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.

and D. Thox

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

6/23/99 Date

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

Principal Engineer

California Professional Engineer (33194)

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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.

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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 Streetand 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/m³ and 1.1 ug/m³ 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/m³). 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 | Total Dust Equivalent | Action |
|----------|-----------------------|--------|
| Arsenic | Action Level | |
| PEL | | |

| 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.

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- 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.

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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 Fast | Ficight Above Ground | Material | As | Pb | L) A | pH. |
|---------------|----------|----------------|---------------------------------------|----------|---------|---------|---------|------|
| | | Walkilland | | Type | (mg/kg) | (mg/ke) | (mg/kg) | |
| BW-1 | Interior | 40 | | 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 | 7,7 |
| 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 | , , , , , , , , , , , , , , , , , , , | brick | < 40 | <3 | 20 | 8.4 |
| BW-18 | Interior | 40 | ٠ - | mortar | 100 | 18 | 120 | 8.2 |
| BW-19 | Interior | 80 | ς . | paint | < 40 | 12000 | 24000 | 5.5 |
| BW-20 | Interior | 80 | - - | 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 | š | paint | < 40 | 3900 | 8200 | 6 |
| BW-24 | Interior | 120 | 5 | mortar | < 40 | 70 | 180 | 8.7 |
| BW-25 | Interior | 120 | - - | brick | < 40 | 12 | 37 | 9 |
| BW-26 | Interior | 160 | Š | 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

| | | | emery vine, camornia | | | | | |
|---|------------|------------------------|----------------------|------------------|-----------------|------------------|---------------|-------|
| Sample Number | Location 1 | Feet from East Wall | Height Above Ground | Material Type | As -(mg/kg): | Pb = (mg/kg)- | Zn (mg/kg) | FEPH. |
| BW-29 | | 40 | | | | | | |
| | 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 | mor tar | < 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 | | |
| | Exterior | .120 | 11.5 | Drick | < 40 | 4 | < 10 | 8.1 |

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 | Feeh-Abovateounk | Material * Jype | "As (mg/kg) | PHUE | Zo Gurka Lukka | ptl-3 |
|---------------|-----------|----------------|------------------|--------------------|----------------|------|----------------------|-------|
| BW-58 | Exterior | 160 | 5 | mortar | 90 | 34 | 40 | 9.1 |
| BW-59 | Exterior | 160 | 5 | brick | < 40 | 35 | < 10 | 9.2 |
| BW-60 | Exterior | 160 | 11.5 | mortar | 90 | 23 | 30 | 9.3 |
| BW-61 | Exterior | 160 | 11.5 | brick | 40 | 84 | 20 | 9.4 |

Notes

As = arsenic

mg/kg milligrams per kilogram

Pb = lead

Zn = zinc

¹ Interior samples were collected from the north-facing side (side facing the Rifkin property) of the Wall. Exterior samples were collected from the south-facing side (side facing the Sherwin-Williams property) of the Wall. Background samples were collected on the Rifkin building away from the Wall.

² All heights above ground are relative to the grade of the Rifkin property.

Table 2 Summary of Concrete Analysis Data Rifkin South Wall Demolition

| Sample | | Arsenic |
|---------|-----------|---------|
| ID | Date | (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 | | Arsenic ⁽¹⁾ |
|-------------|-----------|------------------------|
| 1D | Date | (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 ARJ. 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

| | | | | T | | T | |
|--------|-----------|-------------------|---------------|-------------------|---------------|-------------------|--------------------------|
| | | | | Volumetric | | Volumetric | |
| _ | | Total | Wet Weight of | Arsenic | Wet Weight of | Lead | |
| Sample | | Air Flow (1) | Arsenic (2) | Concentration (3) | Lead (2) | Concentration (3) | Sample |
| ID | Date | (m ³) | (ug) | (ug/m³) | (ug) | (ug/m³) | 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 ART . QA/QC by MDK

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

| | | | | Volumetric | | Volumetric | |
|--------|------|--------------|---------------|-------------------|---------------|-------------------|----------|
| 1 | | Total | Wet Weight of | Arsenic | Wet Weight of | Lead | |
| Sample | [| Air Flow (1) | Arsenic (2) | Concentration (3) | Lead (2) | Concentration (3) | Sample |
| ID | Date | (m³) | (ug) | (ug/m³) | (ug) | (ug/m³) | 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/m³) | 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) |
| 042-0201-2 | 1-Feb-97 | 651 | 0.003 | 0.002 | Bobcat Operator (50/50) |
| 042-0203-1 | 3-Feb-97 | (4) | (4) | (4) | Laborer (25/75) |
| 042-0203-2 | 3-Feb-97 | 728 | < 0.002 | < 0.0007 | Excavator Operator (0/100) |
| 042-0203-3 | 3-Feb-97 | 649 | 0.004 | 0.003 | Bobcat Operator (75/25) |
| 042-0204-1 | 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 (n | nass in mg) | |
| 3042-0129-В | 29-Jan-97 | 0 | < 0.001 | < 0.0005 | Trip Blank |
| 3042-0130-В | 30-Jan-97 | 0 | < 0.001 | < 0.0005 | Trip Blank |
| ata entered by | TGL Proof | ed by ARJ | . QA/QC by MDK | | |

Notes:

1 of 1

mg/m³ = milligrams per cubic meter

NIOSH - National Institute of Occupational Safety and Health

^{(1) =} Total air flow calculated using Personal Air Monitor field data.

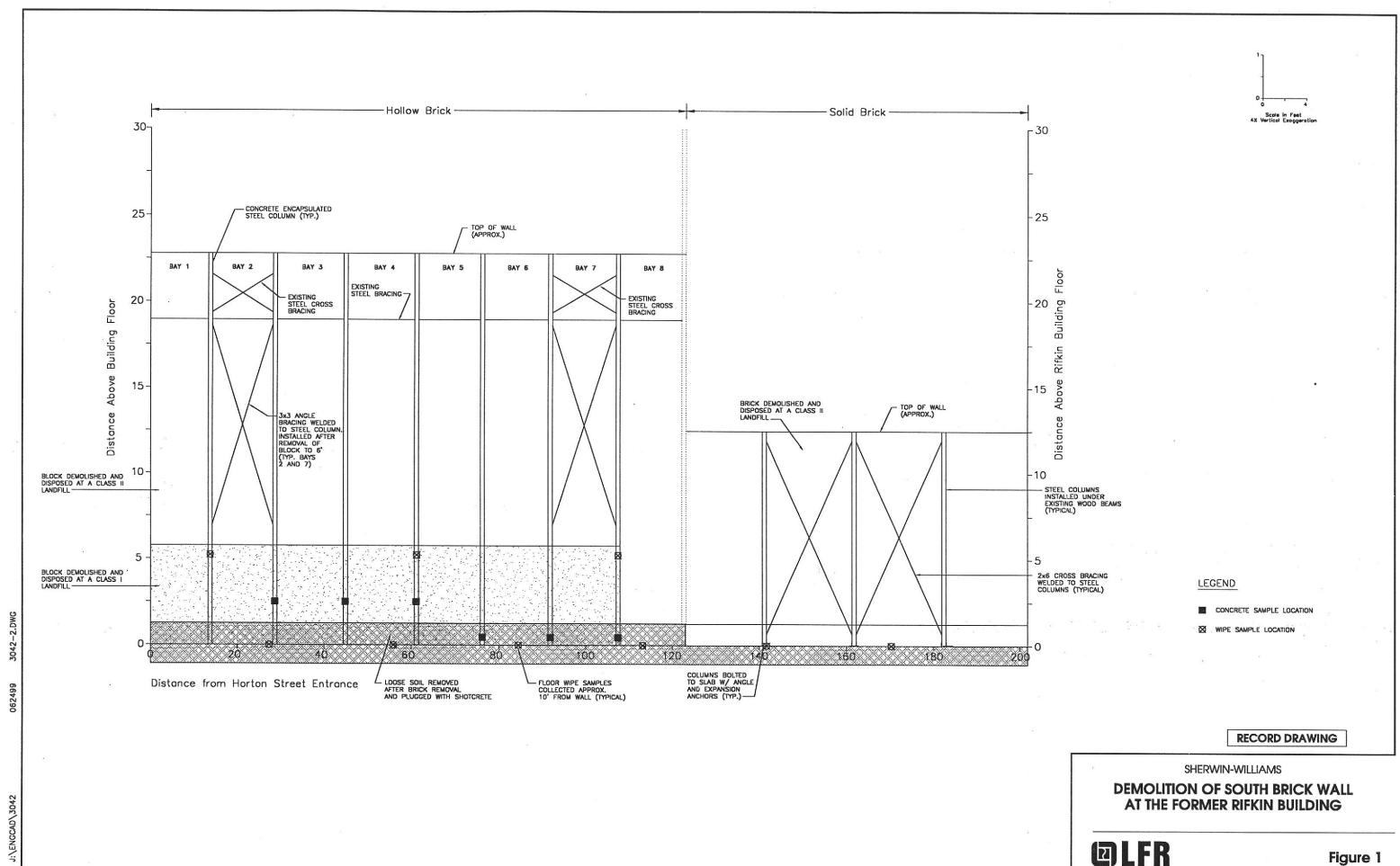
^{(2) -} Laboratory analyses performed by American Environmental Network, Pleasant Hill, California. Arsenic and lead analyzed by modified NIOSH Method 7300. Volumetric concentration calculated by laboratory given the total air flow. For comparison with action levels, background (west upwind) volumetric 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.



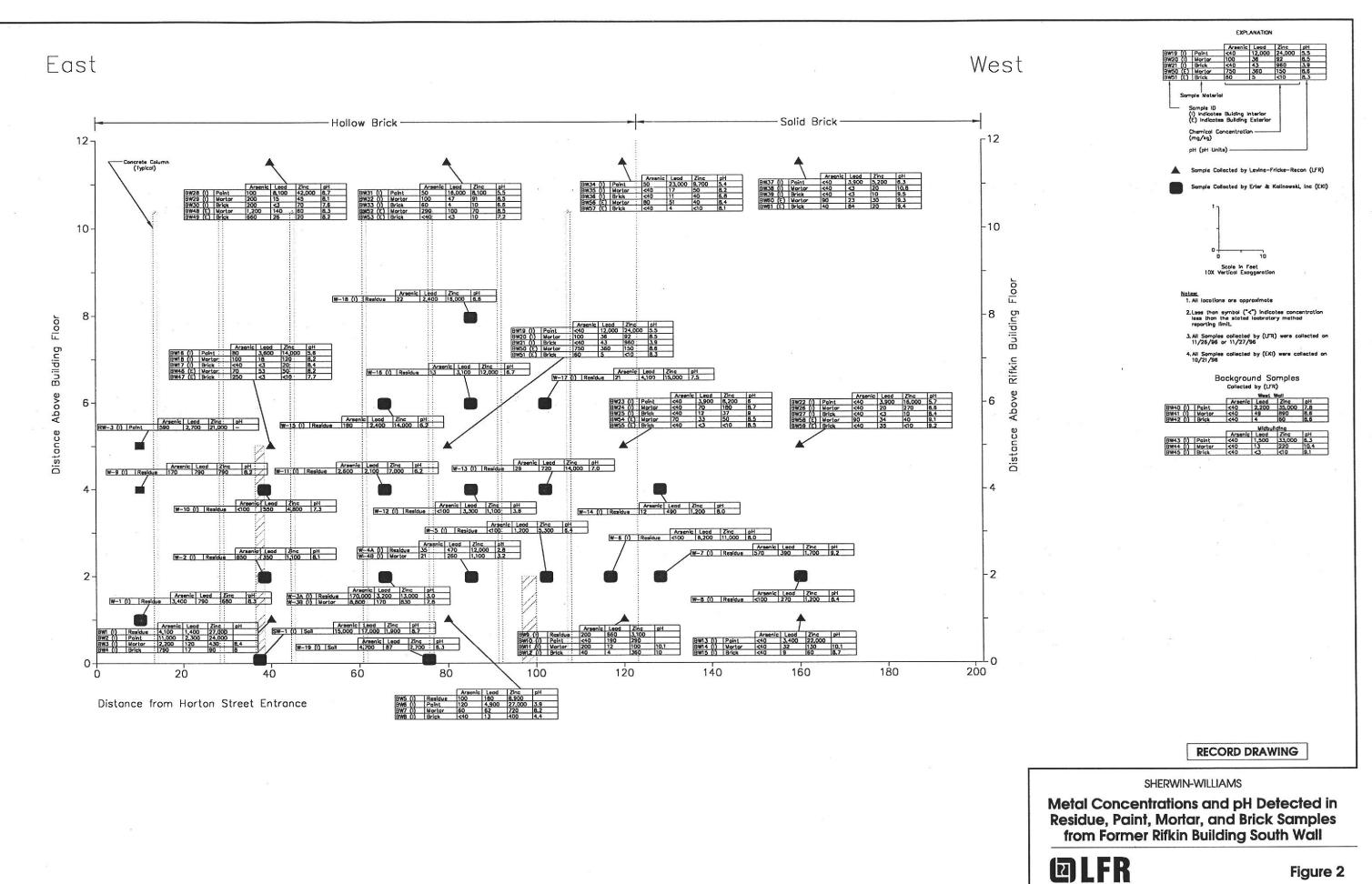
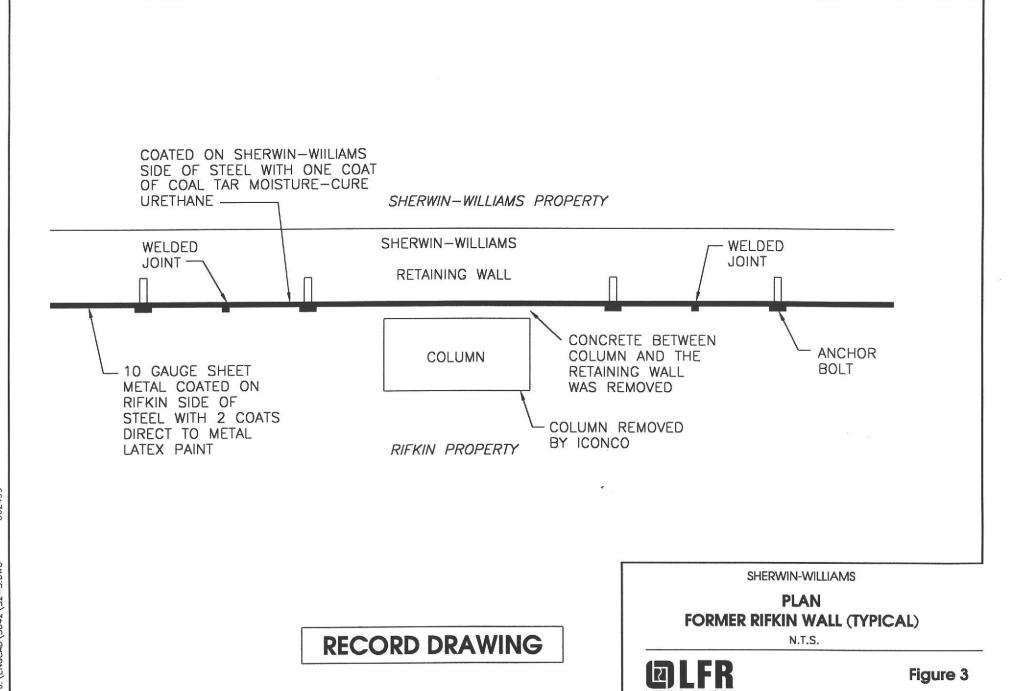


Figure 2

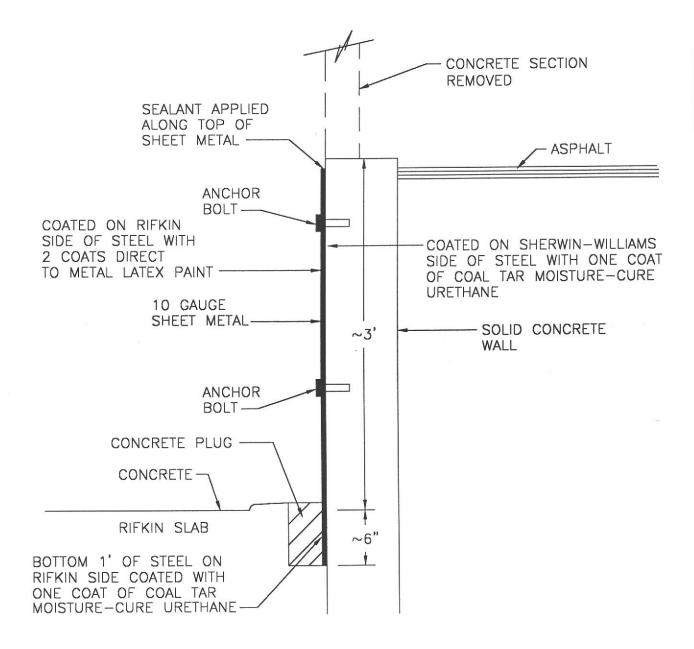


-1 DWG

J:\ENGCAD\3042\SW-1.DWG

RIFKIN PROPERTY

SHERWIN-WILLIAMS
PROPERTY



RECORD DRAWING

SHERWIN-WILLIAMS

SECTION FORMER SOLID BRICK WALL AREA (APPROX. 80' LENGTH)

N.T.S.



Figure 5

30 FEET

| | SHERWIN- | × AF-FL-1 | FORMER RIFKI | N BUILDING | G |
|-----|---------------------------------|---------------------------------|--------------|------------------|----------------------------------|
| | WILLIAMS | X AF-FL-2 | | | |
| | COLUMN 7-8 (AF-CO-7-8) | × AF-FL-3 | | | |
| | (AF-CO-7-8) | * X AF-FL-4 (FL-01-W) | | | |
| | COLUMN | | | × | FLOOR SAMPLE |
| | 4-5 (AF-CO-4-5) | * X AF-FL-5 (FL-02-M) | | • | COLUMN SAMPLE |
| | SHERWIN-WILLIAMS RETAINING WALL | | | * | SECOND ROUND WIPE SAMPLE |
| , | | * X AF-FL-6 (FL-03-E) | | | AFTER CLEANING THE FLOOR SLAB |
| 200 | COLUMN 1-2 (AF-CO-1-2) | Ar-FL-6 (FL-U3-E) | | | |
| 1 | | STREET | | SHERWIN-WILLIAMS | |
| | | | | | WIPE SAMPLE LOCATIONS |

WIPE SAMPLE LOCATIONS AT THE FORMER RIFKIN BUILDING



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.



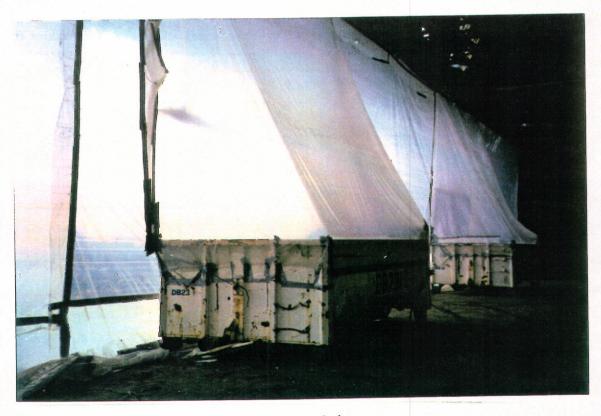
Photograph #5: East wall of the former Rifkin building after the non-hazardous bricks were removed.



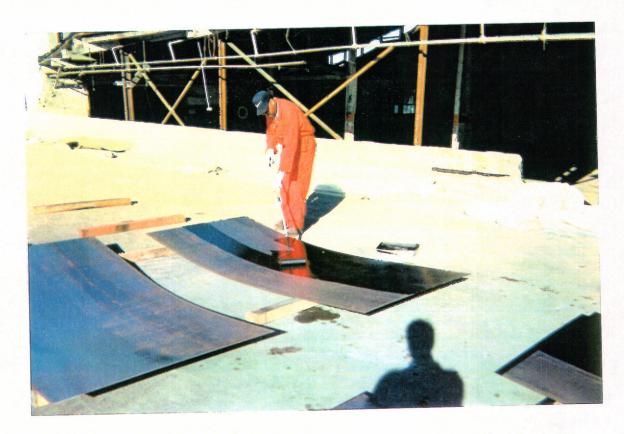
Photograph #6: Laborer in a bobcat removing hazardous bricks from the east wall of the former Rifkin building.



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

FOHS Certification: 1172

VIIIA Acateditation.

PAGE 1

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

THE PARTY OF THE P

ATTN: KENTON GEE

CLIENT PROJ. ID: 3042.95-004 CLIENT PROJ. NAME: SHERWIN WMS

C.O.C. NUMBER: 15177

REPORT DATE: 12/12/96

DATE(S) SAMPLED: 11/27/96

DATE RECEIVED: 11/27/96

AEN WORK ORDER: 9611400

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

1

SAMPLE ID: BW-46

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

DATE SAMPLED: 11/27/96

The state of the s

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

| ANALYTE | METHOD/ CAS# | RESULT | REPORT LIMI | | UNITS | DATE ANALYZED |
|---|---|---|----------------|--|--------------------------|--|
| Soil pH measured in water | EPA 9045A | 8.2 | | S.l | J. | 12/03/96 |
| Lead | EPA 7420 | 53 | * | 3 mg/ | /kg | 12/03/96 |
| #Digestion, Metals by GFAA | EPA 3050 | - | | Pre | ep Date | 12/01/96 |
| Arsenic | EPA 7060 | 52 | * 0 | .5 mg/ | /kg | 12/06/96 |
| #Digestion, Metals AA/ICP | EPA 3050 | _ | | Pre | ep Date | 12/01/96 |
| Anion Scan in Soil by IC Fluoride, F Chloride, Cl Nitrite, NO2-N Nitrate, NO3-N Phosphate, PO4-P Sulfate, SO4 | EPA 300 EPA 300 EPA 300 EPA 300 EPA 300 EPA 300 EPA 300 | ND 2,600 ND 4.000 ND 1,300 | * | 10 mg/ 50 mg/ 10 mg/ 10 mg/ 50 mg/ | 'kg 'kg 'kg 'kg | 12/03/96 12/03/96 12/03/96 12/03/96 12/03/96 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 m g/ | ′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

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

 $\varphi(t,\tau) = \varphi(t,\tau) = \varphi(t) \cdot \Theta(t) + \varepsilon \varphi(t) \tilde{N}_{t}(t) + \varepsilon$

REPORT DATE: 12/12/96

| ANALYTE | METHOD/ CAS# | RI RESULT | EPORTING 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

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 | REPORTIN LIMIT | G 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 Fluoride, F Chloride, Cl Nitrite, NO2-N Nitrate, NO3-N Phosphate, PO4-P Sulfate, SO4 | EPA 300 EPA 300 EPA 300 EPA 300 EPA 300 EPA 300 EPA 300 | ND 190 7 ND 310 7 ND 1,700 7 | 30 5 5 30 | mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg | 12/03/96 12/03/96 12/03/96 12/03/96 12/03/96 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 3 | · 10 | mg/kg | 12/03/96 |

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

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

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| ANALYTE | METHOD/ CAS# | RESULT | REPORTIN LIMIT | IG 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

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

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| ANALYTE | METHOD/ CAS# | RESULT | REPORTIN LIMIT | G UNITS | DATE ANALYZED |
|---|---|---|-------------------|--|--|
| Soil pH measured in water | EPA 9045A | 8.6 | | S.U. | 12/03/96 |
| Lead | EPA 7420 | 360 | ٠ 3 | mg/kg | 12/03/96 |
| #Digestion, Metals by GFAA | EPA 3050 | - | | Prep Date | 12/01/96 |
| Arsenic | EPA 7060 | 750 7 | 0.5 | mg/kg | 12/06/96 |
| #Digestion, Metals AA/ICP | EPA 3050 | - | | Prep Date | 12/01/96 |
| Anion Scan in Soil by IC Fluoride, F Chloride, Cl Nitrite, NO2-N Nitrate, NO3-N Phosphate, PO4-P Sulfate, SO4 | EPA 300 EPA 300 EPA 300 EPA 300 EPA 300 EPA 300 EPA 300 | 9 * 230 * ND 86 * ND 4,000 * | 5 5 5 30 | mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg | 12/03/96 12/03/96 12/03/96 12/03/96 12/03/96 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

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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 UN | DATE ITS 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

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**

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| ANALYTE | METHOD/ CAS# | RESULT | REPORTIN LIMIT | G 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 Fluoride, F Chloride, Cl Nitrite, NO2-N Nitrate, NO3-N Phosphate, PO4-P Sulfate, SO4 | EPA 300 EPA 300 EPA 300 EPA 300 EPA 300 EPA 300 EPA 300 | ND 710 * ND 190 * ND 4,600 * | 50 10 10 50 | mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg | 12/03/96 12/03/96 12/03/96 12/03/96 12/03/96 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

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

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REPORT DATE: 12/12/96

| ANALYTE | METHOD/ CAS# | RESULT | REPORTIN LIMIT | G 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

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

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| ANALYTE | METHOD/ CAS# | RESULT | | REPORTIN LIMIT | G 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 Fluoride, F Chloride, Cl Nitrite, NO2-N Nitrate, NO3-N Phosphate, PO4-P Sulfate, SO4 | EPA 300 EPA 300 EPA 300 EPA 300 EPA 300 EPA 300 EPA 300 | 15 140 ND 110 ND 6,900 | * | 30 5 5 30 | mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg | 12/03/96 12/03/96 12/03/96 12/03/96 12/03/96 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

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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# | R RESULT | EPORTING 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

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

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| ANALYTE | METHOD/ CAS# | RESULT | RE | PORTIN LIMIT | G 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 Fluoride, F Chloride, Cl Nitrite, NO2-N Nitrate, NO3-N Phosphate, PO4-P Sulfate, SO4 | EPA 300 EPA 300 EPA 300 EPA 300 EPA 300 EPA 300 EPA 300 | ND 880 ND 470 ND 7,800 | * | 50 10 10 50 | mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg | 12/03/96 12/03/96 12/03/96 12/03/96 12/03/96 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

12/03/96

LEVINE-FRICKE-RECON

SAMPLE ID: BW-57

Zinc

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

 $(p_{ij}, p_{ij}, p_{$

10 mg/kg

| 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 m g | J/kg | 12/03/96 |
| #Digestion, Metals by GFAA | EPA 3050 | - | Pr | ep Date | 12/01/96 |
| Arsenic | EPA 7060 | 15 * | 0.5 mg | ı/kg | 12/06/96 |
| #Digestion, Metals AA/ICP | EPA 3050 | - | Pr | ep Date | 12/01/96 |

ND

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

EPA 6010

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

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| ANALYTE | METHOD/ CAS# | RESULT | | REPORTIN LIMIT | G 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 Fluoride, F Chloride, Cl Nitrite, NO2-N Nitrate, NO3-N Phosphate, PO4-P Sulfate, SO4 | EPA 300 EPA 300 EPA 300 EPA 300 EPA 300 EPA 300 | ND 10 ND 11 ND 110 | * | 5 1 1 5 | mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg | 12/03/96 12/03/96 12/03/96 12/03/96 12/03/96 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

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

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REPORT DATE: 12/12/96

| ANALYTE | METHOD/ CAS# | RESULT F | 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

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

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REPORT DATE: 12/12/96

| ANALYTE | METHOD/ CAS# | RESULT | REPORTING LIMIT | G 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 Fluoride, F Chloride, Cl Nitrite, NO2-N Nitrate, NO3-N Phosphate, PO4-P Sulfate, SO4 | EPA 300 EPA 300 EPA 300 EPA 300 EPA 300 EPA 300 EPA 300 | ND 7 * ND 5 * ND 78 * | 5 1 1 5 | mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg | 12/03/96 12/03/96 12/03/96 12/03/96 12/03/96 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

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

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REPORT DATE: 12/12/96

| ANALYTE | METHOD/ CAS# | RESULT | | REPORTING LIMIT | G 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 | <u></u> | | | 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.

OUALITY CONTROL REPORT

PAGE QR-2

ANALYSIS: Arsenic

MATRIX: Soil/Bulk

METHOD BLANK SAMPLES

METHOD:

SAMPLE TYPE: Blank-Method/Media blank INSTRUMENT: TJA 4000, GFAA INSTR RUN: 4000\961206200500/1/ LAB ID: GFS_BLNK_T PREPARED:

BATCH ID: GFS113096-T DILUTION: 1.000000

ANALYZED: 12/06/96 mg/kg UNITS:

REPORTING SPIKE RECOVERY REC LIMITS (%) RPD LOW HIGH RPD (%) LIMIT (%) RESULT RESULT VALUE (1) ANALYTE LIMIT

Arsenic in soil EPA 7060 ND 0.5

METHOD SPIKE SAMPLES

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

SAMPLE TYPE: Spike-Method/Media blank INSTRUMENT: TJA 4000, GFAA

ANALYZED: 12/06/96 UNITS: mg/kg

METHOD:

REPORTING RECOVERY REC LIMITS (1) RPD SPIKE RFF LOW HIGH RPD (%) LIMIT (%) 77 141 RESULT RESULT VALUE ANALYTE LIMIT (%)

Arsenic in soil EPA 7060 11.00.5 10.0 110

SAMPLE TYPE: Spike-Method/Media blank INSTRUMENT: TJA 4000, GFAA LAB ID: GFS_MS_T PREPARED: INSTR RUN: 4000\961206200500/2/1 BATCH ID: GFS113096-T DILUTION: 1.000000

ANALYZED: 12/06/96

UNITS: mg/kg METHOD:

REF REPORTING SPIKE RECOVERY REC LIMITS (%) LOW HIGH RPD (*) LIMIT (*) 77 141 (*) 106 VALUE ANALYTE RESULT RESULT LIMIT

Arsenic in soil EPA 7060 10.0 ND 0.510.6.........

INSTR RUN: 4000\961206200500/7/5 SAMPLE TYPE: Spike-Method/Media blank INSTRUMENT: TJA 4000, GFAA LAB ID: MD11391-42A PREPARED:

BATCH ID: GFS113096-T DILUTION: 1.000000 ANALYZED: 12/06/96 UNITS: mg/kg

METHOD: REC LIMITS (%) RPD LOW HIGH RPD (%) LIMIT (%) SPIKE RECOVERY REPORTING

(%) 103 RESULT RESULT LIMIT VALUE ANALYTE Arsenic in soil EPA 7060 77 141 1.07 0.5 10.0 11.4

METHOD SPIKE DUPLICATES

LAB ID: GFS_MR_T PREPARED: INSTR RUN: 4000\961206200500/4/2 BATCH ID: GFS113096-T DILUTION: 1.000000 SAMPLE TYPE: Method Spike Sample Duplicate

INSTRUMENT: TJA 4000, GFAA ANALYZED: 12/06/96

mg/kg UNITS: METHOD: RECOVERY REPORTING REC LIMITS (%) REF

RPD LOW HIGH RPD (%) **RESULT** RESULT VALUE (%) LIMIT (%) LIMIT ANALYTE 3.70 15 Arsenic in soil EPA 7060 11.0 10.6 0.5

QUALITY CONTROL REPORT

PAGE QR-3

ANALYSIS: Lead

MATRIX: Soil/Bulk

METHOD BLANK SAMPLES

| SAMPLE TYPE: Blank-Method/MINSTRUMENT: Video 12 aa sp UNITS: mg/kg METHOD: | | | LAB ID: PREPARED ANALYZED | IFS_BLNK_U : : 12/03/96 | ļ | | A V12\96120 F3120196-U .000000 | 3152300/1/ |
|--|--------------|---------------|---------------------------------|-------------------------------|-----------------|---------------------------|--------------------------------------|------------------|
| ANALYTE Lead in soil-flame | RESULT ND | REF RESULT | REPORTING LIMIT 3 | SPIKE VALUE | RECOVERY (な) | REC LIMITS (% LOW HIGH | RPD (%) | RPD LIMIT (%) |

METHOD SPIKE SAMPLES

| SAMPLE TYPE: Spike-Method/Meth | | | LAB ID: PREPARED ANALYZED | IFS_MD_U : : 12/03/96 | | BATCH ID: 1 | M V12\9612 0 IFS120196-U L.000000 | 03152300/3/1 |
|--|--------------------------|---------------------|-----------------------------------|-----------------------------|------------------------|-------------------------------------|--|------------------|
| ANALYTE Lead in soil·flame | RESULT 53.1 | REF RESULT ND | REPORTING LIMIT 3 | SPIKE VALUE 50.0 | RECOVERY (な) 106 | REC LIMITS () LOW HIGH 80 119 | | RPD LIMIT (*) |
| SAMPLE TYPE: Spike Method/Me INSTRUMENT: Video 12 aa spe UNITS: mg/kg METHOD: | edia blank ectrometer | ***** | LAB ID: PREPARED: ANALYZED: | IFS_MS_U 12/03/96 | | BATCH ID: 1 | A V12\96120 F5120196-U .000000 | 03152300/2/1 |
| ANALYTE Lead in soil-flame | RESULT 50.9 | REF RESULT ND | REPORTING LIMIT 3 | SPIKE VALUE 50.0 | RECOVERY (*) 102 | REC LIMITS (X LOW HIGH 80 119 | | RPD LIMIT (%) |

METHOD SPIKE DUPLICATES

| INSTRUMENT: Vi | thod Spike Sample Dup deo 12 aa spectromete /kg | | LAB ID: PREPARED ANALYZED | IFS_MR_U : : 12/03/96 | | INSTR F BATCH I DILUTIO | (D: IF | V12\96120 5120196-U)00000 | 3152300/4/2 |
|----------------------------|---|----------|---------------------------------|-----------------------------|----------|-------------------------------|---------|----------------------------------|-------------------|
| METHOU; | | REF | REPORTING | SPIKE | RECOVERY | REC LIMI | (Y) 2TI | | RPD |
| ANALYTE Lead in soil-fl | RESUL ame 53.1 | T RESULT | LIMIT 3 | VALUE | (X) | LOW | HIGH | RPD (%) 4.23 | LIMIT (%) 10.5 |

MATRIX SPIKE SAMPLES

| SAMPLE TYPE: Spike-Sample/N INSTRUMENT: Video 12 aa sp UNITS: mg/kg METHOD: | latrix ectrometer | | LAB ID: PREPARED ANALYZED | MD11400-09 : : 12/03/96 | A | INSTR BATCH DILUTI | ID: IF: | V12\96120 5120196-U 000000 | 3152300/11/9 |
|--|-----------------------|-----------------------|---------------------------------|-------------------------------|-------------------------|--------------------------|-------------------------|-----------------------------------|------------------|
| ANALYTE Lead in soil-flame | RESULT 80.8 | REF RESULT 33.2 | REPORTING LIMIT 3 | SPIKE VALUE 50.0 | RECOVERY (な) 95.2 | REC LIM LOW 21 | ITS (%) HIGH 178 | RPD (な) | RPD LIMIT (%) |
| SAMPLE TYPE: Spike-Sample/M INSTRUMENT: Video 12 aa sp UNITS: mg/kg METHOD: | latrix pectrometer | | LAB ID: PREPARED ANALYZED | MS11400-09 | A | INSTR BATCH DILUTI | ID: IF | V12\96120 \$120196-U 000000 |)3152300/10/ |
| ANALYTE Lead in soil-flame | RESULT 83.8 | REF RESULT 33.2 | REPORTING LIMIT 3 | SPIKE VALUE 50.0 | RECOVERY (*) 101 | REC LIM LOW 21 | IITS (1) HIGH 178 | RPD (%) | RPD LIMIT (%) |

Anger an Environmental Network

WORK ORDER: 9611400

QUALITY CONTROL REPORT

PAGE QR-4

ANALYSIS: Lead

MATRIX: Soil/Bulk

MATRIX SPIKE DUPLICATES

SAMPLE TYPE: Spiked Sample Duplicate INSTRUMENT: Video 12 aa spectrometer

LAB ID: MR11400-09A PREPARED:

UNITS: mg/kg

ANALYZED: 12/03/96

INSTR RUN: AA V12\961203152300/12/10 BATCH ID: IF5120196-U DILUTION: 1.000000

METHOD:

REPORTING

RECOVERY REC LIMITS (\$) RPD (\$) LOW HIGH RPD (\$) LIMIT (\$) 3.65 23

ANALYTE Lead in soil-flame

RESULT 80.8

REF RESULT 83.8

LIMIT

SPIKE VALUE 50.0

QUALITY CONTROL REPORT

PAGE QR-5

ANALYSIS: Major Anions

MATRIX: Water

METHOD BLANK SAMPLES

| SAMPLE TYPE: Blank-Method/M INSTRUMENT: Dionex ion chr UNITS: mg/L METHOD: | | | LAB ID: PREPARED: ANALYZED: | ICS_BLNK 12/03/96 | | | \961203000 \$120396 000000 | 0000/1/ |
|--|--|---------------|--|----------------------|--------------|----------------------------|----------------------------------|------------------|
| ANALYTE Fluoride, F Chloride, Cl Nitrate, NO3-N Nitrite, NO2-N Phosphate, PO4-P Sulfate, SO4 | RESULT ND ND ND ND ND ND | REF RESULT | REPORTING LIMIT 0.1 0.5 0.1 0.1 0.5 0.5 | SPIKE VALUE | RECOVERY (*) | REC LIMITS (%) LOW HIGH | RPD (%) | RPD LIMIT (%) |

