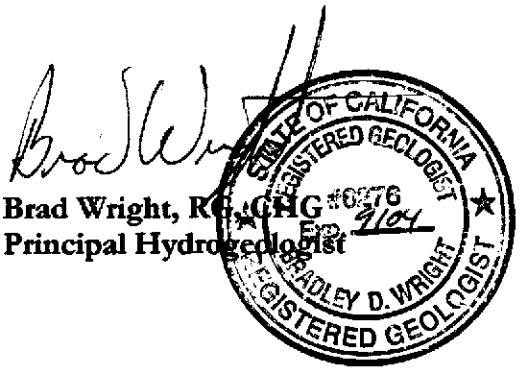
ENCLOSURE 1

SUBSURFACE INVESTIGATION REPORT FOR THE AC TRANSIT 1177 47TH STREET FACILITY EMERYVILLE CALIFORNIA

Prepared For:
Ms. Suzanne Patton
AC Transit-Environmental
10626 E. 14th Street
Oakland, California 94603

Prepared By:
Cameron-Cole LLC
101 West Atlantic Blvd.
Alameda, California 94501

May 2003



Brad Wright, RG, CHG #6276
Principal Hydrogeologist

Andrew Wyckoff
Geologist

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Introduction

On behalf of AC Transit, Cameron-Cole has prepared this report to present the results of a subsurface investigation performed at the AC Transit facility located at 1177 47th Street in Emeryville, California (the site)(Figure 1). On November 6, 2002, AC Transit submitted a Notification of Release to Groundwater to the Alameda County Health Division of Environmental Protection Department of Environmental Health (Alameda County). During third quarter 2002 groundwater monitoring conducted at the site, an approximate seven-foot free phase product layer was measured in monitor well MW-13 (Figure 2). This was the first measurable product layer recorded in monitor well MW-13. Soon thereafter, AC Transit conducted tests on the hydraulic lift system used in the Tire Shop building located near monitor well MW-13 (Figure 3). This testing confirmed that one of the hydraulic lifts had leaked and the faulty lift was immediately taken out of service.

On November 13, 2002, Cameron-Cole implemented free product removal from monitor well MW-13. Initially, product layer removal consisted of pumping the free phase layer from the well on a daily basis. By November 20, 2002 the layer had been reduced to a sheen (< 0.01 feet). On November 22, 2002 overpurging of the well was initiated in an attempt to depress the water table in the vicinity of the well.

In January 2003, the document "Workplan for Subsurface Investigation at the AC Transit 1177 47th Street Facility Emeryville, California" (workplan) was submitted to Alameda County. The workplan detailed a scope of work designed to further define the extent of the hydraulic oil in the vicinity of the Tire Building. This report presents the findings of the investigation generated from the January workplan.

Subsurface Investigation

Monitor well MW-13, which contained the seven-foot free phase product layer, is located along the western property line of the site and monitors groundwater downgradient of the facility.

Figure 2 shows the location of the existing site monitor well network and the groundwater potentiometric surface contours from the first quarter 2003 monitoring event. During this subsurface investigation five borings (SB-1 through SB-5) were located in the vicinity of the Tire Building (Figure 3). At the request of Alameda County, a sixth boring (SB-6) was located downgradient of a 1,000-gallons underground storage tank (UST) used by the facility's emergency generator. All borings were installed for purposes of collecting grab groundwater samples and to visually inspect for the presence of free phase product.

Boring Installation

Prior to mobilizing equipment to the site, the following activities were completed:

- The site specific health and safety plan was updated.
- Underground Service Alert (USA) was notified of impending activities. Additionally, a professional underground utility locator cleared each boring location.
- Drilling permits were obtained from Alameda County Public Works Agency (ACPWA) and City of Emeryville Encroachment permit was obtained for borings located along Doyle Avenue (Appendix A).

The borings were installed on February 18, 2003 using Geoprobe™ push technology coring equipment. During boring advancement, soil cores were continuously collected in clear acetate sleeves, which allowed the field geologist to describe the soil lithology according to the Unified Soil Classification System. The lithologic logs for each boring are presented in Appendix B.

Prior to sample collection, a disposable bailer was lowered to the top of the water table and allowed to fill with groundwater. The bailer sample was visually inspected to assess if a hydrocarbon sheen or measurable layer was present. Grab groundwater sampling involved temporarily placing ¾-inch polyvinyl chloride (PVC) well screen and casing to the total depth of the borehole. Groundwater samples were collected using a peristaltic pump. Groundwater was transferred to laboratory supplied containers and a unique sample identification number was assigned to each container. The sample identification number was documented on the chain-of-

custody form. Upon completion of sample collection, each borehole was backfilled with neat cement and topped with appropriate material to match the surrounding ground surface.

Reusable equipment was thoroughly decontaminated between boreholes. Soil cuttings and water generated during sampling was placed in containers for storage and disposal in accordance with local, state and federal regulations.

Laboratory Analysis

Grab groundwater samples were submitted to Entech Analytical Labs for analysis by USEPA Methods 8015 modified for extractable fuel scan with silica gel cleanup and gasoline.

Investigation Results

Boring SB-5, located inside the Tire Building, was not completed because the drilling equipment was unable to penetrate beyond a depth of four to five feet. Three separate locations were attempted inside the Tire Building and each location encountered refusal at the four to five foot depth. There was no visual evidence of sheen or free phase hydrocarbons detected in borings SB-1 through SB-3 and SB-6. Free phase hydrocarbons were detected in boring SB-4, which was installed immediately downgradient of monitor well MW-13. Due to the presence of the free phase hydrocarbons, a grab groundwater sample was not collected from SB-4.

Lithology

The lithology encountered during the installation of borings SB-1 through SB-4 and SB-6, is consistent with that encountered during the installation of monitor wells MW-12 and MW-13, which are located in the vicinity of this investigation (Cameron-Cole, 2001). The site is underlain by silty clay to depths of three to six feet below ground surface (bgs), where a thin clayey to silty

sand layer is commonly encountered. The first sand layer has been described as slightly moist at depths less than six feet bgs and very moist to saturated below six feet bgs. This sand layer is underlain by silty clay to depths of 14 to 16 feet bgs, which consistently exhibits a strong hydrocarbon odor at a depth interval of seven to 8.5 feet bgs. Very moist to saturated conditions are encountered below the silty clay layer at depths of 16 to 20 feet bgs in more transmissive clayey sand to silty gravel layers. This more transmissive material was not observed in boring SB-3, even though a grab groundwater sample was successfully collected, suggesting that thin sand lenses are present within the predominantly clayey material.

As requested by Alameda County, a geologic cross-section incorporating lithologic data from monitor wells installed across the site is presented as Figure 4. The trace of cross-section A-A' has been oriented to follow the general direction of groundwater flow observed across the site. The cross-section presents a lithologic model similar to that observed in borings SB-1 through SB-6. Underlying the engineering fill, the lithology consists primarily of silty clays with discontinuous sand and gravel layers. A continuous core of the lithology was not collected in the monitor wells installed in 1987 and 1989. In these wells, approximately 1.5 feet of core was collected every five feet during well installation. Therefore, sand and gravel layers may be present in these wells at intervals not logged by the onsite geologist at the time of their installation.

Laboratory Results

Certified analytical reports for the grab groundwater samples analyzed during this investigation are presented in Appendix C and the results are summarized in Table 1. As stated previously, free phase hydrocarbons were visually observed in boring SB-4 (installed downgradient of monitor well MW-13); therefore, grab groundwater samples were not collected from this boring. Gasoline was detected at 630 parts per billion (ppb) in the grab groundwater sample collected from boring SB-6. The emergency generator UST stores diesel, not gasoline, suggesting that it has not impacted groundwater in its vicinity. The low level gasoline concentration is most likely the result of migration from previously replaced gasoline storage USTs located upgradient of SB-6.

As shown in Table 1, concentrations of TPH as diesel and motor oil were detected in the grab groundwater sample collected from SB-3 at concentrations of 9,500 and 34,000 ppb, respectively. The motor oil was quantitated from a carbon chain range of C18 through C40. This range is very similar to the range used to define concentrations of hydraulic oil (C11 through C40), suggesting that the motor oil concentration reported in SB-3 may be hydraulic oil. Concentrations above laboratory reporting limits detected in the grab groundwater samples collected from borings SB-1 and SB-2 were limited to stoddard solvents at 17,000 ppb and 1,400 ppb, respectively. Two solvent USTs were removed from an upgradient location at the facility in December 1999, however water samples collected as part of the UST closure indicated that only low levels of stoddard solvent (120 ppb) were present in groundwater.

Conclusions/Recommendations

The following conclusions are based on data collected during this and past investigations. The proposed recommendations are based on the conclusions presented herein and standard regulatory agency actions taken on similar sites.

As discussed earlier, a seven-foot free product layer was measured in monitor well MW-13 during third quarter 2002 groundwater monitoring. The product was determined to be hydraulic oil and the source was from a hydraulic lift located in the Tire Building. The hydraulic lift was subsequently taken out of service and all lines were drained. Analytical results and field observation from grab groundwater samples collected in the vicinity of the Tire Building reveal that free product has migrated approximately 50 feet downgradient of MW-13. Concentration of TPH in groundwater at SB-3, located approximately 20 feet cross-gradient of MW-13, were reported at 34,000 ppb. Grab groundwater locations located approximately 85 and 135 feet cross-gradient of MW-13 were below reporting limits for TPH as motor and hydraulic oil, but they did have detectable concentrations of stoddard solvent. The results of analysis of the grab groundwater sample collected from SB-6, located downgradient of the facility's emergency generator UST, did not detect concentration of diesel over laboratory reporting limits.

