

ATC ENVIRONMENTAL INC.

ENVIRONMENTAL
PROTECTION
95 NOV -7 AM 8:51

6 November 1996
14543.0001

Alameda County Health Care Services Agency
Department of Environmental Health
1131 Harbor Bay Parkway
Alameda, California 94502-6577

STUD 385

Attention: Ms. Susan L. Hugo, Senior Hazardous Materials Specialist

SUBJECT: ASTM TIER 2 RBCA EVALUATION AND INDOOR AIR QUALITY SURVEY AT
1461 PARK AVENUE IN EMERYVILLE, CALIFORNIA

Dear Ms. Hugo:

ATC Environmental Inc. is pleased to submit this report on behalf of Union Bank of California (acting as trustee), to present the results of an American Society of Testing and Materials (ASTM) standard Risked Based Corrective Action (RCBA) Tier 2 evaluation and an indoor air quality survey at the Watson Trust Property located at 1461 Park Avenue in Emeryville, California. The work conducted for this phase of investigation was summarized in our Work Plan dated 6 August 1996 and the subsequent approval of that Work Plan by the Alameda County Health Care Services Agency, Department of Environmental Health (ACHCSA) in their letter dated 20 September 1996.

Based on the information presented in this report, and the information presented in the 28 March 1996 report, it is the judgment of ATC Environmental Inc. that the site should be considered a low risk groundwater case as described in the 5 January 1996 RWQCB Memorandum. Due to the fact that groundwater quality has been monitored quarterly at the site for a period of one year in addition to sampling conducted in 1990 and 1991, the hydrocarbon plume at the site is judged to be stable, and that the residual, low concentrations of petroleum hydrocarbons will eventually be effectively reduced by natural biodegradation processes, it is requested that the site be considered positively for case closure by the Alameda County Health Care Services Agency, Department of Environmental Health.

On behalf of Union Bank of California (acting as trustee), we appreciate your prompt review of this submittal. If you have any questions regarding the information presented in this work plan, do not hesitate to call either of the undersigned at (408) 474-0280, or Ms. Susan E. McCormack at Union Bank of California at, 818-810-6594.

Very truly yours,
ATC Environmental Inc.



ALEX J. GALLEGO, RG 6349
Project Geologist

cc: Dr. Ravi Arulanantham, Regional Water Quality Control Board
Ms. Susan E. McCormack, Union Bank of California

Solutions For Environmental Concerns



**ASTM TIER 2 RBCA EVALUATION AND
INDOOR AIR QUALITY SURVEY**

**WATSON TRUST PROPERTY
1461 PARK AVENUE
EMERYVILLE, CALIFORNIA
PROJECT NO. 14543.0001**

6 NOVEMBER 1996

ASTM TIER 2 RBCA EVALUATION AND
INDOOR AIR QUALITY SURVEY

Conducted on

Watson Trust Property
1461 Park Avenue
Emeryville, California

for

UNION BANK OF CALIFORNIA (acting as Trustee)
17800 Castleton Street, Suite 586
City of Industry, California

Prepared by:

ALEX J. GALLEGO, RG 6349
Project Manager


Signature

WILLIAM G. THEYSKENS, CEG, CHG
Branch Manager


Signature

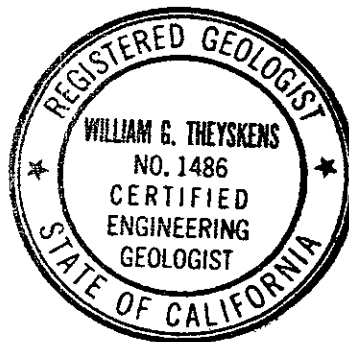


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1.0 INTRODUCTION

ATC Environmental Inc. is pleased to submit this report on behalf of Union Bank of California (acting as trustee), to present the results of an American Society of Testing and Materials (ASTM) standard Risked Based Corrective Action (RCBA) Tier 2 evaluation and an indoor air quality survey at the Watson Trust Property located at 1461 Park Avenue in Emeryville, California (site; Figure 1). The work conducted for this phase of investigation was summarized in our Work Plan dated 6 August 1996 and the subsequent approval of that Work Plan by the Alameda County Health Care Services Agency, Department of Environmental Health (ACHCSA) in their letter dated 20 September 1996.

2.0 SITE BACKGROUND

Previous work conducted at the site included the removal of two underground storage tanks (USTs) in March 1990. A 3,000-gallon gasoline UST was reported to be found in good condition. A 500-gallon UST, thought to have contained either diesel or gasoline, was reported to have showed evidence of leakage. The tanks were excavated, and soil and groundwater samples were collected. The soil and groundwater were reported to contain elevated concentrations of total petroleum hydrocarbons as gasoline (TPHg) and benzene, toluene, ethylbenzene and xylenes (BTEX). In September 1990, three groundwater monitoring wells were installed. Union Bank of California (as Trustee) has been required to conduct quarterly groundwater monitoring by the Alameda County Health Care Services Agency, Department of Environmental Health, UST Local Oversight Program. Groundwater sampling was conducted by Blakely Environmental Inc. in May 1995 and July 1995. Applied Geosciences Inc. conducted groundwater sampling in November 1995 and January 1996. Upon the approval of Ms. Hugo of the ACHCSA, the quarterly groundwater monitoring has been suspended pending the outcome of recent activities related to potential closure of the case.

Relatively low concentrations, to non-detect levels, of petroleum hydrocarbons and/or associated constituents were reported in the groundwater samples collected from the three monitoring wells during the most recent (January 1996) groundwater sampling event. The highest concentrations of petroleum hydrocarbons were reported in the sample collected from monitoring well MW1, located immediately adjacent to the former location of the UST, with concentrations attenuating rapidly in a down-gradient groundwater flow direction. Low concentrations of benzene and toluene were reported in MW-2, and only benzene was reported in MW-3. The concentrations of petroleum hydrocarbons and/or associated constituents have decreased, or have been relatively stable, in the three monitoring wells over the monitoring period.