METHOD SPIKE SAMPLES

| | | | | | BATCH | ID: IC | 5120396 | 0000/3/1 |
|--|---|---|--|--|---|---|-------------|------------------|
| RESULT 2.09 9.88 2.13 1.91 3.84 10.4 | REF RESULT ND ND ND ND ND ND | REPORTING LIMIT 0.1 0.5 0.1 0.1 0.5 0.5 | SPIKE VALUE 2.00 10.0 2.00 2.00 4.00 10.0 | RECOVERY (%) 105 98.8 107 95.5 96.0 104 | REC LIM LOW 80 80 80 80 80 80 | HTS (%) HIGH 120 120 120 120 120 120 | RPD (%) | RPD LIMIT (%) |
| - • • • • • • • • • • • • • • • • • • • | • • • • • • • • • • • | | | | | | | |
| | | | | | BATCH | ID: ICS | \$120396 | 000/2/1 |
| | 2.09 9.88 2.13 1.91 3.84 | romatograph REF RESULT RESULT 2.09 ND 9.88 ND 2.13 ND 1.91 ND 3.84 ND 10.4 ND | romatograph | romatograph | romatograph PREPARED: ANALYZED: 12/03/96 REF REPORTING SPIKE RECOVERY RESULT RESULT LIMIT VALUE (%) 2.09 ND 0.1 2.00 105 9.88 ND 0.5 10.0 98.8 2.13 ND 0.1 2.00 107 1.91 ND 0.1 2.00 95.5 3.84 ND 0.5 4.00 96.0 10.4 ND 0.5 10.0 104 Media blank LAB ID: ICS_MS PREPARED: | romatograph | romatograph | romatograph |

| METHOD: | | | ANALIZED | : 12/03/30 | | DIFOLI | ON: 1.0 | 100000 | |
|------------------|--------|--------|-----------|------------|----------|---------|---------|---------|-----------|
| | | REF | REPORTING | SPIKE | RECOVERY | REC LIM | | | RPD |
| ANALYTE | RESULT | result | LIMIT | VALUE | (*) | LOW | HIGH | RPD (%) | LIMIT (%) |
| 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 | NO | 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 | | | LAB ID: ICS_MR PREPARED: ANALYZED: 12/03/96 | | | INSTR RUN: IC\961203000000/4/2 BATCH ID: ICS120396 DILUTION: 1,000000 | | | | |
|---|-------------|--------|---|----------|------------|---|----------------------------------|--|--|--|
| METHOD: | R | | | RECOVERY | REC LIMITS | | RPD | | | |
| ANALYTE | result resi | | VALUE | (*) | LOW H | HIGH RPD_(∦) | LIMIT_(%) | | | |
| Fluoride, F | 2.09 2.0 | 0.1 | | | | 4.40 | 15 | | | |
| Chloride, Cl | 9.88 9.1 | 39 0.5 | | | | 0.101 | 15 | | | |
| Nitrate, NO3-N | 2.13 | 0.1 | | | | 4.81 | 15 | | | |
| Nitrite, NO2-N | 1.91 1. | | | | | 0.525 | 15 | | | |
| Phosphate, PO4-P | 3.84 3. | | | | | 3.83 | 15 | | | |
| Sulfate, SO4 | 10.4 10 | | | | | 1.90 | 15 15 15 15 15 15 | | | |
| | | | | | | | <i></i> | | | |

QUALITY CONTROL REPORT

PAGE QR-6

ANALYSIS: Metals Scan by ICP

MATRIX: Soil/Bulk

METHOD BLANK SAMPLES

| SAMPLE TYPE: Blank-Method/Media blank INSTRUMENT: TJA Enviro 36 UNITS: mg/kg | | | | LAB ID: PREPARED ANALYZED | IFS_BLNK_ : 12/04/96 | X | INSTR RUN: ICP\961204131200/1/ BATCH ID: IFS120396-X DILUTION: 1.000000 | | | |
|--|--|---|---------------|---|-------------------------|-----------------|---|-------------------|------------------|--|
| METHO ANALY Ag Ba Ba Ca Cc Cc Cc K Mg Mo Na Pb Sb T1 V Zn | | RESULT ND | REF RESULT | REPORTING LIMIT 0.1 1 0.1 4 0.2 0.2 0.5 0.5 2 5 0.2 1 1 1 0.5 1 | SPIKE VALUE | RECOVERY (%) | REC LIMITS LOW HI | (%) GH RPD (%) | RPD LIMIT (%) | |

METHOD SPIKE SAMPLES

| SAMPLE TYPE: Spike-Method/Minstrument: TJA Enviro 36 units: mg/kg METHOD: | edia blank | • • • • • • • • • • | LAB ID: PREPARED: ANALYZED: | IFS_MD_3X 12/10/96 | | INSTR RUN: ICP\961204131200/18/ BATCH ID: IFS120396-3X DILUTION: 1.000000 | | | |
|---|--|---------------------------------------|--|-----------------------|---|--|-----|--|--|
| ANALYTE Ca Calcium K Potassium Mg Magnesium Na Sodium | RESULT 4442 4293 4421 4623 | REF RESULT ND ND ND ND | REPORTING LIMIT 4 2 5 3 | SPIKE VALUE | RECOVERY (%) 88.84 85.86 88.42 92.46 | REC LIMITS (%) RPI LOW HIGH RPD (%) LIMIT 75 125 75 125 75 125 75 125 | | | |
| SAMPLE TYPE: Spike-Method/M INSTRUMENT: TJA Enviro 36 UNITS: mg/kg METHOD: | edia blank | | LAB ID: PREPARED: ANALYZED: | IFS_MS_3X 12/10/96 | | INSTR RUN: ICP\961204131200/17 BATCH ID: IFS120396-3X DILUTION: 1.000000 | //1 | | |
| ANALYTE Ca Calcium K Potassium Mg Magnesium Na Sodium | RESULT 4544 4454 4529 4816 | REF RESULT ND ND ND ND | REPORTING LIMIT 4 2 5 3 | SPIKE VALUE | RECOVERY (%) 90.88 89.08 90.58 96.32 | REC LIMITS (%) RPI LOW HIGH RPD (%) LIMIT 75 125 75 125 75 125 75 125 | | | |

METHOD SPIKE DUPLICATES

| SAMPLE TYPE: Method Spike Sar INSTRUMENT: TJA Enviro 36 UNITS: mg/kg METHOD: | LAB ID: PREPARED ANALYZED | IFS_MR_3X : : 12/04/96 | | INSTR RUN: ICP\961204131200/28/17 BATCH ID: IFS120396-3X DILUTION: 1.00 | | | |
|---|--|---|--|---|-----------------|---|--|
| ANALYTE Ca Calcium K Potassium Mg Magnesium Na Sodium | RESULT 4442 4293 4421 4623 | REF RESULT 4544 4454 4529 4816 | REPORTING LIMIT 4 2 5 3 | SPIKE VALUE | RECOVERY (*) | REC LIMITS (%) LOW HIGH RPD (%) 2.270 3.681 2.413 4.089 | RPO LIMIT (%) 15 15 15 15 |

OUALITY CONTROL REPORT

PAGE QR-

ANALYSIS: Zinc

MATRIX: Soil/Bulk

| MET | THO! | DΒ | ΓAΝ | IK | SA | MP | LFS |
|-----|------|----|-----|----|------------|----|-----|
| | 110 | | | | ~ 1 | 41 | |

INSTR RUN: ICP\961203222200/1/ SAMPLE TYPE: Blank-Method/Media blank LAB ID: IF_BLNK_U BATCH ID: IFS120196-U DILUTION: 1.000000 PREPARED: INSTRUMENT: TJA Enviro 36 UNITS:

ANALYZED: 12/03/96 mg/kg

METHOD: REF REPORTING SPIKE RECOVERY REC LIMITS (*)

LOW HIGH RPD (%) RESULT LIMIT (次) ANALYTE RESULT LIMIT VALUE (X)ZINC IN SOIL BY ICP ND

METHOD SPIKE SAMPLES

SAMPLE TYPE: Spike-Method/Media blank INSTRUMENT: TJA Enviro 36 LAB ID: IFS_MD_U INSTR RUN: ICP\961203222200/3/1 BATCH ID: IFS120196-U DILUTION: 1.000000 PREPARED: ANALYZED: 12/03/96 mg/kg UNITS: METHOD: RECOVERY REC LIMITS (%) RPD REPORTING SPIKE LOW HIGH RPD (%) ANALYTE RESULT RESULT VALUE (x)LIMIT (%) LIMIT 90 ZINC IN SOIL BY ICP 115 ND 50.0 --------. SAMPLE TYPE: Spike-Method/Media blank INSTRUMENT: TJA Enviro 36 INSTR RUN: ICP\961203222200/2/1 LAB ID: IFS_MS_U BATCH ID: IFS120196-U DILUTION: 1.000000 PREPARED: ANALYZED: 12/03/96 UNITS: mg/kg REPORTING SPIKE RECOVERY REC LIMITS (%) RPD REF

METHOD:

RESULT RPD (%) LIMIT (%) ANALYTE RESULT VALUE LOW HIGH LIMIT ZINC IN SOIL BY ICP 90 48.3 ND 50.0 115

METHOD SPIKE DUPLICATES

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

MATRIX SPIKE SAMPLES

SAMPLE TYPE: Spike-Sample/Matrix INSTRUMENT: TJA Enviro 36 INSTR RUN: ICP\961203222200/11/9 LAB ID: MD11400-09A BATCH ID: IFS120196-U DILUTION: 10.0 PREPARED: ANALYZED: 12/03/96 UNITS: mg/kg METHOD: REPORTING RECOVERY REC LIMITS (%) REF SPIKE LOW HIGH RPD (*) LIMIT (*) (X) 90.4 VALUE RESULT RESULT LIMIT ZINC IN SOIL BY ICP 31 134 100 54.8 10 50.0 INSTR RUN: ICP\961203222200/10/9 BATCH ID: IFS120196-U DILUTION: 10.0 MS11400-09A

SAMPLE TYPE: Spike-Sample/Matrix INSTRUMENT: TJA Enviro 36 UNITS: mg/kg LAB ID: PREPARED:

ANALYZED: 12/03/96 UNITS: METHOD:

REF REPORTING SPIKE RECOVERY REC LIMITS (%) RPD RESULT RESULT VALUE LOW HIGH RPD (*) ANALYTE LIMIT (%) LIMIT (%) 31 ZINC IN SOIL BY ICP 50.0 134 54.8 10 99.6

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WORK ORDER: 9611400

QUALITY CONTROL REPORT

PAGE QR-8

ANALYSIS: Zinc

MATRIX: Soil/Bulk

MATRIX SPIKE DUPLICATES

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

INSTR RUN: ICP\961203222200/12/10 BATCH ID: IFS120196·U DILUTION: 10.0

LAB ID: MR11400-09A PREPARED: ANALYZED: 12/03/96

METHOD: REF RESULT 99.6 ANALYTE ZINC IN SOIL BY ICP **RESULT**

100

REPORTING LIMIT 10

SPIKE VALUE RECOVERY (%)

REC LIMITS (%)
LOW HIGH RPD (%)
0.401 LIMIT (*) 25

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

R-5, -D

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

9611400

| The state of the s | | | | Field Logbook No.: | | | | — | Та | | | | 16112 | | | | |
|--|--------------|-------------|-------------------|----------------------------|-----------------|------------|--------------------|------------------|------------------|---------|-------|-------------|-------------|------------|---|-----------------|---------------|
| Project No | ·: 301 | -12.95 | -004 | | Field | Log | book | No. | : | | | Date | : 11-2 | 27-96 | Serial N | o.: | |
| Project Nar | me: Sl | gerwin. | - Williams | | Projec | | | | Ema | ·y vill | ٤, | Ca. | | | Νõ | 1517 | 7 |
| Sampler (Si | gnature) | | | | | | | <u> </u> | , / | NAL | | <u> </u> | _/ | 7 | Sample | ers: | <i></i> |
| | | S. | AMPLES | 110 05 | T | | -Z | 10 P | | 34 | | | 1017 | RIST | <u> </u> | KAGI | >RC |
| SAMPLE NO. | DATE | TIME | LAB SAMPLE NO. | NO. OF CON - TAINERS | SAMPLE TYPE | X | Sign | AND S | Jur Jur | | _ | | */ | % / | R | EMARKS | |
| BW-46 | 11-27-96 | [035 | OIA | 1 | martan | X | X | X | | | | | | | | | |
| BW-47 | | 1036 | 02A | | brick | | $\perp \downarrow$ | | | | | | | | results | loy | |
| BW-48 | | 1045 | 03A | | montar | | | × | | | | · | | | [5. | · L1-96 | |
| CW- 49 | | 1046 | 04A | | brick | | | | | | | | | | | | |
| BW-50 | | 1048 | 05A | | montar | | | × | | | | | | | | | |
| BW- 51 | | 10419 | 06A | | brick | | | | | | | | | | results | to lan | <u> </u> |
| BW-52 | | 1052 | 07 A | | mortar | | | × | | | | | | - | · · · · · · · · · · · · · · · · · · · | (0.0 | Dec |
| BW-53 | | 1053 | 08 A | | brick | | | | | | | | | | | ···· | |
| BW- 54 | | 1054 | 09/4 | | mortar | | | \perp \times | | | | | | | | | |
| 3w - 55 | | 1100 | 10 A | | brick(| | | | | | | | | | | | |
| BW-56 | | 1102 | 11 A | | montar | Ш | | X | <u> </u> | | | | | | | F | |
| BW- 57 | | 1103 | 121 | | brick | Ш | $\perp \perp$ | | | | | | | | , <u>, , , , , , , , , , , , , , , , , , </u> | | |
| BW-58 | | 1110 | 13 A | | mortan | Ш | | \perp \times | , | | | | | | | | <u> </u> |
| BW- 59 | | 1115 | 14 A | | brick | | | | | | | | | | | | |
| BW- 60 | | 1130 | 15 A | | montan | | | $\perp \times$ | | | | | | | | | |
| BW- 61 | | 1133 | 16 A | | brull | lacksquare | | | | | | 0 | | | <u> </u> | | |
| RELINQUISHED (Signature) | | Cents | De s | | DATE \\- 27- | | TIME (21c | | (Signa | ED BY: | My | lad | 3 | Lulle | | DAJE VOST KA | TIME 1545 |
| RELINQUISHED (Signature) | BY: My | West 2 | mindle | | DATE | 12 | TIME ///3 | 5 | RECEIV (Signa | ED BY: | | | | 211 | // | DATE | TIME |
| RELINQUISHED (Signature) | BY: | | | | DATE | | TIME | | RECEIV | ED BY: | | | | | | DATE | 16:40 TIME |
| METHOD OF SHIPMENT: DATE | | | | TIME | | LAB CO | MMENTS | : | | | | · | | . 1 | | | |
| Sample Collector: LEVINE-FRICKE 1900 Powell Street, 12th Emeryville, California 9 (510) 652-4500 | | | | | | | | Anal | ytical | Lab | orato | • | +EN | 1 | | | |
| рріг | (| ab | Gree | | Cop | ello | | P | Сор | n l | k) | | | | | ΓO | a (|

American Environmental Network

OOHS Certification: 1172

PAGE 1

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

ATTN: KENTON GEE

CLIENT PROJ. ID: 3042.95-004 CLIENT PROJ. NAME: SHERWIN WMS

C.O.C. NUMBER: 15174

REPORT DATE: 12/12/96

DATE(S) SAMPLED: 11/26/96

DATE RECEIVED: 11/27/96

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

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...

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

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| 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 $\ensuremath{\mathsf{pH}}$ and anion analysis.

ND = Not detected at or above the reporting limit

* = Value at or above reporting limit

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

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| 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 \star = Value at or above reporting limit

SAMPLE ID: BW-3

AEN LAB NO: 9611391-03 AEN WORK ORDER: 9611391

CLIENT PROJ. ID: 3042.95-004

DATE SAMPLED: 11/26/96

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

| ANALYTE | METHOD/ CAS# | RESULT | REPORTIN LIMIT | IG 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 Fluoride, F Chloride, Cl Nitrite, NO2-N Nitrate, NO3-N Phosphate, PO4-P Sulfate, SO4 | EPA 300 EPA 300 EPA 300 EPA 300 EPA 300 EPA 300 EPA 300 | 20 : 810 : ND 1,700 : ND 6,500 : | * 50 10 * 10 50 | mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg | 12/02/96 12/02/96 12/02/96 12/02/96 12/02/96 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

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

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| ANALYTE | METHOD/ CAS# | RESULT | | REPORTIN LIMIT | G 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

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 | | Pre | ep Date | 11/27/96 |
| Arsenic | EPA 7060 | 59 * | 0.5 mg/ | ′kg | 12/09/96 |
| #Digestion, Metals AA/ICP | EPA 3050 | - | Pre | ep Date | 11/27/96 |
| Anion Scan in Soil by IC Fluoride, F Chloride, Cl Nitrite, NO2-N Nitrate, NO3-N Phosphate, PO4-P Sulfate, SO4 | EPA 300 EPA 300 EPA 300 EPA 300 EPA 300 EPA 300 EPA 300 | ND ND ND 200 * ND 270,000 * | 500 mg/ | íkg íkg íkg íkg | 12/02/96 12/02/96 12/02/96 12/02/96 12/02/96 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

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

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REPORT DATE: 12/12/96

| ANALYTE | METHOD/ CAS# | RESULT | REPORTING LIMIT UNIT | DATE FS 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 Da | ite 11/27/96 |
| Arsenic | EPA 7060 | 56 * | 0.5 mg/kg | 12/06/96 |
| #Digestion, Metals AA/ICP | EPA 3050 | - | Prep Da | te 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

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 | REPORTI LIMIT | | 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 | 5 mg/kg | 12/06/96 |
| #Digestion, Metals AA/ICP | EPA 3050 | - | | Prep Date | 11/27/96 |
| Anion Scan in Soil by IC Fluoride, F Chloride, Cl Nitrite, NO2-N Nitrate, NO3-N Phosphate, PO4-P Sulfate, SO4 | EPA 300 EPA 300 EPA 300 EPA 300 EPA 300 EPA 300 EPA 300 | 20 450 ND 180 ND 10,000 | * 50 10 * 10 50 |) mg/kg) mg/kg) mg/kg) mg/kg) mg/kg) mg/kg | 12/02/96 12/02/96 12/02/96 12/02/96 12/02/96 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

SAMPLE ID: BW-8

AEN LAB NO: 9611391-08 AEN WORK ORDER: 9611391

CLIENT PROJ. ID: 3042.95-004

| ANALYTE | METHOD/ CAS# | RESULT | REPORTII LIMIT | NG 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

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 | G 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 Fluoride, F Chloride, Cl Nitrite. NO2-N Nitrate, NO3-N Phosphate, PO4-P Sulfate, SO4 | EPA 300 EPA 300 EPA 300 EPA 300 EPA 300 EPA 300 EPA 300 | 60 290 ND 650 ND 130,000 | * | 50 10 10 50 | mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg | 12/02/96 12/02/96 12/02/96 12/02/96 12/02/96 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

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 m g/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.

SAMPLE ID: BW-11

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

| ANALYTE | METHOD/ CAS# | RESULT | REPORTII LIMIT | NG UNITS | DATE ANALYZED |
|---|---|---|--------------------------|--|--|
| Soil pH measured in water | EPA 9045A | 10.1 | | S.U. | 12/03/96 |
| Lead | EPA 7420 | 12 | * 3 | 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 Fluoride, F Chloride, Cl Nitrite, NO2-N Nitrate, NO3-N Phosphate, PO4-P Sulfate, SO4 | EPA 300 EPA 300 EPA 300 EPA 300 EPA 300 EPA 300 EPA 300 | 20 : 870 : ND 1,400 : ND 4,900 : | * 50 10 * 10 50 | mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg | 12/02/96 12/02/96 12/02/96 12/02/96 12/02/96 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

SAMPLE ID: BW-12

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

| ANALYTE | METHOD/ CAS# | RESULT | | REPORTING LIMIT | G 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 \star = Value at or above reporting limit

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

| | METHOD/ | | DATE | | | |
|----------------------------|----------|----------|-------|-----------|------------------|--|
| ANALYTE | CAS# | RESULT | LIMIT | UNITS | ANA LYZED | |
| 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

SAMPLE ID: BW-14

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

| ANALYTE | METHOD/ CAS# | RESULT | REPORTING LIMIT | G UNITS | DATE ANALYZED |
|---|---|---|--------------------------|--|--|
| Soil pH measured in water | EPA 9045A | 10.1 | | S.U. | 12/03/96 |
| Lead | EPA 7420 | 32 3 | · 3 | mg/kg | 12/03/96 |
| #Digestion, Metals by GFAA | EPA 3050 | - | | Prep Date | 11/27/96 |
| Arsenic | EPA 7060 | 8.0 3 | 0.5 | mg/kg | 12/06/96 |
| #Digestion, Metals AA/ICP | EPA 3050 | - | | Prep Date | 11/27/96 |
| Anion Scan in Soil by IC Fluoride, F Chloride, Cl Nitrite, NO2-N Nitrate, NO3-N Phosphate, PO4-P Sulfate, SO4 | EPA 300 EPA 300 EPA 300 EPA 300 EPA 300 EPA 300 EPA 300 | ND 330 7 10 7 630 7 ND 3,100 7 | 50 5 10 5 10 50 | mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg | 12/02/96 12/02/96 12/02/96 12/02/96 12/02/96 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

SAMPLE ID: BW-15

AEN LAB NO: 9611391-15 AEN WORK ORDER: 9611391

CLIENT PROJ. ID: 3042.95-004

| ANALYTE | METHOD/ CAS# | RESULT | REPORTING LIMIT U | DATE NITS 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

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

| 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 m | g/kg | 12/03/96 |
| #Digestion, Metals by GFAA | EPA 3050 | - | Р | rep Date | 11/27/96 |
| Arsenic | EPA 7060 | 30 * | 0.5 m | g/kg | 12/06/96 |
| #Digestion, Metals AA/ICP | EPA 3050 | - | Р | rep Date | 11/27/96 |
| Zinc | EPA 6010 | 14,000 * | 10 m | g/kg | 12/04/96 |

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

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

SAMPLE ID: BW-18

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

| ANALYTE | METHOD/ CAS# | RESULT | | REPORTING LIMIT UNIT | S | 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 Da | te | 11/27/96 |
| Arsenic | EPA 7060 | 73 | * | 0.5 mg/kg | | 12/06/96 |
| #Digestion, Metals AA/ICP | EPA 3050 | - | | Prep Da | te | 11/27/96 |
| Anion Scan in Soil by IC Fluoride, F Chloride, Cl Nitrite, NO2-N Nitrate, NO3-N Phosphate, PO4-P Sulfate, SO4 | EPA 300 EPA 300 EPA 300 EPA 300 EPA 300 EPA 300 EPA 300 | 10 1,300 ND 1,500 ND 2,000 | * | 10 mg/kg 50 mg/kg 10 mg/kg 10 mg/kg 50 mg/kg 50 mg/kg | | 12/03/96 12/03/96 12/03/96 12/02/96 12/03/96 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

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

| 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 1 | mg/kg | 12/03/96 |
| #Digestion, Metals by GFAA | EPA 3050 | - | I | Prep Date | 11/27/96 |
| Arsenic | EPA 7060 | 26 * | 0.5 | mg/kg | 12/06/96 |
| #Digestion, Metals AA/ICP | EPA 3050 | - | ſ | Prep Date | 11/27/96 |
| Zinc | EPA 6010 | 24.000 * | 10 r | mg/kg | 12/04/96 |

ND = Not detected at or above the reporting limit

^{* =} Value at or above reporting limit

SAMPLE ID: BW-20 **AEN LAB NO:** 9611391-20

AEN WORK ORDER: 9611391 CLIENT PROJ. ID: 3042.95-004

| ANALYTE | METHOD/ CAS# | RESULT | REPOF LIM | | 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 Fluoride, F Chloride, Cl Nitrite, NO2-N Nitrate, NO3-N Phosphate, PO4-P Sulfate, SO4 | EPA 300 EPA 300 EPA 300 EPA 300 EPA 300 EPA 300 | 40 1,500 20 350 ND 4,700 | * * * | 50 10 10 50 | mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg | 12/03/96 12/03/96 12/03/96 12/02/96 12/03/96 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

SAMPLE ID: BW-21

AEN LAB NO: 9611391-21 AEN WORK ORDER: 9611391

CLIENT PROJ. ID: 3042.95-004

| ANALYTE | METHOD/ CAS# | RESULT | | REPORTING LIMIT | G 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

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

| | | <u> </u> | | | |
|----------------------------|-----------------|----------|-------------------|------------|------------------|
| ANALYTE | METHOD/ CAS# | RESULT | REPORTIN LIMIT | G 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

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

DATE METHOD/ REPORTING UNITS **ANALYZED ANALYTE** CAS# RESULT LIMIT 8.7 S.U. 12/03/96 Soil pH measured in water EPA 9045A 12/03/96 Lead EPA 7420 70 * 3 mg/kg#Digestion, Metals by GFAA Prep Date 11/27/96 EPA 3050 12/08/96 Arsenic 0.5 mg/kgEPA 7060 6.3 * #Digestion, Metals AA/ICP EPA 3050 Prep Date 11/27/96 Anion Scan in Soil by IC **EPA 300** Fluoride, F 10 mg/kg 12/03/96 EPA 300 ND Chloride, Cl EPA 300 280 × 50 mg/kg 12/03/96 10 * 12/03/96 Nitrite. NO2-N EPA 300 10 mg/kgNitrate, NO3-N **EPA 300** 240 * 10 mg/kg12/03/96 EPA 300 EPA 300 Phosphate, PO4-P 50 mg/kg 12/03/96 ND 7.300 * 12/03/96 Sulfate, SO4 50 mg/kg 40 mg/kg Calcium **EPA 6010** 120.000 * 12/03/96 Magnesium EPA 6010 4.200 * 50 mg/kg 12/03/96 20 mg/kgPotassium EPA 6010 590 * 12/03/96

2,200 *

180 *

30 mg/kg

10 mg/kg

12/03/96

12/03/96

EPA 6010

EPA 6010

Sodium

Zinc

ND = Not detected at or above the reporting limit

^{* =} Value at or above reporting limit

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 U | DATE INITS ANALYZED |
|----------------------------|-----------------|--------|----------------------|------------------------|
| Soil pH measured in water | EPA 9045A | 9.0 | S.U. | 12/03/96 |
| Lead | EPA 7420 | 12 * | 3 mg/k | g 12/03/96 |
| #Digestion, Metals by GFAA | EPA 3050 | - | Prep | Date 11/27/96 |
| Arsenic | EPA 7060 | 3.0 * | 0.5 mg/k | g 12/08/96 |
| #Digestion, Metals AA/ICP | EPA 3050 | - | Prep | Date 11/27/96 |
| Zinc | EPA 6010 | 37 * | 10 mg/k | g 12/03/96 |

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

SAMPLE ID: BW-22

AEN LAB NO: 9611391-25 AEN WORK ORDER: 9611391

CLIENT PROJ. ID: 3042.95-004

| ···· | | | | | |
|----------------------------|-----------------|----------|--------------------|-----------|------------------|
| 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

SAMPLE ID: BW-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

METHOD/ REPORTING DATE **ANALYTE RESULT ANALYZED** CAS# LIMIT UNITS Soil pH measured in water EPA 9045A 8.6 S.U. 12/03/96 20 * Lead EPA 7420 3 mg/kg12/03/96 #Digestion, Metals by GFAA EPA 3050 Prep Date 11/27/96 Arsenic EPA 7060 3.6 * 0.5 mg/kg12/08/96 #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 120 * 50 mg/kgEPA 300 12/03/96 Nitrite, NO2-N EPA 300 10 mg/kg 12/03/96 ND 120 * 12/03/96 Nitrate, NO3-N EPA 300 10 mg/kgPhosphate, PO4-P ND 12/03/96 EPA 300 50 mg/kg Sulfate, SO4 EPA 300 2,500 * 50 mg/kg 12/03/96 Calcium EPA 6010 110,000 * 12/03/96 40 mg/kg EPA 6010 3,800 * 12/03/96 Magnesium 50 mg/kg Potassium EPA 6010 520 * 20 mg/kg 12/03/96 Sodium 1.500 * 12/03/96 EPA 6010 30 mg/kg EPA 6010 270 * 10 mg/kg 12/03/96 Zinc

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

| 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

| 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 * | t 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

| ANALYTE | METHOD/ CAS# | RESULT | REPORTIN LIMIT | G 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 Fluoride, F Chloride, Cl Nitrite, NO2-N Nitrate, NO3-N Phosphate, PO4-P Sulfate, SO4 | EPA 300 EPA 300 EPA 300 EPA 300 EPA 300 EPA 300 EPA 300 | 40 * 890 * ND 1.400 * ND 4.000 * | 50 10 10 50 | mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg | 12/03/96 12/03/96 12/03/96 12/03/96 12/03/96 12/03/96 |
| Calcium | EPA 6010 | 83,000 * | 40 | mg/kg | 12/03/96 |
| Magnesium | EPA 6010 | 7.200 7 | 50 | mg/kg | 12/03/96 |
| Potassium | EPA 6010 | 900 > | 20 | mg/kg | 12/03/96 |
| Sodium | EPA 6010 | 680 , | 4 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**

| | | | | <u>. </u> | |
|----------------------------|-----------------|--------|--------------------|--|------------------|
| 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

| | METHOD/ | | REPORTI | NG . | DATE |
|---|---|---------------------------------------|----------------------|--|--|
| ANALYTE | CAS# | RESULT | LIMIT | | 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 Fluoride, F Chloride, Cl Nitrite, NO2-N Nitrate, NO3-N Phosphate, PO4-P Sulfate, SO4 | EPA 300 EPA 300 EPA 300 EPA 300 EPA 300 EPA 300 EPA 300 | 10 640 ND 180 ND 5,900 | * 5 1 * 1 5 | 0 mg/kg 0 mg/kg 0 mg/kg 0 mg/kg 0 mg/kg 0 mg/kg | 12/03/96 12/03/96 12/03/96 12/03/96 12/03/96 12/03/96 |
| Calcium | EPA 6010 | 85,000 | * 4 | 0 mg/kg | 12/03/96 |
| Magnesium | EPA 6010 | 7,600 | * 5 | 0 mg/kg | 12/03/96 |
| Potassium | EPA 6010 | 840 | * 2 | 0 mg/kg | 12/03/96 |
| Sodium | EPA 6010 | 820 | * 3 | 0 mg/kg | 12/03/96 |
| Zinc | EPA 6010 | 94 | * 1 | 0 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 | REPORTIN LIMIT | IG UNITS | DATE ANALYZED |
|----------------------------|-----------------|--------|---|-------------|------------------|
| | ··· | | <u>, , , , , , , , , , , , , , , , , , , </u> | | |
| 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 F | 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

| 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 Fluoride, F Chloride, Cl Nitrite, NO2-N Nitrate, NO3-N Phosphate, PO4-P Sulfate, SO4 | EPA 300 EPA 300 EPA 300 EPA 300 EPA 300 EPA 300 EPA 300 | 30 * 2,200 * ND 990 * ND 4,900 * | 10 mg/kg 50 mg/kg 10 mg/kg 10 mg/kg 50 mg/kg 50 mg/kg | 12/03/96 12/03/96 12/03/96 12/03/96 12/03/96 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

| ANALYTE | METHOD/ CAS# | RESULT | REPORTING LIMIT | G 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 3 | * 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

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

| ANALYTE | METHOD/ CAS# | RESULT | REPORTIN LIMIT | G 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 Fluoride, F Chloride, Cl Nitrite, NO2-N Nitrate, NO3-N Phosphate, PO4-P Sulfate, SO4 | EPA 300 EPA 300 EPA 300 EPA 300 EPA 300 EPA 300 EPA 300 | ND 150 ND 50 ND 1.600 | * 30 5 * 5 30 | mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg | 12/03/96 12/03/96 12/03/96 12/03/96 12/03/96 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-RECOM

SAMPLE ID: BW-40

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

| 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

| ANALYTE | METHOD/ CAS# | RESULT | | REPORTIN LIMIT | G 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 Fluoride, F Chloride, Cl Nitrite, NO2-N Nitrate, NO3-N Phosphate, PO4-P Sulfate, SO4 | EPA 300 EPA 300 EPA 300 EPA 300 EPA 300 EPA 300 EPA 300 | ND 140 ND 60 ND 2,300 | * | 50 10 10 50 | mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg | 12/03/96 12/03/96 12/03/96 12/03/96 12/03/96 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

| ANALYTE | METHOD/ CAS# | RESULT | REPORTIN LIMIT | G 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

| 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 | REPORTIN LIMIT | G 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 Fluoride, F Chloride, Cl Nitrite, NO2-N Nitrate, NO3-N Phosphate, PO4-P Sulfate, SO4 | EPA 300 EPA 300 EPA 300 EPA 300 EPA 300 EPA 300 EPA 300 | 50 3 90 3 50 3 20 3 ND 1.500 3 | 50 5 10 5 10 50 | mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg | 12/03/96 12/03/96 12/03/96 12/03/96 12/03/96 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 | EPORTING 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

PAGE QR-1

AEN (CALIFORNIA) OUALITY 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.

