

November 25, 1998

Mr. John Collins
Metalcast Engineering
4800 Coliseum Way
Oakland, California 94601

COPY

Phase II Environmental Site Investigation Report
Metalcast Engineering Facility
4800 Coliseum Way
Oakland, California

Dear Mr. Collins:

ATC Associates Inc. is pleased to present this report of the Phase II Environmental Site Investigation conducted at 4800 Coliseum Way, Oakland, California.

ATC realizes that this report is to be used exclusively by Metalcast Engineering and Comerica Bank, and it is a report upon which both parties may rely. ATC recommends that one copy of this report be forwarded to Comerica Bank.

If you have any questions about this report please call me at (925) 460-5300.

Very truly yours,



Al Martinez
Project Geologist

Enclosure

November 24, 1998

Prepared for:

Metalcast Engineering
4800 Coliseum Way
Oakland, California

ATC Project No. 89775.0030

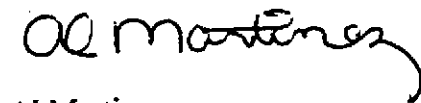
PHASE II ENVIRONMENTAL SITE INVESTIGATION REPORT

METALCAST ENGINEERING FACILITY
4800 COLISEUM WAY
OAKLAND, CALIFORNIA

Submitted By:

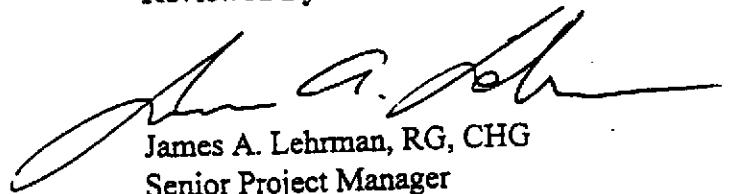
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1.0 INTRODUCTION

This report summarizes the results of a Phase II Environmental Site Investigation conducted for the Metalcast Engineering facility located at 4800 Coliseum Way in Oakland, California (Figure 1). The site is approximately 1.7 acres in area, and is currently occupied by Metalcast Engineering corporate offices, and an aluminum foundry conducting rapid prototyping of aluminum diecastings. Metalcast Engineering uses chemicals associated with its metal-casting operations, and as maintenance of operating equipment. These chemicals are typically elastomer systems (epoxys and resins), compressed gases, and lubricants.

In April 1991, Aqua Terra Technologies (ATT) completed a Phase I Environmental Site Assessment (ESA) of the subject site. The Phase I ESA was prepared to identify historical or current activities at the site and surrounding properties which could have contributed or were currently contributing to the degradation of the subject property's soil and/or groundwater. The report concluded, "known unauthorized releases of hazardous materials were not identified from public records and the site reconnaissance on or upgradient from the subject property. However, the close, upgradient proximity of intense historical industrial use of heavy metals and petroleum products increase the potential for off-site sources of contamination to the subject property's soil and groundwater". ATT recommended Phase II work including soil and/or groundwater sampling.

On April 22, 1991, Simon Environmental Engineering (SIMON) completed a Phase II site assessment consisting of the completion of four soil borings. Soil and groundwater samples were obtained from each boring. Analytical results indicated that petroleum hydrocarbons were present in soil and groundwater samples obtained from beneath the site. In addition, the groundwater samples were also analyzed for metals. Varying concentrations of metals were detected in all four groundwater samples, however the concentrations were below the California Department of Health Services maximum contaminant levels (MCLs). The samples were not analyzed for halogenated volatile organic compounds (HVOCs).

Between June 3 and June 14, 1991, SIMON completed an additional Phase II site assessment consisting of the completion of 15 additional soil borings. Analytical results further indicated that petroleum hydrocarbons were present in soil samples obtained from beneath the site. The samples were not analyzed for HVOCs.

Based on the above information, ATC completed a Phase I ESA to further evaluate the site for environmental concerns. The Phase I ESA of the subject site (ATC, 1998) reported that petroleum hydrocarbon impacted soil (gasoline and diesel range) was detected in a unpaved area in the eastern portion of the site. In addition, files on adjacent properties indicate that the adjacent properties to the south and east (cross- and upgradient, respectively) of the site are known to have been impacted by petroleum hydrocarbons. The general groundwater flow direction beneath the site is based on a file review of the GC Gas Yard (also known as the PG&E property). ATC's review of a December 1997, groundwater monitoring report prepared for GC Gas Yard/PG&E property by CET Environmental Services indicates that the general groundwater flow direction in the vicinity of the site is toward the south (ATC, 1998). ATC's Phase I report concluded that a Phase II Environmental Site Investigation should be conducted to further investigate petroleum hydrocarbon impacted soil and/or groundwater resulting from on- and off-site sources.

The field work for this investigation was conducted by ATC on October 8, 1998, in general accordance with ATC Proposal Number S98-0449. The work was conducted at the request of Mr. John Collins of Metalcast Engineering.

This project is subject to the terms and limitations of the General Consulting Agreement between ATC and Mr. Collins, and Comerica Bank's Terms & Conditions referenced in the Master Service Agreement dated March 31, 1997 between ATC and Comerica Bank. This report was prepared for the benefit of Mr. Collins and Comerica Bank and both parties may rely on its contents and conclusions. This work was undertaken in accordance with generally accepted consulting engineering practices, and the opinions rendered herein are based on professional expertise and experience. No other warranty, expressed or implied, is made.

ATC warrants that the services, findings and/or recommendations provided to Comerica Incorporated, its affiliates and subsidiaries, and their respective successors and assigns (individually and collectively "Comerica"), have been prepared, performed and rendered in accordance with procedures, practices and standards generally accepted and customary in the consultant's profession for use in similar assignments. ATC shall indemnify, save and hold harmless Comerica from and against any and all losses, costs, expenses and liabilities, including without limit reasonable attorney's fees which are attributable to the breach of the above warranty, up to an aggregate amount of \$1,000,000 (One Million Dollars), notwithstanding any limitation (expressed or implied) contained in any other

agreement or document relating to the services, findings and/or recommendations provided by ATC.

2.0 SCOPE OF WORK

The proposed scope of work for this investigation consisted of: completing nine soil borings, collecting soil and groundwater samples, analytical testing, data analyses, and the preparation of this report. In addition, a groundwater sample was obtained from an existing on-site groundwater monitoring well.

3.0 ANALYTICAL METHODOLOGIES

3.1 Contaminants of Concern

This investigation was primarily concerned with the potential presence of petroleum hydrocarbons, solvents, and metals beneath the site. Accordingly, soil and groundwater samples were analyzed for: total petroleum hydrocarbons as gasoline (TPH-G), TPH as diesel (TPH-D) and TPH as motor oil (TPH-M) in accordance with Environmental Protection Agency (EPA) Method 8015M, and benzene, toluene, ethylbenzene, xylenes (BTEX) and methyl tert-butyl ether (MTBE) in accordance with EPA Method 8020. Selected soil and groundwater samples were analyzed for: halogenated volatile organic compounds (HVOCs) in accordance with EPA Method 8010, and RCRA metals in accordance with EPA Method 6010/7000.

3.2 Analytical Laboratory

ATC utilized the laboratory services of Sequoia Analytical, of Redwood City, California for this project. Sequoia Analytical is certified in California by the Department of Health Services under the Environmental Laboratory Accreditation Program (ELAP), and its Certification Number is 1210. All samples were analyzed on a 10 working day turn-around time.

4.0 FIELD INVESTIGATIONS

4.1 Site Description

The subject site is located at 4800 Coliseum Way in Oakland, California (Figure 1). The site is approximately 1.7 acres in area and occupied by one two-story concrete tilt-up

structure, a portable office building and asphalt paved parking areas on the northern and western portion of the site (Figure 2).

4.2 Soil Borings

ATC retained the services of Vironex of Hayward, California for advancing the boreholes. The field investigation was performed on October 8, 1998. Underground Services Alert (USA) was notified of the proposed drilling activities to ensure that no utility lines were located within the immediate vicinity of the soil borings. Cruz Brothers Sub-Surface Locators, Inc. of Milpitas, California, provided a subsurface survey of utility lines and/or other buried objects in and around the borehole locations.

Nine soil borings (ATC-1 through ATC-9) were advanced to depths of approximately 12 feet below ground surface (bgs) in all soil borings except for ATC-6. Soil boring ATC-6 was advanced to a depth of approximately 2 feet bgs due to refusal. Groundwater was encountered at approximately 7 to 8 feet bgs. The soil boring locations are shown on Figure 3. Borings were logged in the field by an ATC geologist under the supervision of a California Registered Geologist. Soil boring logs are included as Appendix A. A copy of the Alameda County Public Works Agency Drilling Permit Application is included as Appendix B.

4.3 Soil Sampling

Soil cores were obtained by pushing a *Geoprobe* sampler, equipped with 4-foot long acrylic liners, into the subsurface. The borings were cored continuously. Upon retrieval of the 4-foot long acrylic liner from the borehole, the sample was screened using a photoionization detector (PID). Based on the PID readings, a section of the liner was cut out at the selected sampling depth for submittal to the analytical laboratory. Where no PID readings were available, or where the PID showed low readings, soil samples were collected just above the groundwater table. The ends of the acrylic tubes containing the soil to be tested were covered with Teflon, capped with plastic end-caps, and placed in sealable plastic bags. The soil samples were then labeled and placed in an iced cooler for transportation to the laboratory using proper chain-of-custody protocol.

4.4 Groundwater Sampling (Geoprobe)

Groundwater was encountered at approximately 7 to 8 feet bgs in the borings. Each boring was advanced deeper to allow sufficient water to be collected inside of the sampler. Groundwater samples were collected from each boring by installing a temporary well with

ten feet of slotted screen, and bailing a grab sample through the temporary casing. The groundwater samples were carefully poured into the appropriate sample containers. The groundwater samples were properly labeled and placed in a cooler with ice. Proper chain of custody procedures were followed until delivery of groundwater samples to a State certified laboratory

4.5 Groundwater Sampling (Groundwater Monitoring Well)

Depth to groundwater measurement and a groundwater sample was collected on October 8, 1998, from the on-site groundwater monitoring well designated by ATC as WELL-1. Prior to groundwater sampling, a depth to groundwater measurement was obtained from the groundwater monitoring well. A groundwater sample was collected after purging the well of approximately three well volumes and recording consistent pH, conductivity, and temperature measurements. Once the well recovered to at least 80% of its original volume, a groundwater sample was obtained using a disposable bailer and carefully pouring the groundwater into the appropriate sampling bottles. The groundwater sample was properly labeled and placed in a cooler with ice. Proper chain of custody procedures were followed until delivery of groundwater sample to a State certified laboratory.

5.0 ANALYTICAL RESULTS

A total of nine soil samples, one from each boring, were submitted to the analytical laboratory for chemical analyses. Groundwater samples were also obtained from each boring, and the groundwater monitoring well, and were submitted to the analytical laboratory for chemical analyses.

5.1 Soil

The soil samples were analyzed for the following: TPH-G, TPH-D, and TPH-M in accordance with EPA Method 8015M, and BTEX and MTBE in accordance with EPA Method 8020. Soil samples obtained from ATC-1, ATC-2, ATC-3, ATC-5, ATC-6, ATC-7, and ATC-9 were also analyzed for the following: HVOCs in accordance EPA Method 8010 and RCRA metals in accordance with EPA Method 6010/7000.

Laboratory analytical results indicated that TPH-G was present in all soil samples except for ATC-5. The maximum TPH-G concentration was 1,000 milligrams per kilograms (mg/kg) in soil samples obtained from ATC-1 and ATC-9 at a depth 4 feet bgs. TPH-D was present in all soil samples. The maximum TPH-D concentration was 13,000 mg/kg in

the soil sample obtained from ATC-3 at a depth 3 feet bgs. TPH-M was present in all soil samples. The maximum TPH-M concentration was 29,000 mg/kg in the soil sample obtained from ATC-3 at a depth 3 feet bgs. Benzene (0.056 mg/kg) was present in the soil sample obtained from ATC-3 at a depth of 3 feet bgs. MTBE was not present in any of the soil samples. Chlorobenzene (MCB) was present in soil samples obtained from ATC-2 [27 micrograms per kilograms (ug/kg)] at a depth of 4 feet bgs and ATC-3 (3,800 ug/kg) at a depth of 4 feet bgs. 1,2-dichlorobenzene (o-DCB) was not present in any of the soil samples. 1,3-dichlorobenzene (m-DCB) was present in soil samples obtained from ATC-2 (50 ug/kg) at a depth of 4 feet bgs and ATC-3 (19,000 ug/kg) at a depth of 3 feet bgs. 1,4-dichlorobenzene (p-DCB) was present in soil samples obtained from ATC-2 (130 ug/kg) at a depth of 4 feet bgs and ATC-3 (33,000 ug/kg) at a depth of 3 feet bgs. Table 1 summarizes the soil analytical results for organic constituents.

Arsenic was present in soil samples obtained from ATC-1 (6.6 mg/kg), ATC-2 (14 mg/kg) and ATC-3 (12 mg/kg). Barium was present in all analyzed samples. The maximum barium concentration was 1,000 mg/kg in soil sample obtained from ATC-3 at a depth of 3 feet bgs. Cadmium was present in soil samples obtained from ATC-2 (0.68 mg/kg), ATC-3 (0.65 mg/kg) and ATC-6 (0.86 mg/kg). Chromium was present in all analyzed soil samples. The maximum chromium concentration was 50 mg/kg in soil sample obtained from ATC-1 at a depth of 4 feet bgs. Mercury was present in soil samples obtained from ATC-1 (0.073 mg/kg), ATC-2 (0.12 mg/kg), ATC-3 (0.16 mg/kg), ATC-7 (0.055 mg/kg) and ATC-9 (0.054 mg/kg). Lead was present in soil samples obtained from ATC-1 (13 mg/kg), ATC-2 (150 mg/kg), ATC-3 (250 mg/kg), ATC-6 (13 mg/kg), ATC-7 (35 mg/kg) and ATC-9 (7.4 mg/kg). Silver and selenium were not present in any of the soil samples. The metals concentrations reported were below the California Department of Health Services Total Threshold Limit Concentrations (TTL). Table 2 summarizes the soil analytical results for inorganic constituents. Copies of the signed laboratory analytical reports and chain-of-custody forms are provided in Appendix C.

5.2 Groundwater

The groundwater samples were analyzed for the following: TPH-G, TPH-D, and TPH-M in accordance with EPA Method 8015M, and BTEX and MTBE in accordance with EPA Method 8020. Groundwater samples obtained from ATC-1, ATC-2, ATC-3, ATC-5, ATC-6, ATC-7, ATC-9, and WELL-1 were also analyzed for the following: HVOCs in accordance EPA Method 8010, and RCRA metals in accordance with EPA Method 6010/7000.

Laboratory analytical results indicated that TPH-G was present in all groundwater samples. The maximum TPH-G concentration was 3,000 micrograms per liter (ug/l) in groundwater sample obtained from ATC-9. TPH-D was present in all groundwater samples. The maximum TPH-D concentration was 20,000 ug/l in the groundwater sample obtained from ATC-5. TPH-M was present in all groundwater samples, except for ATC-7. The maximum TPH-M concentration was 65,000 ug/l in groundwater sample obtained from ATC-5. Benzene was present in groundwater samples obtained from ATC-1, ATC-2, ATC-5, and WELL-1. The maximum benzene concentration was 5.3 ug/l in groundwater sample obtained from ATC-1. MTBE was not present in any of the groundwater samples. MCB and o-DCB were present in groundwater samples obtained from ATC-1, ATC-2, ATC-5, ATC-7, ATC-9, and WELL-1. The maximum MCB concentration was 370 ug/l in groundwater sample ATC-1. The maximum o-DCB concentration was 190 ug/l in groundwater sample obtained from ATC-9. m-DCB and p-DCB were present in groundwater samples obtained from ATC-1, ATC-2, ATC-3, ATC-5, ATC-7, ATC-9, and WELL-1. The maximum m-DCB concentration was 900 ug/l in groundwater sample obtained from WELL-1. The maximum p-DCB concentration was 1,500 ug/l in groundwater sample obtained from WELL-1. None of the concentrations exceeded the Maximum Contaminant Levels (MCLs), with the exception of benzene (ATC-1, ATC-2, ATC-5 and WELL-1), MCB (ATC-1, ATC-2, ATC-7, and WELL-1) and p-DCB (ATC-1, ATC-2, ATC-3, ATC-5, ATC-7, ATC-9, and WELL-1). Table 3 summarizes the groundwater analytical results for organic constituents.

Barium was present in all groundwater samples analyzed. The maximum barium concentration was 0.39 milligrams per liter (mg/l). Chromium was present in groundwater samples obtained from ATC-2 (0.014 mg/l), ATC-3 (0.010 mg/l), ATC-5 (0.033 mg/l), and ATC-7 (0.013 mg/l). Mercury was present in groundwater samples obtained from ATC-5 (0.00041 mg/l). Arsenic, cadmium, lead, silver and selenium were not present in any of the groundwater samples. None of the metals concentrations exceeded the Maximum Contaminant Levels (MCLs). Table 4 summarizes the groundwater analytical results for inorganic constituents. Copies of the signed laboratory analytical reports and chain-of-custody forms are provided in Appendix C.

6.0 DISCUSSION

From surface to a depth of 12 feet bgs, the soils encountered at the site consisted primarily of clays (including gravelly clay), gravel (including clayey gravel and sandy gravel) and

silt (including clayey silt and gravelly silt). Groundwater was encountered at approximately 7 to 8 feet bgs in the soil borings. Groundwater was encountered at approximately 5.65 feet bgs in monitoring well MW-1. The boring logs are included as Appendix A.

TPH-G was present in all soil samples except for ATC-5. TPH-D and TPH-M were present in all soil samples. Benzene was present only in the soil sample obtained from ATC-3. MTBE was not present in any of the soil samples. MCB, m-DCB and p-DCB were present in soil samples obtained from ATC-2 and ATC-3. o-DCB was not present in any of the soil samples.

Arsenic was present in soil samples obtained from ATC-1 (6.6 mg/kg), ATC-2 (14 mg/kg) and ATC-3 (12 mg/kg). Barium was present in all analyzed samples. The maximum barium concentration was 1,000 mg/kg in soil sample obtained from ATC-3 at a depth of 3 feet bgs. Cadmium was present in soil samples obtained from ATC-2 (0.68 mg/kg), ATC-3 (0.65 mg/kg) and ATC-6 (0.86 mg/kg). Chromium was present in all analyzed soil samples. The maximum chromium concentration was 50 mg/kg in soil sample obtained from ATC-1 at a depth of 4 feet bgs. Mercury was present in soil samples obtained from ATC-1 (0.073 mg/kg), ATC-2 (0.12 mg/kg), ATC-3 (0.16 mg/kg), ATC-7 (0.055 mg/kg) and ATC-9 (0.054 mg/kg). Lead was present in soil samples obtained from ATC-1 (13 mg/kg), ATC-2 (150 mg/kg), ATC-3 (250 mg/kg), ATC-6 (13 mg/kg), ATC-7 (35 mg/kg) and ATC-9 (7.4 mg/kg). Silver and selenium were not present in any of the soil samples. The metals concentrations reported were below the California Department of Health Services TTLC.

TPH-G and TPH-D were present in all groundwater samples. TPH-M was present in all groundwater samples, except for ATC-7. Benzene was present in groundwater samples obtained from ATC-1, ATC-2, ATC-5, and WELL-1. MTBE was not present in any of the groundwater samples. MCB and o-DCB were present in groundwater samples obtained from ATC-1, ATC-2, ATC-5, ATC-7, ATC-9, and WELL-1. m-DCB and p-DCB were present in groundwater samples obtained from ATC-1, ATC-2, ATC-3, ATC-5, ATC-7, ATC-9, and WELL-1. None of the concentrations exceeded the MCLs, with the exception of benzene (ATC-1, ATC-2, ATC-5 and WELL-1), MCB (ATC-1, ATC-2, ATC-7, and WELL-1) and p-DCB (ATC-1, ATC-2, ATC-3, ATC-5, ATC-7, ATC-9, and WELL-1).

Barium was present in all groundwater samples analyzed. The maximum barium concentration was 0.39 milligrams per liter (mg/l). Chromium was present in groundwater samples obtained from ATC-2 (0.014 mg/l), ATC-3 (0.010 mg/l), ATC-5 (0.033 mg/l), and ATC-7 (0.013 mg/l). Mercury was present in groundwater samples obtained from ATC-5 (0.00041 mg/l). Arsenic, cadmium, lead, silver and selenium were not present in any of the groundwater samples. None of the metals concentrations exceeded the MCLs.

7.0 CONCLUSIONS

Soil and groundwater beneath the site appears to be impacted by petroleum hydrocarbons, solvents and metals. The analytical data also suggests that there exists a potential for an off-site source(s) that may be contributing to soil and groundwater contamination beneath the site. Since MTBE is not present in any of soil and groundwater samples, it appears that the gasoline in the soil and groundwater may have originated from a older release.

However, it does appear that a upgradient source(s) may also be contributing to the on-site soil and groundwater contamination encountered beneath the site. ATC's Phase I ESA (1998) indicated that the AAA Equipment Company removed a diesel underground storage tank (UST), which was located upgradient from the subject property. Analytical results of soil samples indicated that the maximum on-site TPH-D and TPH-M concentrations were obtained downgradient of the former diesel UST located on the AAA Equipment Company property. Significant concentrations of TPH-D were also detected in groundwater samples obtained along the property line with the AAA Equipment Company property. Furthermore, ATC's Phase I ESA indicated that a hardened or congealed black substance had oozed from a drum(s) located on the AAA Equipment property. Conversations with Mr. John Collins of Metalcast indicated that these and/or other drums had been located in the same area of the AAA Equipment property for the last 20 years. One of the soil borings completed by ATC encountered an asphalt/tar mixture during drilling activities at two feet bgs. In addition, tar was observed to be oozing from the drums on the AAA Equipment property by ATC personnel during the Phase II drilling activities. SIMON (Simon, 1991) also completed two site assessments at the subject site. SIMON encountered a tarry black substance in several soil borings.

In addition, groundwater samples obtained in December 1997, from the GC Gas Yard property (also known as the PG & E property, located east and cross-gradient to the

subject site) indicated that concentrations of chlorobenzene were above the MCLs (ATC, 1998). CET Environmental Services concluded that VOCs were migrating onto the GC Gas Yard property from a upgradient source based on the groundwater sampling data (i.e. increase in upgradient VOC concentrations). Analytical results of soil and groundwater samples obtained from the subject site also indicated the presence of chlorobenzene. Chlorobenzene was detected in two soil samples: ATC-2 and ATC-3. The chlorobenzene detected in soil sample from ATC-2 may be due to an on-site source and/or due to an off-site source. However, the soil sample from ATC-2 was obtained from just above the shallow groundwater bearing zone, therefore, that soil sample may have been impacted by contaminated groundwater and may not be representative of the vadose zone. Due to the close proximity of ATC-3 to the upgradient property, the chlorobenzene detected in that sample may be migrating directly from a release on the upgradient property.

8.0 RECOMMENDATIONS

Because the site has been impacted by petroleum hydrocarbons, solvents, and metals, ATC recommends that three additional groundwater monitoring wells be installed at the site in order to determine flow direction beneath the site. By determining the groundwater gradient at the site, an additional assessment can be made as to whether an upgradient source may be contributing to the groundwater contamination beneath the site. In addition, ATC also recommends that research be performed on the existing on-site groundwater monitoring well in order to determine ownership and construction details of the monitoring well, and the original purpose of installing the monitoring well. ATC also recommends that Metalcast Engineering contact the owner of the AAA Equipment Company facility to request that the leaking drums be removed from the area near the Metalcast property line.

Based on the potential for the groundwater to come in contact with, and adversely impact human health and the environment, ATC also recommends that a copy of this report be provided to the appropriate regulatory agencies, including the Regional Water Quality Control Board - San Francisco Bay Region (RWQCB), and the Alameda County Health Agency (ACHA).

9.0 LIMITATIONS

Our professional services have been performed, our findings obtained, and our conclusions and recommendations prepared in accordance with customary principles and practices in the fields of environmental science and engineering. This statement is in lieu of other statements either expressed or implied. This report does not warrant against future operations or conditions, nor does it warrant against operations or conditions present of a type or at a location not investigated.

This report is intended for the sole use of our Client. The scope of services performed in execution of this evaluation may not be appropriate to satisfy the needs of other users, and use or re-use of this document or the findings, conclusions, or recommendations is at the risk of said user.

Environmental evaluations are limited in the sense that conclusions and recommendations are developed from personal interviews and information obtained from limited research and secondary sources. Except as set forth in this report, ATC has made no independent investigations as to the accuracy or completeness of the information derived from the secondary sources and personal interviews, and has assumed that such information was accurate and complete.

Our conclusions regarding the potential environmental impact of nearby, off-site facilities are based on readily available information from the environmental databases and the assumed groundwater flow direction. A detailed file review of each off-site facility and a determination of actual groundwater conditions were beyond the scope of work for this report.

