			Accuracy Average(%)	Precision (RPD)	
	Spiked	-----Measured-----				
		DCS1	DCS2	AVG	DCS Limits	DCS Limit
Arsenic	0.0400	0.0404	0.0423	0.0414	103 79-120	4.6 16

Category: AS-FAA-A Arsenic, Furnace AA
Testcode: AS-FAA-FILTER
Matrix: AQUEOUS
QC Lot: 03 FEB 97-Q
Method: 7060
Concentration Units: mg/L
Analyzed Date: 03 FEB 97
Time: 13:51

Analyte	-----Concentration-----			Accuracy Average(%)	Precision (RPD)	
	Spiked	-----Measured-----				
		DCS1	DCS2	AVG	DCS Limits	DCS Limit
Arsenic	0.0400	0.0393	0.0400	0.0396	99 79-120	1.8 16

Category: AS-FAA-A Arsenic, Furnace AA
Testcode: AS-FAA-FILTER
Matrix: AQUEOUS
QC Lot: 04 FEB 97-S
Method: 7060
Concentration Units: mg/L
Analyzed Date: 04 FEB 97
Time: 22:45

Analyte	-----Concentration-----			Accuracy Average(%)	Precision (RPD)	
	Spiked	-----Measured-----				
		DCS1	DCS2	AVG	DCS Limits	DCS Limit
Arsenic	0.0400	0.0448	0.0444	0.0446	112 79-120	0.9 16

Calculations are performed before rounding to avoid round-off errors in calculated results.

DUPLICATE CONTROL SAMPLE REPORT
Metals Analysis and Preparation
Project: 091642

(cont.)

Category: PB-FAA-A Lead, Furnance AA (Total)

Testcode: PB-FAA-FILTER

Matrix: AQUEOUS

QC Lot: 30 JAN 97-R

Method: 7421

Concentration Units: mg/L

Analyzed Date: 31 JAN 97

Time: 09:19

Analyte	-----Concentration-----			Accuracy Average(%)	Precision (RPD)
	Spiked	-----Measured-----			
	DCS1	DCS2	AVG	DCS Limits	DCS Limit
Lead	0.0200	0.0203	0.0208	0.0206	103 83-124 2.4 20

Category: PB-FAA-A Lead, Furnance AA (Total)

Testcode: PB-FAA-FILTER

Matrix: AQUEOUS

QC Lot: 03 FEB 97-Q

Method: 7421

Concentration Units: mg/L

Analyzed Date: 03 FEB 97

Time: 13:51

Analyte	-----Concentration-----			Accuracy Average(%)	Precision (RPD)
	Spiked	-----Measured-----			
	DCS1	DCS2	AVG	DCS Limits	DCS Limit
Lead	0.0200	0.0198	0.0201	0.0200	100 83-124 1.5 20

Category: PB-FAA-A Lead, Furnance AA (Total)

Testcode: PB-FAA-FILTER

Matrix: AQUEOUS

QC Lot: 04 FEB 97-S

Method: 7421

Concentration Units: mg/L

Analyzed Date: 04 FEB 97

Time: 18:47

Analyte	-----Concentration-----			Accuracy Average(%)	Precision (RPD)
	Spiked	-----Measured-----			
	DCS1	DCS2	AVG	DCS Limits	DCS Limit
Lead	0.0200	0.0184	0.0175	0.0180	90 83-124 5.0 20

Calculations are performed before rounding to avoid round-off errors in calculated results.



Environmental
Services

Total Metals

Client Name: Levine-Fricke
Client ID: 2687
Lab ID: 091642-0001-SA
Matrix: FILTER
Authorized: 30 JAN 97

Sampled: 29 JAN 97
Prepared: See Below

Received: 30 JAN 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	4.3	total ug	1.8	7060	31 JAN 97	31 JAN 97 S

Note S : Reported value determined by method of standard addition.

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Mei Lai

The cover letter is an integral part of this report.
Rev 230787



Environmental
Services

Total Metals

Client Name: Levine-Fricke
Client ID: 2686
Lab ID: 091642-0002-SA
Matrix: FILTER
Authorized: 30 JAN 97

Sampled: 29 JAN 97
Prepared: See Below

Received: 30 JAN 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	ND	total ug	1.8	7060	31 JAN 97	31 JAN 97

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Mei Lai

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Rev 230787

Total Metals

Client Name: Levine-Fricke
Client ID: 2685
Lab ID: 091642-0003-SA
Matrix: FILTER
Authorized: 30 JAN 97

Sampled: 29 JAN 97
Prepared: See Below

Received: 30 JAN 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	ND	total ug	1.8	7060	31 JAN 97	31 JAN 97

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Mei Lai

The cover letter is an integral part of this report.
Rev 230787

Total Metals

Client Name: Levine-Fricke
Client ID: 2684
Lab ID: 091642-0004-SA
Matrix: FILTER
Authorized: 30 JAN 97

Sampled: 29 JAN 97
Prepared: See Below

Received: 30 JAN 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	ND	total ug	1.8	7060	31 JAN 97	31 JAN 97

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Mei Lai

The cover letter is an integral part of this report.
Rev 230787

METALS
(Soil/Solid - Total)

Client Name: Levine-Fricke
Client ID: 2687
Lab ID: 091642-0001-SA
Matrix: FILTER
Authorized: 30 JAN 97

Sampled: 29 JAN 97
Prepared: See Below

Received: 30 JAN 97
Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Lead	18.8	total ug	1.8	7421	31 JAN 97	31 JAN 97

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Mei Lai

The cover letter is an integral part of this report.
Rev 230787

METALS

(Soil/Solid - Total)

Client Name: Levine-Fricke
Client ID: 2686
Lab ID: 091642-0002-SA
Matrix: FILTER
Authorized: 30 JAN 97

Sampled: 29 JAN 97
Prepared: See Below

Received: 30 JAN 97
Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Lead	10.0	total ug	1.8	7421	31 JAN 97	31 JAN 97

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Mei Lai

The cover letter is an integral part of this report.
Rev 230787

METALS
(Soil/Solid - Total)

Client Name: Levine-Fricke
Client ID: 2685
Lab ID: 091642-0003-SA
Matrix: FILTER
Authorized: 30 JAN 97

Sampled: 29 JAN 97
Prepared: See Below

Received: 30 JAN 97
Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Lead	9.1	total ug	1.8	7421	31 JAN 97	31 JAN 97

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Mei Lai

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METALS
(Soil/Solid - Total)

Client Name: Levine-Fricke
Client ID: 2684
Lab ID: 091642-0004-SA
Matrix: FILTER
Authorized: 30 JAN 97

Sampled: 29 JAN 97
Prepared: See Below

Received: 30 JAN 97
Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Lead	ND	total ug	1.8	7421	31 JAN 97	31 JAN 97

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Mei Lai

The cover letter is an integral part of this report.
Rev 230787



Environmental
Services

QC LOT ASSIGNMENT REPORT
Metals Analysis and Preparation

Laboratory Sample Number	QC Matrix	QC Category	QC Lot Number (DCS)	QC Run Number (SCS/BLANK)
091642-0001-SA	AQUEOUS	AS-FAA-AT	30 JAN 97-R	30 JAN 97-R
091642-0001-SA	AQUEOUS	PB-FAA-AT	30 JAN 97-R	30 JAN 97-R
091642-0002-SA	AQUEOUS	AS-FAA-AT	30 JAN 97-R	30 JAN 97-R
091642-0002-SA	AQUEOUS	PB-FAA-AT	30 JAN 97-R	30 JAN 97-R
091642-0003-SA	AQUEOUS	AS-FAA-AT	30 JAN 97-R	30 JAN 97-R
091642-0003-SA	AQUEOUS	PB-FAA-AT	30 JAN 97-R	30 JAN 97-R
091642-0004-SA	AQUEOUS	AS-FAA-AT	30 JAN 97-R	30 JAN 97-R
091642-0004-SA	AQUEOUS	PB-FAA-AT	30 JAN 97-R	30 JAN 97-R

METHOD BLANK REPORT
Metals Analysis and Preparation

Analyte	Result	Units	Reporting Limit
Test: AS-FAA-FILTER Matrix: FILTER QC Lot: 30 JAN 97-R QC Run: 30 JAN 97-R			
Arsenic	ND	total ug	0.90
Test: PB-FAA-FILTER Matrix: FILTER QC Lot: 30 JAN 97-R QC Run: 30 JAN 97-R			
Lead	ND	total ug	0.50



Environmental
Services

DUPLICATE CONTROL SAMPLE REPORT
Metals Analysis and Preparation

Analyte	Concentration			AVG	Accuracy Average(%)		Precision (RPD)	
	Spiked	DCS1	Measured DCS2		DCS	Limits	DCS	Limit
Category: AS-FAA-AT Matrix: AQUEOUS QC Lot: 30 JAN 97-R Concentration Units: mg/L								
Arsenic	0.040	0.0404	0.0423	0.0414	103	79-120	4.6	16.0
Category: PB-FAA-AT Matrix: AQUEOUS QC Lot: 30 JAN 97-R Concentration Units: mg/L								
Lead	0.020	0.0203	0.0208	0.0206	103	83-124	2.4	20.0

Calculations are performed before rounding to avoid round-off errors in calculated results.

FILE # 09A-10-00



Quanterra Incorporated
880 Riverside Parkway
West Sacramento, California 95605

916 373-5600 Telephone
916 372-1059 Fax

February 19, 1997

QUANTERRA PROJECT NUMBER: 091777

Rick Millelli
Levine-Fricke
1900 Powell St. 12th
Emeryville, CA 94608

Dear Mr. Millelli:

This report contains the analytical results for the eight filter samples which were received under chain of custody by Quanterra Environmental Services on 10 February 1997. This sample set is associated with your Rifkin Wall Demo project.

The case narrative is an integral part of this report.

If you have any questions, please call me at (916)374-4411.

Sincerely,

A handwritten signature in black ink, appearing to read "Patrick Rainey", written over a horizontal line.

Patrick Rainey
Project Manager

PR/ct

Enclosures

MAR 10

TABLE OF CONTENTS

QUANTERRA PROJECT NUMBER 091777

Case Narrative

Quanterra's Quality Assurance Program

Sample Description Information

Chain of Custody Documentation

Total Metals - Various Methods

Includes Samples: 1 - 8

Sample Data

Method Blank

Duplicate Control Sample Report

CASE NARRATIVE

QUANTERRA PROJECT NUMBER 091777

Total Metals

The samples were processed for Lead and Arsenic on a 72 hour Turnaround time.

Preliminary results were sent via facsimile on February 12, 1997.

No anomalies were associated with this report.

QUANTERRA'S QUALITY ASSURANCE PROGRAM

Quanterra has implemented an extensive Quality Assurance (QA) program to ensure the production of scientifically sound, legally defensible data of known documentable quality. A key element of this program is Quanterra's Laboratory Control Sample (LCS) system. Controlling lab operations with LCS (as opposed to matrix spike/matrix spike duplicate samples), allows the lab to differentiate between bias as a result of procedural errors versus bias due to matrix effects. The analyst can then identify and implement the appropriate corrective actions at the bench level, without waiting for extensive senior level review or costly and time-consuming sample re-analyses. The LCS program also provides our client with information to assess batch, and overall laboratory performance.