QUALITY CONTROL REPORT

PAGE QR-2

ANALYSIS: Anion Scan in Soil by IC

MATRIX: Soil/Bulk

MATRIX SPIKE SAMPLES

| SAMPLE TYPE: Spike-Sampl INSTRUMENT: Dionex ion UNITS: mg/kg METHOD: EPA 300 | e/Matrix chromatograph | | LAB ID: PREPARED ANALYZED | MS11391-1 : : 12/02/96 | 4A | BATCH | RUN: IC ID: IC ION: 10 | | 000/6/5 |
|---|--|--|--|---|---|--|--|------------------------------|------------------|
| ANALYTE Fluoride, F Chloride, C1 Nitrite, NO2-N Phosphate, PO4-P Sulfate, SO4 | RESULT 110 853 110 464 4180 | REF RESULT ND 333 13.3 ND 3150 | REPORTING LIMIT 10 50 10 10 50 | SPIKE VALUE 100 500 100 400 1000 | RECOVERY (%) 110 104 96.7 116 103.0 | LAL | HITS (*) HIGH 125 125 125 125 125 125 | <u> </u> | RPD LIMIT (%) |
| SAMPLE TYPE: Spike-Sample INSTRUMENT: Dionex ion (UNITS: mg/kg | e/Matrix chromatograph | | LAB ID: PREPARED: ANALYZED: | MS11391-26 12/03/96 | 5A | INSTR BATCH DILUTI | RUN: IC ID: IC ON: 10 | \961203000 \$120396 .0 | 000/6/5 |
| METHOD: EPA 300 ANALYTE Fluoride, F Chloride, Cl Nitrite, NO2·N Nitrate, NO3·N Phosphate, PO4·P Sulfate, SO4 | RESULT 90.0 574 92.6 213 445 3410 | REF RESULT ND 118 ND 121 ND 2460 | REPORTING LIMIT 10 50 10 10 50 50 | SPIKE VALUE 100 500 100 400 400 | RECOVERY (%) 90.0 91.2 92.6 92.0 111 95.00 | REC LIM LOW 75 75 75 75 75 75 75 | HIGH 125 125 125 125 125 125 125 125 | RPD (%) | RPD LIMIT (%) |
| SAMPLE TYPE: Spike-Sample INSTRUMENT: Dionex ion o UNITS: mg/kg METHOD: EPA 300 | /Matrix | | | | iA | | | (961203000) (3120396 | |
| ANALYTE Fluoride, F Chloride, Cl Nitrite, NO2-N Nitrate, NO3-N Phosphate, PO4-P Sulfate, SO4 | RESULT 52.0 392 55.0 95.7 187 2110 | REF RESULT ND 148 ND 49.4 ND 1620 | 30 | SPIKE VALUE 50.0 250 50.0 50.0 200 500 | 97.6 110 92.6 | REC LIM LOW 75 75 75 75 75 75 | HIGH 125 125 125 125 125 125 125 125 | RPD (%) | RPD LIMIT (%) |

QUALITY CONTROL REPORT

PAGE QR-3

ANALYSIS: Arsenic

MATRIX: Soil/Bulk

METHOD BLANK SAMPLES

| SAMPLE TYPE: Blank-Method/Media INSTRUMENT: TJA 4000, GFAA UNITS: mg/kg | a blank | | . LAB ID: PREPARED: ANALYZED: | GFS_BLNK_Q : : 12/06/96 | | INSTR RUN: 4000\961206143000/1/ BATCH ID: GFS112996-Q DILUTION: 1.000000 |
|---|--------------|---------------|-------------------------------------|-------------------------------|-----------------|--|
| METHOD: EPA 7060 ANALYTE Arsenic in soil EPA 7060 | RESULT ND | REF RESULT | REPORTING LIMIT 0.5 | SPIKE VALUE | RECOVERY (な) | REC LIMITS (%) RPD LOW HIGH RPD (%) LIMIT (%) |
| SAMPLE TYPE: Blank-Method/Media INSTRUMENT: TJA 4000. GFAA UNITS: mg/kg METHOD: EPA 7060 | ı blank | | LAB ID: PREPARED: ANALYZED: | GFS_BLNK_T 12/06/96 | | INSTR RUN: 4000\961206200500/1/ BATCH ID: GFS113096-T DILUTION: 1.000000 |
| | RESULT ND | REF RESULT | REPORTING LIMIT 0.5 | SPIKE VALUE | RECOVERY (オ) | REC LIMITS (*) RPD LOW HIGH RPD (*) LIMIT (*) |

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 |
|---|---|---|
| METHOD: EPA 7060 ANALYTE RESULT Arsenic in soil EPA 7060 22.8 | REF REPORTING SPIKE RECOVERY RESULT LIMIT VALUE (☆) ND 0.5 20.0 114 | REC LIMITS (*) RPD LOW HIGH RPD (*) LIMIT (*) 77 141 |
| SAMPLE TYPE: Spike-Method/Media blank INSTRUMENT: TJA 4000, GFAA UNITS: mg/kg | LAB ID: GFS_MS_Q PREPARED: ANALYZED: 12/06/96 | |
| | REF REPORTING SPIKE RECOVERY RESULT LIMIT VALUE (な) ND 0.5 20.0 117 | |
| | LAB ID: GFS_MD_T PREPARED: ANALYZED: 12/06/96 | |
| ANALYTE RESULT Arsenic in soil EPA 7060 11.0 | REF REPORTING SPIKE RECOVERY RESULT LIMIT VALUE (*) ND 0.5 10.0 110 | REC LIMITS (%) RPD LOW HIGH RPD (%) LIMIT (%) 77 141 |
| SAMPLE TYPE: Spike-Method/Media blank INSTRUMENT: TJA 4000, GFAA | LAB ID: GFS_MS_T PREPARED: ANALY7FD: 12/06/96 | |
| METUND, LDA MAN | REF REPORTING SPIKE RECOVERY RESULT LIMIT VALUE (*) ND 0.5 10.0 106 | |
| SAMPLE TYPE: Spike-Method/Media blank INSTRUMENT: TJA 4000. GFAA | | INSTR RUN: 4000\961206200500/7/5 BATCH ID: GFS113096-T DILUTION: 1.000000 |
| METHOD: EPA 7060 | REF REPORTING SPIKE RECOVERY RESULT LIMIT VALUE (%) 1.07 0.5 10.0 103 | |

QUALITY CONTROL REPORT

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ANALYSIS: Arsenic

MATRIX: Soil/Bulk

METHOD SPIKE DUPLICATES

| SAMPLE TYPE: Method Spike Sam INSTRUMENT: TJA 4000, GFAA UNITS: mg/kg METHOD: EPA 7060 | mple Duplica | te | LAB ID: PREPARED ANALYZED | GFS_MR_Q 1: 12/06/96 | | | 00\9612061 S112996-Q 000000 | 43000/4/2 |
|---|----------------|-----------------------|---------------------------------|-----------------------------|-----------------|----------------------------|------------------------------------|------------------------|
| ANALYTE Arsenic in soil EPA 7060 | RESULT 22.8 | REF RESULT 23.3 | REPORTING LIMIT 0.5 | SPIKE VALUE | RECOVERY (%) | REC LIMITS (%) LOW HIGH | RPD (%) 2.17 | RPD LIMIT (%) 15 |
| SAMPLE TYPE: Method Spike Sam INSTRUMENT: TJA 4000, GFAA UNITS: mg/kg METHOD: EPA 7060 | mple Duplica | te | LAB ID: PREPARED ANALYZED | GFS_MR_T : : 12/06/96 | | | 00\9612062 \$113096-T 000000 | 00500/4/2 |
| ANALYTE Arsenic in soil EPA 7060 | RESULT 11.0 | REF RESULT 10.6 | REPORTING LIMIT 0.5 | SPIKE VALUE | RECOVERY (な) | REC LIMITS (%) LOW HIGH | RPD (*) 3,70 | RPD LIMIT (%) |

MATRIX SPIKE SAMPLES

| SAMPLE TYPE: Spike-Samp INSTRUMENT: TJA 4000, UNITS: mg/kg METHOD: EPA 7060 | ole/Matrix GFAA | | LAB ID: PREPARED: ANALYZED: | MD11391-08 | ВА | INSTR BATCH DILUTI | ID: GFS | 00\9612061 S112996-Q 000000 | 143000/7/5 |
|--|--------------------|-----------------------|-----------------------------------|------------------------|-------------------------|--------------------------|-------------------------|------------------------------------|------------------|
| ANALYTE Arsenic in soil EPA 70 | RESULT 060 37.4 | REF RESULT 5.87 | REPORTING LIMIT 0.5 | SPIKE VALUE 20.0 | RECOVERY (%) 158 | REC LIM LOW 12 | IITS (%) HIGH 168 | RPD (%) | RPD LIMIT (%) |
| SAMPLE TYPE: Spike-Samp INSTRUMENT: TJA 4000, UNITS: mg/kg METHOD: EPA 7060 | ole/Matrix GFAA | | LAB ID: PREPARED: ANALYZED: | | 3A | INSTR BATCH DILUTI | ID: GFS | 00\9612061 \$112996-Q 000000 | .43000/6/5 |
| ANALYTE Arsenic in soil EPA 70 | RESULT 060 31.3 | REF RESULT 5.87 | REPORTING LIMIT 0.5 | SPIKE VALUE 20.0 | RECOVERY (な) 127 | REC LIM LOW 12 | HITS (%) HIGH 168 | RPD (%) | RPD LIMIT (%) |
| SAMPLE TYPE: Spike-Samp INSTRUMENT: TJA 4000, UNITS: mg/kg METHOD: EPA 7060 |)le/Matrix GFAA | | LAB ID: PREPARED: ANALYZED: | | | INSTR BATCH DILUTI | ID: GFS | 00\9612062 5113096-T 000000 | 100500/6/5 |
| ANALYTE Arsenic in soil EPA 70 | RESULT 060 10.7 | REF RESULT 1.07 | REPORTING LIMIT 0.5 | SPIKE VALUE 10.0 | RECOVERY (%) 96.3 | REC LIM LOW 12 | HITS (%) HIGH 168 | RPD (X) | RPD LIMIT (%) |

MATRIX SPIKE DUPLICATES

| SAMPLE TYPE: Spiked Sample Dur INSTRUMENT: TJA 4000, GFAA UNITS: mg/kg METHOD: EPA 7060 | plicate | | PREPARED: ANALYZED: | 12/06/96 | | DILUTION: 1. | S112996-Q 000000 | <u> </u> |
|--|----------------|-----------------------|-----------------------------------|----------------|-----------------|----------------------------|------------------------------------|------------------------|
| ANALYTE Arsenic in soil EPA 7060 | RESULT 37.4 | REF RESULT 31.3 | REPORTING LIMIT 0.5 | SPIKE VALUE | RECOVERY (な) | REC LIMITS (%) LOW HIGH | RPD (*) 17.8 | RPD LIMIT (%) 18 |
| SAMPLE TYPE: Spiked Sample Dug INSTRUMENT: TJA 4000, GFAA UNITS: mg/kg METHOD: EPA 7060 | plicate | | LAB ID: PREPARED: ANALYZED: | | | | 000\9612062 5313096-T 000000 | 200500/8/6 |
| ANALYTE Arsenic in soil EPA 7060 | RESULT 11.4 | REF RESULT 10.7 | REPORTING LIMIT 0.5 | SPIKE VALUE | RECOVERY (%) | REC LIMITS (%) LOW HIGH | RPD (*) 6.33 | RPD LIMIT (%) 18 |

QUALITY CONTROL REPORT

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ANALYSIS: Lead

MATRIX: Soil/Bulk

METHOD BLANK SAMPLES

| SAMPLE TYPE: INSTRUMENT: UNITS: METHOD: | Blank-Method/Medi Video 12 aa spect mg/kg EPA 7420 | | | LAB ID: PREPARED: ANALYZED: | IFS_BLNK_P 12/03/96 | | INSTR RUN: AA V12\961203131900/1/ BATCH ID: IFS112796-P DILUTION: 1.000000 | |
|--|---|--------------|---------------|-----------------------------------|------------------------|-----------------|--|-------|
| ANALYTE Lead in soil | | RESULT ND | REF RESULT | REPORTING LIMIT 3 | SPIKE VALUE | RECOVERY (*) | REC LIMITS (*) RPD LOW HIGH RPD (*) LIMIT (*) |) |
| INSTRUMENT: UNITS: | Blank-Method/Media Video 12 aa specta mg/kg EPA 7420 | | | LAB ID: PREPARED: ANALYZED: | | •• | INSTR RUN: AA V12\961203152300/1/ BATCH ID: IFS120196-U DILUTION: 1.000000 | |
| ANALYTE Lead in soil | | RESULT ND | REF RESULT | REPORTING LIMIT 3 | SPIKE VALUE | RECOVERY (な) | REC LIMITS (%) RPD LOW HIGH RPD (%) LIMIT (%) | |

METHOD SPIKE SAMPLES

| SAMPLE TYPE: Spike-Met INSTRUMENT: Video 12 UNITS: mg/kg METHOD: EPA 7420 | hod/Media blank aa spectrometer | | LAB ID: PREPARED: ANALYZED: | IFS_MD_P 12/03/96 | | INSTR RUN: AA V12\961203131900/3/1 BATCH ID: IFS112796-P DILUTION: 1.000000 |
|--|------------------------------------|---------------------|-----------------------------------|------------------------|------------------------|--|
| ANALYTE Lead in soil-flame | RESULT 53.3 | REF RESULT ND | REPORTING LIMIT 3 | SPIKE VALUE 50.0 | RECOVERY (%) 107 | REC LIMITS (%) RPD LOW HIGH RPD (%) LIMIT (%) 80 119 |
| UNITS: mg/kg | hod/Media blank aa spectrometer | | LAB ID: PREPARED: ANALYZED: | IFS_MS_P 12/03/96 | | INSTR RUN: AA V12\961203131900/2/1 BATCH ID: IF5112796-P DILUTION: 1.000000 |
| METHOD: EPA 7420 ANALYTE Lead in soil-flame | RESULT 54.6 | REF RESULT ND | REPORTING LIMIT 3 | SPIKE VALUE 50.0 | (%) | REC LIMITS (*) RPD LOW HIGH RPD (*) LIMIT (*) 80 119 |
| SAMPLE TYPE: Spike-Met INSTRUMENT: Video 12 UNITS: mg/kg METHOD: EPA 7420 | hod/Media blank | | LAB ID: PREPARED: | IFS_MD_U 12/03/96 | | INSTR RUN: AA V12\961203152300/3/1 BATCH ID: IF\$120196-U DILUTION: 1.000000 |
| ANALYTE Lead in soil-flame | RESULT 53.1 | REF RESULT ND | REPORTING LIMIT 3 | SPIKE VALUE 50.0 | RECOVERY (な) 106 | REC LIMITS (*) RPD LOW HIGH RPD (*) LIMIT (*) 80 119 |
| SAMPLE TYPE: Spike-Met INSTRUMENT: Video 12 UNITS: mg/kg | hod/Media blank | | LAB ID: PREPARED | IFS_MS_U : 12/03/96 | | INSTR RUN: AA V12\961203152300/2/1 BATCH ID: IF\$120196-U DILUTION: 1.000000 |
| METHOD: EPA 7420 ANALYTE Lead in soil-flame | RESULT 50.9 | REF RESULT ND | REPORTING LIMIT 3 | SPIKE VALUE 50.0 | RECOVERY (%) 102 | REC LIMITS (%) RPD LOW HIGH RPD (%) LIMIT (%) 80 119 |

METHOD SPIKE DUPLICATES

| INSTRUMENT: Video 12 aa UNITS: mg/kg | Sample Duplicate spectrometer | | LAB ID: PREPARED: ANALYZED: | IFS_MR_P 12/03/96 | | INSTR RUN: AA V12\96 BATCH ID: IFS112796 DILUTION: 1.000000 | |
|--|----------------------------------|--------------------|-----------------------------------|----------------------|-----------------|---|------------------------------|
| METHOD: EPA 7420 ANALYTE Lead in soil-flame | RESULT RE | REF SULT 4.6 | REPORTING LIMIT | SPIKE VALUE | RECOVERY (%) | REC LIMITS (%) LOW HIGH RPD (%) 2.41 | RPD (*) LIMIT (*) 10.5 |

QUALITY CONTROL REPORT

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ANALYSIS: Lead

MATRIX: Soil/Bulk

METHOD SPIKE DUPLICATES

| SAMPLE TYPE: INSTRUMENT: UNITS: METHOD: | Method Spike Sam Video 12 aa speci mg/kg EPA 7420 | ple Duplica: trometer | te | | : 12/03/96 | | INSTR R BATCH I DILUTIO | UN: AA D: IF N: 1. | , V12\96120 5120196-U 000000 | 03152300/4/2 |
|--|---|--------------------------|---|-----------------------------------|------------------------|-------------------------|----------------------------------|---------------------------|------------------------------------|--------------------------|
| | -flame | RESULT 53.1 | REF RESULT 50.9 | | SPIKE VALUE | RECOVERY (%) | REC LIMI LOW | TS (%) HIGH | RPD (%) 4.23 | RPD LIMIT (%) 10.5 |
| | PIKE SAMPLES | | | | | | | | | |
| INSTRUMENT: UNITS: METHOD: | Spike-Sample/Matr Video 12 aa spect mg/kg EPA 7420 | rix :rometer | | LAB ID: PREPARED: ANALYZED: | 12/03/96 | | DILUTIO | D: IFS N: 1.0 | S112796-P 000000 | 3131900/7/5 |
| ANALYTE Lead in soil | ·flame | RESULT 50.4 | REF RESULT 3.80 | REPORTING LIMIT 3 | SPIKE VALUE 50.0 | RECOVERY (1) 93.2 | REC LIMIT LOW 21 | FS (%) HIGH 178 | RPD (%) | RPD LIMIT (%) |
| SAMPLE TYPE: INSTRUMENT: | Spike-Sample/Matr Video 12 aa spect mg/kg EPA 7420 | | | . | MD11391-214 | | INSTR RI | JN: AA D: IFS | V12\96120 5112796 P | 3131900/11/9 |
| | flame | RESULT 90.6 | REF RESULT 43.4 | REPORTING LIMIT 3 | SPIKE VALUE 50.0 | RECOVERY (%) 94.4 | REC LIMIT LOW 21 | S (%) HIGH 178 | RPD (%) | RPD LIMIT (%) # |
| SAMPLE TYPE: INSTRUMENT: UNITS: | Spike-Sample/Matr Video 12 aa spect mg/kg EPA 7420 | | | LAB ID: PREPARED: ANALYZED: | MD11391-30A | \ | INSTR RU BATCH ID DILUTION | N: AA): IFS : 1.0 | V12\96120 112796-P 100000 | 3131900/15/13 |
| | | RESULT 54.0 | REF RESULT ND | REPORTING LIMIT 3 | SPIKE VALUE 50.0 | RECOVERY (な) 108 | REC LIMIT LOW 21 | S (%) HIGH 178 | RPD (%) | RPD LIMIT (%) |
| SAMPLE TYPE: INSTRUMENT: | Spike-Sample/Matr Video 12 aa spect mg/kg EPA 7420 | | • | LAB ID: PREPARED: ANALYZED: | MS11391-12A | ι | INSTR RU BATCH ID DILUTION | N: AA D: IFS I: 1.0 | V12\96120 3112796-P 000000 | 3131900/6/5 |
| | flame | RESULT 47.2 | REF RESULT 3.80 | REPORTING LIMIT 3 | SPIKE VALUE 50.0 | RECOVERY (な) 86.8 | REC LIMIT LOW 21 | S (%) HIGH 178 | RPD (%) | RPD LIMIT (%) |
| INSTRUMENT: UNITS: | Spike-Sample/Matr Video 12 aa spect mg/kg EPA 7420 | ix rometer | •••••• | | MS11391-21A | | | IN: AA): IFS | V12\96120 3112796-P | 3131900/10/9 |
| ANALYTE Lead in soil | | RESULT 90.3 | REF RESULT 43.4 | REPORTING LIMIT 3 | SPIKE VALUE 50.0 | RECOVERY (%) 93.8 | | S (%) HIGH 178 | RPD (%) | RPD LIMIT (%) |
| INSTRUMENT: UNITS: | Spike-Sample/Matr Video 12 aa spect mg/kg EPA 7420 | | • • • • • • • • | LAB ID: PREPARED: ANALYZED: | MS11391-30A | ` | |): IFS | V12\96120 5112796-P 000000 | 3131900/14/1 |
| ANALYTE Lead in soil- | | RESULT 54.4 | REF RESULT ND | REPORTING LIMIT 3 | SPIKE VALUE 50.0 | RECOVERY (%) 109 | | S (%) HIGH 178 | RPD (%) | RPD LIMIT (%) |

QUALITY CONTROL REPORT

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ANALYSIS: Lead

MATRIX: Soil/Bulk

MATRIX SPIKE SAMPLES

| | Spike-Sample/Ma | trix | | LAB ID: PREPARED: | MD11391-42 | ZA. | INSTR RU BATCH II | JN: AA \ | V12\96120: 120196-U | 3152300 /7/5 | |
|-------------------------|------------------------------------|----------------|----------------|----------------------|---------------|------------|----------------------|-------------|------------------------|---------------------|---|
| INSTRUMENT: UNITS: | Video 12 aa spe mg/kg | crollecer | | | 12/03/96 | | DILUTION | | 00000 | | |
| METHOD: | EPA 7420 | DECUL T | REF | REPORTING | SPIKE | RECOVERY | REC LIMIT | | RPD (な) | RPD LIMIT (%) | |
| ANALYTE Lead in soil | -flame | RESULT 56.9 | RESULT 4.16 | LIMIT 3 | VALUE 50.0 | (*) 105 | 21 | 178 | KFD (4) | | _ |
| • | | | | | | | | | | | - |
| | Spike-Sample/Ma Video 12 aa spe | | | LAB ID: PREPARED: | MS11391-42 | A | INSTR RU BATCH ID | | /12\96120: L20196-U | 3152300/6/5 | |
| UNITS: | mg/kg EPA 7420 | CUI UMECCI | | | 12/03/96 | | DILUTION | | 00000 | | |
| METHOD: | CPA /420 | | REF | REPORTING | SPIKE | RECOVERY | REC_LIMIT | | DDD (41) | RPD | |
| ANALYTE Lead in soil | ·flame | RESULT 55.4 | RESULT 4.16 | LIMIT 3 | VALUE 50.0 | (*) 102 | LOW 21 | HIGH 178 | RPD (%) | LIMIT (%) | _ |
| | . | | | | | | | | | | |

MATRIX CRIVE DIDITCATES

| MATRIX SP | IKE DUPLICATES | | | | | | | |
|--|---|--------------------------------|-----------------------------------|------------------------|-----------------|---|-------------------------|------------------------|
| SAMPLE TYPE: INSTRUMENT: UNITS: METHOD: | Spiked Sample Duplica Video 12 aa spectrome mg/kg | | LAB ID: PREPARED: ANALYZED: | MR11391-12/ | A | INSTR RUN: AA BATCH ID: IF DILUTION: 1. | 5112796-P | 3131900/8/6 |
| | RES | REF SULT RESULT 0.4 47.2 | REPORTING LIMIT 3 | SPIKE VALUE 50.0 | RECOVERY (な) | REC LIMITS (%) LOW HIGH | RPD (%) 6.56 | RPD LIMIT (%) 23 |
| SAMPLE TYPE: INSTRUMENT: UNITS: METHOD: | Spiked Sample Duplica Video 12 aa spectrome | | | | | | V12\96120: S112796-P | |
| METHOD: | EPA 7420 RES | DEE | DEDODTING | COIVE | DECOVEDY | PEC LIMITS (Y) | RPD (*) 0.332 | RPD LIMIT (%) 23 |
| | Spiked Sample Duplica Video 12 aa spectrome | | | | | | V12\96120 5112796-P | |
| METHUU: | EPA 7420 REflame 5 | REF | REPORTING LIMIT 3 | SPIKE VALUE 50.0 | RECOVERY (%) | REC LIMITS (%) LOW HIGH | RPD (%) 0.738 | RPD LIMIT (%) 23 |
| SAMPLE TYPE: INSTRUMENT: | Spiked Sample Duplica Video 12 aa spectrome | | | | | | | |
| METHOD: | EPA 7420 | REF | REPORTING LIMIT 3 | SPIKE | RECOVERY | | ı | RPD |
| | | | | | | | | |

QUALITY CONTROL REPORT

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ANALYSIS: Major Anions

MATRIX: Water

METHOD BLANK SAMPLES

| SAMPLE TYPE: Blank-Method/l INSTRUMENT: Dionex ion ch UNITS: mg/L METHOD: | | | LAB ID: PREPARED ANALYZED | ICS_BLNK): 12/02/96 | | INSTR RUN: IC\9612020000000/1/ BATCH ID: ICS120296 DILUTION: 1.000000 |
|--|--|---------------|--|----------------------------|-----------------|---|
| ANALYTE Fluoride, F Chloride, Cl Nitrate, NO3-N Nitrite, NO2-N Phosphate, PO4-P Sulfate, SO4 | RESULT ND ND ND ND ND ND | REF RESULT | REPORTING LIMIT 0.1 0.5 0.1 0.1 0.5 0.5 | SPIKE VALUE | RECOVERY (X) | REC LIMITS (%) RPD LOW HIGH RPD (%) LIMIT (%) |
| SAMPLE TYPE: Blank-Method/M INSTRUMENT: Dionex ion chr UNITS: mg/L METHOD: | | | LAB ID: PREPARED ANALYZED | ICS_BLNK : 12/03/96 | | INSTR RUN: IC\961203000000/1/ BATCH ID: ICS120396 DILUTION: 1.000000 |
| ANALYTE Fluoride, F Chloride, Cl Nitrate, NO3-N Nitrite, NO2-N Phosphate, PO4-P Sulfate, SO4 | RESULT ND ND ND ND ND ND | REF RESULT | REPORTING LIMIT 0.1 0.5 0.1 0.1 0.5 0.5 | SPIKE VALUE | RECOVERY (%) | REC LIMITS (%) RPD LOW HIGH RPD (%) LIMIT (%) |

METHOD SPIKE SAMPLES

| SAMPLE TYPE: Spike-Method/ INSTRUMENT: Dionex ion ch UNITS: mg/L METHOD: | Media blank romatograph | ••••• | LAB ID: PREPARED ANALYZED | ICS_MD : : 12/02/96 | | BATCH | RUN: ICY ID: ICS ON: 1.0 | | 000/3/1 |
|--|--|---|---|--|---|--|--|---------|------------------|
| ANALYTE Fluoride, F Chloride, Cl Nitrate, NO3-N Nitrite, NO2-N Phosphate, PO4-P Sulfate, SO4 | RESULT 2.02 9.84 2.01 1.90 4.00 | REF RESULT ND ND ND ND ND ND ND | 0.1 0.5 0.5 | SPIKE VALUE 2.00 10.0 2.00 2.00 4.00 10.0 | RECOVERY (%) 101 98.4 101 95.0 100 111 | REC LIM LOW 80 80 80 80 80 80 80 | HIGH 120 120 120 120 120 120 120 120 | RPD (%) | RPD LIMIT (%) |
| SAMPLE TYPE: Spike-Method/ INSTRUMENT: Dionex ion ch UNITS: mg/L METHOD: | Media blank | | | ICS_MS : : 12/02/96 | | INSTR BATCH DILUTI | RUN: ICY ID: ICS ION: 1.0 | | 000/2/1 |
| ANALYTE Fluoride, F Chloride, Cl Nitrate, NO3-N Nitrite, NO2-N Phosphate, PO4-P Sulfate, SO4 | RESULT 2.04 9.89 2.01 1.91 4.02 11.2 | REF RESULT ND ND ND ND ND ND | 0.5 | SPIKE VALUE 2.00 10.0 2.00 2.00 4.00 10.0 | RECOVERY (%) 102 98.9 101 95.5 101 112 | REC LIM LOW 80 80 80 80 80 80 | HITS (%) HIGH 120 120 120 120 120 120 | RPD (%) | RPD LIMIT (%) |
| SAMPLE TYPE: Spike-Method/ INSTRUMENT: Dionex ion ch UNITS: mg/L METHOD: | Media blank romatograph | | LAB ID: PREPARED ANALYZED | ICS_MD : : 12/03/96 | | INSTR BATCH DILUTI | RUN: ICY ID: ICS (ON: 1.0 | | 0000/3/1 |
| ANALYTE Fluoride, F Chloride, Cl Nitrate, NO3-N Nitrite, NO2-N | RESULT 2.09 9.88 2.13 1.91 | REF RESULT ND ND ND ND | REPORTING LIMIT 0.1 0.5 0.1 | SPIKE VALUE 2.00 10.0 2.00 2.00 | RECOVERY (%) 105 98.8 107 95.5 | REC LIM LOW 80 80 80 80 | (ITS (%) HIGH 120 120 120 120 | RPD (%) | RPD LIMIT (%) |

QUALITY CONTROL REPORT

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ANALYSIS: Major Anions

MATRIX: Water

METHOD SPIKE SAMPLES

| SAMPLE TYPE: Spike-Method/ INSTRUMENT: Dionex ion ch UNITS: mg/L METHOD: | | | LAB ID: PREPARED ANALYZED | ICS_MD): 12/03/96 | | INSTR RUN: BATCH ID: DILUTION: | IC\9612030000 ICS120396 1.000000 | 00/3/1 |
|---|--|---|--|--|--|---|--|------------------|
| ANALYTE Phosphate, PO4-P Sulfate, SO4 | RESULT 3.84 10.4 | REF RESULT ND ND | REPORTING LIMIT 0.5 0.5 | SPIKE VALUE 4.00 10.0 | RECOVERY (%) 96.0 104 | REC LIMITS LOW HI(80 120 80 120 | H RPD (*) | RPD LIMIT (%) |
| SAMPLE TYPE: Spike-Method/i INSTRUMENT: Dionex ion ch UNITS: mg/L | | •••• | LAB ID: PREPARED ANALYZED | ICS_MS : : 12/03/96 | | INSTR RUN: BATCH ID: DILUTION: | IC\96120300000 IC\$120396 1.000000 | 00/2/1 |
| METHOD: ANALYTE Fluoride, F Chloride, C1 Nitrate, NO3-N Nitrite, NO2-N Phosphate, PO4-P Sulfate, SO4 | RESULT 2.00 9.89 2.03 1.90 3.99 10.6 | REF RESULT ND ND ND ND ND ND | REPORTING LIMIT 0.1 0.5 0.1 0.1 0.5 0.5 | SPIKE VALUE 2.00 10.0 2.00 2.00 4.00 10.0 | RECOVERY (*) 100 98.9 102 95.0 99.8 106 | REC LIMITS LOW HIG 80 120 80 120 80 120 80 120 80 120 80 120 | H RPD (X) | RPD LIMIT (%) |

METHOD SPIKE DUPLICATES

| SAMPLE TYPE: Method Spike Sam INSTRUMENT: Dionex ion chrom UNITS: mg/L METHOD: | nple Duplicate natograph | LAB ID: I PREPARED: ANALYZED: 1 | CS_MR .2/02/96 | INSTR RUN: IC\961202000000/4/2 BATCH ID: ICS120296 DILUTION: 1.000000 |
|---|--|--|-----------------------------|--|
| ANALYTE Fluoride, F Chloride, C1 Nitrate, NO3-N Nitrite, NO2-N Phosphate, PO4-P Sulfate, SO4 | REF RESULT RESULT 2.02 2.04 9.84 9.89 2.01 2.01 1.90 1.91 4.00 4.02 11.1 11.2 | REPORTING LIMIT 0.1 0.5 0.1 0.1 0.5 0.5 | SPIKE RECOVERY VALUE (*) | REC LIMITS (*) RPD (*) LIMIT (*) 0.985 15 0.507 15 0.525 15 0.525 15 0.499 15 0.897 15 |
| SAMPLE TYPE: Method Spike Sam INSTRUMENT: Dionex ion chrom UNITS: mg/L | | LAB ID: I PREPARED: ANALYZED: 1 | ICS_MR L2/03/96 | INSTR RUN: IC\961203000000/4/2 BATCH ID: ICS120396 DILUTION: 1.000000 |
| METHOD: ANALYTE Fluoride, F Chloride, Cl Nitrate, NO3-N Nitrite, NO2-N Phosphate, PO4-P Sulfate, SO4 | REF RESULT RESULT 2.09 2.00 9.88 9.89 2.13 2.03 1.91 1.90 3.84 3.99 10.4 10.6 | REPORTING LIMIT 0.1 0.5 0.1 0.1 0.5 0.5 | SPIKE RECOVERY VALUE (%) | REC LIMITS (%) RPD (%) LIMIT (%) 4.40 15 0.101 15 4.81 15 0.525 15 3.83 15 1.90 15 |

QUALITY CONTROL REPORT

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ANALYSIS: Metals Scan by ICP

MATRIX: Soil/Bulk

METHOD BLANK SAMPLES

| UNITS: mg/kg | Method/Media blank oviro 36 | * | LAB ID: PREPARED ANALYZED | IFS_BLNK_) : 12/04/96 | (| INSTR BATCH DILUTI | ID: IFS | N96120413 S120396-X D00000 | 31200/1/ |
|---|---|---------------|---|------------------------------|-----------------|--------------------------|---------|----------------------------------|------------------|
| METHOD: ANALYTE Ag Silver Ba Barium Be Beryllium Ca Calcium Cd Cadmium Co Cobalt Cr Chromium Cu Copper K Potassium Mg Magnesium Mo Molybdenum Na Sodium Ni Nickel Pb Lead Sb Antimony Tl Thallium V Vanadium | RESULT ND | REF RESULT | REPORTING LIMIT 0.1 0.1 0.2 0.2 0.5 0.5 0.2 3 1 1 0.5 | : 12/04/96 SPIKE VALUE | RECOVERY (%) | REC LIM LOW | | RPD (*) | RPD LIMIT (*) |
| Zn Zinc | ND | | 1 | | | | | | } |

METHOD SPIKE SAMPLES

| SAMPLE TYPE: Spike-Method/Me INSTRUMENT: TJA Enviro 36 UNITS: mg/kg METHOD: | dia blank | | LAB ID: PREPARED: ANALYZED: | IFS_MD_3X 12/10/96 | | INSTR RUN: ICP\961204131200/18/1 BATCH ID: IFS120396-3X DILUTION: 1.000000 | - • |
|--|--|---------------------------------------|--|-----------------------|---|---|-----|
| ANALYTE Ca Calcium K Potassium Mg Magnesium Na Sodium | RESULT 4442 4293 4421 4623 | REF RESULT ND ND ND ND | REPORTING LIMIT 4 2 5 3 | SPIKE VALUE | RECOVERY (%) 88.84 85.86 88.42 92.46 | REC LIMITS (%) RPD LOW HIGH RPD (%) LIMIT (% 75 125 75 125 75 125 75 125 |) |
| SAMPLE TYPE: Spike-Method/Me INSTRUMENT: TJA Enviro 36 UNITS: mg/kg | dia blank | | LAB ID: PREPARED: ANALYZED: | IFS_MS_3X 12/10/96 | | INSTR RUN: ICP\961204131200/17/1 BATCH ID: IFS120396-3X DILUTION: 1.000000 | |
| METHOD: ANALYTE Ca Calcium K Potassium Mg Magnesium Na Sodium | RESULT 4544 4454 4529 4816 | REF RESULT ND ND ND ND | REPORTING LIMIT 4 2 5 3 | SPIKE VALUE | RECOVERY (%) 90.88 89.08 90.58 96.32 | REC LIMITS (%) RPD LOW HIGH RPD (%) LIMIT (% 75 125 75 125 75 125 75 125 75 125 |) |

METHOD SPIKE DUPLICATES

| SAMPLE TYPE: Method Spike Sa INSTRUMENT: TJA Enviro 36 UNITS: mg/kg METHOD: | mple Duplicat | e | LAB ID: PREPARED ANALYZED | IFS_MR_3X): 12/04/96 | | INSTR RUN: ICP\9612041 BATCH ID: IFS120396-3 DILUTION: 1.00 | |
|--|--|---|--|-----------------------------|-----------------|---|--|
| ANALYTE Ca Calcium K Potassium Mg Magnesium Na Sodium | RESULT 4442 4293 4421 4623 | REF RESULT 4544 4454 4529 4816 | REPORTING LIMIT 4 2 5 3 | SPIKE VALUE | RECOVERY (な) | REC LIMITS (%) LOW HIGH RPD (%) 2.270 3.681 2.413 4.089 | RPD LIMIT (%) 15 15 15 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/M INSTRUMENT: TJA Enviro 36 UNITS: mg/kg METHOD: | latrix | | | 12/10/96 | | INSTR RUN: ICP\9612041 BATCH ID: IFS120396-3 DILUTION: 10.0 | X |
|--|--|--|--|----------------|--|---|------------------|
| ANALYTE K Potassium Mg Magnesium Na Sodium | RESULT 5729 13450 6237 | REF RESULT 844 8838 1039 | REPORTING LIMIT 20 50 30 | SPIKE VALUE | RECOVERY (%) 97.7 92.24 104.0 | REC LIMITS (%) LOW HIGH RPD (%) 50 150 50 150 50 150 | RPD LIMIT (%) |
| SAMPLE TYPE: Spike-Sample/M INSTRUMENT: TJA Enviro 36 UNITS: mg/kg METHOD: | | | LAB ID: PREPARED: | MD11391-26 | 6 A | INSTR RUN: ICP\9612041: BATCH ID: IFS120396-33 DILUTION: 10.0 | (|
| ANALYTE Ca Calcium K Potassium Mg Magnesium Na Sodium | RESULT 112000 5050 8750 6300 | REF RESULT 110000 517 3760 1490 | REPORTING LIMIT 40 20 50 30 | SPIKE VALUE | RECOVERY (%) 40.00 90.7 99.80 96.20 | REC LIMITS (%) LOW HIGH RPD (%) 50 150 50 150 50 150 50 150 | RPD LIMIT (%) |
| SAMPLE TYPE: Spike-Sample/M INSTRUMENT: TJA Enviro 36 UNITS: mg/kg METHOD: | | | LAB ID: PREPARED: | MS11391-07 | 7 A | INSTR RUN: ICP\96120413 BATCH ID: IFS120396-3) DILUTION: 10.0 | 31200/20/19 |
| ANALYTE K Potassium Mg Magnesium Na Sodium | RESULT 5714 13420 6189 | REF RESULT 844 8838 1039 | REPORTING LIMIT 20 50 30 | SPIKE VALUE | RECOVERY (*) 97.4 91.64 103.0 | REC LIMITS (%) LOW HIGH RPD (%) 50 150 50 150 50 150 | RPD LIMIT (*) |
| SAMPLE TYPE: Spike-Sample/Mi INSTRUMENT: TJA Enviro 36 UNITS: mg/kg METHOD: | | | LAB ID: PREPARED: ANALYZED: | MS11391 - 26 | | INSTR RUN: ICP\96120413 BATCH ID: IFS120396-3) DILUTION: 10.0 | (|
| ANALYTE K Potassium Mg Magnesium Na Sodium | RESULT 5070 8800 6360 | REF RESULT 517 3760 1490 | REPORTING LIMIT 20 50 30 | SPIKE VALUE | RECOVERY (%) 91.1 100.8 97.40 | REC LIMITS (%) LOW HIGH RPD (%) 50 150 50 150 50 150 | RPD LIMIT (%) |

MATRIX SPIKE DUPLICATES

| SAMPLE TYPE: Spiked Sample D INSTRUMENT: TJA Enviro 36 UNITS: mg/kg | uplicate | | LAB ID: PREPARED: ANALYZED: | MR11391-07A 12/10/96 | \ | INSTR RUN: ICP\961204131200/22/20 BATCH ID: IFS120396-3X DILUTION: 10.0 |
|---|---------------------------------|--|--------------------------------------|-------------------------|-----------------|---|
| METHOD: ANALYTE K Potassium Mg Magnesium Na Sodium | RESULT 5729 13450 6237 | REF RESULT 5714 13420 6189 | REPORTING LIMIT 20 50 30 | SPIKE VALUE | RECOVERY (%) | REC LIMITS (\$) RPD (\$) LIMIT (\$) 0.2622 30 0.2233 30 0.7726 30 |
| | | | | | | |
| SAMPLE TYPE: Spiked Sample C INSTRUMENT: TJA Enviro 36 UNITS: mg/kg | Ouplicate | •••• | LAB ID: PREPARED: ANALYZED: | MR11391-26A | ί | INSTR RUN: ICP\961204131200/26/24 BATCH ID: IFS120396-3X DILUTION: 10.0 |
| METHOD: ANALYTE K Potassium Mg Magnesium Na Sodium | RESULT 5050 8750 6300 | REF RESULT 5070 8800 6360 | REPORTING LIMIT 20 50 30 | SPIKE VALUE | RECOVERY (な) | REC LIMITS (%) RPD LOW HIGH RPD (%) LIMIT (%) 0.3953 30 0.5698 30 0.9479 30 |

QUALITY CONTROL REPORT

PAGE QR-12_

ANALYSIS: Zinc

MATRIX: Soil/Bulk

METHOD BLANK SAMPLES

| SAMPLE TYPE: Blank-N INSTRUMENT: TJA Env UNITS: mg/kg METHOD: EPA 601 | riro 36 | | LAB ID: PREPARED: ANALYZED: | IFS_BLNK_P : : 12/02/96 | י | INSTR RUN: ICP\961202203000/1/ BATCH ID: IFS112796-P DILUTION: 1.000000 |
|--|--------------|---------------|-----------------------------------|-------------------------------|-----------------|---|
| ANALYTE ZINC IN SOIL BY ICP | RESULT ND | REF RESULT | REPORTING LIMIT 1 | SPIKE VALUE | RECOVERY (%) | REC LIMITS (%) RPD LOW HIGH RPD (%) LIMIT (%) |
| SAMPLE TYPE: Blank-M INSTRUMENT: TJA Env UNITS: mg/kg METHOD: EPA 601 | iro 36 | | LAB ID: PREPARED: ANALYZED: | IF_BLNK_U 12/03/96 | | INSTR RUN: ICP\961203222200/1/ BATCH ID: IFS120196-U DILUTION: 1.000000 |
| ANALYTE ZINC IN SOIL BY ICP | RESULT ND | REF RESULT | REPORTING LIMIT 1 | SPIKE VALUE | RECOVERY (な) | REC LIMITS (%) RPD LOW HIGH RPD (%) LIMIT (%) |