ASTM Tier 2 RBCA Evaluation and
Indoor Air Quality Survey
Watson Trust, 1461 Park Avenue, Emeryville, CA

Applied Geosciences Inc. conducted a well survey and an ASTM Tier 1 RBCA study for the site as documented in their report dated 28 March 1996. The Tier 1 RBCA study was conducted in light of the 5 January 1996 Regional Water Quality Control Board (RWQCB) memorandum which discusses closure of low risk groundwater contamination cases. As discussed in this study, no direct points of exposure (POE) exist for the residual concentrations of petroleum hydrocarbons that exist at the site. The area weighted average of residual concentrations of benzene in groundwater at the site are below the Risk Based Screening Level (RBSL) for the indirect exposure pathway of volatilization from groundwater to enclosed buildings. In this study, the indirect exposure pathway of volatilization from impacted soil to enclosed buildings was not considered because the impacted soil is below the groundwater table. The impacted soil has been interpreted to be present as a 1-foot layer at a depth of 6-feet below the ground surface (BGS). Groundwater is present at the site at a depth of approximately 4-feet BGS.

In the 11 June 1996 ACHCSA response to the Tier 1 RBCA study, they were in agreement with the Tier 1 evaluation with the exception of the exposure pathway of soil vapor intrusion from soil into buildings. The ACHCSA had questions regarding the elevated concentrations of benzene detected in soil samples collected from beneath the building at 6-feet below the ground surface and the potential for benzene vapor migration from this soil to the building. Because of this, the ACHCSA requested that a Tier 2 evaluation using site specific conditions be conducted to facilitate case closure. It was our opinion that the Tier 2 evaluation would not generate RBSLs that are sufficiently low to allow the soil to remain in-place without treatment. Therefore, it was proposed that if the site did not pass the Tier 2 evaluation, an indoor air quality survey would be conducted to collect actual field data related to the possible presence of benzene, toluene, ethylbenzene and xylenes (BTEX) in indoor air in the area of the building underlain by soil containing these constituents. Personnel from the ACHCSA stated that this approach seemed reasonable and would be acceptable.

3.0 OBJECTIVES

The objectives of this investigation were to conduct an ASTM Tier 2 RBCA evaluation, and if necessary, an indoor air quality survey at the site.

4.0 SCOPE OF WORK

The scope of work developed to meet the objectives included the following:

- An American Society of Testing and Materials (ASTM) standard Risked Based Corrective Action (RCBA) Tier 2 evaluation following Standard E 1739-95 and the Tier 2 Guidance Manual for Risk-Based Corrective Action published by Groundwater Services, Inc. in corporation with ASTM.
- An Indoor Air Quality (IAQ) survey conducted by a Certified Industrial Hygienist in accordance with the National Institute for Occupational Safety and Health (NIOSH) Method 1501 Issue 2, dated 15 August 1994.

5.0 ASTM TIER 2 RBCA EVALUATION

The ACHCSA was in agreement with the Tier 1 evaluation of the exposure pathways of vapor intrusion from groundwater to buildings, and groundwater volatilization to outdoor air. Additionally, the direct exposure pathways were judged unlikely due to the fact that the entire site is capped with asphalt and/or building and the shallow groundwater in the site vicinity is not used, and will not likely be used in the future, for drinking water purposes. Therefore, the exposure pathway of volatilization from soils will be the only exposure pathway considered in this evaluation. It should be noted that in the 28 March 1996 Tier 1 evaluation, this exposure pathway was considered unlikely due to the fact that the soil in question is judged to be limited to a narrow band which is currently below the groundwater table. However, at the request of the ACHCSA, this exposure pathway is evaluated in detail in this report. Specifically, the ACHCSA had questions regarding the residual levels of benzene reported in two soil samples collected from 6 feet below the ground surface (BGS). These concentrations were 13 milligrams per kilogram (mg/kg) and 10 mg/kg in soil samples collected from borings No.s 208 and 209, respectively. The borings were drilled inside the on-site structure in an area which is currently used for office space. The locations of the borings are presented in Figure 2 of this report.

A Tier 1 evaluation utilizes conservative, or "worst case", default parameters for site specific conditions such as depth to groundwater, soil type, soil porosity, thickness of capillary fringe, and other data in the equations to calculate RBSLs for given exposure pathways. The RBSLs calculated are then compared to existing soil analytical data to identify areas warranting no further study or action. A Tier 2 evaluation changes these default parameters to site specific values which are measured or can reasonably be assigned based on published information. The ASTM Tier 2 RBCA Evaluation conducted for the site was performed using the Tier 2 RBCA tool kit published by Groundwater Services, Inc. in corporation with ASTM.

ASTM Tier 2 RBCA Evaluation and
Indoor Air Quality Survey
Watson Trust, 1461 Park Avenue, Emeryville, CA

The equations which were used for this evaluation are presented in the ASTM E 1739-95 Standard Guide for Risk-Based Corrective Action Applied at Petroleum Release Sites. The Tier 2 RBCA tool kit incorporates these equations into a spread sheet-type program. The default parameters which were changed to site specific information included the following:

Parameter	Default	Site Specific
Contaminated soil area (cm ²)	2.25E+06	1.5E+06
Length of affected soil parallel to wind (cm)	1.5E+03	1.3E+03
Length of affected soil parallel to groundwater (cm)	1.5E+03	1.3E+03
Capillary Zone Thickness (cm)	5	6
Vadose zone thickness (cm)	295	150
Depth to groundwater (cm)	300	156
Depth to top of affected soil (cm)	100	180
Thickness of affected subsurface soils (cm)	200	30

The above values were used to calculate RBSLs for volatilization of vapors from subsurface soils to indoor air. Based on the calculations, the RBSLs given in mg/kg for benzene, toluene, ethylbenzene, and xylenes are presented below. The maximum measured concentrations, also given in mg/kg, are presented for comparison.

	<i>RBSL</i>	<i>Maximum Site Concentration</i>
Benzene	0.520	13
Toluene	610	80
Ethylbenzene	> RES	53
Xylenes	> RES	260

Note: RES indicates that the selected risk level is not exceeded for pure compound present at any concentration

Because the maximum concentration reported in subsurface soil at the site is above the RBSL for benzene, the site does not pass the Tier 2 evaluation for this compound in this scenario. Because of this, direct measurements in the form of indoor air analyses are needed to assess the actual presence or absence of these compounds in indoor air. It should also be noted that the RBCA Tier 2 Guidance document also suggests direct measurement for air exposure pathways to confirm the presence or absence of these compounds in indoor air. The following section describes the procedures and results of the indoor air quality survey performed at the site.