Soil deposits may vary in type, strength, permeability, and many other important properties between points of observation and exploration. Additionally, changes can occur in groundwater and soil moisture conditions due to seasonal variations or for other reasons. Furthermore, the distribution of chemical concentrations in the soil and groundwater can vary spatially and over time. The chemical analysis results presented herein are illustrative of only the sampling locations at the time of sampling. Therefore, it must be recognized that ATC does not and cannot have complete knowledge of the subsurface conditions underlying the subject Site. The opinions presented are based upon the findings at the points of exploration and upon interpretation of the data, including interpolation and extrapolation of information obtained at points of observation.

10.0 REFERENCES

ATC Associates Inc., October 14, 1998, Phase I Environmental Assessment, Metalcast Engineering, 4800 Coliseum Way, Oakland, California.

Simon Environmental Engineering, July 2, 1991, Report on Supplemental Phase II Assessment, Superior Plaster Castings, 4800 Coliseum Way, Oakland, California.

Simon Environmental Engineering, May 16, 1991, Report on Phase II Assessment, Superior Plaster Castings, 4800 Coliseum Way, Oakland, California.

Aqua Terra Technologies, April 8, 1991, Preliminary (Phase I) Environmental Site Assessment, Superior Plaster Castings, 4800 Coliseum Way, Oakland, California.

TABLE 1

SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS
FOR ORGANIC CONSTITUENTS
METALCAST
OAKLAND, CALIFORNIA

Sample ID	Sample Date	TPH-G (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	MTBE (mg/kg)	Detected HVOCs (EPA 8010)				TPH-M (mg/kg)	TPH-D (mg/kg)
								MCB (ug/kg)	o-DCB (ug/kg)	m-DCB (ug/kg)	p-DCB (ug/kg)		
ATC-1-4ft	10/08/98	1,000	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 2.5	ND 5.0	ND 5.0	ND 5.0	ND 5.0	5,700	3,800
ATC-2-4ft	10/08/98	1.9	ND 0.0050	ND 0.0050	ND 0.0050	0.0082	ND 0.025	27	ND 5.0	50	130	45	11
ATC-3-3ft	10/08/98	160	0.056	ND 0.050	ND 0.050	0.12	ND 0.25	3,800	ND 5.0	19,000	33,000	29,000	13,000
ATC-4-4ft	10/08/98	170	ND 0.10	ND 0.10	ND 0.10	ND 0.10	ND 0.50	NA	NA	NA	NA	3,100	1,700
ATC-5-3.5ft	10/08/98	ND 1.0	ND 0.0050	ND 0.0050	ND 0.0050	ND 0.0050	ND 0.025	ND 5.0	ND 5.0	ND 5.0	ND 5.0	2,700	200
ATC-6-1ft	10/08/98	120	ND 0.050	0.22	0.18	0.78	ND 0.25	ND 5.0	ND 5.0	ND 5.0	ND 5.0	17,000	6,700
ATC-7-4ft	10/08/98	700	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 1.2	ND 5.0	ND 5.0	ND 5.0	ND 5.0	23,000	11,000
ATC-8-4ft	10/08/98	250	ND 0.12	ND 0.12	ND 0.12	ND 0.12	ND 0.62	NA	NA	NA	NA	630	490
ATC-9-4ft	10/08/98	1,000	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 2.5	ND 5.0	ND 5.0	ND 5.0	ND 5.0	8,600	7,200

Notes:

- TPH-G denotes total petroleum hydrocarbons as gasoline
- TPH-D denotes total petroleum hydrocarbons as diesel
- TPH-M denotes total petroleum hydrocarbons as motor oil
- MCB denotes chlorobenzene
- o-DCB denotes 1,2-dichlorobenzene
- m-DCB denotes 1,3-dichlorobenzene
- p-DCB denotes 1,4-dichlorobenzene
- MTBE denotes methyl tert-butyl ether
- ug/kg denotes micrograms per kilogram
- mg/kg denotes milligrams per kilogram
- ND denotes not detected above listed detection limit
- NA denotes not analyzed
- 1,1-Dichloroethane (2,400 ug/kg) was detected in soil sample ATC-3-3ft.

TABLE 2

SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS
FOR INORGANIC CONSTITUENTS
METALCAST
OAKLAND, CALIFORNIA

Sample ID	Sample Date	As (mg/kg)	Ag (mg/kg)	Ba (mg/kg)	Cd (mg/kg)	Cr (mg/kg)	Hg (mg/kg)	Pb (mg/kg)	Se (mg/kg)
TTL		500	500	10,000	100	500	20	1000	100
ATC-1-4ft	10/08/98	6.6	ND 0.50	320	ND 0.50	50	0.073	13	ND 5.0
ATC-2-4ft	10/08/98	14	ND 0.50	270	0.68	36	0.12	150	ND 5.0
ATC-3-3ft	10/08/98	12	ND 0.50	1,000	0.65	30	0.16	250	ND 5.0
ATC-5-3.5ft	10/08/98	ND 5.0	ND 0.50	35	ND 0.50	15	ND 0.050	ND 5.0	ND 5.0
ATC-6-1ft	10/08/98	ND 5.0	ND 0.50	61	0.86	11	ND 0.050	13	ND 5.0
ATC-7-4ft	10/08/98	ND 5.0	ND 0.50	120	ND 0.50	22	0.055	35	ND 5.0
ATC-9-4ft	10/08/98	ND 5.0	ND 0.50	160	ND 0.50	35	0.054	7.4	ND 5.0

Notes:

TTL denotes Total Threshold Limit Concentration

Metals symbols taken from the Periodic Table of Elements:

As = Arsenic, Ag = Silver, Ba = Barium, Cd = Cadmium, Cr = Chromium,

Hg = Mercury, Pb = Lead, Se = Selenium

mg/kg denotes milligrams per kilogram

ND denotes not detected above listed detection limit

TABLE 3

SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS
FOR ORGANIC CONSTITUENTS
METALCAST
OAKLAND, CALIFORNIA

Sample ID	Sample Date	TPH-G (ug/l)	TPH-D (ug/l)	TPH-M (ug/l)	Benzene (ug/l)	Toluene (ug/l)	Ethyl-benzene (ug/l)	Total Xylenes (ug/l)	MTBE (ug/l)	Detected HVOCs (EPA 8010)			
										MCB (ug/l)	o-DCB (ug/l)	m-DCB (ug/l)	p-DCB (ug/l)
Primary MCLs		-	-	-	1	1000	680	1750	-	70	600	130*	5
ATC-1	10/08/98	1,400	19,000	18,000	5.3	ND 5.0	7.5	ND 5.0	ND 25	370	32	370	450
ATC-2	10/08/98	980	1,500	2,300	2.3	ND 2.5	1.4	1.4	ND 12	92	32	590	970
ATC-3	10/08/98	440	6,700	16,000	ND 2.5	ND 2.5	ND 2.5	ND 2.5	ND 12	ND 50	ND 50	120	250
ATC-4	10/08/98	950	1,400	1,200	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 25	NA	NA	NA	NA
ATC-5	10/08/98	270	20,000	65,000	1.8	9.4	1.7	7.0	ND 25	16	3.3	27	42
ATC-7	10/08/98	1,900	2,200	ND 2,000	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 25	210	54	730	1,000
ATC-8	10/08/98	360	15,000	14,000	ND 2.5	ND 2.5	3.5	11	ND 12	NA	NA	NA	NA
ATC-9	10/08/98	3,000	9,300	15,000	ND 10	ND 10	ND 10	ND 10	ND 50	33	190	440	380
WELL-1	10/08/98	2,300	1,700	1,600	4.3	ND 5.0	1.3	2.4	ND 25	220	56	900	1,500

Notes:

Primary MCLs (Maximum Contaminant Levels) from California Dept.of Health Services; if none exist, USEPA levels are listed

TPH-G denotes total petroleum hydrocarbons as gasoline

TPH-D denotes total petroleum hydrocarbons as diesel

TPH-M denotes total petroleum hydrocarbons as motor oil

MTBE denotes methyl tert-butyl ether

MCB denotes chlorobenzene

o-DCB denotes 1,2-dichlorobenzene

m-DCB denotes 1,3-dichlorobenzene

p-DCB denotes 1,4-dichlorobenzene

ug/l denotes micrograms per liter

NA denotes not analyzed

ND denotes not detected above listed detection limit

* State action level for m-DCB is 130 ug/l

TABLE 4

**SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS
FOR INORGANIC CONSTITUENTS
METALCAST
OAKLAND, CALIFORNIA**

Sample ID	Sample Date	As (mg/l)	Ag (mg/l)	Ba (mg/l)	Cd (mg/l)	Cr (mg/l)	Hg (mg/l)	Pb (mg/l)	Se (mg/l)
Primary MCL		0.050	0.050	-1.000	0.010	0.050	0.002	0.050	0.010
ATC-1	10/08/98	ND 0.10	ND 0.010	0.23	ND 0.010	ND 0.010	ND 0.00020	ND 0.10	ND 0.10
ATC-2	10/08/98	ND 0.10	ND 0.010	0.23	ND 0.010	0.014	ND 0.00020	ND 0.10	ND 0.10
ATC-3	10/08/98	ND 0.10	ND 0.010	0.26	ND 0.010	0.010	ND 0.00020	ND 0.10	ND 0.10
ATC-5	10/08/98	ND 0.10	ND 0.010	0.25	ND 0.010	0.033	0.00041	ND 0.10	ND 0.10
ATC-7	10/08/98	ND 0.10	ND 0.010	0.19	ND 0.010	0.013	ND 0.00020	ND 0.10	ND 0.10
ATC-9	10/08/98	ND 0.10	ND 0.010	0.39	ND 0.010	ND 0.010	ND 0.00020	ND 0.10	ND 0.10
WELL-1	10/08/98	ND 0.10	ND 0.010	0.20	ND 0.010	ND 0.010	ND 0.00020	ND 0.10	ND 0.10

Notes:

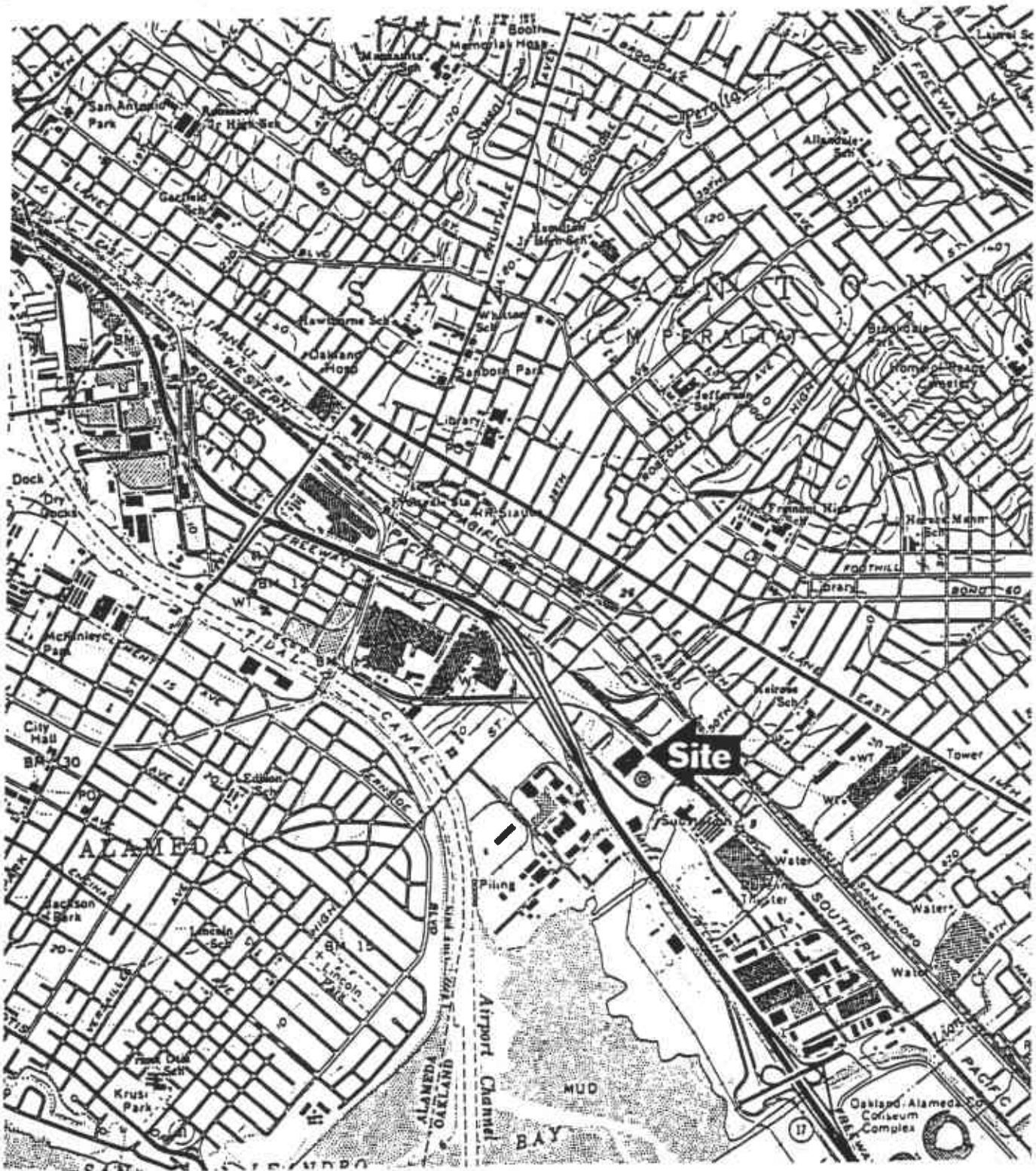
Primary MCLs (Maximum Contaminant Levels) from California Dept. of Health Services; if none exist, USEPA levels are listed

Metals symbols taken from the Periodic Table of Elements:

As = Arsenic, Ag = Silver, Ba = Barium, Cd = Cadmium, Cr = Chromium, Hg = Mercury, Ni = Nickel, Pb = Lead, Se = Selenium

mg/l denotes milligrams per liter

ND denotes not detected above listed detection limit



SOURCE: USGS 7 1/2 MINUTE TOPOGRAPHIC QUADRANGLE.
 OAKLAND EAST, CALIFORNIA
 DATE 1959. PHOTO REUSED 1980. AT SCALE 1:24,000



METALCAST ENGINEERING
 4800 COLISEUM WAY
 OAKLAND, CALIFORNIA

SITE LOCATION MAP

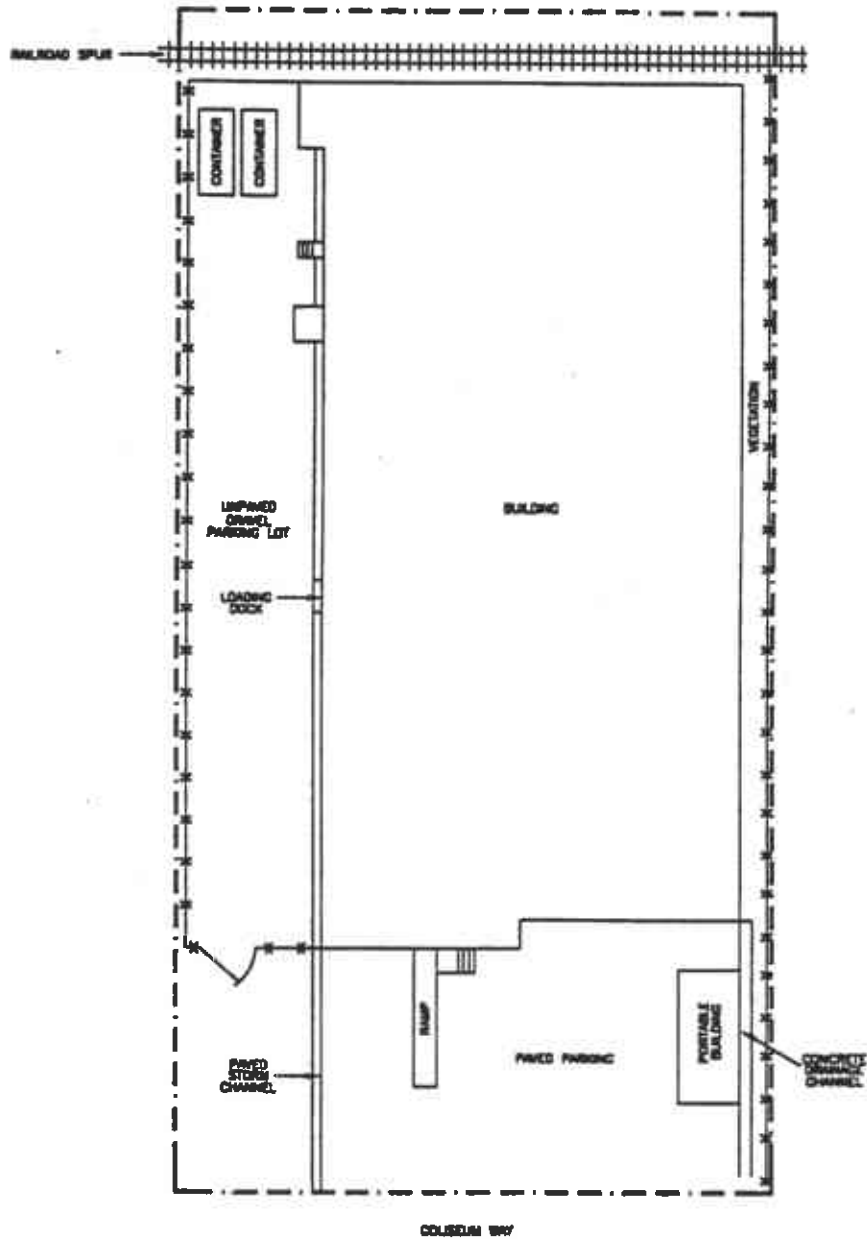
FIGURE:
1

PROJECT #: 89775.0030

SEPTEMBER 1998

LEARNER CO.
(LAWTON)
LAST SITE

AAA EQUIPMENT



WHITE DUC. TRUCKS
(ACROSS SOUTH AVENUE)

BOSTON & BURGON

PCMC

COLISEUM WAY

COLISEUM WAY HOTEL

LEGEND:

- - - - PROPERTY LINE
- *-* FENCE

NOT TO SCALE



METALCAST ENGINEERING
4800 COLISEUM WAY
OAKLAND, CALIFORNIA

SITE AND ADJACENT
PROPERTIES MAP

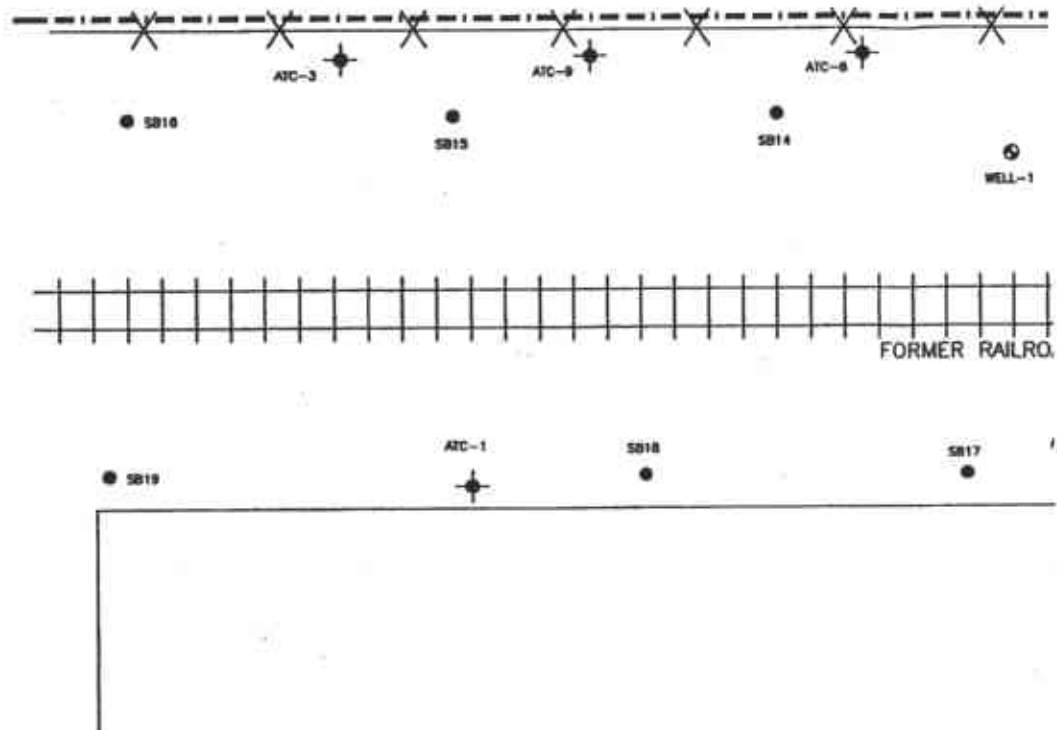
FIGURE:

2

PROJECT #: 89775.0030

SEPTEMBER 1998

SEPARATE LOGS
AVAILABLE FOR
DISCUSS



LEGEND:

- - - - - PROPERTY LINE

X-X FENCE

● SB19 SOIL BORING (COMPLETED BY
SMON-ED INC.)

◆-ATC-8 SOIL BORING (COMPLETED BY
ATC, INC.)

⊙ WELL-1 APPROXIMATE LOCATION OF
MONITORING WELL

NOT TO SCALE

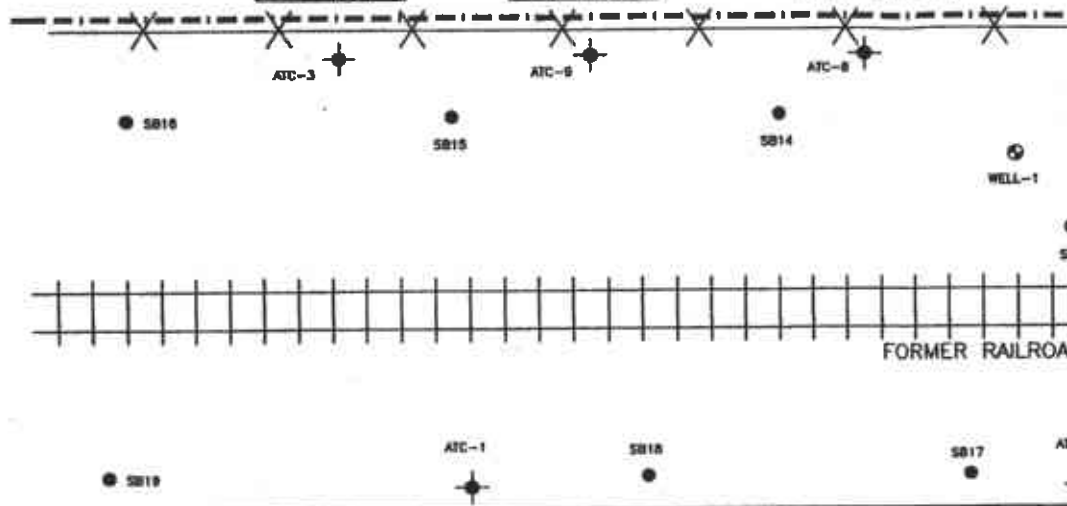


ATC-3	
+TPG-G	160
+TPH-D	13,000
+TPH-M	28,000
+BENZENE	0.056
+o-DCB	ND 5.0
+m-DCB	18,000
+p-DCB	33,000
+MCB	3,800

ATC-8	
+TPG-G	1,000
+TPH-D	7,200
+TPH-M	8,600
+BENZENE	ND 0.50
+o-DCB	ND 5.0
+m-DCB	ND 5.0
+p-DCB	ND 5.0
+MCB	ND 5.0

ATC-8	
+TPG-G	250
+TPH-D	490
+TPH-M	830
+BENZENE	ND 0.12
+o-DCB	NA
+m-DCB	NA
+p-DCB	NA
+MCB	NA

APPROXIMATE LOCATION OF
DISCONTINUED TYPING
SECTION



ATC-1	
+TPG-G	1,000
+TPH-D	3,800
+TPH-M	5,700
+BENZENE	ND 0.50
+o-DCB	ND 5.0
+m-DCB	ND 5.0
+p-DCB	ND 5.0
+MCB	ND 5.0

+TPG-G	
+TPH-D	
+TPH-M	
+BENZENE	
+o-DCB	
+m-DCB	
+p-DCB	
+MCB	

LEGEND:

- - - - - PROPERTY LINE
- X—X— FENCE
- SB19 SOIL BORING (COMPLETED BY SMON-ED Inc.)
- ⊕ ATC-8 SOIL BORING (COMPLETED BY ATC, Inc.)
- WELL-1 APPROXIMATE LOCATION OF MONITORING WELL
- CONCENTRATIONS ARE PRESENTED IN MILLIGRAMS PER KILOGRAMS (mg/kg)
- CONCENTRATIONS ARE PRESENTED IN MICROGRAMS PER KILOGRAMS (ug/kg)
- TPH-G TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
- TPH-D TOTAL PETROLEUM HYDROCARBONS AS DIESEL
- TPH-M TOTAL PETROLEUM HYDROCARBONS AS MOTOR OIL
- o-DCB 1,2-DICHLOROBENZENE
- m-DCB 1,3-DICHLOROBENZENE
- p-DCB 1,4-DICHLOROBENZENE
- MCB CHLOROBENZENE
- NA CONSTITUENT NOT ANALYZED

NOT TO SCALE



APPENDIX A
SOIL BORING LOGS

ATC Environmental, Inc.

