



JONAS & ASSOCIATES INC.

Environmental Consultants

2815 Mitchell Drive, Suite 209 • Walnut Creek, CA 94598 • Tel: (510) 933-5360 • Fax: (510) 933-5362

DRAFT - SUBJECT TO REVISION

November 14, 1995

Mr. Mark Warner
Performance Excavators
3060 Kerner Blvd., Suite A
San Rafael, California 94901

Subject: Preliminary Status Report
Project: City of Emeryville, Shellmound/Former Barbay Coast Site - Underground Storage Tank Removal Performed on November 3, 1995.

Dear Mark:

We have received the laboratory analytical reports for the subject project. Presented below is a summary of activities performed and laboratory analytical results.

1. On November 3, 1995, under Alameda County Health Care Services' supervision, one 2,000-gallon underground storage tank was removed by Performance Excavators (PERFEX) from the Shellmound/Former Barbay Coast site located in City of Emeryville, California.
2. The tank owner is City of Emeryville, 2200 Powell Street, 12th Floor, Emeryville, California 94608. The City's manager on this project is Mr. Juan C. Arreguin.
3. An Underground Tank Closure Plan/Permit was approved by Alameda County Health Care Services on November 3, 1995. The County's project manager is Ms. Susan L. Hugo, Senior Hazardous Materials Specialist. The County's address is: Division of Environmental Protection, Department of Environmental Health, 1131 Harbor Bay Parkway, 2nd Floor, Alameda, California 94502.
4. On November 3, 1995, Ms. Romena Jonas of Jonas & Associates Inc. (J&A), met with Inspector George Warren of the City of Emeryville Fire Department to obtain a tank removal permit. However, Mr. Warren waived the requirement.
5. A Regulation 8, Rule 40 Notification Form was completed and sent to the Bay Area Air Quality Management District on November 3, 1995.
6. During the excavation activities both agency representatives, Ms. Hugo and Inspector Warren were present.
7. The tank was emptied and rinsed by System Operation Services, Inc. (SOS), contracted by the City of Emeryville. SOS's mailing address is 2140 Shattuck Avenue, 11th Floor, Berkeley, California 94704. According to the City of Emeryville, the wastewater will be

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treated by SOS. Neither PERFEX, nor J&A have any involvement in the wastewater treatment activities.

8. The tank was inerted with 15 lbs of dry ice per 1000 gallon capacity, and then excavated by PERFEX. PERFEX is located at 3060 Kerner Blvd., Suite A, San Rafael, California 94901. The Environmental Consultants on the project were representatives from Jonas & Associates Inc. (J&A), located at 2815 Mitchell Drive, Suite 209, Walnut Creek, California, 94598.
9. The tank was transported to Erickson, Inc.'s facility by Trident Truck Line, US EPA Number CAD982484370, as "*Non-RCRA Hazardous Waste Solid, Waste Empty Storage Tank.*" Erickson, Inc., is located at 255 Parr Blvd., Richmond, California 94801
10. Approximate tank dimensions, construction material, and observed conditions are presented below:

| | |
|------------------------|---------------------------|
| Capacity: | 2,000-gallons |
| Length: | 23 feet |
| Diameter: | 3.5 feet |
| Construction Material: | Steel |
| Conditions Observed: | Intact, without corrosion |
| Content: | Possible waste oil |

11. Prior to tank excavation, a sample was collected from the content of the tank by SOS. The sample was analyzed for the following parameters:
 - CAM 17 Metals (EPA Method 3010A M/6010/7470)
 - Volatile Organic Compounds (EPA Method 8240/8260)
 - Ph (EPA Method 9040/9045)
 - Polychlorinated Biphenyl (PCBs) (EPA Method 3510/8080 M)

Detected parameters and their concentrations are presented in Table 1, Appendix I.

12. After tank removal, two soil samples (one from each end of the tank: Shell-East and Shell-West) were collected and analyzed for the following parameters:
 - CAM 17 Metals (Metals) (EPA Method 3010A M/6010/7471)
 - pH (EPA Method 9040/9045)
 - Total Extractable Petroleum Hydrocarbons as kerosene, diesel, and motor oil (TEPH-k,d,mo) (EPA Method 3550/8015M)
 - Total Petroleum Hydrocarbons as gasoline (TPH-g) with Benzene, Toluene, Ethyl Benzene, and Total Xylene (BTEX) (EPA Method 5030/8015/8020)

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- Volatile Organic Compounds (VOCs) (EPA Method 8240/8260)
- Base/Neutral, Acid Extractables (Semi-VOCs) (EPA Method 3550/8270)

In addition, a composite of three soil samples (Stockpile A,B,C) collected from the soil stockpile was analyzed for the same parameters as the excavation samples, with the addition of CA Title 22 W.E.T. (STLC) CAM 17 Metals (Metals/WET) (EPA Method 3005A M/6010/7470).

No water was encountered in the excavation pit.

Sample numbers, detected parameters, and their concentrations are presented in Table 2 (Appendix I). All the other parameters tested for, but not presented in Table 2, were not detected above their laboratory reported detection limits.

13. The soil samples collected from the excavation pit did not exceed the available regulatory limits for all the parameters tested for (conditional upon agencies acceptance of the assumed TEPH-k and TEPH-mo regulatory limits specified in Table 2).

For the stockpile sample, Cadmium, Lead, and Zinc exceeded their STLC limits. Lead concentration also exceeded its TTLC limit.

14. Appendix I contains report tables. Appendix II presents laboratory analytical reports for the tank content sample collected by SOS. Appendix III contains laboratory analytical reports for the soil samples collected by J&A during tank excavation activities.

15. An Underground Storage Tank Unauthorized Release (LEAK)/Contamination Site Report has been completed and is being submitted with a copy of this correspondence to Ms. Susan Hugo.

Upon backfilling of the excavation pit and removal and disposal of soil stockpile, a closure report will be prepared and submitted to City of Emeryville and Alameda County Health Care Services.

Should you have any questions, or comments, please contact us at your convenience.

Sincerely,
JONAS & ASSOCIATES INC.


Romena Jonas
Principal

cc: Ms. Susan Hugo, Alameda County Health Care Services
Mr. Juan C. Arreguin, City of Emeryville

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**APPENDIX I
REPORT TABLES**

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**TABLE 1
DETECTED PARAMETERS
SAMPLE FROM TANK CONTENT
COLLECTED ON OCTOBER 27, 1995**

| PARAMETER | CONCENTRATION (mg/l) |
|--|----------------------|
| Barium | 0.05 |
| Copper | 0.23 |
| Lead | 0.87 |
| Molybdenum | 0.04 |
| Nickel | 0.04 |
| Selenium | 0.03 |
| Vanadium | 0.01 |
| Zinc | 0.16 |
| Acetone | 4.1 |
| Benzene | 2.0 |
| Methyl Ethyl Ketone | 1.6 |
| 1,2-Dichloroethane | 0.84 |
| Ethylbenzene | 1.7 |
| Toluene | 24.0 |
| Vinyl Chloride | 0.028 |
| Total Xylenes | 17.0 |
| pH | 1.7* |
| * PERFEX was informed by the company (SOS) who had collected the liquid sample, that the sample contained preservatives. Therefore, the pH sample result is incorrect. | |