6.0 INDOOR AIR QUALITY SURVEY

Because the maximum concentration reported in subsurface soil at the site is above the RBSL for benzene, the site does not pass the Tier 2 evaluation for this compound in this scenario, and therefore, an indoor air quality (IAQ) survey was conducted. The IAQ is intended to assess the concentration of BTEX, if present, in the area of the building underlain by soil containing these constituents. The IAQ survey was conducted by Mr. Michael Noel, a Certified Industrial Hygienist associated with ATC Environmental Inc. The survey was conducted in general accordance with the National Institute for Occupational Safety and Health (NIOSH) Method 1501 Issue 2, dated 15 August 1994.

Air monitoring was performed over a period of 3 separate days to obtain a statistically sound number of sampling events. Air sampling was conducted in the building area which is underlain by soil containing elevated concentrations of BTEX. The air samples were collected in the office area of the on-site building which is underlain by soil containing elevated concentrations of BTEX. The remainder of the on-site building is occupied by a shop area with large roll-up doors which are generally open during business hours. Additionally, this area of the site is not underlain by soil containing concentrations of BTEX. In general, two air samples and one blank sample were collected over an 8 hour period on each of the 3 days. This sampling strategy best represents expected normal work day exposure. The air samples were collected using a low volume sampler operating at critical flow bifurcated into two separate critical orifices. Each orifice was calibrated separately using a primary calibration standard capable of accurately determining flow rate down to 10 milliliters per minute (ml/min.). Each of the calibrated orifices were attached to a Solid Sorbent tube with 100 milligrams (mg) primary and 50 mg secondary sorbent sections and placed at breathing zone height in the area of the building which is underlain by soil containing elevated concentrations of BTEX. Following each of the 3 sampling events, the samples were capped and transported with the blank under chain-of-custody to an American Industrial Hygiene Association (AIHA) laboratory for analysis. The samples were analyzed using gas chromatography. The report prepared by Mr. Noel is presented as Appendix A to this report. The report includes a summary of the field procedures and analytical results, including copies of the chain-of-custody forms and certified analytical reports. A summary of the results of the IAQ survey follows.

The air samples collected on each of the three days, 8 October, 11 October, and 14 October 1996, did not report BTEX compounds at concentrations greater than the reporting limit for the analytical method used. The reporting limit for benzene, toluene, ethylbenzene, and xylenes were 0.066, 0.026, 0.023, and 0.023 parts per million (ppm), respectively. The Threshold Limit Values (TLVs) as defined by the American Conference of Industrial Hygiene (ACGIH), were used to assess the potential for worker exposure at the site. The TLVs for benzene, toluene, ethylbenzene, and xylenes are 10, 50, 100, and 100 ppm, respectively. The TLV refers to airborne

concentrations of substances and represent conditions under which it is believed that nearly all workers may be repeatedly exposed day after day without adverse health effects. Because none of the samples collected at the site reported concentrations of BTEX greater than the respective reporting limits, which are significantly below the ACGIH established TLVs for these compounds, it is our judgment that there is a very low likelihood of human exposure to BTEX compounds from volatilization of the soils beneath the site. Therefore, based on this evaluation, it is judged that the site would not be considered a significant risk to human health.

7.0 CONCLUSIONS AND RECOMMENDATION

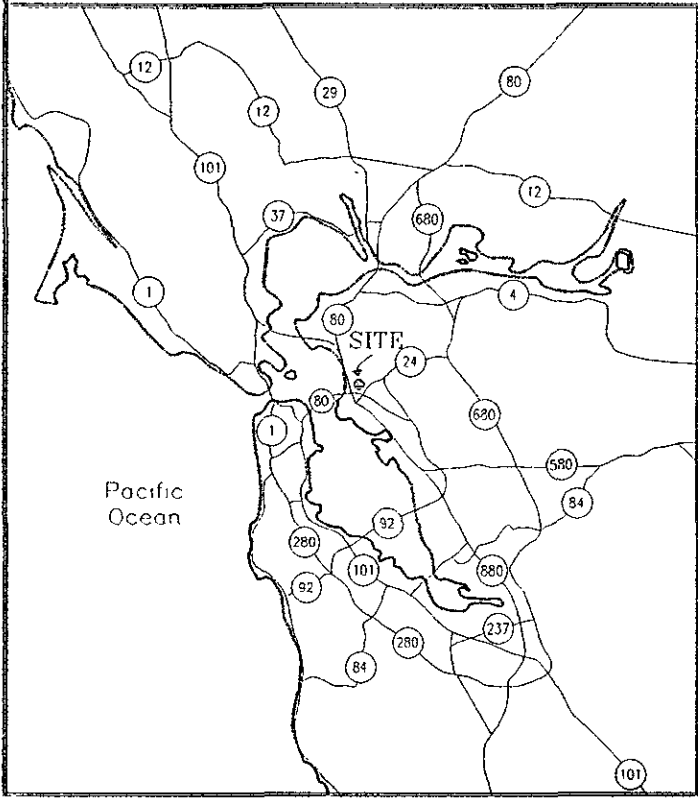
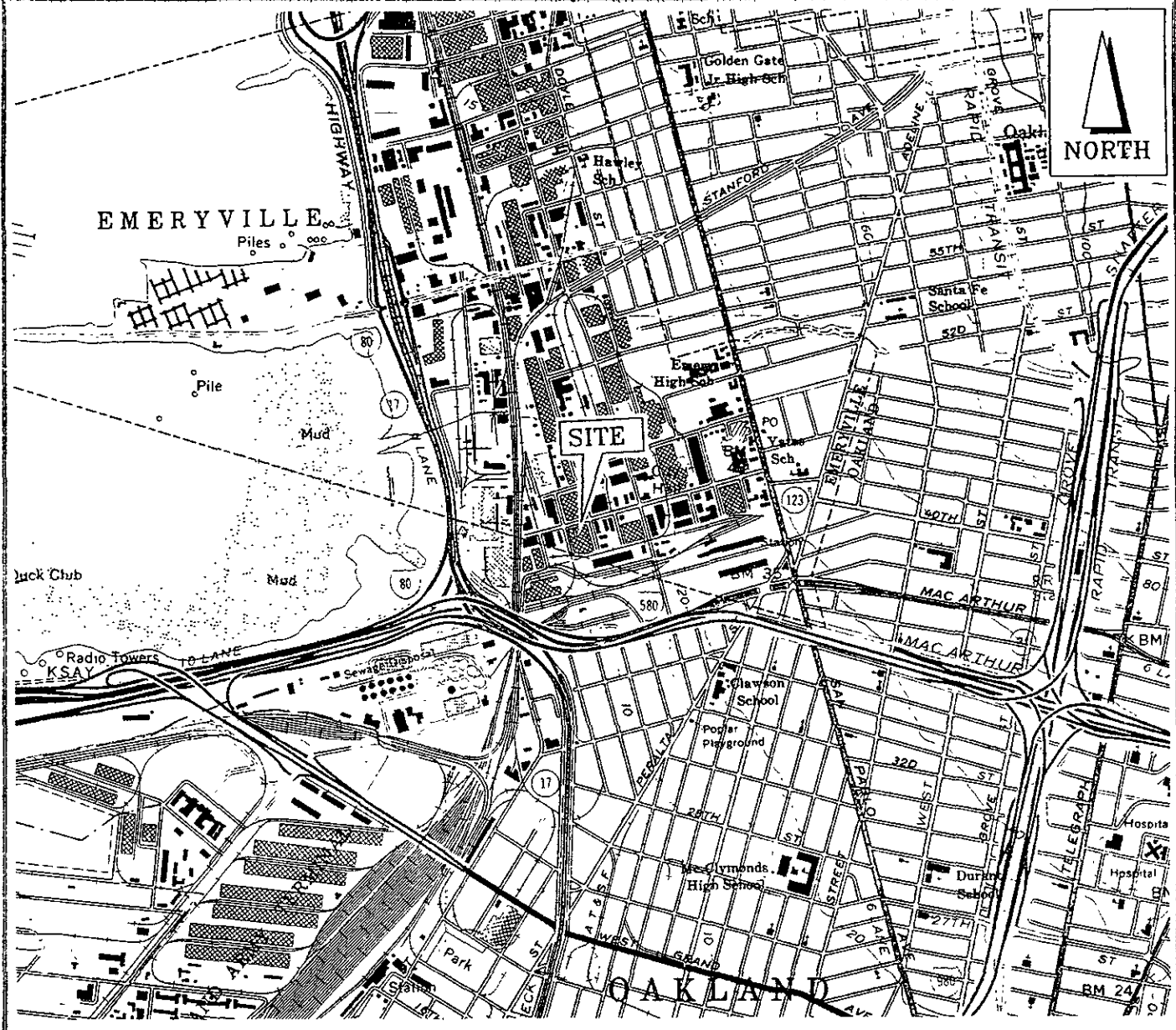
Based on the information presented in this report, and the information presented in the 28 March 1996 report, it is the judgment of ATC Environmental Inc. that the site should be considered a low risk groundwater case as described in the 5 January 1996 RWQCB Memorandum. Due to the fact that groundwater quality has been monitored quarterly at the site for a period of one year in addition to sampling conducted in 1990 and 1991, the hydrocarbon plume at the site is judged to be stable, and that the residual, low concentrations of petroleum hydrocarbons will eventually be effectively reduced by natural biodegradation processes, it is requested that the site be considered positively for case closure by the Alameda County Health Care Services Agency, Department of Environmental Health.