The extent of free phase hydrocarbon associated with the hydraulic lift leak has not been fully defined. The workplan for this investigation presented three contingent borings locations (Figure

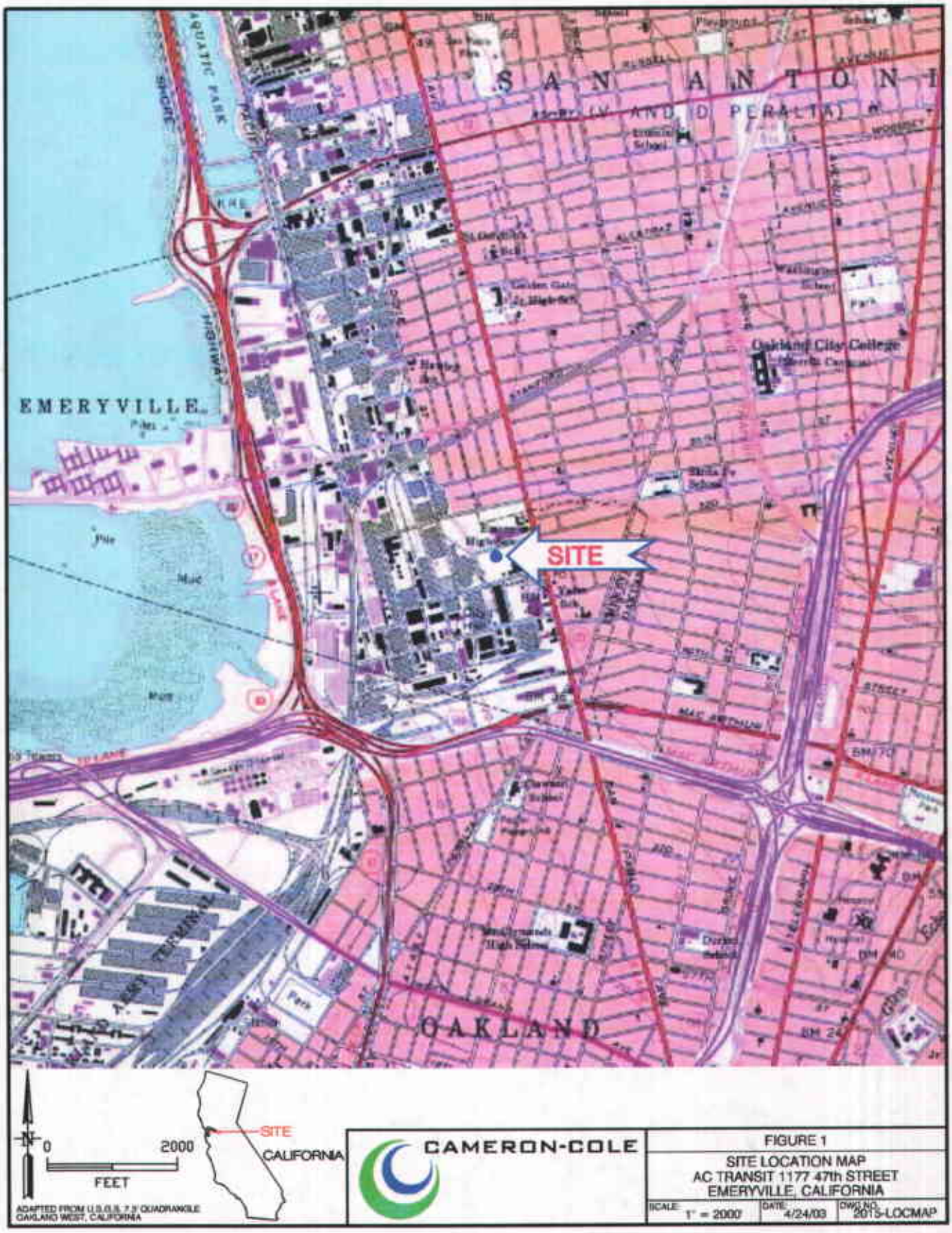
3) on the west side of Doyle Street which could be installed if further downgradient definition is deemed appropriate. Based on the hydrocarbon concentrations observed in borings SB-3 and SB-4, and the known groundwater flow direction, the two northern most contingent boring locations are appropriately located to provide the needed additional definition of the extent of hydraulic oil. One additional boring, located along 47th Street, would also be installed to further define hydraulic oil in the downgradient direction. Grab groundwater sample analyses from these three contingent borings would also be used to further define the extent of stoddard solvent detected in borings SB-1 and SB-2.

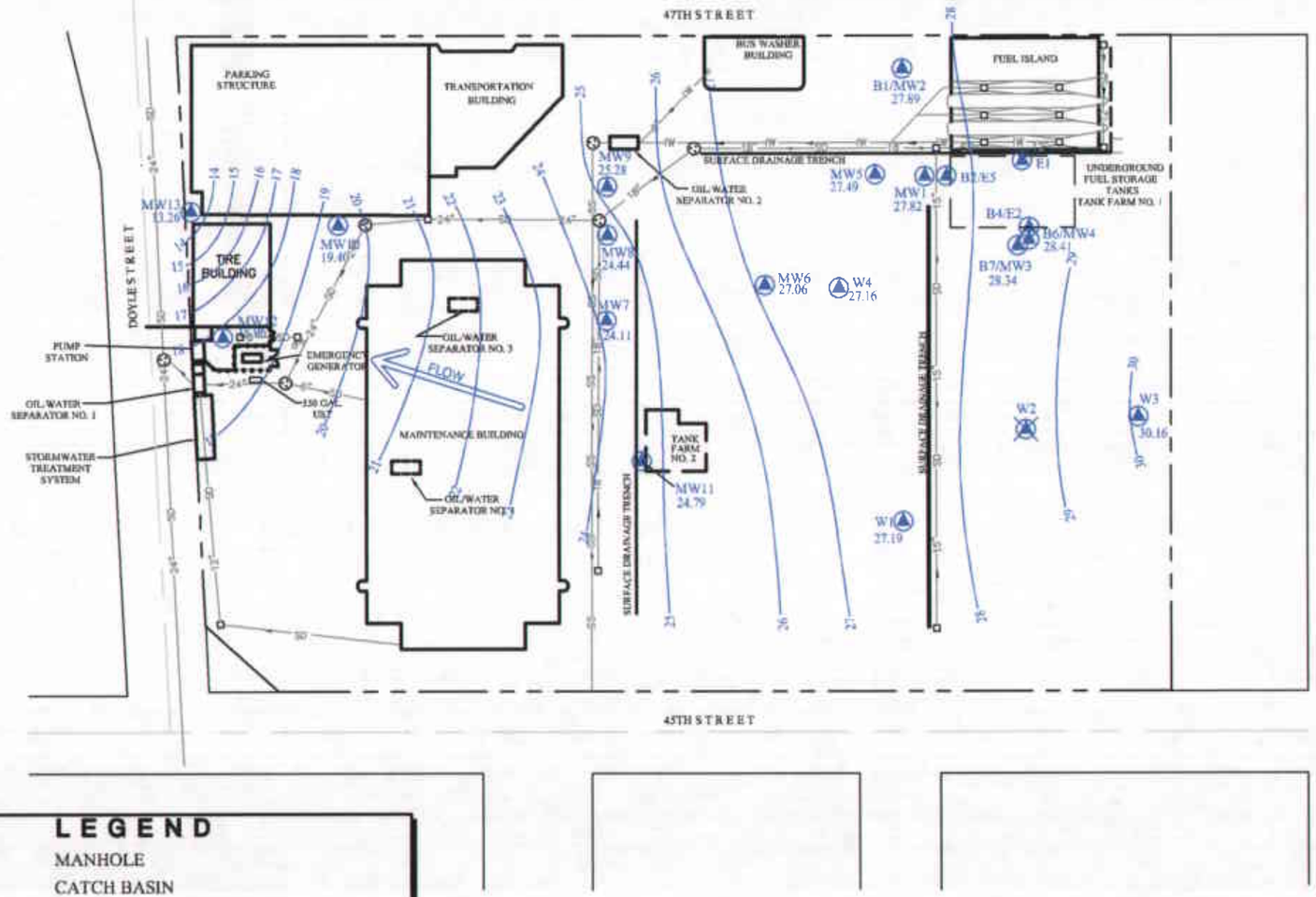
Assuming that the analytical results from the additional grab groundwater samples collected from the three contingent boring locations discussed in the previous paragraph provide sufficient definition on the extent of TPH, approximately two locations will be selected for the installation of groundwater monitor wells. The monitor wells will be included in the facility's current quarterly groundwater monitoring program, which includes analyses to assess natural degradation processes. Additionally, once the extent of the TPH is further defined, remedial action options, which may enhance natural degradation processes, will be evaluated.

References

Cameron-Cole 2002, Groundwater Monitoring Report for the AC Transit Facility Located at 1177 47th Street, Emeryville, California, October 2002

Cameron-Cole 2003, Workplan for Subsurface Investigation at the AC Transit 1177 47th Street Facility, Emeryville California, January 2003


SAN ANTONIO
EMERYVILLE
SITE
Oakland City College
OAKLAND
SITE
CALIFORNIA
0
2000
FEET
ADAPTED FROM U.S.G.S. 7.5' QUADRANGLE
OAKLAND WEST, CALIFORNIA
CAMERON-COLE
FIGURE 1
SITE LOCATION MAP
AC TRANSIT 1177 47th STREET
EMERYVILLE, CALIFORNIA
SCALE: 1" = 2000'
DATE: 4/24/03
DWG NO: 2015-LOCMAP



LEGEND

- MANHOLE
- CATCH BASIN
- MONITORING WELL
- ABANDONED MONITORING WELL
- 27.19 POTENTIOMETRIC SURFACE ELEVATION
- POTENTIOMETRIC SURFACE CONTOUR
- SD STORM DRAIN PIPELINE
- SS SANITARY SEWER PIPELINE
- IW INDUSTRIAL WASTE PIPELINE
- CHAIN LINK FENCE