METHOD SPIKE SAMPLES

| SAMPLE TYPE: Spike-Method/M INSTRUMENT: TJA Enviro 36 UNITS: mg/kg METHOD: EPA 6010 | edia blank | | LAB ID: PREPARED ANALYZED | IFS_MD_P : : 12/02/96 | | INSTR RUN: ICP\961202203000/3/1 BATCH ID: IFS112796-P DILUTION: 1.000000 |
|---|----------------|---------------------|---------------------------------|-----------------------------|-------------------------|--|
| ANALYTE | RESULT 48.5 | REF RESULT ND | REPORTING LIMIT 1 | SPIKE VALUE 50.0 | | REC LIMITS (%) RPD LOW HIGH RPD (%) LIMIT (%) 90 115 |
| SAMPLE TYPE: Spike-Method/Me INSTRUMENT: TJA Enviro 36 UNITS: mg/kg METHOD: EPA 6010 | edia blank | ******** | LAB ID: PREPARED ANALYZED | IFS MS P | | INSTR RUN: ICP\961202203000/2/1 BATCH ID: IFS112796 P DILUTION: 1.000000 |
| ANALYTE ZINC IN SOIL BY ICP | RESULT 47.8 | ND | LIMIT 1 | 50.0 | RECOVERY (*) 95.6 | REC LIMITS (%) RPD LOW HIGH RPD (%) LIMIT (%) 90 115 |
| SAMPLE TYPE: Spike-Method/Me INSTRUMENT: TJA Enviro 36 UNITS: mg/kg METHOD: EPA 6010 | | | | IFS MD U | | INSTR RUN: ICP\961203222200/3/1 BATCH ID: IFS120196-U DILUTION: 1.000000 |
| ANALYTE | RESULT 48.3 | REF RESULT ND | REPORTING LIMIT 1 | SPIKE VALUE 50.0 | RECOVERY (%) 96.6 | REC LIMITS (%) RPD LOW HIGH RPD (%) LIMIT (%) 90 115 |
| SAMPLE TYPE: Spike-Method/Me INSTRUMENT: TJA Enviro 36 UNITS: mg/kg METHOD: EPA 6010 | | | | IFS_MS_U : : 12/03/96 | | INSTR RUN: ICP\961203222200/2/1 BATCH ID: IFS120196-U DILUTION: 1.000000 |
| ANALYTE ZINC IN SOIL BY ICP | RESULT 48.3 | REF Result ND | REPORTING LIMIT 1 | SPIKE VALUE 50.0 | RECOVERY (*) 96.6 | REC LIMITS (%) RPD LOW HIGH RPD (%) LIMIT (%) 90 115 |

METHOD SPIKE DUPLICATES

| | Method Spike Sam TJA Enviro 36 mg/kg EPA 6010 | | | LAB ID: PREPARED | IFS MR P | | INSTR RUN: ICH BATCH ID: IF | P\96120220 S112796-P 000000 | 3000/4/2 |
|-------------------------|--|----------------|-----------------------|-------------------------|----------------|-----------------|--------------------------------|-----------------------------------|------------------------|
| ANALYTE ZINC IN SOIL | | RESULT 48.5 | REF RESULT 47.8 | REPORTING LIMIT 1 | SPIKE VALUE | RECOVERY (な) | REC LIMITS (%) LOW HIGH | RPD (%) 1.45 | RPD LIMIT (%) 10 |

QUALITY CONTROL REPORT

PAGE QR-13

ANALYSIS: Zinc

MATRIX: Soil/Bulk

METHOD SPIKE DUPLICATES

| SAMPLE TYPE: Method Spike INSTRUMENT: TJA Enviro 36 UNITS: mg/kg | Sample Duplicate | | LAB ID: PREPARED: ANALYZED: | IFS_MR_U 12/03/96 | | INSTR RUN: BATCH ID: DILUTION: | ICP\96120322 IFS120196-U 1.000000 | 2200/4/2 |
|--|------------------|----------------------|-----------------------------------|----------------------|-----------------|--------------------------------------|---|------------------------|
| METHOD: ANALYTE ZINC IN SOIL BY ICP | 48.3 | REF ESULT 48.3 | REPORTING LIMIT 1 | SPIKE VALUE | RECOVERY (な) | REC LIMITS (| H RPD (*) | RPD LIMIT (%) 10 |

MATRIX SPIKE SAMPLES

| INSTRUMENT: UNITS: | Spike·Sample/Matr TJA Enviro 36 mg/kg | ix | ****** | LAB ID: PREPARED: ANALYZED: | MD11391-12 12/03/96 | | |
|---------------------------------------|--|---------------|-----------------------|-----------------------------------|---------------------------|---------------------------|--|
| ANALYTE ZINC IN SOIL | . BY ICP | RESULT 366 | REF RESULT 360 | REPORTING LIMIT 10 | SPIKE VALUE 50.0 | RECOVERY (%) 12.0 ! | REC LIMITS (%) RPD LOW HIGH RPD (%) LIMIT (%) 31 134 |
| SAMPLE TYPE: INSTRUMENT: UNITS: | Spike-Sample/Matr TJA Enviro 36 mg/kg | | | | MD11391-21/ 12/03/96 | | |
| METHOD: ANALYTE ZINC IN SOIL | BY ICP | RESULT 985 | REF RESULT 965 | | | | REC LIMITS (%) RPD LOW HIGH RPD (%) LIMIT (%) 31 134 |
| SAMPLE TYPE: INSTRUMENT: UNITS: | Spike-Sample/Matri TJA Enviro 36 mg/kg | x | | LAB ID; PREPARED; ANALYZED; | MD11391-30/ | A | INSTR RUN: ICP\961202203000/15/13 BATCH ID: IFS112796-P DILUTION: 10.0 |
| ANALYTE ZINC IN SOIL | BY ICP | RESULT 117 | REF RESULT 71.6 | REPORTING LIMIT 10 | SPIKE VALUE 50.0 | RECOVERY (%) 90.8 | REC LIMITS (%) RPD LOW HIGH RPD (%) LIMIT (%) 31 134 |
| SAMPLE TYPE: INSTRUMENT: UNITS: | Spike-Sample/Matri TJA Enviro 36 mg/kg | x | ••••• | LAB ID: PREPARED: ANALYZED: | MS11391 · 12/ 12/03/96 | 4 | INSTR RUN: ICP\961202203000/6/5 BATCH ID: IFS112796-P DILUTION: 10.0 |
| ANALYTE ZINC IN SOIL | BY ICP | RESULT 398 | REF RESULT 360 | REPORTING LIMIT 10 | SPIKE VALUE 50.0 | RECOVERY (%) 76.0 | REC LIMITS (*) RPD LOW HIGH RPD (*) LIMIT (*) 31 134 |
| SAMPLE TYPE: INSTRUMENT: UNITS: | Spike-Sample/Matr TJA Enviro 36 mg/kg | ix | | LAB ID: PREPARED: ANALYZED: | MS11391-21 12/03/96 | Α | INSTR RUN: ICP\961202203000/10/9 BATCH ID: IFS112796-P DILUTION: 10.0 |
| METHOD: ANALYTE ZINC IN SOIL | . BY ICP | RESULT 950 | REF RESULT 965 | REPORTING LIMIT 10 | SPIKE VALUE 50.0 | RECOVERY (%) -30.0 | REC LIMITS (%) RPD LOW HIGH RPD (%) LIMIT (%) 31 134 |
| SAMPLE TYPE: INSTRUMENT: UNITS: | Spike-Sample/Matr TJA Enviro 36 mg/kg | ix | | LAB ID: PREPARED: ANALYZED: | MS11391-30 12/03/96 | A | INSTR RUN: ICP\961202203000/14/13 BATCH ID: IFS112796-P DILUTION: 10.0 |
| METHOD: ANALYTE ZINC IN SOIL | BY ICP | RESULT 125 | REF RESULT 71.6 | REPORTING LIMIT 10 | SPIKE VALUE 50.0 | RECOVERY (%) 107 | REC LIMITS (%) RPD LOW HIGH RPD (%) LIMIT (%) 31 134 |

QUALITY CONTROL REPORT

PAGE QR-14

ANALYSIS: Zinc

MATRIX: Soil/Bulk

MATRIX SPIKE SAMPLES

| SAMPLE TYPE: Spike-Sa INSTRUMENT: TJA Envi UNITS: mg/kg METHOD: EPA 6010 | ro 36. | | LAB ID: PREPARED ANALYZED | MD11391-42 : : 12/03/96 | 2 A | INSTR BATCH DILUTI | ID: IF | P\96120322 S120196-U .0 | 22200/7/5 |
|---|---------------|-----------------------|---------------------------------|-------------------------------|-------------------------|--------------------------|-------------------------|-------------------------------|------------------|
| ANALYTE ZINC IN SOIL BY ICP | RESULT 117 | REF RESULT 60.8 | REPORTING LIMIT 10 | SPIKE VALUE 50.0 | RECOVERY (%) 112 | REC LIM LOW 31 | (ITS (%) HIGH 134 | RPD (%) | RPD LIMIT (%) |
| SAMPLE TYPE: Spike-Sa INSTRUMENT: TJA Envi UNITS: mg/kg METHOD: EPA 6010 | ro 36 | •••• | LAB ID: PREPARED ANALYZED | MS11391-42 | A. | INSTR BATCH DILUTI | ID: IF | P\96120322 S120196-U .0 | 22200/6/5 |
| ANALYTE ZINC IN SOIL BY ICP | RESULT 110 | REF RESULT 60.8 | REPORTING LIMIT 10 | SPIKE VALUE 50.0 | RECOVERY (な) 98.4 | REC LIM LOW 31 | ITS (%) HIGH 134 | RPD (%) | RPD LIMIT (%) |

MATRIX SPIKE DUPLICATES

| SAMPLE TYPE: INSTRUMENT: UNITS: METHOD: | Spiked Sample & TJA Enviro 36 mg/kg EPA 6010 | Ouplicate | | LAB ID: PREPARED: ANALYZED: | MR11391-12 12/03/96 | A | INSTR RUN: IO BATCH ID: IO DILUTION: 10 | FS112796-P | 3000/8/6 |
|--|---|---------------|---|-----------------------------------|------------------------|-----------------|---|------------|------------------------|
| ANALYTE ZINC IN SOIL | | RESULT 366 | REF RESULT 398 | REPORTING LIMIT 10 | SPIKE VALUE | RECOVERY (*) | LOW HIGH | | RPD LIMIT (%) 25 |
| INSTRUMENT: UNITS: | Spiked Sample (TJA Enviro 36 mg/kg EPA 6010 | Ouplicate | | LAB ID: PREPARED: ANALYZED: | MR11391-21 | | INSTR RUN: IO | S112796-P | 3000/12/10 |
| ANALYTE ZINC IN SOIL | | RESULT 985 | REF RESULT 950 | REPORTING LIMIT 10 | SPIKE VALUE | RECOVERY | | RPD (*) | RPD LIMIT (%) 25 |
| SAMPLE TYPE: INSTRUMENT: UNITS: METHOD: | Spiked Sample (TJA Enviro 36 mg/kg EPA 6010 | | | LAB ID: PREPARED: ANALYZED: | MR11391-30 12/03/96 | A | INSTR RUN: IC BATCH ID: IF DILUTION: IC | S112796-P | 3000/16/14 |
| ANALYTE ZINC IN SOIL | | RESULT 117 | REF RESULT 125 | REPORTING LIMIT 10 | SPIKE VALUE | RECOVERY (%) | LOW HIGH | | RPD LIMIT (%) 25 |
| SAMPLE TYPE: INSTRUMENT: UNITS: METHOD: | Spiked Sample [TJA Enviro 36 mg/kg EPA 6010 | Duplicate | • | LAB ID: PREPARED: ANALYZED: | MR11391-42 | | INSTR RUN: IO BATCH ID: IF DILUTION: 10 | S120196-U | 2200/8/6 |
| ANALYTE ZINC IN SOIL | | RESULT 117 | REF RESULT 110 | REPORTING LIMIT 10 | SPIKE VALUE | RECOVERY (な) | REC LIMITS (*) LOW HIGH | | RPD LIMIT (%) 25 |

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

CHAIN OF CUSTODY / ANALYSES REQUEST FORM Por 1 of 3 96/139/

| Project No | : 304 | 12,95- | -004 | | | | | | : -TAM.Z | | | Date: 11/26/96 | | Serial No. | .: | | |
|--|----------|-------------|-------------------|---------------------------|-----------------|----------|------------------|------------------------|----------------------------|--|----------|----------------|--------|-----------------|---------------------------------------|---|-------------------|
| Project Nar | ne: 🖇 | kmin b | M's maille | | Projec | t Lo | catio | n: € | พยนุง | 1k | | | | <u> </u> | Nō | 15174 | 1 |
| Sampler (Si | gnature) | T. T. | AMM A | | | | | / | ANALYSES / / Samplers: | | | | | | | | |
| · · · · · · · · · · · · · · · · · · · | | S | MPLES | | | | / _~ ^ | X | Duris | \$/ | | | 4017 | 25x/ | TAM (SR | <u>(</u> | |
| SAMPLE NO. | DATE | TIME | LAB SAMPLE NO. | NO. OF CON- TAINERS | SAMPLE TYPE | 130 | × 200 | * * | May Lynn's | | | | × / | 2 0/ | RE | MARKS | |
| Bu-1 | 11/26/96 | ማ እን | OIA | | precip. | × | X_ | X | ļ | | | | | | | | |
| Bw - Z | | 0931 | 02A | 1 | paint | X | X_ | ļ | ļ | | | | | \sim | end Re | Sulto | |
| BW-3 | | 0943 | 03A | 1 | modian | × | X | X | | | | | | <u> </u> | N 12/1 | 196 | |
| BW-4 | | 0946 | 041 | | brick | X | X | | | | | | | | | | |
| BU-5 | | 1047 | 05 A | | PRECIP | X. | X | X | ļ | | | | | <u> Re</u> | sulk ! | 6 | |
| BW-6 | | 1052 | 06 A | 1 | PAIST | X | X | | <u> </u> | | | | | | Kenton | Ger. | |
| BW-7 | | 1045 | 07A | 1 | MUTAR | <u>X</u> | X | × | | | | | | | | | |
| 3~~~ | | 1043 | 03 A | / | BRICK | X | × | | <u> </u> | | | | | | | | |
| B-1-9 | | गानु | 091 | 1 | PRECIP | X | X_ | × | | | | | | | · | | |
| BW-10 | | 1126 | 10A | 1 | PAINT | X | X | <u> </u> | <u> </u> | <u>. </u> | | | | | · · · · · · · · · · · · · · · · · · · | <u>, , , , , , , , , , , , , , , , , , , </u> | |
| BH-11 | | 1136 | II A | | MURGAR | X | X | X | ļ | | - | | | | | | |
| BW-12 | | ારુ | 12 A | 1 | BRKK | X | X | <u> </u> | | | | | | | | | |
| BW-13 | | 1200 | 13A | 1 | PAINT | X | X | ļ | | | | | | | | | |
| BW - 19 | | 1204 | 14 A | 1 | MORTAL | X | X_ | X | | | | | | | ·-· | | |
| BW-15 | | 1213 | 15 A | 1 | BRICK | X | × | 1 | ļ | | <u> </u> | | | | | | |
| BW-16 | | 1316 | 16 A | | PAINT | X | \overline{X} | <u> </u> | | | | // | | | //- | | |
| RELINQUISHED (Signature |) \(\) | A | MIL | | DATE IN ZO N | | INE / | 16 | RECEIV (Signa RECEIV | ture) | M | | Un | ark | | DATE 279 | 17/16 |
| RELINQUISHED (Signature | | | THE | | DATE | 6 | 33 | 0 | (Signa | ture) | Tu | 1 | , ^ | PodA | march | DATE/ | / TIME / /3.50 |
| RELINQUISHED (Signature | | -(| • | | DATE | 1 | TÎMÊ | | RECEIV (Signa | | - | • | | _ | | DATE | TIME |
| METHOD OF SH | | | | | DATE | | TIME | | LAB COMMENTS: | | | | | | <u> </u> | | |
| Sample Co | ilector | • | LEVINE-F | RICKE | | | | Analytical Laboratory: | | | | | | | | | |
| 1900 Powell Street, 12th Floor Emeryville, California 94608 (510) 652-4500 | | | | | | | AEN, Pleasantan | | | | | | | | | | |

CHAIN OF CUSTODY / ANALYSES REQUEST FORM Page 2 of 3 96/139/ cont Field Logbook No.: TAM-2 Project No.: 3042,95-004 Date: 11/24/96 Serial No.: Project Name: Shewin - Williams Project Location: Emequile Νö 15175 Sampler (Signature): **ANALYSES** Samplers: HOLD SAMPLES RUSH TAN ISRC NO. OF LAB SAMPLE SAMPLE SAMPLE NO. DATE TIME CON -NO. TYPE REMARKS TAINERS 1176176 1318 BW-17 17 A BRICK BW-14 1320 X 18 A MARTAR X Kasulta BW-19 1320 19 A PAINT 1332 1 X X BH -20 20 A X MURTAR 1334 BW-21 21 A X X BRICK BW - 23 1350 22 A PAINT Kentor. (See) BW-24 1358 23 A MACIAR X BW - 25 BRICK 140a 24 A BW - 27-25 A X 1415 PAINT BW-26 X 26 A 1420 MORTAR BW-27 271 1425 BRKK X BW-24 1445 28 1 PAINT BW-29 X A55 29 A MORTAR BW-30 X 4500 30 A BRICK 81-31 31 A PAINT X 1510 BW- 32 MOZTAR 1517 32 A RELINQUISHED BY DATE 196 RECEIVED BY: TIME (Signature) (Signature) RELINQUISHED BY: TIME, RECEIVED BY: (Signature) TIME (Signature) 13:50 RELINQUISHED BY: DATE RECEIVED .PX: DATE (Signature) TIME (Signature) METHOD OF SHIPMENT: DATE TIME LAB COMMENTS: Sample Collector: LEVINE-FRICKE Analytical Laboratory: 1900 Powell Street, 12th Floor AEN, Aensantan Emeryville, California 94608 (510) 652-4500

FORM NO. 86/COC/ARE

96/139/ cont Field Logbook No.: TAM-Z Date: 11/24/96 Project No.: 3042.95.004 Serial No.: Project Location: Emergialle Project Name: Sherwin Williams Μo 15176 **ANALYSES** Samplers: Sampler (Signature): HOLD TAM / SRC SAMPLES NO. OF SAMPLE LAB SAMPLE CON-REMARKS TIME SAMPLE NO. DATE TYPE NO. TAINERS BW-33 BRICK 11124/96 1520 33 A PAINT BW- 34 1233 34 A X X X BW-35 35A MOLTAR 1540 X BRICK 184-36 1542 X PAINT WW-31 371 1545 X MORTAR B~-34 38 A 1555 BRICK X lboo 29A BW-39 PAINT 1615 40 A BW-40 X X 41 A MORTAZ 16ZZ BW-41 BRICK 1623 421 BW-42 PAINT 43 A 1630 B-1-43 X 44 A MUKTAZ 1435 BW-44 BRIGL X 45 A 1633 BW-45 RECEIVED BY: DATE 11 27 196 RELINQUISHED BY: (Signature) (Signature) DATE RECEIVED BY: TIME RELINQUISHED BY: (Signature) (Signature) RECEIVED BY TIME RELINOUISHED BY: (Signature) (Signature) TIME LAB COMMENTS: DATE METHOD OF SHIPMENT: Analytical Laboratory: LEVINE-FRICKE Sample Collector: 1900 Powell Street, 12th Floor AEN . Pleasanton Emeryville, California 94608 (510) 652-4500 File Copy (Yellow) Field Copy (Pink) Lab Copy (Green) FORM NO. 86/COC/ARF

Shipping Copy (White)

CHAIN OF CUSTODY / ANALYSES REQUEST FORM Page 3 of 3

Appendix C

Laboratory Analytical Results for Concrete Samples

American Environ

- Nerwork

90HS Cempleas inc. 172

A Paragraph of Salari Salari

PAGE 1

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

ATTN: A.JENKINS/R.MILELLI/M.KNOX CLIENT PROJ. ID: CLIENT PROJ. NAME: RIFKIN WALL

C.O.C. NUMBER: 15167

REPORT DATE: 02/03/97

DATE(S) SAMPLED: 01/30/97

DATE RECEIVED: 01/30/97

AEN WORK ORDER: 9701317

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

3.440 Artist 1.70

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 R | EPORTING LIMIT UNI | DATE TS ANALYZED |
|---------------------------|-----------------|----------|-----------------------|---------------------|
| Arsenic | EPA 7060 | 6.2 * | 0.5 mg/kg | 02/01/97 |
| #Digestion, Metals AA/ICP | EPA 3050 | - | Prep D | ate 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 m | g/kg | 02/01/97 |
| #Digestion, Metals AA/ICP | EPA 3050 | - | Р | rep Date | 01/31/97 |

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

PAGE QR-1

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

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

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.

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 DILUTION: 1.000000 mg/kg EPA 7060 UNITS: ANALYZED: 02/01/97 METHOD: REF REPORTING SPIKE REC LIMITS (%) RECOVERY **ANALYTE** RESULT RESULT LIMIT VALUE (%) LOW HIGH RPD (%) LIMIT (%) Arsenic in soil EPA 7060 ND 0.5

METHOD SPIKE SAMPLES

SAMPLE TYPE: Spike-Method/Media blank INSTRUMENT: TJA 4000, GFAA LAB ID: GFS MD P INSTR RUN: 4000\970201121600/3/1 BATCH ID: GFS020197-P DILUTION: 1.000000 PREPARED: mg/kg EPA 7060 UNITS: ANALYZED: 02/01/97 METHOD: REF RECOVERY REPORTING SPIKE REC LIMITS (水) ANALYTE RESULT RESULT HIĠĤĺ LIMIT VALUE RPD (%) (%) LOW LIMIT (%) Arsenic in soil EPA 7060 77 12.0 ND 10.0 0.5 141 SAMPLE TYPE: Spike-Method/Media blank INSTRUMENT: TJA 4000, GFAA UNITS: mg/kg METHOD: EPA 7060 LAB ID: GFS MS P INSTR RUN: 4000\970201121600/2/1 BATCH ID: GFS020197-P DILUTION: 1.000000 PREPARED: ANALYZED: 02/01/97 REF REPORTING SPIKE RECOVERY REC LIMITS (%) RPD ANALYTE RESULT RESULT LIMIT VALUE HIGH (%) LIMIT (%) Arsenic in soil EPA 7060 11.7 ND 77 0.5 10.0 117 141

METHOD SPIKE DUPLICATES

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

MATRIX SPIKE SAMPLES

Arsenic in soil EPA 7060

16.8

6.24

SAMPLE TYPE: Spike-Sample/Matrix INSTRUMENT: TJA 4000, GFAA LAB ID: MD01317-02A PREPARED: INSTR RUN: 4000\970201121600/7/5 BATCH ID: GFS020197-P DILUTION: 1.000000 UNITS: METHOD: mg/kg EPA 7060 ANALYZED: 02/01/97 SPIKE REC LIMITS (%) REF REPORTING RECOVERY RESULT RESULT RPD (%) LIMIT VALUE (%) LOW HIGH LIMIT (%) Arsenic in soil EPA 7060 16.4 6.24 0.5 168 SAMPLE TYPE: Spike-Sample/Matrix INSTRUMENT: TJA 4000, GFAA LAB ID: PREPARED: INSTR RUN: 4000\970201121600/6/5 MS01317-02A BATCH ID: GFS020197-P DILUTION: 1.000000 mg/kg EPA 7060 UNITS: ANALYZED: 02/01/97 METHOD: REF REPORTING RECOVERY REC LIMITS (%) SPIKE **RESULT** RESULT LOW. RPD (%) LIMIT (%) LIMIT VALUE HIGH (%)

10.0

106

12

168

0.5

American Environmental Network

WORK ORDER: 9701317

OUALITY CONTROL REPORT

PAGE QR-3

ANALYSIS: Arsenic

MATRIX: Soil/Bulk

MATRIX SPIKE DUPLICATES

REPORTING

LIMIT

0.5

LAB ID: MR01317-02A PREPARED:

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

SAMPLE TYPE: Spiked Sample Duplicate INSTRUMENT: TJA 4000, GFAA UNITS: mg/kg METHOD: EPA 7060 ANALYZED: 02/01/97

Arsenic in soil EPA 7060

ANALYTE

REF RESULT RESULT 16.4 16.8

SPIKE VALUE

RECOVERY REC LIMITS (%) RPD (%) LIMIT (%)
2.41 18

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

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

R-75-9701317

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| Project No. | : 30 | 42. 9 | 5-005 | | Field | - | | | | | | Date | : 1/3 | 0/97 | Serial | No.: | | |
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| METHOD OF SHI | PMENT: | | | | DATE | Ť | IME | _+ | AB COM | | : | | | | | | | |
| Sample Collector: LEVINE-FRICKE 1900 Powell Street, 12th Floor Emeryville, California 94608 (510) 652-4500 | | | | | A | Analy | | Lab | | ory: | · · · · · · · · · · · · · · · · · · · | | | | *************************************** | | | |

American Environmentai Network

Certificate of Analysis

Self Berger Stranger

Charles Aller

PAGE 1

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

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

REPORT DATE: 02/10/97

DATE(S) SAMPLED: 02/05/97

DATE RECEIVED: 02/06/97

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.

Larr 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

| TIL ILLO | | 00/07/ |
|----------|-------|----------|
| 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

| | METHOD/ | | DATE | | |
|----------------|-------------|--------|-------|----------|----------|
| ANALYTE | CAS# | RESULT | LIMIT | UNITS | ANALYZED |
| #Sample Volume | | 210 | L | iters | |
| #Digestion | | - | - P | rep Date | 02/06/97 |
| Arsenic in Air | NIOSH 7300M | <0.005 | mę | g/m3 | 02/07/97 |
| Lead in Air | NIOSH 7300M | 0.005 | mg | g/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

| 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 | e 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

| ANALYTE | METHOD/ CAS# | RESULT | REPORTING LIMIT | UNITS | DATE ANALYZED |
|---------------------------|-----------------|--------|--------------------|----------|------------------|
| Arsenic | EPA 7060 | 7.2 * | 0.5 m | g/kg | 02/07/97 |
| #Digestion, Metals AA/ICP | EPA 3050 | - | Р | rep 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

| ANALYTE | METHOD/ CAS# | R RESULT | EPORTING 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.

<u>Definitions</u>

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.

OUALITY CONTROL REPORT

PAGE QR-2

ANALYSIS: Arsenic

MATRIX: Soil/Bulk

METHOD BLANK SAMPLES

| • | • • • • • • • • • • • • • • • • • • • | | | |
|---|---------------------------------------|---------|------------|-------------------------------------|
| | AMPLE TYPE: Blank-Method/Media blank | LAB ID: | GFS_BENK_G | 4000\970207115400/1/ GES020697-G |

INSTRUMENT: UNITS:

DILUTION: 1.000000 ANALYZED: 02/07/97 mg/kg EPA 7060 METHOD:

RFF REPORTING SPIKE RECOVERY REC LIMITS (%) RPD VALUE LOW HIGH RPD (%) LIMIT (%) RESULT RESULT (%)

LIMIT ANALYTE Arsenic in soil EPA 7060 ND 0.5

METHOD SPIKE SAMPLES

| SAMPLE TYPE: Spike-Method/Mei INSTRUMENT: TJA 4000, GFAA UNITS: mg/kg | dia blank | PREPARED: BATC ANALYZED: 02/07/97 DILU REF REPORTING SPIKE RECOVERY REC L RESULT LIMIT VALUE (%) LOW ND 0.5 10.0 120 77 | INSTR RUN: 4000\970207115400/3/1 BATCH ID: GFS020697-G DILUTION: 1.000000 | | | |
|---|----------------|---|---|---------------|------------|--|
| METHOD: EPA 7060 ANALYTE Arsenic in soil EPA 7060 | RESULT 12.0 | RESULT ND | LIMIT 0.5 | VALUE 10.0 | (%) 120 | REC LIMITS (%) RPD LOW HIGH RPD (%) LIMIT (%) 77 141 |
| | | | | | | THETP BUIL 4000 0709711E400/2/1 |

SAMPLE TYPE: Spike-Method/Media blank INSTR RUN: 4000\970207115400/2/1 BATCH ID: GFS020697-G DILUTION: 1.000000 LAB ID: GFS_MS_G INSTRUMENT: TJA 4000, GFAA
UNITS: mg/kg
METHOD: EPA 7060 PREPARED:

ANALYZED: 02/07/97

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

141 Arsenic in soil EPA 7060 ND 0.5 10.0 12.2

METHOD SPIKE DUPLICATES

LAB ID: GFS_MR_G PREPARED: INSTR RUN: 4000\970207115400/4/2 SAMPLE TYPE: Method Spike Sample Duplicate INSTRUMENT: TJA 4000, GFAA

BATCH ID: GFS020697-G DILUTION: 1.000000 ANALYZED: 02/07/97 mg/kg EPA 7060 UNITS:

METHOD: RPD RECOVERY REC LIMITS (%) REF REPORTING SPIKE LOW HIGH RPD (%) RESULT 12.2 LIMIT LIMIT (%) RESULT VALUE (%) ANALYTE 1.65 15 Arsenic in soil EPA 7060 12.0 0.5

WORK ORDER: 9702066

QUALITY CONTROL REPORT

PAGE QR-3

ANALYSIS: Metals NIOSH 7300M

MATRIX: Air

METHOD BLANK SAMPLES

| SAMPLE TYPE: Blank-Method/M INSTRUMENT: TJA Enviro 36 UNITS: ug METHOD: | | - | LAB ID: PREPARED | IFA_BLNK : : 02/07/97 | | | CP\97020710 FA020697 .000000 |)5700/1/ |
|--|----------------------|---------------|---------------------|-----------------------------|-----------------|---------------------------|------------------------------------|------------------|
| ANALYTE Arsenic, MCEF Lead, MCEF | RESULT <1 <0.5 | REF RESULT | REPORTING LIMIT | SPIKE VALUE | RECOVERY (%) | REC LIMITS (% LOW HIGH |) RPD (%) | RPD LIMIT (%) |

METHOD SPIKE SAMPLES

| | ke-Method/Media blank Enviro 36 | | LAB ID: PREPARED: ANALYZED: | IFA_MD 02/07/97 | · · · · · · · · · · · · · · · · · · · | BATCH ID: II | CP\97020710570 A020697 000000 | 0/3/1 |
|--|------------------------------------|-----------------------------|-----------------------------------|--------------------------------|---------------------------------------|--|-------------------------------------|----------------|
| ANALYTE Arsenic, MCEF Lead, MCEF | RESULT 6.30 7.50 | REF RESULT <1 <0.5 | REPORTING LIMIT | SPIKE VALUE 6.00 7.50 | RECOVERY (%) 105 100 | REC LIMITS (%) LOW HIGH 68 127 72 121 | | RPD MIT (%) |
| SAMPLE TYPE: Spik INSTRUMENT: TJA UNITS: ug METHOD: | e-Method/Media blank Enviro 36 | | LAB ID: PREPARED: ANALYZED: | | ••••• | BATCH ID: IF | P\970207105700 A020697 000000 |)/2/1 |
| ANALYTE Arsenic, MCEF Lead, MCEF | RESULT 6.14 7.30 | REF RESULT <1 <0.5 | REPORTING LIMIT | SPIKE VALUE 6.00 7.50 | RECOVERY (%) 102 97.3 | REC LIMITS (%) LOW HIGH 68 127 72 121 | | RPD MIT (%) |

METHOD SPIKE DUPLICATES

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

····· End of Quality Control Report ·····

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

| Project No.: 30 | 0 4 Z. | 95-0 | 05 | | Project Lo | ocation: | EMERYVILLE, | A | Date: 2/3 | 5/97 | Serial No | |
|------------------------------|----------------------|---------------|--|---------------------------|----------------|--------------------|--|----------|-----------|------------|------------------------|--------|
| Project Name: | | | | NO | Field Log | Field Logbook No.: | | | | | Nº | 1091 |
| Sampler (Signat | ure): C | De fa | en R.J. | م ا نہ | | | | ANALYS | SES | . <u>/</u> | Samplers | ARJ |
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| SAMPLE NO. | DATE | TIME | LAB SAMPLE NO. | NO. OF CON- TAINERS | SAMPLE TYPE | ₩. Y | 14. 18. 18. 10 00 10 00 10 10 10 10 10 10 10 10 10 | | YOU | RUSH | REMARI | (S |
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| Sample Collect | or: | LEVINE | FRICKE•RECC | N h Eloor | | | Analytical Lab | viatviy. | | | | |
| | | 1900 Pd | well Street, 12t lle, California 94 | 11 11001 4608-1827 | | | | AEI | \1 | | | |
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Appendix D

Laboratory Analytical Results for Whatman Wipe Samples

American Environmental Network

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Mark Aller & John

PAGE 1

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

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

C.O.C. NUMBER: 1089

REPORT DATE: 02/15/97

DATE(S) SAMPLED: 02/12/97

DATE RECEIVED:

02/12/97

AEN WORK ORDER: 9702129

3

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

1. [1] · [1 The first of the

LEVINE-FRICKE-RECON

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

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

| ANALYTE | METHOD/ CAS# | RESULT | REPORTING LIMIT UNIT | DATE S ANALYZED |
|--------------------|-----------------|--------|-------------------------|--------------------|
| #Digestion on wipe | EPA 3050 | _ | Prep Da | te 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

| | | | | · · · · · · · · · · · · · · · · · · · | | | |
|--------------------|-----------------|--------|--------------------|---------------------------------------|------------------|--|--|
| 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 | I | 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 | - | F | Prep Date | 02/12/97 |
| Arsenic on wipe | EPA 6010 | 13 | ι | ıg | 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 |

PAGE OR-1

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.

<u>Definitions</u>

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

INSTR RUN: ICP\970213185100/1/ BATCH ID: IFP021297 DILUTION: 1.000000 LAB ID: IFP_BLNK PREPARED: SAMPLE TYPE: Blank-Method/Media blank INSTRUMENT: TJA Enviro 36

UNITS: ANALYZED: 02/13/97 ug EPA 6010 METHOD:

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

METHOD SPIKE SAMPLES

INSTR RUN: ICP\970213185100/3/1 LAB ID: IFP_MD

SAMPLE TYPE: Spike-Method/Media blank INSTRUMENT: TJA Enviro 36 BATCH ID: IFP021297 DILUTION: 1.000000 PREPARED:

ANALYZED: 02/13/97 ug EPA 6010 UNITS: METHOD:

RECOVERY REC LIMITS (%) REPORTING SPIKE REF LIMIT 5 LOW HIGH RPD (%) LIMIT (%) 75 125 ANALYTE RESULT RESULT VALUE

20.0 <5 Arsenic on wipes 16.6 _____

INSTR RUN: ICP\970213185100/2/1 BATCH ID: IFP021297 DILUTION: 1.000000 SAMPLE TYPE: Spike-Method/Media blank INSTRUMENT: TJA Enviro 36 LAB ID: IFP_MS PREPARED:

ANALYZED: 02/13/97 UNITS:

ug EPA 6010 METHOD:

REPORTING SPIKE RECOVERY REC LIMITS (%) LOW HIGH RPD (X) LIMIT (%) **RESULT** LIMIT RESULT VALUE ANALYTE

20.0 125 17.3 <5 Arsenic on wipes

METHOD SPIKE DUPLICATES

INSTR RUN: ICP\970213185100/4/2 SAMPLE TYPE: Method Spike Sample Duplicate INSTRUMENT: TJA Enviro 36 LAB_ID: IFP_MR

BATCH ID: IFP021297 DILUTION: 1.000000 PREPARED:

ANALYZED: 02/13/97 ug EPA 6010 UNITS: METHOD:

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

20 4.13 Arsenic on wipes 16.6 17.35

..... End of Quality Control Report

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

9702129

| Project No.: 3042.95 -005 | Project Location: E | MERYVILLE, CA | Date: 2/12/97 | Serial No.: |
|---|---------------------|-----------------------------|---------------|--|
| Project Name: RIFKIN WALL DEMO | Field Logbook No.: | | | Nº 1089 |
| Sampler (Signature): B Mulelle | | ANALYSE | s / | Samplers: RJM |
| SAMPLES | , v | | 7/0/4/ | / |
| SAMPLE NO. DATE TIME LAB SAMPLE NO. OF CONTAINER | SAMPLE / | | KOLD KILSH | REMARKS |
| AF-BLNK 2/12/97 1300 01A AF-FL-1 02A AF-FL-2 03A | wipe X | | 48 | - TAT |
| AF-FL-3 OYA | > | | RESULT | S TO A. JEWKINS |
| AF-FL-5 05A | | | R.MI | -ELI/M.KNOX/ |
| AF-FL-6 07A | | | 3.5M | <u> </u> |
| AF-C0-1-2 084 | >< | | | |
| AF-co-4-5 09A | | | | |
| AF-co-7-8 * /OA * | | | | |
| | | | | |
| RELINQUISHED BY: (Signature) By Milest 2 | TIME 45 | RECEIVED BY: (Signature) | Total 31 | DATE TIME |
| RELINQUISHED BY: (Signature) | 12 97/6:15 | RECEIVED BY: (Signature) | otheroist _ | DATE TIME 2-/2-97 /6.30 |
| RELINQUISHED BY: (Signature) | ATE TIME | RECEIVED BY: (Signature) | | DATE TIME |
| METHOD OF SHIPMENT: | ATE TIME | LAB COMMENTS: | | |
| Sample Collector: LEVINE•FRICKE•RECON 1900 Powell Street, 12th Floor Emeryville, California 94608-1827 (510) 652-4500 | , | Analytical Laboratory: | | |

American Environmental Network

Certificule of Analysis

DOHS Certification, 1172

MHA Accreditation, U.F.-

PAGE 1

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

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

C.O.C. NUMBER: 1114

REPORT DATE: 02/21/97

DATE(S) SAMPLED: 02/18/97

DATE RECEIVED: 02/19/97

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.