Laboratory Control Samples - (LCS)

Laboratory Control Samples (LCS) are well-characterized, laboratory generated samples used to monitor the laboratory's day-to-day performance of routine analytical methods. The results of the LCS are compared to well-defined laboratory acceptance criteria to determine whether the laboratory system is "in control". Three types of LCS are routinely analyzed: Duplicate Control Samples (DCS), Single Control Samples (SCS), and method blanks. Each of these LCS are described below.

Duplicate Control Samples. A DCS is a well-characterized matrix (blank water, sand, sodium sulfate or celite) which is spiked with certain target parameters and analyzed at approximately 10% of the sample load in order to establish method-specific control limits.

Single Control Samples. An SCS consists of a control matrix that is spiked with surrogate compounds appropriate to the method being used. In cases where no surrogate is available, (e.g. metals or conventional analyses) a single control sample identical to the DCS serves as the control sample. An SCS is prepared for each sample lot. Accuracy is calculated identically to the DCS.

Method Blank Results. A method blank is a laboratory-generated sample which assesses the degree to which laboratory operations and procedures cause false-positive analytical results for your samples.

SAMPLE DESCRIPTION INFORMATION
for
Levine-Fricke

Lab ID	Client ID	Matrix	Sampled		Received
			Date	Time	Date
091777-0001-SA	2659	FILTER	07 FEB 97	17:55	10 FEB 97
091777-0002-SA	2660	FILTER	07 FEB 97	17:15	10 FEB 97
091777-0003-SA	2661	FILTER	07 FEB 97	16:45	10 FEB 97
091777-0004-SA	2662	FILTER	07 FEB 97	15:40	10 FEB 97
091777-0005-SA	2655	FILTER	08 FEB 97	17:23	10 FEB 97
091777-0006-SA	2656	FILTER	08 FEB 97	16:00	10 FEB 97
091777-0007-SA	2657	FILTER	08 FEB 97	16:43	10 FEB 97
091777-0008-SA	2658	FILTER	08 FEB 97	17:00	10 FEB 97

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.: 3042.95-005			Project Location: EMERYVILLE, CA			Date: 2/7/97		Serial No.: Nº 1093		
Project Name: RIFKIN WALL DEMO			Field Logbook No.:							
Sampler (Signature): <i>Alexander R. Jaki</i>					ANALYSES			Samplers: ARJ		
SAMPLES										
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	ARSENIC EPA 7060	LEAD EPA 7421	HOLD	RUSH	REMARKS
2659	2/7/97	17:55		1	AIR	XXX	XXX	XXX		4 = 458 m ³
2660		17:15		1	↓	XXX	XXX	XXX		4 = 407 m ³
2661		16:45		1	↓	XXX	XXX	XXX		4 = 404 m ³
2662		15:40		1	↓	XXX	XXX	XXX		4 = 308 m ³
2655	2/8/97	17:23		1	↓			XX		4 = 615 m ³
2656		16:00		1	↓			XX		4 = 405 m ³
2657		16:43		1	↓			XX		4 = 627 m ³
2658		17:00		1	↓			XX		4 = 663 m ³
72 8-HOUR TAT IF POSSIBLE OTHERWISE 48-HOUR TAT RESULTS TO A. JENKINS/ R. MILELLI / M. KNOX / S. SHIU										
RELINQUISHED BY: (Signature) <i>Alexander R. Jaki</i>		DATE: 2/10/97	TIME: 10¹⁵	RECEIVED BY: (Signature) <i>[Signature]</i>		DATE: 2/10/97	TIME: 10¹⁵			
RELINQUISHED BY: (Signature) <i>[Signature]</i>		DATE: 2/10/97	TIME: 11³⁰	RECEIVED BY: (Signature) <i>[Signature]</i>		DATE: 02/10/97	TIME: 1130			
RELINQUISHED BY: (Signature)		DATE	TIME	RECEIVED BY: (Signature)		DATE	TIME			
METHOD OF SHIPMENT:		DATE	TIME	LAB COMMENTS:						
Sample Collector: LEVINE•FRICKE•RECON 1900 Powell Street, 12th Floor Emeryville, California 94608-1827 (510) 652-4500				Analytical Laboratory: QUANTERRA						





Environmental
Services

Total Metals

Client Name: Levine-Fricke
Client ID: 2659
Lab ID: 091777-0001-SA
Matrix: FILTER
Authorized: 10 FEB 97

Sampled: 07 FEB 97
Prepared: See Below

Received: 10 FEB 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	ND	total ug	1.8	7060	10 FEB 97	11 FEB 97
Lead	11.7	total ug	1.8	7421	10 FEB 97	11 FEB 97

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw

The cover letter is an integral part of this report.
Rev 230787

Total Metals

Client Name: Levine-Fricke
 Client ID: 2660
 Lab ID: 091777-0002-SA
 Matrix: FILTER
 Authorized: 10 FEB 97

Sampled: 07 FEB 97
 Prepared: See Below

Received: 10 FEB 97
 Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	9.6	total ug	3.6	7060	10 FEB 97	11 FEB 97 1
Lead	17.5	total ug	3.6	7421	10 FEB 97	11 FEB 97 1

Note 1 : Reporting limit raised as a dilution was performed because the initial post-digestion spike recovery fell between 40% and 85% due to matrix interference.

ND = Not detected
 NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw

The cover letter is an integral part of this report.
 Rev 230787

Total Metals

Client Name: Levine-Fricke
Client ID: 2661
Lab ID: 091777-0003-SA
Matrix: FILTER
Authorized: 10 FEB 97

Sampled: 07 FEB 97
Prepared: See Below

Received: 10 FEB 97
Analyzed: See Below

Parameter	Result	Wet wt. Reporting Units	Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	ND	total ug	1.8	7060	10 FEB 97	11 FEB 97
Lead	9.3	total ug	3.6	7421	10 FEB 97	11 FEB 97 1

Note 1 : Reporting limit raised as a dilution was performed because the initial post-digestion spike recovery fell between 40% and 85% due to matrix interference.

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw

The cover letter is an integral part of this report.

Rev 230787

Total Metals

Client Name: Levine-Fricke
 Client ID: 2662
 Lab ID: 091777-0004-SA
 Matrix: FILTER
 Authorized: 10 FEB 97

Sampled: 07 FEB 97
 Prepared: See Below

Received: 10 FEB 97
 Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	ND	total ug	1.8	7060	10 FEB 97	11 FEB 97
Lead	8.6	total ug	3.6	7421	10 FEB 97	11 FEB 97 1

Note 1 : Reporting limit raised as a dilution was performed because the initial post-digestion spike recovery fell between 40% and 85% due to matrix interference.

ND = Not detected
 NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw

The cover letter is an integral part of this report.

Rev 230787

Total Metals

Client Name: Levine-Fricke
 Client ID: 2655
 Lab ID: 091777-0005-SA
 Matrix: FILTER
 Authorized: 10 FEB 97

Sampled: 08 FEB 97
 Prepared: See Below

Received: 10 FEB 97
 Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	1.9	total ug	1.8	7060	10 FEB 97	11 FEB 97 S
Lead	4.6	total ug	1.8	7421	10 FEB 97	12 FEB 97

Note S : Reported value determined by method of standard addition.

ND = Not detected
 NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw

The cover letter is an integral part of this report.
 Rev 230787

Total Metals

Client Name: Levine-Fricke
 Client ID: 2656
 Lab ID: 091777-0006-SA
 Matrix: FILTER
 Authorized: 10 FEB 97

Sampled: 08 FEB 97
 Prepared: See Below

Received: 10 FEB 97
 Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	42.7	total ug	9.0	7060	10 FEB 97	11 FEB 97 R
Lead	42.0	total ug	9.0	7421	10 FEB 97	11 FEB 97 R

Note R : Raised reporting limit(s) due to high analyte level(s).

ND = Not detected
 NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw

The cover letter is an integral part of this report.

Rev 230787



Environmental
Services

Total Metals

Client Name: Levine-Fricke
Client ID: 2657
Lab ID: 091777-0007-SA
Matrix: FILTER
Authorized: 10 FEB 97

Sampled: 08 FEB 97
Prepared: See Below

Received: 10 FEB 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	ND	total ug	1.8	7060	10 FEB 97	11 FEB 97
Lead	3.5	total ug	1.8	7421	10 FEB 97	11 FEB 97

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw

The cover letter is an integral part of this report.

Rev 230787

Total Metals

Client Name: Levine-Fricke
 Client ID: 2658
 Lab ID: 091777-0008-SA
 Matrix: FILTER
 Authorized: 10 FEB 97

Sampled: 08 FEB 97
 Prepared: See Below

Received: 10 FEB 97
 Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	55.6	total ug	9.0	7060	10 FEB 97	11 FEB 97 R
Lead	30.9	total ug	9.0	7421	10 FEB 97	11 FEB 97 R

Note R : Raised reporting limit(s) due to high analyte level(s).

ND = Not detected
 NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw

The cover letter is an integral part of this report.
 Rev 230787

QC LOT ASSIGNMENT REPORT
Metals Analysis and Preparation

Laboratory Sample Number	QC Matrix	QC Category	QC Lot Number (DCS)	QC Run Number (LCS/BLANK)
091777-0001-SA	AQUEOUS	AS-FAA-AT	10 FEB 97-S	10 FEB 97-S
091777-0001-SA	AQUEOUS	PB-FAA-AT	10 FEB 97-S	10 FEB 97-S
091777-0002-SA	AQUEOUS	AS-FAA-AT	10 FEB 97-S	10 FEB 97-S
091777-0002-SA	AQUEOUS	PB-FAA-AT	10 FEB 97-S	10 FEB 97-S
091777-0003-SA	AQUEOUS	AS-FAA-AT	10 FEB 97-S	10 FEB 97-S
091777-0003-SA	AQUEOUS	PB-FAA-AT	10 FEB 97-S	10 FEB 97-S
091777-0004-SA	AQUEOUS	AS-FAA-AT	10 FEB 97-S	10 FEB 97-S
091777-0004-SA	AQUEOUS	PB-FAA-AT	10 FEB 97-S	10 FEB 97-S
091777-0005-SA	AQUEOUS	AS-FAA-AT	10 FEB 97-S	10 FEB 97-S
091777-0005-SA	AQUEOUS	PB-FAA-AT	10 FEB 97-S	10 FEB 97-S
091777-0006-SA	AQUEOUS	AS-FAA-AT	10 FEB 97-S	10 FEB 97-S
091777-0006-SA	AQUEOUS	PB-FAA-AT	10 FEB 97-S	10 FEB 97-S
091777-0007-SA	AQUEOUS	AS-FAA-AT	10 FEB 97-S	10 FEB 97-S
091777-0007-SA	AQUEOUS	PB-FAA-AT	10 FEB 97-S	10 FEB 97-S
091777-0008-SA	AQUEOUS	AS-FAA-AT	10 FEB 97-S	10 FEB 97-S
091777-0008-SA	AQUEOUS	PB-FAA-AT	10 FEB 97-S	10 FEB 97-S