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TABLE 2
 DETECTED PARAMETERS
 SAMPLES FROM EXCAVATION PIT AND SOIL STOCKPILE
 COLLECTED ON NOVEMBER 3, 1995

| PARAMETER | SAMPLE NUMBER AND DETECTED CONCENTRATIONS | | | | AVAILABLE REGULATORY LIMITS | |
|------------|---|-----------------------|----------------------------|---|-----------------------------|--------|
| | SHELL-EAST (mg/kg) | SHELL-WEST (mg/kg) | STOCKPILE A,B,C (mg/kg) | STOCKPILE A,B,C (mg/l) METAL/WET | STLC | TTLIC |
| Antimony | 16 | ND | 7.6 | ND | 15 | 500 |
| Arsenic | 44 | 2.6 | ND | ND | 5.0 | 500 |
| Barium | 320 | 460 | 430 | 10 | 100 | 10,000 |
| Cadmium | 12 | 4.2 | 26 | 1.2 | 0.75 | 75 |
| Chromium | 400 | 300 | 280 | ND | 5 | 500 |
| Cobalt | 13 | 7.8 | 7.0 | ND | 80 | 8,000 |
| Copper | 1200 | 460 | 680 | ND | 25 | 2,500 |
| Lead | 920 | 190 | 1200 | 15 | 5.0 | 1,000 |
| Mercury | 1.4 | 0.71 | 1.2 | ND | 0.2 | 20 |
| Molybdenum | ND | ND | 3.6 | ND | 350 | 3,500 |
| Nickel | 150 | 51 | 88 | 0.8 | 20 | 2,000 |
| Selenium | ND | ND | 2.7 | ND | 1.0 | 100 |
| Silver | 11 | 9.7 | 14 | ND | 5 | 500 |

TABLE 2^(Continued)
 DETECTED PARAMETERS
 SAMPLES FROM EXCAVATION PIT AND SOIL STOCKPILE
 COLLECTED ON NOVEMBER 3, 1995

DRAFT SUBJECT TO REVISION

| PARAMETER | SAMPLE NUMBER AND DETECTED CONCENTRATIONS | | | | AVAILABLE REGULATORY LIMITS | |
|---------------|---|-----------------------|----------------------------|---|-----------------------------|-----------------------|
| | SHELL-EAST (mg/kg) | SHELL-WEST (mg/kg) | STOCKPILE A,B,C (mg/kg) | STOCKPILE A,B,C (mg/l) METAL/WET | STLC | TTLC |
| Thallium | 7.0 | ND | ND | ND | 7.0 | 700 |
| Vanadium | 61 | 53 | 66 | 1.8 | 24 | 2,400 |
| Zinc | 2900 | 720 | 4100 | 600 | 250 | 5,000 |
| pH | 8.8 | 9.2 | 10.4 | NT | NA | NA |
| TEPH-k | ND | 6.7 | ND | NT | NA | 100 (assumed) |
| TEPH-mo | 140 | 190 | 170 | NT | NA | 500 - 1,000 (assumed) |
| Total Xylenes | ND | 0.022 | ND | NT | NA | NA |
| Ethyl Benzene | ND | 0.012 | ND | NT | NA | NA |

Note: ND = Not detected above the laboratory reported detection limit.
 NA = Not Available
 NT = Not Tested

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**APPENDIX II
LABORATORY ANALYTICAL REPORTS
TANK CONTENT SAMPLE
COLLECTED ON OCTOBER 27, 1995**

CHROMALAB, INC.

Environmental Services (SOC)

October 27, 1995

Submission #: 9510390

CITY OF EMERYVILLE

Atten: Mike Roberts/Larry Russel

Project: MJB
Received: October 26, 1995

re: One sample for CAM 17 Metals analysis.
Method: EPA 3010A M/6010/7470

Sample ID: SHELL MOUND JOB-MJB/SPAC.
Sample #: 100117 Matrix: WATER Extracted: October 27, 1995
Sampled: October 26, 1995 Run: 9117-C Analyzed: October 27, 1995

| Analyte | RESULT | REPORTING | BLANK | BLANK | SPK |
|------------|--------|-----------|--------|--------|-----|
| | (mg/L) | LIMIT | RESULT | RESULT | (%) |
| ANTHRACENE | N.D. | 0.02 | N.D. | | 105 |
| ARSENIC | N.D. | 0.01 | N.D. | | 99 |
| BARIUM | 0.05 | 0.01 | N.D. | | 109 |
| BERYLLIUM | N.D. | 0.005 | N.D. | | 112 |
| CADMIUM | N.D. | 0.005 | N.D. | | 106 |
| CHROMIUM | N.D. | 0.01 | N.D. | | 109 |
| COBALT | N.D. | 0.01 | N.D. | | 109 |
| COPPER | 0.23 | 0.01 | N.D. | | 109 |
| LEAD | 0.87 | 0.01 | N.D. | | 107 |
| MOLYBDENUM | 0.04 | 0.01 | N.D. | | 106 |
| NICKEL | 0.04 | 0.01 | N.D. | | 109 |
| SELENIUM | 0.03 | 0.01 | N.D. | | 103 |
| SILVER | N.D. | 0.01 | N.D. | | 103 |
| THALLIUM | N.D. | 0.02 | N.D. | | 100 |
| VANADIUM | 0.01 | 0.01 | N.D. | | 111 |
| ZINC | 0.16 | 0.01 | N.D. | | 107 |
| MERCURY | N.D. | 0.001 | N.D. | | 85 |

Charles Woolley
Charles Woolley
Chemist

John B. Labaah
John B. Labaah
Inorganic Supervisor

CHROMALAB, INC.

Environmental Services (ESCS)

October 27, 1995

Submission #: 9510390

CITY OF EMERYVILLE

Atten: Mike Roberts/Larry Russel

Project: MJB

Received: October 26, 1995

re: One sample for Volatile Organic Compounds analysis.

Method: EPA 8240/8260

Sample ID: SHELL ROUND 008-MJB/SPEC.

Sample #: 109117

Matrix: WATER

Sampled: October 26, 1995

Run: 9127-A

Analysed: October 27, 1995

| Analyte | RESULT (ug/L) | REPORTING LIMIT (ug/L) | BLANK RESULT (ug/L) | BLANK RESULT (%) | SPIKE |
|---------------------------|------------------|------------------------------|---------------------------|------------------------|-------|
| ACETONE | 4100 | 1000 | N.D. | | |
| BENZENE | 3000 | 500 | N.D. | | 101 |
| BROMODICHLOROMETHANE | N.D. | 2.0 | N.D. | | |
| BROMOFORM | N.D. | 2.0 | N.D. | | |
| BROMOMETHANE | N.D. | 2.0 | N.D. | | |
| METHYL ETHYL KETONE | 1600 | 500 | N.D. | | |
| CARBON TETRACHLORIDE | N.D. | 2.0 | N.D. | | |
| CHLOROBENZENE | N.D. | 2.0 | N.D. | | 100 |
| CHLOROETHANE | N.D. | 2.0 | N.D. | | |
| 2-CHLOROETHYL VINYL ETHER | N.D. | 2.0 | N.D. | | |
| CHLOROFORM | N.D. | 2.0 | N.D. | | |
| CHLOROMETHANE | N.D. | 2.0 | N.D. | | |
| DIBROMOCHLOROMETHANE | N.D. | 2.0 | N.D. | | |
| 1,1-DICHLOROETHANE | N.D. | 2.0 | N.D. | | |
| 1,2-DICHLOROETHANE | N.D. | 500 | N.D. | | |
| 1,1-DICHLOROETHENE | N.D. | 2.0 | N.D. | | 80 |
| CIS-1,2-DICHLOROETHENE | N.D. | 2.0 | N.D. | | |
| TRANS-1,2-DICHLOROETHENE | N.D. | 2.0 | N.D. | | |
| 1,2-DICHLOROPROPANE | N.D. | 2.0 | N.D. | | |
| CIS-1,3-DICHLOROPROPENE | N.D. | 2.0 | N.D. | | |
| TRANS-1,3-DICHLOROPROPENE | N.D. | 2.0 | N.D. | | |
| ETHYLBENZENE | 1700 | 500 | N.D. | | |
| 2-HEXANONE | N.D. | 2.0 | N.D. | | |
| METHYLENE CHLORIDE | N.D. | 2.0 | N.D. | | |
| METHYL ISOBUTYL KETONE | N.D. | 2.0 | N.D. | | |
| STYRENE | N.D. | 2.0 | N.D. | | |
| 1,1,2,2-TETRACHLOROETHANE | N.D. | 2.0 | N.D. | | |
| TETRACHLOROETHENE | N.D. | 2.0 | N.D. | | |
| TOLUENE | 24000 | 500 | N.D. | | 91 |
| 1,1,1-TRICHLOROETHANE | N.D. | 2.0 | N.D. | | |
| 1,1,2-TRICHLOROETHANE | N.D. | 2.0 | N.D. | | |
| TRICHLOROETHENE | N.D. | 2.0 | N.D. | | 98 |
| TRICHLOROFLUOROMETHANE | N.D. | 2.0 | N.D. | | |
| VINYL ACETATE | N.D. | 2.0 | N.D. | | |
| VINYL CHLORIDE | 28 | 2.0 | N.D. | | |
| TOTAL XYLENES | 17000 | 500 | N.D. | | |

Arion McMichael
Arion McMichael
Chemist

Ali Khayati
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Organic Manager

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CHROMALAB, INC.