The judgments, conclusions, and recommendations described in this report pertain to the conditions judged to be present or applicable at the time the work was performed. Future conditions may differ from those described herein and this report is not intended for use in future evaluations of the site unless an update is conducted by a consultant familiar with environmental assessments and/or subsurface investigations. Use of this report is provided to the Union Bank of California solely for their exclusive use and shall be subject to the terms and conditions in the applicable contract between the Union Bank of California and ATC Environmental Inc. Any third party use, including use by Client's lender, of this report shall also be subject to the terms and conditions governing the work in the contract between the Union Bank of California and ATC Environmental Inc. Any unauthorized release or misuse of this report shall be without risk or liability to ATC Environmental Inc.

Certain information contained in this report may have been rightfully provided to ATC Environmental Inc. by third parties or other outside sources. ATC Environmental Inc. does not make any warranties or representations, whether expressed or implied, regarding the accuracy of such information, and shall not be held accountable or responsible in the event that any such inaccuracies are present.

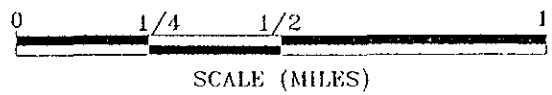
ASTM Tier 2 RBCA Evaluation and
Indoor Air Quality Survey
Watson Trust, 1461 Park Avenue, Emeryville, CA

FIGURES



Notes

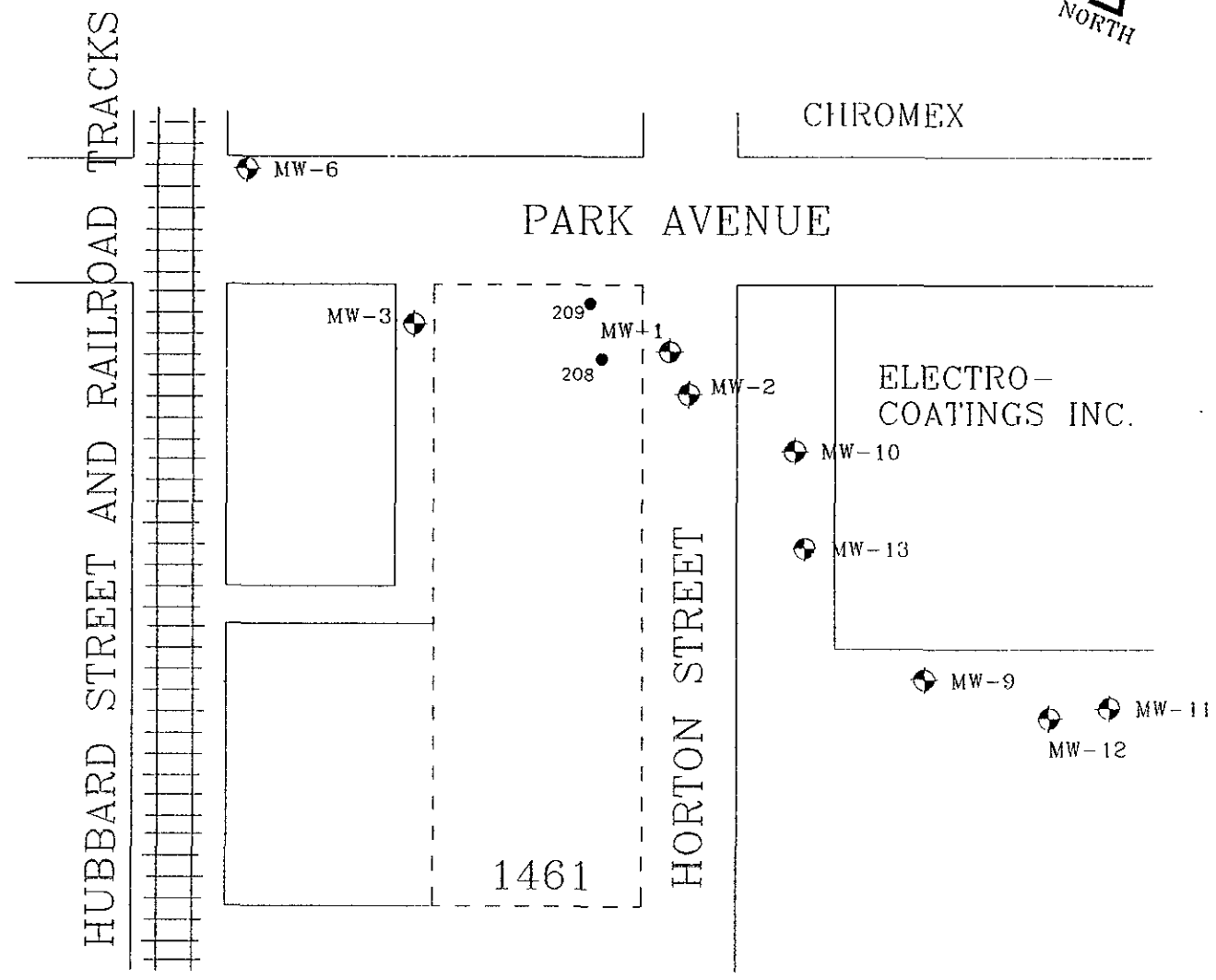
- 1) All locations and dimensions are approximate
- 2) Base map from USGS Oakland West (1959), 7.5 Minute Series Topographic, Photorevised 1980