METHOD BLANK REPORT
Metals Analysis and Preparation
Project: 091777

Test: AS-FAA-FILTER Arsenic, Furnace AA
Method: 7060
Matrix: AQUEOUS
QC Lot: 10 FEB 97-S QC Run: 10 FEB 97-S

Analyte	Result	Units	Reporting Limit
Arsenic	ND	total ug	1.8

Test: PB-FAA-FILTER Lead, Furnace AA
Method: 7421
Matrix: AQUEOUS
QC Lot: 10 FEB 97-S QC Run: 10 FEB 97-S

Analyte	Result	Units	Reporting Limit
Lead	ND	total ug	1.8

ND = Not Detected

DUPLICATE CONTROL SAMPLE REPORT
Metals Analysis and Preparation
Project: 091777

Category: AS-FAA-A Arsenic, Furnace AA
 Testcode: AS-FAA-FILTER Method: 7060
 Matrix: AQUEOUS Concentration Units: mg/L
 QC Lot: 10 FEB 97-S Analyzed Date: 11 FEB 97 Time: 08:57

Analyte	-----Concentration-----			Accuracy		Precision	
	Spiked	-----Measured-----		Average(%)		(RPD)	
	DCS1	DCS2	AVG	DCS	Limits	DCS	Limit
Arsenic	0.0400	0.0396	0.0449	0.0422	106	79-120	13 16

Category: PB-FAA-A Lead, Furnance AA (Total)
 Testcode: PB-FAA-FILTER Method: 7421
 Matrix: AQUEOUS Concentration Units: mg/L
 QC Lot: 10 FEB 97-S Analyzed Date: 11 FEB 97 Time: 08:29

Analyte	-----Concentration-----			Accuracy		Precision	
	Spiked	-----Measured-----		Average(%)		(RPD)	
	DCS1	DCS2	AVG	DCS	Limits	DCS	Limit
Lead	0.0200	0.0206	0.0220	0.0213	107	83-124	6.6 20

Calculations are performed before rounding to avoid round-off errors in calculated results.



Quanterra Incorporated
880 Riverside Parkway
West Sacramento, California 95605

916 373-5600 Telephone
916 372-1059 Fax

February 20, 1997

QUANTERRA PROJECT NUMBER: 091852

Rick Millelli
Levine-Fricke
1900 Powell St. 12th
Emeryville, CA 94608

Dear Mr. Millelli:

This report contains the analytical results for the fourteen samples which were received under chain of custody by Quanterra Environmental Services on 10 February 1997. This sample set is associated with your Rifkin Wall Demo project.

The case narrative is an integral part of this report.

If you have any questions, please call me at (916)374-4411.

Sincerely,

A handwritten signature in black ink, appearing to read "Patrick Rainey".

Patrick Rainey
Project Manager

PR/ct

Enclosures

TABLE OF CONTENTS

QUANTERRA PROJECT NUMBER 091852

Case Narrative

Quanterra's Quality Assurance Program

Sample Description Information

Arsenic - Method 7060

Includes Samples: 1 - 14

Sample Data

Method Blank

Duplicate Control Sample Report

CASE NARRATIVE

QUANTERRA PROJECT NUMBER 091862

Arsenic

Sample 091852-01 and 091852-02 were resubmitted from project 091777. Sample 091852-01 through 07 and 091852-08 through 14 were originally samples 091777-02 and 091777-08 respectively. Each sample was logged in for 7 filter strips (A-G). Each sample was logged in as 24-48 hour turnaround time.

Preliminary results were sent via facsimile on February 18, 1997.

No anomalies were associated with this report.

QUANTERRA'S QUALITY ASSURANCE PROGRAM

Quanterra has implemented an extensive Quality Assurance (QA) program to ensure the production of scientifically sound, legally defensible data of known documentable quality. A key element of this program is Quanterra's Laboratory Control Sample (LCS) system. Controlling lab operations with LCS (as opposed to matrix spike/matrix spike duplicate samples), allows the lab to differentiate between bias as a result of procedural errors versus bias due to matrix effects. The analyst can then identify and implement the appropriate corrective actions at the bench level, without waiting for extensive senior level review or costly and time-consuming sample re-analyses. The LCS program also provides our client with information to assess batch, and overall laboratory performance.

Laboratory Control Samples - (LCS)

Laboratory Control Samples (LCS) are well-characterized, laboratory generated samples used to monitor the laboratory's day-to-day performance of routine analytical methods. The results of the LCS are compared to well-defined laboratory acceptance criteria to determine whether the laboratory system is "in control". Three types of LCS are routinely analyzed: Duplicate Control Samples (DCS), Single Control Samples (SCS), and method blanks. Each of these LCS are described below.

Duplicate Control Samples. A DCS is a well-characterized matrix (blank water, sand, sodium sulfate or celite) which is spiked with certain target parameters and analyzed at approximately 10% of the sample load in order to establish method-specific control limits.

Single Control Samples. An SCS consists of a control matrix that is spiked with surrogate compounds appropriate to the method being used. In cases where no surrogate is available, (e.g. metals or conventional analyses) a single control sample identical to the DCS serves as the control sample. An SCS is prepared for each sample lot. Accuracy is calculated identically to the DCS.

Method Blank Results. A method blank is a laboratory-generated sample which assesses the degree to which laboratory operations and procedures cause false-positive analytical results for your samples.

SAMPLE DESCRIPTION INFORMATION
for
Levine-Fricke

Lab ID	Client ID	Matrix	Sampled Date	Time	Received Date
091852-0001-SA	2660 Strip A	FILTER	07 FEB 97	17:15	14 FEB 97
091852-0002-SA	2660 Strip B	FILTER	07 FEB 97	17:15	14 FEB 97
091852-0003-SA	2660 Strip C	FILTER	07 FEB 97	17:15	14 FEB 97
091852-0004-SA	2660 Strip D	FILTER	07 FEB 97	17:15	14 FEB 97
091852-0005-SA	2660 Strip E	FILTER	07 FEB 97	17:15	14 FEB 97
091852-0006-SA	2660 Strip F	FILTER	07 FEB 97	17:15	14 FEB 97
091852-0007-SA	2660 Strip G	FILTER	07 FEB 97	17:15	14 FEB 97
091852-0008-SA	2658 Strip A	FILTER	08 FEB 97	17:00	14 FEB 97
091852-0009-SA	2658 Strip B	FILTER	08 FEB 97	17:00	14 FEB 97
091852-0010-SA	2658 Strip C	FILTER	08 FEB 97	17:00	14 FEB 97
091852-0011-SA	2658 Strip D	FILTER	08 FEB 97	17:00	14 FEB 97
091852-0012-SA	2658 Strip E	FILTER	08 FEB 97	17:00	14 FEB 97
091852-0013-SA	2658 Strip F	FILTER	08 FEB 97	17:00	14 FEB 97
091852-0014-SA	2658 Strip G	FILTER	08 FEB 97	17:00	14 FEB 97

Total Metals

Client Name: Levine-Fricke
Client ID: 2660 Strip A
Lab ID: 091852-0001-SA
Matrix: FILTER
Authorized: 14 FEB 97

Sampled: 07 FEB 97
Prepared: See Below

Received: 14 FEB 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	9.3	total ug	1.8	7060	17 FEB 97	18 FEB 97

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw

The cover letter is an integral part of this report.
Rev 230787

Total Metals

Client Name: Levine-Fricke
Client ID: 2660 Strip B
Lab ID: 091852-0002-SA
Matrix: FILTER
Authorized: 14 FEB 97

Sampled: 07 FEB 97
Prepared: See Below

Received: 14 FEB 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	9.3	total ug	1.8	7060	17 FEB 97	18 FEB 97

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw

The cover letter is an integral part of this report.
Rev 230787

Total Metals

Client Name: Levine-Fricke
Client ID: 2660 Strip C
Lab ID: 091852-0003-SA
Matrix: FILTER
Authorized: 14 FEB 97

Sampled: 07 FEB 97
Prepared: See Below

Received: 14 FEB 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	10.5	total ug	7.2	7060	17 FEB 97	18 FEB 97 1

Note 1 : Reporting limit raised as a dilution was performed because the initial post-digestion spike recovery fell between 40% and 85% due to matrix interference.

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw

The cover letter is an integral part of this report.

Rev 230787

Total Metals

Client Name: Levine-Fricke
 Client ID: 2660 Strip D
 Lab ID: 091852-0004-SA
 Matrix: FILTER
 Authorized: 14 FEB 97

Sampled: 07 FEB 97
 Prepared: See Below

Received: 14 FEB 97
 Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	9.6	total ug	7.2	7060	17 FEB 97	18 FEB 97 1

Note 1 : Reporting limit raised as a dilution was performed because the initial post-digestion spike recovery fell between 40% and 85% due to matrix interference.

ND = Not detected
 NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw

The cover letter is an integral part of this report.

Rev 230787

Total Metals

Client Name: Levine-Fricke
Client ID: 2660 Strip E
Lab ID: 091852-0005-SA
Matrix: FILTER
Authorized: 14 FEB 97

Sampled: 07 FEB 97
Prepared: See Below

Received: 14 FEB 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	10.7	total ug	1.8	7060	17 FEB 97	18 FEB 97

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw

The cover letter is an integral part of this report.
Rev 230787

Total Metals

Client Name: Levine-Fricke
Client ID: 2660 Strip F
Lab ID: 091852-0006-SA
Matrix: FILTER
Authorized: 14 FEB 97

Sampled: 07 FEB 97
Prepared: See Below

Received: 14 FEB 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	10.7	total ug	1.8	7060	17 FEB 97	18 FEB 97

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw

The cover letter is an integral part of this report.
Rev 230787



Environmental
Services

Total Metals

Client Name: Levine-Fricke
Client ID: 2660 Strip G
Lab ID: 091852-0007-SA
Matrix: FILTER
Authorized: 14 FEB 97

Sampled: 07 FEB 97
Prepared: See Below

Received: 14 FEB 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	8.3	total ug	1.8	7060	17 FEB 97	18 FEB 97

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw

The cover letter is an integral part of this report.
Rev 230787

Total Metals

Client Name: Levine-Fricke
Client ID: 2658 Strip A
Lab ID: 091852-0008-SA
Matrix: FILTER
Authorized: 14 FEB 97

Sampled: 08 FEB 97
Prepared: See Below

Received: 14 FEB 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	45.5	total ug	9.0	7060	17 FEB 97	18 FEB 97 R

Note R : Raised reporting limit(s) due to high analyte level(s).

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw

The cover letter is an integral part of this report.
Rev 230787

Total Metals

Client Name: Levine-Fricke
Client ID: 2658 Strip B
Lab ID: 091852-0009-SA
Matrix: FILTER
Authorized: 14 FEB 97

Sampled: 08 FEB 97
Prepared: See Below

Received: 14 FEB 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	53.2	total ug	9.0	7060	17 FEB 97	18 FEB 97 R

Note R : Raised reporting limit(s) due to high analyte level(s).