Environmental Services (ESD)

October 27, 1995

Submission #: 9510390

CITY OF EMERYVILLE

Atten: Mike Roberts/Larry Russel

Project: MJB
Received: October 26, 1995

re: 1 sample for pH analysis.
Method: EPA 9040/9045

Sampled: October 26, 1995 Matrix: WATER Extracted: October 27, 1995
Run: 9119-C Analyzed: October 27, 1995

| Sp. # | Sample ID | pH (UNITS) | REPORTING LIMIT (UNITS) | BLANK RESULT (UNITS) | BLANK RESULT (%) | SPKR RESULT (%) |
|--------|------------------------------|---------------|-------------------------------|----------------------------|------------------------|-----------------------|
| 108117 | SHELL HOOD JOB- MJB/SPEC. | 1.7 | 0.1 | N.D. | | |

Carol House
Carolyn House
Extractions Supervisor

Ali Kharfesi
Ali Kharfesi
Organic Manager

CHROMALAB, INC.

Environmental Services (ESD)

October 27, 1995

Submission #: 9510390

CITY OF EMERYVILLE

Atten: Mike Roberts/Larry Russel

Project: MJB

Received: October 26, 1995

re: One sample for 8080 MOD PCBs - WATER analysis.

Method: MOD. EPA 3510/8080

Sample ID: SUELL SOUND JOB-MJB/SPSC.

Sample #: 108117

Matrix: WATER


Extracted: October 27, 1995

Sampled: October 26, 1995

Run: 9123-D

Analyzed: October 27, 1995

| Analyte | RESULT (ug/L) | REPORTING LIMIT (ug/L) | BLANK RESULT (ug/L) | BLANK SPIKE RESULT (%) |
|--------------|------------------|------------------------------|---------------------------|------------------------------|
| AROCLOR 1016 | N.D. | 0.5 | N.D. | -- |
| AROCLOR 1221 | N.D. | 0.5 | N.D. | -- |
| AROCLOR 1232 | N.D. | 0.5 | N.D. | -- |
| AROCLOR 1242 | N.D. | 0.5 | N.D. | -- |
| AROCLOR 1248 | N.D. | 0.5 | N.D. | -- |
| AROCLOR 1254 | N.D. | 0.5 | N.D. | -- |
| AROCLOR 1260 | N.D. | 0.5 | N.D. | 96 |


 Dennis Mayuga
 Chemist


 Ali Kharrazi
 Organic Manager

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**APPENDIX III
LABORATORY ANALYTICAL REPORTS
EXCAVATION AND STOCKPILE SOIL SAMPLES
COLLECTED ON NOVEMBER 3, 1995**

CHROMALAB, INC.

Environmental Services (SDB)

November 13, 1995

Submission #: 9511114

JONAS & ASSOCIATES, INC.

Atten: Romena Jonas

Project: CITY OF EMERYVILLE
Received: November 6, 1995

Project#: PFX-211

re: One sample for CAM 17 Metals analysis.
Method: EPA 3050A M/6010/7471

SampleID: SHELL-EAST

Sample #: 109647

Matrix: SOIL

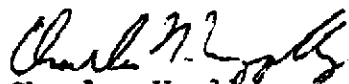
Extracted: November 9, 1995

Sampled: November 3, 1995

Run: 9307-C

Analyzed: November 13, 1995

| Analyte | RESULT (mg/Kg) | REPORTING | BLANK | BLANK SPIKE |
|------------|-------------------|------------------|-------------------|---------------|
| | | LIMIT (mg/Kg) | RESULT (mg/Kg) | RESULT (%) |
| ANTIMONY | 16 | 2.0 | N.D. | 101 |
| ARSENIC | 44 | 1.0 | N.D. | 101 |
| BARIUM | 320 | 1.0 | N.D. | 98 |
| BERYLLIUM | N.D. | 0.5 | N.D. | 103 |
| CADMIUM | 12 | 0.5 | N.D. | 99 |
| CHROMIUM | 400 | 1.0 | N.D. | 100 |
| COBALT | 13 | 1.0 | N.D. | 100 |
| COPPER | 1200 | 1.0 | N.D. | 99 |
| LEAD | 920 | 1.0 | N.D. | 100 |
| MOLYBDENUM | N.D. | 1.0 | N.D. | 101 |
| NICKEL | 150 | 1.0 | N.D. | 98 |
| SELENIUM | N.D. | 2.0 | N.D. | 101 |
| SILVER | 11 | 1.0 | N.D. | 98 |
| THALLIUM | 7.0 | 2.0 | N.D. | 101 |
| VANADIUM | 61 | 1.0 | N.D. | 99 |
| ZINC | 2900 | 1.0 | N.D. | 98 |
| MERCURY | 1.4 | 0.05 | N.D. | 97 |



Charles Woolley
Chemist



John S. Labash
Inorganic Supervisor

CHROMALAB, INC.

Environmental Services (SDB)

November 13, 1995

Submission #: 9511114

JONAS & ASSOCIATES, INC.

Atten: Romena Jonas

Project: CITY OF EMERYVILLE
Received: November 6, 1995

Project#: PFX-211

re: One sample for CAM 17 Metals analysis.
Method: EPA 3050A M/6010/7471

SampleID: SHELL-WEST

Sample #: 109648

Matrix: SOIL

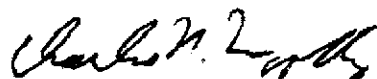
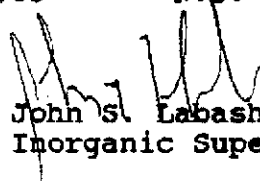
Extracted: November 9, 1995

Sampled: November 3, 1995

Run: 9307-C

Analyzed: November 13, 1995

| Analyte | RESULT | REPORTING | BLANK | BLANK SPIKE |
|------------|---------|-----------|---------|-------------|
| | (mg/Kg) | LIMIT | RESULT | RESULT |
| | (mg/Kg) | (mg/Kg) | (mg/Kg) | (%) |
| ANTIMONY | N.D. | 2.0 | N.D. | 101 |
| ARSENIC | 2.6 | 1.0 | N.D. | 101 |
| BARIUM | 460 | 1.0 | N.D. | 98 |
| BERYLLIUM | N.D. | 0.5 | N.D. | 103 |
| CADMIUM | 4.2 | 0.5 | N.D. | 99 |
| CHROMIUM | 300 | 1.0 | N.D. | 100 |
| COBALT | 7.8 | 1.0 | N.D. | 100 |
| COPPER | 460 | 1.0 | N.D. | 99 |
| LEAD | 190 | 1.0 | N.D. | 100 |
| MOLYBDENUM | N.D. | 1.0 | N.D. | 101 |
| NICKEL | 51 | 1.0 | N.D. | 98 |
| SELENIUM | N.D. | 2.0 | N.D. | 101 |
| SILVER | 9.7 | 1.0 | N.D. | 98 |
| THALLIUM | N.D. | 2.0 | N.D. | 101 |
| VANADIUM | 53 | 1.0 | N.D. | 99 |
| ZINC | 720 | 1.0 | N.D. | 98 |
| MERCURY | 0.71 | 0.05 | N.D. | 97 |

Charles Woolley
ChemistJohn St. Labash
Inorganic Supervisor

CHROMALAB, INC.