ATC ENVIRONMENTAL INC.
Solutions for Environmental Concerns

SITE LOCATION MAP
WATSON TRUST
1641 PARK AVENUE
OAKLAND, CALIFORNIA

PROJECT NO. 14543.0001 | FIGURE 1



EXPLANATION

MW-3 DESIGNATION AND LOCATION OF MONITORING WELLS

209 DESIGNATION AND LOCATION OF SELECTED SOIL BORINGS

- - - - BUILDING BOUNDARY



NOTES:

- 1) ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE
- 2) SITE PLAN BASED ON OBSERVATIONS MADE DURING SITE RECONNAISSANCE AND FIGURES PREPARED BY BLAKELY ENVIRONMENTAL INC., DATED JULY 1995

ATC ENVIRONMENTAL INC.
Solutions for Environmental Concerns

SITE PLOT PLAN
WATSON TRUST
1641 PARK AVENUE
OAKLAND, CALIFORNIA

PROJECT NO. 14543.0001 FIGURE 2

ASTM Tier 2 RBCA Evaluation and
Indoor Air Quality Survey
Watson Trust, 1461 Park Avenue, Emeryville, CA

APPENDIX A

INDOOR AIR QUALITY SURVEY REPORT AND ANALYTICAL RESULTS

AAEP Environmental

October 18, 1996

Alex Gallego
ATC Environmental
2380 Qume Drive Suite C
San Jose, CA 95131

Re: BTEX Sampling for Watson Trust Property at 1461 Park St.,
Emeryville, CA.

An Industrial Hygiene investigation was performed at the above referenced site, to determine if chemical constituents might be emanating from a previously determined, leaking underground gasoline storage tank. The sampling was performed on October 8th, 11th & 14th by Michael Noel, Certified Industrial Hygienist and Toxicologist. Monitoring was performed over a period of 3 separate days to obtain a statistically sound number of sampling events. Monitoring was conducted in the "10" contour as depicted in Figure 2 of the project drawings for the site. The actual sampling areas were inside the business offices on the North and South sides of the office. Sampling protocol was as follows:

Sampling and analysis was performed according to NIOSH Method 1501 Issue 2, dated 15 August 1994. This method covers the following compounds:

Benzene	Styrene (ortho)
Toluene	a-methylstyrene
Xylene	Vinyltoluene (meta)
Ethylbenzene	Napthlene
Cumene	

The samples highlighted above are the constituents in question. The components known as BTEX are commonly found in gasoline and may be harmful to humans at excessive airborne levels.

Sampling was performed using a low volume sampler operating at critical flow through a low-flow orifice. The orifice for each pump was calibrated at 20 ml/min. using a primary calibration standard capable of accurately determining flow rate down to less than 10 ml per minute. Each of the calibrated orifices was attached to a Solid Sorbent tube with 100 mg primary and 50 mg secondary sorbent sections and placed in the "10" zone at "breathing zone" height.

AAEP Environmental

The samples were each collected over an 8 hour period to best represent an expected normal work day exposure. Samples were capped and transported with a blank, under chain of custody to an American Industrial Hygiene Association (AIHA) laboratory for analysis. Copies of all sampling results and chain of custody sheets may be found attached to this report.

Samples were eluted using Carbon Disulfide and analyzed using Gas Chromatography with Flame Ionization Detector (FID). Blank samples were analyzed at the same time and results subtracted from the actual field samples where indicated. Results for the samples are as follows:

Date	Sample Number	Location of Sample	Sample Results parts per million-ppm	TLV Values ¹ (ppm)
10/8/96	108-01	South Side of Office	Benzene <0.066* Toluene <0.026* EthylBenzene <0.023* Xylene <0.023*	10.0 50.0 100.0 100.0
10/8/96	108-02	North Side of Office	Benzene <0.066* Toluene <0.026* EthylBenzene <0.023* Xylene <0.023*	10.0 50.0 100.0 100.0
10/8/96	108-03	Blank Sample	Below Limit of Detection	
10/11/96	1011-01	North Side of Office	Benzene <0.066* Toluene <0.026* EthylBenzene <0.023* Xylene <0.023*	10.0 50.0 100.0 100.0
10/11/96	1011-02	South Side of Office	Benzene <0.066* Toluene <0.026* EthylBenzene <0.023* Xylene <0.023*	10.0 50.0 100.0 100.0
10/11/96	1011-03	Blank Sample	Below Limit of Detection	
10/14/96	1014-01	South Side of Office	Benzene <0.066* Toluene <0.026* EthylBenzene <0.023* Xylene <0.023*	10.0 50.0 100.0 100.0
10/14/96	1014-02	North Side of Office	Benzene <0.066* Toluene <0.026* EthylBenzene <0.023* Xylene <0.023*	10.0 50.0 100.0 100.0
10/14/96	1014-03	Blank Sample	Below Limit of Detection	

The Threshold Limit Values (TLV's) are the industry accepted maximum exposure values for an 8-hour day without wearing a respirator, as adopted by the American Conference of Industrial Hygiene (ACGIH). The TLV refers to airborne concentrations of substances and represent conditions under which it is believed that nearly all workers may be repeatedly exposed day after day without adverse health effects.