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw

The cover letter is an integral part of this report.
Rev 230787



Environmental
Services

Total Metals

Client Name: Levine-Fricke
Client ID: 2658 Strip C
Lab ID: 091852-0010-SA
Matrix: FILTER
Authorized: 14 FEB 97

Sampled: 08 FEB 97
Prepared: See Below

Received: 14 FEB 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	48.0	total ug	9.0	7060	17 FEB 97	18 FEB 97 R

Note R : Raised reporting limit(s) due to high analyte level(s).

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw

The cover letter is an integral part of this report.
Rev 230787



Environmental
Services

Total Metals

Client Name: Levine-Fricke
Client ID: 2658 Strip D
Lab ID: 091852-0011-SA
Matrix: FILTER
Authorized: 14 FEB 97

Sampled: 08 FEB 97
Prepared: See Below

Received: 14 FEB 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	53.7	total ug	9.0	7060	17 FEB 97	18 FEB 97 R

Note R : Raised reporting limit(s) due to high analyte level(s).

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw

The cover letter is an integral part of this report.
Rev 230787



Environmental
Services

Total Metals

Client Name: Levine-Fricke
Client ID: 2658 Strip E
Lab ID: 091852-0012-SA
Matrix: FILTER
Authorized: 14 FEB 97

Sampled: 08 FEB 97
Prepared: See Below

Received: 14 FEB 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	41.1	total ug	9.0	7060	17 FEB 97	18 FEB 97 R

Note R : Raised reporting limit(s) due to high analyte level(s).

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw

The cover letter is an integral part of this report.
Rev 230787



Environmental
Services

Total Metals

Client Name: Levine-Fricke
Client ID: 2658 Strip F
Lab ID: 091852-0013-SA
Matrix: FILTER
Authorized: 14 FEB 97

Sampled: 08 FEB 97
Prepared: See Below

Received: 14 FEB 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	42.9	total ug	9.0	7060	17 FEB 97	18 FEB 97 R

Note R : Raised reporting limit(s) due to high analyte level(s).

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw

The cover letter is an integral part of this report.
Rev 230787



Environmental
Services

Total Metals

Client Name: Levine-Fricke
Client ID: 2658 Strip G
Lab ID: 091852-0014-SA
Matrix: FILTER
Authorized: 14 FEB 97

Sampled: 08 FEB 97
Prepared: See Below

Received: 14 FEB 97
Analyzed: See Below

Parameter	Result	Wet wt. Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Arsenic	43.9	total ug	36.0	7060	17 FEB 97	18 FEB 97 R

Note R : Raised reporting limit(s) due to high analyte level(s).

ND = Not detected
NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw

The cover letter is an integral part of this report.

Rev 230787



Environmental
Services

QC LOT ASSIGNMENT REPORT
Metals Analysis and Preparation

Laboratory Sample Number	QC Matrix	QC Category	QC Lot Number (DCS)	QC Run Number (LCS/BLANK)
091852-0001-SA	AQUEOUS	AS-FAA-AT	17 FEB 97-Q	17 FEB 97-Q
091852-0002-SA	AQUEOUS	AS-FAA-AT	17 FEB 97-Q	17 FEB 97-Q
091852-0003-SA	AQUEOUS	AS-FAA-AT	17 FEB 97-Q	17 FEB 97-Q
091852-0004-SA	AQUEOUS	AS-FAA-AT	17 FEB 97-Q	17 FEB 97-Q
091852-0005-SA	AQUEOUS	AS-FAA-AT	17 FEB 97-Q	17 FEB 97-Q
091852-0006-SA	AQUEOUS	AS-FAA-AT	17 FEB 97-Q	17 FEB 97-Q
091852-0007-SA	AQUEOUS	AS-FAA-AT	17 FEB 97-Q	17 FEB 97-Q
091852-0008-SA	AQUEOUS	AS-FAA-AT	17 FEB 97-Q	17 FEB 97-Q
091852-0009-SA	AQUEOUS	AS-FAA-AT	17 FEB 97-Q	17 FEB 97-Q
091852-0010-SA	AQUEOUS	AS-FAA-AT	17 FEB 97-Q	17 FEB 97-Q
091852-0011-SA	AQUEOUS	AS-FAA-AT	17 FEB 97-Q	17 FEB 97-Q
091852-0012-SA	AQUEOUS	AS-FAA-AT	17 FEB 97-Q	17 FEB 97-Q
091852-0013-SA	AQUEOUS	AS-FAA-AT	17 FEB 97-Q	17 FEB 97-Q
091852-0014-SA	AQUEOUS	AS-FAA-AT	17 FEB 97-Q	17 FEB 97-Q

METHOD BLANK REPORT
Metals Analysis and Preparation
Project: 091852

Test: AS-FAA-FILTER Arsenic, Furnace AA
Method: 7060
Matrix: AQUEOUS
QC Lot: 17 FEB 97-Q QC Run: 17 FEB 97-Q

Analyte	Result	Units	Reporting Limit
Arsenic	ND	total ug	1.8

ND = Not Detected

DUPLICATE CONTROL SAMPLE REPORT
Metals Analysis and Preparation
Project: 091852

Category: AS-FAA-A Arsenic, Furnace AA

Testcode: AS-FAA-FILTER

Matrix: AQUEOUS

QC Lot: 17 FEB 97-Q

Analyzed Date: 18 FEB 97

Method: 7060

Concentration Units: mg/L

Time: 08:56

Analyte	-----Concentration-----			Accuracy		Precision	
	Spiked	-----Measured-----		Average(%)		(RPD)	
	DCS1	DCS2	AVG	DCS	Limits	DCS	Limit
Arsenic	0.0400	0.0375	0.0426	0.0401	100	79-120	13 16

Calculations are performed before rounding to avoid round-off errors in calculated results.

Appendix G

Laboratory Analytical Results for PAMs

American Environmental Network

Environmental Services

DOHS Certificate: H72

PAGE 1

LEVINE-FRICKE-RECON
1900 POWELL ST. 12TH FL.
EMERYVILLE, CA 94608

REPORT DATE: 02/02/97

DATE(S) SAMPLED: 01/29/97

DATE RECEIVED: 01/30/97

ATTN: A.JENKINS/R.MILELLI/M.KNOX
CLIENT PROJ. ID: [REDACTED]
CLIENT PROJ. NAME: RIFKIN WALL
C.O.C. NUMBER: 15154

AEN WORK ORDER: 9701305

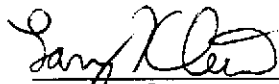
PROJECT SUMMARY:

On January 30, 1997, this laboratory received 3 MCE filter 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

LEVINE - FRICKE - RECON

SAMPLE ID: 3042-0129-1
AEN LAB NO: 9701305-01
AEN WORK ORDER: 9701305
CLIENT PROJ. ID: 3042.95-005

DATE SAMPLED: 01/29/97
DATE RECEIVED: 01/30/97
REPORT DATE: 02/02/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Sample Volume		531		Liters	
#Digestion		-	-	Prep Date	01/30/97
Arsenic in Air	NIOSH 7300M	<0.002		mg/m3	01/30/97
Lead in Air	NIOSH 7300M	0.001		mg/m3	01/30/97

LEVINE-FRICKE-RECON

SAMPLE ID: 3042-0129-2
 AEN LAB NO: 9701305-02
 AEN WORK ORDER: 9701305
 CLIENT PROJ. ID: 3042.95-005

DATE SAMPLED: 01/29/97
 DATE RECEIVED: 01/30/97
 REPORT DATE: 02/02/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Sample Volume		519		Liters	
#Digestion		-		- Prep Date	01/30/97
Arsenic in Air	NIOSH 7300M	<0.002		mg/m3	01/30/97
Lead in Air	NIOSH 7300M	<0.001		mg/m3	01/30/97

LEVINE-FRICKE-RECON

SAMPLE ID: 3042-0129-B
 AEN LAB NO: 9701305-03
 AEN WORK ORDER: 9701305
 CLIENT PROJ. ID: 3042.95-005

DATE SAMPLED: 01/29/97
 DATE RECEIVED: 01/30/97
 REPORT DATE: 02/02/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Sample Volume		BLANK		Liters	
#Digestion		-	-	Prep Date	01/30/97
Arsenic in Air	NIOSH 7300M	<0.001		mg	01/30/97
Lead in Air	NIOSH 7300M	<0.0005		mg	01/30/97

AEN (CALIFORNIA)
QUALITY CONTROL REPORT

AEN JOB NUMBER: 9701305
CLIENT PROJECT ID: 3042.95-005

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.

D: Surrogates diluted out.

I: Interference.

!: Indicates result outside of established laboratory QC limits.

WORK ORDER: 9701305

QUALITY CONTROL REPORT

PAGE QR-2

ANALYSIS: Metals NIOSH 7300M

MATRIX: Air

METHOD BLANK SAMPLES

SAMPLE TYPE: Blank-Method/Media blank
 INSTRUMENT: TJA Enviro 36
 UNITS: ug
 METHOD:

LAB ID: IFA_BLNK
 PREPARED:
 ANALYZED: 01/30/97

INSTR RUN: ICP\970130224500/1/
 BATCH ID: IFA013097
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Arsenic, MCEF	<1								
Lead, MCEF	<0.5								

METHOD SPIKE SAMPLES

SAMPLE TYPE: Spike-Method/Media blank
 INSTRUMENT: TJA Enviro 36
 UNITS: ug
 METHOD:

LAB ID: IFA_MD
 PREPARED:
 ANALYZED: 01/30/97

INSTR RUN: ICP\970130224500/3/1
 BATCH ID: IFA013097
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Arsenic, MCEF	5.87	<1		6.00	97.8	68	127		
Lead, MCEF	7.17	<0.5		7.50	95.6	72	121		

SAMPLE TYPE: Spike-Method/Media blank
 INSTRUMENT: TJA Enviro 36
 UNITS: ug
 METHOD:

LAB ID: IFA_MS
 PREPARED:
 ANALYZED: 01/30/97

INSTR RUN: ICP\970130224500/2/1
 BATCH ID: IFA013097
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Arsenic, MCEF	5.89	<1		6.00	98.2	68	127		
Lead, MCEF	7.08	<0.5		7.50	94.4	72	121		

METHOD SPIKE DUPLICATES

SAMPLE TYPE: Method Spike Sample Duplicate
 INSTRUMENT: TJA Enviro 36
 UNITS: ug
 METHOD:

LAB ID: IFA_MR
 PREPARED:
 ANALYZED: 01/30/97

INSTR RUN: ICP\970130224500/4/2
 BATCH ID: IFA013097
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Arsenic, MCEF	5.87	5.89						0.340	10
Lead, MCEF	7.17	7.08						1.26	10

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

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.: 3042.95-005	Field Logbook No.: █	Date: 1/29/97	Serial No.: No 15154
Project Name: RIFKIN WALL DEMO		Project Location: EMERYVILLE, CA	