Environmental Services (SDB)

November 13, 1995

Submission #: 9511114

JONAS & ASSOCIATES, INC.

Atten: Romena Jonas

Project: CITY OF EMERYVILLE
Received: November 6, 1995

Project#: PFX-211

re: One sample for CAM 17 Metals analysis.
Method: EPA 3050A M/6010/7471

SampleID: STOCKPILE A,B,C

Sample #: 109649

Sampled: November 3, 1995

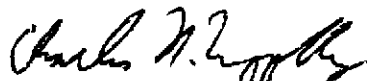
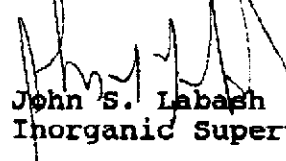
Matrix: SOIL

Run: 9307-C

Extracted: November 9, 1995

Analyzed: November 13, 1995

| Analyte | RESULT | REPORTING | BLANK | BLANK SPIKE |
|------------|---------|-----------|---------|-------------|
| | (mg/Kg) | LIMIT | RESULT | RESULT |
| | | (mg/Kg) | (mg/Kg) | (%) |
| ANTIMONY | 7.6 | 2.0 | N.D. | 101 |
| ARSENIC | N.D. | 1.0 | N.D. | 101 |
| BARIUM | 430 | 1.0 | N.D. | 98 |
| BERYLLIUM | N.D. | 0.5 | N.D. | 103 |
| CADMIUM | 26 | 0.5 | N.D. | 99 |
| CHROMIUM | 280 | 1.0 | N.D. | 100 |
| COBALT | 7.0 | 1.0 | N.D. | 100 |
| COPPER | 680 | 1.0 | N.D. | 99 |
| LEAD | 1200 | 1.0 | N.D. | 100 |
| MOLYBDENUM | 3.6 | 1.0 | N.D. | 101 |
| NICKEL | 88 | 1.0 | N.D. | 98 |
| SELENIUM | 2.7 | 2.0 | N.D. | 101 |
| SILVER | 14 | 1.0 | N.D. | 98 |
| THALLIUM | N.D. | 2.0 | N.D. | 101 |
| VANADIUM | 66 | 1.0 | N.D. | 99 |
| ZINC | 4100 | 1.0 | N.D. | 98 |
| MERCURY | 1.2 | 0.05 | N.D. | 97 |


Charles Woolley
Chemist

John S. Labash
Inorganic Supervisor

CHROMALAB, INC.

Environmental Services (SDB)

November 14, 1995

Submission #: 9511114

JONAS & ASSOCIATES, INC.

Atten: Romena Jonas

Project: CITY OF EMERYVILLE
Received: November 6, 1995

Project#: PFX-211

re: One sample for CA Title 22 W.E.T. (STLC) CAM 17 Metals analysis.
Method: CA WET/EPA 3005A M/6010/7470

SampleID: STOCKPILE A,B,C

Sample #: 110338

Sampled: November 3, 1995

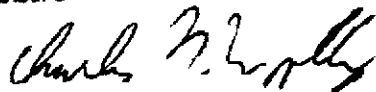
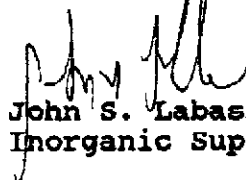
Matrix: SOIL

Run: 9335-C

Extracted: November 13, 1995

Analyzed: November 13, 1995

| Analyte | RESULT | REPORTING | BLANK | BLANK SPIKE |
|------------|--------|-----------|--------|-------------|
| | (mg/L) | LIMIT | RESULT | RESULT |
| | | (mg/L) | (mg/L) | (%) |
| ANTIMONY | N.D. | 0.5 | N.D. | 98 |
| ARSENIC | N.D. | 0.5 | N.D. | 88 |
| BARIUM | 10 | 0.1 | N.D. | 95 |
| BERYLLIUM | N.D. | 0.1 | N.D. | 96 |
| CADMIUM | 1.2 | 0.1 | N.D. | 94 |
| CHROMIUM | N.D. | 0.5 | N.D. | 94 |
| COBALT | N.D. | 0.5 | N.D. | 95 |
| COPPER | N.D. | 0.5 | N.D. | 97 |
| LEAD | 15 | 0.5 | N.D. | 93 |
| MOLYBDENUM | N.D. | 0.5 | N.D. | 96 |
| NICKEL | 0.8 | 0.5 | N.D. | 92 |
| SELENIUM | N.D. | 0.2 | N.D. | 103 |
| SILVER | N.D. | 0.5 | N.D. | 94 |
| THALLIUM | N.D. | 0.5 | N.D. | 90 |
| VANADIUM | 1.8 | 0.5 | N.D. | 96 |
| ZINC | 600 | 0.5 | N.D. | 93 |


Charles Woolley
Chemist

John S. Labash
Inorganic Supervisor

CHROMALAB, INC.

Environmental Services (SDB)

November 8, 1995

Submission #: 9511114

JONAS & ASSOCIATES, INC.

Atten: Romena Jonas

Project: CITY OF EMERYVILLE
Received: November 6, 1995

Project#: PFX-211

re: 3 samples for pH analysis.
Method: EPA 9040/9045

Sampled: November 3, 1995 Matrix: SOIL Extracted: November 8, 1995
Run: 9285-C Analyzed: November 8, 1995

| <u>Spl #</u> | <u>Sample ID</u> | <u>PH</u> <u>(UNITS)</u> | <u>REPORTING</u> <u>LIMIT</u> <u>(UNITS)</u> | <u>BLANK</u> <u>RESULT</u> <u>(UNITS)</u> | <u>BLANK SPIKE</u> <u>RESULT</u> <u>(%)</u> |
|--------------|------------------|-----------------------------|--|---|---|
| 109647 | SHELL-EAST | 8.8 | 0.10 | N.D. | -- |
| 109648 | SHELL-WEST | 9.2 | 0.10 | N.D. | -- |
| 109649 | STOCKPILE A,B,C | 10.4 | 0.10 | N.D. | -- |


Carolyn House
Extractions Supervisor


Ali Kharrazi
Organic Manager

CHROMALAB, INC.

Environmental Services (SDB)

November 14, 1995

Submission #: 9511114

JONAS & ASSOCIATES, INC.

Atten: Romena Jonas
 Project: CITY OF EMERYVILLE
 Received: November 6, 1995

Project#: PFX-211

re: 3 samples for Total Extractable Petroleum Hydrocarbons (TEPH)
 analysis.

Method: EPA 3550/8015M
 Sampled: November 3, 1995


Matrix: SOIL
 Run: 9333-K

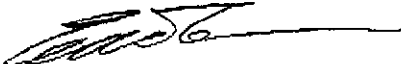
Extracted: November 9, 1995
 Analyzed: November 10, 1995

| Spl # | Sample ID | Kerosene (mg/Kg) | Diesel (mg/Kg) | Motor Oil (mg/Kg) |
|--------|-----------------|---------------------|-------------------|----------------------|
| 109647 | SHELL-EAST | N.D. | N.D. | 140 |
| 109648 | SHELL-WEST | 6.7 | N.D. | 190 |
| 109649 | STOCKPILE A,B,C | N.D. | N.D. | 170 |

Reporting Limits
 Blank Result
 Blank Spike Result (%)

| | | |
|------|------|------|
| 1.0 | 1.0 | 50 |
| N.D. | N.D. | N.D. |
| -- | 87 | -- |


 Kayvan Kimyai
 Chemist


 Eric Tam
 Laboratory Director

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CHROMALAB, INC.

Environmental Services (SDB)

November 14, 1995

Submission #: 9511114

JONAS & ASSOCIATES, INC.

Atten: Romena Jonas

Project: CITY OF EMERYVILLE

Project#: PFX-211

Received: November 6, 1995

re: One sample for Volatile Organic Compounds analysis.