BORING LOG

BORING NO: ATC-1

PROJECT NO: 89775.0030

PROJECT NAME: MetalCoast CLIENT: Comerica Bank
 PROJECT LOCATION: 4800 Coliseum Way, Oakland DRILLING CONTRACTOR: Vironex
 DRILLING MTHD: Geoprobe SAMPLE MTHD: Geoprobe
 DATE STARTED: Oct 8, 1998 DATE FINISHED: Oct 9, 1998 DRILLER: Scott/Brian INSPECTOR: None

DEPTH (FT)	SPT BLows PER 48"	REC (%)	PID (ppm)	LITHOLOGY	SURFACE ELEVATION: NA		REMARKS
					LITHOLOGIC DESCRIPTION		
0.0				Clayey Gravel, GC, orange-brown, slightly moist, dense, no odor			Soil sample ATC-1-4FT collected at 15:30 Soil sample ATC-1-6FT collected at 16:05 & archived at lab Water sample ATC-1 collected at 15:50 Geologist: Bahram Zanganeh-Azam
1		80		Gravelly Clay, CL, black, slightly moist, slightly stiff, very elastic, med plasticity, tar at 3.3ft, strong petroleum odor			
5.0				Clay, CL, black, slightly moist, slightly stiff, med. plasticity, petroleum odor			
		90		Gravelly Clay, CL, green, very moist to 6.5ft, wet from 6.5ft, stiff, high plasticity, some sand at 7ft, strong petroleum odor, oil/tar globules visible			
				Clay, CL, green/dark grey, wet, slightly stiff, high plasticity, strong odor			
10.0			100	Gravel, GC, grey-green, saturated, loose, slight sour odor			
				Clay, CL, light brown, very wet, stiff, high plasticity, orange discolorations, no odor			
				Clayey/Sandy Gravel, GC, orange-brown, saturated, dense, no odor			
15.0							
20.0							
25.0							
30.0							

BOTTOM OF TEST BORING: 12.00'

SPT = STANDARD PENETRATION TEST
 REC = SAMPLE RECOVERY
 ND = NON-DETECTABLE
 FID = FLAME IONIZATION DETECTOR
 PID = PHOTO-IONIZATION DETECTOR

ATC Environmental, Inc.

BORING LOG

BORING NO: ATC-2

PROJECT NO: 89775.0030

PROJECT NAME: MetalCast

CLIENT: Comerica Bank

PROJECT LOCATION: 1800 Coliseum Way, Oakland

DRILLING CONTRACTOR: Vironex

DRILLING MTHD: Geoprobe

SAMPLE MTHD: Geoprobe

DATE STARTED: Oct 8, 1998

DATE FINISHED: Oct 8, 1998

DRILLER: Scott/Brion

INSPECTOR: None

DEPTH (FT)	SPT BLOWS PER 10"	REC (%)	PID (ppm)	ACQUILA	SURFACE ELEVATION: NA	REMARKS
					LITHOLOGIC DESCRIPTION	
0.0					Backfill Gravel, GP, light grey, dry, loose. 3ft: 2" lens of clayey gravel, dark brown, moist, very stiff, cemented by thick hard tar	Soil sample ATC-2-4FT collected at 16:30
1		40			Silt, ML, black, moist, soft, no odor	
5.0		50			Clayey/Gravelly Sand, SC, green, very moist, loose, slight sour odor	
					Clayey Gravel, GC, green, very moist, very stiff/dense. 8ft-10ft: saturated	Soil sample ATC-2-7FT collected at 16:45 & archived at lab
10.0		100			Gravelly Clay, CL, green, very wet, very stiff, abundant gravel&sand. 11.5ft: orange-brown	Difficulty in obtaining complete samples due to surface gravels caving into borehole: 2" metal casings were delivered by Vironex support team to the site from their Hayward location. 2" casing kept hole open for the 1" temporary pvc casing & screen to be installed
15.0						Water sample ATC-2 collected at 16:30
20.0						
25.0						Geologist: Bahram Zanganeh-Azou
30.0						

BOTTOM OF TEST BORING: 12.00'

- SPT = STANDARD PENETRATION TEST
- REC = SAMPLE RECOVERY
- ND = NON-DETECTABLE
- FID = FLAME IONIZATION DETECTOR
- PID = PHOTO-IONIZATION DETECTOR

ATC Environmental, Inc.

BORING LOG

BORING NO: ATC-3

PROJECT NO: 89775.0030

PROJECT NAME: MetalCast CLIENT: Comerica Bank
 PROJECT LOCATION: 4800 Coliseum Way, Oakland DRILLING CONTRACTOR: Vironex
 DRILLING MTHD: Geoprobe SAMPLE MTHD: Geoprobe
 DATE STARTED: Oct 8, 1998 DATE FINISHED: Oct 8, 1998 DRILLER: Scott/Brian INSPECTOR: None

DEPTH (FT)	SPT BLOWS PER 40"	REC (%)	PID (ppm)	LITHOLOGY	SURFACE ELEVATION: NA	REMARKS
					LITHOLOGIC DESCRIPTION	
0.0						
1		50		Clayey Gravel, GC, light brown, dry, loose, dense at 1ft, oil/tar globules visible, 2" layer of soft tar at 1.5ft		Soil sample ATC-3-3FT collected at 15:00 Soil sample ATC-3-4FT collected at 15:05 & archived at lab
				Clayey Silt, ML, black, very moist, wet at 3.5ft, soft, slight petroleum odor		
5.0		100		Clay, CL, green, moist, very stiff, high plasticity, some brown discoloration, some gravels, slight sour odor		
				Gravelly Clay, CL, green with large orange-brown discoloration, very moist, slightly stiff, slight sour odor		
10.0		100		Clayey/Sandy Gravel, GC, green, very moist, slightly loose, very slight sour odor. Brown at 11ft, 8ft-12ft: saturated, no odor		Water sample ATC-3 collected at 15:10
15.0						
20.0						
25.0						Geologist: Bahram Zanganeh-Azou
30.0						
BOTTOM OF TEST BORING: 12.00'						
SPT - STANDARD PENETRATION TEST REC - SAMPLE RECOVERY ND - NON-DETECTABLE FID - FLAME IONIZATION DETECTOR PID - PHOTO-IONIZATION DETECTOR						

ATC Environmental, Inc.

BORING LOG

BORING NO: ATC-1
 PROJECT NO: 89775.0030

PROJECT NAME: MetalCoast CLIENT: Comerica Bank
 PROJECT LOCATION: 4600 Coliseum Way Oakland DRILLING CONTRACTOR: Viconex
 DRILLING MTHD: Seecorbe SAMPLE MTHD: Seecorbe
 DATE STARTED: Oct 8, 1998 DATE FINISHED: Oct 8, 1998 DRILLER: Scott/Brian INSPECTOR: None

DEPTH (FT)	SPT BLOWS PER 4"	REC (%)	PID (ppm)	LITHOLOGY	SURFACE ELEVATION: NA		REMARKS
					LITHOLOGIC DESCRIPTION		
0.0					Clayey Gravel, GC, red.-brown, dry to 2ft, moist 2-3ft, very moist 3-4ft, med. dense, black from 3.5ft, some sand, very strong petroleum odor		Pid @ 4ft >2500 ppm: PID maxed out at 2500 ppm & would not clear Soil sample ATC-1-4FT collected at 07:48 Water sample ATC-1 collected at 08:10 Geologist: Bahram Zanganeh-Azou
1		90	>2500		Clay, CL, black, very moist, slightly stiff, high plasticity, some gravels, strong petroleum odor		
5.0		100			Gravelly Clay, CL, green-grey, very moist, slightly stiff, med. to high plasticity, strong odor, globules of black oil/tar visible, amount of globules increases at 8ft. Saturated at 8ft 8-10ft: greenish-brown, some sand, sheen, free product. 10ft: green, saturated, no more globules of free product		
10.0		100					
15.0							
20.0							
25.0							
30.0							
BOTTOM OF TEST BORING: 12.00'							
SPT = STANDARD PENETRATION TEST REC = SAMPLE RECOVERY ND = NON-DETECTABLE PID = FLAME IONIZATION DETECTOR PTD = PHOTO-IONIZATION DETECTOR							

ATC Environmental, Inc.

BORING LOG

BORING NO: ATC-5

PROJECT NO: 89775.0030

PROJECT NAME: MetalCoast

CLIENT: Coastal Bank

PROJECT LOCATION: 4800 Coliseum Way, Oakland

DRILLING CONTRACTOR: Virex

DRILLING MTHD: Geoprobe

SAMPLE MTHD: Geoprobe

DATE STARTED: Oct 8, 1998

DATE FINISHED: Oct 8, 1998

DRILLER: Scott/Brian

INSPECTOR: None

DEPTH (FT)	SPT BLOWS PER 48"	REC (%)	PID (ppm)	MTHD	SURFACE ELEVATION: NA	REMARKS
					LITHOLOGIC DESCRIPTION	
0.0					Clayey/Sandy Gravel, GC, red-brown, dry, very loose, black at 2.5ft, strong petroleum odor	Soil sample ATC-5-3.5FT collected at 08:25 Initial water level: 5ft bgs Water sample ATC-5 collected at 08:50 Geologist: Bahram Zanganeh-Azam
1		60				
5.0		80			Gravelly Clay, CL, black, moist, slightly stiff, med. plasticity, wet at 4ft, strong petroleum odor 4ft-8ft: grey-green, some sand, wet at 7ft, globules of black oil/tar visible, strong odor 8ft-9.5ft: saturated, amount of sand and clay increases; slight petroleum odor from 8ft	
10.0		100				
					Clayey/Sandy Gravel, GC, green-grey, saturated, slightly loose, some oil globules, slight odor. 10ft-12ft: no odor, some sand, green-brown, very wet, dense	
15.0						
20.0						
25.0						
30.0						
BOTTOM OF TEST BORING: 12.00'						
SPT = STANDARD PENETRATION TEST REC = SAMPLE RECOVERY ND = NON-DETECTABLE FID = FLAME IONIZATION DETECTOR PID = PHOTO-IONIZATION DETECTOR						

ATC Environmental, Inc.

BORING LOG

BORING NO: ATC-6
 PROJECT NO: 89775.0030

PROJECT NAME: Metal Coat CLIENT: Comerica Bank
 PROJECT LOCATION: 4800 Coliseum Hwy, Oakland DRILLING CONTRACTOR: Viconex
 DRILLING MTHD: Geoprobe SAMPLE MTHD: Geoprobe
 DATE STARTED: Oct 8, 1998 DATE FINISHED: Oct 8, 1998 DRILLER: Scott/Brion INSPECTOR: None

DEPTH (FT)	FT. TO LOG	SPT BLOWS PER 4"	REC (%)	PID (ppm)	MTHD	SURFACE ELEVATION: NA	REMARKS
						LITHOLOGIC DESCRIPTION	
0.0	1	0				Gravelly Tar/Asphalt with scrap metals, very hard, could not penetrate with Geoprobe; used the Geoprobe rotating asphalt/concrete corer; generated heat and some soaks; very slow progress. Attempted 3 adjacent locations before moving on to next borehole	Tar sample ATC-6-1FT collected at 10:27
5.0							
10.0							
15.0							
20.0							
25.0							
30.0							
BOTTOM OF TEST BORING: 2.00'							
SPT = STANDARD PENETRATION TEST REC = SAMPLE RECOVERY ND = NON-DETECTABLE FID = FLAME IONIZATION DETECTOR PID = PHOTO-IONIZATION DETECTOR							

Geologist: Bahram Zanganeh-Azad

ATC Environmental, Inc.

BORING LOG

BORING NO: ATC-7

PROJECT NO: 89775.0030

PROJECT NAME: MetalCast CLIENT: Comerica Bank
 PROJECT LOCATION: 4800 Coliseum Way, Oakland DRILLING CONTRACTOR: Vironex
 DRILLING MTHD: Geoprobe SAMPLE MTHD: Geoprobe
 DATE STARTED: Oct 8, 1998 DATE FINISHED: Oct 8, 1998 DRILLER: Scott/Brian INSPECTOR: None

DEPTH (FT)	SPT BLows PER 4ft	REC (%)	PID (ppm)	REMARKS	SURFACE ELEVATION: NA	
					LITHOLOGIC DESCRIPTION	
0.0					Backfill/gravels 0ft-1ft. Sandy/Gravelly Tar, black, slightly soft to hard, very high plasticity, highly elastic, very strong petroleum odor, broken glass	
1		50			Clayey Silt, ML, black, very moist/wet, soft, strong petroleum odor	
5.0		100			Clay, CL, green, very moist/wet, stiff, high plasticity, some sand, very elastic, some gravels at 6ft	
					Gravelly/Sandy Clay, CL, green, very moist, stiff, high plasticity, no odor	
10.0		100			Clayey/Sandy Gravel, GC, green, saturated, dense, orange at 12ft	
15.0						
20.0						
25.0						
30.0						

Soil sample ATC-7-4FT collected at 11:05
 Soil sample ATC-7-4.5FT collected at 11:10 & archived at lab
 Soil sample ATC-7-5.5FT collected at 11:15 & archived at lab

Water sample ATC-7 collected at 11:40

Geologist: Bahram Zanganeh-Azom

BOTTOM OF TEST BORING: 12.00'

- SPT = STANDARD PENETRATION TEST
- REC = SAMPLE RECOVERY
- ND = NON-DETECTABLE
- FID = FLAME IONIZATION DETECTOR
- PID = PHOTO-IONIZATION DETECTOR

ATC Environmental, Inc.

BORING LOG

BORING NO: ATC-8

PROJECT NO: 89775.0030

PROJECT NAME: MetalCast

CLIENT: Comerica Bank

PROJECT LOCATION: 4800 Coliseum Way Oakland

DRILLING CONTRACTOR: Viconex

DRILLING MTHD: Geoprobe

SAMPLE MTHD: Geoprobe

DATE STARTED: Oct 8, 1998

DATE FINISHED: Oct 8, 1998

DRILLER: Scott/Brian

INSPECTOR: None

DEPTH (FT)	SPT (blows per 4ft)	REC (%)	PID (ppm)	ACQUILA	SURFACE ELEVATION: NA	REMARKS
					LITHOLOGIC DESCRIPTION	
0.0					Gravelly Clay, CL, dark brown/black, dry, stiff, high plasticity, petroleum odor	<p>Soil sample ATC-8-2FT collected at 11:55 & archived at lab</p> <p>Soil sample ATC-8-3FT collected at 12:00 & archived at lab</p> <p>Soil sample ATC-8-4FT collected at 12:10</p> <p>Soil sample ATC-8-8FT collected at 12:30 & archived at lab</p> <p>Soil sample ATC-8-9FT collected at 12:50 & archived at lab</p> <p>When retrieving the 4-8ft sample, the Geoprobe rods from 2-4ft were covered with oozing soft tar</p> <p>8-12ft sample: recovered approximately 1.5ft of the soft oozing tar which apparently dripped down from the 2-4ft interval</p> <p>Water sample ATC-8 collected at 12:50. Initially has odor, sheen, floating product. 4th VDA has very slight to no odor and no sheen</p> <p>Geologist: Bahraa Zanganeh-Azad</p>
1		90			Gravelly Tar, black, slightly stiff, very sticky, very elastic	
					Clayey/Gravelly Silt, ML, black, wet, soft, elastic, strong petroleum odor, globules of oil/tar visible	
5.0					Clay, CL, grey-green, very moist, stiff, high plasticity, very elastic, petroleum odor, oil/tar globules visible	
		100			Gravelly Clay, CL, green, moist, slightly stiff, med. plasticity, strong petroleum odor, globules of oil/tar visible	
10.0					Clayey Gravel, GC, green, saturated, slightly dense, orange-brown at 10.5ft	
		100			Clayey/Sandy Silt, ML, very wet, soft. Brown discolorations 11.3ft-11.5ft	
					Clayey Gravel, GC, brown, saturated, slightly loose, no odor	
15.0						
20.0						
25.0						
30.0						
BOTTOM OF TEST BORING: 12.00'						
<p>SPT - STANDARD PENETRATION TEST</p> <p>REC - SAMPLE RECOVERY</p> <p>ND - NON-DETECTABLE</p> <p>FID - FLAME IONIZATION DETECTOR</p> <p>PID - PHOTO-IONIZATION DETECTOR</p>						

ATC Environmental, Inc.

BORING LOG

BORING NO: ATC-9

PROJECT NO: 89775.0030

PROJECT NAME: MetalCoast CLIENT: Comerica Bank
 PROJECT LOCATION: 4800 Coliseum Way, Oakland DRILLING CONTRACTOR: Vironex
 DRILLING MTHD: Geoprobe SAMPLE MTHD: Geoprobe
 DATE STARTED: Oct 8, 1998 DATE FINISHED: Oct 8, 1998 DRILLER: Scott/Brian INSPECTOR: None

DEPTH (FT)	SPT BLOWS PER 48"	REC (%)	PID (ppm)	FID (ppm)	SURFACE ELEVATION: NA		REMARKS
					LITHOLOGIC DESCRIPTION		
0.0					Gravelly Clay, CL, black, moist, stiff, very elastic, high plasticity, broken glass at 2ft, strong petroleum odor, oil/tar globules visible		Soil sample ATC-9-3FT collected at 13:55 & archived at lab Soil sample ATC-9-4FT collected at 14:00 & archived at lab Water sample ATC-9 collected at 14:15 Geologist: Bahram Zanganeh-Azoum
1		90			Silty Clay, CL, black, very moist, slightly stiff, strong petroleum odor, oil/tar globules visible		
5.0					Clay, CL, grey-green, very moist, very stiff, high plasticity, some gravels, strong petroleum odor, oil/tar globules visible		
		100			Gravelly Clay, CL, green, wet, stiff, med plasticity, strong petroleum odor, oil/ tar globules visible		
10.0					Clayey Gravel, GC, green, very wet, saturated at 7.5ft, loose, strong petroleum odor		
		100			Clayey/Sandy Gravel, GC, orange-brown, saturated, med. dense, sour odor, some 2" lenses of clay; 11.5ft-3" lens of coarse clayey sand		
15.0							
20.0							
25.0							
30.0							
BOTTOM OF TEST BORING: 12.00'							
SPT = STANDARD PENETRATION TEST REC = SAMPLE RECOVERY ND = NON-DETECTABLE FID = FLAME IONIZATION DETECTOR PID = PHOTO-IONIZATION DETECTOR							

APPENDIX B
DRILLING PERMIT APPLICATION



ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION
951 TURNER COURT, SUITE 300, HAYWARD, CA 94545-2651
PHONE (510) 678-5575 ANDREAS GODFREY FAX (510) 670-5262
(510) 678-5248 ALVIN KAN

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT
Metalcast Engineering
4800 Coliseum Way - Oakland

California Coordinates Source _____ ft. Accuracy ± _____ ft.
CCN _____ ft. CCE _____ ft.
APN _____

* See attached figures *

CLIENT
Name Metalcast Engineering
Address 4800 Coliseum Way Phone _____
City Oakland Zip 94601

APPLICANT
Name ATC Associates c/o
A. Martinez Fax (925) 463-2559
Address Isabella Owens Drive Phone (925) 460-5300
City Pleasanton Zip 94588

TYPE OF PROJECT

Well Construction Geotechnical Investigation
Cathodic Protection General
Water Supply Contamination
Monitoring Well Destruction

* Geoprobe *

PROPOSED WATER SUPPLY WELL USE

New Domestic Replacement Domestic
Municipal Irrigation
Industrial Other _____

DRILLING METHOD:

Mud Rotary Air Rotary Auger
Cable Other

DRILLER'S LICENSE NO.

CS7-705927

VIPower

WELL PROJECTS

Drill Hole Diameter _____ in. Maximum _____
Casing Diameter _____ in. Depth _____ ft.
Surface Seal Depth _____ ft. Number _____

GEOTECHNICAL PROJECTS

Number of Borings 11 Maximum _____
Hole Diameter 1.74 in. Depth 10 ft.

ESTIMATED STARTING DATE

10/8/98

ESTIMATED COMPLETION DATE

10/8/98

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE A. Martinez DATE 9/24/98

FOR OFFICE USE

PERMIT NUMBER 98WR421
WELL NUMBER _____
APN _____

PERMIT CONDITIONS

Circled Permit Requirements Apply

A. GENERAL

1. A permit application should be submitted so as to arrive at the ACPWA office five days prior to proposed starting date.
2. Submit to ACPWA within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well projects, or drilling logs and location sketch for geotechnical projects.
3. Permit is void if project not begun within 90 days of approval date.

B. WATER SUPPLY WELLS

1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 30 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.

C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS

1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

D. GEOTECHNICAL

Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremie cement grout shall be used in place of compacted cuttings.

E. CATHODIC

Fill hole above anodic zone with concrete placed by tremie.

F. WELL DESTRUCTION

See attached.

G. SPECIAL CONDITIONS

APPROVED Al-Ka

DATE 9/28/98

APPENDIX C

**LABORATORY ANALYTICAL REPORTS AND
CHAIN-OF-CUSTODY FORMS**



Sequoia Analytical

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ATC Associates, Inc.
6666 Owens Drive
Pleasanton, CA 94588

Client Proj. ID: Metalcast

Lab Proj. ID: 9810847

Sampled: 10/08/98
Received: 10/09/98
Analyzed: see below

Reported: 10/26/98

Attention: Al Martinez

LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9810847-02 Sample Desc: SOLID,ATC-5-3.5				
Arsenic by ICP	mg/Kg	10/14/98	5.0	N.D.
Barium by ICP	mg/Kg	10/14/98	5.0	35
Cadmium by ICP	mg/Kg	10/14/98	0.50	N.D.
Chromium by ICP	mg/Kg	10/14/98	0.50	15
Lead by ICP	mg/Kg	10/14/98	5.0	N.D.
Mercury by Cold Vapor	mg/Kg	10/14/98	0.050	N.D.
Selenium by ICP	mg/Kg	10/14/98	5.0	N.D.
Silver: ICP	mg/Kg	10/14/98	0.50	N.D.
Lab No: 9810847-03 Sample Desc: SOLID,ATC-7-4ft				
Arsenic by ICP	mg/Kg	10/14/98	5.0	N.D.
Barium by ICP	mg/Kg	10/14/98	5.0	120
Cadmium by ICP	mg/Kg	10/14/98	0.50	N.D.
Chromium by ICP	mg/Kg	10/14/98	0.50	22
Lead by ICP	mg/Kg	10/14/98	5.0	35
Mercury by Cold Vapor	mg/Kg	10/14/98	0.050	0.055
Selenium by ICP	mg/Kg	10/14/98	5.0	N.D.
Silver: ICP	mg/Kg	10/14/98	0.50	N.D.
Lab No: 9810847-05 Sample Desc: SOLID,ATC-9-4ft				
Arsenic by ICP	mg/Kg	10/14/98	5.0	N.D.
Barium by ICP	mg/Kg	10/14/98	5.0	160
Cadmium by ICP	mg/Kg	10/14/98	0.50	N.D.
Chromium by ICP	mg/Kg	10/14/98	0.50	35
Lead by ICP	mg/Kg	10/14/98	5.0	7.4
Mercury by Cold Vapor	mg/Kg	10/14/98	0.050	0.054
Selenium by ICP	mg/Kg	10/14/98	5.0	N.D.
Silver: ICP	mg/Kg	10/14/98	0.50	N.D.

analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Jayvan Kinyai
Project Manager



Sequoia Analytical

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ATC Associates, Inc.
6666 Owens Drive
Pleasanton, CA 94588

Client Proj. ID: Metalcast

Lab Proj. ID: 9810847

Sampled: 10/08/98
Received: 10/09/98
Analyzed: see below

Reported: 10/26/98

Attention: Al Martinez

LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9810847-06 Sample Desc: SOLID,ATC-3-3ft				
Arsenic by ICP	mg/Kg	10/14/98	5.0	12
Barium by ICP	mg/Kg	10/14/98	5.0	1000
Cadmium by ICP	mg/Kg	10/14/98	0.50	0.65
Chromium by ICP	mg/Kg	10/14/98	0.50	30
Lead by ICP	mg/Kg	10/14/98	5.0	250
Mercury by Cold Vapor	mg/Kg	10/14/98	0.050	0.16
Selenium by ICP	mg/Kg	10/14/98	5.0	N.D.
Silver: ICP	mg/Kg	10/14/98	0.50	N.D.
Lab No: 9810847-07 Sample Desc: SOLID,ATC-1-4ft				
Arsenic by ICP	mg/Kg	10/14/98	5.0	6.6
Barium by ICP	mg/Kg	10/14/98	5.0	320
Cadmium by ICP	mg/Kg	10/14/98	0.50	N.D.
Chromium by ICP	mg/Kg	10/14/98	0.50	50
Lead by ICP	mg/Kg	10/14/98	5.0	13
Mercury by Cold Vapor	mg/Kg	10/14/98	0.050	0.073
Selenium by ICP	mg/Kg	10/14/98	5.0	N.D.
Silver: ICP	mg/Kg	10/14/98	0.50	N.D.
Lab No: 9810847-08 Sample Desc: SOLID,ATC-2-4ft				
Arsenic by ICP	mg/Kg	10/14/98	5.0	14
Barium by ICP	mg/Kg	10/14/98	5.0	270
Cadmium by ICP	mg/Kg	10/14/98	0.50	0.68
Chromium by ICP	mg/Kg	10/14/98	0.50	36
Lead by ICP	mg/Kg	10/14/98	5.0	150
Mercury by Cold Vapor	mg/Kg	10/14/98	0.050	0.12
Selenium by ICP	mg/Kg	10/14/98	5.0	N.D.
Silver: ICP	mg/Kg	10/14/98	0.50	N.D.