Sampler (Signature): *Oscar R. Juri* ANALYSES Samplers: **ARJ**

SAMPLES					ANALYSES								REMARKS			
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	ARSENIC MUSK 71300	LEAD MUSK 7200								HOLD	RUSH
3042-0129-1	1/29/97	1521	01A	1	AIR	X	X							X		V = 531 L
3042-0129-2	1/29/97	1519	02A	1	AIR	X	X							X		V = 519 L
3042-0129-B	1/29/97	1730	03A	1	AIR	X	X							X		V = 0 L
															24 HR TAT	
															RESULTS TO A. JENKINS / R. MILELLI / M. KNOX / S. SHIU	

RELINQUISHED BY: (Signature) <i>Oscar R. Juri</i>	DATE 1-30-97	TIME 14:00	RECEIVED BY: (Signature) <i>[Signature]</i>	DATE 1-30-97	TIME 14:00
RELINQUISHED BY: (Signature) <i>[Signature]</i>	DATE 1-30-97	TIME 14:20	RECEIVED BY: (Signature) <i>Ronald C Jensen</i>	DATE 1/30/97	TIME 14:20
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT:		DATE	TIME	LAB COMMENTS:	

Sample Collector: LEVINE-FRICKE 1900 Powell Street, 12th Floor Emeryville, California 94608 (510) 652-4500	Analytical Laboratory: AEN
--	--

American Environmental

ark

DOHS Certificate of Analysis

PAGE 1

LEVINE-FRICKE-RECON
1900 POWELL ST. 12TH FL.
EMERYVILLE, CA 94608

REPORT DATE: 02/06/97

DATE(S) SAMPLED: 01/30/97

DATE RECEIVED: 01/31/97

AEN WORK ORDER: 9701325

ATTN: A.JENKINS/R.MILELLI/M.KNOX
CLIENT PROJ. ID: 3042.95-005
CLIENT PROJ. NAME: RIFKIN WALL
C.O.C. NUMBER: 15168

PROJECT SUMMARY:

On January 31, 1997, this laboratory received 3 MCE filter 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

LEVINE-FRICKE-RECON

SAMPLE ID: 3042-0130-1
AEN LAB NO: 9701325-01
AEN WORK ORDER: 9701325
CLIENT PROJ. ID: 3042.95-005

DATE SAMPLED: 01/30/97
DATE RECEIVED: 01/31/97
REPORT DATE: 02/06/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Sample Volume		813		Liters	
#Digestion		-	-	Prep Date	02/01/97
Arsenic in Air	NIOSH 7300M	<0.002		mg/m3	02/04/97
Lead in Air	NIOSH 7300M	0.0011		mg/m3	02/04/97

LEVINE-FRICKE-RECON

SAMPLE ID: 3042-0130-2
AEN LAB NO: 9701325-02
AEN WORK ORDER: 9701325
CLIENT PROJ. ID: 3042.95-005

DATE SAMPLED: 01/30/97
DATE RECEIVED: 01/31/97
REPORT DATE: 02/06/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Sample Volume		753		Liters	
#Digestion		-	-	Prep Date	02/01/97
Arsenic in Air	NIOSH 7300M	<0.002		mg/m3	02/04/97
Lead in Air	NIOSH 7300M	<0.0007		mg/m3	02/04/97

LEVINE - FRICKE - RECON

SAMPLE ID: 3042-0130-B
 AEN LAB NO: 9701325-03
 AEN WORK ORDER: 9701325
 CLIENT PROJ. ID: 3042.95-005

DATE SAMPLED: 01/30/97
 DATE RECEIVED: 01/31/97
 REPORT DATE: 02/06/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Sample Volume		BLANK		Liters	
#Digestion		-	-	Prep Date	02/01/97
Arsenic in Air	NIOSH 7300M	<0.001		mg	02/04/97
Lead in Air	NIOSH 7300M	<0.0005		mg	02/04/97

AEN (CALIFORNIA)
QUALITY CONTROL REPORT

AEN JOB NUMBER: 9701325
CLIENT PROJECT ID: 3042.95-005

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.

D: Surrogates diluted out.

I: Interference.

!: Indicates result outside of established laboratory QC limits.

WORK ORDER: 9701325

QUALITY CONTROL REPORT

PAGE QR-2

ANALYSIS: Metals NIOSH 7300M

MATRIX: Air

METHOD BLANK SAMPLES

SAMPLE TYPE: Blank-Method/Media blank		LAB ID: IFA_BLNK		INSTR RUN: ICP\970204152900/1/				
INSTRUMENT: TJA Enviro 36		PREPARED:		BATCH ID: IFA020197				
UNITS: ug		ANALYZED: 02/04/97		DILUTION: 1.000000				
METHOD:								
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)	RPD (%)	RPD LIMIT (%)
						LOW HIGH		
Arsenic, MCEF	<1							
Lead, MCEF	<0.5							

METHOD SPIKE SAMPLES

SAMPLE TYPE: Spike-Method/Media blank		LAB ID: IFA_MD		INSTR RUN: ICP\970204152900/3/1				
INSTRUMENT: TJA Enviro 36		PREPARED:		BATCH ID: IFA020197				
UNITS: ug		ANALYZED: 02/04/97		DILUTION: 1.000000				
METHOD:								
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)	RPD (%)	RPD LIMIT (%)
						LOW HIGH		
Arsenic, MCEF	6.16	<1		6.00	103	68 127		
Lead, MCEF	7.26	<0.5		7.50	96.8	72 121		

SAMPLE TYPE: Spike-Method/Media blank		LAB ID: IFA_MS		INSTR RUN: ICP\970204152900/2/1				
INSTRUMENT: TJA Enviro 36		PREPARED:		BATCH ID: IFA020197				
UNITS: ug		ANALYZED: 02/04/97		DILUTION: 1.000000				
METHOD:								
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)	RPD (%)	RPD LIMIT (%)
						LOW HIGH		
Arsenic, MCEF	5.73	<1		6.00	95.5	68 127		
Lead, MCEF	7.21	<0.5		7.50	96.1	72 121		

METHOD SPIKE DUPLICATES

SAMPLE TYPE: Method Spike Sample Duplicate		LAB ID: IFA_MR		INSTR RUN: ICP\970204152900/4/2				
INSTRUMENT: TJA Enviro 36		PREPARED:		BATCH ID: IFA020197				
UNITS: ug		ANALYZED: 02/04/97		DILUTION: 1.000000				
METHOD:								
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)	RPD (%)	RPD LIMIT (%)
						LOW HIGH		
Arsenic, MCEF	6.16	5.73					7.23	10
Lead, MCEF	7.26	7.21					0.691	10

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

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

9701329

Project No.: 3042.95-005	Field Logbook No.:	Date: 1/30/97	Serial No.:
Project Name: RIFKIN WALL DEMO	Project Location: EMERYVILLE, CA		No 15168

SAMPLES						ANALYSES						SAMPLERS:		REMARKS
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	ARSENIC	MOSEY	LEAD	NICOSH	HOLD	RUSH	ARJ		
3042-0130-1	1/30/97	1630	01A	1	AIR	X	X			X		V = 813 L		
3042-0130-2	↓	↓	02A	1	↓	X	X			X		V = 753 L		
3042-0130-B	↓	↓	03A	1	↓	X	X			X		V = 0 L		
TURNAROUND TIME DEPENDS ON RESULTS OF SAMPLES COLLECTED ON 1/29/97 - CALL RICK MILELLI AT (510) 596-9594														
RESULTS TO A. JENKINS / R. MILELLI / M. KNOX / S. SHIU														
3-day TAT														

RELINQUISHED BY: (Signature) <i>Alexander R. Juelin</i>	DATE 1/31/97	TIME 1055	RECEIVED BY: (Signature) <i>Michael D. McNeill</i>	DATE 1/31/97	TIME 1055
RELINQUISHED BY: (Signature) <i>Michael D. McNeill</i>	DATE 1/31/97	TIME 1140	RECEIVED BY: (Signature) <i>Ronald C. Jensen</i>	DATE 1/31/97	TIME 11:40
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT:	DATE	TIME	LAB COMMENTS:		

Sample Collector: LEVINE-FRICKE 1900 Powell Street, 12th Floor Emeryville, California 94608 (510) 652-4500	Analytical Laboratory: AEN
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American Environmental Network

Certificate of Analysis

DOHS Certification: 1172

MHA Accreditation: 11134

PAGE 1

LEVINE-FRICKE-RECON
1900 POWELL ST. 12TH FL.
EMERYVILLE, CA 94608

REPORT DATE: 02/07/97

DATE(S) SAMPLED: 01/31/97-02/01/97

DATE RECEIVED: 02/03/97

ATTN: A.JENKINS/R.MILELLI/M.KNOX
CLIENT PROJ. ID: 3042.95-005
CLIENT PROJ. NAME: RIFKIN WALL
C.O.C. NUMBER: 1087

AEN WORK ORDER: 9702005

PROJECT SUMMARY:

On February 3, 1997, this laboratory received 4 MCE filter 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

LEVINE-FRICKE-RECON

SAMPLE ID: 3042-0131-1
 AEN LAB NO: 9702005-01
 AEN WORK ORDER: 9702005
 CLIENT PROJ. ID: 3042.95-005

DATE SAMPLED: 01/31/97
 DATE RECEIVED: 02/03/97
 REPORT DATE: 02/07/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Sample Volume		833		Liters	
#Digestion		-		- Prep Date	02/04/97
Arsenic in Air	NIOSH 7300M	<0.002		mg/m3	02/06/97
Lead in Air	NIOSH 7300M	0.0007		mg/m3	02/06/97

LEVINE-FRICKE-RECON

SAMPLE ID: 3042-0131-2
AEN LAB NO: 9702005-02
AEN WORK ORDER: 9702005
CLIENT PROJ. ID: 3042.95-005

DATE SAMPLED: 01/31/97
DATE RECEIVED: 02/03/97
REPORT DATE: 02/07/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Sample Volume		912		Liters	
#Digestion		-	-	Prep Date	02/04/97
Arsenic in Air	NIOSH 7300M	<0.002		mg/m3	02/06/97
Lead in Air	NIOSH 7300M	<0.0006		mg/m3	02/06/97

LEVINE - FRICKE - RECON

SAMPLE ID: 3042-0201-1
AEN LAB NO: 9702005-03
AEN WORK ORDER: 9702005
CLIENT PROJ. ID: 3042.95-005

DATE SAMPLED: 02/01/97
DATE RECEIVED: 02/03/97
REPORT DATE: 02/07/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Sample Volume		486		Liters	
#Digestion		-	-	Prep Date	02/04/97
Arsenic in Air	NIOSH 7300M	0.005		mg/m3	02/06/97
Lead in Air	NIOSH 7300M	0.005		mg/m3	02/06/97

LEVINE-FRICKE-RECON

SAMPLE ID: 3042-0201-2
AEN LAB NO: 9702005-04
AEN WORK ORDER: 9702005
CLIENT PROJ. ID: 3042.95-005

DATE SAMPLED: 02/01/97
DATE RECEIVED: 02/03/97
REPORT DATE: 02/07/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Sample Volume		651		Liters	
#Digestion		-	-	Prep Date	02/04/97
Arsenic in Air	NIOSH 7300M	0.003		mg/m3	02/06/97
Lead in Air	NIOSH 7300M	0.002		mg/m3	02/06/97

AEN (CALIFORNIA)
QUALITY CONTROL REPORT

AEN JOB NUMBER: 9702005
CLIENT PROJECT ID: 3042.95-005

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.