AAEP Environmental

The sample results as asterisked above indicate that the measured sample results were less than the minimum level of detection for the method. This means that no chemical constituents were detected above the minimum background detectable by the method and equipment employed for analysis.

All samples therefore revealed no detectable amounts of BTEX components analyzed above on any of the three days tested. Based on this information, there appears to be no risk of harm to persons working in the offices at the site from any of the BTEX components.

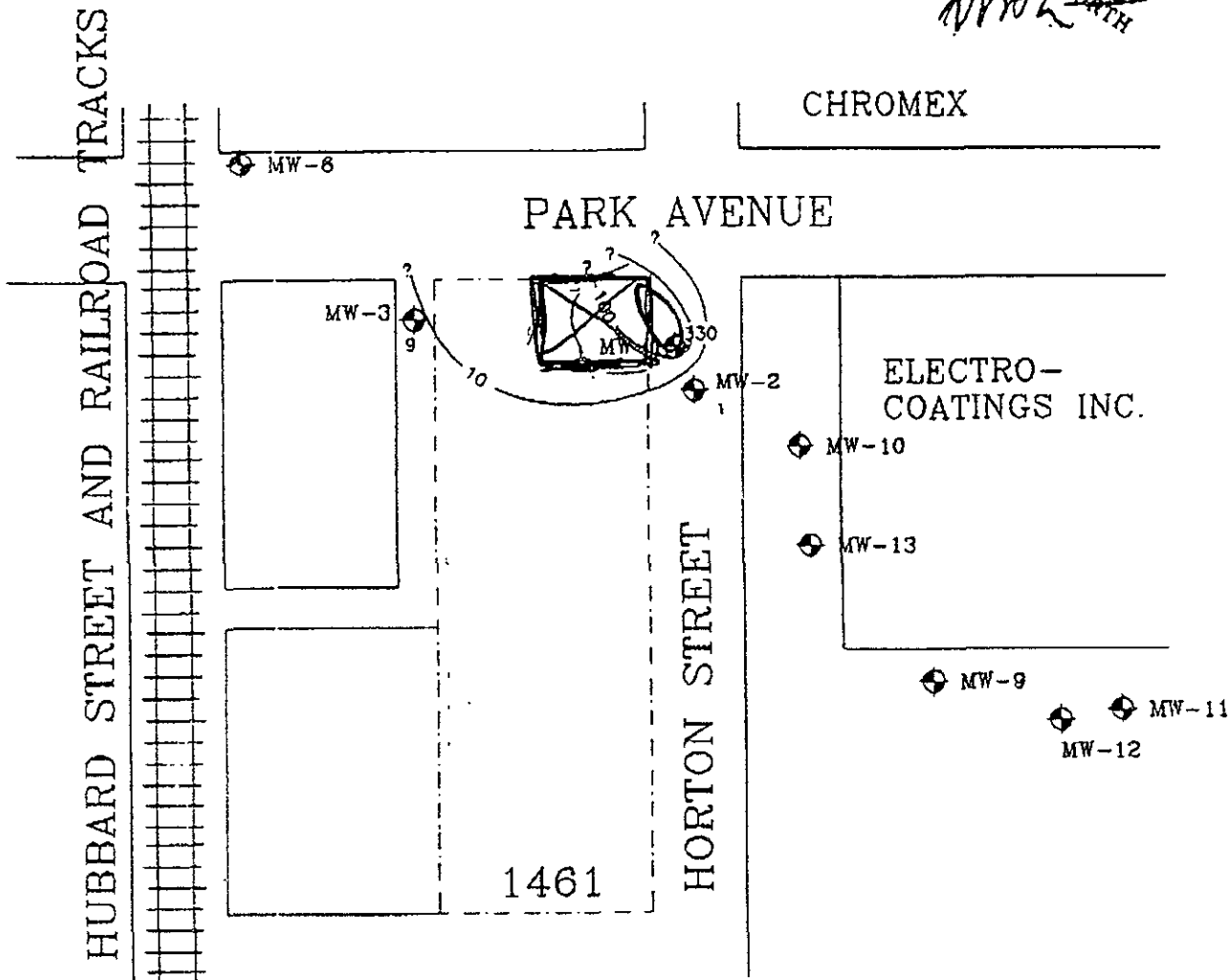
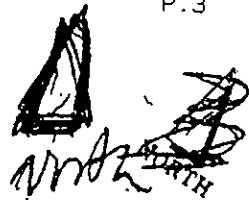
Sincerely,



Michael Noel
Certified Industrial Hygienist
Environmental Toxicologist

Attachments:

Sampling Results
Chain of Custody Sheets



EXPLANATION

- MW-3 DESIGNATION AND LOCATION OF MONITORING WELLS.
- 9 CONCENTRATION OF BENZENE IN GROUNDWATER (UG/L)
- 10 CONTOUR OF BENZENE IN GROUNDWATER (UG/L)
- 214 CONTOUR OF 214 UG/L BENZENE IN GROUNDWATER
- BUILDING BOUNDARY



NOTES:

- 1) ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
- 2) SITE PLAN BASED ON OBSERVATIONS MADE DURING SITE RECONNAISSANCE AND FIGURES PREPARED BY BLAKELY ENVIRONMENTAL INC. DATED JULY 1985

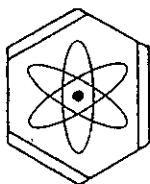
APPLIED GEOSCIENCES INC.
Environmental Consultants



BENZENE CONCENTRATION CONTOUR MAP
WATSON TRUST
1461 PARK AVENUE
EMERYVILLE, CALIFORNIA

PROJECT NO. A953399

FIGURE 2



Itek Enviro Services, Inc.