Analyses reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

ayvan Kimyer
Project Manager



**Sequoia
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ATC Associates, Inc. 666 Owens Drive Pleasanton, CA 94588	Client Proj. ID: Metalcast Lab Proj. ID: 9810847	Sampled: 10/08/98 Received: 10/09/98 Analyzed: see below Reported: 10/26/98
Attention: Al Martinez		

LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No:	9810847-09			
Sample Desc:	SOLID, ATC-6-1ft			
Arsenic by ICP	mg/Kg	10/14/98	5.0	N.D.
Barium by ICP	mg/Kg	10/14/98	5.0	61
Cadmium by ICP	mg/Kg	10/14/98	0.50	0.86
Chromium by ICP	mg/Kg	10/14/98	0.50	11
Lead by ICP	mg/Kg	10/14/98	5.0	13
Mercury by Cold Vapor	mg/Kg	10/14/98	0.050	N.D.
Selenium by ICP	mg/Kg	10/14/98	5.0	N.D.
Silver: ICP	mg/Kg	10/14/98	0.50	N.D.

analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210


Ivan Kiriyai
Project Manager



**Sequoia
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ATC Associates, Inc. 6666 Owens Drive Pleasanton, CA 94588	Client Proj. ID: Metalcast Sample Descript: ATC-4-ft Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9810847-01	Sampled: 10/08/98 Received: 10/09/98 Extracted: 10/13/98 Analyzed: 10/16/98 Reported: 10/26/98
Attention: Al Martinez		


GC Batch Number: GC101398BTEXEXA
Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	20	170
Methyl t-Butyl Ether	0.50	N.D.
Benzene	0.10	N.D.
Toluene	0.10	N.D.
Ethyl Benzene	0.10	N.D.
Xylenes (Total)	0.10	N.D.
Chromatogram Pattern: Unidentified HC		> C8
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	100
4-Bromofluorobenzene	60 140	0 Q

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210


Project Manager



**Sequoia
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ATC Associates, Inc.
6666 Owens Drive
Pleasanton, CA 94588

Client Proj. ID: Metalcast
Sample Descript: ATC-4-4ft
Matrix: SOLID
Analysis Method: EPA 8015 Mod
Lab Number: 9810847-01

Sampled: 10/08/98
Received: 10/09/98
Extracted: 10/13/98
Analyzed: 10/17/98
Reported: 10/26/98

Attention: Al Martinez

GC Batch Number: GC1013980HBPEXC
Instrument ID: GCHP4B

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel	100	1700
Chromatogram Pattern: Unidentified HC		C9-C24
Surrogates	Control Limits %	% Recovery
n-Pentacosane (C25)	50 150	Q

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210


Project Manager



**Sequoia
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ATC Associates, Inc. 6666 Owens Drive Pleasanton, CA 94588	Client Proj. ID: Metalcast Sample Descript: ATC-4-4ft Matrix: SOLID Analysis Method: EPA 8015 Mod Lab Number: 9810847-01	Sampled: 10/08/98 Received: 10/09/98 Extracted: 10/13/98 Analyzed: 10/17/98 Reported: 10/26/98
Attention: Al Martinez		


GC Batch Number: GC1013980HBPEXC
Instrument ID: GCHP4B

Fuel Fingerprint : Motor Oil

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
Extractable HC as Motor Oil	1000	3100
Chromatogram Pattern: Unidentified HC		C16-C36
Surrogates	Control Limits %	% Recovery
n-Pentacosane (C25)	50 150	Q

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210


Project Manager



**Sequoia
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ATC Associates, Inc.
3666 Owens Drive
Pleasanton, CA 94588

Client Proj. ID: Metalcast
Sample Descript: ATC-5-3.5
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9810847-02

Sampled: 10/08/98
Received: 10/09/98
Extracted: 10/13/98
Analyzed: 10/16/98
Reported: 10/26/98

Attention: Al Martinez

C Batch Number: GC101398BTEXEXA
Instrument ID: GCHP18

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Methyl t-Butyl Ether	0.025	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern:		
	Control Limits %	% Recovery
Surrogates		
Trifluorotoluene	70	130
4-Bromofluorobenzene	60	140

analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210


Project Manager



**Sequoia
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ATC Associates, Inc.
666 Owens Drive
Pleasanton, CA 94588

Client Proj. ID: Metalcast
Sample Descript: ATC-5-3.5
Matrix: SOLID
Analysis Method: EPA 8015 Mod
Lab Number: 9810847-02

Sampled: 10/08/98
Received: 10/09/98
Extracted: 10/13/98
Analyzed: 10/20/98
Reported: 10/26/98

Attention: Al Martinez


Batch Number: GC1013980HBPEXC
Instrument ID: GCHP4B

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel Chromatogram Pattern: Unidentified HC	200	200 C9-C24
Surrogates n-Pentacosane (C25)	Control Limits % 50 150	% Recovery 174 Q

Analytes reported as N.D. were not present above the stated limit of detection.

EQUOIA ANALYTICAL - ELAP #1210


Project Manager





**Sequoia
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ATC Associates, Inc.
3666 Owens Drive
Pleasanton, CA 94588

Client Proj. ID: Metalcast
Sample Descript: ATC-5-3.5
Matrix: SOLID
Analysis Method: EPA 8015 Mod
Lab Number: 9810847-02

Sampled: 10/08/98
Received: 10/09/98
Extracted: 10/13/98
Analyzed: 10/20/98
Reported: 10/26/98

Attention: Al Martinez

GC Batch Number: GC1013980HBPEXC
Instrument ID: GCHP4B

Fuel Fingerprint : Motor Oil

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
Extractable HC as Motor Oil	2000	2700
Chromatogram Pattern: Unidentified HC		C16-C36
Surrogates	Control Limits %	% Recovery
n-Pentacosane (C25)	50 150	174 Q

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210


Project Manager





**Sequoia
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FAX (707) 792-0342

ATC Associates, Inc.
6666 Owens Drive
Pleasanton, CA 94588

Client Proj. ID: **Metalcast**
Sample Descript: **ATC-5-3.5**
Matrix: **SOLID**
Analysis Method: **EPA 8010**
Lab Number: **9810847-02**

Sampled: 10/08/98
Received: 10/09/98
Extracted: 10/19/98
Analyzed: 10/19/98
Reported: 10/26/98


GC Batch Number: 8100232
Instrument ID: GCMS-1

Halogenated Volatile Organics (EPA 8010)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Bromodichloromethane	5.0	N.D.
Bromoform	5.0	N.D.
Bromomethane	10	N.D.
Carbon Tetrachloride	5.0	N.D.
Chlorobenzene	5.0	N.D.
Chloroethane	10	N.D.
2-Chloroethylvinyl ether	10	N.D.
Chloroform	5.0	N.D.
Chloromethane	10	N.D.
Dibromochloromethane	5.0	N.D.
1,2-Dichlorobenzene	5.0	N.D.
1,3-Dichlorobenzene	5.0	N.D.
1,4-Dichlorobenzene	5.0	N.D.
1,1-Dichloroethane	5.0	N.D.
1,2-Dichloroethane	5.0	N.D.
1,1-Dichloroethene	5.0	N.D.
cis-1,2-Dichloroethene	5.0	N.D.
trans-1,2-Dichloroethene	5.0	N.D.
1,2-Dichloropropane	5.0	N.D.
cis-1,3-Dichloropropene	5.0	N.D.
trans-1,3-Dichloropropene	5.0	N.D.
Methylene chloride	50	N.D.
1,1,2,2-Tetrachloroethane	5.0	N.D.
Tetrachloroethene	5.0	N.D.
1,1,1-Trichloroethane	5.0	N.D.
1,1,2-Trichloroethane	5.0	N.D.
Trichloroethene	5.0	N.D.
Trichlorofluoromethane	5.0	N.D.
Vinyl chloride	10	N.D.
Surrogates	Control Limits %	% Recovery
Bromochloromethane	70	130
Orthochlorotoluene	70	130
		101
		78

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1624


Project Manager



**Sequoia
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ATC Associates, Inc. 3666 Owens Drive Pleasanton, CA 94588	Client Proj. ID: Metalcast Sample Descript: ATC-7-4ft Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9810847-03	Sampled: 10/08/98 Received: 10/09/98 Extracted: 10/13/98 Analyzed: 10/16/98 Reported: 10/26/98
Attention: Al Martinez		

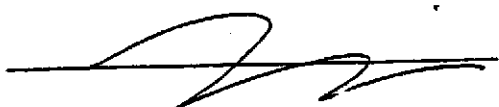
C Batch Number: GC101398BTEXEXA
Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	50	700
Methyl t-Butyl Ether	1.2	N.D.
Benzene	0.25	N.D.
Toluene	0.25	N.D.
Ethyl Benzene	0.25	N.D.
Xylenes (Total)	0.25	N.D.
Chromatogram Pattern: Unidentified HC		> C8
	Control Limits %	% Recovery
Surrogates	70	130
Trifluorotoluene	60	140
4-Bromofluorobenzene		93
		0 Q

Analytes reported as N.D. were not present above the stated limit of detection.

EQUOIA ANALYTICAL - ELAP #1210


Project Manager





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ATC Associates, Inc.
666 Owens Drive
Pleasanton, CA 94588

Client Proj. ID: Metalcast
Sample Descript: ATC-7-4ft
Matrix: SOLID
Analysis Method: EPA 8015 Mod
Lab Number: 9810847-03

Sampled: 10/08/98
Received: 10/09/98
Extracted: 10/13/98
Analyzed: 10/20/98
Reported: 10/26/98

Attention: Al Martinez


Batch Number: GC1013980HBPEXC
Instrument ID: GCHP4B

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel Chromatogram Pattern: Unidentified HC	1000	11000 C9-C24
Surrogates n-Pentacosane (C25)	Control Limits % 50 150	% Recovery Q

Analyses reported as N.D. were not present above the stated limit of detection.

EQUOIA ANALYTICAL - ELAP #1210


Project Manager



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TC Associates, Inc.
366 Owens Drive
Pleasanton, CA 94588

Attention: Al Martinez

Batch Number: GC1013980HBPEXC
Instrument ID: GCHP4B

Client Proj. ID: Metalcast
Sample Descript: ATC-7-4ft
Matrix: SOLID
Analysis Method: EPA 8015 Mod
Lab Number: 9810847-03

Sampled: 10/08/98
Received: 10/09/98
Extracted: 10/13/98
Analyzed: 10/20/98
Reported: 10/26/98

Fuel Fingerprint : Motor Oil

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
Extractable HC as Motor Oil	10000	23000
Chromatogram Pattern:		C16-C36
Unidentified HC		
	Control Limits %	% Recovery
Surrogates	50	150
n-Pentacosane (C25)		Q

Analyses reported as N.D. were not present above the stated limit of detection.

EQUOIA ANALYTICAL - ELAP #1210


Project Manager



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TC Associates, Inc.
666 Owens Drive
Leasonton, CA 94588

Client Proj. ID: Metalcast
Sample Descript: ATC-7-4ft
Matrix: SOLID
Analysis Method: EPA 8010
Lab Number: 9810847-03

Sampled: 10/08/98
Received: 10/09/98
Extracted: 10/19/98
Analyzed: 10/19/98
Reported: 10/26/98

Attention: Al Martinez


Batch Number: 8100232
Instrument ID: GCMS-1

Halogenated Volatile Organics (EPA 8010)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Bromodichloromethane	5.0	N.D.
Bromoform	5.0	N.D.
Bromomethane	10	N.D.
Carbon Tetrachloride	5.0	N.D.
Chlorobenzene	5.0	N.D.
Chloroethane	10	N.D.
2-Chloroethylvinyl ether	10	N.D.
Chloroform	5.0	N.D.
Chloromethane	5.0	N.D.
Dibromochloromethane	5.0	N.D.
1,2-Dichlorobenzene	5.0	N.D.
1,3-Dichlorobenzene	5.0	N.D.
1,4-Dichlorobenzene	5.0	N.D.
1,1-Dichloroethane	5.0	N.D.
1,2-Dichloroethane	5.0	N.D.
1,1-Dichloroethene	5.0	N.D.
cis-1,2-Dichloroethene	5.0	N.D.
trans-1,2-Dichloroethene	5.0	N.D.
1,2-Dichloropropane	5.0	N.D.
cis-1,3-Dichloropropene	5.0	N.D.
trans-1,3-Dichloropropene	50	N.D.
Methylene chloride	5.0	N.D.
1,1,2,2-Tetrachloroethane	5.0	N.D.
Tetrachloroethene	5.0	N.D.
1,1,1-Trichloroethane	5.0	N.D.
1,1,2-Trichloroethane	5.0	N.D.
Trichloroethene	5.0	N.D.
Trichlorofluoromethane	10	N.D.
Vinyl chloride		
Surrogates	Control Limits %	% Recovery
Bromochloromethane	70	130
Orthochlorotoluene	70	130

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1624


Project Manager



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TC Associates, Inc.
566 Owens Drive
Leasanton, CA 94588

Attention: Al Martinez

Batch Number: GC101398BTEXEXA
Instrument ID: GCHP07

Client Proj. ID: Metalcast
Sample Descript: ATC-8-4ft
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9810847-04


Sampled: 10/08/98
Received: 10/09/98
Extracted: 10/13/98
Analyzed: 10/15/98
Reported: 10/26/98

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	25	250
Methyl t-Butyl Ether	0.62	N.D.
Benzene	0.12	N.D.
Toluene	0.12	N.D.
Ethyl Benzene	0.12	N.D.
Xylenes (Total)	0.12	N.D.
Chromatogram Pattern: Unidentified HC		C6-C12
	Control Limits %	% Recovery
Surrogates	70	130
Trifluorotoluene	60	140
p-Bromofluorobenzene		97
		0 Q

Analytes reported as N.D. were not present above the stated limit of detection.

EQUOIA ANALYTICAL - ELAP #1210


Project Manager



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GC Associates, Inc.
366 Owens Drive
Easanton, CA 94588

Attention: Al Martinez

Batch Number: GC1013980HBPEXC
Instrument ID: GCHP4B

Client Proj. ID: Metalcast
Sample Descript: ATC-8-4ft
Matrix: SOLID
Analysis Method: EPA 8015 Mod
Lab Number: 9810847-04

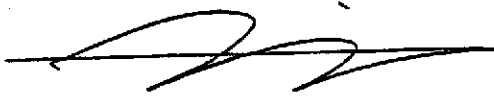
Sampled: 10/08/98
Received: 10/09/98
Extracted: 10/13/98
Analyzed: 10/20/98
Reported: 10/26/98

Total Extractable Petroleum Hydrocarbons (TEPH)

analyte	Detection Limit mg/Kg	Sample Results mg/Kg
EPH as Diesel chromatogram Pattern: identified HC	20	490
Surrogates -Pentacosane (C25)	Control Limits % 50 150	% Recovery 723 Q

analytes reported as N.D. were not present above the stated limit of detection.

EQUOIA ANALYTICAL - ELAP #1210


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ATC Associates, Inc.
3666 Owens Drive
Pleasanton, CA 94588

Client Proj. ID: Metalcast
Sample Descript: ATC-8-4ft
Matrix: SOLID
Analysis Method: EPA 8015 Mod
Lab Number: 9810847-04

Sampled: 10/08/98
Received: 10/09/98
Extracted: 10/13/98
Analyzed: 10/20/98
Reported: 10/26/98

Attention: Al Martinez


C Batch Number: GC1013980HBPEXC
Instrument ID: GCHP4B

Fuel Fingerprint : Motor Oil

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
Extractable HC as Motor Oil	200	630
Chromatogram Pattern: Unidentified HC		C16-C36
Surrogates	Control Limits %	% Recovery
n-Pentacosane (C25)	50 150	723 Q

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210


Project Manager



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ATC Associates, Inc.
1666 Owens Drive
Pleasanton, CA 94588

Attention: Al Martinez

Client Proj. ID: Metalcast
Sample Descript: ATC-9-4ft
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9810847-05

Sampled: 10/08/98
Received: 10/09/98
Extracted: 10/13/98
Analyzed: 10/16/98
Reported: 10/26/98

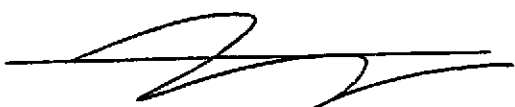
Batch Number: GC101398BTEXEXA
Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	100	1000
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern: Unidentified HC		>C10
	Control Limits %	% Recovery
Surrogates	70	130
Trifluorotoluene	60	140
4-Bromofluorobenzene		79
		0 Q

analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210


Project Manager



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ATC Associates, Inc.
6666 Owens Drive
Pleasanton, CA 94588

Attention: Al Martinez

Client Proj. ID: Metalcast
Sample Descript: ATC-9-4ft
Matrix: SOLID
Analysis Method: EPA 8015 Mod
Lab Number: 9810847-05

Sampled: 10/08/98
Received: 10/09/98
Extracted: 10/13/98
Analyzed: 10/20/98
Reported: 10/26/98


IC Batch Number: GC1013980HBPEXC
Instrument ID: GCHP48

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel Chromatogram Pattern: Unidentified HC	500	7200 C9-C24
Surrogates n-Pentacosane (C25)	Control Limits % 50 150	% Recovery Q

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210


Project Manager



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ATC Associates, Inc.
6666 Owens Drive
Pleasanton, CA 94588

Client Proj. ID: Metalcast
Sample Descript: ATC-9-4ft
Matrix: SOLID
Analysis Method: EPA 8015 Mod
Lab Number: 9810847-05

Sampled: 10/08/98
Received: 10/09/98
Extracted: 10/13/98
Analyzed: 10/20/98
Reported: 10/26/98

Attention: Al Martinez


IC Batch Number: GC1013980HBPEXC
Instrument ID: GCHP4B

Fuel Fingerprint : Motor Oil

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
Extractable HC as Motor Oil	5000	8600
Chromatogram Pattern: Unidentified HC		C16-C36
Surrogates	Control Limits %	% Recovery
n-Pentacosane (C25)	50 150	Q

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210


Project Manager



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ATC Associates, Inc.
3666 Owens Drive
Pleasanton, CA 94588

Client Proj. ID: Metalcast
Sample Descript: ATC-9-4ft
Matrix: SOLID
Analysis Method: EPA 8010
Lab Number: 9810847-05

Sampled: 10/08/98
Received: 10/09/98
Extracted: 10/19/98
Analyzed: 10/19/98
Reported: 10/26/98

Attention: Al Martinez

C Batch Number: 8100232
Instrument ID: GCMS-1

Halogenated Volatile Organics (EPA 8010)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Bromodichloromethane	5.0	N.D.
Bromoform	5.0	N.D.
Bromomethane	10	N.D.
Carbon Tetrachloride	5.0	N.D.
Chlorobenzene	5.0	N.D.
Chloroethane	10	N.D.
2-Chloroethylvinyl ether	10	N.D.
Chloroform	5.0	N.D.
Chloromethane	10	N.D.
Dibromochloromethane	5.0	N.D.
1,2-Dichlorobenzene	5.0	N.D.
1,3-Dichlorobenzene	5.0	N.D.
1,4-Dichlorobenzene	5.0	N.D.
1,1-Dichloroethane	5.0	N.D.
1,2-Dichloroethane	5.0	N.D.
1,1-Dichloroethene	5.0	N.D.
cis-1,2-Dichloroethene	5.0	N.D.
trans-1,2-Dichloroethene	5.0	N.D.
1,2-Dichloropropane	5.0	N.D.
cis-1,3-Dichloropropene	5.0	N.D.
trans-1,3-Dichloropropene	5.0	N.D.
Methylene chloride	50	N.D.
1,1,2,2-Tetrachloroethane	5.0	N.D.
Tetrachloroethene	5.0	N.D.
1,1,1-Trichloroethane	5.0	N.D.
1,1,2-Trichloroethane	5.0	N.D.
Trichloroethene	5.0	N.D.
Trichlorofluoromethane	5.0	N.D.
Vinyl chloride	10	N.D.
Surrogates	Control Limits %	% Recovery
Bromochloromethane	70 130	127
Orthochlorotoluene	70 130	90

analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1624

Project Manager



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ATC Associates, Inc.
5666 Owens Drive
Pleasanton, CA 94588

Client Proj. ID: Metalcast
Sample Descript: ATC-3-3ft
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9810847-06

Sampled: 10/08/98
Received: 10/09/98
Extracted: 10/13/98
Analyzed: 10/15/98
Reported: 10/26/98

Attention: Al Martinez

C Batch Number: GC101398BTEXEXA
Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	10	160
Methyl t-Butyl Ether	0.25	N.D.
Benzene	0.050	0.056
Toluene	0.050	N.D.
Ethyl Benzene	0.050	N.D.
Xylenes (Total)	0.050	0.12
Chromatogram Pattern: Unidentified HC		C6-C12
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70	130
4-Bromofluorobenzene	60	140
		97
		10 Q

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210


Project Manager



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ATC Associates, Inc.
3666 Owens Drive
Pleasanton, CA 94588

Client Proj. ID: Metalcast
Sample Descript: ATC-3-3ft
Matrx: SOLID
Analysis Method: EPA 8015 Mod
Lab Number: 9810847-06

Sampled: 10/08/98
Received: 10/09/98
Extracted: 10/13/98
Analyzed: 10/17/98
Reported: 10/26/98

Attention: Al Martinez

Batch Number: GC1013980HBPEXC
Instrument ID: GCHP4A

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel Chromatogram Pattern: Unidentified HC	1000	13000 C9-C24
Surrogates	Control Limits %	% Recovery
n-Pentacosane (C25)	50 150	Q

analytes reported as N.D. were not present above the stated limit of detection.

EQUOIA ANALYTICAL - ELAP #1210


Project Manager



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FAX (707) 792-0342

ATC Associates, Inc.
5666 Owens Drive
Pleasanton, CA 94588

Client Proj. ID: Metalcast
Sample Descript: ATC-3-3ft
Matrix: SOLID
Analysis Method: EPA 8015 Mod
Lab Number: 9810847-06

Sampled: 10/08/98
Received: 10/09/98
Extracted: 10/13/98
Analyzed: 10/17/98
Reported: 10/26/98

Attention: Al Martinez

C Batch Number: GC1013980HBPEXC
Instrument ID: GCHP4A

Fuel Fingerprint : Motor Oil

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
Extractable HC as Motor Oil	10000	29000
Chromatogram Pattern: Unidentified HC		C16-C36
Surrogates	Control Limits %	% Recovery
n-Pentacosane (C25)	50 150	Q

Analytes reported as N.D. were not present above the stated limit of detection.

EQUOIA ANALYTICAL - ELAP #1210

Project Manager



**Sequoia
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ATC Associates, Inc.
5666 Owens Drive
Pleasanton, CA 94588

Client Proj. ID: Metalcast
Sample Descript: ATC-3-3ft
Matrix: SOLID
Analysis Method: EPA 8010
Lab Number: 9810847-06

Sampled: 10/08/98
Received: 10/09/98
Extracted: 10/19/98
Analyzed: 10/19/98
Reported: 10/26/98

Attention: Al Martinez

C Batch Number: 8100232
Instrument ID: GCMS-1

Halogenated Volatile Organics (EPA 8010)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Bromodichloromethane	5.0	N.D.
Bromoform	5.0	N.D.
Bromomethane	10	N.D.
Carbon Tetrachloride	5.0	N.D.
Chlorobenzene	50	3800
Chloroethane	10	N.D.
2-Chloroethylvinyl ether	10	N.D.
Chloroform	5.0	N.D.
Chloromethane	10	N.D.
Dibromochloromethane	5.0	N.D.
1,2-Dichlorobenzene	5.0	N.D.
1,3-Dichlorobenzene	500	19000
1,4-Dichlorobenzene	500	33000
1,1-Dichloroethane	50	2400
1,2-Dichloroethane	5.0	N.D.
1,1-Dichloroethene	5.0	N.D.
cis-1,2-Dichloroethene	5.0	N.D.
trans-1,2-Dichloroethene	5.0	N.D.
1,2-Dichloropropane	5.0	N.D.
cis-1,3-Dichloropropene	5.0	N.D.
trans-1,3-Dichloropropene	5.0	N.D.
Methylene chloride	50	N.D.
1,1,2,2-Tetrachloroethane	5.0	N.D.
Tetrachloroethene	5.0	N.D.
1,1,1-Trichloroethane	5.0	N.D.
1,1,2-Trichloroethane	5.0	N.D.
Trichloroethene	5.0	N.D.
Trichlorofluoromethane	5.0	N.D.
Vinyl chloride	10	N.D.
Surrogates	Control Limits %	% Recovery -
Bromochloromethane	70	127
Orthochlorotoluene	70	130
		90

Analytes reported as N.D. were not present above the stated limit of detection.