D: Surrogates diluted out.

I: Interference.

!: Indicates result outside of established laboratory QC limits.

WORK ORDER: 9702005

QUALITY CONTROL REPORT

PAGE QR-2

ANALYSIS: Metals NIOSH 7300M

MATRIX: Air

METHOD BLANK SAMPLES

SAMPLE TYPE: Blank-Method/Media blank		LAB ID: IFA_BLNK		INSTR RUN: ICP\970206122100/1/				
INSTRUMENT: TJA Enviro 36		PREPARED:		BATCH ID: IFA020497				
UNITS: ug		ANALYZED: 02/06/97		DILUTION: 1.000000				
METHOD:								
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)	RPD (%)	RPD LIMIT (%)
						LOW HIGH		
Arsenic, MCEF	<1							
Lead, MCEF	<0.5							

METHOD SPIKE SAMPLES

SAMPLE TYPE: Spike-Method/Media blank		LAB ID: IFA_MD		INSTR RUN: ICP\970206122100/3/1				
INSTRUMENT: TJA Enviro 36		PREPARED:		BATCH ID: IFA020497				
UNITS: ug		ANALYZED: 02/06/97		DILUTION: 1.000000				
METHOD:								
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)	RPD (%)	RPD LIMIT (%)
						LOW HIGH		
Arsenic, MCEF	7.84	<1		7.50	105	68 127		
Lead, MCEF	8.28	<0.5		7.50	110	72 121		

SAMPLE TYPE: Spike-Method/Media blank		LAB ID: IFA_MS		INSTR RUN: ICP\970206122100/2/1				
INSTRUMENT: TJA Enviro 36		PREPARED:		BATCH ID: IFA020497				
UNITS: ug		ANALYZED: 02/06/97		DILUTION: 1.000000				
METHOD:								
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)	RPD (%)	RPD LIMIT (%)
						LOW HIGH		
Arsenic, MCEF	7.75	<1		7.50	103	68 127		
Lead, MCEF	8.13	<0.5		7.50	108	72 121		

METHOD SPIKE DUPLICATES

SAMPLE TYPE: Method Spike Sample Duplicate		LAB ID: IFA_MR		INSTR RUN: ICP\970206122100/4/2				
INSTRUMENT: TJA Enviro 36		PREPARED:		BATCH ID: IFA020497				
UNITS: ug		ANALYZED: 02/06/97		DILUTION: 1.000000				
METHOD:								
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)	RPD (%)	RPD LIMIT (%)
						LOW HIGH		
Arsenic, MCEF	7.84	7.75					1.15	10
Lead, MCEF	8.28	8.13					1.83	10

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

CISI

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

9702005

Project No.: 3042.95 - 005 Project Location: EMERYVILLE, CA Date: 1/31/97 Serial No.: N^o 1087

Project Name: RIFKIN WALL DEMO Field Logbook No.:

Sampler (Signature): Alexander R. Jelic ANALYSES Samplers: ARJ

SAMPLES					ANALYSES				SAMPLERS		REMARKS
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	ARSENIC NIOSH 7300	LEAD NIOSH 7300	HOLD	RUSH		
3042-0131-1	1/31/97	16:20	01A	1	AIR	XX	XX	XX		V = 833 L	
3042-0131-2	↓	↓	02A	1	↓	XX	XX	XX		V = 912 L	
3042-0201-1	2/1/97	16:38	03A	1	↓	↓	↓	XX		V = 486 L	
3042-0201-2	↓	↓	04A	1	↓	↓	↓	X		V = 651 L	
RESULTS TO A. JENKINS / R. MILELLI / M. KNOX / S. SHIU											

RELINQUISHED BY: (Signature) Alexander R. Jelic	DATE 2-3-97	TIME 10:05 AM	RECEIVED BY: (Signature) [Signature]	DATE 2-3-97	TIME 10:05 AM
RELINQUISHED BY: (Signature) [Signature]	DATE 2-3-97	TIME 11:00	RECEIVED BY: (Signature) Gina Gillespie	DATE 2-3-97	TIME 11:20
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME

METHOD OF SHIPMENT: DATE TIME LAB COMMENTS:

Sample Collector: LEVINE•FRICKE•RECON 1900 Powell Street, 12th Floor Emeryville, California 94608-1827 (510) 652-4500 Analytical Laboratory: AEN

American Environmental Network

Certificate of Analysis

DOHS Certification: 1172

ALTA A. 00010101

PAGE 1

LEVINE-FRICKE-RECON
1900 POWELL ST. 12TH FL.
EMERYVILLE, CA 94608

REPORT DATE: 02/10/97

DATE(S) SAMPLED: 02/03/97

DATE RECEIVED: 02/04/97

ATTN: A.JENKINS/R.MILELLI/M.KNOX
CLIENT PROJ. ID: 3042.95-005
CLIENT PROJ. NAME: RIFKIN WALL
C.O.C. NUMBER: 1098

AEN WORK ORDER: 9702019

PROJECT SUMMARY:

On February 4, 1997, this laboratory received 2 MCE filter 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

LEVINE - FRICKE - RECON

SAMPLE ID: 3042-0203-2
AEN LAB NO: 9702019-01
AEN WORK ORDER: 9702019
CLIENT PROJ. ID: 3042.95-005

DATE SAMPLED: 02/03/97
DATE RECEIVED: 02/04/97
REPORT DATE: 02/10/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Sample Volume		728		Liters	
#Digestion		-		- Prep Date	02/04/97
Arsenic in Air	NIOSH 7300M	<0.002		mg/m3	02/06/97
Lead in Air	NIOSH 7300M	<0.0007		mg/m3	02/06/97

LEVINE-FRICKE-RECON

SAMPLE ID: 3042-0203-3
AEN LAB NO: 9702019-02
AEN WORK ORDER: 9702019
CLIENT PROJ. ID: 3042.95-005

DATE SAMPLED: 02/03/97
DATE RECEIVED: 02/04/97
REPORT DATE: 02/10/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Sample Volume		649		Liters	
#Digestion		-	-	Prep Date	02/04/97
Arsenic in Air	NIOSH 7300M	0.004		mg/m3	02/06/97
Lead in Air	NIOSH 7300M	0.003		mg/m3	02/06/97

AEN (CALIFORNIA)
QUALITY CONTROL REPORT

AEN JOB NUMBER: 9702019
CLIENT PROJECT ID: 3042.95-005

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.

D: Surrogates diluted out.

I: Interference.

!: Indicates result outside of established laboratory QC limits.

WORK ORDER: 9702019

QUALITY CONTROL REPORT

PAGE QR-2

ANALYSIS: Metals NIOSH 7300M

MATRIX: Air

METHOD BLANK SAMPLES

SAMPLE TYPE: Blank-Method/Media blank		LAB ID: IFA_BLNK		INSTR RUN: ICP\970206122100/1/					
INSTRUMENT: TJA Enviro 36		PREPARED:		BATCH ID: IFA020497					
UNITS: ug		ANALYZED: 02/06/97		DILUTION: 1.000000					
METHOD:									
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Arsenic, MCEF	<1								
Lead, MCEF	<0.5								

METHOD SPIKE SAMPLES

SAMPLE TYPE: Spike-Method/Media blank		LAB ID: IFA_MD		INSTR RUN: ICP\970206122100/3/1					
INSTRUMENT: TJA Enviro 36		PREPARED:		BATCH ID: IFA020497					
UNITS: ug		ANALYZED: 02/06/97		DILUTION: 1.000000					
METHOD:									
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Arsenic, MCEF	7.84	<1		7.50	105	68	127		
Lead, MCEF	8.28	<0.5		7.50	110	72	121		

SAMPLE TYPE: Spike-Method/Media blank		LAB ID: IFA_MS		INSTR RUN: ICP\970206122100/2/1					
INSTRUMENT: TJA Enviro 36		PREPARED:		BATCH ID: IFA020497					
UNITS: ug		ANALYZED: 02/06/97		DILUTION: 1.000000					
METHOD:									
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Arsenic, MCEF	7.75	<1		7.50	103	68	127		
Lead, MCEF	8.13	<0.5		7.50	108	72	121		

METHOD SPIKE DUPLICATES

SAMPLE TYPE: Method Spike Sample Duplicate		LAB ID: IFA_MR		INSTR RUN: ICP\970206122100/4/2					
INSTRUMENT: TJA Enviro 36		PREPARED:		BATCH ID: IFA020497					
UNITS: ug		ANALYZED: 02/06/97		DILUTION: 1.000000					
METHOD:									
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Arsenic, MCEF	7.84	7.75						1.15	10
Lead, MCEF	8.28	8.13						1.83	10

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

CIS1

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

9702019

Project No.: 3042.95-005	Project Location: EMERYVILLE, CA	Date: 2/3/97	Serial No.: Nº 1098
Project Name: RIFKIN WALL DEMO	Field Logbook No.:		

Sampler (Signature): *Oliver R. Jali* ANALYSES Samplers: ARJ

SAMPLES					ANALYSES					REMARKS
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	ARSENIC MDSH T300	LEAD MDSH T300	HOLD	RUSH	
3042-0203-2	2/3/97	17:30	01A	1	AIR	XX	XX	XX		4 = 728 L
3042-0203-3	↓	↓	02A	1	↓	XX	XX	XX		4 = 649 L
										72-HOUR TAT
										RESULTS TO A. JENKINS/ R. MILELLI / M. KNOX / S. SHIU

RELINQUISHED BY: (Signature) <i>Oliver R. Jali</i>	DATE 2-4-97	TIME 10:17	RECEIVED BY: (Signature) <i>[Signature]</i>	DATE 2-4-97	TIME 10:17
RELINQUISHED BY: (Signature) <i>[Signature]</i>	DATE 2-4-97	TIME 12:05	RECEIVED BY: (Signature) <i>Gina Gillespie</i>	DATE 2-4-97	TIME 12:05
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME

METHOD OF SHIPMENT: DATE TIME LAB COMMENTS:

Sample Collector: LEVINE•FRICKE•RECON
1900 Powell Street, 12th Floor
Emeryville, California 94608-1827
(510) 652-4500

Analytical Laboratory:
AEN

American Environmental Network

Certificate of Analysis

DOHS Certificate No. 1172

DEA Accreditation

PAGE 1

LEVINE-FRICKE-RECON
1900 POWELL ST. 12TH FL.
EMERYVILLE, CA 94608

REPORT DATE: 02/10/97

DATE(S) SAMPLED: 02/04/97

DATE RECEIVED: 02/05/97

ATTN: A. JENKINS/R. MILLELLI/M. KNOX
CLIENT PROJ. ID: 3042.95-005
CLIENT PROJ. NAME: RIFKIN WALL
C.O.C. NUMBER: 1099

AEN WORK ORDER: 9702055

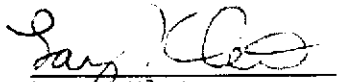
PROJECT SUMMARY:

On February 5, 1997, this laboratory received 2 MCE filter 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

LEVINE - FRICKE - RECON

SAMPLE ID: 3042-0204-1
AEN LAB NO: 9702055-01
AEN WORK ORDER: 9702055
CLIENT PROJ. ID: 3042.95-005

DATE SAMPLED: 02/04/97
DATE RECEIVED: 02/05/97
REPORT DATE: 02/10/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Sample Volume		828		Liters	
#Digestion		-	-	Prep Date	02/06/97
Arsenic in Air	NIOSH 7300M	0.030		mg/m3	02/07/97
Lead in Air	NIOSH 7300M	0.030		mg/m3	02/07/97

LEVINE-FRICKE-RECON

SAMPLE ID: 3042-0204-2
AEN LAB NO: 9702055-02
AEN WORK ORDER: 9702055
CLIENT PROJ. ID: 3042.95-005

DATE SAMPLED: 02/04/97
DATE RECEIVED: 02/05/97
REPORT DATE: 02/10/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Sample Volume		616		Liters	
#Digestion		-	-	Prep Date	02/06/97
Arsenic in Air	NIOSH 7300M	<0.002		mg/m3	02/07/97
Lead in Air	NIOSH 7300M	0.001		mg/m3	02/07/97

AEN (CALIFORNIA)
QUALITY CONTROL REPORT

AEN JOB NUMBER: 9702055
CLIENT PROJECT ID: 3042.95-005

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.