FIGURE 2

BY	DATE
DRAWN WRB	1/9/03
CHECKED	
APPROVED	
APPROVED	
APPROVED	

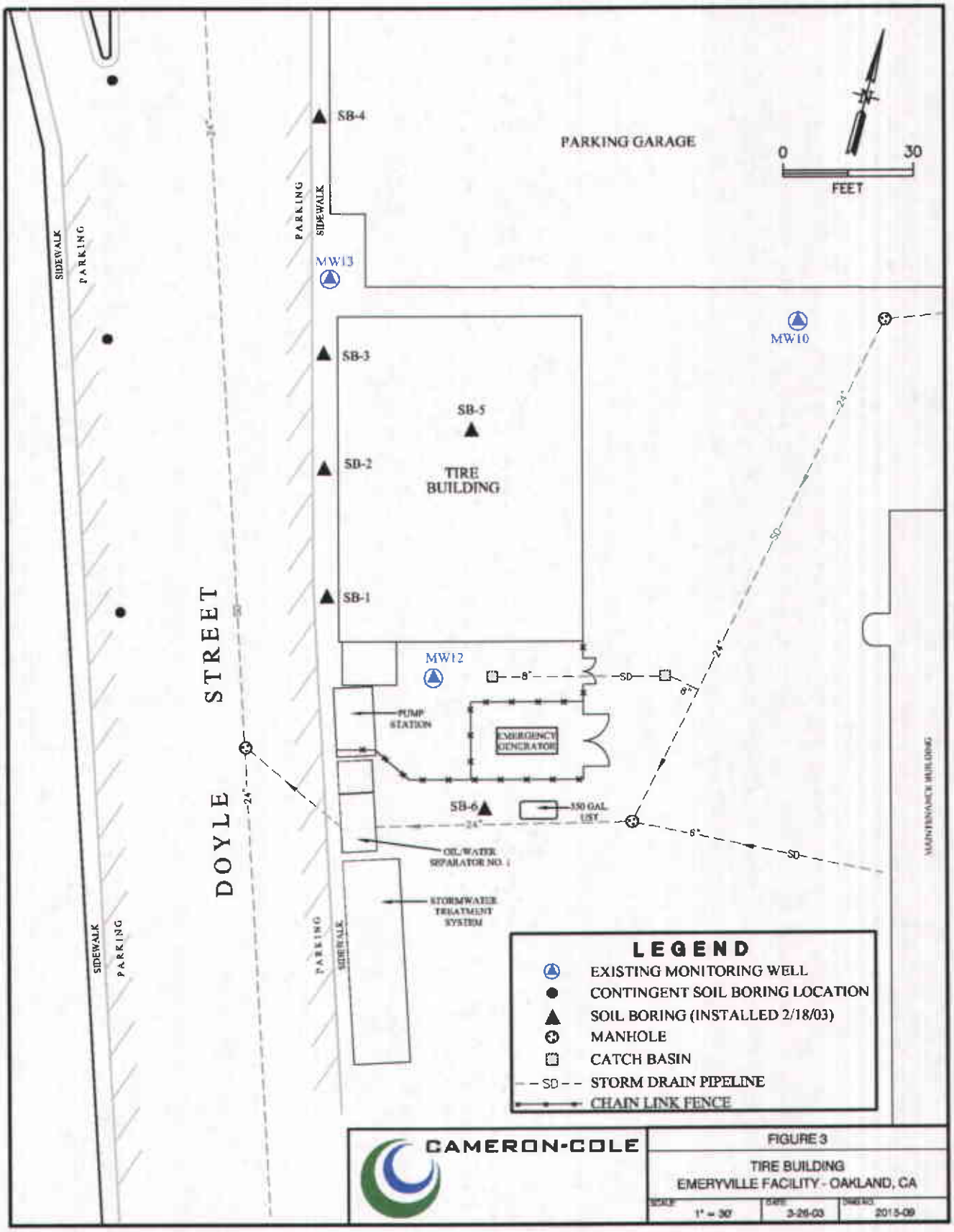
CAMERON-COLE

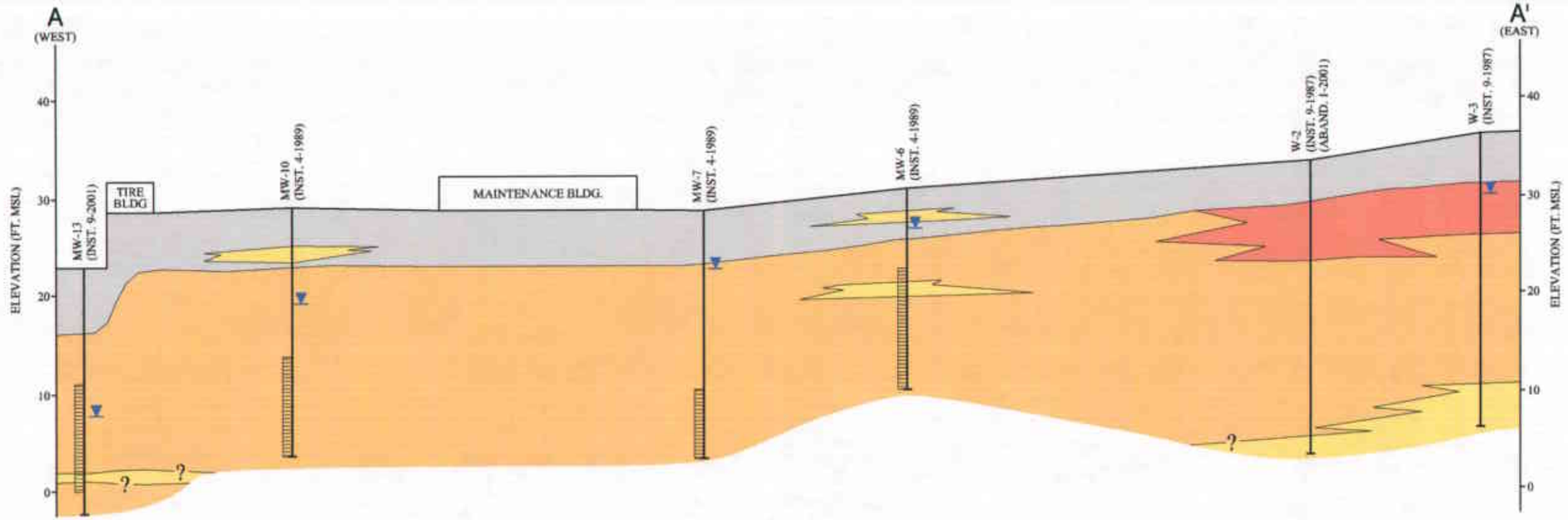
EMERYVILLE FACILITY - OAKLAND, CALIFORNIA

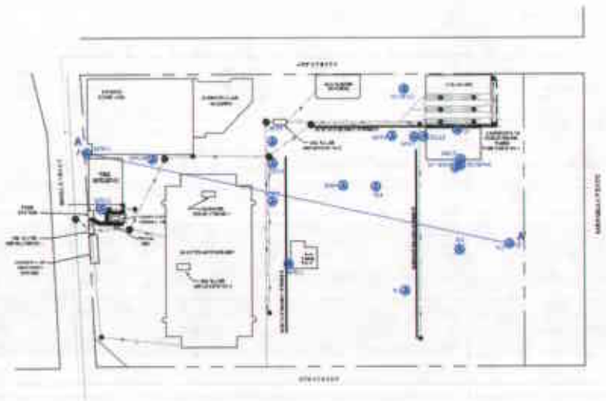
AC TRANSIT - POTENTIOMETRIC SURFACE MAP
OCTOBER 30, 2000

SCALE: 1" = 100'

DWG. NO.: 2015-08


SB-4
PARKING GARAGE
0
30
FEET
SIDEWALK
PARKING
PARKING
SIDEWALK
MW13
MW10
SB-3
SB-5
SB-2
TIRE BUILDING
SB-1
MW12
8"
SD
PUMP STATION
EMERGENCY GENERATOR
24"
DOYLE STREET
SB-6
550 GAL UST
6"
OIL/WATER SEPARATOR NO. 1
STORMWATER TREATMENT SYSTEM
SIDEWALK
PARKING
PARKING
SIDEWALK
MAINTENANCE BUILDING
LEGEND
EXISTING MONITORING WELL
CONTINGENT SOIL BORING LOCATION
SOIL BORING (INSTALLED 2/18/03)
MANHOLE
CATCH BASIN
SD STORM DRAIN PIPELINE
CHAIN LINK FENCE
CAMERON-COLE
FIGURE 3
TIRE BUILDING
EMERYVILLE FACILITY - OAKLAND, CA
SCALE
1" = 30'
DATE
3-26-03
DRAWING NO.
2015-09





SECTION LOCATION KEY

LEGEND

- FILL
- CLAY - CL/CH
- SILT - ML
- SAND/GRAVEL - SM, SP, SW, GM, GP
- GROUNDWATER LEVEL (10/20/02)
- MONITORING WELL SCREEN INTERVAL

0 60
FEET

	BY	DATE
DRAWN	CJJ	3-27-03
CHECKED		
APPROVED		
APPROVED		
APPROVED		

CAMERON-COLE

FIGURE 4

GEOLOGIC CROSS SECTION A - A'
AC TRANSIT, 1177 47th STREET - EMERYVILLE, CA

SCALE: AS NOTED

DWG. NO.: 2015-11

Table 1
Grab Groundwater Analytical Results
AC Transit 1177 47TH Street
Emeryville, California

Soil Boring	Date	TPH-ss	TPH-d	TPH-mo	TPH-g
SB-1	2/18/2003	17000	<50	<250	<50
SB-2	2/18/2003	1400	<50	<250	<50
SB-3	2/18/2003	<50	9500	34000	<50
SB-6	2/18/2003	<50	<50	<250	630

Notes:
All concnetrations in micrograms per liter (ug/L)
TPH-ss = total petroleum hydrocarbon as stoddard solvent
TPH-d = total petroleum hydrocarbon as diesel
TPH-mo = total petroleum hydrocarbon as motor oil
TPH-g = total petroleum hydrocarbon as gasoline

ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION
399 ELMHURST ST. HAYWARD CA 94544-1395
PHONE (510) 670-6633 James Yoo
FAX (510)782-1939