Industrial Hygiene and Environmental Laboratory

10/15/96

AAEP ENVIRONMENTAL
Attn: Mr. Michael Noel
607 Parkhaven Ct
Pleasant Hill, CA 94523

Client PO#:
Project #: WATSON TRUST
Survey #:

L A B O R A T O R Y R E S U L T S

Client: AAEP ENVIRONMENTAL
Date Sampled: 10/08/96
Analyzed: 10/11/96

Lab Job #: 96955
Date Received: 10/08/96
Reported: 10/15/96

Matrix: CT
Method: Hydrocarbons Aromatic (NIOSH 1501)

Lab#	Smpl. ID	Air Vol. (lt)	Front mg	Back mg	Total mg	Concentration mg/m3	ppm
955-01	108-01	9.6					
	BENZENE		<0.002	<0.002	<0.002	<0.21	<0.066
	TOLUENE		<0.001	<0.001	<0.001	<0.1	<0.026
	ETHYLBENZENE		<0.001	<0.001	<0.001	<0.1	<0.023
	XYLENE		<0.001	<0.001	<0.001	<0.1	<0.023
955-02	108-02	9.6					
	BENZENE		<0.002	<0.002	<0.002	<0.21	<0.066
	TOLUENE		<0.001	<0.001	<0.001	<0.1	<0.026
	ETHYLBENZENE		<0.001	<0.001	<0.001	<0.1	<0.023
	XYLENE		<0.001	<0.001	<0.001	<0.1	<0.023
955-03	108-B1	0.0					
	BENZENE		<0.002	<0.002	<0.002		
	TOLUENE		<0.001	<0.001	<0.001		
	ETHYLBENZENE		<0.001	<0.001	<0.001		
	XYLENE		<0.001	<0.001	<0.001		

This report has been reviewed
and approved for release.

Olivia A. Alejandro
for Olivia A. Alejandro
Laboratory Manager

Wtek

Enviro Services, Inc.

#96955

3 E. Grand Avenue, Suite E
 South San Francisco, CA 94080-6209
 (415) 952-8501 • Fax (415) 952-4359
 (800) 953-8501

Lab Use Only

Job No.:

Client Code:

Logged in by:

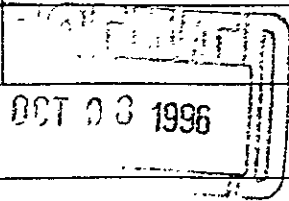
Date:

LABORATORY ANALYSIS REQUEST

Purchase Order No.: _____ Client Job No.: _____
 Name: *Michael Neil* Phone No.: _____
 Company: *AAEP Environmental* Fax: _____
 Address: _____
 City, State, Zip: _____

Date Sampled: *10/8/96*
 Date Results Needed: *Regular*
 Rush Charges Authorized Yes No

Client Sample ID (Description)	Sampling medium	Air Volume (liters)	Analysis Requested (List Methods and Substances)	Lab Use Only
<i>108-01</i>	<i>ct</i>	<i>9.60L</i>	<i>NIOSH 1501</i> <i>BTEX</i>	<i>955-01</i>
<i>108-02</i>		<i>9.60L</i>		<i>955-02</i>
<i>108-B1</i>		<i>0</i>		<i>955-03</i>



Authorized by: _____

Date: _____

Relinquished by: _____ Date/Time: _____

Received by: *NM* Date/Time: *10/08/96 4:25*

Relinquished by: _____ Date/Time: _____

Received at Lab by: _____ Date/Time: _____

#96955

AAEP Environmental AIR MONITORING FORM

Normal TAT

Site: 1461 Park St. Eurekaville (Watson Trust)

Date: 10/8/96

Lab: ITEK (415-952-8501)

Sample Number	Location	Time On	Pre-Flow LPM	Time Off	End-Flow LPM	Volume
108-01	South side of Office	0745	.020	1545	.020	9.6 L
108-02	North side of Office	0745	.020	1545	.020	9.6 L
108-31	Blank					

RECEIVED
OCT 20 1996
LABORATORY

LABORATORY INSTRUCTIONS:

PROTOCOL: Analyte BTEX Method NIOSH 1501
Analyte _____ Method _____
Analyte _____ Method _____

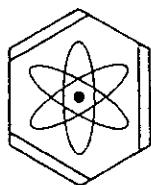
Turnaround Time: <12 Hrs 24 Hrs 48 Hrs 72 Hrs 5 Days 10 Days

Additional Instructions:

Fax Results ASAP to Michael Noel CIH at (510) 229-2230

Released by: [Signature] Date: 10/8/96 Time 1620

Received by: [Signature] Date: 10/05/96 Time 1625



Itek Enviro Services, Inc.

Industrial Hygiene and Environmental Laboratory

10/17/96

AAEP ENVIRONMENTAL
Attn: Mr. Michael Noel
607 Parkhaven Ct.
Pleasant Hill, CA 94523

Client PO#:
Project #: WATSON TRUST
Survey #:

LABORATORY RESULTS

Client: AAEP ENVIRONMENTAL
Date Sampled: 10/11/96
Analyzed: 10/16/96

Lab Job #: 96972
Date Received: 10/11/96
Reported: 10/17/96

Matrix: CT
Method: Hydrocarbons Aromatic (NIOSH 1501)

Lab#	Smpl. ID	Air Vol. (lt)	Front mg	Back mg	Total mg	Concentration mg/m ³	ppm
972-01	1011-01	9.6					
	BENZENE		<0.002	<0.002	<0.002	<0.21	<0.066
	TOLUENE		<0.001	<0.001	<0.001	<0.1	<0.026
	ETHYLBENZENE		<0.001	<0.001	<0.001	<0.1	<0.023
	XYLENE		<0.001	<0.001	<0.001	<0.1	<0.023
972-02	1011-02	9.6					
	BENZENE		<0.002	<0.002	<0.002	<0.21	<0.066
	TOLUENE		<0.001	<0.001	<0.001	<0.1	<0.026
	ETHYLBENZENE		<0.001	<0.001	<0.001	<0.1	<0.023
	XYLENE		<0.001	<0.001	<0.001	<0.1	<0.023
972-03	1011-03	0.0					
	BENZENE		<0.002	<0.002	<0.002		
	TOLUENE		<0.001	<0.001	<0.001		
	ETHYLBENZENE		<0.001	<0.001	<0.001		
	XYLENE		<0.001	<0.001	<0.001		

This report has been reviewed
and approved for release.