D: Surrogates diluted out.

I: Interference.

!: Indicates result outside of established laboratory QC limits.

WORK ORDER: 9702055

QUALITY CONTROL REPORT

PAGE QR-2

ANALYSIS: Metals NIOSH 7300M

MATRIX: Air

METHOD BLANK SAMPLES

SAMPLE TYPE: Blank-Method/Media blank		LAB ID: IFA_BLNK		INSTR RUN: ICP\970207105700/1/					
INSTRUMENT: TJA Enviro 36		PREPARED:		BATCH ID: IFA020697					
UNITS: ug		ANALYZED: 02/07/97		DILUTION: 1.000000					
METHOD:									
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Arsenic, MCEF	<1								
Lead, MCEF	<0.5								

METHOD SPIKE SAMPLES

SAMPLE TYPE: Spike-Method/Media blank		LAB ID: IFA_MD		INSTR RUN: ICP\970207105700/3/1					
INSTRUMENT: TJA Enviro 36		PREPARED:		BATCH ID: IFA020697					
UNITS: ug		ANALYZED: 02/07/97		DILUTION: 1.000000					
METHOD:									
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Arsenic, MCEF	6.30	<1		6.00	105	68	127		
Lead, MCEF	7.50	<0.5		7.50	100	72	121		

SAMPLE TYPE: Spike-Method/Media blank		LAB ID: IFA_MS		INSTR RUN: ICP\970207105700/2/1					
INSTRUMENT: TJA Enviro 36		PREPARED:		BATCH ID: IFA020697					
UNITS: ug		ANALYZED: 02/07/97		DILUTION: 1.000000					
METHOD:									
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Arsenic, MCEF	6.14	<1		6.00	102	68	127		
Lead, MCEF	7.30	<0.5		7.50	97.3	72	121		

METHOD SPIKE DUPLICATES

SAMPLE TYPE: Method-Spike Sample Duplicate		LAB ID: IFA_MR		INSTR RUN: ICP\970207105700/4/2					
INSTRUMENT: TJA Enviro 36		PREPARED:		BATCH ID: IFA020697					
UNITS: ug		ANALYZED: 02/07/97		DILUTION: 1.000000					
METHOD:									
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Arsenic, MCEF	6.30	6.14						2.57	10
Lead, MCEF	7.50	7.30						2.70	10

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

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

9702055

Project No.: 3042.95-005			Project Location: EMERYVILLE, CA			Date: 2/4/97			Serial No.: Nº 1099				
Project Name: RIFKIN WALL DEMO						Field Logbook No.:							
Sampler (Signature): <i>Olay R. Jali</i>						ANALYSES						Samplers: ARJ	
SAMPLES						ANALYSES						REMARKS	
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	ARSENIC MESH 7300	LEAD MESH 7300				HOLD	RUSH	REMARKS
3042-0204-1	2/4/97	17:20	01A	1	AIR	XX	XX				XX		✓ = 828 L
3042-0204-2	↓	↓	02A	1	↓	XX	XX				XX		✓ = 616 L
													72-HOUR TAT
													RESULTS TO A. JENKINS/ R. MILELLI / M. KNOX / S. SHIU
RELINQUISHED BY: (Signature) <i>Olay R. Jali</i>			DATE	TIME	RECEIVED BY: (Signature) <i>Michael E. Miller</i>			DATE	TIME				
RELINQUISHED BY: (Signature) <i>Michael E. Miller</i>			DATE	TIME	RECEIVED BY: (Signature) <i>Juan Rodriguez</i>			DATE	TIME				
RELINQUISHED BY: (Signature)			DATE	TIME	RECEIVED BY: (Signature)			DATE	TIME				
METHOD OF SHIPMENT:			DATE	TIME	LAB COMMENTS:								
Sample Collector: LEVINE•FRICKE•RECON 1900 Powell Street, 12th Floor Emeryville, California 94608-1827 (510) 652-4500					Analytical Laboratory: AEN								

American Environmental Network

Certificate of Analysis

DOHS Certification: 1172

AIHA Accreditation: 11134

PAGE 1

LEVINE-FRICKE-RECON
1900 POWELL ST. 12TH FL.
EMERYVILLE, CA 94608

REPORT DATE: 02/10/97

DATE(S) SAMPLED: 02/05/97

DATE RECEIVED: 02/06/97

ATTN: A.JENKINS/R.MILELLI/M.KNOX
CLIENT PROJ. ID: 3042.95-005
CLIENT PROJ. NAME: RIFKIN WALL
C.O.C. NUMBER: 1091

AEN WORK ORDER: 9702066

PROJECT SUMMARY:

On February 6, 1997, this laboratory received 5 (2 MCE filter & 3 concrete) 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

LEVINE-FRICKE-RECON

SAMPLE ID: 3042-0205-1
AEN LAB NO: 9702066-01
AEN WORK ORDER: 9702066
CLIENT PROJ. ID: 3042.95-005

DATE SAMPLED: 02/05/97
DATE RECEIVED: 02/06/97
REPORT DATE: 02/10/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Sample Volume		492		Liters	
#Digestion		-	-	Prep Date	02/06/97
Arsenic in Air	NIOSH 7300M	0.011		mg/m3	02/07/97
Lead in Air	NIOSH 7300M	0.008		mg/m3	02/07/97

LEVINE-FRICKE-RECON

SAMPLE ID: 3042-0205-2
AEN LAB NO: 9702066-02
AEN WORK ORDER: 9702066
CLIENT PROJ. ID: 3042.95-005

DATE SAMPLED: 02/05/97
DATE RECEIVED: 02/06/97
REPORT DATE: 02/10/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Sample Volume		210		Liters	
#Digestion		-	-	Prep Date	02/06/97
Arsenic in Air	NIOSH 7300M	<0.005		mg/m3	02/07/97
Lead in Air	NIOSH 7300M	0.005		mg/m3	02/07/97

LEVINE - FRICKE - RECON

SAMPLE ID: CHI-5-6
AEN LAB NO: 9702066-03
AEN WORK ORDER: 9702066
CLIENT PROJ. ID: 3042.95-005

DATE SAMPLED: 02/05/97
DATE RECEIVED: 02/06/97
REPORT DATE: 02/10/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Arsenic	EPA 7060	44 *	0.5 mg/kg		02/07/97
#Digestion, Metals AA/ICP	EPA 3050	-		Prep Date	02/06/97

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

LEVINE - FRICKE - RECON

SAMPLE ID: CHI-6-7
 AEN LAB NO: 9702066-04
 AEN WORK ORDER: 9702066
 CLIENT PROJ. ID: 3042.95-005

DATE SAMPLED: 02/05/97
 DATE RECEIVED: 02/06/97
 REPORT DATE: 02/10/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Arsenic	EPA 7060	7.2 *	0.5	mg/kg	02/07/97
#Digestion, Metals AA/ICP	EPA 3050	-		Prep Date	02/06/97

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

LEVINE - FRICKE - RECON

SAMPLE ID: CHI-7-8
 AEN LAB NO: 9702066-05
 AEN WORK ORDER: 9702066
 CLIENT PROJ. ID: 3042.95-005

DATE SAMPLED: 02/05/97
 DATE RECEIVED: 02/06/97
 REPORT DATE: 02/10/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Arsenic	EPA 7060	11 *	0.5	mg/kg	02/07/97
#Digestion, Metals AA/ICP	EPA 3050	-		Prep Date	02/06/97

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

AEN (CALIFORNIA)
QUALITY CONTROL REPORT

AEN JOB NUMBER: 9702066
CLIENT PROJECT ID: 3042.95-005

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.

D: Surrogates diluted out.

I: Interference.

!: Indicates result outside of established laboratory QC limits.

WORK ORDER: 9702066

QUALITY CONTROL REPORT

PAGE QR-2

ANALYSIS: Arsenic

MATRIX: Soil/Bulk

METHOD BLANK SAMPLES

SAMPLE TYPE: Blank-Method/Media blank		LAB ID: GFS_BLNK_G	INSTR RUN: 4000\970207115400/1/	
INSTRUMENT: TJA 4000, GFAA		PREPARED:	BATCH ID: GFS020697-G	
UNITS: mg/kg		ANALYZED: 02/07/97	DILUTION: 1.000000	
METHOD: EPA 7060				

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD
						LOW	HIGH	LIMIT (%)
Arsenic in soil EPA 7060	ND		0.5					

METHOD SPIKE SAMPLES

SAMPLE TYPE: Spike-Method/Media blank		LAB ID: GFS_MD_G	INSTR RUN: 4000\970207115400/3/1	
INSTRUMENT: TJA 4000, GFAA		PREPARED:	BATCH ID: GFS020697-G	
UNITS: mg/kg		ANALYZED: 02/07/97	DILUTION: 1.000000	
METHOD: EPA 7060				

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD
						LOW	HIGH	LIMIT (%)
Arsenic in soil EPA 7060	12.0	ND	0.5	10.0	120	77	141	

SAMPLE TYPE: Spike-Method/Media blank		LAB ID: GFS_MS_G	INSTR RUN: 4000\970207115400/2/1	
INSTRUMENT: TJA 4000, GFAA		PREPARED:	BATCH ID: GFS020697-G	
UNITS: mg/kg		ANALYZED: 02/07/97	DILUTION: 1.000000	
METHOD: EPA 7060				

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD
						LOW	HIGH	LIMIT (%)
Arsenic in soil EPA 7060	12.2	ND	0.5	10.0	122	77	141	