Larny Klein

Laboratory Director

FEE 2 /

LEVINE-FRICKE-RECON

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

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

| ANALYTE | METHOD/ CAS# | RESULT | REPORTING LIMIT | UNITS | DATE ANALYZED |
|--------------------|-----------------|--------|--------------------|--------|------------------|
| #Digestion on wipe | EPA 3050 | - | Pre | p 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

| ANALYTE | METHOD/ CAS# | RESULT | REPORTING LIMIT | UNITS | DATE ANALYZED |
|--------------------|-----------------|--------|--------------------|----------|------------------|
| #Digestion on wipe | EPA 3050 | _ | Р | rep Date | 02/20/97 |
| Arsenic on wipe | EPA 6010 | 14 | u | g | 02/21/97 |

AEN (CALIFORNIA) OUALITY 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.

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

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- 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/MerinSTRUMENT: TJA Enviro 36 UNITS: ug | | | LAB ID: PREPARED | IFP BLNK | | INSTR RUN: IC BATCH ID: IF | | |
|--|--------------|---------------|-------------------------|----------------|-----------------|-------------------------------|---------|------------------|
| METHOD: EPA 6010 ANALYTE Arsenic on wipes | RESULT <5 | REF RESULT | REPORTING LIMIT 5 | SPIKE VALUE | RECOVERY (な) | REC LIMITS (%) LOW HIGH | RPD (%) | RPD LIMIT (%) |

METHOD SPIKE SAMPLES

| SAMPLE TYPE: Spike-Method/Me INSTRUMENT: TJA Enviro 36 UNITS: ug METHOD: EPA 6010 | edia blank | | LAB 1D: PREPARED ANALYZED | 1FP_MD 1: 02/21/97 | | INSTR RUN: BATCH ID: DILUTION: | ICP\9702211 IFP022097 1.000000 | 12300/3/1 |
|--|----------------|---------------------|---------------------------------|--------------------------|-------------------------|--------------------------------------|---------------------------------------|------------------|
| ANALYTE Arsenic on wipes | RESULT 19.1 | REF RESULT <5 | REPORTING LIMIT 5 | SPIKE VALUE 20.0 | RECOVERY (%) 95.5 | REC LIMITS LOW HI 75 12 | GH RPD (%) | RPD LIMIT (%) |
| SAMPLE TYPE: Spike-Method/Me INSTRUMENT: TJA Enviro 36 UNITS: ug METHOD: EPA 6010 | edia blank | ••••• | LAB ID: PREPARED ANALYZED | IFP_MS: : 02/21/97 | | INSTR RUN: BATCH ID: DILUTION: | ICP\97022113 IFP022097 1.000000 | 12300/2/1 |
| ANALYTE Arsenic on wipes | RESULT 19.7 | REF RESULT <5 | REPORTING LIMIT 5 | SPIKE VALUE 20.0 | RECOVERY (*) 98.5 | REC LIMITS LOW HI 75 12 | H RPD (X) | RPD LIMIT (%) |

METHOD SPIKE DUPLICATES

| SAMPLE TYPE: Method Spike Sam INSTRUMENT: TJA Enviro 36 UNITS: ug METHOD: EPA 6010 | ple Duplicat | te | LAB ID: PREPARED ANALYZED | IFP_MR 02/21/97 | | BATCH ID: IF | P\97022111 P022097 000000 | 2300/4/2 |
|---|----------------|-----------------------|---------------------------------|--------------------|-----------------|----------------------------|---------------------------------|------------------------|
| ANALYTE Arsenic on wipes | RESULT 19.1 | REF RESULT 19.7 | REPORTING LIMIT 5 | SPIKE VALUE | RECOVERY (%) | REC LIMITS (%) LOW HIGH | RPD (%) 3.09 | RPD LIMIT (%) 20 |

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

CHAIN OF CUSTODY / ANALYSES REQUEST FORM 9702199 Project Location: EMERYVILLE Project No.: 3042.95-05 Date: 2/18/97 Serial No.: $N_{\bar{0}}$ 1114 Project Name: RIFKIN WALL DEMO Field Logbook No.: **ANALYSES** Sampler (Signature): Samplers: ROSENIL SAMPLES HOLD RUSH NO. OF LAB SAMPLE SAMPLE DATE TIME CON-SAMPLE NO. REMARKS NO. TYPE TAINERS WHATMAN OLA 2/18/97 1100 FL-01-W WIPE OZA FAX Results to: Rick Milelli FL-02-M 030 Mark Knex; Susan Shui FL-03-E RECEIVED BY: RELINQUISHED BY: (Signature) (Signature) RECEIVED BY: RELINQUISHED BY (Signature) (Signature) RECEIVED BY: TIME DATE RELINQUISHED BY: (Signature) (Signature) TIME LAB COMMENTS: DATE METHOD OF SHIPMENT: Analytical Laboratory: LEVINE*FRICKE*RECON Sample Collector: AEN 1900 Powell Street, 12th Floor Emeryville, California 94608-1827 (510) 652-4500

Shipping Copy (White)

Lab Copy (Yellow)

File Copy (Pink)

Field Copy (Goldenrod)

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

| 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 |

American Environmental Network

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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 | - | Р | rep Date | 02/12/97 |
| Arsenic on wipe | EPA 6010 | 13 | u | g | 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

| 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

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- I: Interference.
- !: Indicates result outside of established laboratory QC limits.

WORK ORDER: 9702129

OUALITY CONTROL REPORT

PAGE QR-2

ANALYSIS: Arsenic on wipes

MATRIX: Wipe

METHOD BLANK SAMPLES

SAMPLE TYPE: Blank-Method/Media blank INSTRUMENT: TJA Enviro 36 INSTR RUN: ICP\970213185100/1/ LAB ID: IFP_BLNK BATCH ID: IFP021297 DILUTION: 1.000000 PREPARED: ANALYZED: 02/13/97 UNITS:

ug EPA 6010 METHOD:

REPORTING SPIKE RESULT RESULT LIMIT VALUE (%) ANALYTE Arsenic on wipes <5

METHOD SPIKE SAMPLES

INSTR RUN: ICP\970213185100/3/1 SAMPLE TYPE: Spike-Method/Media blank INSTRUMENT: TJA Enviro 36 LAB ID: IFP_MD

BATCH ID: IFP021297 DILUTION: 1.000000 PREPARED:

ANALYZED: 02/13/97 ug EPA 6010 UNITS: METHOD:

REC LIMITS (%) RPD RECOVERY REF REPORTING LOW HIGH RPD (%) LIMIT (%) 75 125 **RESULT** RESULT **VALUE** ANALYTE

20.0 Arsenic on wipes 16.6<5

SAMPLE TYPE: Spike-Method/Media blank INSTRUMENT: TJA Enviro 36 LAB ID: IFP_MS PREPARED: INSTR RUN: ICP\970213185100/2/1

BATCH ID: IFP021297 DILUTION: 1.000000 ANALYZED: 02/13/97 UNITS:

ug EPA 6010 METHOD:

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

Arsenic on wipes

METHOD SPIKE DUPLICATES

INSTR RUN: ICP\970213185100/4/2 LAB ID: IFP_MR
PREPARED: SAMPLE TYPE: Method Spike Sample Duplicate

BATCH ID: IFP021297 DILUTION: 1,000000 INSTRUMENT: TJA Enviro 36 ANALYZED: 02/13/97

UNITS: METHOD: ug EPA 6010

RPD REC LIMITS (%) REF REPORTING SPIKE RECOVERY LOW HIGH RPD (%) LIMIT (%) RESULT RESULT VALUE (%) LIMIT 4.13 20 Arsenic on wipes 16.617.3

..... End of Quality Control Report

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

9702129

| Project No.: 3042.95 - 005 | Project Location | EMERYVILLE, | CA | Date: 2/ | 12/97 | Serial No. | ; |
|--|------------------|--------------------------------------|-------------|---------------------------------------|----------|---------------------------------------|------------|
| Project Name: RIFKIN WALL DEMO | Field Logbook N | 0.: | | | | Nº | 1089 |
| Sampler (Signature): 13 Mulelle - | | | ANALYSES | 3 | | Samplers: | Rom |
| SAMPLES | | /v / / / | | 7/_ | | | |
| SAMPLE NO. DATE TIME LAB SAMPLE NO. OF CONTAINER | SAMPLE | | /// | KOLD . | AUSH / | REMARK | S |
| AF-BLNK 2/12/97 1300 01A AF-FL-1 02A AF-FL-2 03A | wipe > | | | | 48 - | TAT | |
| AF-FL-3 OYA | | | | · · · · · · · · · · · · · · · · · · · | RESULTS | TO A | 154K145/ |
| AF-FL-A 05A | | | | | R.MILE | 261/M. | KNOXI |
| AF-FL-6 07A | | | | | <u> </u> | | |
| AF-C0-1-2 084 | X | | | | | | |
| AF-CO-4-5 09A | | | | | | · · · · · · · · · · · · · · · · · · · | |
| AF-CO-7-8 * /OA | | | | 7 | | | |
| RELINQUISHED BY: (Signature) Relinquished By: Relinquishe | 13-97 15° | RECEIVED BY: (Signature) | A Sto | of | 318 | ATE / | TIME |
| RELINQUISHED BY: (Signature) | 12 97/6:1 | RECEIVED BY: (Signature) | ren I | Thorn | | ATE 2-/2-97 | TIME /6.30 |
| RELINQUISHED BY: (Signature) | ATE TIME | RECEI V €D BY: (Signature) | | | D | ATE | TIME |
| METHOD OF SHIPMENT: | ATE TIME | LAB COMMENTS: | - | | | | å, |
| Sample Collector: LEVINE•FRICKE•RECON 1900 Powell Street, 12th Floor Emeryville, California 94608-182 (510) 652-4500 | , | Analytical Labora | tory: EN | | | | |

American Environmental Network

Certifule D'Antions

DOHS Certification: 1172

ABBA Accreditation, Unit-

PAGE 1

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

TOTAL SECTION OF THE
ATTN: R.MILELLI/M.KNOX/S.SHIU CLIENT PROJ. ID: 3042.95-05 CLIENT PROJ. NAME: RIFKIN WALL

C.O.C. NUMBER: 1114

REPORT DATE: 02/21/97

DATE(S) SAMPLED: 02/18/97

DATE RECEIVED: 02/19/97

AEN WORK ORDER: 9702199

PROJECT SUMMARY:

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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

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LEVINE-FRICKE-RECON

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

| ANALYTE | METHOD/ CAS# | RESULT | REPORTING LIMIT | UNITS | DATE ANALYZED |
|--------------------|-----------------|--------|--------------------|----------|------------------|
| #Digestion on wipe | EPA 3050 | - | P | rep Date | 02/20/97 |
| Arsenic on wipe | EPA 6010 | 11 | u | g | 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

| 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 |

American Environmental Network

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LEVINE-FRICKE-RECON

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

| ANALYTE | METHOD/ CAS# | RESULT | REPORTING LIMIT | UNITS | DATE ANALYZED | |
|--------------------|-----------------|--------|--------------------|----------|------------------|--|
| #Digestion on wipe | EPA 3050 | - | Pi | rep Date | 02/20/97 | |
| Arsenic on wipe | EPA 6010 | 14 | นดุ | } | 02/21/97 | |

AEN (CALIFORNIA) QUALITY CONTROL REPORT

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

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- 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/Me INSTRUMENT: TJA Enviro 36 UNITS: ug | | | LAB ID: IFP_BLNK PREPARED: ANALYTED: 02/21/97 | | | INSTR RUN: ICP\970221112300/1/ BATCH ID: IFP022097 DILUTION: 1.000000 | | |
|--|--------------|---------------|---|----------------|----------|---|---------|------------------|
| METHOD: EPA 6010 ANALYTE Arsenic on wipes | RESULT <5 | REF RESULT | REPORTING LIMIT | SPIKE VALUE | RECOVERY | REC LIMITS (%) LOW HIGH | RPD (%) | RPD LIMIT (%) |

METHOD SPIKE SAMPLES

| INSTRUMENT: UNITS: | Spike-Method/Medi TJA Enviro 36 ug EPA 6010 | a blank | | LAB ID: PREPARED: ANALYZED: | IFP_MD 02/21/97 | | BATCH ID: | CP\97022111 FP022097 L.000000 | 2300/3/1 |
|--------------------------|--|----------------|---------------------|-----------------------------------|------------------------|-------------------------|-------------------------------------|-------------------------------------|------------------|
| ANALYTE Arsenic on wi | | RESULT 19.1 | REF RESULT <5 | REPORTING LIMIT 5 | SPIKE VALUE 20.0 | RECOVERY (*) 95.5 | REC LIMITS (2 LOW HIGH 75 125 | | RPD LIMIT (%) |
| INSTRUMENT: UNITS: | Spike-Method/Medi TJA Enviro 36 ug EPA 6010 | a blank | | LAB ID: PREPARED: ANALYZED: | IFP_MS 02/21/97 | | | CP\97022111 FP022097 .000000 | 2300/2/1 |
| ANALYTE Arsenic on wi | | RESULT 19.7 | ref Result <5 | REPORTING LIMIT 5 | SPIKE VALUE 20.0 | RECOVERY (*) 98.5 | REC LIMITS (X LOW HIGH 75 125 | | RPD LIMIT (%) |

METHOD SPIKE DUPLICATES

| SAMPLE TYPE: Method Spike Sample Dup INSTRUMENT: TJA Enviro 36 UNITS: ug METHOD: EPA 6010 | plicate | LAB ID: IFP_MR PREPARED: ANALYZED: 02/21/97 | | | INSTR RUN: ICP\970221112300/4/2 BATCH ID: IFP022097 DILUTION: 1.000000 | | | |
|--|---------|---|-------|----------|--|-----------------|-----------------|--|
| | REF | REPORTING | SPIKE | RECOVERY | REC LIMITS (%) | | RPD | |
| ANALYTE RESU Arsenic on wipes 19. | | LIMIT 5 | VALUE | (%) | LOW HIGH | RPD (%) 3.09 | LIMIT (%) 20 | |

----- End of Quality Control Report

9702199 Project Location: EMERYVILE CA Project No.: 3042.95-05 Date: 2/18/97 Serial No.: $N_{\bar{0}}$ 1114 Field Logbook No.: Project Name: RIFKIN WALL DEMO **ANALYSES** Samplers: Sampler (Signature): MOSENIL SAMPLES *OLD RUSH NO. OF LAB SAMPLE SAMPLE TIME CON-REMARKS SAMPLE NO. DATE NO. TYPE **TAINERS** WHATMAN OIA 2/18/97 1100 FL-01-W 024 FAX Results to: Rick Milelli FL-02-M Mark Knex; susan shui 03A FL-03-E RECEIVED BY: RELINQUISHED BY: (Signature) (Signature) RECEIVED BY: RELINQUISHED BY (Signature) (Signature) RECEIVED BY: TIME DATE RELINQUISHED BY: (Signature) (Signature) TIME LAB COMMENTS: DATE METHOD OF SHIPMENT: Analytical Laboratory: LEVINE*FRICKE*RECON AEN Sample Collector: 1900 Powell Street, 12th Floor Emeryville, California 94608-1827 (510) 652-4500

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Shipping Copy (White)

Lab Copy (Yellow)

File Copy (Pink)

Field Copy (Goldenrod)

COU CDR 10159/JRYL

Appendix E

Laboratory Analytical Results for Debris Samples



American Environmental Network

20HS Centilication: 1173

Add A Algebras

PAGE 1

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

ATTN: A.JENKINS/R.MILELLI/S.SHIU

CLIENT PROJ. ID: 3042.95-05 CLIENT PROJ. NAME: RIFKIN WALL

C.O.C. NUMBER: 1034

REPORT DATE: 02/12/97

DATE(S) SAMPLED: 02/04/97

DATE RECEIVED: 02/04/97

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 1

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 Me Ag As Ba Cd Cr Hg Pb Se | tals Silver Arsenic Barium Cadmium Chromium Mercury Lead Selenium | EPA 6010 EPA 7060 EPA 6010 EPA 6010 EPA 7471 EPA 6010 EPA 7740 | ND 240 * 26 * 1.8 * 2.6 * 0.06 * 32 * ND | 0.2 0.5 | mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg | 02/07/97 02/06/97 02/07/97 02/07/97 02/07/97 02/06/97 02/05/97 |
| #Digest | ion, Metals by GFAA | EPA 3050 | - | | Prep Date | 02/04/97 |
| #Digest | ion, 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 Ag Silver As Arsenic Ba Barium Cd Cadmium Cr Chromium Hg Mercury Pb Lead Se Selenium | EPA6010/7000 EPA 6010 EPA 7060 EPA 6010 EPA 6010 EPA 7470 EPA 6010 EPA 7740 | ND 0.49 * 0.13 * 0.031 * ND ND 0.09 * 0.007 * | 0.005 0.002 0.01 0.005 0.01 0.0002 0.04 0.004 | mg/L mg/L mg/L mg/L mg/L mg/L mg/L | 02/06/97 02/06/97 02/06/97 02/06/97 02/06/97 02/06/97 02/06/97 |

 $ND = Not detected at or above the reporting limit <math>\star = Value at or above reporting limit$

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

| ANALYT | E | METHOD/ CAS# | RESULT | REPORTING LIMIT | UNITS | DATE ANALYZED |
|--|--|--|---|--------------------|---|--|
| RCRA M Ag As Ba Cd Cr Hg Pb Se | etals Silver Arsenic Barium Cadmium Chromium Mercury Lead Selenium | EPA 6010 EPA 7060 EPA 6010 EPA 6010 EPA 7471 EPA 6010 EPA 7740 | ND 1.6 * 28 * ND 4.5 * ND 4 * ND | 0.2 0.5 0.06 | mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg | 02/07/97 02/06/97 02/07/97 02/07/97 02/07/97 02/06/97 02/05/97 |
| #Digest | tion, Metals by GFAA | EPA 3050 | - | | Prep Date | 02/04/97 |
| #Digest | tion, 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 Ag Silver As Arsenic Ba Barium Cd Cadmium Cr Chromium Hg Mercury Pb Lead Se Selenium | EPA6010/7000 EPA 6010 EPA 7060 EPA 6010 EPA 6010 EPA 6010 EPA 7470 EPA 6010 EPA 7740 | ND 0.023 * 0.16 * ND ND ND ND ND | 0.005 0.002 0.01 0.005 0.01 0.0002 0.04 0.004 | mg/L mg/L mg/L mg/L mg/L mg/L mg/L | 02/06/97 02/06/97 02/06/97 02/06/97 02/06/97 02/06/97 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.
- Interference.
- !: Indicates result outside of established laboratory QC limits.

QUALITY CONTROL REPORT

PAGE OR-2

ANALYSIS: Arsenic

MATRIX: TCLP Extract

METHOD BLANK SAMPLES

SAMPLE TYPE: Blank-Method/Media blank

INSTRUMENT: TJA 4000, GFAA

mg/L

LAB ID: TCLP_BLNK

PREPARED: ANALYZED: 02/06/97

INSTR RUN: 4000\970206110600/15/

BATCH ID: GFW020597-B DILUTION: 1.000000

BATCH ID: GFW020597-B DILUTION: 1.000000

UNITS:

METHOD:

RESULT

REF REPORTING RESULT LIMIT

SPIKE VALUE

RECOVERY REC LIMITS (%)

ANALYTE Arsenic in water by GFAA

ND

0.002

(%)

LOW

HIGH RPD (%) LIMIT (%)

MATRIX SPIKE SAMPLES

SAMPLE TYPE: Spike-Sample/Matrix INSTRUMENT: TJA 4000, GFAA

UNITS: METHOD:

mg/L

REF RESULT

REPORTING LIMIT

VALUE 0.0400

LAB ID: MS02018-01B

ANALYZED: 02/06/97

(%)

RECOVERY REC LIMITS (%)

RPD

Arsenic in water by GFAA

RESULT 0.557

0.485

PREPARED:

0.5

PREPARED:

180

LOW HIGH RPD (%) LIMIT (%)

MATRIX: Soil/Bulk

LAB ID: GFS_BLANK_X

METHOD BLANK SAMPLES

SAMPLE TYPE: Blank-Method/Media blank

INSTRUMENT: TJA 4000, GFAA

UNITS: METHOD:

mg/kg

ANALYTE Arsenic in soil EPA 7060

ND

ANALYZED: 02/05/97

INSTR RUN: 4000\970205172600/1/ BATCH ID: GFS020497-X DILUTION: 1.000000

INSTR RUN: 4000\970206110600/17/16

RECOVERY REC LIMITS (%) REPORTING SPIKE LOW HIGH RPD (%) LIMIT (%) RESULT VALUE (%) RESULT LIMIT

METHOD SPIKE SAMPLES

SAMPLE TYPE: Spike-Method/Media blank INSTRUMENT: TJA 4000, GFAA

mg/kg

PREPARED: ANALYZED: 02/05/97

LAB ID: GFS_MD_X

INSTR RUN: 4000\970205172600/3/1

BATCH ID: GFS020497-X DILUTION: 1.000000

METHOD:

UNITS:

RESULT Arsenic in soil EPA 7060 11.4

REF REPORTING RESULT LIMIT ND 0.5

SPIKE VALUE 10.0

. **.** .

114

RECOVERY REC LIMITS (%)

LOW HIGH RPD (%) LIMIT (%) 77 141

SAMPLE TYPE: Spike-Method/Media blank INSTRUMENT: TJA 4000, GFAA

UNITS:

LAB ID: GFS_MS_X PREPARED: ANALYZED: 02/05/97

INSTR RUN: 4000\970205172600/2/1 BATCH ID: GFS020497-X DILUTION: 1.000000

METHOD:

mg/kg

REPORTING

. **.**

SPIKE

RECOVERY

REC LIMITS (%) LOW HIGH

RPD RPD (%) LIMIT (%)

ANALYTE

Arsenic in soil EPA 7060

RESULT 11.2

RESULT LIMIT ND 0.5

VALUE

141

QUALITY CONTROL REPORT

PAGE QR-

ANALYSIS: Mercury

MATRIX: TCLP Extract

VALUE

METHOD BLANK SAMPLES

SAMPLE TYPE: Blank-Method/Media blank INSTRUMENT: Coleman Hg Analyzer 50D

LAB ID: TCLP BLNK PREPARED:

INSTR RUN: HG\970206110009/5/

UNITS:

Mercury in water

BATCH ID: HGW020597 DILUTION: 1.000000

mg/L

ANALYZED: 02/06/97

METHOD:

ANALYTE

REPORTING SPIKE

LIMIT

0.0002

RECOVERY (x)

REC LIMITS (%) LOW HIGH RPD (%)

LIMIT (%)

MATRIX SPIKE SAMPLES

SAMPLE TYPE: Spike-Sample/Matrix

LAB ID: MS02018-01B PREPARED:

INSTR RUN: HG\970206110009/7/6

UNITS:

INSTRUMENT: Coleman Hg Analyzer 50D

ANALYZED: 02/06/97

BATCH ID: HGW020597 DILUTION: 1.000000

METHOD:

mg/L

SPIKE RECOVERY

RESULT

RESULT

ND

REPORTING LIMIT

VALUE

REC LIMITS (%)

ANALYTE

(%)

LOW HIGH RPD (%)

Mercury in water

RESULT

ND

ND 0.0002

0.00200

0.00205

RESULT

REF

REF

RESULT

LIMIT (%)

MATRIX: Soil/Bulk

METHOD BLANK SAMPLES

SAMPLE TYPE: Blank Method/Media blank INSTRUMENT: Coleman Hg Analyzer 50D

LAB_ID: HGS_BLNK

INSTR RUN: HG\970206210000/1/

PREPARED:

UNITS:

BATCH ID: HGS020697 DILUTION: 1.000000

METHOD:

mg/kg

ANALYZED: 02/06/97

ANALYTE

REF RESULT REPORTING LIMIT 0.06

SPIKE RECOVERY VALUE

(%)

REC LIMITS (%) LOW HIGH

RPD (%)

RPD LIMIT (%)

Mercury in soil EPA 7471 METHOD SPIKE SAMPLES

SAMPLE TYPE: Spike-Method/Media blank INSTRUMENT: Coleman Hg Analyzer 50D

LAB ID:

HGS_MD

INSTR RUN: HG\970206210000/3/1

UNITS:

mg/kg

PREPARED: ANALYZED: 02/06/97 BATCH ID: HGS020697 DILUTION: 1.000000

118

METHOD:

ANALYTE RESULT Mercury in soil EPA 7471 0.342 ····

REF REPORTING RESULT LIMIT ND 0.06

SPIKE VALUE 0.400

RECOVERY (%) 85.5

REC LIMITS (%) 79

HIGH RPD (%)

LIMIT (%)

SAMPLE TYPE: Spike-Method/Media blank INSTRUMENT: Coleman Hg Analyzer 50D

LAB ID: PREPARED:

ANALYZED: 02/06/97

HGS MS

INSTR RUN: HG\970206210000/2/1 BATCH ID: HGS020697 DILUTION: 1.000000

UNITS: METHOD:

analyte

mg/kg

Mercury in soil EPA 7471

RESULT 0.366

REF RESULT ND

REPORTING LIMIT 0.06

SPIKE VALUE 0.400

RECOVERY

REC LIMITS (%) HIGH

RPD (%) 118

RPD LIMIT (%)

OUALITY 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 PREPARED:

INSTR RUN: 4000\970205172600/4/2

INSTRUMENT: TJA 4000, GFAA UNITS: mg/kg

ANALYZED: 02/05/97

BATCH ID: GFS020497-X DILUTION: 1.000000

METHOD:

REPORTING

RECOVERY REC LIMITS (%)

RPD

ANALYTE Arsenic in soil EPA 7060

REF RESULT RESULT LIMIT 11.4 11.2 0.5

SPIKE VALUE

(%)

LOW HIGH RPD (%) 1.77 LIMIT (%)

MATRIX SPIKE SAMPLES

SAMPLE TYPE: Spike-Sample/Matrix INSTRUMENT: TJA 4000, GFAA

LAB ID: MD02018-02A

INSTR RUN: 4000\970205172600/7/5

UNITS: mg/kg PREPARED:

BATCH ID: GFS020497-X DILUTION: 1.000000

ANALYZED: 02/06/97

METHOD:

REF REPORTING

RECOVERY REC LIMITS (%)

ANALYTE

Arsenic in soil EPA 7060

LIMIT **RESULT** 1.610.5

SPIKE VALUE 10.0

(%) 127 12 168

LOW HIGH RPD (%) LIMIT (%)

SAMPLE TYPE: Spike-Sample/Matrix INSTRUMENT: TJA 4000, GFAA

LAB ID: PREPARED:

MS02018-02A

INSTR RUN: 4000\970205172600/6/5

mg/kg

BATCH ID: GFS020497-X DILUTION: 1.000000

UNITS:

ANALYZED: 02/06/97

METHOD:

REPORTING

RECOVERY SPIKE

REC LIMITS (%)

RPD

ANALYTE

Arsenic in soil EPA 7060

RESULT 14.8

RESULT

14.3

RESULT LIMIT 0.5

VALUE 10.0

HIGH RPD (%) LIMIT (%) 168

MATRIX SPIKE DUPLICATES

INSTR RUN: 4000\970205172600/8/6 BATCH ID: GFS020497-X

SAMPLE TYPE: Spiked Sample Duplicate INSTRUMENT: TJA 4000, GFAA

LAB ID: MR02018-02A PREPARED:

UNITS:

mg/kg

ANALYZED: 02/06/97

DILUTION: 1.000000

METHOD:

RPD

Arsenic in soil EPA 7060

RESULT 14.3

REF RESULT 14.8

1.61

REPORTING LIMIT 0.5

SPIKE VALUE RECOVERY (%)

REC LIMITS (%) LOW HIGH

RPD (%) 3.44

LIMIT (%) 18

OUALITY CONTROL REPORT

PAGE QR

ANALYSIS: Mercury

MATRIX: Soil/Bulk

METHOD SPIKE DUPLICATES

SAMPLE TYPE: Method Spike Sample Duplicate INSTRUMENT: Coleman Hg Analyzer 50D

LAB_ID: HGS_MR PREPARED:

INSTR RUN: HG\970206210000/4/2

UNITS:

BATCH ID: HGS020697

mg/kg

ANALYZED: 02/06/97

METHOD:

DILUTION: 1.000000

ANALYTE

Mercury in soil EPA 7471

REPORTING RESULT LIMIT 0.366 0.06

SPIKE VALUE

RECOVERY REC LIMITS (%) (%) LOW HIGH

RPD (%) 6.78

LIMIT (%)

MATRIX SPIKE SAMPLES

SAMPLE TYPE: Spike-Sample/Matrix INSTRUMENT: Coleman Hg Analyzer 50D

LAB ID: MD02018-02A PREPARED:

INSTR RUN: HG\970206210000/7/5

UNITS:

mg/kg

ANALYZED: 02/06/97

BATCH ID: HGS020697 DILUTION: 1.000000

METHOD:

ANALYTE Mercury in soil EPA 7471

REF REPORTING RESULT L.IMIT ND 0.06

SPIKE VALUE 0.400

RECOVERY (χ)

REC LIMITS (%) HIGH

44

RPD(岩) LIMIT (%)

SAMPLE TYPE: Spike-Sample/Matrix INSTRUMENT: Coleman Hg Analyzer 50D

LAB ID: MS02018-02A

INSTR RUN: HG\970206210000/6/5

153

PREPARED:

BATCH ID: HGS020697 DILUTION: 1.000000

UNITS: METHOD:

mg/kg

ANALYZED: 02/06/97

RPD

ANALYTE Mercury in soil EPA 7471

RESULT 0.373

RESULT

0.373

RESULT

REF REPORTING RESULT ND

LIMIT 0.06

SPIKE VALUE 0.400

RECOVERY

REC LIMITS (%) 44 153

HIGH RPD (%)

LIMIT (%)

MATRIX SPIKE DUPLICATES

SAMPLE TYPE: Spiked Sample Duplicate INSTRUMENT: Coleman Hg Analyzer 50D LAB ID: MR02018-02A PREPARED:

INSTR RUN: HG\970206210000/8/6

UNITS:

mg/kg

ANALYZED: 02/06/97

BATCH ID: HGS020697 DILUTION: 1.000000

METHOD: **ANALYTE**

Mercury in soil EPA 7471

REF RESULT RESULT 0.373 0.373

REPORTING LIMIT 0.06

SPIKE VALUE RECOVERY (%)

REC LIMITS (%) RPD (%) LOW HIGH

RPD LIMIT (%) 0 15

QUALITY CONTROL REPORT

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ANALYSIS: RCRA Metals

MATRIX: Soil/Bulk

METHOD BLANK SAMPLES

| SAMPLE INSTRUME UNITS: METHOD: | TYPE: Blank-Method/ ENT: TJA Enviro 36 mg/kg | | | LAB ID: PREPARED ANALYZED | IFS_BLNK_1): 02/06/97 | | | 70206181900/1/ 0497-W 000 |
|---------------------------------------|--|--------------------------------------|---------------|---|------------------------------|-----------------|-------------------------------|---------------------------------|
| ANALYTE Ag Ba Cd Cr Pb | Silver Barium Cadmium Chromium Lead | RESULT ND ND ND ND NO | REF RESULT | REPORTING LIMIT 0.1 1 0.2 0.5 1 | SPIKE VALUE | RECOVERY (*) | REC LIMITS (%) LOW HIGH RP | RPD PD (%) LIMIT (%) |

METHOD SPIKE SAMPLES

| SAMPLE TYPE: Spike-Method/M INSTRUMENT: TJA Enviro 36 UNITS: mg/kg METHOD: | ledia blank | | LAB ID: PREPARED ANALYZED | IFS_MO_W : 02/06/97 | | INSTR BATCH DILUTI | ID: IF: | P\97020618 S020497-W 000000 | 31900/4/2 |
|---|---|---|---|--|---|--|--|-----------------------------------|------------------|
| ANALYTE Ag Silver Ba Barium Cd Cadmium Cr Chromium Pb Lead | RESULT 4.91 105 10.2 52.4 53.1 | REF RESULT ND 1.48 ND 1.72 1.34 | REPORTING LIMIT 0.1 1 0.2 0.5 1 | SPIKE VALUE 5.00 10.0 50.0 50.0 | RECOVERY (%) 98.2 104 102 101 104 | REC LIM LOW 60 80 90 90 | ITS (%) HIGH 120 115 120 120 120 | RPD (%) | RPD LIMIT (%) |
| SAMPLE TYPE: Spike-Method/M INSTRUMENT: TJA Enviro 36 UNITS: mg/kg METHOD: | edia blank | | LAB ID: PREPARED ANALYZED | IFS_MS_W : : 02/06/97 | | INSTR BATCH DILUTI | ID: IF: | P\97020618 S020497-W | 1900/3/2 |
| ANALYTE Ag Silver Ba Barium Cd Cadmium Cr Chromium Pb Lead | RESULT 4.97 106 10.3 52.7 | REF RESULT ND 1.48 ND 1.72 | REPORTING LIMIT 0.1 1 0.2 0.5 | SPIKE VALUE 5.00 100 10.0 50.0 | RECOVERY (%) 99.4 105 103 102 | REC LIM LOW 60 80 90 90 | ITS (%) HIGH 120 115 120 120 | RPD (%) | RPD LIMIT (%) |

METHOD SPIKE DUPLICATES

| SAMPLE INSTRUMI UNITS: METHOD: | TYPE: Method Spike S ENT: TJA Enviro 36 mg/kg | ample Duplica | te | LAB ID: PREPARED ANALYZED | 181900/5/3 √ | | | |
|---------------------------------------|---|---|--|---|-----------------|-----------------|--|---|
| ANALYTE Ag Ba Cd Cr Pb | Silver Barium Cadmium Chromium Lead | RESULT 4.91 105 10.2 52.4 53.1 | REF RESULT 4.97 106 10.3 52.7 53.4 | REPORTING LIMIT 0.1 1 0.2 0.5 1 | SPIKE VALUE | RECOVERY (%) | REC LIMITS (*) LOW HIGH RPD (*) 1.21 0.948 0.976 0.571 0.563 | RPD 10 10 10 10 10 10 |

QUALITY CONTROL REPORT

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ANALYSIS: RCRA Metals

MATRIX: Soil/Bulk

MATRIX SPIKE SAMPLES

| SAMPLE TYPE: Spike-Sample/Ma INSTRUMENT: TJA Enviro 36 UNITS: mg/kg METHOD: | trix | | LAB ID: PREPARED ANALYZED | MD02018-0 : : 02/06/97 | INSTR RUN: ICP\970206181900/8/6 BATCH ID: IFS020497-W DILUTION: 1.000000 | | | | |
|---|---|--|---|---|--|---|---|-----------------------------------|------------------|
| ANALYTE Ag Silver Ba Barium Cd Cadmium Cr Chromium Pb Lead | RESULT 4.13 134 10.6 56.0 55.3 | REF RESULT ND 28.45 ND 4.54 4.00 | REPORTING LIMIT 0.1 1 0.2 0.5 1 | SPIKE VALUE 5.00 100 10.0 50.0 50.0 | RECOVERY (*) 82.6 106 106 103 103 | REC LIM LOW 2 45 57 49 24 | HITS (%) HIGH 118 139 112 125 153 | RPD (%) | RPD LIMIT (*) |
| SAMPLE TYPE: Spike-Sample/Mar INSTRUMENT: TJA Enviro 36 UNITS: mg/kg METHOD: | trix | | LAB ID: PREPARED: ANALYZED: | MS02018-02 02/06/97 | ZA | INSTR BATCH DILUTI | ID: IF | P\97020618 S020497-W 000000 | 1900/7/6 |
| ANALYTE Ag Silver Ba Barium Cd Cadmium Cr Chromium Pb Lead | RESULT 3.75 135 10.4 56.5 53.3 | REF RESULT ND 28.45 ND 4.54 4.00 | REPORTING LIMIT 0.1 0.2 0.5 1 | SPIKE VALUE 5.00 100 10.0 50.0 50.0 | RECOVERY (%) 75.0 107 104 104 98.6 | REC LIM LOW 2 45 57 49 24 | ITS (%) HIGH 118 139 112 125 153 | RPD (%) | RPD LIMIT (%) |

MATRIX SPIKE DUPLICATES

| SAMPLE T INSTRUME UNITS: METHOD: | TYPE: Spiked Sample D ENT: TJA Enviro 36 mg/kg | uplicate | | LAB ID: PREPARED: ANALYZED: | MR02018-02 02/06/97 | A | BATCH ID: IF | :P\97020618 :S020497-W :000000 | 31900/9/7 |
|---|--|---|--|--|------------------------|-----------------|----------------------------|---|--|
| ANALYTE Ag Ba Cd Cr Pb | Silver Barium Cadmium Chromium Lead | RESULT 4.13 134 10.6 56.0 55.3 | REF RESULT 3.75 135 10.4 56.5 53.3 | REPORTING LIMIT 0.1 1 0.2 0.5 | SPIKE VALUE | RECOVERY (%) | REC LIMITS (*) LOW HIGH | RPD (%) 9.64 0.743 1.90 0.889 3.68 | RPD LIMIT (%) 25 25 25 25 25 25 |