APPLICANTS: PLEASE ATTACH A SITE MAP FOR ALL DRILLING PERMIT APPLICATIONS
DESTRUCTION OF WELLS OVER 45 FEET REQUIRES A SEPARATE PERMIT APPLICATION

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT 1172 47th St.
Emeryville, CA

CLIENT
Name AC Transit
Address 1600 Franklin St. Phone
City Oakland CA Zip 94603

APPLICANT
Name Cameron-Cole
Andrew [illegible] Fax (510) 337-3994
Address 101 W. Atlantic Ave Phone (510) 748-3557
City Alameda CA Zip 94501

TYPE OF PROJECT
Well Construction ☐ Geotechnical Investigation
Cathodic Protection ☐ General ☐
Water Supply ☐ Contamination ☒
Monitoring ☐ Well Destruction ☐

PROPOSED WATER SUPPLY WELL USE
New Domestic ☐ Replacement Domestic ☐
Municipal ☐ Irrigation ☐
Industrial ☐ Other ______ ☐

DRILLING METHOD:
Mud Rotary ☐ Air Rotary ☐ Auger ☐
Cable ☐ Other ☒ Direct Push

DRILLER'S NAME Vironex

DRILLER'S LICENSE NO. 705927

WELL PROJECTS
Drill Hole Diameter ______ in. Maximum
Casing Diameter ______ in. Depth ______ ft.
Surface Seal Depth ______ ft. Owner's Well Number ______

GEOTECHNICAL PROJECTS
Number of Borings 6 Maximum
Hole Diameter 2 in. Depth 16 ft.

STARTING DATE 2/15/03

COMPLETION DATE 2/15/03

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

APPLICANT'S SIGNATURE [signature] DATE 2/11/03

PLEASE PRINT NAME Brad Wright

Rev. 5-11-02

FOR OFFICE USE

PERMIT NUMBER W03-126
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 original Department of Water Resources-Well Completion Report.
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 50 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 by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings.

E. CATHODIC
Fill hole anode zone with concrete placed by tremie.

F. WELL DESTRUCTION
Send a map of work site. A separate permit is required for wells deeper than 45 feet.

G. SPECIAL CONDITIONS

NOTE: One application must be submitted for each well or well destruction. Multiple borings on one application are acceptable for geotechnical and contamination investigations.

APPROVED [signature] DATE 2-13-03

City of Emeryville, Department of Public Works
ENCROACHMENT PERMIT
(rev.9/22/00)

FOR CITY USE ONLY	
Permit No. _____ Date _____	
Permit Admin. Fee	
Est. Inspection Time _____	
Permit Insp. Deposit (2 hr. min.)	
Required Security Deposit:	
☐ $1,000 cash	
☐ $10,000 Bond	
Bond No. _____	
☐ 100% Perf. Bond	
Bond Value _____	
Bond No. _____	
Total Payment Required	
Received: _____ Date	
Receipt No. _____	

APPLICANT Cameron-Cole for AC Transit
CONTACT PERSON Brad Wright
ADDRESS 101 W. Atlantic Ave, Bldg B, Alameda CA
PHONE (510) 769-3563 FAX (510) 337-3994

OWNER/DEVELOPER OF FACILITIES AC Transit
ADDRESS 10626 E. 14th St, Oakland CA
PHONE (510) 577-8869 FAX (510) 577-8859
☒ yes ☐ no CURRENT CITY BUSINESS LICENSE ON FILE

CONTRACTOR DOING WORK Vironex
CONTACT PERSON Trisha White
ADDRESS 2110 Adams Ave, San Leandro CA 94577
PHONE (510) 568-7676 FAX (510) 568-7679
LICENSE NO. 705927 CLASS C57
☐ yes ☒ no CURRENT CITY BUSINESS LICENSE ON FILE
☐ yes ☐ no PROVIDE PROOF OF INSURANCE

EST. START DATE 2/18/03 EST. COMPLETION DATE 2/19/03 EST. COST IN CITY R/W $1,500.00

LOCATION OF WORK 1177 47th Street, Emeryville CA

FULLY DESCRIBE PROPOSED WORK WITHIN CITY RIGHT-OF-WAY *(additional space on reverse if needed)*:
Attach 3 complete sets of plans, if applicable.

Install four two-inch diameter borings to approximately 16 feet within sidewalk along east side of Doyle St. adjacent to subject Property. Boring will be backfilled and capped with concrete on completion.

I hereby agree to protect and indemnify the City of Emeryville and hold it harmless in every way from all claims or suits for injuries damage to persons or property as set forth in the Standard Provisions. I agree not to begin construction until all materials to be used are on hand, to perform all work in accordance with the plans submitted (if any), the Standard Provisions to Encroachment Permits and all applicable Special Conditions of Approval, and to pay all inspection and engineering costs in addition to those paid at the time of issuance of this permit. I further agree to complete the work to the satisfaction of the City Engineer and if for any reason the City of Emeryville is required to complete this work, I will pay all costs for such work.

Applicant Signature Brad Wright Date 2/6/03

FOR CITY USE ONLY

The following documents are attached and incorporated into this permit and have been given to the applicant:

☐ yes ☐ no Standard Provisions to Encroachment Permit
☐ yes ☐ no Special Conditions of Approval
☐ yes ☐ no City Standard Details *(List Details)* _____
☐ yes ☐ no Handout: Urban Runoff BMP's
☐ yes ☐ no Other _____

Remarks: _____

☐ yes ☐ no 48 HOUR NOTICE PRIOR TO START OF WORK.
☐ yes ☐ no PROVIDE CONSTRUCTION SCHEDULE 7 DAYS PRIOR TO START OF WORK.
☐ yes ☒ no AS-BUILT PLANS REQUIRED.
☐ yes ☐ no PLEASE CALL FOR INSPECTION AT 510-596-4333.
☐ yes ☐ no PLEASE NOTIFY POLICE (510-596-1700) AND FIRE (510-596-3750) 24 HOURS IN ADVANCE.

This permit is void unless the work is completed before _____, 20____.
This permit is to be strictly construed and no other work than is specifically mentioned is hereby authorized.

APPROVED: _____ TITLE _____ DATE _____

FINAL INSPECTION APPROVED: _____ TITLE _____ DATE _____
After final inspection is approved, please contact the Public Works Department at 510-596-4330 to determine final cost, and for final payment or reimbursement of deposit.

CAMERON-COLE

SOIL BORING LOG AND WELL COMPLETION DATA

BORING NO.: **SB-1**

CLIENT/PROJECT: AC TRANSIT / EMERYVILLE, CA	DRILLER: VIRONEX
DRILLING RIG TYPE: GEOPROBE	DRILL METHOD: DIRECT PUSH
DATE STARTED: 2/18/03	DATE COMPLETED: 2/18/03
PROJECT NUMBER: 2017	
TOTAL DEPTH (FT.): 20	WATER DEPTH (FT.): 5.35
LOGGED BY: ANDREW WYCKOFF	

WELL COMPLETION	DEPTH FEET	DESCRIPTION	USCS CODE GRAPHIC	OVM PPM	SAMPLE NUMBER	SAMPLE RESULTS
2" DIAMETER BOREHOLE BACKFILLED WITH PORTLAND CEMENT	0	0 - 3 ft. Silty Clay; strong brown (7.5YR4/6); medium stiff; dry	CL		SB-1	
		3 - 5 ft. Silty Sand; brown (7.5YR4/3); sub-angular gravels 30%; slightly moist	SM			
	5 ▼	5 - 7 ft. Clayey Sand; pale brown (10YR6/3); soft; saturated	SC			
		7 - 8.5 ft. Silty Clay; dark grey (10YR4/1); medium stiff; strong hydrocarbon odor	CL			
	10	8.5 - 11 ft. Silty Clay; grey (10YR5/1); high plasticity; white mottles; dry	CH			
		11 - 13 ft. Sandy Clay; greyish brown (10YR5/2); medium stiff; slightly moist	CL			
	15	13 - 16 ft. Silty Clay with gravel; pale brown (10YR6/3); firm; medium plasticity; black mottles; gravels ~20%; dry	CL			
		16- 20 ft. Clayey Gravel; brownish yellow (10YR6/8); firm; gravels ~40%; moist	GC			
	20	End of borehole				
	25					

2017-01

CAMERON-COLE

SOIL BORING LOG AND WELL COMPLETION DATA

BORING NO.: **SB-2**

CLIENT/PROJECT: AC TRANSIT / EMERYVILLE, CA	DRILLER: VIRONEX
DRILLING RIG TYPE: GEOPROBE	DRILL METHOD: DIRECT PUSH
DATE STARTED: 2/18/03	DATE COMPLETED: 2/18/03
PROJECT NUMBER: 2017	
TOTAL DEPTH (FT.): 20	WATER DEPTH (FT.): 5.74
LOGGED BY: ANDREW WYCKOFF	

WELL COMPLETION	DEPTH FEET	DESCRIPTION	USCS CODE GRAPHIC	OVM PPM	SAMPLE NUMBER	SAMPLE RESULTS
2" DIAMETER BOREHOLE; BACKFILLED WITH PORTLAND CEMENT	0	0 - 1.5 ft. Pea Gravel	FILL			
		1.5 - 5 ft. Silty Clay with Gravel; strong brown (7.5YR4/6) sub-angular gravels ~20%; dry	CL			
	5	5 - 6 ft. Silty Sand; slightly moist	SM			
		6 - 7 ft. Silty Clay; dark yellowish brown (10YR4/6); soft, medium plasticity; slightly moist	CL			
		7 - 8 ft. Silty Clay; olive grey (5Y4/2); soft; strong hydrocarbon odor	CL			
		8 - 10 ft. Sandy Clay with gravel; brown (10YR4/3); soft; fine grained Sand; 20% sub-angular gravel; slightly moist	CL		SB-2	
	10	10 - 13 ft. Silty Clay; very dark grey (10YR3/6); medium stiff; slightly moist	CL			
		13 - 16 ft. Silty Clay; greyish brown (10YR5/2); low plasticity; 5% gravels; dry	CL			
	15	16 - 20 ft. Clayey Sand; dark greyish brown (10YR4/2); saturated at 16'	SC			
	20	End of borehole				
	25					