METHOD SPIKE DUPLICATES

SAMPLE TYPE: Method Spike Sample Duplicate		LAB ID: GFS_MR_G	INSTR RUN: 4000\970207115400/4/2	
INSTRUMENT: TJA 4000, GFAA		PREPARED:	BATCH ID: GFS020697-G	
UNITS: mg/kg		ANALYZED: 02/07/97	DILUTION: 1.000000	
METHOD: EPA 7060				

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD
						LOW	HIGH	LIMIT (%)
Arsenic in soil EPA 7060	12.0	12.2	0.5					1.65

WORK ORDER: 9702066

QUALITY CONTROL REPORT

PAGE QR-3

ANALYSIS: Metals NIOSH 7300M

MATRIX: Air

METHOD BLANK SAMPLES

SAMPLE TYPE: Blank-Method/Media blank
 INSTRUMENT: TJA Enviro 36
 UNITS: ug
 METHOD:

LAB ID: IFA_BLNK
 PREPARED:
 ANALYZED: 02/07/97

INSTR RUN: ICP\970207105700/1/
 BATCH ID: IFA020697
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Arsenic, MCEF	<1								
Lead, MCEF	<0.5								

METHOD SPIKE SAMPLES

SAMPLE TYPE: Spike-Method/Media blank
 INSTRUMENT: TJA Enviro 36
 UNITS: ug
 METHOD:

LAB ID: IFA_MD
 PREPARED:
 ANALYZED: 02/07/97

INSTR RUN: ICP\970207105700/3/1
 BATCH ID: IFA020697
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Arsenic, MCEF	6.30	<1		6.00	105	68	127		
Lead, MCEF	7.50	<0.5		7.50	100	72	121		

SAMPLE TYPE: Spike-Method/Media blank
 INSTRUMENT: TJA Enviro 36
 UNITS: ug
 METHOD:

LAB ID: IFA_MS
 PREPARED:
 ANALYZED: 02/07/97

INSTR RUN: ICP\970207105700/2/1
 BATCH ID: IFA020697
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Arsenic, MCEF	6.14	<1		6.00	102	68	127		
Lead, MCEF	7.30	<0.5		7.50	97.3	72	121		

METHOD SPIKE DUPLICATES

SAMPLE TYPE: Method-Spike Sample Duplicate
 INSTRUMENT: TJA Enviro 36
 UNITS: ug
 METHOD:

LAB ID: IFA_MR
 PREPARED:
 ANALYZED: 02/07/97

INSTR RUN: ICP\970207105700/4/2
 BATCH ID: IFA020697
 DILUTION: 1.000000

ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)		RPD (%)	RPD LIMIT (%)
						LOW	HIGH		
Arsenic, MCEF	6.30	6.14						2.57	10
Lead, MCEF	7.50	7.30						2.70	10

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

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

9702066

Project No.: 3042.95-005			Project Location: EMERYVILLE, CA			Date: 2/5/97		Serial No.: Nº 1091	
Project Name: RIFKIN WALL DEMO			Field Logbook No.:						
Sampler (Signature): <i>Alvin R. Jeli</i>					ANALYSES			Samplers: ARJ	
SAMPLES									
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	ARSENIC NIOSH 7300	LEAD NIOSH 7300	ARSENIC EPA 7060	REMARKS
3042-0205-1	2/5/97	17:00	01A	1	AIR	XX	XX		72-HR { XX V = 492 L XX V = 210 L
3042-0205-2	↓	↓	02A	1	↓	XX	XX		
CHI-5-6	2/5/97	15:45	03A	1	CONCRETE			XX	24-HR { XX 72-HOUR TAT FOR XX AIR SAMPLES XX RESULTS TO A. JENKINS/ R. MILELLI / M. KNOX / S. SHU 24-HOUR TAT FOR CONCRETE SAMPLES
CHI-6-7	↓	↓	04A	1	↓			XX	
CHI-7-8	↓	↓	05A	1	↓			XX	
RELINQUISHED BY: (Signature) <i>Alvin R. Jeli</i>			DATE: 2/6/97	TIME: 1200	RECEIVED BY: (Signature) <i>Michael Etchells</i>			DATE: 2/6/97	TIME: 1200
RELINQUISHED BY: (Signature) <i>Michael Etchells</i>			DATE: 2/6/97	TIME: 1300	RECEIVED BY: (Signature) <i>Ronald C. Jensen</i>			DATE: 2/6/97	TIME: 13:00
RELINQUISHED BY: (Signature)			DATE:	TIME:	RECEIVED BY: (Signature)			DATE:	TIME:
METHOD OF SHIPMENT:			DATE:	TIME:	LAB COMMENTS:				
Sample Collector: LEVINE•FRICKE•RECON 1900 Powell Street, 12th Floor Emeryville, California 94608-1827 (510) 652-4500					Analytical Laboratory: AEN				

American Environmental Network

Certificate of Analysis

DOHS Certificate # 1772

A/E/N Accredited # 0174

PAGE 1

LEVINE-FRICKE-RECON
1900 POWELL ST. 12TH FL.
EMERYVILLE, CA 94608

REPORT DATE: 02/13/97

DATE(S) SAMPLED: 02/06/97

DATE RECEIVED: 02/07/97

ATTN: A. JENKINS/R. MILELLI/M. KNOX
CLIENT PROJ. ID: 3042.95-005
CLIENT PROJ. NAME: RIFKIN WALL
C.O.C. NUMBER: 1092

AEN WORK ORDER: 9702082

PROJECT SUMMARY:

On February 7, 1997, this laboratory received 2 MCE cassette 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

FEB 13

LEVINE-FRICKE-RECON

SAMPLE ID: 3042-0206-1
AEN LAB NO: 9702082-01
AEN WORK ORDER: 9702082
CLIENT PROJ. ID: 3042.95-005

DATE SAMPLED: 02/06/97
DATE RECEIVED: 02/07/97
REPORT DATE: 02/13/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Sample Volume		863		Liters	
#Digestion		-	-	Prep Date	02/11/97
Arsenic in Air	NIOSH 7300M	0.038		mg/m3	02/12/97
Lead in Air	NIOSH 7300M	0.024		mg/m3	02/12/97

LEVINE-FRICKE-RECON

SAMPLE ID: 3042-0206-2
AEN LAB NO: 9702082-02
AEN WORK ORDER: 9702082
CLIENT PROJ. ID: 3042.95-005

DATE SAMPLED: 02/06/97
DATE RECEIVED: 02/07/97
REPORT DATE: 02/13/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Sample Volume		861		Liters	
#Digestion		-	-	Prep Date	02/11/97
Arsenic in Air	NIOSH 7300M	0.004		mg/m3	02/12/97
Lead in Air	NIOSH 7300M	0.0037		mg/m3	02/12/97

AEN (CALIFORNIA)
QUALITY CONTROL REPORT

AEN JOB NUMBER: 9702082
CLIENT PROJECT ID: 3042.95-005

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.

D: Surrogates diluted out.

I: Interference.

!: Indicates result outside of established laboratory QC limits.

WORK ORDER: 9702082

QUALITY CONTROL REPORT

PAGE QR-2

ANALYSIS: Metals NIOSH 7300M

MATRIX: Air

METHOD BLANK SAMPLES

SAMPLE TYPE: Blank-Method/Media blank		LAB ID: IFA_BLNK		INSTR RUN: ICP\970212131500/1/				
INSTRUMENT: TJA Enviro 36		PREPARED:		BATCH ID: IFA021197		DILUTION: 1.000000		
UNITS: ug		ANALYZED: 02/12/97						
METHOD:								
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)	RPD (%)	RPD LIMIT (%)
						LOW HIGH		
Arsenic, MCEF	<1							
Lead, MCEF	<0.5							

METHOD SPIKE SAMPLES

SAMPLE TYPE: Spike-Method/Media blank		LAB ID: IFA_MD		INSTR RUN: ICP\970212131500/3/1				
INSTRUMENT: TJA Enviro 36		PREPARED:		BATCH ID: IFA021197		DILUTION: 1.000000		
UNITS: ug		ANALYZED: 02/12/97						
METHOD:								
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)	RPD (%)	RPD LIMIT (%)
						LOW HIGH		
Arsenic, MCEF	6.20	<1		6.00	103	68 127		
Lead, MCEF	8.28	<0.5		7.50	110	72 121		

SAMPLE TYPE: Spike-Method/Media blank		LAB ID: IFA_MS		INSTR RUN: ICP\970212131500/2/1				
INSTRUMENT: TJA Enviro 36		PREPARED:		BATCH ID: IFA021197		DILUTION: 1.000000		
UNITS: ug		ANALYZED: 02/12/97						
METHOD:								
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)	RPD (%)	RPD LIMIT (%)
						LOW HIGH		
Arsenic, MCEF	6.00	<1		6.00	100	68 127		
Lead, MCEF	8.22	<0.5		7.50	110	72 121		

METHOD SPIKE DUPLICATES

SAMPLE TYPE: Method Spike Sample Duplicate		LAB ID: IFA_MR		INSTR RUN: ICP\970212131500/4/2				
INSTRUMENT: TJA Enviro 36		PREPARED:		BATCH ID: IFA021197		DILUTION: 1.000000		
UNITS: ug		ANALYZED: 02/12/97						
METHOD:								
ANALYTE	RESULT	REF RESULT	REPORTING LIMIT	SPIKE VALUE	RECOVERY (%)	REC LIMITS (%)	RPD (%)	RPD LIMIT (%)
						LOW HIGH		
Arsenic, MCEF	6.20	6.00					3.28	10
Lead, MCEF	8.28	8.22					0.727	10

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

C-15-1

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

9702082

Project No.: 3042.95-005		Project Location: EMERYVILLE, CA		Date: 2/6/97		Serial No.: Nº 1092				
Project Name: RIFKIN WALL DEMO				Field Logbook No.:						
Sampler (Signature): <i>Oliver R. Jali</i>				ANALYSES		Samplers: ARJ				
SAMPLES										
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	ARSENIC NIOSH 7300	LEAD NIOSH 7300	HOLD	RUSH	REMARKS
3042-0206-1	2/6/97	17:10	01A	1	AIR	XX	XX	XX		✓ = 863 L
3042-0206-2	↓	↓	02A	1	↓	XX	XX	XX		✓ = 861 L
										72-HOUR TAT
										RESULTS TO A. JENKINS/ R. MILELLI / M. KNOX/ S. SHIU
RELINQUISHED BY: (Signature) <i>Oliver R. Jali</i>		DATE 2/7/97	TIME 1025	RECEIVED BY: (Signature) <i>Michael E. Keller</i>		DATE 2/7/97	TIME 1025			
RELINQUISHED BY: (Signature) <i>Michael E. Keller</i>		DATE 2/7/97	TIME 1135	RECEIVED BY: (Signature) <i>Gina Gillespie</i>		DATE 2-7-97	TIME 1135			
RELINQUISHED BY: (Signature)		DATE	TIME	RECEIVED BY: (Signature)		DATE	TIME			
METHOD OF SHIPMENT:		DATE	TIME	LAB COMMENTS:						
Sample Collector: LEVINE•FRICKE•RECON 1900 Powell Street, 12th Floor Emeryville, California 94608-1827 (510) 652-4500				Analytical Laboratory: A E N						