QUALITY CONTROL REPORT

PAGE QR-8

ANALYSIS: RCRA Metals in TCLP Extr

MATRIX: TCLP Extract

METHOD BLANK SAMPLES

| SAMPLE TINSTRUME | | edia blank | | LAB ID: PREPAREI | TCLP_BLNK | | INSTR RUN: ICP\97 BATCH ID: IFW020 | |
|------------------|--------------|------------|--------|---------------------|-------------|----------|---------------------------------------|-----------------|
| UNITS: | mg/L | | | | o: 02/06/97 | | DILUTION: 1.0000 | |
| METHOD: | FPA6010/7000 | | | AUNCIZE |). V2/V0/J/ | | DIEG110N. 1.0000 | .00 |
| TIL TROD. | LFA001077000 | | REF | REPORTING | SPIKE | RECOVERY | REC LIMITS (%) | RPD |
| ANALYTE | | RESULT | RESULT | LIMIT | VALUE | (%) | | D (%) LIMÎT (%) |
| | | | VESOFI | | YALUL | (4) | COM HIGH MI | D (4) EXTIX (4) |
| Вa | Barium | ND | | 0.05 | | | | |
| Cd | Cadmium | ND | | 0.005 | | | | |
| Čr | Chromium | ND | | 0.01 | | | | |
| Рb | Lead | ND | | 0.04 | | | | |
| FU | LCau | ND | | U.U4 | | | | |

MATRIX SPIKE SAMPLES

| SAMPLE TYPE: Spike-Sample/ INSTRUMENT: TJA Enviro 36 UNITS: mg/L METHOD: EPA6010/7000 | | LAB ID: PREPAREC ANALYZEC | MS02018-02): 0: 02/06/97 | INSTR RUN: ICP\970206160600/7/6 BATCH ID: IFW020597-C DILUTION: 1.000000 | | | | |
|--|---|--|---|--|--|--|--|--|
| ANALYTE Ba Barium Cd Cadmium Cr Chromium Pb Lead | RESULT 1.19 0.0598 0.0995 0.539 | REF RESULT 0.165 ND ND ND | REPORTING LIMIT 0.05 0.005 0.01 0.04 | SPIKE VALUE 1.00 0.0500 0.100 0.500 | RECOVERY (%) 103 120 99.5 108 | REC LIMITS (*) RPD LOW HIGH RPD (*) LIMIT (*) | | |

QUALITY CONTROL REPORT

PAGE QR-9

ANALYSIS: Selenium

MATRIX: TCLP Extract

METHOD BLANK SAMPLES

SAMPLE TYPE: Blank-Method/Media blank INSTRUMENT: TJA 4000, GFAA

LAB ID:

TCLP_BLNK

BATCH ID: GFW020597-B

INSTR RUN: 4000\970206110700/9/

UNITS:

PREPARED:

DILUTION: 1.000000

METHOD:

mg/L

ANALYZED: 02/06/97

ANALYTE

REF REPORTING RESULT LIMIT 0.004

SPIKE VALUE

RECOVERY (X)

REC LIMITS (%) LOW HIGH RPD (%)

LIMIT (%)

MATRIX SPIKE SAMPLES

Selenium in water by GFAA

SAMPLE TYPE: Spike-Sample/Matrix INSTRUMENT: TJA 4000, GFAA

LAB ID: M\$02018-01B

INSTR RUN: 4000\970206110700/11/10 BATCH ID: GFW020597-B

UNITS:

mg/L

PREPARED: ANALYZED: 02/06/97

DILUTION: 1.000000

METHOD:

REF REPORTING

SPIKE VALUE RECOVERY (%)

REC LIMITS (%)

LIMIT 0.004

0.0800

73.3

LOW HIGH

ANALYTE

Selenium in water by GFAA

RESULT 0.0653

RESULT

ND

RESULT

ND

RESULT 0.00667

RPD (%)

LIMIT (%)

MATRIX: Soil/Bulk

METHOD BLANK SAMPLES

SAMPLE TYPE: Blank Method/Media blank INSTRUMENT: TJA 4000, GFAA

LAB ID:

GFS BLANK X

INSTR RUN: 4000\970205172700/1/

BATCH ID: GFS020497-X DILUTION: 1.000000

UNITS:

PREPARED: ANALYZED: 02/05/97

METHOD:

mg/kg

RPD

ANALYTE

Selenium in soil EPA 7740

REE RESULT REPORTING LIMIT

SPIKE VALUE RECOVERY (%)

REC LIMITS (%) LOW HIGH

RPD (%)

LIMIT (%)

METHOD SPIKE SAMPLES

SAMPLE TYPE: Spike-Method/Media blank INSTRUMENT: TJA 4000, GFAA

LAB ID: PREPARED: ANALYZED: 02/05/97

GFS_MD_X

INSTR RUN: 4000\970205172700/3/1

BATCH ID: GFS020497-X DILUTION: 1.000000

METHOD: ANALYTE

UNITS:

Selenium in soil EPA 7740

RESULT ND

REF

REPORTING LIMIT

SPIKE VALUE 20.0

RECOVERY

REC LIMITS (%) LOW HIGH 70 127

RPD (%) LIMIT (%)

SAMPLE TYPE: Spike-Method/Media blank INSTRUMENT: TJA 4000, GFAA

LAB ID:

 GFS_MS_X

INSTR RUN: 4000\970205172700/2/1

UNITS:

mg/kg

mg/kg

PREPARED:

ANALYZED: 02/05/97

BATCH ID: GFS020497-X DILUTION: 1.000000

RPD

METHOD:

RESULT

RESULT

REF RESULT ND

REPORTING LIMIT

SPIKE VALUE RECOVERY

REC LIMITS (%) LOW HIGH

RPD (%)

ANALYTE Selenium in soil EPA 7740

20.3

20.0

127

LIMIT (%)

QUALITY CONTROL REPORT

PAGE OR-10

RPD

ANALYSIS: Selenium

MATRIX: Soil/Bulk

METHOD SPIKE DUPLICATES

SAMPLE TYPE: Method Spike Sample Duplicate INSTRUMENT: TJA 4000, GFAA INSTR RUN: 4000\970205172700/4/2 LAB ID: GFS_MR_X

BATCH ID: GFS020497-X DILUTION: 1.000000 PREPARED:

ANALYZED: 02/05/97 UNITS: mg/kg METHOD:

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

2.43 Selenium in soil EPA 7740 20.8 20.3 1

MATRIX SPIKE SAMPLES

INSTR RUN: 4000\970205172700/7/5 LAB ID: MD02018-02A

SAMPLE TYPE: Spike-Sample/Matrix INSTRUMENT: TJA 4000, GFAA PREPARED:

BATCH ID: GFS020497-X DILUTION: 1.000000 ANALYZED: 02/05/97 UNITS: mg/kg

METHOD:

RECOVERY REF REPORTING SPIKE REC LIMITS (%) LOW HIGH RPD (%) LIMIT (%) ANALYTE RESULT RESULT VALUE (%) LIMIT 102 Selenium in soil EPA 7740 ND 20.0 1 156 20.4

LAB ID: MS02018-02A INSTR RUN: 4000\970205172700/6/5

SAMPLE TYPE: Spike-Sample/Matrix INSTRUMENT: TJA 4000, GFAA PREPARED:

BATCH ID: GFS020497·X DILUTION: 1.000000 ANALYZED: 02/05/97 UNITS: mg/kg

METHOD:

SPIKE RECOVERY REC LIMITS (%) REPORTING LOW HIGH RPD (%) LIMIT (%) ANALYTE VALUE RESULT RESULT LIMIT (*) 20.0 156 Selenium in soil EPA 7740 20.9 ND

MATRIX SPIKE DUPLICATES

INSTR RUN: 4000\970205172700/8/6 BATCH ID: GFS020497-X DILUTION: 1.000000 LAB ID: MR02018-02A PREPARED:

SAMPLE TYPE: Spiked Sample Duplicate INSTRUMENT: TJA 4000, GFAA

ANALYZED: 02/05/97 UNITS: mg/kg METHOD:

RECOVERY REC LIMITS (%) RPD REF REPORTING SPIKE LOW HIGH RPD (%) LIMIT (%) RESULT RESULT VALUE

(%) 2.42 21 Selenium in soil EPA 7740 20.4 20.9

----- End of Quality Control Report

9702018

| Project No.: 2 | 5042. | 95- | 05 | | Project Lo | cation: | Em | eryvi! | ile, | CA | 1 | Date: | 2/4 | 1/97 | | Serial No | .: |
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| | | | SAMPLES | | | | _{ * * | (***) | | / / | / / | | / | /. / | | | 1 |
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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 I O

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 receive 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.



SAMPLE DESCRIPTION INFORMATION for Levine-Fricke

| 091642-0001-SA 2687 FILTER | 29 JAN 97 16:45 30 JAN 97 |
|--|---|
| 091642-0002-SA 2686 FILTER | 29 JAN 97 17:35 30 JAN 97 |
| 091642-0002-SA 2686 FILTER 091642-0003-SA 2685 FILTER 091642-0005-SA 2683 FILTER 091642-0006-SA 2682 FILTER 091642-0007-SA 2681 FILTER 091642-0008-SA 2680 FILTER 091642-0009-SA 2676 FILTER 091642-0010-SA 2677 FILTER 091642-0011-SA 2678 FILTER 091642-0011-SA 2673 FILTER 091642-0013-SA 2674 FILTER 091642-0014-SA 2687-Strip A FILTER 091642-0015-SA 2687-Strip B FILTER 091642-0016-SA 2687-Strip B FILTER 091642-0018-SA 2687-Strip C FILTER 091642-0019-SA 2687-Strip E FILTER 091642-0019-SA 2687-Strip F FILTER 091642-0021-SA 2687-Strip F FILTER 091642-0021-SA 2687-Strip G FILTER 091642-0022-SA 2668 FILTER 091642-0023-SA 2668 FILTER 091642-0026-SA 2671 | 29 JAN 97 17:20 30 JAN 97 29 JAN 97 17:20 30 JAN 97 30 JAN 97 18:10 31 JAN 97 30 JAN 97 17:50 31 JAN 97 30 JAN 97 17:50 31 JAN 97 30 JAN 97 17:50 03 FEB 97 31 JAN 97 17:20 03 FEB 97 31 JAN 97 17:00 03 FEB 97 01 FEB 97 17:02 03 FEB 97 01 FEB 97 17:02 03 FEB 97 01 FEB 97 17:13 03 FEB 97 01 FEB 97 16:42 03 FEB 97 01 FEB 97 16:45 30 JAN 97 29 JAN 97 16:45 30 JAN 97 03 FEB 97 18:05 04 FEB 97 03 FEB 97 17:00 04 FEB 97 03 FEB 97 17:45 04 FEB 97 03 FEB 97 16:45 05 FEB 97 04 FEB 97 18:25 05 FEB 97 04 FEB 97 18:15 05 FEB 97 04 FEB 97 18:15 05 FEB 97 |

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| 2685 | | | 1720 | | 1 | | | | | | | | | \times | | 446 m3 | | |
| 2684 | ١ | 7 | 1750 | | l | • | | | | | | | | X | | 0 m3 | | |
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| Sample Collector: LEVINE•FRICKE•RECON 1900 Powell Street, 12th Floor Emeryville, California 94608-1827 (510) 652-4500 | | | | | | | Analytical Lab | oratory: | NTE | RRA | | | |

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| Sample Collector: LEVINE•FRICKE•RECON 1900 Powell Street, 12th Floor Emeryville, California 94608-1827 (510) 652-4500 | | | | | · | | Analytical Labora | atory: | TER | LR. | A | | | |

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| Sample Collector: LEVINE•FRICKE•RECON 1900 Powell Street, 12th Floor Emeryville, California 94608-1827 (510) 652-4500 | | | | | | | Analytical Labor | | | v | | | | |

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| | | | SAMPLES | | | | رمار | 0/.5/ | // | | | | |
| SAMPLE NO. | DATE | TIME | LAB SAMPLE NO. | NO. OF CON- TAINERS | SAMPLE TYPE | 4 g | | AN JULY | | HOLD | HISH | REMARK | SS . |
| 2663 | 2/4/97 | 16:45 | | ١ | AIR | | | | | | ¥ = 46 | 2 m ³ | |
| 266A | | 18:25 | | 1 | | >< | \succeq | | | >< | 74 = 65 | 5 m3 | |
| 2665 | | 18:15 | | 1 | ļ <u> </u> | <u>><</u> | \geq | | | <u>><</u> | 4 = 80 | 5 m ³ | |
| 2-666 | ₩ | 17:50 | | | | >< | <u>~</u> | | | <u> </u> | ¥ = 47 | 1 m ³ | |
| | | | | | | | | | | | A LANGE | | A GESTALES |
| | | · | | | | | | | | | | TO A.JE | |
| | - | | | | | | | . | | | SSHI | ELI /M. | KNOX |
| | | | | | 1. 1× | 11 | | | | G | 12.3H1 | <u> </u> | |
| 1.78 (| | | | | | | | | | | 77-HOU | R TAT | |
| <u>4.</u> | | | | | | | | | | | | | |
| RELINQUISHED 8 (Signature) | O6 | -tal | R. Jal | DAT | 15/97 | TIME | 55 | RECEIVED BY: (Signature) | 1CCC | 1 | | DATE / 2/5/97 | TIME 10 |
| RELINQUISHED E (Signature) | Y: L | 2 | | DAT 2/ | F /57 | TIME 2 | ၁ | RECEIVED BX: (Signature) | mas | Mar- | | DATE OPOSST | TIME 1445 |
| RELINQUISHED BY: (Signature) | | | | DAT | E' | TIME | | RECEIVED BY: (Signature) | | J | | DATE | TIME |
| METHOD OF SHIPMENT: DA | | | | DAT | E | TIME | | LAB COMMENT | S: | | | , | <u> </u> |
| Sample Collector: LEVINE•FRICKE•RECON 1900 Powell Street, 12th Floor Emeryville, California 94608-1827 (510) 652-4500 | | | | | | | Analytical Lab | , | VTEI | ZRA | | | |

Shipping Copy (White)

Lab Copy (Yellow)

File Copy (Pink)

Field Copy (Goldenrod)

COC.CDR 101596RYL



Client Name: Levine-Fricke

Client ID: 2687

Lab ID: 091642-0001-SA

Matrix: FILTER Sampled: 29 JAN 97 Received: 30 JAN 97 Authorized: 30 JAN 97 Prepared: See Below 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 S |
| Lead | 18.8 | total ug | 1.8 | 742 1 | | 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



Client Name: Levine-Fricke

Client ID:

2686 091642-0002-SA FILTER Lab ID: Matrix: Sampled: 29 JAN 97 Prepared: See Below Authorized: 30 JAN 97

Received: 30 JAN 97 Analyzed: See Below

| Parameter | Result | Wet wt. R Units | eporting Limit | Analytical Method | epare Date | | alyze Date | d |
|-----------------|------------|----------------------|-------------------|----------------------|---------------|--|---------------|---|
| Arsenic Lead | ND 10.0 | total ug total ug | 1.8 1.8 | 7060 7421 | | | JAN JAN | |

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



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

Wet wt. Reporting Analytical Prepared Analyzed Parameter Result Units Limit Method Date 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



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

Prepared Analyzed Wet wt. Reporting Analytical Parameter Result Units Limit Method Date Date 31 JAN 97 31 JAN 97 31 JAN 97 31 JAN 97 Arsenic ND 7060 total uq 1.8 Lead ND 1.8 7421 total ug

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



Client Name: Levine-Fricke

Client ID:

2683 091642-0005-SA Lab ID:

Matrix: FILTER Authorized: 30 JAN 97 Sampled: 30 JAN 97 Prepared: See Below Received: 31 JAN 97 Analyzed: See Below

| Parameter | Result | Wet wt. Re Units | eporting Limit | Analytical Method | Prepared Date | Analyzed Date |
|-----------|--------|---------------------|-------------------|----------------------|------------------|------------------|
| Arsenic | ND | total ug | 1.8 | 7060 | | 03 FEB 97 |
| Lead | 10.5 | total ug | 1.8 | 7421 | | 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



Client Name: Levine-Fricke

Client ID:

2682 091642-0006-SA Lab ID:

Matrix: FILTER Authorized: 30 JAN 97 Sampled: 30 JAN 97 Prepared: See Below

Received: 31 JAN 97 Analyzed: See Below

| Parameter | Result | Wet wt. R Units | Reporting Limit | Analytical Method | Prepared Date | Analyzed Date |
|-----------|--------|--------------------|--------------------|----------------------|------------------|------------------|
| Arsenic | ND | total ug | 1.8 | 7060 | | 03 FEB 97 |
| Lead | 11.2 | total ug | 1.8 | 7421 | | 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



Client Name: Levine-Fricke Client ID: 2681 Lab ID: 091642-0007-SA 091642-0007-SA

Received: 31 JAN 97 Analyzed: See Below Sampled: 30 JAN 97 Prepared: See Below Matrix: FILTER Authorized: 30 JAN 97

| Parameter | Result | Wet wt. Ro Units | eporting Limit | Analytical Method | Prepared Date | Analyzed Date |
|-----------|--------|---------------------|-------------------|----------------------|------------------|------------------|
| Arsenic | ND | total ug | 1.8 | 7060 | | 03 FEB 97 |
| Lead | 10.7 | total ug | 1.8 | 7421 | | 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



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 |
| Lead | ND | total ug | 1.8 | 7421 | | 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



Client Name: Levine-Fricke Client ID: 2676

Lab ID: 091642-0009-SA

Matrix: FILTER Sampled: 31 JAN 97 Prepared: See Below Received: 03 FEB 97 Authorized: 30 JAN 97 Analyzed: See Below

| Parameter | Result | Wet wt. Reporting Units Limit | Analytical Method | Prepared Date | Analyzed Date |
|-----------|--------|----------------------------------|----------------------|------------------|------------------|
| Arsenic | 2.9 | total ug 1.8 | 7060 | | 03 FEB 97 |
| Lead | 21.7 | total ug 1.8 | 7 4 21 | | 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



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

Wet wt. Reporting Analytical Prepared Analyzed Parameter Result Date Units Limit Method Date Arsenic 3.1 total ug 1.8 7060 03 FEB 97 03 FEB 97 Lead 17.3 03 FEB 97 03 FEB 97 total ug 1.8 7421

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



Client Name: Levine-Fricke

2678

Client ID: Lab ID: 091642-0011-SA FILTER

Matrix: Authorized: 30 JAN 97 Sampled: 31 JAN 97 Prepared: See Below

Received: 03 FEB 97 Analyzed: See Below

| Parameter | Result | Wet wt. Repor Units Lim | | Prepared Date | Analyzed Date |
|-----------|--------|----------------------------|--------|------------------|------------------|
| Arsenic | ND | total ug 1. | 8 7060 | | 03 FEB 97 |
| Lead | 18.2 | total ug 1. | 8 7421 | | 03 FEB 97 |

ND = Not detected NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw



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

Prepared Analyzed Wet wt. Reporting Analytical Parameter Result. Limit Date Units Method Date 03 FEB 97 03 FEB 97 03 FEB 97 03 FEB 97 Arsenic ND total ug 1.8 7060 Lead 2.8 7421 total ug 1.8

ND = Not detected NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw



Client Name: Levine-Fricke Client ID: 2674

Lab ID:

091642-0013-SA

Matrix: Authorized:

FILTER 30 JAN 97

Received: 03 FEB 97

Sampled: 01 FEB 97 Prepared: See Below

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 |
| Lead | 4.8 | total ug | 1.8 | 7421 | | 03 FEB 97 |

ND = Not detected NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw



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

Prepared Analyzed Wet wt. Reporting Analytical Parameter Result Units Limit Method Date Date total ug 7060 03 FEB 97 03 FEB 97 Arsenic ND 1.9 4.5 total ug 7421 03 FEB 97 03 FEB 97 Lead 1.8

ND = Not detected NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw



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. Re Units | eporting Limit | Analytical Method | Prepared Date | Analyzed Date |
|-----------|--------|---------------------|-------------------|----------------------|------------------|------------------|
| Arsenic | 3.4 | total ug | 1.8 | 7060 | | 03 FEB 97 |
| Lead | 15.9 | total ug | 1.8 | 7421 | | 03 FEB 97 |

ND = Not detected NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw



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 Analyzed Date Date | d |
|-----------|--------|------------------|--------------------|----------------------|--------------------------------|---|
| Arsenic | 3.5 | total ug | 1.8 | 7060 | 03 FEB 97 03 FEB 9 | |
| Lead | 16.6 | total ug | 1.8 | 7421 | 03 FEB 97 03 FEB 9 | |

ND = Not detected NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw



Client Name: Levine-Fricke Client ID: 2687-Strip C Lab ID: 091642-0017-SA 2687-Strip C 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. Reportin Units Limit | g Analytical Method | Prepared Date | Analyzed Date |
|-----------|--------|---------------------------------|------------------------|------------------|------------------|
| Arsenic | 3.5 | total ug 1.8 | 7060 | | 03 FEB 97 |
| Lead | 15.9 | total ug 1.8 | 7421 | | 03 FEB 97 |

ND = Not detected NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw



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. Re Units | eporting Limit | Analytical Method | Prepared Date | Analyzed Date |
|-----------|--------|---------------------|-------------------|----------------------|------------------|------------------|
| Arsenic | 3.6 | total ug | 1.8 | 7060 | | 03 FEB 97 |
| Lead | 15.0 | total ug | 1.8 | 7421 | | 03 FEB 97 |

ND = Not detected NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw



Client Name: Levine-Fricke Client ID: 2687-Strip E

Lab ID: 091642-0019-SA Matrix: FILTER Authorized: 30 JAN 97 Received: 30 JAN 97 Analyzed: See Below Sampled: 29 JAN 97 Prepared: 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 |
| Lead | 15.3 | total ug | 1.8 | 7421 | | 03 FEB 97 |

ND = Not detected NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw



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. Repo | orting imit | Analytical Method | Prepared Date | Analyzed Date |
|-----------|--------|--------------|----------------|----------------------|------------------|------------------|
| Arsenic | 3.9 | total ug | 1.8 | 7060 | | 04 FEB 97 |
| Lead | 17.0 | total ug | 1.8 | 7421 | | 03 FEB 97 |

ND = Not detected NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw



Client Name: Levine-Fricke Client ID: Lab ID:

2687-Strip G 091642-0021-SA

Sampled: 29 JAN 97 Prepared: See Below Received: 30 JAN 97 Analyzed: See Below Matrix: **FILTER** Authorized: 30 JAN 97

| Parameter | Result | Wet wt. Units | Reporting Limit | Analytical Method | Prepared Date | Analyzed Date |
|-----------|--------|------------------|--------------------|----------------------|------------------|------------------|
| Arsenic | 5.2 | total ug | 1.8 | 7060 | | 03 FEB 97 |
| Lead | 18.6 | total ug | 1.8 | 7421 | | 03 FEB 97 |

ND = Not detected NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw



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

Wet wt. Reporting Analytical Prepared Analyzed Parameter Result Units Limit Method Date Date Arsenic ND 04 FEB 97 04 FEB 97 04 FEB 97 04 FEB 97 7060 total ug 1.8 Lead ND total uğ 1.8 7421

ND = Not detected NA = Not applicable

Reported By: Steven Spain

Approved By: Barry Votaw



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. F Units | Reporting Limit | Analytical Method | Prepared Date | Analyzed Date |
|-----------|--------|--------------------|--------------------|----------------------|------------------|------------------|
| Arsenic | 5.5 | total ug | 1.8 | 7060 | | 04 FEB 97 |
| Lead | 16.2 | total ug | 1.8 | 7421 | | 04 FEB 97 |

ND = Not detected NA = Not applicable

Reported By: Steven Spain

Approved By: Barry Votaw



Client Name: Levine-Fricke

2670

Client ID: 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

Wet wt. Reporting Analytical Prepared Analyzed Parameter Result Units Limit Method Date Date Arsenic 4.0 total ug 7060 1.8 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



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

Prepared Analyzed Wet wt. Reporting Analytical Date Method Date Parameter Result Units Limit 7060 04 FEB 97 04 FEB 97 Arsenic ND total ug 1.8 04 FEB 97 04 FEB 97 20.6 total uğ 1.8 7421 Lead

ND = Not detected NA = Not applicable

Reported By: Steven Spain

Approved By: Barry Votaw



Client Name: Levine-Fricke Client ID: 2672 Lab ID: 091642-0026-SA Matrix: FILTER

2672 091642-0026-SA FILTER

Authorized: 30 JAN 97

Sampled: 03 FEB 97 Prepared: See Below

Received: 04 FEB 97

Analyzed: See Below

| Parameter | Result | Wet wt. Reporti Units Limit | | Prepared Date | Analyzed Date |
|-----------|--------|--------------------------------|------|------------------|------------------|
| Arsenic | ND | total ug 1.8 | 7060 | | 04 FEB 97 |
| Lead | 21.2 | total ug 1.8 | 7421 | | 04 FEB 97 |

ND = Not detected NA = Not applicable

Reported By: Steven Spain

Approved By: Barry Votaw



Client Name: Levine-Fricke

2663

Client ID: 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

Prepared Analyzed Wet wt. Reporting Analytical Date Date Parameter Result Units Limit Method 06 FEB 97 06 FEB 97 06 FEB 97 Arsenic ND total ug 1.8 7060 Lead 5.6 total uğ 1.8 7421

ND = Not detected NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Mei Lai



Client Name: Levine-Fricke

Client ID: 2664 Lab ID:

091642-0028-SA

Matrix: Authorized:

FILTER 30 JAN 97

Sampled: 04 FEB 97 Prepared: See Below

Received: 05 FEB 97

Analyzed: See Below

| Parameter | Result | Wet wt. Reporti Units Limit | | Prepared Date | Analyzed Date |
|-----------|--------|--------------------------------|--------------|------------------|------------------|
| Arsenic | ND | total ug 1.8 | 7060 | | 06 FEB 97 |
| Lead | 7.7 | total ug 1.8 | 742 1 | | 06 FEB 97 |

ND = Not detected NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Mei Lai



Client Name: Levine-Fricke

2665

091642-0029-SA

Client ID: Lab ID: Matrix: Sampled: 04 FEB 97 Prepared: See Below Received: 05 FEB 97 Analyzed: See Below FILTER Authorized: 30 JAN 97

| Parameter | Result | Wet wt. Reporting Units Limit | ng Analytical Method | Prepared Date | Analyzed Date |
|-----------|--------|-------------------------------|-------------------------|------------------|------------------|
| Arsenic | ND | total ug 1.8 | 7060 | | 06 FEB 97 |
| Lead | 8.9 | total ug 1.8 | 7421 | | 06 FEB 97 |

ND = Not detected NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Mei Lai



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 | | porting Limit | Analytical Method | Prepared Date | Analyzed Date |
|-----------|--------|----------|------------------|----------------------|------------------|------------------|
| Arsenic | ND | total ug | 1.8 | 7060 | | 06 FEB 97 |
| Lead | 7.2 | total ug | 1.8 | 7421 | | 06 FEB 97 |

ND = Not detected NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Mei Lai



QC LOT ASSIGNMENT REPORT Metals Analysis and Preparation

| Laboratory Sample Number | QC Matrix | QC Category | QC Lot Number (DCS) | QC Run Number (SCS/BLANK) |
|----------------------------------|---|--|----------------------------|------------------------------|
| | QC Matrix AQUEOUS QC Category AS-FAA-AT PB-FAA-AT | | |
| 091642-0023-SA 091642-0024-SA | AQUEOUS AQUEOUS | PB-FAA-AT AS-FAA-AT | 04 FEB 97-S 04 FEB 97-S | 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 (SCS/BLANK) |
|--|---|---|---|---|
| 091642-0024-SA 091642-0025-SA 091642-0025-SA 091642-0026-SA 091642-0027-SA 091642-0027-SA 091642-0028-SA 091642-0028-SA 091642-0029-SA 091642-0029-SA 091642-0030-SA | AQUEOUS | PB-FAA-AT AS-FAA-AT PB-FAA-AT AS-FAA-AT AS-FAA-AT PB-FAA-AT PB-FAA-AT PB-FAA-AT PB-FAA-AT PB-FAA-AT PB-FAA-AT PB-FAA-AT | 04 FEB 97-S 04 FEB 97-S 04 FEB 97-S 04 FEB 97-S 04 FEB 97-Q 06 FEB 97-Q | 04 FEB 97-S 04 FEB 97-S 04 FEB 97-S 04 FEB 97-S 04 FEB 97-Q 06 FEB 97-Q |
| | | | | • |



METHOD BLANK REPORT Metals Analysis and Preparation

| Analyte | | Res | sult | Units | Reporting Limit |
|---|---------|-------------|------|----------|--------------------|
| Test: AS-FAA-FILTER Matrix: FILTER QC Lot: 30 JAN 97-R Arsenic | QC Run: | 30 JAN 97-R | ND | total ug | 1.8 |
| Test: PB-FAA-FILTER Matrix: FILTER QC Lot: 30 JAN 97-R Lead | QC Run: | 30 JAN 97-R | ND | total ug | 1.8 |
| Test: AS-FAA-FILTER Matrix: FILTER QC Lot: 03 FEB 97-Q Arsenic | QC Run: | 03 FEB 97-Q | ND | total ug | 1.8 |
| Test: PB-FAA-FILTER Matrix: FILTER QC Lot: 03 FEB 97-Q Lead | QC Run: | 03 FEB 97-Q | ND | total ug | 1.8 |
| Test: AS-FAA-FILTER Matrix: FILTER QC Lot: 04 FEB 97-S Arsenic | QC Run: | 04 FEB 97-S | ND | total ug | 1.8 |
| Test: PB-FAA-FILTER Matrix: FILTER QC Lot: 04 FEB 97-S Lead | QC Run: | 04 FEB 97-S | ND | total ug | 1.8 |



METHOD BLANK REPORT Metals Analysis and Preparation (cont.)

| Analyte | | Res | ult | Units | Reporting Limit |
|---|---------|-------------|-----|----------|--------------------|
| Test: AS-FAA-FILTER Matrix: FILTER QC Lot: 06 FEB 97-Q Arsenic | QC Run: | 06 FEB 97-Q | 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 |



DUPLICATE CONTROL SAMPLE REPORT Metals Analysis and Preparation

| Analyte | | Cor Spiked | centratio | n Measured DCS2 | AVG | | uracy age(%) Limits | Precision (RPD) DCS Limit |
|--|------|---------------|-----------|-----------------------|--------|-----|---------------------------|---------------------------------|
| Category: AS-FAA-AT Matrix: AQUEOUS QC Lot: 30 JAN 97-R Concentration Units: Arsenic | mg/L | 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 | 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 | 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: Lead | mg/L | 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 | 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.



DUPLICATE CONTROL SAMPLE REPORT Metals Analysis and Preparation (cont.)

| A = = 14 = | | Co | ncentratio | | • | | curacy | Precision |
|---|------|--------|------------|-----------------|--------|-----|-------------------|--------------------------------------|
| Analyte | | Spiked | DCS1 | Measure DCS2 | | DCS | rage(%) Limits |) (RPD) ts DCS Limi 24 5.0 20. |
| 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: O6 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.



Client Name: Levine-Fricke

Client ID: 2687

Lab ID: 091642-0001-SA

Matrix: FILTER Sampled: 29 JAN 97 Received: 30 JAN 97 Authorized: 30 JAN 97 Prepared: See Below Analyzed: See Below

| Parameter | Result | Wet wt. R Units | eporting Limit | Analytical Method | Prepared Date | Analyzed Date |
|-----------|--------|--------------------|-------------------|----------------------|------------------|------------------|
| Arsenic | 4.3 | total ug | 1.8 | 7060 | | 7 31 JAN 97 S |
| Lead | 18.8 | total ug | 1.8 | 7421 | | 7 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



Client Name: Levine-Fricke

2686

Client ID: 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

Wet wt. Reporting Analytical Prepared Analyzed Parameter Result Units Limit Method Date Date Arsenic ND total ug total ug 31 JAN 97 31 JAN 97 31 JAN 97 31 JAN 97 7060 1.8 Lead 10.0 1.8 7421

ND = Not detected NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Mei Lai



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

Wet wt. Reporting Analytical Prepared Analyzed Parameter Result Units Limit Method Date Date 31 JAN 97 31 JAN 97 31 JAN 97 31 JAN 97 Arsenic ND 7060 total ug 1.8 Lead 9.1 total ug 1.8 7421

ND = Not detected NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Mei Lai



Client Name: Levine-Fricke Client ID: 2684

Client ID: 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. Reporting Units Limit | Analytical Method | Prepared Date | Analyzed Date |
|-----------|--------|----------------------------------|----------------------|------------------|------------------|
| Arsenic | ND | total ug 1.8 | 7060 | | 31 JAN 97 |
| Lead | ND | total ug 1.8 | 7421 | | 31 JAN 97 |

ND = Not detected NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Mei Lai



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

Prepared Analyzed Wet wt. Reporting Analytical Method Parameter Result Limit Date Date Units 03 FEB 97 03 FEB 97 ND 7060 Arsenic total ug 1.8 03 FEB 97 03 FEB 97 10.5 7421 Lead total ug 1.8

ND = Not detected NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw



Client Name: Levine-Fricke

Client ID: 2682 Lab ID: 091642-0

Authorized:

Lab ID: 091642-0006-SA Matrix: FILTER

30 JAN 97

Sampled: 30 JAN 97
Prepared: See Below Received: 31 JAN 97
Analyzed: See Below

Wet wt. Reporting Analytical Prepared Analyzed Parameter Result Units Limit Method Date Date Arsenic ND 03 FEB 97 03 FEB 97 03 FEB 97 03 FEB 97 total ug 1.8 7060 Lead 11.2 total ug 1.8 7421

ND = Not detected NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw



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

Prepared: See Below Analyzed: See Below

| Parameter | Result | | porting Limit | Analytical Method | Prepared Date | Analyzed Date |
|-----------|--------|----------|------------------|----------------------|------------------|------------------|
| Arsenic | ND | total ug | 1.8 | 7060 | | 7 03 FEB 97 |
| Lead | 10.7 | total ug | 1.8 | 7421 | | 7 03 FEB 97 |

ND = Not detected NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw



Client Name: Levine-Fricke

Client ID: 2680

Lab ID: 091642-0008-SA

FILTER 30 JAN 97 Matrix: Authorized:

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 |
| Lead | ND | total ug | 1.8 | 7421 | | 03 FEB 97 |

ND = Not detected NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw



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. Rep Units L | orting imit | Analytical Method | epared Date | Analyzed Date |
|-----------------|-------------|------------------------|----------------|----------------------|----------------|------------------------|
| Arsenic Lead | 2.9 21.7 | | 1.8 1.8 | 7060 7421 | | 03 FEB 97 03 FEB 97 |

ND = Not detected NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw



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. Reportin Units Limit | g Analytical Method | Prepared Date | Analyzed Date |
|-----------|--------|---------------------------------|------------------------|------------------|------------------|
| Arsenic | 3.1 | total ug 1.8 | 7060 | | 03 FEB 97 |
| Lead | 17.3 | total ug 1.8 | 7421 | | 03 FEB 97 |

ND = Not detected NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw



Client Name: Levine-Fricke

Client ID: 2678

Lab ID: 091642-0011-SA

Matrix: FILTER Authorized: 30 JAN 97 Sampled: 31 JAN 97 Received: 03 FEB 97 Prepared: See Below Analyzed: See Below

Prepared Analyzed Wet wt. Reporting Analytical Parameter Result Limit Method Date Date Units 03 FEB 97 03 FEB 97 Arsenic ND 7060 total ug 1.8 18.2 7421 03 FEB 97 03 FEB 97 Lead total ug 1.8

ND = Not detected NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw



Client Name: Levine-Fricke

Client ID: 2673

091642-0012-SA FILTER Lab ID:

Matrix: Authorized: 30 JAN 97

Sampled: 01 FEB 97 Prepared: See Below

Received: 03 FEB 97 Analyzed: See Below

| Parameter | Result | Wet wt. Report Units Limi | | Prepared Date | Analyzed Date |
|-----------|--------|------------------------------|------|------------------|------------------|
| Arsenic | ND | total ug 1.8 | 7060 | | 03 FEB 97 |
| Lead | 2.8 | total ug 1.8 | 7421 | | 03 FEB 97 |

ND = Not detected NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw



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

Prepared Analyzed Wet wt. Reporting Analytical Parameter Result Units Limit Method Date Date 7060 03 FEB 97 03 FEB 97 Arsenic ND total ug 1.8 4.8 total uğ 1.8 7421 03 FEB 97 03 FEB 97 Lead

ND = Not detected NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw



Client Name: Levine-Fricke

Client ID: 2675

091642-0014-SA Lab ID:

Matrix: FILTER Authorized: 30 JAN 97 Sampled: 01 FEB 97 Prepared: See Below

Received: 03 FEB 97

Analyzed: See Below

Wet wt. Reporting Analytical Prepared Analyzed Parameter Result Units Limit Method Date Date Arsenic ND total ug 1.9 7060 03 FEB 97 03 FEB 97 Lead 4.5 total uğ 7421 1.8 03 FEB 97 03 FEB 97

ND = Not detected NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw



Client Name: Levine-Fricke Client ID: 2687-Strip A 2687-Strip A 091642-0015-SA

Lab ID:

Sampled: 29 JAN 97 Prepared: See Below Received: 30 JAN 97 Analyzed: See Below Matrix: FILTER Authorized: 30 JAN 97

| Parameter | Result | Wet wt. Reportin Units Limit | g Analytical Method | Prepared Date | Analyzed Date |
|-----------|--------|---------------------------------|------------------------|------------------|------------------|
| Arsenic | 3.4 | total ug 1.8 | 7060 | | 03 FEB 97 |
| Lead | 15.9 | total ug 1.8 | 7421 | | 03 FEB 97 |

ND = Not detected NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw



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

Wet wt. Reporting Analytical Prepared Analyzed Parameter Result Units Limit Method Date Date Arsenic 7060 3.5 total ug 1.8 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