2017-02

CAMERON-COLE

SOIL BORING LOG AND WELL COMPLETION DATA

BORING NO.: **SB-3**

CLIENT/PROJECT: AC TRANSIT / EMERYVILLE, CA	DRILLER: VIRONEX
DRILLING RIG TYPE: GEOPROBE	DRILL METHOD: DIRECT PUSH
DATE STARTED: 2/18/03	DATE COMPLETED: 2/18/03
PROJECT NUMBER: 2017	
TOTAL DEPTH (FT.): 20	WATER DEPTH (FT.): 17.97
LOGGED BY: ANDREW WYCKOFF	

WELL COMPLETION	DEPTH FEET	DESCRIPTION	USCS CODE GRAPHIC	OVM PPM	SAMPLE NUMBER	SAMPLE RESULTS
2" DIAMETER BOREHOLE; BACKFILLED WITH PORTLAND CEMENT	0	0 - 3 ft. Silty Clay; strong brown (7.5YR4/6); medium stiff; sub-angular gravels ~5%; dry	CL			
	5	3 - 7 ft. Clayey Sand; dark yellowish brown (10YR3/6); soft; very moist	SC			
		7 - 8.5 ft. Silty Clay; olive grey (5Y4/2); soft; very moist strong hydrocarbon odor	CL			
	10	8.5 - 12 ft. Silty Clay; dark greyish brown (10YR4/2); medium plasticity; sub-angular gravels ~5%; dry	CL		SB-3	
		12 - 13.5 ft. Silty Clay; dark yellowish brown (10YR4/6); soft; medium plasticity; gravels ~20%	CL			
	15	13.5 - 17 ft. Silty Clay; dark grey (10YR3/1); soft; medium plasticity; dry	CL			
	▼	17- 20 ft. Silty Clay; dark brown (10YR3/3); medium plasticity; rusty mottled appearance; moist	CL			
	20	End of borehole				
	25					

2017-03

CAMERON-COLE

SOIL BORING LOG AND WELL COMPLETION DATA

BORING NO.: **SB-4**

CLIENT/PROJECT: AC TRANSIT / EMERYVILLE, CA	DRILLER: VIRONEX
DRILLING RIG TYPE: GEOPROBE	DRILL METHOD: DIRECT PUSH
DATE STARTED: 2/18/03	DATE COMPLETED: 2/18/03
PROJECT NUMBER: 2017	
TOTAL DEPTH (FT.): 20	WATER DEPTH (FT.): 7.12
LOGGED BY: ANDREW WYCKOFF	

WELL COMPLETION	DEPTH FEET	DESCRIPTION	USCS CODE GRAPHIC	OVM PPM	SAMPLE NUMBER	SAMPLE RESULTS
2" DIAMETER BOREHOLE; BACKFILLED WITH PORTLAND CEMENT	0	0 - 4 ft. Silty Clay; strong brown (7.5YR4/6); medium plasticity; dry	CL			
	5	4 - 7 ft. Sandy Clay; dark yellowish brown (10YR4/6); rusty mottled appearance; slightly moist	CL			
	▼	7 - 8.5 ft. Silty Clay; olive grey (5Y4/2); strong hydrocarbon odor	CL			
		8.5 - 10.5 ft. Silty Clay; brown (10YR5/3); soft medium plasticity; dry	CL		SB-4	
	10	10.5 - 12 ft. Silty Clay; very dark grey (2.5Y3/1); medium stiff; slightly moist	CL			
		12 - 14 ft. Silty Clay; dark yellowish brown (10YR3/6); soft; medium plasticity; slightly moist	CL			
		14 - 15.5 ft. Clayey Sand; olive grey (5Y4/2); saturated; strong hydrocarbon odor	SC			
	15	15.5 - 16.5 ft. Silty Clay; very dark grey (2.5Y3/1); stiff; dry	CL			
		16.5 - 18.5 ft. Clayey Sand; very dark grey (2.5Y3/1); very moist	SC			
		18.5 - 20 ft. Silty Gravel with sand; olive brown (2.5Y4/3); moist	GM			
	20	End of borehole				
	25					

2017-04

CAMERON-COLE

SOIL BORING LOG AND WELL COMPLETION DATA

BORING NO.: **SB-6**

CLIENT/PROJECT: AC TRANSIT / EMERYVILLE, CA	DRILLER: VIRONEX
DRILLING RIG TYPE: GEOPROBE	DRILL METHOD: DIRECT PUSH
DATE STARTED: 2/18/03	DATE COMPLETED: 2/18/03
PROJECT NUMBER: 2017	
TOTAL DEPTH (FT.): 20	WATER DEPTH (FT.): 9.20
LOGGED BY: ANDREW WYCKOFF	

WELL COMPLETION	DEPTH FEET	DESCRIPTION	USCS CODE GRAPHIC	OVM PPM	SAMPLE NUMBER	SAMPLE RESULTS
2" DIAMETER BOREHOLE; BACKFILLED WITH PORTLAND CEMENT	0	0 - 1.5 ft. Pea Gravel	FILL			
		1.5 - 5 ft. Silty Clay; dark yellowish brown (10YR4/6); soft; medium plasticity; gravels ~10%; dry	CL			
	5	5 - 6 ft. Silty Clay with gravel; very dark grey (10YR3/1); stiff; 30% sub-angular gravel; slightly moist	CL			
		6 - 8.5 ft. Clayey Sand; brown (7.5YR4/4); poorly graded medium grained; 30% gravel; rusty mottled appearance; very moist	SC			
	▼	8.5 - 11 ft. Sandy Clay; brown (7.5YR4/4); soft; dry	CL		SB-6	
	10	11 - 13 ft. Silty Clay; dark grey (10YR4/1); high plasticity; slightly moist	CH			
		13 - 14.5 ft. Sandy Clay; dark greyish brown (10YR4/2); soft; saturated	CL			
	15	14.5 - 16.5 ft. Silty Clay; grey (10YR5/1); firm; rusty mottled appearance; moist; pinkish white (7.5YR8/2) sub-angular gravels ~5%	CL			
		16.5 - 17.5 ft. Silty Sand; yellowish brown (10YR5/6); soft; saturated	SM			
		17.5 - 20 ft. Silty Gravel with sand; multi-colored; 40% sand; firm; very moist	GM			
	20	End of borehole				
	25					

2017-05

APPENDIX C

CERTIFIED ANALYTICAL REPORTS

Entech Analytical Labs, Inc. RECEIVED MAR 1 0 2003

3334 Victor Court • Santa Clara, CA 95054 • (408) 588-0200 • Fax (408) 588-0201

February 28, 2003

Brad Wright
Cameron-Cole
101 W. Atlantic Ave.,Bldg#90
Alameda, CA 94501

Order:	33376	**Date Collected:**	02/18/03
Project Name:	AC Transit Hyd. Oil	**Date Received:**	02/19/03
Project Number:	2017	**P.O. Number:**	2017
Project Notes:			

On February 19, 2003, samples were received under documentented chain of custody. Results for the following analyses are attached:

Matrix	Test	Method
Liquid	PDF	PDF
	TPH as Gasoline	EPA 8015 MOD. (Purgeable)
	TPH, Extractable w/ Si-Gel Std	EPA 8015 MOD. (Extractable)

Case Narrative: Per client request, report re-issued 2/28/03 to include carbon ranges used for fuel quantitation.

Chemical analysis of these samples has been completed. Summaries of the data are contained on the following pages. USEPA protocols for sample storage and preservation were followed.

Entech Analytical Labs, Inc. is certified by the State of California (#2346). If you have any questions regarding procedures or results, please call me at 408-588-0200.

Sincerely,

Patti Sandrock
QA/QC Manager

Entech Analytical Labs, Inc.

3334 Victor Court • Santa Clara, CA 95054 • (408) 588-0200 • Fax (408) 588-0201

Cameron-Cole
101 W. Atlantic Ave.,Bldg#90
Alameda, CA 94501
Attn: Brad Wright

Date: 2/28/03
Date Received: 02/19/03
Project Name: AC Transit Hyd. Oil
Project Number: 2017
P.O. Number: 2017
Sampled By: Amir Mostazov

Certified Analytical Report

Order ID: 33376 **Lab Sample ID:** 33376-001 **Client Sample ID:** SB-1

Sample Time: 2:20 PM **Sample Date:** 02/18/03 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Bunker Oil	ND		10	250	2500	µg/L	02/20/03	02/26/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	71.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup. TPH as Bunker Oil quantitated from C9-C40.

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	ND		10	50	500	µg/L	02/20/03	02/26/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	71.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup. TPH as Diesel quantitated from C9-C26.

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Heating Oil	ND		10	250	2500	µg/L	02/20/03	02/26/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	71.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup. TPH as Heating Oil quantitated from C10-C39.

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Hydraulic Oil	ND		10	250	2500	µg/L	02/20/03	02/26/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	71.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup. TPH as Hydraulic Oil quantitated from C11-C40.

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Patti Sandrock, QA/QC Manager

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

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Cameron-Cole
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Attn: Brad Wright

Date: 2/28/03
Date Received: 02/19/03
Project Name: AC Transit Hyd. Oil
Project Number: 2017
P.O. Number: 2017
Sampled By: Amir Mostazov

Certified Analytical Report

Order ID: 33376 **Lab Sample ID:** 33376-001 **Client Sample ID:** SB-1

Sample Time: 2:20 PM **Sample Date:** 02/18/03 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Jet Fuel (Jet A)	ND		10	50	500	µg/L	02/20/03	02/26/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	71.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup. TPH as Jet Fuel (Jet A) quantitated from C8-C18.

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Kerosene	ND		10	50	500	µg/L	02/20/03	02/26/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	71.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup. TPH as Kerosene quantitated from C8-C16.

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	ND		10	250	2500	µg/L	02/20/03	02/26/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	71.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup. TPH as Motor Oil quantitated from C18-C40.