Method: EPA 8240/8260

SampleID: SHELL-EAST

Sample #: 109647


Matrix: SOIL

Sampled: November 3, 1995

Run: 9365-A

Analyzed: November 13, 1995

| Analyte | RESULT | REPORTING | BLANK | BLANK SPIKE |
|-----------------------------|---------|-----------|---------|-------------|
| | (ug/Kg) | LIMIT | RESULT | RESULT |
| | | (ug/Kg) | (ug/Kg) | (%) |
| ACETONE | N.D. | 10 | N.D. | -- |
| BENZENE | N.D. | 5.0 | N.D. | 114 |
| BROMODICHLOROMETHANE | N.D. | 5.0 | N.D. | -- |
| BROMOFORM | N.D. | 5.0 | N.D. | -- |
| BROMOMETHANE | N.D. | 5.0 | N.D. | -- |
| 2-BUTANONE | N.D. | 5.0 | N.D. | -- |
| CARBON TETRACHLORIDE | N.D. | 5.0 | N.D. | -- |
| CHLOROBENZENE | N.D. | 5.0 | N.D. | 107 |
| CHLOROETHANE | N.D. | 5.0 | N.D. | -- |
| 2-CHLOROETHYLVINYLETHER | N.D. | 5.0 | N.D. | -- |
| CHLOROFORM | N.D. | 5.0 | N.D. | -- |
| CHLOROMETHANE | N.D. | 5.0 | N.D. | -- |
| DIBROMOCHLOROMETHANE | N.D. | 5.0 | N.D. | -- |
| 1,1-DICHLOROETHANE | N.D. | 5.0 | N.D. | -- |
| 1,2-DICHLOROETHANE | N.D. | 5.0 | N.D. | -- |
| 1,1-DICHLOROETHENE | N.D. | 5.0 | N.D. | 123 |
| 1,2-DICHLOROETHENE (CIS) | N.D. | 5.0 | N.D. | -- |
| 1,2-DICHLOROETHENE (TRANS) | N.D. | 5.0 | N.D. | -- |
| 1,2-DICHLOROPROPANE | N.D. | 5.0 | N.D. | -- |
| 1,3-DICHLOROPROPENE (CIS) | N.D. | 5.0 | N.D. | -- |
| 1,3-DICHLOROPROPENE (TRANS) | N.D. | 5.0 | N.D. | -- |
| ETHYL BENZENE | N.D. | 5.0 | N.D. | -- |
| 2-HEXANONE | N.D. | 5.0 | N.D. | -- |
| METHYLENE CHLORIDE | N.D. | 5.0 | N.D. | -- |
| 4-METHYL-2-PENTANONE | N.D. | 5.0 | N.D. | -- |
| STYRENE | N.D. | 5.0 | N.D. | -- |
| 1,1,2,2-TETRACHLOROETHANE | N.D. | 5.0 | N.D. | -- |
| TETRACHLOROETHENE | N.D. | 5.0 | N.D. | -- |
| TOLUENE | N.D. | 5.0 | N.D. | 106 |
| 1,1,1-TRICHLOROETHANE | N.D. | 5.0 | N.D. | -- |
| 1,1,2-TRICHLOROETHANE | N.D. | 5.0 | N.D. | -- |
| TRICHLOROETHENE | N.D. | 5.0 | N.D. | 109 |
| TRICHLOROFLUOROMETHANE | N.D. | 5.0 | N.D. | -- |
| VINYL ACETATE | N.D. | 5.0 | N.D. | -- |
| VINYL CHLORIDE | N.D. | 5.0 | N.D. | -- |
| TOTAL XYLENES | N.D. | 5.0 | N.D. | -- |



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Federal ID #68-0140157

CHROMALAB, INC.

Environmental Services (SDB)

November 14, 1995

Submission #: 9511114

JONAS & ASSOCIATES, INC.

Atten: Romena Jonas

Project: CITY OF EMERYVILLE

Project#: PFX-211

Received: November 6, 1995

re: One sample for Volatile Organic Compounds analysis.

Method: EPA 8240/8260

Sample ID: STOCKPILE A,B,C

Sample #: 109649

Matrix: SOIL

Sampled: November 3, 1995

Run: 9365-A

Analyzed: November 13, 1995

| Analyta | RESULT (ug/Kg) | REPORTING LIMIT (ug/Kg) | BLANK RESULT (ug/Kg) | BLANK SPIKE RESULT (%) |
|-----------------------------|-------------------|-------------------------------|----------------------------|------------------------------|
| ACETONE | N.D. | 10 | N.D. | -- |
| BENZENE | N.D. | 5.0 | N.D. | 114 |
| BROMODICHLOROMETHANE | N.D. | 5.0 | N.D. | -- |
| BROMOFORM | N.D. | 5.0 | N.D. | -- |
| BROMOMETHANE | N.D. | 5.0 | N.D. | -- |
| 2-BUTANONE | N.D. | 5.0 | N.D. | -- |
| CARBON TETRACHLORIDE | N.D. | 5.0 | N.D. | -- |
| CHLOROBENZENE | N.D. | 5.0 | N.D. | 107 |
| CHLOROETHANE | N.D. | 5.0 | N.D. | -- |
| 2-CHLOROETHYLVINYLETHER | N.D. | 5.0 | N.D. | -- |
| CHLOROFORM | N.D. | 5.0 | N.D. | -- |
| CHLOROMETHANE | N.D. | 5.0 | N.D. | -- |
| DIBROMOCHLOROMETHANE | N.D. | 5.0 | N.D. | -- |
| 1,1-DICHLOROETHANE | N.D. | 5.0 | N.D. | -- |
| 1,2-DICHLOROETHANE | N.D. | 5.0 | N.D. | -- |
| 1,1-DICHLOROETHENE | N.D. | 5.0 | N.D. | 123 |
| 1,2-DICHLOROETHENE (CIS) | N.D. | 5.0 | N.D. | -- |
| 1,2-DICHLOROETHENE (TRANS) | N.D. | 5.0 | N.D. | -- |
| 1,2-DICHLOROPROPANE | N.D. | 5.0 | N.D. | -- |
| 1,3-DICHLOROPROPENE (CIS) | N.D. | 5.0 | N.D. | -- |
| 1,3-DICHLOROPROPENE (TRANS) | N.D. | 5.0 | N.D. | -- |
| ETHYL BENZENE | N.D. | 5.0 | N.D. | -- |
| 2-HEXANONE | N.D. | 5.0 | N.D. | -- |
| METHYLENE CHLORIDE | N.D. | 5.0 | N.D. | -- |
| 4-METHYL-2-PENTANONE | N.D. | 5.0 | N.D. | -- |
| STYRENE | N.D. | 5.0 | N.D. | -- |
| 1,1,2,2-TETRACHLOROETHANE | N.D. | 5.0 | N.D. | -- |
| TETRACHLOROETHENE | N.D. | 5.0 | N.D. | -- |
| TOLUENE | N.D. | 5.0 | N.D. | 106 |
| 1,1,1-TRICHLOROETHANE | N.D. | 5.0 | N.D. | -- |
| 1,1,2-TRICHLOROETHANE | N.D. | 5.0 | N.D. | -- |
| TRICHLOROETHENE | N.D. | 5.0 | N.D. | 109 |
| TRICHLOROFLUOROMETHANE | N.D. | 5.0 | N.D. | -- |
| VINYL ACETATE | N.D. | 5.0 | N.D. | -- |
| VINYL CHLORIDE | N.D. | 5.0 | N.D. | -- |
| TOTAL XYLENES | N.D. | 5.0 | N.D. | -- |



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Eric Tam
Laboratory Director

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Federal ID #68-0140157

CHROMALAB, INC.

Environmental Services (SOS)

November 14, 1995

Submission #: 9511114

JONAS & ASSOCIATES, INC.