Client Name: Levine-Fricke Client ID: 2687-Strip C Lab ID: 091642-0017-SA

Matrix: FILTER

Sampled: 29 JAN 97 Prepared: See Below Received: 30 JAN 97 Analyzed: See Below Authorized: 30 JAN 97

| Parameter | Result | Wet wt. Reportin Units Limit | g Analytical Method | Prepared Date | Analyzed Date |
|-----------|--------|---------------------------------|------------------------|------------------|------------------|
| Arsenic | 3.5 | total ug 1.8 | 7060 | | 03 FEB 97 |
| Lead | 15.9 | total ug 1.8 | 7421 | | 03 FEB 97 |

ND = Not detected NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw



Client Name: Levine-Fricke 2687-Strip D 091642-0018-SA FILTER 30 JAN 97 Client ID: Lab ID:

Matrix: Authorized: 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 |
| Lead | 15.0 | total ug | 1.8 | 7421 | | 03 FEB 97 |

ND = Not detected NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw



Client Name: Levine-Fricke Client ID: 2687-Strip E Lab ID: 091642-0019-SA

Matrix: FILTER Sampled: 29 JAN 97 Received: 30 JAN 97 Authorized: 30 JAN 97 Prepared: See Below Analyzed: See Below

| Parameter | Result | Wet wt. Reporti Units Limit | | Prepared Date | Analyzed Date |
|-----------|--------|--------------------------------|------|------------------|------------------|
| Arsenic | 3.4 | total ug 1.8 | 7060 | | 03 FEB 97 |
| Lead | 15.3 | total ug 1.8 | 7421 | | 03 FEB 97 |

ND = Not detected NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw



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

Wet wt. Reporting Analytical Prepared Analyzed Parameter Result Units Limit Method Date Date Arsenic 3.9 total ug 1.8 7060 03 FEB 97 04 FEB 97 Lead 17.0 total uğ 1.8 7421 03 FEB 97 03 FEB 97

ND = Not detected NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw



Client Name: Levine-Fricke Client ID:

2687-Strip G 091642-0021-SA Lab ID:

Sampled: 29 JAN 97 Prepared: See Below Received: 30 JAN 97 Analyzed: See Below Matrix: FILTER 30 JAN 97 Authorized:

| Parameter | Result | Wet wt. Reporting Units Limit | | Prepared Analyzed Date 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



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

Wet wt. Reporting Analytical Units Limit Method Prepared Analyzed Parameter Result Units Date Date Arsenic ND total ug 1.8 7060 04 FEB 97 04 FEB 97 Lead ND total uğ 1.8 7421 04 FEB 97 04 FEB 97

ND = Not detected NA = Not applicable

Reported By: Steven Spain

Approved By: Barry Votaw



Client Name: Levine-Fricke Client ID: 2669

Lab ID:

091642-0023-SA

Matrix:

FILTER

Authorized: 30 JAN 97

Received: 04 FEB 97

Sampled: 03 FEB 97 Prepared: See Below Analyzed: See Below

| Parameter | Result | Wet wt. Report Units Limi | ing Analytical t Method | Prepared Date | Analyzed Date |
|-----------|--------|------------------------------|----------------------------|------------------|------------------|
| Arsenic | 5.5 | total ug 1.8 | 7060 | | 04 FEB 97 |
| Lead | 16.2 | total ug 1.8 | 7421 | | 04 FEB 97 |

ND = Not detected NA = Not applicable

Reported By: Steven Spain

Approved By: Barry Votaw



Client Name: Levine-Fricke

Client ID: 2670

091642-0024-SA FILTER Lab ID:

Matrix: 30 JAN 97 Authorized:

Sampled: 03 FEB 97 Prepared: See Below Received: 04 FEB 97

Analyzed: See Below

| Parameter | Result | Wet wt. Re Units | eporting Limit | Analytical Method | Prepared Date | Analyzed Date |
|-----------|--------|---------------------|-------------------|----------------------|------------------|------------------|
| Arsenic | 4.0 | total ug | 1.8 | 7060 | | 04 FEB 97 |
| Lead | 30.3 | total ug | 3.6 | 7421 | | 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



Client Name: Levine-Fricke

Client ID: 2671

Lab ID: 091642-0025-SA

Matrix: FILTER Sampled: 03 FEB 97 Received: 04 FEB 97 Authorized: 30 JAN 97 Prepared: See Below Analyzed: See Below

Prepared Analyzed Wet wt. Reporting Analytical Limit Method Date Date Parameter Result Units 04 FEB 97 04 FEB 97 7060 ND Arsenic total ug 1.8 7421 04 FEB 97 04 FEB 97 20.6 total ug 1.8 Lead

ND = Not detected NA = Not applicable

Reported By: Steven Spain

Approved By: Barry Votaw



Client Name: Levine-Fricke

Client ID: 2672 Lab ID: 09164

091642-0026-SA

Matrix: FILTER Authorized: 30 JAN 97 Sampled: 03 FEB 97 Prepared: See Below

Received: 04 FEB 97 Analyzed: See Below

Wet wt. Reporting Analytical Units Limit Method Prepared Analyzed Parameter Result Units Date 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



QC LOT ASSIGNMENT REPORT Metals Analysis and Preparation

| 091642-0001-SA | Laboratory Sample Number | QC Matrix | QC Category | QC Lot Number (DCS) | QC Run Number (LCS/BLANK) |
|--|---|---|---|---|---|
| 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 | Sample Number 091642-0001-SA 091642-0002-SA 091642-0003-SA 091642-0003-SA 091642-0004-SA 091642-0005-SA 091642-0005-SA 091642-0006-SA 091642-0006-SA 091642-0007-SA 091642-0007-SA 091642-0008-SA 091642-0008-SA 091642-0010-SA 091642-0010-SA 091642-0011-SA 091642-0011-SA 091642-0011-SA 091642-0011-SA 091642-0011-SA 091642-0011-SA 091642-0015-SA | AQUEOUS | AS-FAA-AT PB-FAA-AT PB-FAA-AT PB-FAA-AT AS-FAA-AT PB-FAA-AT AS-FAA-AT PB-FAA-AT AS-FAA-AT PB-FAA-AT AS-FAA-AT PB-FAA-AT AS-FAA-AT PB-FAA-AT | 30 JAN 97-R 30 JAN 97-Q 03 FEB 97-Q | 30 JAN 97-R 30 JAN 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 091642-0021-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 091642-0022-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 | 091642-0020-SA 091642-0020-SA 091642-0021-SA 091642-0021-SA 091642-0022-SA | AQUEOUS AQUEOUS AQUEOUS AQUEOUS AQUEOUS | AS-FAA-AT PB-FAA-AT AS-FAA-AT PB-FAA-AT AS-FAA-AT | 03 FEB 97-Q 03 FEB 97-Q 03 FEB 97-Q 03 FEB 97-Q 04 FEB 97-S | 03 FEB 97-Q 03 FEB 97-Q 03 FEB 97-Q 03 FEB 97-Q 04 FEB 97-S |
| | 091642-0014-SA 091642-0015-SA 091642-0015-SA 091642-0016-SA 091642-0016-SA 091642-0017-SA | AQUEOUS AQUEOUS AQUEOUS AQUEOUS AQUEOUS AQUEOUS | PB-FAA-AT AS-FAA-AT PB-FAA-AT AS-FAA-AT PB-FAA-AT AS-FAA-AT | 03 FEB 97-Q 03 FEB 97-Q 03 FEB 97-Q 03 FEB 97-Q 03 FEB 97-Q 03 FEB 97-Q | 03 FEB 97-Q 03 FEB 97-Q 03 FEB 97-Q 03 FEB 97-Q 03 FEB 97-Q 03 FEB 97-Q |
| 091642-0023-SA AQUEOUS PB-FAA-AT 04 FEB 97-S 04 FEB 97-S | 091642-0024-SA 091642-0024-SA | AQUEOUS AQUEOUS | AS-FAA-AT PB-FAA-AT | 04 FEB 97-S 04 FEB 97-S | 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: Matrix: 7060

AQUEOUS

30 JAN 97-R QC Lot:

QC Run: 30 JAN 97-R

Analyte

Result

Reporting Limit

Units

Arsenic

ND

1.8 total ug

Test:

AS-FAA-FILTER

Arsenic, Furnace AA

Method: Matrix: 7060

AQUEOUS

QC Lot: 03 FEB 97-Q QC Run: 03 FEB 97-Q

Analyte

Result

Units

Reporting Limit

ND

total ug

1.8

Arsenic

AS-FAA-FILTER

Test: Method: 7060

Matrix:

AQUEOUS

QC Lot:

04 FEB 97-S

Arsenic, Furnace AA

QC Run: 04 FEB 97-S

Analyte

Arsenic

Result

Units

Reporting Limit

ND

total ug

1.8

Test: Method: PB-FAA-FILTER

7421

Matrix:

AQUEOUS

Lead, Furnace AA

QC Lot:

30 JAN 97-R

QC Run: 30 JAN 97-R

Analyte

Result

Units

Reporting Limit

Lead

ND

total ug

1.8



METHOD BLANK REPORT

Metals Analysis and Preparation

Project: 091642

(cont.)

Test:

PB-FAA-FILTER

Lead, Furnace AA

Method: Matrix: 7421

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 7421

Lead, Furnace AA

Method: Matrix:

AQUEOUS

04 FEB 97-S

QC Run: 04 FEB 97-S

Analyte

Lead

QC Lot:

Result

Units

Reporting Limit

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 Method: 7060

AQUEOUS Concentration Units: mg/L Matrix: Time: 09:36 QC Lot: 30 JAN 97-R Analyzed Date: 31 JAN 97

-----Concentration-----Precision Accuracy Average(%) Analyte Spiked ----Measured----(RPD)

DCS Limits DCS Limit DCS1 DCS2 AVG

103 79-120 Arsenic 0.0400 0.0404 0.0423 0.0414 4.6 16

Category: AS-FAA-A Arsenic, Furnace AA

Testcode: AS-FAA-FILTER Method: 7060

AQUEOUS Concentration Units: mg/L Matrix:

OC Lot: 03 FEB 97-Q Analyzed Date: 03 FEB 97 Time: 13:51

-----Concentration-----Accuracy Precision Average(%) Spiked (RPD) Analyte ----Measured----

DCS1 AVG DCS Limits DCS Limit DCS2

0.0400 0.0393 0.0400 0.0396 99 79-120 1.8 16 Arsenic

Category: AS-FAA-A Arsenic, Furnace AA

Testcode: AS-FAA-FILTER Method: 7060

Concentration Units: mg/L 4 FEB 97 Time: 22:45 Matrix: **AQUEOUS**

QC Lot: 04 FEB 97-S Analyzed Date: 04 FEB 97

Accuracy Precision -----Concentration---------Measured----(RPD) Average(%) Analyte Spiked

DCS1 AVG DCS Limits DCS Limit DCS2

Arsenic 0.0400 0.0448 0.0444 0.0446 112 79-120 0.9

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

Method: 7421

Matrix: **AQUEOUS**

Concentration Units: mg/L

QC Lot:

30 JAN 97-R Analyzed Date: 31 JAN 97 Time: 09:19

Analyte

-----Concentration-----Accuracy Average(%) Spiked ----Measured----

Precision (RPD)

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

Method: 7421

Matrix: AQUEOUS OC Lot: 03 FEB 97-0

Analyzed Date: 03 FEB 97

Concentration Units: mg/L Time: 13:51

Analyte

-----Concentration-----Accuracy Spiked ----Measured----

Precision

DCS2 AVG

Average(%) DCS Limits

(RPD) DCS Limit

Lead

0.0200 0.0198 0.0201 0.0200

100 83-124 20

Category: PB-FAA-A Lead, Furnance AA (Total)

Testcode: PB-FAA-FILTER

Method: 7421

Concentration Units: mg/L

Matrix: QC Lot:

AQUEOUS 04 FEB 97-S

Analyzed Date: 04 FEB 97

Time: 18:47

-----Concentration-----Spiked ----Measured----

DCS1

Accuracy Average(%) Precision (RPD)

Analyte

DCS2

DCS Limits

DCS Limit

Lead

0.0200 0.0184 0.0175 0.0180 90 83-124 20 5.0

AVG

Calculations are performed before rounding to avoid round-off errors in calculated results.



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

Wet wt. Reporting Limit

Analytical Method

Prepared Analyzed Date Date

Arsenic

4.3

total uq

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



Client Name: Levine-Fricke

Client ID: 2686

Lab ID: 091642-0002-SA

FILTER Matrix: Authorized: 30 JAN 97 Sampled: 29 JAN 97 Prepared: See Below

Received: 30 JAN 97

Analyzed: See Below

Wet wt. Reporting Analytical Parameter Limit Result Units

Method

Prepared Analyzed

Date Date

Arsenic ND 7060 total ug 31 JAN 97 31 JAN 97 1.8

ND = Not detected NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Mei Lai



Client Name: Levine-Fricke

2685

Client ID: 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

Wet wt. Reporting Analytical Prepared Analyzed Parameter Result Units Limit Method Date Date

31 JAN 97 31 JAN 97 Arsenic ND total ug 1.8 7060

ND = Not detected NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Mei Lai



Client Name: Levine-Fricke Client ID: 2684 Lab ID: 091642-0004-SA

091642-0004-SA

Matrix: FILTER Authorized: 30 JAN 97 Sampled: 29 JAN 97 Prepared: See Below

Received: 30 JAN 97

Analyzed: See Below

Wet wt. Reporting Analytical Parameter Result Units Limit Method

Prepared Analyzed Date 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



(Soil/Solid - Total)

Client Name: Levine-Fricke

Client ID: 2687 Lab ID: 09164

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 Limit Method Date 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



(Soil/Solid - Total)

Client Name: Levine-Fricke

Client ID: 2686

Lab ID: 091642-0002-SA

Matrix: FILTER 30 JAN 97 Authorized:

Sampled: 29 JAN 97 Prepared: See Below

Received: 30 JAN 97 Analyzed: See Below

Parameter

Result

Units

Limit

Reporting Analytical Method

Prepared Analyzed Date

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



(Soil/Solid - Total)

Client Name: Levine-Fricke

Client ID:

2685 091642-0003-SA

Lab ID: Matrix:

Authorized:

FILTER

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 Analyzed Date 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



(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

Reporting Analytical Prepared Analyzed Parameter Result Units Limit Method Date 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



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 | AÒUEOUS | 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 | AÒUEOUS | 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 Arsenic | QC Run: | 30 JAN 97-R ND | total ug | 0.90 |
| Test: PB-FAA-FILTER Matrix: FILTER QC Lot: 30 JAN 97-R Lead | QC Run: | 30 JAN 97-R | total ug | 0.50 |



DUPLICATE CONTROL SAMPLE REPORT Metals Analysis and Preparation

| Analyte | Concentration Spiked Measured | | | | | Accuracy Average(%) | | Precision (RPD) |
|---|----------------------------------|--------|--------|--------|--------|------------------------|--------|--------------------|
| 1 | | opined | DCS1 | DCS2 | AVG | 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.



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,

Patrick Rainey Project Manager

PR/ct

Enclosures

MAR I O



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 Date Time | Date |
|--|--|--|--|--|
| 091777-0001-SA 091777-0002-SA 091777-0003-SA 091777-0004-SA 091777-0005-SA 091777-0007-SA 091777-0008-SA | 2659 2660 2661 2662 2655 2656 2657 2658 | FILTER FILTER FILTER FILTER FILTER FILTER FILTER FILTER FILTER | 07 FEB 97 17:55 07 FEB 97 17:15 07 FEB 97 16:45 07 FEB 97 15:40 08 FEB 97 17:23 08 FEB 97 16:00 08 FEB 97 16:43 08 FEB 97 17:00 | 10 FEB 97 10 FEB 97 10 FEB 97 10 FEB 97 10 FEB 97 10 FEB 97 |

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

| Project No.: 3 | 042 | .95 - | 205 | | Project L | ocation: £ | MER' | <>1LC | E, CA | Date: | 2/7 | 197 | Serial N | |
|-----------------------------|----------|--|--|---------------------------|----------------|---|---------------|--|---------------------------------------|---------------------------------------|---------------|---|------------------|---------------------------|
| Project Name: | RIFU | (1N W | ALL DEN | 10 | Field Log | book No.: | | | | · · · · · · · · · · · · · · · · · · · | | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | Nō | 1093 |
| Sampler (Signa | ture): (| مبعلا | 2 R. | Sal: | | | | | ANALY | SES | | | Samplers | : ARJ |
| | | | SAMPLES | | | 6 | , 9/ | -/- | / / | | | / / | | |
| SAMPLE NO. | DATE | TIME | LAB SAMPLE NO. | NO. OF CON- TAINERS | SAMPLE TYPE | A CON | ASTON AND | | // | // | HOLD | RUSH | REMAR | KS |
| 2659 | 2/7/37 | 17:55 | | | AIR | > </td <td></td> <td></td> <td></td> <td></td> <td>><</td> <td>¥ = 45</td> <td>8 m3</td> <td></td> | | | | | >< | ¥ = 45 | 8 m3 | |
| 7660 | | 17:15 | | 11 | 11 | >-< > | < | | | | >< | ¥ = 40° | 7 m ³ | |
| 2661 | | 16:45 | | 11 | | >< > | < | | | | >< | ¥ = 40 | 4 m3 | |
| 2662 | + | 15:40 | | | <u> </u> | <u>><</u> > | ~ | | | | >< | ¥,= 30 | 8 m3 | |
| 2655 | 2/8/9 | 71723 | | | | | | <u> </u> | | | \times | ¥= 61 | 5 m³ | |
| 2656 | | 16:00 | | 1 | <u> </u> | | | | | | \perp | Y= 40 | 5 m3 | |
| 2657 | <u> </u> | 16:43 | | <u> </u> | | | | | | | X | ¥=62 | | |
| 2658 | \ | 17:00 | | | ₩ | <u> </u> | / | ļ.,ļ. | | | X | ¥= 66 | 3 m3 | |
| | | ļ | | | <u> </u> | ļ. | | - | · | | - | 72. | | |
| ····· | | | | <u> </u> | | | | | | | | | 71 TAT S | |
| | | | | | | | <u> </u> | | | | | | enise 48 | -HOUR |
| | ļ | - | | | | | | | | | | TAT | | |
| | | | | | ļ | | | | | - | - | | | BUKINS! |
| | | | | | | - | | - | · · · · · · · · · · · · · · · · · · · | | ļ | | | 1. KNOY |
| | | | | - | <u> </u> | | | | | 1 | - | 5,5H | 10 | |
| RELINQUISHED (Signature) | BY: O | لمم | -R. Je | D. DAT | 10/97 | TIME (5 | (Org | VED BY: | 10 | 1/ | | <u> </u> | DATE / 2/10/97 | TIME 15 |
| RELINQUISHED (Signature) | | JA. | | DAT 2 | 1 1 - | TIMEZU | RECE (Sign | VED BY: | ma | Dras | | | DATE / 021097 | TIME 1130 |
| RELINQUISHED (Signature) | BY: |] | | DAT | Έ | TIME | | VED BY: nature) | | \cup | | | DATE | TIME |
| METHOD OF SHI | PMENT: | | | DAT | Е | TIME | LAB C | OMMENTS | 3; | | | | | Envi Servi |
| Sample Collecto | or: | 1900 Pov | FRICKE•RECON vell Street, 12th e, California 94 -4500 | Floor | | | Analy | tical Labo | ratory: | TEI | Z R | A | | Environmental Services |

Shipping Copy (White)

Lab Copy (Yellow)

File Copy (Pink)

Field Copy (Goldenrod)



Client Name: Levine-Fricke

Client ID: 2659

Lab ID: 091777-0001-SA

Matrix: FILTER Sampled: 07 FEB 97 Received: 10 FEB 97 Authorized: 10 FEB 97 Prepared: See Below Analyzed: See Below

Wet wt. Reporting Units Limit Analytical Prepared Analyzed Parameter Result Units Date Method 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



Client Name: Levine-Fricke

Client ID: 2660

Lab ID: 091777-0002-SA

Matrix: FILTER Sampled: 07 FEB 97 Received: 10 FEB 97 Authorized: 10 FEB 97 Prepared: See Below Analyzed: See Below

| Parameter | Result | Wet wt. Report Units Limi | ting Analytical it Method | Prepared Date | Analyzed Date |
|-----------------|-------------|------------------------------|------------------------------|------------------|----------------------------|
| Arsenic Lead | 9.6 17.5 | total ug 3.6 total ug 3.6 | | | 11 FEB 97 1 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



Client Name: Levine-Fricke

2661

Client ID: Lab ID: 091777-0003-SA

Sampled: 07 FEB 97 Prepared: See Below Matrix: FILTER Received: 10 FEB 97 Analyzed: See Below Authorized: 10 FEB 97

| Parameter | Result | Wet wt. Units | Reporting Limit | Analytical Method | Prepared Date | Analyzed Date |
|-----------|--------|--------------------|--------------------|----------------------|------------------|------------------|
| Arsenic | ND | total ug | 1.8 | 7060 | | 11 FEB 97 |
| Lead | 9.3 | total ug | 3.6 | 7421 | | 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



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. I Units | Reporting Limit | Analytical Method | Prepared Date | Analyzed Date |
|-----------|--------|--------------------|--------------------|----------------------|------------------|------------------|
| Arsenic | ND | total ug | 1.8 | 7060 | | 11 FEB 97 |
| Lead | 8.6 | total ug | 3.6 | 7421 | | 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



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. Ro Units | eporting Limit | Analytical Method | Prepared Date | Analyzed Date |
|-----------|--------|---------------------|-------------------|----------------------|------------------|------------------|
| Arsenic | 1.9 | total ug | 1.8 | 7060 | | 11 FEB 97 S |
| Lead | 4.6 | total ug | 1.8 | 7421 | | 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



Client Name: Levine-Fricke

Client ID: 2656

Lab ID: 091777-0006-SA

Matrix: FILTER Sampled: 08 FEB 97 Received: 10 FEB 97 Authorized: 10 FEB 97 Prepared: See Below Analyzed: See Below

| Parameter | Result | Wet wt. R Units | eporting Limit | Analytical Method | Prepared Date | Analyzed Date |
|-----------|--------|--------------------|-------------------|----------------------|------------------|------------------|
| Arsenic | 42.7 | total ug | 9.0 | 7060 | | 11 FEB 97 R |
| Lead | 42.0 | total ug | 9.0 | 7421 | | 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



Client Name: Levine-Fricke

Client ID: 2657

Lab ID: 091777-0007-SA

Matrix: FILTER Sampled: 08 FEB 97 Received: 10 FEB 97 Authorized: 10 FEB 97 Prepared: See Below Analyzed: See Below

Wet wt. Reporting Units Limit Analytical Prepared Analyzed Parameter Result Units Date Method 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



Client Name: Levine-Fricke

Client ID: 2658

Lab ID: 091777-0008-SA

Matrix: FILTER Sampled: 08 FEB 97 Received: 10 FEB 97 Authorized: 10 FEB 97 Prepared: See Below Analyzed: See Below

| Parameter | Result | Wet wt. Repor Units Lim | ting Analytical it Method | Prepared Date | Analyzed Date |
|-----------------|--------------|----------------------------|------------------------------|------------------|----------------------------|
| Arsenic Lead | 55.6 30.9 | total ug 9. total ug 9. | | | 11 FEB 97 R 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



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 091777-0001-SA 091777-0002-SA 091777-0002-SA 091777-0003-SA 091777-0003-SA 091777-0004-SA 091777-0004-SA 091777-0005-SA 091777-0006-SA 091777-0006-SA 091777-0007-SA 091777-0007-SA | AQUEOUS | AS-FAA-AT PB-FAA-AT | 10 FEB 97-S 10 FEB 97-S | 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: Matrix: 7060

AQUEOUS 10 FEB 97-S QC Lot:

QC Run: 10 FEB 97-S

Analyte

Result

Reporting Units Limit

1.8

Arsenic

ND

total ug

Test:

PB-FAA-FILTER

Lead, Furnace AA

Method: Matrix: 7421

AQUEOUS 10 FEB 97-S QC Lot:

QC Run: 10 FEB 97-S

Analyte

Reporting

Result

Units

Limit

Lead

ND

total ug

1.8



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

-----Concentration-----Precision Accuracy Analyte 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

-----Concentration-----Accuracy Precision Analyte Average (%) Spiked ----Measured----(RPD) DCS1 DCS2 AVG DCS Limits DCS Limit

Lead 0.0200 0.0206 0.0220 0.0213 107 83-124 20

Calculations are performed before rounding to avoid round-off errors in calculated results.

FILE LF 3042.46.005



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.

 V^{i}

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

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 Tim | Received e Date |
|--|--|---|---|--|
| 091852-0001-SA 091852-0002-SA 091852-0003-SA 091852-0004-SA 091852-0005-SA 091852-0006-SA 091852-0007-SA 091852-0008-SA 091852-0010-SA 091852-0011-SA | 2660 Strip A 2660 Strip B 2660 Strip C 2660 Strip D 2660 Strip E 2660 Strip F 2660 Strip G 2658 Strip A 2658 Strip B 2658 Strip C 2658 Strip D | FILTER | 07 FEB 97 17: 08 FEB 97 17: 08 FEB 97 17: 08 FEB 97 17: 08 FEB 97 17: | 15 14 FEB 97 15 14 FEB 97 00 14 FEB 97 00 14 FEB 97 00 14 FEB 97 |
| 091852-0012-SA 091852-0013-SA 091852-0014-SA | 2658 Strip E 2658 Strip F 2658 Strip G | FILTER FILTER FILTER | 08 FEB 97 17: 08 FEB 97 17: 08 FEB 97 17: | 00 14 FEB 97 |



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 Units Limit Method Prepared Analyzed Date 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



Client Name: Levine-Fricke Client ID: 2660 Strip B 091852-0002-SA Lab ID:

Matrix: Authorized:

FILTER 14 FEB 97

Sampled: 07 FEB 97 Prepared: See Below

Received: 14 FEB 97 Analyzed: See Below

Parameter Result

Units

Wet wt. Reporting Limit

Analytical Method

Prepared Analyzed Date 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



Client Name: Levine-Fricke 2660 Strip C 091852-0003-SA Client ID:

Lab ID: Matrix: FILTER

14 FEB 97

Authorized:

Sampled: 07 FEB 97 Prepared: See Below

Received: 14 FEB 97 Analyzed: See Below

Wet wt. Reporting Analytical Prepared Analyzed Parameter Result Units Limit Method Date Date Arsenic 10.5 7060 total ug 7.2 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



Client Name: Levine-Fricke Client ID:

Lab ID:

2660 Strip D 091852-0004-SA

Matrix: Authorized:

FILTER 14 FEB 97

Sampled: 07 FEB 97 Prepared: See Below Received: 14 FEB 97 Analyzed: See Below

Parameter

Result

Units

Wet wt. Reporting Limit

Analytical Method

Prepared Analyzed Date 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



Client Name: Levine-Fricke Client ID: 2660 Strip E 091852-0005-SA

Lab ID: Matrix:

Authorized:

FILTER 14 FEB 97

Sampled: 07 FEB 97 Prepared: See Below

Received: 14 FEB 97

Analyzed: See Below

Parameter

Result

Units

Wet wt. Reporting Analytical Limit

Method

Prepared Analyzed Date

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



Client Name: Levine-Fricke Client ID:

Lab ID:

2660 Strip F 091852-0006-SA

Matrix: Authorized: 14 FEB 97

FILTER

Sampled: 07 FEB 97

Prepared: See Below

Received: 14 FEB 97 Analyzed: See Below

Parameter

Result

Units

Wet wt. Reporting Limit

Analytical Method

Prepared Analyzed Date 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



Client Name: Levine-Fricke 2660 Strip G 091852-0007-SA Client ID:

Lab ID:

Matrix: FILTER Sampled: 07 FEB 97 Received: 14 FEB 97 Authorized: 14 FEB 97 Prepared: See Below Analyzed: See Below

Wet wt. Reporting Analytical Prepared Analyzed Parameter Result Units Limit Method Date Date Arsenic 8.3 7060 17 FEB 97 18 FEB 97 total ug 1.8

ND = Not detected NA = Not applicable

Reported By: Wennilyn Fua

Approved By: Barry Votaw



Client Name: Levine-Fricke Client ID: 2658 Strip A

Lab ID:

091852-0008-SA

Matrix: Authorized:

FILTER 14 FEB 97

Sampled: 08 FEB 97 Prepared: See Below Received: 14 FEB 97 Analyzed: See Below

Parameter

Result

Units

Wet wt. Reporting Limit

Analytical Method

Prepared Analyzed Date 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



Client Name: Levine-Fricke Client ID: 2658 Strip B 2658 Strip B 091852-0009-SA

Lab ID:

Matrix: FILTER Sampled: 08 FEB 97 Authorized: 14 FEB 97 Prepared: See Below

Received: 14 FEB 97 Analyzed: See Below

Prepared Analyzed Wet wt. Reporting Analytical Method Parameter Result Limit Date Units 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



Client Name: Levine-Fricke Client ID: 2658 Strip C

Lab ID:

2658 Strip C 091852-0010-SA

Matrix: Authorized: FILTER 14 FEB 97 Sampled: 08 FEB 97

Received: 14 FEB 97

Prepared: See Below

Analyzed: See Below

Wet wt. Reporting Analytical Parameter Result Units Limit

Method

Prepared Analyzed Date 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



Client Name: Levine-Fricke Client ID:

2658 Strip D 091852-0011-SA Lab ID:

Matrix: FILTER Sampled: 08 FEB 97 Received: 14 FEB 97 Authorized: 14 FEB 97 Prepared: See Below Analyzed: See Below

Wet wt. Reporting Analytical Prepared Analyzed Parameter Result Limit Method Date Units 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



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

Wet wt. Reporting Analytical Prepared Analyzed Parameter Result Units Limit Method Date 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



Client Name: Levine-Fricke Client ID:

2658 Strip F 091852-0013-SA Lab ID:

Matrix: FILTER Sampled: 08 FEB 97 Received: 14 FEB 97 Authorized: 14 FEB 97 Prepared: See Below Analyzed: See Below

Wet wt. Reporting Analytical Prepared Analyzed Parameter Result Units Limit Method Date Date

Arsenic 42.9 total uq 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



Client Name: Levine-Fricke Client ID: 2658 Strip G

Lab ID:

091852-0014-SA

Matrix:

Parameter

FILTER

Sampled: 08 FEB 97

Prepared: See Below

Received: 14 FEB 97 Analyzed: See Below

Authorized: 14 FEB 97

> Wet wt. Reporting Result Units

Limit

Analytical Method

Prepared Analyzed Date 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



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 091852-0002-SA 091852-0003-SA 091852-0004-SA 091852-0005-SA 091852-0006-SA 091852-0008-SA 091852-0009-SA 091852-0010-SA 091852-0011-SA 091852-0012-SA 091852-0013-SA 091852-0014-SA | AQUEOUS | AS-FAA-AT | 17 FEB 97-Q 17 FEB 97-Q | 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: QC Lot:

AQUEOUS 17 FEB 97-Q

QC Run: 17 FEB 97-Q

Analyte

Result

Units

Reporting Limit

Arsenic

ND

total ug

1.8



DUPLICATE CONTROL SAMPLE REPORT Metals Analysis and Preparation

Project: 091852

Category: AS-FAA-A Arsenic, Furnace AA

Testcode: AS-FAA-FILTER

Method: 7060 Matrix: **AQUEOUS** Concentration Units: mg/L QC Lot: 17 FEB 97-Q Analyzed Date: 18 FEB 97 Time: 08:56

-----Concentration-----Accuracy Precision Analyte Average(%)
DCS Limits Spiked ----Measured----(RPD) DCS1 DCS2 AVG 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 Carried to the second s

DOHS Centrication: 1172

PAGE 1

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

AND AND THE STATE OF THE STATE

ATTN: A.JENKINS/R.MILELLI/M.KNOX CLIENT PROJ. ID: CLIENT PROJ. NAME. RIFKIN WALL

C.O.C. NUMBER: 15154

REPORT DATE: 02/02/97

DATE(S) SAMPLED: 01/29/97

DATE RECEIVED: 01/30/97

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.

Lar**W** Klein

Laboratory Director

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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 | | | |
| #Sample Volume | | 531 | Li | ters | | |
| #Digestion | | - | - Pr | ep Date | 01/30/97 | |
| Arsenic in Air | NIOSH 7300M | <0.002 | mg | 1/m3 | 01/30/97 | |
| Lead in Air | NIOSH 7300M | 0.001 | mg | r/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 |

American Environmental Network

PAGE 4

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

| | METHOD / | ···· | DEDORTHO | | | | | |
|----------------|-----------------|---------|--------------------|----------|------------------|--|--|--|
| ANALYTE | METHOD/ CAS# | RESULT | REPORTING LIMIT | UNITS | DATE ANALYZED | | | |
| #Sample Volume | | BLANK | L | iters | | | | |
| #Digestion | | - | - P | rep Date | 01/30/97 | | | |
| Arsenic in Air | NIOSH 7300M | <0.001 | m | g | 01/30/97 | | | |
| Lead in Air | NIOSH 7300M | <0.0005 | m | g | 01/30/97 | | | |

PAGE QR-1

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.

<u>Definitions</u>

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/Me INSTRUMENT: TJA Enviro 36 UNITS: ug | dia blank | | LAB ID: PREPARED ANALYZED | IFA_BLNK : 01/30/97 | | BATCH ID: IF | P\97013022 A013097 000000 | 24500/1/ |
|--|--------------|---------------|---------------------------------|------------------------|-----------------|----------------------------|---------------------------------|------------------|
| METHOD: ANALYTE Arsenic, MCEF | RESULT <1 | REF RESULT | REPORTING LIMIT | SPIKE VALUE | RECOVERY (%) | REC LIMITS (%) LOW HIGH | RPD (%) | RPD LIMIT (%) |

METHOD SPIKE SAMPLES

Lead, MCEF

| SAMPLE TYPE: Spike Method/M INSTRUMENT: TJA Enviro 36 UNITS: ug METHOD: | ledia blank | | LAB ID: PREPARED ANALYZED | IFA_MD): 0: 01/30/97 | | INSTR RUN: ICP\970130224500/3/1 BATCH ID: IFA013097 DILUTION: 1.000000 |
|--|------------------------|-----------------------------|---------------------------------|--------------------------------|---------------------------------|--|
| ANALYTE Arsenic, MCEF Lead, MCEF | RESULT 5.87 7.17 | REF RESULT <1 <0.5 | REPORTING LIMIT | SPIKE VALUE 6.00 7.50 | RECOVERY (%) 97.8 95.6 | REC LIMITS (%) RPD LOW HIGH RPD (%) LIMIT (%) { 68 127 72 121 |
| SAMPLE TYPE: Spike-Method/M INSTRUMENT: TJA Enviro 36 UNITS: ug METHOD: | ledia blank | | LAB ID: PREPARED ANALYZED | IFA_MS : : 01/30/97 | ***** | INSTR RUN: ICP\970130224500/2/1 BATCH ID: IFA013097 DILUTION: 1.000000 |
| ANALYTE Arsenic, MCEF | RESULT 5.89 | REF RESULT <1 | REPORTING LIMIT | SPIKE VALUE 6.00 | RECOVERY (%) 98.2 | REC LIMITS (%) LOW HIGH RPD (%) LIMIT (%) 68 127 |

METHOD SPIKE DUPLICATES

| SAMPLE TYPE: Method Spike Sample Duplicate | | | LAB ID: IFA_MR | | | INSTR RUN: ICP\970130224500/4/2 | | | |
|---|------------------------|-------------------------------|--------------------|----------------|-----------------|---|--|--|--|
| INSTRUMENT: TJA Enviro 36 | | | PREPARED: | | | BATCH ID: IFA013097 | | | |
| UNITS: ug | | | ANALYZED: 01/30/97 | | | DILUTION: 1.000000 | | | |
| METHOD: ANALYTE Arsenic, MCEF Lead, MCEF | RESULT 5.87 7.17 | REF RESULT 5.89 7.08 | REPORTING LIMIT | SPIKE VALUE | RECOVERY (*) | REC LIMITS (%) LOW HIGH RPD 0.340 1.26 | | | |

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

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

| Project No. | : 304 | 2.9 | 5-005 | | | ield Logbook No.: | | | | | | | 1/2 | 9/97 | Serial | No.: | | |
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| SAMPLE NO. | DATE | TIME | LAB SAMPLE NO. | NO. OF CON- TAINERS | SAMPLE TYPE | A | | 97 | | | \angle | | <u> </u> | */ | | REM | IARKS | |
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| 3042-0129-B | | | 03A | 1 | AIR | \geq | \geq | | | | | | \geq | A = 0 | · L | | | |
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| METHOD OF SH | | | | | DATE | | ΓIME | | LAB CO | MMENTS | · | | | | | | | |
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| Sample Co | Hector: | | 1900 Powell St Emeryville, C (510) 652-450 | reet, 12th allfornia 00 | Floor 94608 | · | | Fi | Analytical Laboratory: AEN | | | | | 0.5 (0.00 (4.00 | | | | |

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PAGE 1

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

ATTN: A.JENKINS/R.MILELLI/M.KNOX CLIENT PROJ. ID: 3042.95-005 CLIENT PROJ. NAME: RIFKIN WALL C.O.C. NUMBER: 15168 REPORT DATE: 02/06/97

DATE(S) SAMPLED: 01/30/97

DATE RECEIVED: 01/31/97

AEN WORK ORDER: 9701325

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

| ANAL VTC | METHOD/ | RESULT | REPORTING | REPORTING LIMIT UNITS | | |
|----------------|-------------|---------|-----------|--------------------------|----------|--|
| ANALYTE | CAS# | KESULI | | UNTIS | ANALYZED | |
| #Sample Volume | | 753 | Lii | ters | | |
| #Digestion | | - | - Pre | ep 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.