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Stoddard Solvent	17000		10	50	500	µg/L	02/20/03	02/26/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	71.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup. TPH as Stoddard Solvent quantitated from C8-C13.

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Patti Sandrock, QA/QC Manager

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Attn: Brad Wright

Date: 2/28/03
Date Received: 02/19/03
Project Name: AC Transit Hyd. Oil
Project Number: 2017
P.O. Number: 2017
Sampled By: Amir Mostazov

Certified Analytical Report

Order ID: 33376 **Lab Sample ID:** 33376-001 **Client Sample ID:** SB-1

Sample Time: 2:20 PM **Sample Date:** 02/18/03 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Transformer Oil	ND		10	250	2500	µg/L	02/20/03	02/26/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	71.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup. TPH as Trandformer Oil (C11-C34).

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Patti Sandrock, QA/QC Manager

Environmental Analysis Since 1983

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Cameron-Cole
101 W. Atlantic Ave.,Bldg#90
Alameda, CA 94501
Attn: Brad Wright

Date: 2/28/03
Date Received: 02/19/03
Project Name: AC Transit Hyd. Oil
Project Number: 2017
P.O. Number: 2017
Sampled By: Amir Mostazov

Certified Analytical Report

Order ID: 33376 **Lab Sample ID:** 33376-002 **Client Sample ID:** SB-2

Sample Time: 2:40 PM **Sample Date:** 02/18/03 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Bunker Oil	ND		1	250	250	µg/L	02/20/03	02/21/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	68.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup. TPH as Bunker Oil quantitated from C9-C40.

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	ND		1	50	50	µg/L	02/20/03	02/21/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	68.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup. TPH as Diesel quantitated from C9-C26.

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Heating Oil	ND		1	250	250	µg/L	02/20/03	02/21/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	68.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup. TPH as Heating Oil quantitated from C10-C39.

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Hydraulic Oil	ND		1	250	250	µg/L	02/20/03	02/21/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	68.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup. TPH as Hydraulic Oil quantitated from C11-C40.

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

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Attn: Brad Wright

Date: 2/28/03
Date Received: 02/19/03
Project Name: AC Transit Hyd. Oil
Project Number: 2017
P.O. Number: 2017
Sampled By: Amir Mostazov

Certified Analytical Report

Order ID: 33376 **Lab Sample ID:** 33376-002 **Client Sample ID:** SB-2

Sample Time: 2:40 PM **Sample Date:** 02/18/03 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Jet Fuel (Jet A)	ND		1	50	50	µg/L	02/20/03	02/21/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	68.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup. TPH as Jet Fuel (Jet A) quantitated from C8-C18.

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Kerosene	ND		1	50	50	µg/L	02/20/03	02/21/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	68.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup. TPH as Kerosene quantitated from C8-C16.

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	ND		1	250	250	µg/L	02/20/03	02/21/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	68.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup. TPH as Motor Oil quantitated from C18-C40.

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Stoddard Solvent	1400		1	50	50	µg/L	02/20/03	02/21/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	68.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup. TPH as Stoddard Solvent quantitated from C8-C13.

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

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Alameda, CA 94501
Attn: Brad Wright

Date: 2/28/03
Date Received: 02/19/03
Project Name: AC Transit Hyd. Oil
Project Number: 2017
P.O. Number: 2017
Sampled By: Amir Mostazov

Certified Analytical Report

Order ID: 33376 **Lab Sample ID:** 33376-002 **Client Sample ID:** SB-2

Sample Time: 2:40 PM **Sample Date:** 02/18/03 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Transformer Oil	ND		1	250	250	µg/L	02/20/03	02/21/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	68.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup. TPH as Trandformer Oil (C11-C34).

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Patti Sandrock, QA/QC Manager

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Cameron-Cole
101 W. Atlantic Ave.,Bldg#90
Alameda, CA 94501
Attn: Brad Wright

Date: 2/28/03
Date Received: 02/19/03
Project Name: AC Transit Hyd. Oil
Project Number: 2017
P.O. Number: 2017
Sampled By: Amir Mostazov

Certified Analytical Report

Order ID: 33376 **Lab Sample ID:** 33376-003 **Client Sample ID:** SB-3

Sample Time: 2:55 PM **Sample Date:** 02/18/03 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Bunker Oil	ND		20	250	5000	µg/L	02/20/03	02/22/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	90.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup. TPH as Bunker Oil quantitated from C9-C40.

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	9500	x	20	50	1000	µg/L	02/20/03	02/22/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	90.0	35 - 125

Comment: Not TPH as Diesel: unidentified hydrocarbon (C9-19) in the TPH as Diesel (C9-C26) quanitation range. Extraction performed with standard silica gel cleanup.

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Heating Oil	ND		20	250	5000	µg/L	02/20/03	02/22/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	90.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup. TPH as Heating Oil quantitated from C10-C39.

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Hydraulic Oil	ND		20	250	5000	µg/L	02/20/03	02/22/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	90.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup. TPH as Hydraulic Oil quantitated from C11-C40.

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Patti Sandrock, QA/QC Manager

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Cameron-Cole
101 W. Atlantic Ave.,Bldg#90
Alameda, CA 94501
Attn: Brad Wright

Date: 2/28/03
Date Received: 02/19/03
Project Name: AC Transit Hyd. Oil
Project Number: 2017
P.O. Number: 2017
Sampled By: Amir Mostazov

Certified Analytical Report

Order ID: 33376 **Lab Sample ID:** 33376-003 **Client Sample ID:** SB-3

Sample Time: 2:55 PM **Sample Date:** 02/18/03 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Jet Fuel (Jet A)	ND		20	50	1000	µg/L	02/20/03	02/22/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	90.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup. TPH as Jet Fuel (Jet A) quantitated from C8-C18.

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Kerosene	ND		20	50	1000	µg/L	02/20/03	02/22/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	90.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup. TPH as Kerosene quantitated from C8-C16.

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	34000	x	20	250	5000	µg/L	02/20/03	02/22/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	90.0	35 - 125

Comment: Not a TPH as Motor Oil pattern; Value due to an unknown hydrocarbon (C19 - C40), in the Motor Oil (C18-C40) quantitation range.Extraction performed with standard silica gel cleanup.

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Stoddard Solvent	ND		20	50	1000	µg/L	02/20/03	02/22/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	90.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup. TPH as Stoddard Solvent quantitated from C8-C13.

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Patti Sandrock, QA/QC Manager

Environmental Analysis Since 1983

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Attn: Brad Wright

Date: 2/28/03
Date Received: 02/19/03
Project Name: AC Transit Hyd. Oil
Project Number: 2017
P.O. Number: 2017
Sampled By: Amir Mostazov

Certified Analytical Report

Order ID: 33376 **Lab Sample ID:** 33376-003 **Client Sample ID:** SB-3

Sample Time: 2:55 PM **Sample Date:** 02/18/03 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Transformer Oil	ND		20	250	5000	µg/L	02/20/03	02/22/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	90.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup. TPH as Trandformer Oil (C11-C34).

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Patti Sandrock, QA/QC Manager

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Cameron-Cole
101 W. Atlantic Ave.,Bldg#90
Alameda, CA 94501
Attn: Brad Wright

Date: 2/28/03
Date Received: 02/19/03
Project Name: AC Transit Hyd. Oil
Project Number: 2017
P.O. Number: 2017
Sampled By: Amir Mostazov

Certified Analytical Report

Order ID: 33376 **Lab Sample ID:** 33376-004 **Client Sample ID:** SB-6

Sample Time: 3:25 PM **Sample Date:** 02/18/03 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Bunker Oil	ND		5	250	1250	µg/L	02/20/03	02/26/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	72.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup. TPH as Bunker Oil quantitated from C9-C40.

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	ND		5	50	250	µg/L	02/20/03	02/26/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	72.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup. TPH as Diesel quantitated from C9-C26.

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Gasoline	630	x	1	50	50	µg/L	N/A	02/20/03	WGC62759	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	160.8	65 - 135
aaa-Trifluorotoluene	82.1	65 - 135

Comment: Reported TPH as Gasoline value is the result of heavy end hydrocarbons within the TPH as Gasoline quantitation range but not typical of TPH as Gasoline.

Comment: Surrogate recovery for BFB due to matrix interference. See TFT result.

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Heating Oil	ND		5	250	1250	µg/L	02/20/03	02/26/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	72.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup. TPH as Heating Oil quantitated from C10-C39.

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Patti Sandrock, QA/QC Manager

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

3334 Victor Court • Santa Clara, CA 95054 • (408) 588-0200 • Fax (408) 588-0201

Cameron-Cole
101 W. Atlantic Ave.,Bldg#90
Alameda, CA 94501
Attn: Brad Wright

Date: 2/28/03
Date Received: 02/19/03
Project Name: AC Transit Hyd. Oil
Project Number: 2017
P.O. Number: 2017
Sampled By: Amir Mostazov

Certified Analytical Report

Order ID: 33376 **Lab Sample ID:** 33376-004 **Client Sample ID:** SB-6

Sample Time: 3:25 PM **Sample Date:** 02/18/03 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Hydraulic Oil	ND		5	250	1250	µg/L	02/20/03	02/26/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	72.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup. TPH as Hydraulic Oil quantitated from C11-C40.

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Jet Fuel (Jet A)	ND		5	50	250	µg/L	02/20/03	02/26/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	72.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup. TPH as Jet Fuel (Jet A) quantitated from C8-C18.

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Kerosene	ND		5	50	250	µg/L	02/20/03	02/26/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	72.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup. TPH as Kerosene quantitated from C8-C16.

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	ND		5	250	1250	µg/L	02/20/03	02/26/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	72.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup. TPH as Motor Oil quantitated from C18-C40.