Atten: Romena Jonas

Project: CITY OF EMERYVILLE
Received: November 6, 1995

Project#: PFX-211

re: One sample for Semivolatile Organics (BNAs) analysis.
Method: EPA 3550/8270

SampleID: SHELL-EAST

Sample #: 109647

Matrix: SOIL

Extracted: November 10, 1995

Sampled: November 3, 1995

Run: 9322-A

Analyzed: November 10, 1995

| Analyte | RESULT | REPORTING | BLANK | BLANK SPIKE |
|------------------------------|---------|------------------|-------------------|---------------|
| | (mg/Kg) | LIMIT (mg/Kg) | RESULT (mg/Kg) | RESULT (%) |
| PHENOL | N.D. | 10 | N.D. | -- |
| BIS(2-CHLOROETHYL) ETHER | N.D. | 10 | N.D. | -- |
| 2-CHLOROPHENOL | N.D. | 10 | N.D. | 73 |
| 1,3-DICHLOROBENZENE | N.D. | 10 | N.D. | -- |
| 1,4-DICHLOROBENZENE | N.D. | 10 | N.D. | -- |
| BENZYL ALCOHOL | N.D. | 20 | N.D. | -- |
| 1,2-DICHLOROBENZENE | N.D. | 10 | N.D. | -- |
| O-METHYLPHENOL | N.D. | 10 | N.D. | -- |
| BIS(2-CHLOROISOPROPYL) ETHER | N.D. | 10 | N.D. | -- |
| m+p-METHYLPHENOL | N.D. | 20 | N.D. | -- |
| N-NITROSO-DI-N-PROPYLAMINE | N.D. | 10 | N.D. | 73 |
| HEXACHLOROETHANE | N.D. | 10 | N.D. | -- |
| NITROBENZENE | N.D. | 10 | N.D. | -- |
| ISOPHORONE | N.D. | 10 | N.D. | -- |
| 2-NITROPHENOL | N.D. | 10 | N.D. | -- |
| 2,4-DIMETHYLPHENOL | N.D. | 10 | N.D. | -- |
| BIS(2-CHLOROETHOXY) METHANE | N.D. | 10 | N.D. | -- |
| 2,4-DICHLOROPHENOL | N.D. | 10 | N.D. | -- |
| 1,2,4-TRICHLOROBENZENE | N.D. | 10 | N.D. | 75 |
| NAPHTHALENE | N.D. | 10 | N.D. | -- |
| 4-CHLOROANILINE | N.D. | 20 | N.D. | -- |
| HEXACHLOROBTADIENE | N.D. | 10 | N.D. | -- |
| 4-CHLORO-3-METHYLPHENOL | N.D. | 20 | N.D. | 76 |
| 2-METHYLNAPHTHALENE | N.D. | 10 | N.D. | -- |
| HEXACHLOROCYCLOPENTADIENE | N.D. | 10 | N.D. | -- |
| 2,4,6-TRICHLOROPHENOL | N.D. | 10 | N.D. | -- |
| 2,4,5-TRICHLOROPHENOL | N.D. | 10 | N.D. | -- |
| 2-CHLORONAPHTHALENE | N.D. | 50 | N.D. | -- |
| 2-NITROANILINE | N.D. | 10 | N.D. | -- |
| DIMETHYL PHTHALATE | N.D. | 50 | N.D. | -- |
| ACENAPHTHYLENE | N.D. | 10 | N.D. | -- |
| 3-NITROANILINE | N.D. | 50 | N.D. | -- |
| ACENAPHTHENE | N.D. | 10 | N.D. | 74 |
| 2,4-DINITROPHENOL | N.D. | 50 | N.D. | -- |
| 4-NITROPHENOL | N.D. | 50 | N.D. | -- |
| DIBENZOFURAN | N.D. | 10 | N.D. | -- |
| 2,4-DINITROTOLUENE | N.D. | 10 | N.D. | -- |
| 2,6-DINITROTOLUENE | N.D. | 20 | N.D. | -- |
| DIETHYL PHTHALATE | N.D. | 50 | N.D. | -- |

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510-933-5362 11/13

1180
NQC1106 YR 15:15:30

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(510) 484-1919 • Facsimile (510) 484-1096

Federal ID #68-0140157

510-933-5362 11/13

1180
NQC1106 YR 15:15:30

CHROMALAB, INC.

Environmental Services (SDB)

November 14, 1995

Submission #: 9511114
page 2

JONAS & ASSOCIATES, INC.

Atten: Romena Jonas

Project: CITY OF EMERYVILLE
Received: November 6, 1995

Project#: PFX-211

re: One sample for Semivolatile Organics (BNAAs) analysis, continued.
Method: EPA 3550/8270

SampleID: SHELL-EAST

Sample #: 109647

Sampled: November 3, 1995

Matrix: SOIL

Run: 9322-A

Extracted: November 10, 1995

Analyzed: November 10, 1995

| Analyte | RESULT | REPORTING LIMIT | BLANK RESULT | BLANK SPIKE RESULT |
|------------------------------|---------|-----------------|--------------|--------------------|
| | (mg/Kg) | (mg/Kg) | (mg/Kg) | (%) |
| 4-CHLOROPHENYL PHENYL ETHER | N.D. | 10 | N.D. | -- |
| FLUORENE | N.D. | 10 | N.D. | -- |
| 4-NITROANILINE | N.D. | 50 | N.D. | -- |
| 4,6-DINITRO-2-METHYLPHENOL | N.D. | 50 | N.D. | -- |
| N-NITROSO-DI-N-PHENYLAMINE | N.D. | 10 | N.D. | -- |
| 4-BROMOPHENYL PHENYL ETHER | N.D. | 10 | N.D. | -- |
| HEXACHLOROBENZENE | N.D. | 10 | N.D. | -- |
| PENTACHLOROPHENOL | N.D. | 50 | N.D. | 80 |
| PHENATHRENE | N.D. | 10 | N.D. | -- |
| ANTHRACENE | N.D. | 10 | N.D. | -- |
| DI-N-BUTYL PHTHALATE | N.D. | 50 | N.D. | -- |
| FLUORANTHENE | N.D. | 10 | N.D. | -- |
| PYRENE | N.D. | 10 | N.D. | 87 |
| BUTYL BENZYL PHTHALATE | N.D. | 50 | N.D. | -- |
| 3,3'-DICHLOROBENZIDINE | N.D. | 20 | N.D. | -- |
| BENZO (A) ANTHRACENE | N.D. | 10 | N.D. | -- |
| BIS (2-ETHYLHEXYL) PHTHALATE | N.D. | 50 | N.D. | -- |
| CHRYSENE | N.D. | 10 | N.D. | -- |
| DI-N-OCTYL PHTHALATE | N.D. | 50 | N.D. | -- |
| BENZO (B) FLUORANTHENE | N.D. | 10 | N.D. | -- |
| BENZO (K) FLUORANTHENE | N.D. | 20 | N.D. | -- |
| BENZO (A) PYRENE | N.D. | 5 | N.D. | -- |
| INDENO (1,2,3 C,D) PYRENE | N.D. | 20 | N.D. | -- |
| DIBENZ (A,H) ANTHRACENE | N.D. | 20 | N.D. | -- |
| BENZ (G,H,I) PERYLENE | N.D. | 20 | N.D. | -- |

For above analyte:

REPORTING LIMITS RAISED BY 100X DUE TO MATRIX INTERFERENCE


Alex Tam
Chemist


Eric Tam
Laboratory Director

CHROMALAB, INC.

Environmental Services (SOB)

November 14, 1995

Submission #: 9511114

JONAS & ASSOCIATES, INC.