EQUOIA ANALYTICAL - ELAP #1624

Project Manager





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ATC Associates, Inc.
6666 Owens Drive
Pleasanton, CA 94588

Client Proj. ID: Metalcast
Sample Descript: ATC-1-4ft
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9810847-07

Sampled: 10/08/98
Received: 10/09/98
Extracted: 10/13/98
Analyzed: 10/16/98
Reported: 10/26/98

Attention: Al Martinez

GC Batch Number: GC101398BTEXEXA
Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	100	1000
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern: Unidentified HC		>C10
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70	130
4-Bromofluorobenzene	60	140
		90
		0 Q

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Project Manager





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ATC Associates, Inc.
5666 Owens Drive
Pleasanton, CA 94588

Client Proj. ID: Metalcast
Sample Descript: ATC-1-4ft
Matrix: SOLID
Analysis Method: EPA 8015 Mod
Lab Number: 9810847-07

Sampled: 10/08/98
Received: 10/09/98
Extracted: 10/13/98
Analyzed: 10/20/98
Reported: 10/26/98

Attention: Al Martinez


C Batch Number: GC1013980HBPEXC
Instrument ID: GCHP4B

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel Chromatogram Pattern: Unidentified HC	500	3800
		C9-C24
Surrogates	Control Limits %	% Recovery
1-Pentacosane (C25)	50 150	Q

Analytes reported as N.D. were not present above the stated limit of detection.

EQUOIA ANALYTICAL - ELAP #1210


Project Manager



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TC Associates, Inc.
666 Owens Drive
Pleasanton, CA 94588

Client Proj. ID: Metalcast
Sample Descript: ATC-1-4ft
Matrix: SOLID
Analysis Method: EPA 8015 Mod
Lab Number: 9810847-07

Sampled: 10/08/98
Received: 10/09/98
Extracted: 10/13/98
Analyzed: 10/20/98
Reported: 10/26/98

Attention: Al Martinez

Batch Number: GC1013980HBPEXC
Instrument ID: GCHP4B

Fuel Fingerprint : Motor Oil

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
Extractable HC as Motor Oil	5000	5700
Chromatogram Pattern: Unidentified HC		C16-C36
Surrogates	Control Limits %	% Recovery
1-Pentacosane (C25)	50 150	Q

Analytes reported as N.D. were not present above the stated limit of detection.

EQUOIA ANALYTICAL - ELAP #1210

Project Manager





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ATC Associates, Inc.
3666 Owens Drive
Pleasanton, CA 94588

Client Proj. ID: Metalcast
Sample Descript: ATC-1-4ft
Matrix: SOLID
Analysis Method: EPA 8010
Lab Number: 9810847-07

Sampled: 10/08/98
Received: 10/09/98
Extracted: 10/19/98
Analyzed: 10/19/98
Reported: 10/26/98

Attention: Al Martinez

C Batch Number: 8100232
Instrument ID: GCMS-1

Halogenated Volatile Organics (EPA 8010)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Bromodichloromethane	5.0	N.D.
Bromoform	5.0	N.D.
Bromomethane	10	N.D.
Carbon Tetrachloride	5.0	N.D.
Chlorobenzene	5.0	N.D.
Chloroethane	10	N.D.
2-Chloroethylvinyl ether	10	N.D.
Chloroform	5.0	N.D.
Chloromethane	10	N.D.
Dibromochloromethane	5.0	N.D.
1,2-Dichlorobenzene	5.0	N.D.
1,3-Dichlorobenzene	5.0	N.D.
1,4-Dichlorobenzene	5.0	N.D.
1,1-Dichloroethane	5.0	N.D.
1,2-Dichloroethane	5.0	N.D.
1,1-Dichloroethene	5.0	N.D.
cis-1,2-Dichloroethene	5.0	N.D.
trans-1,2-Dichloroethene	5.0	N.D.
1,2-Dichloropropane	5.0	N.D.
cis-1,3-Dichloropropene	5.0	N.D.
trans-1,3-Dichloropropene	5.0	N.D.
Methylene chloride	50	N.D.
1,1,2,2-Tetrachloroethane	5.0	N.D.
Tetrachloroethene	5.0	N.D.
1,1,1-Trichloroethane	5.0	N.D.
1,1,2-Trichloroethane	5.0	N.D.
Trichloroethene	5.0	N.D.
Trichlorofluoromethane	10	N.D.
Vinyl chloride		
Surrogates	Control Limits %	% Recovery
Bromochloromethane	70	130
Orthochlorotoluene	70	130

Analytes reported as N.D. were not present above the stated limit of detection.

EQUOIA ANALYTICAL - ELAP #1624

Project Manager



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ATC Associates, Inc. 6666 Owens Drive Pleasanton, CA 94588	Client Proj. ID: Metalcast Sample Descript: ATC-2-4ft Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9810847-08	Sampled: 10/08/98 Received: 10/09/98 Extracted: 10/13/98 Analyzed: 10/13/98 Reported: 10/26/98
Attention: Al Martinez		


GC Batch Number: GC101398BTEXEXA
Instrument ID: GCHP18

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	1.9
Methyl t-Butyl Ether	0.025	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	0.0082
Chromatogram Pattern: Unidentified HC		C8-C12
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70	130
4-Bromofluorobenzene	60	140

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210


Project Manager



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ATC Associates, Inc.
6666 Owens Drive
Pleasanton, CA 94588

Client Proj. ID: Metalcast
Sample Descript: ATC-2-4ft
Matrix: SOLID
Analysis Method: EPA 8015 Mod
Lab Number: 9810847-08

Sampled: 10/08/98
Received: 10/09/98
Extracted: 10/13/98
Analyzed: 10/20/98
Reported: 10/26/98

Attention: Al Martinez

GC Batch Number: GC1013980HBPEXC
Instrument ID: GCHP4B

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel Chromatogram Pattern: Unidentified HC	2.0	11 C9-C24
Surrogates n-Pentacosane (C25)	Control Limits % 50 150	% Recovery 118

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Project Manager



**Sequoia
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TC Associates, Inc.
666 Owens Drive
Pleasanton, CA 94588

Attention: Al Martinez

Batch Number: GC1013980HBPEXC
Instrument ID: GCHP4B

Client Proj. ID: Metalcast
Sample Descript: ATC-2-4ft
Matrix: SOLID
Analysis Method: EPA 8015 Mod
Lab Number: 9810847-08

Sampled: 10/08/98
Received: 10/09/98
Extracted: 10/13/98
Analyzed: 10/20/98
Reported: 10/26/98

Fuel Fingerprint : Motor Oil

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
Extractable HC as Motor Oil	20	45
Chromatogram Pattern: Unidentified HC		C16-C36
Surrogates	Control Limits %	% Recovery
1-Pentacosane (C25)	50 150	118

Analyses reported as N.D. were not present above the stated limit of detection.

EQUOIA ANALYTICAL - ELAP #1210


Project Manager



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ATC Associates, Inc.
3666 Owens Drive
Pleasanton, CA 94588

Client Proj. ID: Metalcast
Sample Descript: ATC-2-4ft
Matrix: SOLID
Analysis Method: EPA 8010
Lab Number: 9810847-08

Sampled: 10/08/98
Received: 10/09/98
Extracted: 10/19/98
Analyzed: 10/19/98
Reported: 10/26/98

Attention: Al Martinez

Batch Number: 8100232
Instrument ID: GCMS-1

Halogenated Volatile Organics (EPA 8010)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Bromodichloromethane	5.0	N.D.
Bromoform	5.0	N.D.
Bromomethane	10	N.D.
Carbon Tetrachloride	5.0	27
Chlorobenzene	10	N.D.
Chloroethane	10	N.D.
2-Chloroethylvinyl ether	5.0	N.D.
Chloroform	10	N.D.
Chloromethane	5.0	N.D.
Dibromochloromethane	5.0	N.D.
1,2-Dichlorobenzene	5.0	50
1,3-Dichlorobenzene	5.0	130
1,4-Dichlorobenzene	5.0	N.D.
1,1-Dichloroethane	5.0	N.D.
1,2-Dichloroethane	5.0	N.D.
1,1-Dichloroethene	5.0	N.D.
cis-1,2-Dichloroethene	5.0	N.D.
trans-1,2-Dichloroethene	5.0	N.D.
1,2-Dichloropropane	5.0	N.D.
cis-1,3-Dichloropropene	5.0	N.D.
trans-1,3-Dichloropropene	5.0	N.D.
Methylene chloride	50	N.D.
1,1,2,2-Tetrachloroethane	5.0	N.D.
Tetrachloroethene	5.0	N.D.
1,1,1-Trichloroethane	5.0	N.D.
1,1,2-Trichloroethane	5.0	N.D.
Trichloroethene	5.0	N.D.
Trichlorofluoromethane	10	N.D.
Vinyl chloride		
Surrogates	Control Limits %	% Recovery
Bromochloromethane	70	130
Orthochlorotoluene	70	130

Analytes reported as N.D. were not present above the stated limit of detection.

EQUOIA ANALYTICAL - ELAP #1624

Project Manager



Sequoia Analytical

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ATC Associates, Inc. 5666 Owens Drive Pleasanton, CA 94588	Client Proj. ID: Metalcast Sample Descript: ATC-6-1ft Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9810847-09	Sampled: 10/08/98 Received: 10/09/98 Extracted: 10/13/98 Analyzed: 10/16/98 Reported: 10/26/98
Attention: Al Martinez		

C Batch Number: GC101398BTEXEXA
Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	10	120
Methyl t-Butyl Ether	0.25	N.D.
Benzene	0.050	N.D.
Toluene	0.050	0.22
Ethyl Benzene	0.050	0.18
Xylenes (Total)	0.050	0.78
Chromatogram Pattern:		C6-C12
Unidentified HC		
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	108
4-Bromofluorobenzene	60 140	8 Q

Analytes reported as N.D. were not present above the stated limit of detection.

EQUOIA ANALYTICAL - ELAP #1210

Project Manager



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ATC Associates, Inc. 6666 Owens Drive Pleasanton, CA 94588	Client Proj. ID: Metalcast Sample Descript: ATC-6-1ft Matrix: SOLID Analysis Method: EPA 8015 Mod Lab Number: 9810847-09	Sampled: 10/08/98 Received: 10/09/98 Extracted: 10/13/98 Analyzed: 10/20/98 Reported: 10/26/98
Attention: Al Martinez		


GC Batch Number: GC1013980HBPEXC
Instrument ID: GCHP4B

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel Chromatogram Pattern: Unidentified HC	1000	6700 C9-C24
Surrogates n-Pentacosane (C25)	Control Limits % 50 150	% Recovery Q

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210


Project Manager



**Sequoia
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ATC Associates, Inc.
5666 Owens Drive
Pleasanton, CA 94588

Client Proj. ID: Metalcast
Sample Descript: ATC-6-1ft
Matrix: SOLID
Analysis Method: EPA 8015 Mod
Lab Number: 9810847-09

Sampled: 10/08/98
Received: 10/09/98
Extracted: 10/13/98
Analyzed: 10/20/98
Reported: 10/26/98

Attention: AJ Martinez


C Batch Number: GC1013980HBPEXC
Instrument ID: GCHP4B

Fuel Fingerprint : Motor Oil

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
Extractable HC as Motor Oil	10000	17000
Chromatogram Pattern: Unidentified HC		C16-C36
Surrogates	Control Limits %	% Recovery
n-Pentacosane (C25)	50 150	Q

analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210


Project Manager



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ATC Associates, Inc.
6666 Owens Drive
Pleasanton, CA 94588

Client Proj. ID: Metalcast
Sample Descript: ATC-6-1ft
Matrix: SOLID
Analysis Method: EPA 8010
Lab Number: 9810847-09

Sampled: 10/08/98
Received: 10/09/98
Extracted: 10/19/98
Analyzed: 10/19/98
Reported: 10/26/98

Attention: Al Martinez

C Batch Number: 8100232
Instrument ID: GCMS-1

Halogenated Volatile Organics (EPA 8010)

Analyte	Detection Limit ug/L	Sample Results ug/L
Bromodichloromethane	5.0	N.D.
Bromoform	5.0	N.D.
Bromomethane	10	N.D.
Carbon Tetrachloride	5.0	N.D.
Chlorobenzene	5.0	N.D.
Chloroethane	10	N.D.
2-Chloroethylvinyl ether	10	N.D.
Chloroform	5.0	N.D.
Chloromethane	10	N.D.
Dibromochloromethane	5.0	N.D.
1,2-Dichlorobenzene	5.0	N.D.
1,3-Dichlorobenzene	5.0	N.D.
1,4-Dichlorobenzene	5.0	N.D.
1,1-Dichloroethane	5.0	N.D.
1,2-Dichloroethane	5.0	N.D.
1,1-Dichloroethene	5.0	N.D.
cis-1,2-Dichloroethene	5.0	N.D.
trans-1,2-Dichloroethene	5.0	N.D.
1,2-Dichloropropane	5.0	N.D.
cis-1,3-Dichloropropene	5.0	N.D.
trans-1,3-Dichloropropene	5.0	N.D.
Methylene chloride	50	N.D.
1,1,2,2-Tetrachloroethane	5.0	N.D.
Tetrachloroethene	5.0	N.D.
1,1,1-Trichloroethane	5.0	N.D.
1,1,2-Trichloroethane	5.0	N.D.
Trichloroethene	5.0	N.D.
Trichlorofluoromethane	5.0	N.D.
Vinyl chloride	10	N.D.
Surrogates	Control Limits %	% Recovery
Bromochloromethane	70 130	97
Orthochlorotoluene	70 130	51 Q

Analytes reported as N.D. were not present above the stated limit of detection.

EQUOIA ANALYTICAL - ELAP #1624

Project Manager



**Sequoia
Analytical**

680 Chesapeake Drive
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FAX (707) 792-0342

ATC Associates, Inc.
6666 Owens Drive
Pleasanton, CA 94588
Attention: Al Martinez

Client Project ID: **Metalcast**
Matrix: **Solid**

Work Order #: **9810847 -02, 03, 05-09**

Reported: **Oct 28, 1998**

QUALITY CONTROL DATA REPORT

Analyte:	1,1-Dichloro-ethene	Trichloro-ethene	Chloro-Benzene
QC Batch#:	8100232	8100232	8100232
Analy. Method:	EPA 8010	EPA 8010	EPA 8010
Prep. Method:	N.A.	N.A.	N.A.

Analyst:	R. Bobel	R. Bobel	R. Bobel
MS/MSD #:	S810111-03	S810111-03	S810111-03
Sample Conc.:	N.D.	N.D.	N.D.
Prepared Date:	10/19/98	10/19/98	10/19/98
Analyzed Date:	10/19/98	10/19/98	10/19/98
Instrument I.D.#:	-	-	-
Conc. Spiked:	200 µg/Kg	200 µg/Kg	400 µg/Kg

Result:	194	190	360
MS % Recovery:	97	95	90

Dup. Result:	260	242	466
MSD % Recov.:	130	121	117

RPD:	29.1	24.1	25.7
RPD Limit:	0-25	0-25	0-25

LCS #:	LCS101998	LCS101998	LCS101998
Prepared Date:	10/19/98	10/19/98	10/19/98
Analyzed Date:	10/19/98	10/19/98	10/19/98
Instrument I.D.#:	-	-	-
Conc. Spiked:	200 µg/Kg	200 µg/Kg	400 µg/Kg
LCS Result:	200	188	348
LCS % Recov.:	100	94	87

MS/MSD	60-140	60-140	60-140
LCS	70-130	70-130	70-130
Control Limits			

SEQUOIA ANALYTICAL
Elap #1624

Kaywan Kimyal
Project Manager

Please Note:

The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

** MS=Matrix Spike, MSD=MS Duplicate, RPD=Relative % Difference



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ATC Associates, Inc.
6666 Owens Drive
Pleasanton, CA 94588
Attention: Al Martinez

Client Project ID: Metalcast
Matrix: Solid

Work Order #: 9810847-02, 03, 05-09

Reported: Oct 28, 1998

QUALITY CONTROL DATA REPORT

Analyte: Mercury

QC Batch#: ME1014987471M4A

Analy. Method: EPA 7471

Prep. Method: EPA 7471

Analyst: B. Entenmann

MS/MSD #: 981093301

Sample Conc.: 0.042

Prepared Date: 10/14/98

Analyzed Date: 10/14/98

Instrument I.D.#: MPE4

Conc. Spiked: 2.0 mg/Kg

Result: 2.3

MS % Recovery: 113

Dup. Result: 2.2

MSD % Recov.: 108

RPD: 4.4

RPD Limit: 0-20

LCS #: LCS101498

Prepared Date: 10/14/98

Analyzed Date: 10/14/98

Instrument I.D.#: MPE4

Conc. Spiked: 2.0 mg/Kg

LCS Result: 2.2

LCS % Recov.: 110

MS/MSD 75-125

LCS 75-125

Control Limits

SEQUOIA ANALYTICAL

Kaywan Kimyal
Project Manager

Please Note:

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** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

9810847.AAA <2>



Sequoia Analytical

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ATC Associates, Inc.
6666 Owens Drive
Pleasanton, CA 94588
Attention: Al Martinez

Client Project ID: Metalcast
Matrix: Solid

Work Order #: 9810847-02, 03, 05-09

Reported: Oct 28, 1998

QUALITY CONTROL DATA REPORT

Analyte: Mercury

QC Batch#: ME1014987471M4A
Analy. Method: EPA 7471
Prep. Method: EPA 7471

Analyst: B. Entenmann
MS/MSD #: 981093301
Sample Conc.: 0.042
Prepared Date: 10/14/98
Analyzed Date: 10/14/98
Instrument I.D.#: MPE4
Conc. Spiked: 2.0 mg/Kg

Result: 2.3
MS % Recovery: 113

Dup. Result: 2.2
MSD % Recov.: 108

RPD: 4.4
RPD Limit: 0-20

LCS #: LCS101498

Prepared Date: 10/14/98
Analyzed Date: 10/14/98
Instrument I.D.#: MPE4
Conc. Spiked: 2.0 mg/Kg

LCS Result: 2.2
LCS % Recov.: 110

MS/MSD 75-125
LCS 75-125
Control Limits

Please Note:

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SEQUOIA ANALYTICAL

Kayvan Kimyai
Project Manager

** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

9810847.AAA <3>



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ATC Associates, Inc.
6666 Owens Drive
Pleasanton, CA 94588
Attention: Al Martinez

Client Project ID: Metalcast
Matrix: Solid

Work Order #: 9810847-02, 03, 05-09

Reported: Oct 28, 1998

QUALITY CONTROL DATA REPORT

Analyte:	Beryllium	Cadmium	Chromium	Nickel
QC Batch#:	ME1014986010MDE	ME1014986010MDE	ME1014986010MDE	ME1014986010MDE
Analy. Method:	EPA 6010	EPA 6010	EPA 6010	EPA 6010
Prep. Method:	EPA 3050	EPA 3050	EPA 3050	EPA 3050

Analyst:	R. Sharma	R. Sharma	R. Sharma	R. Sharma
MS/MSD #:	981084702	981084702	981084702	981084702
Sample Conc.:	N.D.	N.D.	15	20
Prepared Date:	10/14/98	10/14/98	10/14/98	10/14/98
Analyzed Date:	10/14/98	10/14/98	10/14/98	10/14/98
Instrument I.D.#:	MTJA5	MTJA5	MTJA5	MTJA5
Conc. Spiked:	50 mg/Kg	50 mg/Kg	50 mg/Kg	50 mg/Kg
Result:	44	45	58	62
MS % Recovery:	88	90	86	84
Dup. Result:	43	44	52	57
MSD % Recov.:	86	88	74	74
RPD:	2.3	2.2	11	8.4
RPD Limit:	0-20	0-20	0-20	0-20

LCS #:	LCS101498	LCS101498	LCS101498	LCS101498
Prepared Date:	10/14/98	10/14/98	10/14/98	10/14/98
Analyzed Date:	10/14/98	10/14/98	10/14/98	10/14/98
Instrument I.D.#:	MTJA5	MTJA5	MTJA5	MTJA5
Conc. Spiked:	50 mg/Kg	50 mg/Kg	50 mg/Kg	50 mg/Kg
LCS Result:	47	48	48	47
LCS % Recov.:	94	96	96	94

MS/MSD	80-120	80-120	80-120	80-120
LCS	80-120	80-120	80-120	80-120
Control Limits				

SEQUOIA ANALYTICAL

Kayvan Kimyai
Project Manager

Please Note:

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** MS=Matrix Spike, MSD=MS Duplicate, RPD=Relative % Difference

9810847.AAA <4>



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ATC Associates, Inc.
6666 Owens Drive
Pleasanton, CA 94588
Attention: Al Martinez

Client Project ID: Metalcast

QC Sample Group: 9810847-01-09

Reported: Oct 26, 1998

QUALITY CONTROL DATA REPORT

Matrix: Solid
Method: EPA 8015M
Analyst: A. PORTER

ANALYTE Diesel

QC Batch #: GC1013980HBPEXC

Sample No.: 9810851-5
Date Prepared: 10/13/98
Date Analyzed: 10/15/98
Instrument I.D.#: GCHP5A

Sample Conc., mg/Kg: N.D.
Conc. Spiked, mg/Kg: 17

Matrix Spike, mg/Kg: 16
% Recovery: 94

Matrix
Spike Duplicate, mg/Kg: 18
% Recovery: 106

Relative % Difference: 12

RPD Control Limits: 0-50

LCS Batch#: BLK101398CS

Date Prepared: 10/13/98
Date Analyzed: 10/15/98
Instrument I.D.#: GCHP5A

Conc. Spiked, mg/Kg: 17

Recovery, mg/Kg: 16
LCS % Recovery: 94

Percent Recovery Control Limits:

MS/MSD	50-150
LCS	60-140

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

SEQUOIA ANALYTICAL


Kayvan Kimyai
Project Manager

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ATC Associates, Inc.
6666 Owens Drive
Pleasanton, CA 94588
Attention: Al Martinez

Client Project ID: Metalcast

QC Sample Group: 9810847-01-09

Reported: Oct 26, 1998

QUALITY CONTROL DATA REPORT

-Matrix: Solid
Method: EPA 8020
Analyst: R.GECKLER

ANALYTE	Benzene	Toluene	Ethylbenzene	Xylenes
---------	---------	---------	--------------	---------

QC Batch #: GC101398BTEXEXA

Sample No.:	9810847-8			
Date Prepared:	10/13/98	10/13/98	10/13/98	10/13/98
Date Analyzed:	10/13/98	10/13/98	10/13/98	10/13/98
Instrument I.D.#:	GCHP18	GCHP18	GCHP18	GCHP18
Sample Conc., mg/Kg:	N.D.	N.D.	N.D.	N.D.
Conc. Spiked, mg/Kg:	0.20	0.20	0.20	0.60
Matrix Spike, mg/Kg:	0.19	0.19	0.19	0.57
% Recovery:	95	95	95	95
Matrix Spike Duplicate, mg/Kg:	0.19	0.18	0.19	0.56
% Recovery:	95	90	95	93
Relative % Difference:	0.0	5.4	0.0	2.1
RPD Control Limits:	0-25	0-25	0-25	0-25

LCS Batch#: GC101398BTEXEXA

Date Prepared:	10/13/98	10/13/98	10/13/98	10/13/98
Date Analyzed:	10/13/98	10/13/98	10/13/98	10/13/98
Instrument I.D.#:	GCHP18	GCHP18	GCHP18	GCHP18
Conc. Spiked, mg/Kg:	0.20	0.20	0.20	0.60
Recovery, mg/Kg:	0.20	0.20	0.20	0.60
LCS % Recovery:	100	100	100	100

Percent Recovery Control Limits:

MS/MSD	60-140	60-140	60-140	60-140
LCS	70-130	70-130	70-130	70-130

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

SEQUOIA ANALYTICAL

Kayran Kimyai
Project Manager

Please Note:

The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.