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

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Attn: Brad Wright

Date: 2/28/03
Date Received: 02/19/03
Project Name: AC Transit Hyd. Oil
Project Number: 2017
P.O. Number: 2017
Sampled By: Amir Mostazov

Certified Analytical Report

Order ID: 33376 **Lab Sample ID:** 33376-004 **Client Sample ID:** SB-6

Sample Time: 3:25 PM **Sample Date:** 02/18/03 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Stoddard Solvent	ND		5	50	250	µg/L	02/20/03	02/26/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	72.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup. TPH as Stoddard Solvent quantitated from C8-C13.

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Transformer Oil	ND		5	250	1250	µg/L	02/20/03	02/26/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	72.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup. TPH as Trandformer Oil (C11-C34).

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Patti Sandrock, QA/QC Manager

Entech Analytical Labs, Inc.

3334 Victor Court
Santa Clara, CA 95054
(408) 588-0200
(408) 588-0201 - Fax

Chain of Custody / Analysis Request

Attention to: BRAD WRIGHT	Phone No.: (510) 769-3563	Purchase Order No (Reqd).:	Send Invoice to (if Different) / Phone
Company Name: CAMERON - COLE	Fax No.: (510) 337-3794	Project Number: 2017	Company
Mailing Address: 101 W. ATLANTIC AVE., BLG #70	email:	Project Name: AT TRANSIT IMP. OIL	Billing Address (if Different)
City: ALAMEDA	State: CA / Zip: 94501	Project Location: EMERYVILLE	City / State / Zip
Sampler: ANDREW VICKERS	Field Org. Code:		
Global ID:			

Turn Around Time

- ☐ Same Day
- ☐ 1 Day
- ☐ 2 Day
- ☐ 3 Day
- ☐ 4 Day
- ☐ 5 Day
- ☒ Standard (10 Day)

Order ID:

Client ID:	Field PT	Lab. No.	Sampling Date	Sampling Time	Matrix H2O	Composite	Grab	Containers	Preservative	Volatile Organics by GCMS: 601/602 ☐ 624 ☐ / Fuel Oxygenates by 8260: 8010 by 8260 ☐ / MTBE by 8260B ☐ / Pesticides-8081 ☐ / PCBs - 8082 ☐ / TPH as Gas/BTEX ☐ / TPH as Gas/BTEX/MTBE ☐ / Base/Neutral/Acid Organics 8270 ☐ / 8270-SIM ☐ / PNA ☐ / Fuel Scan Extractable ☐ Purgeable ☐ / Diesel ☐ w/ Si-gel Standard Cleanup ☐ / Motor Oil ☐ w/ Si-gel Column Cleanup ☐ / pH / CN / TRPH ☐ Oil & Grease ☐ / TPH EXTRACTABLE SCAN / TPH GAS + DIESEL / Metals - Circle Below Total ☐ Dissolved ☐ / STLC / TTLC	Remarks
SB-1	33576	001	2/18	1420	X			2	—	X
SB-2		002		1440				2	—	X
SB-3		003		1455				3	HCL	X
SB-6		004		1525				2	—	X
SB-6				1525	↓			3	HCL	X

Relinquished by:	Received by:	Date:	Time:
[illegible] AW	[illegible] Cole	2/19/03	1:17 PM
Relinquished by:	Received by: [illegible] Machado	2/19/03	1450
Relinquished by:	Received by:	Date:	Time:
Relinquished by:	Received by:	Date:	Time:

Special Instructions or Comments

- ☐ NPDES Detection Limits
- ☐ EDD Report Required
- ☐ EDF Report Required
- ☐ PDF File Required

Metals:
Al, As, Sb, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, K, Si, Ag, Na, Se, Sr, Tl, Sn, Ti, V, Zn, W : RCRA-8 ☐ CAM-17 ☐ Plating ☐ PPM-13 ☐ LUFT-5 ☐

Entech Analytical Labs, Inc. RECEIVED MAR 0 4 2003

3334 Victor Court • Santa Clara, CA 95054 • (408) 588-0200 • Fax (408) 588-0201

February 26, 2003

Brad Wright
Cameron-Cole
101 W. Atlantic Ave.,Bldg#90
Alameda, CA 94501

Order:	33376	**Date Collected:**	2/18/03
Project Name:	AC Transit Hyd. Oil	**Date Received:**	2/19/03
Project Number:	2017	**P.O. Number:**	2017
Project Notes:			

On February 19, 2003, samples were received under documentented chain of custody. Results for the following analyses are attached:

Matrix	Test	Method
Liquid	PDF	PDF
	TPH as Diesel	EPA 8015 MOD. (Extractable)
	TPH as Gasoline	EPA 8015 MOD. (Purgeable)
	TPH, Extractable w/ Si-Gel Std	EPA 8015 MOD. (Extractable)

Chemical analysis of these samples has been completed. Summaries of the data are contained on the following pages. USEPA protocols for sample storage and preservation were followed.

Entech Analytical Labs, Inc. is certified by the State of California (#2346). If you have any questions regarding procedures or results, please call me at 408-588-0200.

Sincerely,

Patti Sandrock
QA/QC Manager

Entech Analytical Labs, Inc.

3334 Victor Court • Santa Clara, CA 95054 • (408) 588-0200 • Fax (408) 588-0201

Cameron-Cole
101 W. Atlantic Ave.,Bldg#90
Alameda, CA 94501
Attn: Brad Wright

Date: 2/27/03
Date Received: 2/19/03
Project Name: AC Transit Hyd. Oil
Project Number: 2017
P.O. Number: 2017
Sampled By: Amir Mostazov

Certified Analytical Report

Order ID: 33376 **Lab Sample ID:** 33376-001 **Client Sample ID:** SB-1

Sample Time: 2:20 PM **Sample Date:** 2/18/03 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Bunker Oil	ND		10	250	2500	µg/L	2/20/03	2/26/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	71.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup.

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	ND		10	50	500	µg/L	2/20/03	2/26/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	71.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup.

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Heating Oil	ND		10	250	2500	µg/L	2/20/03	2/26/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	71.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup.

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Hydraulic Oil	ND		10	250	2500	µg/L	2/20/03	2/26/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	71.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup.

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Jet Fuel (Jet A)	ND		10	50	500	µg/L	2/20/03	2/26/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Patti Sandrock, QA/QC Manager

Environmental Analysis Since 1983

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Cameron-Cole
101 W. Atlantic Ave.,Bldg#90
Alameda, CA 94501
Attn: Brad Wright

Date: 2/27/03
Date Received: 2/19/03
Project Name: AC Transit Hyd. Oil
Project Number: 2017
P.O. Number: 2017
Sampled By: Amir Mostazov

Certified Analytical Report

Order ID: 33376 **Lab Sample ID:** 33376-001 **Client Sample ID:** SB-1

Sample Time: 2:20 PM **Sample Date:** 2/18/03 **Matrix:** Liquid

	o-Terphenyl	71.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup.

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Kerosene	ND		10	50	500	µg/L	2/20/03	2/26/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	71.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup.

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	ND		10	250	2500	µg/L	2/20/03	2/26/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	71.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup.

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Stoddard Solvent	17000		10	50	500	µg/L	2/20/03	2/26/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	71.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup.

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Transformer Oil	ND		10	250	2500	µg/L	2/20/03	2/26/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	71.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup.

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

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Cameron-Cole
101 W. Atlantic Ave.,Bldg#90
Alameda, CA 94501
Attn: Brad Wright

Date: 2/27/03
Date Received: 2/19/03
Project Name: AC Transit Hyd. Oil
Project Number: 2017
P.O. Number: 2017
Sampled By: Amir Mostazov

Certified Analytical Report

Order ID: 33376 **Lab Sample ID:** 33376-002 **Client Sample ID:** SB-2

Sample Time: 2:40 PM **Sample Date:** 2/18/03 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Bunker Oil	ND		1	250	250	µg/L	2/20/03	2/21/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	68.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup.

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	ND		1	50	50	µg/L	2/20/03	2/21/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	68.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup.

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Heating Oil	ND		1	250	250	µg/L	2/20/03	2/21/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	68.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup.

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Hydraulic Oil	ND		1	250	250	µg/L	2/20/03	2/21/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	68.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup.

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Jet Fuel (Jet A)	ND		1	50	50	µg/L	2/20/03	2/21/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

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Date: 2/27/03
Date Received: 2/19/03
Project Name: AC Transit Hyd. Oil
Project Number: 2017
P.O. Number: 2017
Sampled By: Amir Mostazov

Certified Analytical Report

Order ID: 33376 **Lab Sample ID:** 33376-002 **Client Sample ID:** SB-2

Sample Time: 2:40 PM **Sample Date:** 2/18/03 **Matrix:** Liquid

	o-Terphenyl	68.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup.

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Kerosene	ND		1	50	50	µg/L	2/20/03	2/21/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	68.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup.

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	ND		1	250	250	µg/L	2/20/03	2/21/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	68.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup.

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Stoddard Solvent	1400		1	50	50	µg/L	2/20/03	2/21/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	68.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup.

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Transformer Oil	ND		1	250	250	µg/L	2/20/03	2/21/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	68.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup.

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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Alameda, CA 94501
Attn: Brad Wright

Date: 2/27/03
Date Received: 02/19/03
Project Name: AC Transit Hyd. Oil
Project Number: 2017
P.O. Number: 2017
Sampled By: Amir Mostazov

Certified Analytical Report

Order ID: 33376 **Lab Sample ID:** 33376-003 **Client Sample ID:** SB-3

Sample Time: 2:55 PM **Sample Date:** 02/18/03 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Bunker Oil	ND		20	250	5000	µg/L	02/20/03	02/22/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	90.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup.

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	9500	x	20	50	1000	µg/L	02/20/03	02/22/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	90.0	35 - 125

Comment: Not TPH as Diesel: unidentified hydrocarbon (C9-19) in the TPH as Diesel quanitation range. Extraction performed with standard silica gel cleanup.

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Heating Oil	ND		20	250	5000	µg/L	02/20/03	02/22/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	90.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup.

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Hydraulic Oil	ND		20	250	5000	µg/L	02/20/03	02/22/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	90.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup.