<u>Definitions</u>

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/M INSTRUMENT: TJA Enviro 36 UNITS: ug | ledia blank | | LAB ID: PREPARED ANALYZED | IFA_BLNK : 02/04/97 | | BATCH ID: IF | CP\97020415 A020197 000000 | i2900/1/ | - |
|---|-------------|---------------|---------------------------------|------------------------|-----------------|----------------------------|----------------------------------|------------------|---|
| METHOD: ANALYTE Arsenic, MCEF | RESULT | REF RESULT | REPORTING LIMIT | SPIKE VALUE | RECOVERY (%) | REC LIMITS (%) LOW HIGH | RPD (%) | RPD LIMIT (%) | |

METHOD SPIKE SAMPLES

| SAMPLE TYPE: Spike-Method. INSTRUMENT: TJA Enviro 36 UNITS: ug | LAB ID: IFA_MD INSTR RUN: ICP\970204152900/3/1 PREPARED: BATCH ID: IFA020197 ANALYZED: 02/04/97 DILUTION: 1.000000 | | | | | |
|---|--|-----------------------------|---------------------------------|--------------------------------|---------------------------------|--|
| METHOD: ANALYTE Arsenic, MCEF Lead, MCEF | RESULT 6.16 7.26 | REF RESULT <1 <0.5 | REPORTING LIMIT | SPIKE VALUE 6.00 7.50 | RECOVERY (%) 103 96.8 | REC LIMITS (%) RPD LOW HIGH RPD (%) LIMIT (%) 68 127 72 121 |
| SAMPLE TYPE: Spike Method/ INSTRUMENT: TJA Enviro 36 UNITS: ug METHOD: | /Media blank | | LAB ID: PREPARED ANALYZED | : 02/04/97 | •••• | INSTR RUN: ICP\970204152900/2/1 BATCH ID: IFA020197 DILUTION: 1.000000 |
| ANALYTE Arsenic, MCEF Lead, MCEF | RESULT 5.73 7.21 | REF RESULT <1 <0.5 | REPORTING LIMIT | SPIKE VALUE 6.00 7.50 | RECOVERY (%) 95.5 96.1 | REC LIMITS (%) RPD LOW HIGH RPD (%) LIMIT (%) 68 127 72 121 |

METHOD SPIKE DUPLICATES

| SAMPLE TYPE: Method Spike Sam INSTRUMENT: TJA Enviro 36 UNITS: ug | LAB ID: PREPARED: ANALYZED: | IFA_MR : 02/04/97 | | INSTR RUN: ICP\970204152900/4/2 BATCH ID: IFA020197 DILUTION: 1.000000 | | | | |
|---|-----------------------------------|-------------------------------|--------------------|--|-----------------|---------------------------|--------------------------|------------------------------|
| METHOD: ANALYTE Arsenic, MCEF Lead, MCEF | RESULT 6.16 7.26 | REF RESULT 5.73 7.21 | REPORTING LIMIT | SPIKE VALUE | RECOVERY (%) | REC LIMITS (% LOW HIGH | RPD (*) 7.23 0.691 | RPD LIMIT (%) 10 10 |

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

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

| Project No. | : 304 | +2.9 | 5-005 | | Field Logbook No. | | | | | | | Date: 1/30/97 | | Serial No |) .: | |
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| 3042-0130-1 | 1/30/97 | 1630 | 01A | 1 | AIR | \times | $ \times $ | | | | | \times | 4 = 8 | | | |
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| RELINQUISHED (Signature) | BY: Oo | <u> </u> | 12 / 0 . | | 9/3/0 | 6. | TIME 1055 | | CEIVED ignatu | BY: | 1// | | 2/1 | N) | DATE TIME | |
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| RELINQUISHED (Signature) | BÝ: | VICE | | | DATE | | TIME | RE(| CEIVED ignatu | re) | | | 7 | | DATE TIME | |
| METHOD OF SH | | | | | DATE | | TIME | E LAB COMMENTS: | | | | | | | | |
| Sample Collector: LEVINE-FRICKE 1900 Powell Street, 12th Floor Emeryville, California 94608 (510) 652-4500 | | | | | | | A | ical La | | ory: | | | 307/38 ON MGUŁ | 44.05 | | |

American Environmental Network

Certificate of Analysis

DOHS Certification: 1172

MHA Accreditation: 11134

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PAGE 1

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

ATTN: A.JENKINS/R.MILELLI/M.KNOX CLIENT PROJ. ID: 3042.95-005 CLIENT PROJ. NAME: RIFKIN WALL C.O.C. NUMBER: 1087

REPORT DATE: 02/07/97

DATE(S) SAMPLED: 01/31/97-02/01/97

DATE RECEIVED: 02/03/97

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.

Klein

Laboratory Director

American Environmental Network

PAGE 2

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 UNIT: | DATE S ANALYZED |
|----------------|-----------------|---------|--------------------------|--------------------|
| #Sample Volume | | 912 | Liters | |
| #Digestion | | - | - Prep Dat | te 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 | | | |
|----------------|-----------------|--------|--------------------|---------|----------|--|
| #Sample Volume | | 651 | Lit | ters | | |
| #Digestion | | - | - Pre | ep 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 | |

PAGE OR-1

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.
- 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: ua | ANALYZED: 02/06/97 | DILUTION: 1.000000 |

METHOD:

REPORTING LIMIT SPIKE VALUE RECOVERY REC LIMITS (%) RPD (%) LIMIT (%) REF RESULT ANALYTE RESULT

Arsenic, MCEF Lead, MCEF <1 <0.5

METHOD SPIKE SAMPLES

| SAMPLE TYPE: Spike-Method/M INSTRUMENT: TJA Enviro 36 UNITS: ug METHOD: | edia blank | | LAB ID: PREPARED: ANALYZED: | IFA_MD 02/06/97 | | INSTR RUN: ICP\970206122100/3/1 BATCH ID: IFA020497 DILUTION: 1.000000 |
|--|------------------------|-----------------------------|-----------------------------------|--------------------------------|-------------------------------|--|
| ANALYTE Arsenic, MCEF Lead, MCEF | RESULT 7.84 8.28 | REF RESULT <1 <0.5 | REPORTING LIMIT | SPIKE VALUE 7.50 7.50 | RECOVERY (%) 105 110 | REC LIMITS (%) RPD LOW HIGH RPD (%) LIMIT (%) 68 127 72 121 |
| SAMPLE TYPE: Spike-Method/M INSTRUMENT: TJA Enviro 36 UNITS: ug METHOD: | edia blank | | LAB ID: PREPARED: ANALYZED: | IFA_MS 02/06/97 | | INSTR RUN: ICP\970206122100/2/1 BATCH ID: IFA020497 DILUTION: 1.000000 |
| ANALYTE Arsenic, MCEF Lead, MCEF | RESULT 7.75 8.13 | REF RESULT <1 <0.5 | REPORTING LIMIT | SPIKE VALUE 7.50 7.50 | RECOVERY (%) 103 108 | REC LIMITS (%) RPD LOW HIGH RPD (%) LIMIT (%) 68 127 72 121 |

METHOD SPIKE DUPLICATES

| SAMPLE TYPE: Method Spike Sam INSTRUMENT: TJA Enviro 36 UNITS: ug | mple Duplicat | te | LAB ID: PREPARED: ANALYZED; | IFA_MR 02/06/97 | | INSTR RUN: ICP\9702061 BATCH ID: IFA020497 DILUTION: 1,000000 | 22100/4/2 |
|---|------------------------|-------------------------------|-----------------------------------|--------------------|-----------------|---|------------------------------|
| METHOD: ANALYTE Arsenic, MCEF Lead, MCEF | RESULT 7.84 8.28 | REF RESULT 7.75 8.13 | REPORTING LIMIT | SPIKE VALUE | RECOVERY (%) | REC LIMITS (%) LOW HIGH RPD (%) 1.15 1.83 | RPD LIMIT (%) 10 10 |

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

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

9102005

| Project No.: 3 | Project No.: 3042. 95 - 005 | | | | | | Project Location: EMERYVILLE, CA | | | | | Date: | 1/31 | 197 | i | ial No. | |
|---|-----------------------------|-------------------|---|---------------------------|----------------|-------------|----------------------------------|--------------------|--------|--------------|-----------------|----------|----------|--------|----------------|---------|------------------|
| Project Name: | RIFK | 17 h | JALL DEN | NO | Field Log | jbook No | k No.: | | | | | | | ſ | 1 ō | 1087 | |
| Sampler (Signa | iture): C | est- | & R. Jan | خا | | | | | | AN | ALYSE | S | | / | Sar | mplers: | ARJ |
| | ····· | | SAMPLES | | | | چوپر مادر ا | 130 | | / / | / , | Ι. | /,0 / | / kk / | | | |
| SAMPLE NO. | DATE | TIME | LAB SAMPLE NO. | NO. OF CON- TAINERS | SAMPLE TYPE | No. of the | 4. E. | 33× 7380 | | | | | HOLD | RIGH | RE | MARK | s |
| 3042-0131-1 3042-0131-2 3042-0201- 1 | 4 | 16:20 | 01A 02A 03A | | AIR | \approx | \propto | | - | ٧× | 4 86 | L | \times | _₩= | 833 L 912 L | | |
| 3042-0201-2 | | • | 04A | 1 | V | • | <u> </u> | | | ¥= , | 651 | _ | X | 72-1 | HOUR ' | TAT | |
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| RELINQUISHED (Signature) | BY: 4 | Mia | Tel | J. DA | JE 97 | TIME. | - | RECEIVE (Signat | D BY: | Zin | à l | Juli | issiu | υ | DATE 2-3- | 97 | TIME 1120 |
| RELINQUISHED (Signature) | | - | D | DA | ATE | TIME | | RECEIVE (Signat | ED BY: | () | | 0 | V | | DATE | | TIME |
| METHOD OF SH | IPMENT: | | | DA | ATE | TIME | | LAB COM | имент | S: | | | | | | | |
| Sample Collect | tor: | 1900 Po Emeryv | •FRICKE•RECO owell Street, 12t ille, California 94 52-4500 | h Floor | • | <u> </u> | | Analytic | | oratory E | | | | | | | |
| <u> </u> | | · | | O /Di- | | t Conv (Co | | | | | | | | | *** | | COC CDR 101596RY |

American Environmental Network

Certificate of Analysis

DOHS Carrollection, 1172

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PAGE 1

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

STANKA TO SERVE TO THE PROPERTY OF A STANKE

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

C.O.C. NUMBER: 1098

REPORT DATE: 02/10/97

DATE(S) SAMPLED: 02/03/97

DATE RECEIVED: 02/04/97

AEN WORK ORDER: 9702019

1 1

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.

Larny 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

| | METHOD/ | | DATE | | |
|----------------|-------------|---------|--------------------|----------|----------|
| ANALYTE | CAS# | RESULT | REPORTING LIMIT | | |
| #Sample Volume | | 728 | <u>L</u> - | iters | |
| #Digestion | | - | - Pi | rep Date | 02/04/97 |
| Arsenic in Air | NIOSH 7300M | <0.002 | mç | g/m3 | 02/06/97 |
| Lead in Air | NIOSH 7300M | <0.0007 | mç | g/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.

<u>Definitions</u>

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/ INSTRUMENT: TJA Enviro 36 UNITS: ug METHOD: | | | LAB ID: PREPARED ANALYZED | IFA_BLNK : 02/06/97 | | INSTR RUN: ICP\970206122100/1/ BATCH ID: IFA020497 DILUTION: 1.000000 | - |
|---|----------------------|---------------|---------------------------------|------------------------|-----------------|---|---|
| ANALYTE Arsenic, MCEF Lead, MCEF | RESULT <1 <0.5 | ref Result | REPORTING LIMIT | SPIKE VALUE | RECOVERY (%) | REC LIMITS (%) RPD LOW HIGH RPD (%) LIMIT (%) | |

METHOD SPIKE SAMPLES

| SAMPLE TYPE: Spike-Method/Mer INSTRUMENT: TJA Enviro 36 UNITS: ug METHOD: | dia blank | | LAB ID: PREPARED: ANALYZED: | IFA_MD 02/06/97 | | INSTR RUN: ICP\970206122100/3/1 BATCH ID: IFA020497 DILUTION: 1.000000 |
|--|------------------------|-----------------------------|-----------------------------------|--------------------------------|-------------------------------|--|
| ANALYTE Arsenic, MCEF Lead, MCEF | RESULT 7.84 8.28 | REF RESULT <1 <0.5 | REPORTING LIMIT | SPIKE VALUE 7.50 7.50 | RECOVERY (%) 105 110 | REC LIMITS (%) RPD LOW HIGH RPD (%) LIMIT (%) 68 127 72 121 |
| SAMPLE TYPE: Spike-Method/Med INSTRUMENT: TJA Enviro 36 UNITS: ug METHOD: | lia blank | * | LAB ID: PREPARED: ANALYZED: | | | INSTR RUN: ICP\970206122100/2/1 BATCH ID: IFA020497 DILUTION: 1.000000 |
| ANALYTE Arsenic, MCEF Lead, MCEF | RESULT 7.75 8.13 | REF RESULT <1 <0.5 | REPORTING LIMIT | SPIKE VALUE 7.50 7.50 | RECCVERY (%) 103 108 | REC LIMITS (%) RPD LOW HIGH RPD (%) LIMIT (%) 68 127 72 121 |

METHOD SPIKE DUPLICATES

| SAMPLE TYPE: Method Spike Sam INSTRUMENT: TJA Enviro 36 UNITS: ug | mple Duplica | te | LAB ID: PREPARED: ANALYZED: | IFA_MR 02/06/97 | | BATCH ID: IFAG | \97020612; 020497 00000 | 2100/4/2 |
|---|------------------------|-------------------------------|-----------------------------------|--------------------|-----------------|----------------------------|-------------------------------|------------------------------|
| METHOD: ANALYTE Arsenic, MCEF Lead, MCEF | RESULT 7.84 8.28 | REF RESULT 7.75 8.13 | REPORTING LIMIT | SPIKE VALUE | RECOVERY (*) | REC LIMITS (%) LOW HIGH | RPD (%) 1.15 1.83 | RPD LIMIT (%) 10 10 |

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

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

9702019

| Project No.: 3 | 042 | . 9 <i>5</i> - | -005 | | Project L | ocation: | EMI | ERYV | الدرو | ICA | | Date: | 2/31 | ۹ 7 | Serial | |
|-----------------------------|----------|-------------------|---|---------------------------|---------------------------------------|----------|--------|------------------|-------|-----------|-------|-------|-----------|------------|---------------------------------------|------------|
| Project Name: | RIFK | 112 W | ALL DEM | 2 | Field Log | gbook No |).; | | | | | | | | Nº | 1098 |
| Sampler (Signat | ture): 🗘 | سبمك | المراء | خگ | | | | | | ANA | LYSE: | S | | | Sampl | ers: ARJ |
| | | | SAMPLES | | · · · · · · · · · · · · · · · · · · · | | No M | ولم كرا | •/ | | 7 | / / | | / & / | | |
| SAMPLE NO. | DATE | TIME | LAB SAMPLE NO. | NO. OF CON- TAINERS | SAMPLE | W. | ST SE | A rat | | // | | /\ | , did | AUSH | REMA | ARKS |
| 3042-0203-2 3042-0203-3 | 2 3 97 | 17:30 | 01A 02A | | AIR | × × | X X | | | | | | \gtrsim | | 728L 649 L | |
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| METHOD OF SH | PMENT: | | | DA | ATE | TIME | | LAB CO | MMEN | TS: | | | | | | |
| Sample Collect | or: | 1900 Po Emeryv | •FRICKE•RECC owell Street, 12 ille, California 9 52-4500 | h Floor | 7 | | | Analytic | | ooratory: | 7 | | | | 2 | |

American Environmental Network

Certificate of Auctorisis

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HRA Accreditation

PAGE 1

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

Dayway and a Same of the Commencer of t

ATTN: A.JENKINS/R.MILLELLI/M.KNOX

CLIENT PROJ. ID: 3042.95-005 CLIENT PROJ. NAME: RIFKIN WALL

C.O.C. NUMBER: 1099

REPORT DATE: 02/10/97

DATE(S) SAMPLED: 02/04/97

DATE RECEIVED: 02/05/97

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

| | NETHOD (| | REPORTING | | | | | | |
|----------------|-----------------|--------|-----------|---------|------------------|--|--|--|--|
| ANALYTE | METHOD/ CAS# | RESULT | LIMIT | UNITS | DATE ANALYZED | | | | |
| #Sample Volume | | 828 | Li | ters | | | | | |
| #Digestion | | _ | - Pr | ep 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.
- 1: 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/MeinSTRUMENT: TJA Enviro 36 UNITS: ug | | | LAB ID: PREPARED: | IFA BLNK | | INSTR RUN: ICP\970207105700/1/ BATCH ID: IFA020697 DILUTION: 1.000000 | | | | |
|---|--------|--------|----------------------|----------|----------|---|-----------|--|--|--|
| METHOO: | | REF | REPORTING | SPIKE | RECOVERY | REC LIMITS (%) | RPD | | | |
| ANALYTE | RESULT | RESULT | LIMIT | VALUE | (%) | LOW HIGH RPD (%) | LIMIT (%) | | | |

Arsenic, MCEF <1 Lead, MCEF <0.5

METHOD SPIKE SAMPLES

| SAMPLE TYPE: Spike-Methor INSTRUMENT: TJA Enviro ug | | | LAB ID: PREPARED: ANALYZED: | IFA_MD 02/07/97 | | INSTR RUN: ICP\970207105700/3/1 BATCH ID: IFA020697 DILUTION: 1.000000 | |
|--|------------------------|-----------------------------|-----------------------------------|--------------------------------|--------------------------------|--|--|
| METHOD: ANALYTE Arsenic, MCEF Lead, MCEF | RESULT 6.30 7.50 | REF RESULT <1 <0.5 | REPORTING LIMIT | SPIKE VALUE 6.00 7.50 | RECOVERY (%) 105 100 | REC LIMITS (%) RPD LOW HIGH RPD (%) LIMIT (%) 68 127 72 121 | |
| SAMPLE TYPE: Spike-Metho INSTRUMENT: TJA Enviro UNITS: ug METHOD: | od/Media blank 36 | | LAB ID: PREPARED: ANALYZED: | IFA_MS 02/07/97 | | INSTR RUN: ICP\970207105700/2/1 BATCH ID: IFA020697 DILUTION: 1.000000 | |
| ANALYTE Arsenic, MCEF Lead, MCEF | RESULT 6.14 7.30 | REF RESULT <1 <0.5 | REPORTING LIMIT | SPIKE VALUE 6.00 7.50 | RECOVERY (%) 102 97.3 | REC LIMITS (%) RPD LOW HIGH RPD (%) LIMIT (%) 68 127 72 121 | |

METHOD SPIKE DUPLICATES

| SAMPLE TYPE: Method Spike Sam INSTRUMENT: TJA Enviro 36 UNITS: ug | ple Duplica | te | LAB ID: PREPARED: ANALYZED: | IFA_MR 02/07/97 | | INSTR RUN: ICP\970 BATCH ID: IFA0200 DILUTION: 1.00000 | 697 |
|---|------------------------|-------------------------------|-----------------------------------|--------------------|-----------------|--|-----|
| METHOD: ANALYTE Arsenic. MCEF Lead, MCEF | RESULT 6.30 7.50 | REF RESULT 6.14 7.30 | REPORTING LIMIT | SPIKE VALUE | RECOVERY (%) | REC LIMITS (%) LOW HIGH RPC 2.5 2.7 | |

..... End of Quality Control Report

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

9702055

| Project No.: 3 | Project No.: 3042.95 - 005 | | | | Project Location: EMERYVILE, CA Date: 2/4 | | | | | | | | |
|--|----------------------------|-------------------|--|---------------------------|---|----------|-----------------|-----------------------------|------------|----------|-----------------|-------------|--------------|
| Project Name: | ZIFK | 1N h | JAU DET | W | Field Log | gbook No |),: | | | | | Nº | 1099 |
| Sampler (Signa | ture): C |) | 4 R. | عمد | - | | | Α | ANALYSE | S | | Samplers | ARJ |
| | | | SAMPLES | | | | المرماي | a mo | | | / _{-x} | · | |
| SAMPLE NO. | DATE | TIME | LAB SAMPLE NO. | NO. OF CON- TAINERS | SAMPLE TYPE | \$ 15 S | 4× /5 | S MAN | | HOLD | RUSH | REMARI | K S |
| 3042-0204-1 3042- <i>0</i> 204 <i>-</i> 2 | | 17:20 \$ | 018 | 1 | AIR | X | >> | | | \sim | 4 = 6 | | |
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| | | | | | | | | | | | | LELLI / M | Tenkins/ |
| | | | | | - | | | | | | | | |
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| | | | | | | - | | | | | | | |
| RELINQUISHED (Signature) | BY: O | [| LR. Jal | <u></u> → _ 2 | 15/97 | TIME | 50 | RECEIVED BY: (Signature) | alex | Le he he | ll. | DATE 2/5/8> | TIME (SSO |
| RELINQUISHED (Signature) | BY: C | ne to | Lador | | 5-5> | TIME | <u>د</u> ک`ک | RECEIVED BY: (Signature) | akara. | Pode | some _ | DATE 2 | TIME 7 2 |
| RELINQUISHED (Signature) | BY: | | | DA | TE. | TIME | | RECEIVED BY: (Signature) | · | | | DATE | TIME |
| METHOD OF SH | IPMENT: | | | DA | ΤE | TIME | | LAB COMMENTS: | | | | | |
| Sample Collect | or: | 1900 Po Emeryv | •FRICKE•RECO owell Street, 12tl ille, California 94 52-4500 | n Floor | | | | Analytical Laborat | ory: AE | N | | | |

American Environmental Network

Certificate of Analysis

DOHS Certification: 1172

AIHA Accreditation: 11134

PAGE 1

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

A.JENKINS/R.MILELLI/M.KNOX CLIENT PROJ. ID: 3042.95-005 CLIENT PROJ. NAME: RIFKIN WALL

C.O.C. NUMBER: 1091

REPORT DATE: 02/10/97

DATE(S) SAMPLED: 02/05/97

DATE RECEIVED: 02/06/97

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.

larr⊮Klein

Laboratory Director

PAGE 2

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 | | | |
|----------------|-----------------|--------|--------------------|----------|----------|--|
| #Sample Volume | | 492 | L | iters | | |
| #Digestion | | - | - P | rep Date | 02/06/97 | |
| Arsenic in Air | NIOSH 7300M | 0.011 | m | g/m3 | 02/07/97 | |
| Lead in Air | NIOSH 7300M | 0.008 | m | g/m3 | 02/07/97 | |

PAGE 3

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 |

PAGE 4

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 R | EPORTING 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

PAGE 5

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 | - | Pre | ep Date | 02/06/97 |

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

PAGE 6

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 | J/kg | 02/07/97 |
| #Digestion, Metals AA/ICP | EPA 3050 | - | Pr | ep Date | 02/06/97 |

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

PAGE QR-1

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

OUALITY CONTROL REPORT

PAGE QR-2

ANALYSIS: Arsenic

MATRIX: Soil/Bulk

METHOD BLANK SAMPLES

SAMPLE TYPE: Blank-Method/Media blank INSTRUMENT: TJA 4000, GFAA

LAB ID: GFS_BLNK_G PREPARED:

INSTR RUN: 4000\970207115400/1/ BATCH ID: GFS020697-G

mg/kg ANALYZED: 02/07/97 UNITS:

DILUTION: 1.000000

EPA 7060 REPORTING RECOVERY REC LIMITS (%) ANALYTE RESULT HIGH RESULT LIMIT VALUE (x)LOW RPD (1) LIMIT (%) Arsenic in soil EPA 7060 ND 0.5

METHOD SPIKE SAMPLES

METHOD:

SAMPLE TYPE: Spike-Method/Media blank INSTRUMENT: TJA 4000, GFAA INSTR RUN: 4000\970207115400/3/1 LAB ID: GFS_MD_G BATCH ID: GFS020697-G DILUTION: 1.000000 PREPARED:

mg/kg EPA 7060 UNITS: ANALYZED: 02/07/97 METHOD:

REF RECOVERY REPORTING SPIKE REC LIMITS (%) ANALYTE RESULT RESULT LIMIT VALUE (1)LOW HIGH RPD (%) LIMIT (次) Arsenic in soil EPA 7060 77 12.0 ND 0.5 10.0 141

SAMPLE TYPE: Spike-Method/Media blank INSTRUMENT: TJA 4000, GFAA INSTR RUN: 4000\970207115400/2/1 BATCH ID: GFS020697-G DILUTION: 1.000000 LAB ID: GFS MS G PREPARED:

mg/kg EPA 7060 ANALYZED: 02/07/97 UNITS: METHOD:

REF REPORTING SPIKE RECOVERY REC LIMITS (%) ANALYTE **RESULT** RESULT VALUE LOW HIGH RPD (%) LIMIT LIMIT (%) Arsenic in soil EPA 7060 0.5 77 12.2 ND 10.0 141

METHOD SPIKE DUPLICATES

SAMPLE TYPE: Method Spike Sample Duplicate
INSTRUMENT: TJA 4000, GFAA
UNITS: mg/kg
METHOD: EPA 7060 LAB ID: PREPARED: GFS_MR_G INSTR RUN: 4000\970207115400/4/2 BATCH ID: GFS020697-G DILUTION: 1.000000 ANALYZED: 02/07/97

REF REPORTING SPIKE RECOVERY REC LIMITS (%)

RPD ANALYTE **RESULT** RESULT LIMIT VALUE LOW HIGH RPD (%) LIMIT (%) Arsenic in soil EPA 7060 12.2 12.0 0.51.6515

WORK ORDER: 9702066

QUALITY CONTROL REPORT

PAGE QR-3

ANALYSIS: Metals NIOSH 7300M

MATRIX: Air

METHOD BLANK SAMPLES

| SAMPLE TYPE: Blank-Method/M INSTRUMENT: TJA Enviro 36 UNITS: ug METHOD: | edia blank | • • • • • • • • • • | LAB ID: PREPARED ANALYZED | IFA_BLNK : : 02/07/97 | | INSTR RUN: ICP\9702071057 BATCH ID: IFA020697 DILUTION: 1.000000 | '00/1/ |
|--|----------------------|---------------------|---------------------------------|-----------------------------|-----------------|--|------------------|
| ANALYTE Arsenic, MCEF Lead, MCEF | RESULT <1 <0.5 | REF RESULT | REPORTING LIMIT | SPIKE VALUE | RECOVERY (な) | REC LIMITS (%) LOW HIGH RPD (%) L | RPD _IMIT (な) |

METHOD SPIKE SAMPLES

| SAMPLE TYPE: Spike-Method/M INSTRUMENT: TJA Enviro 36 UNITS: ug METHOD: | edia blank | * | LAB ID: PREPARED ANALYZED | IFA_MD : : 02/07/97 | | INSTR RUN: ICP\970207105700/3/1 BATCH ID: IFA020697 DILUTION: 1.000000 |
|---|------------------------|-----------------------------|-----------------------------------|--------------------------------|--------------------------------|--|
| ANALYTE Arsenic, MCEF Lead, MCEF | RESULT 6.30 7.50 | REF RESULT <1 <0.5 | REPORTING LIMIT | SPIKE VALUE 6.00 7.50 | RECOVERY (%) 105 100 | REC LIMITS (%) RPD LOW HIGH RPD (%) LIMIT (%) 68 127 72 121 |
| SAMPLE TYPE: Spike-Method/Me INSTRUMENT: TJA Enviro 36 UNITS: ug METHOD: | edia blank | | LAB ID: PREPARED: ANALYZED: | IFA_MS 02/07/97 | | INSTR RUN: ICP\970207105700/2/1 BATCH ID: IFA020697 DILUTION: 1.000000 |
| ANALYTE Arsenic, MCEF Lead, MCEF | RESULT 6.14 7.30 | REF RESULT <1 <0.5 | REPORTING LIMIT | SPIKE VALUE 6.00 7.50 | RECOVERY (%) 102 97.3 | REC LIMITS (%) RPD LOW HIGH RPD (%) LIMIT (%) 68 127 72 121 |

METHOD SPIKE DUPLICATES

| SAMPLE TYPE: Method Spike S INSTRUMENT: TJA Enviro 36 UNITS: ug METHOD: | Sample Duplica | ite | LAB ID: PREPARED ANALYZED | IFA_MR): 0: 02/07/97 | | INSTR RUN: ICP\970207 BATCH ID: IFA020697 DILUTION: 1.000000 | 105700/4/2 |
|--|------------------------|-------------------------------|---------------------------------|-----------------------------|-----------------|--|----------------------------------|
| ANALYTE Arsenic, MCEF Lead, MCEF | RESULT 6.30 7.50 | REF RESULT 6.14 7.30 | REPORTING LIMIT | SPIKE VA LUE | RECOVERY (%) | REC LIMITS (%) LOW HIGH RPD (% 2.57 2.70 | RPD (*) LIMIT (*) 10 10 |

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

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

| Project No.: 3 | 042. | 95- | 005 | | Project L | ocation: | EMET | zyvilli | E, CA | | Date: | 2/5 | 197 | Serial No | .: |
|--|---------------|-----------|---|---------------------------|----------------|----------|-----------|---|-------|-------|-------|-----------|------------------|-----------|-------------------|
| Project Name: | RIFK | IN W | JALL DE | % O | Field Log | book No | o.: | | | | | | , | Nº | 1091 |
| Sampler (Signa | ture); |)Qe fa | en R.J. | مانہ | | | | 7 | | ALYSE | S | | | Samplers | ARJ |
| | | | SAMPLES | | | | جهر ملک | \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ | Ω | | | /_ | /, \/ | • | |
| SAMPLE NO. | DATE | TIME | LAB SAMPLE NO. | NO. OF CON- TAINERS | SAMPLE TYPE | A. | in in the | 1 1 10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | | | | HOLD | RUSH | REMARK | S |
| 3042- <i>0205-</i> 1 3042-0205 <i>-</i> 2 | | 17:00 | 01A 02A | 1 | AIR | X | \approx | | | 72- | HR { | \gtrsim | ¥ = 49 ¥ = 21 | | |
| CHI -5-6 | 2/5/97 | 15:45 | 03A | 1 | CONCRETE | • | | >< | | | | | | UR TAT | FOR |
| CHI - 6-7 | <u> </u> | | <u>04A</u> 05A | 3 | +1 | | | >==================================== | | 24. | HR | > | AIR S | AMPLES | 1 m . 1 A . 1 L |
| CHI-1-8 | V | 7 | NSA_ | | V | | | | | | | | R.MIL S.SHI | S TO A. | RNOX JEHKINZ |
| | | | | | | | | | | | | | | UR TAT F | OR |
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| RELINQUISHED (Signature) | BY: CNC |). / _0 . | D) 0 | DA | 11/92 | TIME | | RECEIVED I (Signature | | | 1/2 | 1 | Pa | DATE | TIME |
| (Signature) | $\overline{}$ | C A | 777 | | | 120 | | | mode | cel (| /Z_ | refu | dl | 2/6/85 | 1200 |
| RELINQUISHED (Signature) | Nucla | 12K | chelle | DAT Q | 6/72 | 13G | : | RECEIVED I (Signature | | ald | c. ge | ense | ·p1 | 2/6/97 | TIME 13:00 |
| RELINQUISHED (Signature) | BY: | | | DA | re | TIME | | RECEIVED I (Signature | 3Y: | | | | | DATE | TIME |
| METHOD OF SHI | PMENT: | | | DA | ΓE | TIME | | AB COMME | ENTS: | | | | | <u> </u> | 1 |
| Sample Collecto | or: | 1900 Pov | FRICKE•RECOR well Street, 12th e, California 94 2-4500 | Floor | | .1 | , | Analytical L | | EN | 1 | | | | |

Certificate of Analysis

DOHS Centification 1.70

VHA Accidents of

PAGE 1

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

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

C.O.C. NUMBER: 1092

REPORT DATE: 02/13/97

DATE(S) SAMPLED: 02/06/97

DATE RECEIVED: 02/07/97

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.

Arry Klein Muhalle for Laboratory Director

ft: 13

PAGE 2

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

| **** | METHOD/ | | REPORTING | | | | | |
|----------------|-------------|--------|-----------|----------|----------|--|--|--|
| ANALYTE | CAS# | RESULT | LIMIT | UNITS | ANALYZED | | | |
| #Sample Volume | | 863 | L | iters | | | | |
| #Digestion | | - | - Pi | rep Date | 02/11/97 | | | |
| Arsenic in Air | NIOSH 7300M | 0.038 | mọ | g/m3 | 02/12/97 | | | |
| Lead in Air | NIOSH 7300M | 0.024 | mç | g/m3 | 02/12/97 | | | |

PAGE 3

LEVINE-FRICKE-RECON

SAMPLE ID: 3042-0206-2 AEN LAB NO: 9702082-02 AEN WORK ORDER: 9702082 DATE SAMPLED: 02/06/97 DATE RECEIVED: 02/07/97 REPORT DATE: 02/13/97

| , | | | J. 02002 |
|--------|-------|-----|-------------|
| CLIENT | PROJ. | ID: | 3042.95-005 |

| ANAL VITE | METHOD/ | DECI I | REPORTING LIMIT UNITS | DATE NITS ANALYZED | | |
|----------------|-------------|--------|--------------------------|-----------------------|--|--|
| ANALYTE | CAS# | RESULT | LIMIT UNITS | ANALIZED | | |
| #Sample Volume | | 861 | Liters | | | |
| #Digestion | | - | - Prep Dat | ce 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/Medi INSTRUMENT: TJA Enviro 36 UNITS: ug | | LAB ID: PREPARED: ANALYZED: | IFA_BLNK 02/12/97 | INSTR RUN: ICP\970212131500/1/ BATCH ID: IFA021197 DILUTION: 1.000000 | | | | |
|--|----------------------|-----------------------------------|----------------------|---|-----------------|----------------------------|---------|------------------|
| METHOD: ANALYTE Arsenic, MCEF Lead, MCEF | RESULT <1 <0.5 | ref Result | REPORTING LIMIT | SPIKE VALUE | RECOVERY (%) | REC LIMITS (%) LOW HIGH | RPD (%) | RPD LIMIT (%) |

METHOD SPIKE SAMPLES

| SAMPLE TYPE: Spike-Method/Med INSTRUMENT: TJA Enviro 36 UNITS: ug | ia blank | | LAB ID: PREPARED: ANALYZED: | | | INSTR RUN: ICP\970212131500/3/1 BATCH ID: IFA021197 DILUTION: 1.000000 |
|--|------------------------|-----------------------------------|-----------------------------------|--------------------------------|--|--|
| METHOD: ANALYTE Arsenic, MCEF Lead, MCEF | RESULT 6.20 8.28 | REF RESULT <1 <0.5 | REPORTING LIMIT | SPIKE VALUE 6.00 7.50 | RECOVERY (%) 103 110 | REC LIMITS (%) RPD LOW HIGH RPD (%) LIMIT (%) 68 127 72 121 |
| SAMPLE TYPE: Spike-Method/Med INSTRUMENT: TJA Enviro 36 UNITS: ug METHOD: | | LAB ID: PREPARED: ANALYZED: | | | INSTR RUN: ICP\970212131500/2/1 BATCH ID: IFA021197 DILUTION: 1.000000 | |
| ANALYTE Arsenic, MCEF Lead, MCEF | RESULT 6.00 8.22 | REF RESULT <1 <0.5 | REPORTING LIMIT | SPIKE VALUE 6.00 7.50 | RECOVERY (%) 100 110 | REC LIMITS (%) RPD LOW HIGH RPD (%) LIMIT (%) 68 127 72 121 |

METHOD SPIKE DUPLICATES

| SAMPLE TYPE: Method Spike Sa INSTRUMENT: TJA Enviro 36 UNITS: ug | mple Duplica | ite | LAB ID: PREPARED ANALYZED | IFA_MR : : 02/12/97 | INSTR RUN: ICP\970212131500/4/2 BATCH ID: IFA021197 DILUTION: 1.000000 | | | | |
|--|------------------------|-------------------------------|---------------------------------|---------------------------|--|---------------------------|-------------------------------|------------------------------|--|
| METHOD: ANALYTE Arsenic, MCEF Lead, MCEF | RESULT 6.20 8.28 | REF RESULT 6.00 8.22 | REPORTING LIMIT | SPIKE VALUE | RECOVERY (%) | REC LIMITS (% LOW HIGH |) RPD (%) 3.28 0.727 | RPD LIMIT (%) 10 10 | |

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

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

9702082

| Project No.: 3042.95 - 005 | | | | Project Location: EMERYVILLE, CA Date: 2/6/97 | | | | | | | Serial No. | | |
|---|----------|--|-------------------|---|----------------------------|-------------------------|---------------|---------------------------|----------|----------------|--------------|------------------------------------|-----------|
| Project Name: RIFKIN WALL DEMO Sampler (Signature): Olyander R. Jali | | | | | Field Logbook No.: Nº 1092 | | | | | | | | 1092 |
| | | | | | ANALYSES | | | | | | | Samplers: | ARJ |
| | | | SAMPLES | | | | کهر ب | 2 300 | | | 0/4/ | 7 | |
| SAMPLE NO. | DATE | TIME | LAB SAMPLE NO. | NO. OF CON- TAINERS | SAMPLE TYPE | Parks | | o ma | | | ADID RUSH | REMARK | S |
| 3042-0206-1 3042-0206-2 | 216197 | 17:10 | 01A 02A | l | AIR | × | X | | | | | 863 L 861 L | |
| | | | | | | | | | - | | 72-H | OUR TAT | |
| | | | | | | | | | | | R . | LTS TO A. J MILELLI I A SHIU | |
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| Sample Collector: LEVINE•FRICKE•RECON 1900 Powell Street, 12th Floor Emeryville, California 94608-1827 (510) 652-4500 | | | | | | | | Analytical La | A E | Ν | | | 9 |