Priscilla Robinson

for Olivia A. Alejandro
Laboratory Manager

Vitek
Enviro Services, Inc.
 33 E. Grand Avenue, Suite E
 South San Francisco, CA 94080-6209
 (415) 952-8501 • Fax (415) 952-4359
 (800) 953-8501

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Lab Use Only	
Job No.:	
Client Code:	
Logged in by:	Date:

LABORATORY ANALYSIS REQUEST

Purchase Order No.: _____ Client Job No.: WATSON TRUST Date Sampled: 10/11/96
 Name: Michael Neil Phone No.: (510) 229-2237 Date Results Needed: _____
 Company: AAEP Environmental Fax: (510) 229-2230 Rush Charges Authorized Yes No
 Address: 607 Parkhurst Ct,
 City, State, Zip: Pleasant Hill, CA 94523

Client Sample ID (Description)	Sampling medium	Air Volume (liters)	Analysis Requested (List Methods and Substances)	Lab Use Only
<u>1011-01</u>	} <u>ct</u>	<u>9.6</u>	} <u>NIOSH 1501</u> <u>BTEX</u>	<u>972-01</u>
<u>1011-02</u>		<u>9.6</u>		<u>972-02</u>
<u>1011-03</u>		<u>0</u>		<u>972-03</u>

Authorized by: _____ Date: _____

Relinquished by:	Date/Time:	Received by: <u>Em</u>	Date/Time: <u>10/11/96 1540</u>
Relinquished by:	Date/Time:	Received at Lab by:	Date/Time:

AAEP Environmental AIR MONITORING FORM

#96972

Site: 1461 Park Ave, Emeryville, Watson Trust

Date: _____ Lab: _____

Sample Number	Location	Time On	Pre-Flow LPM	Time Off	End-Flow LPM	Volume
1011-01	Northside of Office	0700	.02 LPM	1500	.02 LPM	9.6 L
1011-02	Southside of Office	0700	.02 LPM	1500	.02 LPM	9.6 L
1011-03	Blank					

LABORATORY INSTRUCTIONS:

PROTOCOL: Analyte BTEX Method NIOSH 1501
 Analyte _____ Method _____
 Analyte _____ Method _____

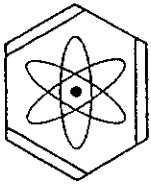
Turnaround Time: <12 Hrs 24 Hrs 48 Hrs 72 Hrs 5 Days 10 Days

Additional Instructions: Normal

Fax Results ASAP to Michael Noel CIH at (510) 229-2230

Released by: Michael Noel Date: 10/11/96 Time: 1540

Received by: Umadah Date: 10/11/96 Time: 1540



Itek Enviro Services, Inc.

Industrial Hygiene and Environmental Laboratory

10/17/96

AAEP ENVIRONMENTAL
Attn: Mr. Michael Noel
607 Parkhaven Ct.
Pleasant Hill, CA 94523

Client PO#: _____
Project #: WATSON TRUST
Survey #: _____

L A B O R A T O R Y R E S U L T S

Client: AAEP ENVIRONMENTAL
Date Sampled: 10/14/96
Analyzed: 10/16/96

Lab Job #: 96981
Date Received: 10/14/96
Reported: 10/17/96

Matrix: CT
Method: Hydrocarbons Aromatic (NIOSH 1501)

Lab#	Smpl. ID	Air Vol. (lt)	Front mg	Back mg	Total mg	Concentration mg/m3	ppm
981-01	1014-01	9.6					
	BENZENE		<0.002	<0.002	<0.002	<0.21	<0.066
	TOLUENE		<0.001	<0.001	<0.001	<0.1	<0.026
	ETHYLBENZENE		<0.001	<0.001	<0.001	<0.1	<0.023
	XYLENE		<0.001	<0.001	<0.001	<0.1	<0.023
981-02	1014-02	9.6					
	BENZENE		<0.002	<0.002	<0.002	<0.21	<0.066
	TOLUENE		<0.001	<0.001	<0.001	<0.1	<0.026
	ETHYLBENZENE		<0.001	<0.001	<0.001	<0.1	<0.023
	XYLENE		<0.001	<0.001	<0.001	<0.1	<0.023
981-03	1014-03	0.0					
	BENZENE		<0.002	<0.002	<0.002		
	TOLUENE		<0.001	<0.001	<0.001		
	ETHYLBENZENE		<0.001	<0.001	<0.001		
	XYLENE		<0.001	<0.001	<0.001		

This report has been reviewed
and approved for release.

Priscilla Robinson

for Olivia A. Alejandro
Laboratory Manager

Htek
Enviro Services, Inc.
 33 E. Grand Avenue, Suite E
 South San Francisco, CA 94080-6209
 (5) 952-8501 • Fax (415) 952-4359
 (800) 953-8501

9 6 9 8 1

Lab Use Only	
Job No.:	
Client Code:	
Logged in by:	Date:

LABORATORY ANALYSIS REQUEST

Purchase Order No.: _____ Client Job No.: **WATSON-TRUST**
 Name: **Michael Noel** Phone No.: **(510) 229-2237**
 Company: **AAEP Environmental** Fax: **(510) 229-2230**
 Address: **607 Parkhaven Ct,**
 City, State, Zip: **Pleasant Hill, CA 94523**

Date Sampled: **10/14/96**
 Date Results Needed: _____
 Rush Charges Authorized Yes No

Client Sample ID (Description)	Sampling medium	Air Volume (liters)	Analysis Requested (List Methods and Substances)	Lab Use Only
1014-01	} ct	9.6	} BTEX	981-01
1014-02		9.6		981-02
1014-03		0		981-03

RECEIVED
OCT 14 1996

Authorized by: _____ Date: _____

Relinquished by:	Date/Time:	Received by: <i>lgm</i>	Date/Time: 10/14/96 3:30
Relinquished by:	Date/Time:	Received at Lab by:	Date/Time:

#96931

AAEP Environmental AIR MONITORING FORM

site: 1461 Park Ave, Emeryville, CA (Watson Trust)

Date: _____

Lab: _____

Sample Number	Location	Time On	Pre-Flow LPM	Time Off	End-Flow LPM	Volume
1014-01	South side of office	0850	0.02 LPM	1450	0.02	9.6L
1014-02	North side of office	0850	0.02 LPM	1450	0.02	9.6L
1014-03	Blank					

LABORATORY INSTRUCTIONS:

PROTOCOL: Analyte BTEX Method NIOSH 1501

Analyte _____ Method _____

Analyte _____ Method _____

Turnaround Time: <12 Hrs 24 Hrs 48 Hrs 72 Hrs 7 Days 10 Days

Additional Instructions: _____

Fax Results ASAP to Michael Noel CIH at (510) 229-2230

Released by: Michael Noel Date: 1520 Time: 10/14/96

Received by: Jim Adair Date: 10/14/96 Time: 1520