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ATC Associates, Inc.
5666 Owens Drive
Pleasanton, CA 94588
Attention: Al Martinez

Client Proj. ID: Metalcast

Lab Proj. ID: 9810847

Received: 10/09/98

Reported: 10/26/98

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 46 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

SEQUOIA ANALYTICAL


Project Manager



SEQUOIA ANALYTICAL CHAIN OF CUSTODY

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 1455 McDowell Blvd. North, Suite D • Petaluma, CA 94954 • (707) 792-1865 FAX (707) 792-0342

Company Name: AIC Associates Project Name: Metal Coat
 Mailing Address: 6666 Owens Dr Billing Address (if different):
 City: Pleasanton State: CA Zip Code: 94588
 Telephone: 925-460-5300 FAX #: 925-463-2559 P.O. #: 89775-0030
 Report To: AL Martinez Sampler: Bob Azon QC Data: Level D (Standard) Level C Level B Level A

Turnaround 10 Working Days 3 Working Days 2 - 8 Hours Drinking Water
 Time: 7 Working Days 2 Working Days Waste Water
 5 Working Days 24 Hours Other

Analyses Requested: 9810847

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Sequoia's Sample #	TPH-GISTEX	MTBE	TPH-D	TPH-M	AVCS EPA 8070	RCRA Metals	Comments
1. ATC-4-4FT	10.8.98/748	Soil	1	Plastic sleeve	01	X	X	X	X	X		
2. ATC-5-3.5FT	0825				02	X	X	X	X	X		
3. ATC-7-4FT	11:05				03	X	X	X	X	X		
4. ATC-7-4.5FT	11:10					HOLD/ARCHIVE						
5. ATC-7-5.5FT	11:15					HOLD/ARCHIVE						
6. ATC-8-2FT	11:55					↓	↓	↓	↓	↓		
7. ATC-8-3FT	12:00					↓	↓	↓	↓	↓		
8. ATC-8-4FT	12:10				04	X	X	X				
9. ATC-8-8FT	12:30					HOLD/ARCHIVE						
10. ATC-8-9FT	12:50					HOLD/ARCHIVE						

Relinquished By: <u>Bob Azon</u>	Date: <u>10.9.98</u>	Time: <u>0800</u>	Received By: <u>Charles Martinez</u>	Date: <u>10-9-98</u>	Time: <u>16:00</u>
Relinquished By: <u>C. Anderson</u>	Date: <u>10-9</u>	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By Lab: <u>GW</u>	Date: <u>9/9/98</u>	Time: <u>17:05</u>

Pink - Client
Yellow - Sequoia
White - Sequoia



SEQUOIA ANALYTICAL CHAIN OF CUSTODY

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 1455 McDowell Blvd. North, Suite D • Petaluma, CA 94954 • (707) 792-1865 FAX (707) 792-0342

Company Name: ATC-ASSOCIATES		Project Name: METAL CAST	
Mailing Address: 6666 OWENS DR		Billing Address (if different):	
City: PLEASANTON State: CA	Zip Code: 94588		
Telephone: 925-460-5300 FAX #: 925-463-2559		P.O. #: 89775-0030	
Report To: AL MARTINEZ	Sampler: Bob Abram	QC Data: <input checked="" type="checkbox"/> Level D (Standard) <input type="checkbox"/> Level C <input type="checkbox"/> Level B <input type="checkbox"/> Level A	

Turnaround <input checked="" type="checkbox"/> 10 Working Days	<input type="checkbox"/> 3 Working Days	<input type="checkbox"/> 2 - 8 Hours	<input type="checkbox"/> Drinking Water	Analyses Requested: 9810847
Time: <input type="checkbox"/> 7 Working Days	<input type="checkbox"/> 2 Working Days	<input checked="" type="checkbox"/> Other	<input type="checkbox"/> Waste Water	
<input type="checkbox"/> 5 Working Days	<input type="checkbox"/> 24 Hours			

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Sequoia's Sample #	TPH-STRIPE MIBIE	TPH-D	TPH-M	WVOLS	PCPA METALS	Comments
1. ATC-9-3FT	10.8.98/13:55	SOIL	1	Plastic sleeve							
2. ATC-9-4FT	14:00				05	X	X	X	X		
3. ATC-3-3FT	15:00				06	X	X	X	X		
4. ATC-3-4FT	15:05										
5. ATC-1-4FT	15:30				0X	X	X	X	X		
6. ATC-1-6FT	16:05										
7. ATC-2-4FT	16:30				00	X	X	X	X		
8. ATC-2-7FT	16:45										
9.											
10.											

Relinquished By: Bob Abram	Date: 10.9.98	Time: 0800	Received By: Charles [Signature]	Date: 10-9-98	Time: 16:00
Relinquished By: C. [Signature]	Date: 10-9	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By Lab: [Signature]	Date: 10/9	Time: 17:00

Pink - Client
Yellow - Sequoia
White - Sequoia



Sequoia Analytical

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FAX (707) 792-0342

ATC Associates, Inc.
5666 Owens Drive
Pleasanton, CA 94588

Client Proj. ID: Metalcast
Lab Proj. ID: 9810784

Sampled: 10/08/98
Received: 10/08/98
Analyzed: see below
Reported: 10/21/98

Attention: Al Martinez

LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9810784-02 Sample Desc: LIQUID,ATC-5				
Arsenic by ICP	mg/L	10/13/98	0.10	N.D.
Barium by ICP	mg/L	10/13/98	0.10	0.25
Cadmium by ICP	mg/L	10/13/98	0.010	N.D.
Chromium by ICP	mg/L	10/13/98	0.010	0.033
Lead by ICP	mg/L	10/13/98	0.10	N.D.
Mercury by Cold Vapor	mg/L	10/13/98	0.00020	0.00041
Selenium by ICP	mg/L	10/13/98	0.10	N.D.
Silver: ICP	mg/L	10/13/98	0.010	N.D.
Lab No: 9810784-03 Sample Desc: LIQUID,ATC-7				
Arsenic by ICP	mg/L	10/13/98	0.10	N.D.
Barium by ICP	mg/L	10/13/98	0.10	0.19
Cadmium by ICP	mg/L	10/13/98	0.010	N.D.
Chromium by ICP	mg/L	10/13/98	0.010	0.013
Lead by ICP	mg/L	10/13/98	0.10	N.D.
Mercury by Cold Vapor	mg/L	10/13/98	0.00020	N.D.
Selenium by ICP	mg/L	10/13/98	0.10	N.D.
Silver: ICP	mg/L	10/13/98	0.010	N.D.
Lab No: 9810784-05 Sample Desc: LIQUID,ATC-9				
Arsenic by ICP	mg/L	10/13/98	0.10	N.D.
Barium by ICP	mg/L	10/13/98	0.10	0.39
Cadmium by ICP	mg/L	10/13/98	0.010	N.D.
Chromium by ICP	mg/L	10/13/98	0.010	N.D.
Lead by ICP	mg/L	10/13/98	0.10	N.D.
Mercury by Cold Vapor	mg/L	10/13/98	0.00020	N.D.
Selenium by ICP	mg/L	10/13/98	0.10	N.D.
Silver: ICP	mg/L	10/13/98	0.010	N.D.

Analyses reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Steven Kimball
Project Manager



**Sequoia
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ATC Associates, Inc.
6666 Owens Drive
Pleasanton, CA 94588

Client Proj. ID: Metalcast
Lab Proj. ID: 9810784

Sampled: 10/08/98
Received: 10/08/98
Analyzed: see below
Reported: 10/21/98

Attention: Al Martinez

LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9810784-06				
Sample Desc : LIQUID,ATC-3				
Arsenic by ICP	mg/L	10/13/98	0.10	N.D.
Barium by ICP	mg/L	10/13/98	0.10	0.26
Cadmium by ICP	mg/L	10/13/98	0.010	N.D.
Chromium by ICP	mg/L	10/13/98	0.010	0.010
Lead by ICP	mg/L	10/13/98	0.10	N.D.
Mercury by Cold Vapor	mg/L	10/13/98	0.00020	N.D.
Selenium by ICP	mg/L	10/13/98	0.10	N.D.
Silver: ICP	mg/L	10/13/98	0.010	N.D.

analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210


Gayvan Kimyai
Project Manager



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ATC Associates, Inc.
666 Owens Drive
Pleasanton, CA 94588

Client Proj. ID: Metalcast
Sample Descript: ATC-4
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9810784-01

Sampled: 10/08/98
Received: 10/08/98
Analyzed: 10/12/98
Reported: 10/21/98

Attention: Al Martinez


Batch Number: GC101298BTEX17A
Instrument ID: GCHP17

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	500	950
Methyl t-Butyl Ether	25	N.D.
Benzene	5.0	N.D.
Toluene	5.0	N.D.
Ethyl Benzene	5.0	N.D.
Aromatics (Total)		
Chromatogram Pattern: Discrete Peaks		C6-C12
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	90

Analytes reported as N.D. were not present above the stated limit of detection.

EQUOIA ANALYTICAL - ELAP #1210


Project Manager





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ATC Associates, Inc.
6666 Owens Drive
Pleasanton, CA 94588

Client Proj. ID: Metalcast
Sample Descript: ATC-4
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9810784-01

Sampled: 10/08/98
Received: 10/08/98
Extracted: 10/12/98
Analyzed: 10/16/98
Reported: 10/21/98

Attention: Al Martinez


GC Batch Number: GC1012980HBPEXZ
Instrument ID: GCHP5A

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel	50	1400
Chromatogram Pattern: Unidentified HC		C9-C24
Surrogates	Control Limits %	% Recovery
n-Pentacosane (C25)	50 150	158 Q

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210


Project Manager



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ATC Associates, Inc.
3666 Owens Drive
Pleasanton, CA 94588

Attention: Al Martinez

C Batch Number: GC1012980HBPEXZ
Instrument ID: GCHP5A

Client Proj. ID: Metalcast
Sample Descript: ATC-4
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9810784-01

Sampled: 10/08/98
Received: 10/08/98
Extracted: 10/12/98
Analyzed: 10/16/98
Reported: 10/21/98

Fuel Fingerprint : Motor Oil

Analyte	Detection Limit ug/L	Sample Results ug/L
Extractable HC as Motor Oil	500	1200
Chromatogram Pattern: Unidentified HC		C16-C36
Surrogates	Control Limits %	% Recovery
n-Pentacosane (C25)	50 150	158 Q

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210


Project Manager





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ATC Associates, Inc. 6666 Owens Drive Pleasanton, CA 94588	Client Proj. ID: Metalcast Sample Descript: ATC-5 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9810784-02	Sampled: 10/08/98 Received: 10/08/98 Analyzed: 10/12/98 Reported: 10/21/98
Attention: Al Martinez		


GC Batch Number: GC101298BTEX17A
Instrument ID: GCHP17

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	270
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	1.8
Toluene	0.50	9.4
Ethyl Benzene	0.50	1.7
Xylenes (Total)	0.50	7.0
Chromatogram Pattern: Unidentified HC		C6-C12
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	100

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210


Project Manager



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ATC Associates, Inc.
1666 Owens Drive
Pleasanton, CA 94588

Client Proj. ID: Metalcast
Sample Descript: ATC-5
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9810784-02

Sampled: 10/08/98
Received: 10/08/98
Extracted: 10/13/98
Analyzed: 10/17/98
Reported: 10/21/98

Attention: Al Martinez

Batch Number: GC1013980HBPEXA
Instrument ID: GCHP5A

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel	2500	20000
Chromatogram Pattern: Unidentified HC		C9-C24
Surrogates	Control Limits %	% Recovery
1-Pentacosane (C25)	50 150	Q

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210


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ATC Associates, Inc.
6666 Owens Drive
Pleasanton, CA 94588

Client Proj. ID: Metalcast
Sample Descript: ATC-5
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9810784-02

Sampled: 10/08/98
Received: 10/08/98
Extracted: 10/13/98
Analyzed: 10/17/98
Reported: 10/21/98

Attention: Al Martinez


GC Batch Number: GC1013980HBPEXA
Instrument ID: GCHP5A

Fuel Fingerprint : Motor Oil

Analyte	Detection Limit ug/L	Sample Results ug/L
Extractable HC as Motor Oil	25000	65000
Chromatogram Pattern: Unidentified HC		C16-C36
Surrogates	Control Limits %	% Recovery
n-Pentacosane (C25)	50 150	Q

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210


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ATC Associates, Inc.
6666 Owens Drive
Pleasanton, CA 94588

Client Proj. ID: Metalcast
Sample Descript: ATC-7
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9810784-03

Sampled: 10/08/98
Received: 10/08/98
Analyzed: 10/12/98
Reported: 10/21/98

Attention: Al Martinez

GC Batch Number: GC101298BTEX17A
Instrument ID: GCHP17

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	500	1900
Methyl t-Butyl Ether	25	N.D.
Benzene	5.0	N.D.
Toluene	5.0	N.D.
Ethyl Benzene	5.0	N.D.
Xylenes (Total)	5.0	N.D.
Chromatogram Pattern: Discrete Peaks		C6-C12
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70	130
		87

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210


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ATC Associates, Inc.
6666 Owens Drive
Pleasanton, CA 94588

Client Proj. ID: Metalcast
Sample Descript: ATC-7
Matrix: LIQUID
Analysis Method: EPA 8010
Lab Number: 9810784-03

Sampled: 10/08/98
Received: 10/08/98
Analyzed: 10/13/98
Reported: 10/21/98

Attention: Al Martinez

IC Batch Number: GC101398OVOA32A
Instrument ID: GCHP32

Halogenated Volatile Organics (EPA 8010)

Analyte	Detection Limit ug/L	Sample Results ug/L
Bromodichloromethane	25	N.D.
Bromoform	25	N.D.
Bromomethane	50	N.D.
Carbon Tetrachloride	25	N.D.
Chlorobenzene	25	210
Chloroethane	50	N.D.
Chloroform	25	N.D.
Chloromethane	50	N.D.
Dibromochloromethane	25	54
1,2-Dichlorobenzene	25	730
1,3-Dichlorobenzene	25	1000
1,4-Dichlorobenzene	25	N.D.
1,1-Dichloroethane	25	N.D.
1,2-Dichloroethane	25	N.D.
1,1-Dichloroethene	25	N.D.
cis-1,2-Dichloroethene	25	N.D.
trans-1,2-Dichloroethene	25	N.D.
1,2-Dichloropropane	25	N.D.
cis-1,3-Dichloropropene	25	N.D.
trans-1,3-Dichloropropene	250	N.D.
Methylene chloride	25	N.D.
1,1,2,2-Tetrachloroethane	25	N.D.
Tetrachloroethene	25	N.D.
1,1,1-Trichloroethane	25	N.D.
1,1,2-Trichloroethane	25	N.D.
Trichloroethene	25	N.D.
Trichlorofluoromethane	25	N.D.
Vinyl chloride	50	N.D.
Surrogates	Control Limits %	% Recovery
4-Bromofluorobenzene	70 130	91

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

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TC Associates, Inc.
666 Owens Drive
Pleasanton, CA 94588

Client Proj. ID: Metalcast
Sample Descript: ATC-7
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9810784-03

Sampled: 10/08/98
Received: 10/08/98
Extracted: 10/13/98
Analyzed: 10/19/98
Reported: 10/21/98

Attention: Al Martinez


Batch Number: GC1013980HBPEXA
Instrument ID: GCHP4B

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel Chromatogram Pattern: Unidentified HC Discrete Peak	200	2200 C9-C24 @C10
Surrogates n-Pentacosane (C25)	Control Limits % 50 150	% Recovery 145

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210


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ATC Associates, Inc.
6666 Owens Drive
Pleasanton, CA 94588

Client Proj. ID: Metalcast
Sample Descript: ATC-7
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9810784-03

Sampled: 10/08/98
Received: 10/08/98
Extracted: 10/13/98
Analyzed: 10/19/98
Reported: 10/21/98

Attention: Al Martinez

GC Batch Number: GC1013980HBPEXA
Instrument ID: GCHP4B

Fuel Fingerprint : Motor Oil

Analyte	Detection Limit ug/L	Sample Results ug/L
Extractable HC as Motor Oil Chromatogram Pattern:	2000	N.D.
Surrogates	Control Limits %	% Recovery
n-Pentacosane (C25)	50 150	145

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210


Project Manager



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ATC Associates, Inc.
3666 Owens Drive
Pleasanton, CA 94588

Client Proj. ID: Metalcast
Sample Descript: ATC-8
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9810784-04

Sampled: 10/08/98
Received: 10/08/98
Analyzed: 10/13/98
Reported: 10/21/98

C Batch Number: GC101398BTEX21A
Instrument ID: GCHP21

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	250	360
Methyl t-Butyl Ether	12	N.D.
Benzene	2.5	N.D.
Toluene	2.5	3.5
Ethyl Benzene	2.5	11
Xylenes (Total)	2.5	
Chromatogram Pattern: Unidentified HC		C6-C12
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	100

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Project Manager



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ATC Associates, Inc.
3666 Owens Drive
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Client Proj. ID: Metaicast
Sample Descript: ATC-8
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9810784-04

Sampled: 10/08/98
Received: 10/08/98
Extracted: 10/13/98
Analyzed: 10/16/98
Reported: 10/21/98

Attention: Al Martinez


GC Batch Number: GC1013980HBPEXA
Instrument ID: GCHP5A

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel Chromatogram Pattern: Unidentified HC	1000	15000 C9-C24
Surrogates n-Pentacosane (C25)	Control Limits % 50 150	% Recovery 264 Q

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210


Project Manager





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ATC Associates, Inc.
6666 Owens Drive
Pleasanton, CA 94588

Client Proj. ID: Metalcast
Sample Descript: ATC-8
Matrx: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9810784-04

Sampled: 10/08/98
Received: 10/08/98
Extracted: 10/13/98
Analyzed: 10/16/98
Reported: 10/21/98

GC Batch Number: GC1013980HBPEXA
Instrument ID: GCHP5A

Fuel Fingerprint : Motor Oil

Analyte	Detection Limit ug/L	Sample Results ug/L
Extractable HC as Motor Oil	10000	14000
Chromatogram Pattern: Unidentified HC		C16-C36
Surrogates	Control Limits %	% Recovery
n-Pentacosane (C25)	50 150	264 Q

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

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ATC Associates, Inc.
3666 Owens Drive
Pleasanton, CA 94588

Client Proj. ID: Metalcast
Sample Descript: ATC-9
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9810784-05

Sampled: 10/08/98
Received: 10/08/98
Analyzed: 10/12/98
Reported: 10/21/98

Attention: Al Martinez


GC Batch Number: GC101298BTEX17A
Instrument ID: GCHP17

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	1000	3000
Methyl t-Butyl Ether	50	N.D.
Benzene	10	N.D.
Toluene	10	N.D.
Ethyl Benzene	10	N.D.
Xylenes (Total)	10	N.D.
Chromatogram Pattern: Discrete Peaks		C6-C12
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	95

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210


Project Manager



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6666 Owens Drive
Pleasanton, CA 94588

Attention: Al Martinez

Client Proj. ID: Metalcast
Sample Descript: ATC-9
Matrix: LIQUID
Analysis Method: EPA 8010
Lab Number: 9810784-05

Sampled: 10/08/98
Received: 10/08/98

Analyzed: 10/13/98
Reported: 10/21/98

GC Batch Number: GC101398OVOA32A
Instrument ID: GCHP32

Halogenated Volatile Organics (EPA 8010)

Analyte	Detection Limit ug/L	Sample Results ug/L
Bromodichloromethane	10	N.D.
Bromoform	10	N.D.
Bromomethane	20	N.D.
Carbon Tetrachloride	10	N.D.
Chlorobenzene	10	33
Chloroethane	20	N.D.
Chloroform	10	N.D.
Chloromethane	20	N.D.
Dibromochloromethane	10	N.D.
1,2-Dichlorobenzene	10	190
1,3-Dichlorobenzene	10	440
1,4-Dichlorobenzene	10	380
1,1-Dichloroethane	10	N.D.
1,2-Dichloroethane	10	N.D.
1,1-Dichloroethene	10	N.D.
cis-1,2-Dichloroethene	10	N.D.
trans-1,2-Dichloroethene	10	N.D.
1,2-Dichloropropane	10	N.D.
cis-1,3-Dichloropropene	10	N.D.
trans-1,3-Dichloropropene	10	N.D.
Methylene chloride	100	N.D.
1,1,2,2-Tetrachloroethane	10	N.D.
Tetrachloroethene	10	N.D.
1,1,1-Trichloroethane	10	N.D.
1,1,2-Trichloroethane	10	N.D.
Trichloroethene	10	N.D.
Trichlorofluoromethane	10	N.D.
Vinyl chloride	20	N.D.
Surrogates	Control Limits %	% Recovery
4-Bromofluorobenzene	70	130
		75

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Project Manager



**Sequoia
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ATC Associates, Inc. 6666 Owens Drive Pleasanton, CA 94588	Client Proj. ID: Metalcast Sample Descript: ATC-9 Matrix: LIQUID Analysis Method: EPA 8015 Mod Lab Number: 9810784-05	Sampled: 10/08/98 Received: 10/08/98 Extracted: 10/13/98 Analyzed: 10/16/98 Reported: 10/21/98
Attention: Al Martinez		


GC Batch Number: GC1013980HBPEXA
Instrument ID: GCHP5A

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel	1000	9300
Chromatogram Pattern: Unidentified HC		C9-C24
Surrogates	Control Limits %	% Recovery
n-Pentacosane (C25)	50 150	429 Q

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210


Project Manager



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ATC Associates, Inc.
3666 Owens Drive
Pleasanton, CA 94588

Attention: Al Martinez

Client Proj. ID: Metalcast
Sample Descript: ATC-9
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9810784-05

Sampled: 10/08/98
Received: 10/08/98
Extracted: 10/13/98
Analyzed: 10/16/98
Reported: 10/21/98

Batch Number: GC1013980HBPEXA
Instrument ID: GCHP5A

Fuel Fingerprint : Motor Oil

Analyte	Detection Limit ug/L	Sample Results ug/L
Extractable HC as Motor Oil	10000	15000
Chromatogram Pattern: Unidentified HC		C16-C36
Surrogates	Control Limits %	% Recovery
n-Pentacosane (C25)	50 150	429 Q

analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Project Manager





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ATC Associates, Inc.
1666 Owens Drive
Pleasanton, CA 94588

Client Proj. ID: Metalcast
Sample Descript: ATC-3
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9810784-06

Sampled: 10/08/98
Received: 10/08/98
Analyzed: 10/12/98
Reported: 10/21/98

Attention: Al Martinez


Batch Number: GC101298BTEX17A
Instrument ID: GCHP17

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	250	440
Methyl t-Butyl Ether	12	N.D.
Benzene	2.5	N.D.
Toluene	2.5	N.D.
Ethyl Benzene	2.5	N.D.
Aromatics (Total)	2.5	N.D.
Chromatogram Pattern: Discrete Peaks		C6-C12
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	97

Analytes reported as N.D. were not present above the stated limit of detection.

EQUOIA ANALYTICAL - ELAP #1210


Project Manager





Sequoia Analytical

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ATC Associates, Inc. 6666 Owens Drive Pleasanton, CA 94588	Client Proj. ID: Metalcast Sample Descript: ATC-3 Matrix: LIQUID Analysis Method: EPA 8010 Lab Number: 9810784-06	Sampled: 10/08/98 Received: 10/08/98 Analyzed: 10/13/98 Reported: 10/21/98
Attention: Al Martinez		


GC Batch Number: GC101398OVOA32A
Instrument ID: GCHP32

Halogenated Volatile Organics (EPA 8010)

Analyte	Detection Limit ug/L	Sample Results ug/L
Bromodichloromethane	50	N.D.
Bromoform	50	N.D.
Bromomethane	100	N.D.
Carbon Tetrachloride	50	N.D.
Chlorobenzene	50	N.D.
Chloroethane	100	N.D.
Chloroform	50	N.D.
Chloromethane	100	N.D.
Dibromochloromethane	50	N.D.
1,2-Dichlorobenzene	50	N.D.
1,3-Dichlorobenzene	50	120
1,4-Dichlorobenzene	50	250
1,1-Dichloroethane	50	N.D.
1,2-Dichloroethane	50	N.D.
1,1-Dichloroethene	50	N.D.
cis-1,2-Dichloroethene	50	N.D.
trans-1,2-Dichloroethene	50	N.D.
1,2-Dichloropropane	50	N.D.
cis-1,3-Dichloropropene	50	N.D.
trans-1,3-Dichloropropene	50	N.D.
Methylene chloride	500	N.D.
1,1,2,2-Tetrachloroethane	50	N.D.
Tetrachloroethene	50	N.D.
1,1,1-Trichloroethane	50	N.D.
1,1,2-Trichloroethane	50	N.D.
Trichloroethene	50	N.D.
Trichlorofluoromethane	50	N.D.
Vinyl chloride	100	N.D.
Surrogates	Control Limits %	% Recovery
4-Bromofluorobenzene	70 130	82

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210


Project Manager





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ATC Associates, Inc.
3666 Owens Drive
Pleasanton, CA 94588

Client Proj. ID: Metalcast
Sample Descript: ATC-3
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9810784-06

Sampled: 10/08/98
Received: 10/08/98
Extracted: 10/13/98
Analyzed: 10/16/98
Reported: 10/21/98

Attention: Al Martinez

GC Batch Number: GC1013980HBPEXA
Instrument ID: GCHP5A

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel Chromatogram Pattern: Unidentified HC	1000	6700
Surrogates	Control Limits % 50 150	% Recovery 393 Q
n-Pentacosane (C25)		

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Project Manager



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ATC Associates, Inc.
6666 Owens Drive
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Client Proj. ID: Metalcast
Sample Descript: ATC-3
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9810784-06

Sampled: 10/08/98
Received: 10/08/98
Extracted: 10/13/98
Analyzed: 10/16/98
Reported: 10/21/98


GC Batch Number: GC1013980HBPEXA
Instrument ID: GCHP5A

Fuel Fingerprint : Motor Oil

Analyte	Detection Limit ug/L	Sample Results ug/L
Extractable HC as Motor Oil	10000	16000
Chromatogram Pattern: Unidentified HC		C16-C36
Surrogates	Control Limits %	% Recovery
n-Pentacosane (C25)	50 150	393 Q

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210


Project Manager



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ATC Associates, Inc.
3666 Owens Drive
Pleasanton, CA 94588

Client Proj. ID: Metalcast
Lab Proj. ID: 9810785

Sampled: 10/08/98
Received: 10/08/98
Analyzed: see below
Reported: 10/21/98

Attention: Al Martinez

LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9810785-07 Sample Desc: LIQUID,ATC-1				
Arsenic by ICP	mg/L	10/13/98	0.10	N.D.
Barium by ICP	mg/L	10/13/98	0.10	0.23
Cadmium by ICP	mg/L	10/13/98	0.010	N.D.
Chromium by ICP	mg/L	10/13/98	0.010	N.D.
Lead by ICP	mg/L	10/13/98	0.10	N.D.
Mercury by Cold Vapor	mg/L	10/13/98	0.00020	N.D.
Selenium by ICP	mg/L	10/13/98	0.10	N.D.
Silver: ICP	mg/L	10/13/98	0.010	N.D.
Lab No: 9810785-08 Sample Desc: LIQUID,ATC-2				
Arsenic by ICP	mg/L	10/13/98	0.10	N.D.
Barium by ICP	mg/L	10/13/98	0.10	0.23
Cadmium by ICP	mg/L	10/13/98	0.010	N.D.
Chromium by ICP	mg/L	10/13/98	0.010	0.014
Lead by ICP	mg/L	10/13/98	0.10	N.D.
Mercury by Cold Vapor	mg/L	10/13/98	0.00020	N.D.
Selenium by ICP	mg/L	10/13/98	0.10	N.D.
Silver: ICP	mg/L	10/13/98	0.010	N.D.
Lab No: 9810785-09 Sample Desc: LIQUID,WELL-1				
Arsenic by ICP	mg/L	10/13/98	0.10	N.D.
Barium by ICP	mg/L	10/13/98	0.10	0.20
Cadmium by ICP	mg/L	10/13/98	0.010	N.D.
Chromium by ICP	mg/L	10/13/98	0.010	N.D.
Lead by ICP	mg/L	10/13/98	0.10	N.D.
Mercury by Cold Vapor	mg/L	10/13/98	0.00020	N.D.
Selenium by ICP	mg/L	10/13/98	0.10	N.D.
Silver: ICP	mg/L	10/13/98	0.010	N.D.

*Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Kayvan Kimyer
Project Manager



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ATC Associates, Inc.
3666 Owens Drive
Pleasanton, CA 94588

Client Proj. ID: Metalcast
Sample Descript: ATC-1
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9810785-07

Sampled: 10/08/98
Received: 10/08/98
Analyzed: 10/13/98
Reported: 10/21/98

Attention: Al Martinez

C Batch Number: GC101398BTEX21A
Instrument ID: GCHP21

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	500	1400
Methyl t-Butyl Ether	25	N.D.
Benzene	5.0	5.3
Toluene	5.0	N.D.
Ethyl Benzene	5.0	7.5
Xylenes (Total)	5.0	N.D.
Chromatogram Pattern: Unidentified HC		C6-C12
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	90

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Project Manager



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TC Associates, Inc.
666 Owens Drive
Pleasanton, CA 94588

Client Proj. ID: Metalcast
Sample Descript: ATC-1
Matrix: LIQUID
Analysis Method: EPA 8010
Lab Number: 9810785-07

Sampled: 10/08/98
Received: 10/08/98
Analyzed: 10/13/98
Reported: 10/21/98

Attention: Al Martinez


Batch Number: GC101398OVOA32A
Instrument ID: GCHP32

Halogenated Volatile Organics (EPA 8010)

Analyte	Detection Limit ug/L	Sample Results ug/L
Bromodichloromethane	10	N.D.
Bromoform	10	N.D.
Bromomethane	20	N.D.
Carbon Tetrachloride	10	N.D.
Chlorobenzene	10	370
Chloroethane	20	N.D.
Chloroform	10	N.D.
Chloromethane	20	N.D.
Dibromochloromethane	10	N.D.
1,2-Dichlorobenzene	10	32
1,3-Dichlorobenzene	10	370
1,4-Dichlorobenzene	10	450
1,1-Dichloroethane	10	N.D.
1,2-Dichloroethane	10	N.D.
1,1-Dichloroethene	10	N.D.
cis-1,2-Dichloroethene	10	N.D.
trans-1,2-Dichloroethene	10	N.D.
1,2-Dichloropropane	10	N.D.
cis-1,3-Dichloropropene	10	N.D.
trans-1,3-Dichloropropene	10	N.D.
Methylene chloride	100	N.D.
1,1,2,2-Tetrachloroethane	10	N.D.
Tetrachloroethene	10	N.D.
1,1,1-Trichloroethane	10	N.D.
1,1,2-Trichloroethane	10	N.D.
Trichloroethene	10	N.D.
Trichlorofluoromethane	10	N.D.
Vinyl chloride	20	N.D.
Surrogates	Control Limits %	% Recovery
4-Bromofluorobenzene	70 130	78

analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210


Project Manager



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ATC Associates, Inc.
3666 Owens Drive
Pleasanton, CA 94588

Attention: Al Martinez

Client Proj. ID: Metalcast
Sample Descript: ATC-1
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9810785-07

Sampled: 10/08/98
Received: 10/08/98
Extracted: 10/13/98
Analyzed: 10/17/98
Reported: 10/21/98

Batch Number: GC1013980HBPEXA
Instrument ID: GCHP5A

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel Chromatogram Pattern: Unidentified HC	1000	19000 C9-C24
Surrogates	Control Limits %	% Recovery
n-Pentacosane (C25)	50 150	542 Q

Analyses reported as N.D. were not present above the stated limit of detection.

EQUOIA ANALYTICAL - ELAP #1210

Project Manager



**Sequoia
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ATC Associates, Inc. 3666 Owens Drive Pleasanton, CA 94588	Client Proj. ID: Metalcast Sample Descript: ATC-1 Matrix: LIQUID Analysis Method: EPA 8015 Mod Lab Number: 9810785-07	Sampled: 10/08/98 Received: 10/08/98 Extracted: 10/13/98 Analyzed: 10/17/98 Reported: 10/21/98
Attention: Al Martinez		

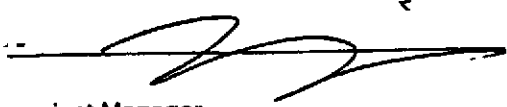
C Batch Number: GC1013980HBPEXA
Instrument ID: GCHP5A

Fuel Fingerprint : Motor Oil

Analyte	Detection Limit ug/L	Sample Results ug/L
Extractable HC as Motor Oil	10000	18000
Chromatogram Pattern:		C16-C36
Unidentified HC		
Surrogates	Control Limits %	% Recovery
n-Pentacosane (C25)	50 150	542 Q

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210


Project Manager



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ATC Associates, Inc.
1666 Owens Drive
Fleasanton, CA 94588

Attention: Al Martinez

Client Proj. ID: Metalcast
Sample Descript: ATC-2
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9810785-08

Sampled: 10/08/98
Received: 10/08/98
Analyzed: 10/14/98
Reported: 10/21/98

Batch Number: GC101498BTEX17A
Instrument ID: GCHP17

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	250	980
Methyl t-Butyl Ether	12	N.D.
Benzene	0.50	2.3
Toluene	2.5	N.D.
o-xyl Benzene	0.50	1.4
m-xyl Benzene	0.50	1.4
Chromatogram Pattern: Discrete Peaks		C6-C12
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	108

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Project Manager



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ATC Associates, Inc.
5666 Owens Drive
Pleasanton, CA 94588

Client Proj. ID: Metalcast
Sample Descript: ATC-2
Matrix: LIQUID
Analysis Method: EPA 8010
Lab Number: 9810785-08

Sampled: 10/08/98
Received: 10/08/98
Analyzed: 10/13/98
Reported: 10/21/98

C Batch Number: GC101398OVOA32A
Instrument ID: GCHP32

Halogenated Volatile Organics (EPA 8010)

Analyte	Detection Limit ug/L	Sample Results ug/L
Bromodichloromethane	25	N.D.
Bromoform	25	N.D.
Bromomethane	50	N.D.
Carbon Tetrachloride	25	N.D.
Chlorobenzene	25	92
Chloroethane	50	N.D.
Chloroform	25	N.D.
Chloromethane	50	N.D.
Dibromochloromethane	25	N.D.
1,2-Dichlorobenzene	25	32
1,3-Dichlorobenzene	25	590
1,4-Dichlorobenzene	25	970
1,1-Dichloroethane	25	N.D.
1,2-Dichloroethane	25	N.D.
1,1-Dichloroethene	25	N.D.
cis-1,2-Dichloroethene	25	N.D.
trans-1,2-Dichloroethene	25	N.D.
1,2-Dichloropropane	25	N.D.
cis-1,3-Dichloropropene	25	N.D.
trans-1,3-Dichloropropene	25	N.D.
Methylene chloride	250	N.D.
1,1,2,2-Tetrachloroethane	25	N.D.
Tetrachloroethene	25	N.D.
1,1,1-Trichloroethane	25	N.D.
1,1,2-Trichloroethane	25	N.D.
Trichloroethene	25	N.D.
Trichlorofluoromethane	25	N.D.
Vinyl chloride	50	N.D.
Surrogates	Control Limits %	% Recovery
+Bromofluorobenzene	70 130	83

analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Project Manager



**Sequoia
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ATC Associates, Inc.
3666 Owens Drive
Pleasanton, CA 94588

Client Proj. ID: Metalcast
Sample Descript: ATC-2
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9810785-08

Sampled: 10/08/98
Received: 10/08/98
Extracted: 10/13/98
Analyzed: 10/20/98
Reported: 10/21/98

Attention: Al Martinez

C Batch Number: GC1013980HBPEXA
Instrument ID: GCHP5B

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel	50	1500
Chromatogram Pattern: Unidentified HC		C9-C24
Surrogates	Control Limits %	% Recovery
n-Pentacosane (C25)	50 150	133

Analyses reported as N.D. were not present above the stated limit of detection.

EQUOIA ANALYTICAL - ELAP #1210

Project Manager



**Sequoia
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ATC Associates, Inc.
3666 Owens Drive
Pleasanton, CA 94588

Client Proj. ID: Metalcast
Sample Descript: ATC-2
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9810785-08

Sampled: 10/08/98
Received: 10/08/98
Extracted: 10/13/98
Analyzed: 10/20/98
Reported: 10/21/98

Attention: Al Martinez


C Batch Number: GC1013980HBPEXA
Instrument ID: GCHP5B

Fuel Fingerprint : Motor Oil

Analyte	Detection Limit ug/L	Sample Results ug/L
Extractable HC as Motor Oil	500	2300
Chromatogram Pattern: Unidentified HC		C16-C36
Surrogates	Control Limits %	% Recovery
n-Pentacosane (C25)	50 150	133

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210


Project Manager



**Sequoia
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ATC Associates, Inc.
3666 Owens Drive
Pleasanton, CA 94588

Client Proj. ID: Metalcast
Sample Descript: WELL-1
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9810785-09

Sampled: 10/08/98
Received: 10/08/98
Analyzed: 10/14/98
Reported: 10/21/98

Attention: Al Martinez

Batch Number: GC101498BTEX17A
Instrument ID: GCHP17

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	500	2300
Methyl t-Butyl Ether	25	N.D.
Benzene	0.50	4.3
Toluene	5.0	N.D.
Ethyl Benzene	0.50	1.3
Aromatics (Total)	0.50	2.4
Chromatogram Pattern: Discrete Peaks		C6-C12
Surrogates	Control Limits %	% Recovery
1,1-Difluorotoluene	70	130
		105

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Project Manager



Sequoia Analytical

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ATC Associates, Inc.
6666 Owens Drive
Pleasanton, CA 94588

Client Proj. ID: Metalcast
Sample Descript: WELL-1
Matrix: LIQUID
Analysis Method: EPA 8010
Lab Number: 9810785-09

Sampled: 10/08/98
Received: 10/08/98
Analyzed: 10/14/98
Reported: 10/21/98

IC Batch Number: GC101498OVOA32A
Instrument ID: GCHP32

Halogenated Volatile Organics (EPA 8010)

Analyte	Detection Limit ug/L	Sample Results ug/L
Bromodichloromethane	25	N.D.
Bromoform	25	N.D.
Bromomethane	50	N.D.
Carbon Tetrachloride	25	N.D.
Chlorobenzene	25	220
Chloroethane	50	N.D.
Chloroform	25	N.D.
Chloromethane	50	N.D.
Dibromochloromethane	25	N.D.
1,2-Dichlorobenzene	25	56
1,3-Dichlorobenzene	25	900
1,4-Dichlorobenzene	25	1500
1,1-Dichloroethane	25	N.D.
1,2-Dichloroethane	25	N.D.
1,1-Dichloroethene	25	N.D.
cis-1,2-Dichloroethene	25	N.D.
trans-1,2-Dichloroethene	25	N.D.
1,2-Dichloropropane	25	N.D.
cis-1,3-Dichloropropene	25	N.D.
trans-1,3-Dichloropropene	25	N.D.
Methylene chloride	250	N.D.
1,1,2,2-Tetrachloroethane	25	N.D.
Tetrachloroethene	25	N.D.
1,1,1-Trichloroethane	25	N.D.
1,1,2-Trichloroethane	25	N.D.
Trichloroethene	25	N.D.
Trichlorofluoromethane	25	N.D.
Vinyl chloride	50	N.D.
Surrogates	Control Limits %	% Recovery
4-Bromofluorobenzene	70 130	74

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Project Manager



**Sequoia
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ATC Associates, Inc.
3666 Owens Drive
Pleasanton, CA 94588

Client Proj. ID: Metalcast
Sample Descript: WELL-1
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9810785-09

Sampled: 10/08/98
Received: 10/08/98
Extracted: 10/13/98
Analyzed: 10/16/98
Reported: 10/21/98

Attention: Al Martinez

C Batch Number: GC1013980HBPEXA
Instrument ID: GCHP5A

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel Chromatogram Pattern: Unidentified HC	50	1700
		C9-C24
Surrogates	Control Limits %	% Recovery
n-Pentacosane (C25)	50 150	221 Q

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Project Manager



**Sequoia
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ATC Associates, Inc.
3666 Owens Drive
Pleasanton, CA 94588

Client Proj. ID: Metalcast
Sample Descript: WELL-1
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9810785-09

Sampled: 10/08/98
Received: 10/08/98
Extracted: 10/13/98
Analyzed: 10/16/98
Reported: 10/21/98

Attention: Al Martinez

C Batch Number: GC1013980HBPEXA
Instrument ID: GCHP5A

Fuel Fingerprint : Motor Oil

Analyte	Detection Limit ug/L	Sample Results ug/L
Extractable HC as Motor Oil	500	1600
Chromatogram Pattern: Unidentified HC		C16-C36
Surrogates	Control Limits %	% Recovery
1-Pentacosane (C25)	50 150	221 Q

Analyses reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Project Manager



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ATC Associates, Inc.
6666 Owens Drive
Pleasanton, CA 94588
Attention: Al Martinez

Client Project ID: Metalcast
Matrix: Liquid

Work Order #: 9810784 -02, 03, 05, 06

Reported: Oct 28, 1998

QUALITY CONTROL DATA REPORT

Analyte:	Beryllium	Cadmium	Chromium	Nickel
QC Batch#:	ME1012986010MDB	ME1012986010MDB	ME1012986010MDB	ME1012986010MDB
Analy. Method:	EPA 6010	EPA 6010	EPA 6010	EPA 6010
Prep. Method:	EPA 3010	EPA 3010	EPA 3010	EPA 3010

	C. Medefesser	C. Medefesser	C. Medefesser	C. Medefesser
Analyst:	C. Medefesser	C. Medefesser	C. Medefesser	C. Medefesser
MS/MSD #:	981080001	981080001	981080001	981080001
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	10/12/98	10/12/98	10/12/98	10/12/98
Analyzed Date:	10/13/98	10/13/98	10/13/98	10/13/98
Instrument I.D.#:	MTJA5	MTJA5	MTJA5	MTJA5
Conc. Spiked:	1.0 mg/L	1.0 mg/L	1.0 mg/L	1.0 mg/L
Result:	1.1	1.0	1.0	1.1
MS % Recovery:	110	100	100	110
Dup. Result:	0.91	0.91	0.90	0.92
MSD % Recov.:	91	91	90	92
RPD:	19	9.4	11	18
RPD Limit:	0-20	0-20	0-20	0-20

LCS #:	LCS101298	LCS101298	LCS101298	LCS101298
Prepared Date:	10/12/98	10/12/98	10/12/98	10/12/98
Analyzed Date:	10/13/98	10/13/98	10/13/98	10/13/98
Instrument I.D.#:	MTJA5	MTJA5	MTJA5	MTJA5
Conc. Spiked:	1.0 mg/L	1.0 mg/L	1.0 mg/L	1.0 mg/L
LCS Result:	1.0	1.0	1.0	1.0
LCS % Recov.:	100	100	100	100

MS/MSD	80-120	80-120	80-120	80-120
LCS	80-120	80-120	80-120	80-120
Control Limits				

SEQUOIA ANALYTICAL

Kayvan Jamyal
Project Manager

Please Note:

The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

9810784.AAA <1>





Sequoia Analytical

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ATC Associates, Inc.
 6666 Owens Drive
 Pleasanton, CA 94588
 Attention: Al Martinez

Client Project ID: Metalcast
 Matrix: Liquid

Work Order #: 9810785-07-09

Reported: Oct 28, 1998

QUALITY CONTROL DATA REPORT

Analyte:	Beryllium	Cadmium	Chromium	Nickel
QC Batch#:	ME1012986010MDB	ME1012986010MDB	ME1012986010MDB	ME1012986010MDB
Analy. Method:	EPA 6010	EPA 6010	EPA 6010	EPA 6010
Prep. Method:	EPA 3010	EPA 3010	EPA 3010	EPA 3010

	C. Medefesser	C. Medefesser	C. Medefesser	C. Medefesser
Analyst:	C. Medefesser	C. Medefesser	C. Medefesser	C. Medefesser
MS/MSD #:	981080001	981080001	981080001	981080001
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	10/12/98	10/12/98	10/12/98	10/12/98
Analyzed Date:	10/13/98	10/13/98	10/13/98	10/13/98
Instrument I.D.#:	MTJA5	MTJA5	MTJA5	MTJA5
Conc. Spiked:	1.0 mg/L	1.0 mg/L	1.0 mg/L	1.0 mg/L
Result:	1.1	1.0	1.0	1.1
MS % Recovery:	110	100	100	110
Dup. Result:	0.91	0.91	0.90	0.92
MSD % Recov.:	91	91	90	92
RPD:	19	9.4	11	18
RPD Limit:	0-20	0-20	0-20	0-20

LCS #:	LCS101298	LCS101298	LCS101298	LCS101298
Prepared Date:	10/12/98	10/12/98	10/12/98	10/12/98
Analyzed Date:	10/13/98	10/13/98	10/13/98	10/13/98
Instrument I.D.#:	MTJA5	MTJA5	MTJA5	MTJA5
Conc. Spiked:	1.0 mg/L	1.0 mg/L	1.0 mg/L	1.0 mg/L
LCS Result:	1.0	1.0	1.0	1.0
LCS % Recov.:	100	100	100	100

MS/MSD	80-120	80-120	80-120	80-120
LCS	80-120	80-120	80-120	80-120
Control Limits				

Please Note:

The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

SEQUOIA ANALYTICAL

Kayvan Kimyal
 Project Manager

** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

9810784.AAA <2>





**Sequoia
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ATC Associates, Inc.
6666 Owens Drive
Pleasanton, CA 94588
Attention: Al Martinez

Client Project ID: Metalcast
Matrix: Liquid

Work Order #: 9810784-02, 03, 05, 06

Reported: Oct 28, 1998

QUALITY CONTROL DATA REPORT

Analyte: Mercury

QC Batch#: ME1013987470M4A
Analy. Method: EPA 7470
Prep. Method: EPA 7470

Analyst: B. Entenmann
MS/MSD #: 981079101
Sample Conc.: N.D.
Prepared Date: 10/13/98
Analyzed Date: 10/13/98
Instrument I.D.#: MPE4
Conc. Spiked: 0.0080 mg/L

Result: 0.0088
MS % Recovery: 110

Dup. Result: 0.0088
MSD % Recov.: 110

RPD: 0.0
RPD Limit: 0-20

LCS #: LCS101398

Prepared Date: 10/13/98
Analyzed Date: 10/13/98
Instrument I.D.#: MPE4
Conc. Spiked: 0.0040 mg/L

LCS Result: 0.0043
LCS % Recov.: 108

MS/MSD 75-125
LCS 75-125
Control Limits

SEQUOIA ANALYTICAL

Kaywan Kimyaji
Project Manager

Please Note:

The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

9810784.AAA <3>



Sequoia Analytical

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ATC Associates, Inc.
6666 Owens Drive
Pleasanton, CA 94588
Attention: Al Martinez

Client Project ID: Metalcast
Matrix: Liquid

Work Order #: 9810785-07-09

Reported: Oct 28, 1998

QUALITY CONTROL DATA REPORT

Analyte: Mercury

QC Batch#: ME1013987470M4A

Analy. Method: EPA 7470

Prep. Method: EPA 7470

Analyst: B. Entenmann

MS/MSD #: 981079101

Sample Conc.: N.D.

Prepared Date: 10/13/98

Analyzed Date: 10/13/98

Instrument I.D.#: MPE4

Conc. Spiked: 0.0080 mg/L

Result: 0.0088

MS % Recovery: 110

Dup. Result: 0.0088

MSD % Recov.: 110

RPD: 0.0

RPD Limit: 0-20

LCS #: LCS101398

Prepared Date: 10/13/98

Analyzed Date: 10/13/98

Instrument I.D.#: MPE4

Conc. Spiked: 0.0040 mg/L

LCS Result: 0.0043

LCS % Recov.: 108

MS/MSD 75-125

LCS 75-125

Control Limits

SEQUOIA ANALYTICAL

Kayvan Kimyai
Project Manager

Please Note:

The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

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Sequoia Analytical

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FAX (707) 792-0342

ATC Associates, Inc.
6666 Owens Drive
Pleasanton, CA 94588
Attention: Al Martinez

Client Project ID: Metalcast

QC Sample Group: 9810784-01-06

Reported: Oct 23, 1998

QUALITY CONTROL DATA REPORT

Matrix: Liquid
Method: EPA 8015
Analyst: GR

ANALYTE Gasoline

QC Batch #: GC101298BTEX17A

Sample No.: GW9810061-1

Date Prepared: 10/12/98
Date Analyzed: 10/12/98
Instrument I.D.#: GCHP17

Sample Conc., ug/L: N.D.
Conc. Spiked, ug/L: 250

Matrix Spike, ug/L: 240
% Recovery: 94

Matrix Spike Duplicate, ug/L: 240
% Recovery: 97

Relative % Difference: 3.1

RPD Control Limits: 0-25

LCS Batch#: GWLCS101298A

Date Prepared: 10/12/98
Date Analyzed: 10/12/98
Instrument I.D.#: GCHP17

Conc. Spiked, ug/L: 250

LCS Recovery, ug/L: 250
LCS % Recovery: 101

Percent Recovery Control Limits:

MS/MSD 60-140
LCS 70-130

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

SEQUOIA ANALYTICAL

Kaywan Kimyai
Project Manager

Please Note:

The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.



**Sequoia
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ATC Associates, Inc.
6666 Owens Drive
Pleasanton, CA 94588
Attention: Al Martinez

Client Project ID: Metalcast

QC Sample Group: 9810785-08

Reported: Oct 23, 1998

QUALITY CONTROL DATA REPORT

Matrix: Liquid
Method: EPA 8015
Analyst: GR

ANALYTE Gasoline

QC Batch #: GC101298BTEX17A

Sample No.: GW9810061-1
Date Prepared: 10/12/98
Date Analyzed: 10/12/98
Instrument I.D.#: GCHP17

Sample Conc., ug/L: N.D.
Conc. Spiked, ug/L: 250

Matrix Spike, ug/L: 240
% Recovery: 94

Matrix
Spike Duplicate, ug/L: 240
% Recovery: 97

Relative % Difference: 3.1

RPD Control Limits: 0-25

LCS Batch#: GWLCS101298A

Date Prepared: 10/12/98
Date Analyzed: 10/12/98
Instrument I.D.#: GCHP17

Conc. Spiked, ug/L: 250

LCS Recovery, ug/L: 250
LCS % Recovery: 101

Percent Recovery Control Limits:

MS/MSD 60-140
LCS 70-130

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

SEQUOIA ANALYTICAL

Kayvan Kimyai
Project Manager

Please Note:

The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.