Atten: Romena Jonas

Project: CITY OF EMERYVILLE
Received: November 6, 1995

Project#: PFX-211

re: One sample for Semivolatile Organics (BNAs) analysis.
Method: EPA 3550/8270

Sample ID: SHELL-WEST

Sample #: 109648

Sampled: November 3, 1995

Matrix: SOIL

Run: 9322-A

Extracted: November 10, 1995

Analyzed: November 12, 1995

| Analyte | RESULT (mg/Kg) | REPORTING LIMIT (mg/Kg) | BLANK RESULT (mg/Kg) | BLANK SPIKE RESULT (%) |
|------------------------------|-------------------|-------------------------------|----------------------------|------------------------------|
| PHENOL | N.D. | 1.0 | N.D. | -- |
| BIS(2-CHLOROETHYL) ETHER | N.D. | 1.0 | N.D. | -- |
| 2-CHLOROPHENOL | N.D. | 1.0 | N.D. | 73 |
| 1,3-DICHLOROBENZENE | N.D. | 1.0 | N.D. | -- |
| 1,4-DICHLOROBENZENE | N.D. | 1.0 | N.D. | -- |
| BENZYL ALCOHOL | N.D. | 2.0 | N.D. | -- |
| 1,2-DICHLOROBENZENE | N.D. | 1.0 | N.D. | -- |
| O-METHYLPHENOL | N.D. | 1.0 | N.D. | -- |
| BIS(2-CHLOROISOPROPYL) ETHER | N.D. | 1.0 | N.D. | -- |
| m+p-METHYLPHENOL | N.D. | 2.0 | N.D. | -- |
| N-NITROSO-DI-N-PROPYLAMINE | N.D. | 1.0 | N.D. | 73 |
| HEXACHLOROETHANE | N.D. | 1.0 | N.D. | -- |
| NITROBENZENE | N.D. | 1.0 | N.D. | -- |
| ISOPHORONE | N.D. | 1.0 | N.D. | -- |
| 2-NITROPHENOL | N.D. | 1.0 | N.D. | -- |
| 2,4-DIMETHYLPHENOL | N.D. | 1.0 | N.D. | -- |
| BIS(2-CHLOROETHOXY) METHANE | N.D. | 1.0 | N.D. | -- |
| 2,4-DICHLOROPHENOL | N.D. | 1.0 | N.D. | 75 |
| 1,2,4-TRICHLOROBENZENE | N.D. | 1.0 | N.D. | -- |
| NAPHTHALENE | N.D. | 2.0 | N.D. | -- |
| 4-CHLOROANILINE | N.D. | 1.0 | N.D. | -- |
| HEXACHLOROBTADIENE | N.D. | 1.0 | N.D. | 76 |
| 4-CHLORO-3-METHYLPHENOL | N.D. | 2.0 | N.D. | -- |
| 2-METHYLNAPHTHALENE | N.D. | 1.0 | N.D. | -- |
| HEXACHLOROCYCLOPENTADIENE | N.D. | 1.0 | N.D. | -- |
| 2,4,6-TRICHLOROPHENOL | N.D. | 1.0 | N.D. | -- |
| 2,4,5-TRICHLOROPHENOL | N.D. | 1.0 | N.D. | -- |
| 2-CHLORONAPHTHALENE | N.D. | 5.0 | N.D. | -- |
| 2-NITROANILINE | N.D. | 1.0 | N.D. | -- |
| DIMETHYL PHTHALATE | N.D. | 5.0 | N.D. | -- |
| ACENAPHTHYLENE | N.D. | 1.0 | N.D. | -- |
| 3-NITROANILINE | N.D. | 5.0 | N.D. | -- |
| ACENAPHTHENE | N.D. | 1.0 | N.D. | 74 |
| 2,4-DINITROPHENOL | N.D. | 5.0 | N.D. | -- |
| 4-NITROPHENOL | N.D. | 5.0 | N.D. | -- |
| DIBENZOFURAN | N.D. | 1.0 | N.D. | -- |
| 2,4-DINITROTOLUENE | N.D. | 1.0 | N.D. | -- |
| 2,6-DINITROTOLUENE | N.D. | 2.0 | N.D. | -- |
| DIETHYL PHTHALATE | N.D. | 5.0 | N.D. | -- |

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Federal ID #68-0140157

CHROMALAB, INC.

Environmental Services (SDB)

November 14, 1995

Submission #: 9511114
page 2

JONAS & ASSOCIATES, INC.

Atten: Romena Jonas

Project: CITY OF EMERYVILLE
Received: November 6, 1995

Project#: PFX-211

re: One sample for Semivolatile Organics (BNAs) analysis, continued.
Method: EPA 3550/8270

SampleID: SHELL-WEST
Sample #: 109648
Sampled: November 3, 1995


Matrix: SOIL
Run: 9322-A

Extracted: November 10, 1995
Analyzed: November 12, 1995

| Analyte | RESULT | REPORTING LIMIT | BLANK RESULT | BLANK SPIKE RESULT |
|------------------------------|---------|-----------------|--------------|--------------------|
| | (mg/Kg) | (mg/Kg) | (mg/Kg) | (%) |
| 4-CHLOROPHENYL PHENYL ETHER | N.D. | 1.0 | N.D. | -- |
| FLUORENE | N.D. | 1.0 | N.D. | -- |
| 4-NITROANILINE | N.D. | 5.0 | N.D. | -- |
| 4,6-DINITRO-2-METHYLPHENOL | N.D. | 5.0 | N.D. | -- |
| N-NITROSO-DI-N-PHENYLAMINE | N.D. | 1.0 | N.D. | -- |
| 4-BROMOPHENYL PHENYL ETHER | N.D. | 1.0 | N.D. | -- |
| HEXACHLOROBENZENE | N.D. | 1.0 | N.D. | -- |
| PENTACHLOROPHENOL | N.D. | 5.0 | N.D. | 80 |
| PHENATHRENE | N.D. | 1.0 | N.D. | -- |
| ANTHRACENE | N.D. | 1.0 | N.D. | -- |
| DI-N-BUTYL PHTHALATE | N.D. | 5.0 | N.D. | -- |
| FLUORANTHENE | N.D. | 1.0 | N.D. | -- |
| PYRENE | N.D. | 1.0 | N.D. | 87 |
| BUTYL BENZYL PHTHALATE | N.D. | 5.0 | N.D. | -- |
| 3,3'-DICHLOROBENZIDINE | N.D. | 2.0 | N.D. | -- |
| BENZO (A) ANTHRACENE | N.D. | 1.0 | N.D. | -- |
| BIS (2-ETHYLHEXYL) PHTHALATE | N.D. | 5.0 | N.D. | -- |
| CHRYSENE | N.D. | 1.0 | N.D. | -- |
| DI-N-OCTYL PHTHALATE | N.D. | 5.0 | N.D. | -- |
| BENZO (B) FLUORANTHENE | N.D. | 1.0 | N.D. | -- |
| BENZO (K) FLUORANTHENE | N.D. | 2.0 | N.D. | -- |
| BENZO (A) PYRENE | N.D. | 0.5 | N.D. | -- |
| INDENO (1,2,3 C,D) PYRENE | N.D. | 2.0 | N.D. | -- |
| DIBENZ (A,H) ANTHRACENE | N.D. | 2.0 | N.D. | -- |
| BENZ (G,H,I) PERYLENE | N.D. | 2.0 | N.D. | -- |

For above analyte:

REPORTING LIMITS RAISED BY 10X DUE TO MATRIX INTERFERENCE


Alex Tam
Chemist


Eric Tam
Laboratory Director

CHROMALAB, INC.

Environmental Services (SDB)

November 14, 1995

Submission #: 9511114

JONAS & ASSOCIATES, INC.

Atten: Romena Jonas

Project: CITY OF EMERYVILLE

Project#: PFX-211

Received: November 6, 1995

re: One sample for Semivolatile Organics (BNAs) analysis.