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Patti Sandrock, QA/QC Manager

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Cameron-Cole
101 W. Atlantic Ave.,Bldg#90
Alameda, CA 94501
Attn: Brad Wright

Date: 2/27/03
Date Received: 02/19/03
Project Name: AC Transit Hyd. Oil
Project Number: 2017
P.O. Number: 2017
Sampled By: Amir Mostazov

Certified Analytical Report

Order ID: 33376 **Lab Sample ID:** 33376-003 **Client Sample ID:** SB-3

Sample Time: 2:55 PM **Sample Date:** 02/18/03 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Jet Fuel (Jet A)	ND		20	50	1000	µg/L	02/20/03	02/22/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	90.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup.

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Kerosene	ND		20	50	1000	µg/L	02/20/03	02/22/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	90.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup.

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	34000	x	20	250	5000	µg/L	02/20/03	02/22/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	90.0	35 - 125

Comment: Not a TPH as Motor Oil pattern; Value due to an unknown hydrocarbon (C19 - C40), in the Motor Oil quantitation range.Extraction performed with standard silica gel cleanup.

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Stoddard Solvent	ND		20	50	1000	µg/L	02/20/03	02/22/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	90.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup.

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

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Attn: Brad Wright

Date: 2/27/03
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Project Name: AC Transit Hyd. Oil
Project Number: 2017
P.O. Number: 2017
Sampled By: Amir Mostazov

Certified Analytical Report

Order ID: 33376 **Lab Sample ID:** 33376-003 **Client Sample ID:** SB-3

Sample Time: 2:55 PM **Sample Date:** 02/18/03 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Transformer Oil	ND		20	250	5000	µg/L	02/20/03	02/22/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	90.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup.

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Patti Sandrock, QA/QC Manager

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Sampled By: Amir Mostazov

Certified Analytical Report

Order ID: 33376 **Lab Sample ID:** 33376-004 **Client Sample ID:** SB-6

Sample Time: 3:25 PM **Sample Date:** 2/18/03 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Bunker Oil	ND		5	250	1250	µg/L	2/20/03	2/26/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	72.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup.

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	ND		5	50	250	µg/L	2/20/03	2/26/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	72.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup.

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Heating Oil	ND		5	250	1250	µg/L	2/20/03	2/26/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	72.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup.

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Hydraulic Oil	ND		5	250	1250	µg/L	2/20/03	2/26/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	72.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup.

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Jet Fuel (Jet A)	ND		5	50	250	µg/L	2/20/03	2/26/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Patti Sandrock, QA/QC Manager

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

3334 Victor Court • Santa Clara, CA 95054 • (408) 588-0200 • Fax (408) 588-0201

Cameron-Cole
101 W. Atlantic Ave.,Bldg#90
Alameda, CA 94501
Attn: Brad Wright

Date: 2/27/03
Date Received: 2/19/03
Project Name: AC Transit Hyd. Oil
Project Number: 2017
P.O. Number: 2017
Sampled By: Amir Mostazov

Certified Analytical Report

Order ID: 33376 **Lab Sample ID:** 33376-004 **Client Sample ID:** SB-6

Sample Time: 3:25 PM **Sample Date:** 2/18/03 **Matrix:** Liquid

	o-Terphenyl	72.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup.

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Kerosene	ND		5	50	250	µg/L	2/20/03	2/26/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	72.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup.

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	ND		5	250	1250	µg/L	2/20/03	2/26/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	72.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup.

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Stoddard Solvent	ND		5	50	250	µg/L	2/20/03	2/26/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	72.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup.

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Transformer Oil	ND		5	250	1250	µg/L	2/20/03	2/26/03	DW4307A	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	72.0	35 - 125

Comment: Extraction performed with standard silica gel cleanup.

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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Date: 2/27/03
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Sampled By: Amir Mostazov

Certified Analytical Report

Order ID: 33376 **Lab Sample ID:** 33376-004 **Client Sample ID:** SB-6

Sample Time: 3:25 PM **Sample Date:** 2/18/03 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Gasoline	630	x	1	50	50	µg/L	N/A	2/20/03	WGC62759	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	160.8	65 - 135
aaa-Trifluorotoluene	82.1	65 - 135

Comment: Reported TPH as Gasoline value is the result of heavy end hydrocarbons within the TPH as Gasoline quantitation range but not typical of TPH as Gasoline.

Comment: Surrogate recovery for BFB due to matrix interference. See TFT result.

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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STANDARD LAB QUALIFIERS (FLAGS)

All Entech lab reports now reference standard lab qualifiers. These qualifiers are noted in the adjacent column to the analytical result and are adapted from the U.S. EPA CLP program. The current qualifier list is as follows:

Qualifier (Flag)	Description
U	Compound was analyzed for but not detected
J	Estimated value for tentatively identified compounds or if result is below PQL but above MDL
N	Presumptive evidence of a compound (for Tentatively Identified Compounds)
B	Analyte is found in the associated Method Blank
E	Compounds whose concentrations exceed the upper level of the calibration range
D	Multiple dilutions reported for analysis; discrepancies between analytes may be due to dilution
X	Results within quantitation range; chromatographic pattern not typical of fuel
Y	PQL is reported below MDL but verified against a standard analyzed at the client requested reporting limit of 0.5 ppb
C	Reported results affected by contaminated reagent materials. See narrative for futher explanation

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Quality Control Results Summary

QC Batch #: DW4307A
Matrix: Liquid
Units: µg/L
Date Analyzed: 2/21/03

Parameter	Method	Blank Result	Spike Sample ID	Spike Amount	Sample Result	Spike Result	QC Type	% Recovery	RPD	RPD Limits	Recovery Limits
Test: TPH as Diesel w/ Si-Gel Std											
TPH as Diesel	EPA 8015 M	ND		1000		1082.96	LCS	108.3			43.9 - 125.0
Surrogate			**Surrogate Recovery**			**Control Limits (%)**					
o-Terphenyl			102.0			29 - 142					
Test: TPH as Diesel w/ Si-Gel Std											
TPH as Diesel	EPA 8015 M	ND		1000		982.66	LCSD	98.3	9.71	30.00	43.9 - 125.0
Surrogate			**Surrogate Recovery**			**Control Limits (%)**					
o-Terphenyl			92.0			29 - 142					

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Quality Control Results Summary

QC Batch #: WGC62759
Matrix: Liquid

Units: µg/L
Date Analyzed: 2/20/03

Parameter	Method	Blank Result	Spike Sample ID	Spike Amount	Sample Result	Spike Result	QC Type	% Recovery	RPD	RPD Limits	Recovery Limits
Test: TPH as Gasoline											
TPH as Gasoline	EPA 8015 M	ND		250		234.99	LCS	94.0			65.0 - 135.0
Surrogate			**Surrogate Recovery**			**Control Limits (%)**					
4-Bromofluorobenzene			92.8			65 - 135					
Test: TPH as Gasoline											
TPH as Gasoline	EPA 8015 M	ND		250		231.82	LCSD	92.7	1.36	25.00	65.0 - 135.0
Surrogate			**Surrogate Recovery**			**Control Limits (%)**					
4-Bromofluorobenzene			89.3			65 - 135					

Entech Analytical Labs, Inc.

3334 Victor Court (408) 588-0200
Santa Clara, CA 95054 (408) 588-0201 - Fax

Chain of Custody / Analysis Request

Attention to: BRAD WRIGHT	Phone No.: (510) 769-3563	Purchase Order No (Reqd).:	Send Invoice to (if Different) / Phone
Company Name: [illegible]	Fax No.: (510) 337-3974	Project Number: 2017	Company
Mailing Address: 101 W. ATLANTIC AVE., BLG #70	email:	Project Name: AT TRANSIT HYD. OIL	Billing Address (if Different)
City: ALAMEDA / State: CA / Zip: 94501		Project Location: EMERYVILLE	City: / State / Zip

Sampler: [illegible] Field Org. Code:

Global ID:

Turn Around Time
- ☐ Same Day ☐ 1 Day
- ☐ 2 Day ☐ 3 Day
- ☐ 4 Day ☐ 5 Day
- ☑ Standard (10 Day)

Order ID:

Sampling

Client ID:	Field PT	Lab. No.	Date	Time	Matrix	Composite	Grab	Containers	Preservative
SB-1	33576	001	2/18	1420	X			2	—
SB-2		002	"	1440	"			2	—
SB-3		003	"	1455	"		X	3	HCL
SB-4		004	"	1525	"			2	—
SB-4			"	1525	↓			3	HCL

Volatile Organics by GCMS: 601/602 ☐ 624 ☐ 8010 by 8260 ☐ 8260B ☐
Fuel Oxygenates by 8260B ☐ MTBE by 8260B ☐
Pesticides-8081 ☐ PCBs - 8082 ☐
TPH as Gas/BTEX ☐ TPH as Gas/BTEX/MTBE ☐
Base/Neutral/Acid Organics 8270 ☐ 8270-SIM ☐ PNA ☐
Fuel Scan Extractable ☐ Purgeable ☐
Diesel ☐ w/ Si-gel Standard Cleanup ☐
Motor Oil ☐ w/ Si-gel Column Cleanup ☐
pH
CN
TRPH ☐ Oil & Grease ☐
TPH EXTRACTABLE - SCAN
TPH GAS + DIESEL
Metals - Circle Below Total ☐ Dissolved ☐
STLC
TTLC
Remarks

Relinquished by: EW TIR AW	Received by: Rose Cortez	Date: 2/19/03	Time: 1:17 PM
Relinquished by:	Received by: [signature] Machado	Date: 2/19/03	Time: 1450
Relinquished by:	Received by:	Date:	Time:
Relinquished by:	Received by:	Date:	Time:

Special Instructions or Comments

- ☐ NPDES Detection Limits
- ☐ EDD Report Required
- ☐ EDF Report Required
- ☐ PDF File Required

Metals:
Al, As, Sb, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, K, Si, Ag, Na, Se, Sr, Tl, Sn, Ti, V, Zn, W : RCRA-8 ☐ CAM-17 ☐ Plating ☐ PPM-13 ☐ LUFT-5 ☐