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ATC Associates, Inc.
6666 Owens Drive
Pleasanton, CA 94588
Attention: Al Martinez

Client Project ID: Metalcast

QC Sample Group: 9810784-01

Reported: Oct 23, 1998

QUALITY CONTROL DATA REPORT

Matrix: Liquid
Method: EPA 8015A
Analyst: A. PORTER

ANALYTE DIESELS

QC Batch #: GC1012980HBPEXZ

Sample No.: 9810471-3

Date Prepared: 10/12/98

Date Analyzed: 10/16/98

Instrument I.D.#: GCHP5B

Sample Conc., ug/L: 240

Conc. Spiked, ug/L: 1000

Matrix Spike, ug/L: 1100

% Recovery: 86

Matrix

Spike Duplicate, ug/L: 1100

% Recovery: 86

Relative % Difference: 0.0

RPD Control Limits: 0-50

LCS Batch#: BLK101298ZS

Date Prepared: 10/12/98

Date Analyzed: 10/16/98

Instrument I.D.#: GCHP5B

Conc. Spiked, ug/L: 1000

Recovery, ug/L: 880

LCS % Recovery: 88

Percent Recovery Control Limits:

MS/MSD 50-150

LCS 60-140

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

SEQUOIA ANALYTICAL


Kayvon Kimyan
Project Manager

Please Note:

The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.





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ATC Associates, Inc.
6666 Owens Drive
Pleasanton, CA 94588
Attention: Al Martinez

Client Project ID: Metalcast

QC Sample Group: 9810784-02-03,05-06

Reported: Oct 23, 1998

QUALITY CONTROL DATA REPORT

Matrix: Liquid
Method: EPA 8010/8020; 601/602
Analyst: C. Medina

ANALYTE	1,1-DCE	TCE	Chlorobenzene	Benzene	Toluene	Chlorobenzene
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QC Batch #: GC1013980VOA32A

Sample No.:	9810611-01					
Date Prepared:	10/12/98	10/12/98	10/12/98	10/12/98	10/12/98	10/12/98
Date Analyzed:	10/12/98	10/12/98	10/12/98	10/12/98	10/12/98	10/12/98
Instrument I.D.#:	gchp32	gchp32	gchp32	gchp32	gchp32	gchp32
Sample Conc., ug/L:	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Conc. Spiked, ug/L:	25	25	25	25	25	25
Matrix Spike, ug/L:	22	23	24	22	22	22
% Recovery:	88	92	96	88	88	88
Matrix Spike Duplicates, ug/L:	21	23	23	21	21	21
% Recovery:	84	92	92	84	84	84
Relative % Difference:	4.7	0.0	4.3	4.7	4.7	4.7
RPD Control Limits:	0-50	0-50	0-50	0-50	0-50	0-50

LCS Batch#: VWLCS101398A

Date Prepared:	10/13/98	10/13/98	10/13/98	10/13/98	10/13/98	10/13/98
Date Analyzed:	10/13/98	10/13/98	10/13/98	10/13/98	10/13/98	10/13/98
Instrument I.D.#:	gchp32	gchp32	gchp32	gchp32	gchp32	gchp32
Conc. Spiked, ug/L:	25	25	25	25	25	25
Recovery, ug/L:	23	24	26	22	22	22
LCS % Recovery:	92	96	104	88	88	88

Percent Recovery Control Limits:

MS/MSD	60-140	60-140	60-140	60-140	60-140	60-140
LCS	65-135	70-130	70-130	70-130	70-130	70-130

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

SEQUOIA ANALYTICAL

Kayvan Kimyai
Project Manager

Please Note:

The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.



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ATC Associates, Inc.
 6666 Owens Drive
 Pleasanton, CA 94588
 Attention: Al Martinez

Client Project ID: Metalcast

QC Sample Group: 9810785-07-09

Reported: Oct 23, 1998

QUALITY CONTROL DATA REPORT

Matrix: Liquid
 Method: EPA 8010/8020, 601/602
 Analyst: C. Medina

ANALYTE	1,1-DCE	TCE	Chlorobenzene	Benzene	Toluene	Chlorobenzene
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QC Batch #: GC1013980VOA32A

Sample No.:	9810611-01					
Date Prepared:	10/12/98	10/12/98	10/12/98	10/12/98	10/12/98	10/12/98
Date Analyzed:	10/12/98	10/12/98	10/12/98	10/12/98	10/12/98	10/12/98
Instrument I.D.#:	gchp32	gchp32	gchp32	gchp32	gchp32	gchp32
Sample Conc., ug/L:	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Conc. Spiked, ug/L:	25	25	25	25	25	25
Matrix Spike, ug/L:	22	23	24	22	22	22
% Recovery:	88	92	96	88	88	88
Matrix Spike Duplicate, ug/L:	21	23	23	21	21	21
% Recovery:	84	92	92	84	84	84
Relative % Difference:	4.7	0.0	4.3	4.7	4.7	4.7
RPD Control Limits:	0-50	0-50	0-50	0-50	0-50	0-50

LCS Batch#: VWLCS101398A

Date Prepared:	10/13/98	10/13/98	10/13/98	10/13/98	10/13/98	10/13/98
Date Analyzed:	10/13/98	10/13/98	10/13/98	10/13/98	10/13/98	10/13/98
Instrument I.D.#:	gchp32	gchp32	gchp32	gchp32	gchp32	gchp32
Conc. Spiked, ug/L:	25	25	25	25	25	25
Recovery, ug/L:	23	24	26	22	22	22
LCS % Recovery:	92	96	104	88	88	88

Percent Recovery Control Limits:

MS/MSD	60-140	60-140	60-140	60-140	60-140	60-140
LCS	65-135	70-130	70-130	70-130	70-130	70-130

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

Please Note:

The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

SEQUOIA ANALYTICAL

Kayvan Kimyai
 Project Manager





Sequoia Analytical

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ATC Associates, Inc.
6666 Owens Drive
Pleasanton, CA 94588
Attention: Al Martinez

Client Project ID: Metalcast

QC Sample Group: 9810784-02-06

Reported: Oct 23, 1998

QUALITY CONTROL DATA REPORT

Matrix: Liquid
Method: EPA 8015A
Analyst: G.WARDLE

ANALYTE Diesel

QC Batch #: GC1013980HBPEXA

LCS ID: BLK101398AS

Date Prepared: 10/13/98
Date Analyzed: 10/13/98
Instrument I.D.#: GCHP4B

Conc. Spiked, ug/L: 1000

Blank Spike, ug/L: 680
% Recovery: 68

Blank
Spike Duplicate, ug/L: 750
% Recovery: 75

Relative % Difference: 9.8

% Recovery
Control Limits: 50-150

RPD Control Limits: 0-50

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

SEQUOIA ANALYTICAL


Kaywan Kimyai
Project Manager

Please Note:

The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.





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ATC Associates, Inc.
 6666 Owens Drive
 Pleasanton, CA 94588
 Attention: Al Martinez

Client Project ID: Metaicast

QC Sample Group: 9810785-07

Reported: Oct 23, 1998

QUALITY CONTROL DATA REPORT

Matrix: Liquid
 Method: EPA 8020
 Analyst: NC

ANALYTE	Benzene	Toluene	Ethylbenzene	Xylenes
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QC Batch #: GC101398BTEX21A

Sample No.:	GW9809H95-8			
Date Prepared:	10/13/98	10/13/98	10/13/98	10/13/98
Date Analyzed:	10/13/98	10/13/98	10/13/98	10/13/98
Instrument I.D.#:	GCHP21	GCHP21	GCHP21	GCHP21
Sample Conc., ug/L:	N.D.	N.D.	N.D.	N.D.
Conc. Spiked, ug/L:	10	10	10	30
Matrix Spike, ug/L:	12	12	12	36
% Recovery:	120	120	120	120
Matrix Spike Duplicate, ug/L:	11	10	10	31
% Recovery:	110	100	100	103
Relative % Difference:	8.7	18	18	15
RPD Control Limits:	0-25	0-25	0-25	0-25

LCS Batch#: GWLCS101398A

Date Prepared:	10/13/98	10/13/98	10/13/98	10/13/98
Date Analyzed:	10/13/98	10/13/98	10/13/98	10/13/98
Instrument I.D.#:	GCHP21	GCHP21	GCHP21	GCHP21
Conc. Spiked, ug/L:	10	10	10	30
LCS Recovery, ug/L:	12	12	12	35
LCS % Recovery:	120	120	120	117

Percent Recovery Control Limits:

MS/MSD	60-140	80-140	60-140	60-140
LCS	70-130	70-130	70-130	70-130

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

SEQUOIA ANALYTICAL


 Kayvan Kimyaji
 Project Manager

Please Note:

The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.





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ATC Associates, Inc.
6666 Owens Drive
Pleasanton, CA 94588
Attention: Al Martinez

Client Project ID: Metalcast

QC Sample Group: 9810784-04

Reported: Oct 23, 1998

QUALITY CONTROL DATA REPORT

Matrix: Liquid
Method: EPA 8020
Analyst: NC

ANALYTE	Benzene	Toluene	Ethylbenzene	Xylenes
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QC Batch #: GC101398BTEX21A

Sample No.: GW9809H95-8

	10/13/98	10/13/98	10/13/98	10/13/98
Date Prepared:	10/13/98	10/13/98	10/13/98	10/13/98
Date Analyzed:	10/13/98	10/13/98	10/13/98	10/13/98
Instrument I.D.#:	GCHP21	GCHP21	GCHP21	GCHP21

Sample Conc., ug/L:	N.D.	N.D.	N.D.	N.D.
Conc. Spiked, ug/L:	10	10	10	30

Matrix Spike, ug/L:	12	12	12	36
% Recovery:	120	120	120	120

Matrix Spike Duplicate, ug/L:	11	10	10	31
% Recovery:	110	100	100	103

Relative % Difference:	8.7	18	18	15
------------------------	-----	----	----	----

RPD Control Limits:	0-25	0-25	0-25	0-25
---------------------	------	------	------	------

LCS Batch#: GWLCS101398A

	10/13/98	10/13/98	10/13/98	10/13/98
Date Prepared:	10/13/98	10/13/98	10/13/98	10/13/98
Date Analyzed:	10/13/98	10/13/98	10/13/98	10/13/98
Instrument I.D.#:	GCHP21	GCHP21	GCHP21	GCHP21

Conc. Spiked, ug/L:	10	10	10	30
---------------------	----	----	----	----

LCS Recovery, ug/L:	12	12	12	35
LCS % Recovery:	120	120	120	117

Percent Recovery Control Limits:

MS/MSD	60-140	60-140	60-140	60-140
LCS	70-130	70-130	70-130	70-130

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

SEQUOIA ANALYTICAL

Kayvan Kimyai
Project Manager

Please Note:

The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.





**Sequoia
Analytical**

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ATC Associates, Inc.
6666 Owens Drive
Pleasanton, CA 94588
Attention: Al Martinez

Client Project ID: Metalcast

QC Sample Group: 9810785-09

Reported: Oct 23, 1998

QUALITY CONTROL DATA REPORT

Matrix: Liquid
Method: EPA 8015
Analyst: NC/GR

ANALYTE Gasoline

QC Batch #: GC101498BTEX17A

Sample No.: GW9809186-1

Date Prepared: 10/14/98

Date Analyzed: 10/14/98

Instrument I.D.#: GCHP17

Sample Conc., ug/L: N.D.
Conc. Spiked, ug/L: 250

Matrix Spike, ug/L: 230
% Recovery: 93

Matrix
Spike Duplicate, ug/L: 240
% Recovery: 98

Relative % Difference: 5.2

RPD Control Limits: 0-25

LCS Batch#: GWLCS101498A

Date Prepared: 10/14/98

Date Analyzed: 10/14/98

Instrument I.D.#: GCHP17

Conc. Spiked, ug/L: 250

LCS Recovery, ug/L: 250
LCS % Recovery: 101

Percent Recovery Control Limits:

MS/MSD 60-140
LCS 70-130

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

SEQUOIA ANALYTICAL


Project Manager

Please Note:

The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.





Sequoia
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ATC Associates, Inc.
3666 Owens Drive
Pleasanton, CA 94588
Attention: Al Martinez

Client Proj. ID: Metalcast

Received: 10/08/98

Lab Proj. ID: 9810784

Reported: 10/21/98

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 53 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

8010 Note:

There was a single, saturated, non-targeted peak for sample 9810784-05 and 9810784-06.

Laboratory project numbers 9810784 and 9810785 represent samples for project metalcast sampled on October 08, 1998.

SEQUOIA ANALYTICAL


Project Manager





Sequoia
Analytical

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ATC Associates, Inc.
3666 Owens Drive
Pleasanton, CA 94588
Attention: Al Martinez

Client Proj. ID: Metalcast
Lab Proj. ID: 9810785

Received: 10/08/98

Reported: 10/21/98

LABORATORY NARRATIVE

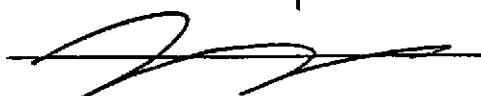
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TPGEMW Note:

Samples 9810785-08 and -09 were analyzed twice. The BTEX analytes were reported from GCHP21 on 10/13/98.

Laboratory project numbers 9810784 and 9810785 represent samples for project metalcast sampled on October 08, 1998.

EQUOIA ANALYTICAL


Project Manager





SEQUOIA ANALYTICAL CHAIN OF CUSTODY

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Company Name: ATC Project Name: METALCAST
 Mailing Address: 6666 OWENS DR Billing Address (if different):
 City: Pleasanton State: CA Zip Code: 94588 **★ LAB FILTER & METALS PRESERVE UPON SAMPLES ARRIVAL**
 Telephone: 925-460-5300 FAX #: 925-463-2557 P.O. #:
 Report To: AL MONTANA Sampler: BOB AZAM QC Data: Level D (Standard) Level C Level B Level A

Turnaround ne: 10 Working Days 3 Working Days 2 - 8 Hours
 7 Working Days 2 Working Days
 5 Working Days 24 Hours

Drinking Water
 Waste Water
 Other GW

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Sequoia's Sample #	Analyses Requested										Comments				
						TPH-G	TPH-B	TPH-D	TPH-M	HVOCs	SVOCs	PCDDs	PCDFs	METALS	OTHER					
1 <u>ATC-4</u>	<u>10-8-98</u> 8:10	<u>water</u>	<u>4</u>	<u>40ml VOA</u>	<u>01</u>	X	X	X	X											
2. ↓	8:10		1	1 Litor Amber		X														
3. ↓	8:10		1	↓					X											
4 <u>ATC-5</u>	8:50		3	40ml VOA	<u>02</u>	X														
5. ↓			3	↓						X										
6. ↓			1	1L plastic							X									<u>NOT PRESERVED</u>
7. ↓			1	1L Amber		X														<u>Preserve upon arrival</u>
8. ↓			1	1L Amber					X											
9. ↓																				
10. ↓																				

Relinquished By: <u>Bob Azam</u>	Date: <u>10-8-98</u>	Time: <u>1800</u>	Received By: <u>KAT #313</u>	Date: <u>10/8</u>	Time: <u>1800</u>
Relinquished By: <u>ADD</u>	Date: <u>08/98</u>	Time: <u>1908</u>	Received By: <u>ULTRA EX</u>	Date:	Time:
Relinquished By:	Date:	Time:	Received By Lab: <u>ADD</u>	Date: <u>10/10/98</u>	Time: <u>1908</u>

Pink - Client
 Yellow - Sequoia
 White - Sequoia ID #



SEQUOIA ANALYTICAL CHAIN OF CUSTODY

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- 1455 McDowell Blvd. North, Suite D • Petaluma, CA 94954 • (707) 792-1865 FAX (707) 792-0342

Company Name: <u>ATC - Associates</u>		Project Name: <u>Metal Cast</u>	
Mailing Address: <u>6666 Owens Dr</u>		Billing Address (if different): <u>Pressure & Filter Samples</u>	
City: <u>Dixon</u>	State: <u>CA</u>	Zip Code: <u>94588</u>	P.O. #: <u>Upon Arrival</u>
Telephone: <u>925-460-5300</u>		FAX #: _____	
Report To: <u>AL Martin</u>	Sampler: <u>Bob Azam</u>		
<input type="checkbox"/> 10 Working Days <input type="checkbox"/> 3 Working Days <input type="checkbox"/> 2 - 8 Hours <input type="checkbox"/> 7 Working Days <input type="checkbox"/> 2 Working Days <input type="checkbox"/> 5 Working Days <input type="checkbox"/> 24 Hours		<input type="checkbox"/> Drinking Water <input type="checkbox"/> Waste Water <input type="checkbox"/> Other	

Turnaround time: 980184/15

Analyses Requested:

	<input checked="" type="checkbox"/> TOX/BTEX	<input checked="" type="checkbox"/> TPH-D	<input checked="" type="checkbox"/> TPH-M	<input checked="" type="checkbox"/> HVOCS	<input checked="" type="checkbox"/> PCBs	<input checked="" type="checkbox"/> RCRA METALS
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Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Sequoia's Sample #	TOX/BTEX	TPH-D	TPH-M	HVOCS	PCBs	RCRA METALS	Comments
1. <u>ATC-7</u>	<u>10/8/98/11:40</u>	<u>Water</u>	<u>3</u>	<u>40mL VOA</u>	<u>03</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
2.			<u>3</u>									
3.			<u>1</u>	<u>1L Plastic</u>								
4.			<u>1</u>	<u>1L Amber</u>			<input checked="" type="checkbox"/>					
5.			<u>1</u>	<u>1L Amber</u>			<input checked="" type="checkbox"/>					
6. <u>ATC-8</u>	<u>12:50</u>		<u>4</u>	<u>40mL VOA</u>	<u>04</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
7.			<u>1</u>	<u>1L Amber</u>			<input checked="" type="checkbox"/>					
8.			<u>1</u>					<input checked="" type="checkbox"/>				
9. <u>ATC-9</u>	<u>14:45</u>		<u>3</u>	<u>40mL VOA</u>	<u>05</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
10.			<u>3</u>									

Relinquished By: <u>Bob Azam</u>	Date: <u>10-8-98</u>	Time: <u>8:00</u>	Received By: <u>[Signature] (ULTRA EX)</u>	Date: <u>10-8-98</u>	Time: <u>18:00</u>
Relinquished By: <u>[Signature] ULTRA EX</u>	Date: <u>11</u>	Time: <u>19:06</u>	Received By: _____	Date: _____	Time: _____
Relinquished By: _____	Date: _____	Time: _____	Received By Lab: <u>[Signature]</u>	Date: <u>10/10/98</u>	Time: <u>19:08</u>

Pink - Client

Yellow - Sequoia

White - Sequoia



SEQUOIA ANALYTICAL CHAIN OF CUSTODY

680 Chesapeake Drive • Redwood City, CA 94063 • (650) 364-9600 FAX (650) 364-9233
 819 Striker Ave., Suite 8 • Sacramento, CA 95834 • (916) 921-9600 FAX (916) 921-0100
 404 N. Wiget Lane • Walnut Creek, CA 94598 • (925) 988-9600 FAX (925) 988-9673
 1455 McDowell Blvd. North, Suite D • Petaluma, CA 94954 • (707) 792-1865 FAX (707) 792-0342

Company Name: ATC Associate			Project Name: Metal Cast		
Mailing Address:			Billing Address (if different):		
City:	State:	Zip Code:	* Preserve & Filter Metals		
Telephone: 925-460-5300		FAX #:	P.O. #: Samples upon arrival		
Report To: AL MARTINEZ	Sampler: Bob Azem		QC Data: <input type="checkbox"/> Level D (Standard) <input type="checkbox"/> Level C <input type="checkbox"/> Level B <input type="checkbox"/> Level A		

Turnaround time: 10 Working Days 3 Working Days 2 - 8 Hours
 7 Working Days 2 Working Days
 5 Working Days 24 Hours

9/8/07 84/15

Drinking Water
 Waste Water
 Other

Analyses Requested

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Sequoia's Sample #	TPH-D	TPH-M	TPH-S	TPH-L	TPH-H	TPH-ULTRA	TPH-REPERMITS	Comments
1. ATC-9	10-8-98 14:15	water	1	1L plastic	0705								preserve & filter upon arrival
2.			1	1L Amber									
3.			1	1L Amber									
4. ATC-3	15:10		3	40ML VOA'S HCL	0706	X							
5.	17:00		3	1L Amber									
6.	15:10		1	1L Amber		X							
7.	15:10		1	1L Amber			X						
8.	17:00		1	1L plastic									preserve & filter upon arrival
9. ATC-1	15:50		3	40ML VOA'S (HCL)	0707	X							
10.			3	1L Amber									

Relinquished By: Bob Azem	Date: 10/8	Time: 1800	Received By: WST (ULTRA EX)	Date: 10-8-98	Time: 1800
Relinquished By: [Signature]	Date: 10/8	Time: 1908	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By Lab: [Signature]	Date: 10/8/98	Time: 1908

Pink - Client
 Yellow - Sequoia
 White - Sequoia



SEQUOIA ANALYTICAL CHAIN OF CUSTODY

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 1455 McDowell Blvd. North, Suite D • Petaluma, CA 94954 • (707) 792-1865 FAX (707) 792-0342

Company Name: ATC Associates Project Name: Metal Cast
 Mailing Address: 6666 Owens St Billing Address (if different):
 City: Pleasanton State: CA Zip Code:
 Telephone: 925-460-5300 FAX #:
 Report To: Al Martinez Sampler: Bob Brown P.O. #:
 QC Data: Level D (Standard) Level C Level B Level A

Turnaround 10 Working Days 3 Working Days 2 - 8 Hours
 7 Working Days 2 Working Days
 5 Working Days 24 Hours

Drinking Water
 Waste Water
 Other
 Analyses Requested:

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Sequoia's Sample #	TPH-TEXT	TPH-MIBE	TPH-D	TPH-M	UVCS 2010	PCC/METALS	Comments
* 1. ATC-1	10-8-98/1550	Water	1	1L plastic	980108					X		Preserved Filter upon Arrival
2.			1	1L Amber		X						
3.			1	1L Amber			X					
4. ATC-2	1630	tom VORS (UL)	3		980108	X						
5.			3	1L Amber				X		X		Preserved Filter upon Arrival
6.			1	1L Amber		X						
7.			1	1L Amber			X					
8.			1					X				
9.												
10.												

Relinquished By: Bob Brown Date: 10-8-98 Time: 1800 Received By: Mike (ULTRA EX) Date: 10-8-98 Time: 1800
 Relinquished By: AUST Date: 10/8 Time: 1908 Received By: Date: Time:
 Relinquished By: Date: Time: Received By Lab: KEPZ Date: 10/8/98 Time: 19:08

Pink - Client
 Yellow - Sequoia
 White - Sequoia

... of ... TRP ... 4 ...



SEQUOIA ANALYTICAL CHAIN OF CUSTODY

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 1455 McDowell Blvd. North, Suite D • Petaluma, CA 94954 • (707) 792-1865 FAX (707) 792-0342

Company Name: ATC ASSOCIATES		Project Name: METAL CAST	
Mailing Address: 6666 OWENS DR.		Billing Address (if different): SAME	
City: PLEASANTON	State: CA	Zip Code: 94588	
Telephone: (925) 460-5300		FAX #: (925) 463-2559	
Report To: JIM LEHRMAN		Sampler: JEFFREY D. SALA	
Turnaround <input checked="" type="checkbox"/> 10 Working Days		P.O. #: 89775,0030 T3	
<input type="checkbox"/> 3 Working Days <input type="checkbox"/> 7 Working Days <input type="checkbox"/> 2 Working Days <input type="checkbox"/> 5 Working Days <input type="checkbox"/> 24 Hours		QC Data: <input checked="" type="checkbox"/> Level D (Standard) <input type="checkbox"/> Level C <input type="checkbox"/> Level B <input type="checkbox"/> Level A	

Turnaround 10 Working Days 3 Working Days 2 - 8 Hours
 7 Working Days 2 Working Days
 5 Working Days 24 Hours

Drinking Water
 Waste Water
 Other

Analyses Requested: **TPH-5 (BTEX), MTBE (B15/B20), H VOC'S (BOP), TPH-D (BOP), TPH-M (BOP), PCRA METALS**

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Sequoia's Sample #	TPH-5 (BTEX)	MTBE (B15/B20)	H VOC'S (BOP)	TPH-D (BOP)	TPH-M (BOP)	PCRA METALS	Comments
1. WELL - 1	10/8/98 1327	Water	3	VOC'S	10 #01	X	X					
2.			3	VOC'S	09			X				
3.			1	AMBER LIQUOR				X				
4.			1	plastic LIQUOR					X			
5.			2	plastic LIQUOR						X		Filter & Preserve For METALS @ AT Lab
6.												
7.												
8.												
9.												
10.												

Relinquished By: Jeffrey D. Sala	Date: 10/8/98	Time: 1430	Received By: Bob Azam	Date: 10.8.98	Time: 1430
Relinquished By: Bob Azam	Date: 10.8.98	Time:	Received By: ULTRAEX	Date: 10.8.98	Time: 1800
Relinquished By: ATC	Date: 10/8	Time: 1908	Received By Lab: L-EPZ	Date: 10/8/98	Time: 19:08

Pink - Client

Yellow - Sequoia

White - Sequoia