Method: EPA 3550/8270

SampleID: STOCKPILE A,B,C

Sample #: 109649

Matrix: SOIL

Extracted: November 10, 1995

Sampled: November 3, 1995

Run: 9322-A

Analyzed: November 12, 1995

| Analyte | RESULT | REPORTING | BLANK | BLANK SPIKE |
|-------------------------------|---------|-----------|---------|-------------|
| | (mg/Kg) | LIMIT | RESULT | RESULT |
| | | (mg/Kg) | (mg/Kg) | (%) |
| PHENOL | N.D. | 5.0 | N.D. | -- |
| BIS (2-CHLOROETHYL) ETHER | N.D. | 5.0 | N.D. | -- |
| 2-CHLOROPHENOL | N.D. | 5.0 | N.D. | 73 |
| 1,3-DICHLOROBENZENE | N.D. | 5.0 | N.D. | -- |
| 1,4-DICHLOROBENZENE | N.D. | 5.0 | N.D. | -- |
| BENZYL ALCOHOL | N.D. | 10 | N.D. | -- |
| 1,2-DICHLOROBENZENE | N.D. | 5.0 | N.D. | -- |
| O-METHYLPHENOL | N.D. | 5.0 | N.D. | -- |
| BIS (2-CHLOROISOPROPYL) ETHER | N.D. | 5.0 | N.D. | -- |
| m+p-METHYLPHENOL | N.D. | 10 | N.D. | -- |
| N-NITROSO-DI-N-PROPYLAMINE | N.D. | 5.0 | N.D. | 73 |
| HEXACHLOROETHANE | N.D. | 5.0 | N.D. | -- |
| NITROBENZENE | N.D. | 5.0 | N.D. | -- |
| ISOPHORONE | N.D. | 5.0 | N.D. | -- |
| 2-NITROPHENOL | N.D. | 5.0 | N.D. | -- |
| 2,4-DIMETHYLPHENOL | N.D. | 5.0 | N.D. | -- |
| BIS (2-CHLOROETHOXY) METHANE | N.D. | 5.0 | N.D. | -- |
| 2,4-DICHLOROPHENOL | N.D. | 5.0 | N.D. | -- |
| 1,2,4-TRICHLOROBENZENE | N.D. | 5.0 | N.D. | 75 |
| NAPHTHALENE | N.D. | 5.0 | N.D. | -- |
| 4-CHLOROANILINE | N.D. | 10 | N.D. | -- |
| HEXACHLOROBUTADIENE | N.D. | 5.0 | N.D. | -- |
| 4-CHLORO-3-METHYLPHENOL | N.D. | 10 | N.D. | 76 |
| 2-METHYLNAPHTHALENE | N.D. | 5.0 | N.D. | -- |
| HEXACHLOROCYCLOPENTADIENE | N.D. | 5.0 | N.D. | -- |
| 2,4,6-TRICHLOROPHENOL | N.D. | 5.0 | N.D. | -- |
| 2,4,5-TRICHLOROPHENOL | N.D. | 5.0 | N.D. | -- |
| 2-CHLORONAPHTHALENE | N.D. | 25 | N.D. | -- |
| 2-NITROANILINE | N.D. | 5.0 | N.D. | -- |
| DIMETHYL PHTHALATE | N.D. | 25 | N.D. | -- |
| ACENAPHTHYLENE | N.D. | 5.0 | N.D. | -- |
| 3-NITROANILINE | N.D. | 25 | N.D. | -- |
| ACENAPHTHENE | N.D. | 5.0 | N.D. | 74 |
| 2,4-DINITROPHENOL | N.D. | 25 | N.D. | -- |
| 4-NITROPHENOL | N.D. | 25 | N.D. | -- |
| DIBENZOFURAN | N.D. | 5.0 | N.D. | -- |
| 2,4-DINITROTOLUENE | N.D. | 5.0 | N.D. | -- |
| 2,6-DINITROTOLUENE | N.D. | 10 | N.D. | -- |
| DIETHYL PHTHALATE | N.D. | 25 | N.D. | -- |

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CHROMALAB, INC.

Environmental Services (SDB)

November 14, 1995

Submission #: 9511114
page 2

JONAS & ASSOCIATES, INC.

Atten: Romena Jonas

Project: CITY OF EMERYVILLE
Received: November 6, 1995

Project#: PFX-211

re: One sample for Semivolatile Organics (BNAs) analysis, continued.
Method: EPA 3550/8270

SampleID: STOCKPILE A,B,C

Sample #: 109649

Matrix: SOIL

Extracted: November 10, 1995

Sampled: November 3, 1995

Run: 9322-A

Analyzed: November 12, 1995

| Analyte | RESULT | REPORTING | BLANK | BLANK SPIKE |
|------------------------------|---------|-----------|---------|-------------|
| | (mg/Kg) | LIMIT | RESULT | RESULT |
| | | (mg/Kg) | (mg/Kg) | (%) |
| 4-CHLOROPHENYL PHENYL ETHER | N.D. | 5.0 | N.D. | -- |
| FLUORENE | N.D. | 5.0 | N.D. | -- |
| 4-NITROANILINE | N.D. | 25 | N.D. | -- |
| 4,6-DINITRO-2-METHYLPHENOL | N.D. | 25 | N.D. | -- |
| N-NITROSO-DI-N-PHENYLAMINE | N.D. | 5.0 | N.D. | -- |
| 4-BROMOPHENYL PHENYL ETHER | N.D. | 5.0 | N.D. | -- |
| HEXACHLOROBENZENE | N.D. | 5.0 | N.D. | -- |
| PENTACHLOROPHENOL | N.D. | 25 | N.D. | 80 |
| PHENATHRENE | N.D. | 5.0 | N.D. | -- |
| ANTHRACENE | N.D. | 5.0 | N.D. | -- |
| DI-N-BUTYL PHTHALATE | N.D. | 25 | N.D. | -- |
| FLUORANTHENE | N.D. | 5.0 | N.D. | -- |
| PYRENE | N.D. | 5.0 | N.D. | 87 |
| BUTYL BENZYL PHTHALATE | N.D. | 25 | N.D. | -- |
| 3,3'-DICHLOROBENZIDINE | N.D. | 10 | N.D. | -- |
| BENZO (A) ANTHRACENE | N.D. | 5.0 | N.D. | -- |
| BIS (2-ETHYLHEXYL) PHTHALATE | N.D. | 25 | N.D. | -- |
| CHRYSENE | N.D. | 5.0 | N.D. | -- |
| DI-N-OCTYL PHTHALATE | N.D. | 25 | N.D. | -- |
| BENZO (B) FLUORANTHENE | N.D. | 5.0 | N.D. | -- |
| BENZO (K) FLUORANTHENE | N.D. | 10 | N.D. | -- |
| BENZO (A) PYRENE | N.D. | 2.5 | N.D. | -- |
| INDENO (1,2,3 C,D) PYRENE | N.D. | 10 | N.D. | -- |
| DIBENZ (A,H) ANTHRACENE | N.D. | 10 | N.D. | -- |
| BENZ (G,H,I) PERYLENE | N.D. | 10 | N.D. | -- |

For above analyte:

REPORTING LIMITS RAISED BY 50X DUE TO MATRIX INTERFERENCE

Alex Tam
ChemistEric Tam
Laboratory Director

CHROMALAB, INC.

Environmental Services (SDB)

November 14, 1995

Submission #: 9511114

JONAS & ASSOCIATES, INC.

Atten: Romena Jonas

Project: CITY OF EMERYVILLE
Received: November 6, 1995

Project#: PFX-211

re: 3 samples for Gasoline and BTEX analysis.
Method: EPA 5030/8015M/8020

Sampled: November 3, 1995


Matrix: SOIL

Run: 9362-1

Analyzed: November 13, 1995

| Spl # | Sample ID | Gasoline (mg/Kg) | Benzene (ug/Kg) | Toluene (ug/Kg) | Ethyl Benzene (ug/Kg) | Total Xylenes (ug/Kg) |
|--------|-------------------|--|--------------------|--------------------|-----------------------------|-----------------------------|
| 109647 | SHELL-EAST | N.D. | N.D. | N.D. | N.D. | N.D. |
| 109648 | SHELL-WEST | N.D. | N.D. | N.D. | 12 | 22 |
| | For above sample: | Unknown hydrocarbons were found in gasoline range. | | | | |
| 109649 | STOCKPILE A,B,C | N.D. | N.D. | N.D. | N.D. | N.D. |

| | | | | | |
|------------------------|------|------|------|------|------|
| Reporting Limits | 1.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Blank Result | N.D. | N.D. | N.D. | N.D. | N.D. |
| Blank Spike Result (%) | 94 | 103 | 102 | 104 | 103 |


Jaspal Singh
Chemist

Eric Tam
Laboratory Director

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