93 NOV -1 AM 11:58

LRA ENVIRONMENTAL

3235 SUNRISE BOULEVARD, SUITE 5
RANCHO CORDOVA, CA 95742
PHONE 916/631-4455
FAX 916/631-4466

26 October 1993
OUR JOB NUMBER: E9170

Ms. Juliet Shin
Alameda County Health Care Services Agency
Hazardous Materials Program
80 Swan Way, Room 200
Oakland, California 94621

Subject: Third Quarter Monitoring Report
Taco Bell
1900 Webster Street
Alameda, Alameda County, California

Dear Ms. Shin:

Our office has prepared the Third Quarter Groundwater Monitoring Report for the above referenced property.

Should you have any questions regarding this report, please contact our office immediately.

Very truly yours,

LRA ENVIRONMENTAL

Janine M. Jewell
Staff Geologist

[epa\e9170.cltr]

LRA ENVIRONMENTAL
3235 SUNRISE BOULEVARD, SUITE 5
RANCHO CORDOVA, CA 95742
PHONE 916/631-4455
FAX 916/631-4466

THIRD QUARTER GROUNDWATER MONITORING REPORT

TACO BELL

1900 WEBSTER STREET

ALAMEDA, ALAMEDA COUNTY, CALIFORNIA

PREPARED BY:

LRA ENVIRONMENTAL
3235 SUNRISE BOULEVARD, SUITE 5
RANCHO CORDOVA, CALIFORNIA 95742
(916) 631-4455

20 OCTOBER 1993
JOB NUMBER E9170

Job Number E9170
20 October 1993

TABLE OF CONTENTS

GROUNDWATER MONITORING REPORT — Page

INTRODUCTION 1
- Location
- Background and Site History
  - Current and Previous Property Owners and Contact Persons
  - Current and Previous Activities on the Property
  - Spill, Leak, or Leachate Migration History on the Site
  - Subsurface Investigation on the site

OBJECTIVE OF THE WORK PROPOSED 3

SITE DESCRIPTION 4
- Vicinity Map
- Site Map
- Description of Topography and Surface Features, i.e., Watercourses, Lakes and Groundwater Recharge Conduits
- Site Topography

GROUNDWATER SAMPLING 5
- Observation of Free Product, Odor, or Sheen
- Water and Product Level
- Purging Procedures
- Sample collection Equipment and Procedures
- Sample Shipping Procedures
- Equipment Decontamination Procedures
- Disposal of Contaminated Material
- Quality Assurance/Quality Control Procedures

STATEMENT OF FINDINGS (RESULTS) 7

CONCLUSIONS 7

RECOMMENDATIONS 7

SIGNATURE PAGE 8

APPENDIX A
- Vicinity Map
- Location Map
- Groundwater Gradient Map

APPENDIX B
- Water Quality Parameter Tables
- Lab Analysis Report
- Chain of Custody

20 October 1993
Job Number: E9170

THIRD QUARTER GROUNDWATER MONITORING REPORT

TACO BELL

1900 WEBSTER STREET

ALAMEDA, ALAMEDA COUNTY, CALIFORNIA

INTRODUCTION

Location:

The property in question, a Taco Bell restaurant, is located at 1900 Webster Street, Alameda, Alameda County, California. The property is located at approximately 122°16'31" west longitude and 37°46'27" north latitude. This corresponds to the County of Alameda Assessors's Parcel Number 73-426-12.

Background/Site History:
Current and previous property owners and contact persons:

The property in question is an operational Taco Bell franchise. The property is currently owned and managed by Dolan Foster Enterprises and is supervised by Dan Mundy, the site construction manager. Contact can be made with Mr. Mundy at (510) 887-7260.

Current and previous business activities on the property:

Currently, the property supports a Taco Bell restaurant and customer parking facilities. This operational franchise has been owned and operated by Dolan Foster Enterprises since 1976. This Taco Bell franchise is a fast food take-out restaurant and has never been involved with the storage or dispensing of any hazardous materials or petroleum products.

An informal historical investigation of the property revealed that this site has in the past been used as a service station. The first service station on this site initially began dispensing gasoline in 1928 from two (2) five hundred fifty (550) gallon tanks. From that time until 1976 the property had been in continual use as a service and gasoline dispensing station. A total of eight (8) different tanks of varying sizes have been used for underground gasoline storage. These tanks have ranged in size from five hundred fifty (550) to eight thousand (8000) gallons. From 1967 to 1974, underground gasoline storage totaled fourteen thousand (14,000) gallons. Alameda City Fire Department records show that all

tanks, tank filler lines, and dispenser lines were removed on 8 February 1974, prior to the sale of the property to Dolan Foster Enterprises.

Gasoline storage tank operators and dates of tank placement for the property are summarized as follows:

OPERATOR	DATE OF TANK PLACEMENT
Humble Oil Service Station	November 29, 1967
Signal Oil Company	October 27, 1941
P.S. Ray	May 11, 1933
F. Burrington	October 11, 1928

Spill, leak, or leachate migration history on the site:

Prior to 15 January 1992, no spill, leak, nor leachate migration reports had been filed with the Alameda County Health Department. However, on that date, Dolan Foster Enterprises filed an Underground Storage Tank Unauthorized Release Contamination Site Report with the Health Department. This report was precipitated by the discovery of petroleum products by LRA Engineering while conducting a geotechnical investigation. Dolan Foster Enterprises was appraised of the situation and they, in turn, initiated the preliminary site contamination investigation process. The unauthorized leak report is in the custody of the Alameda County Health Department.

Subsurface investigations on the site:

Site remediation by over-excavation of the contaminated soils was conducted June 1, 2, and 3, 1992. Soils were removed from the location of the former tank dispensers. All native soils registering PID measurements above 5 ppm or emitting chemical odors were removed from the excavation. The highest chemical concentrations in the soils appeared to be in the upper 3 to 6 feet of strata. Soils from the bottom and the sidewalls of the excavation, registering elevated PID readings, were removed to depths varying from 4 to 6 feet below grade. The excavated area was backfilled and compacted with pit run aggregates.

Approximately 300 cubic yards of native soils were removed during the excavation of soils beneath and adjacent to the former location of the gasoline dispenser islands. Excavated soils were transported to a dedicated area on the north half of the parking lot that had been properly prepared to receive the soil for stockpiling. The soils were then aerated on site under permit from the Bay Area Air Quality Management Department (BAAQMD). Soil aeration occurred from June 5 through July 2, 1992.

The stockpile was mixed and turned for two weeks. At the end of this period the stockpile was sampled and analyzed for volatile organic compounds. The results of the chemical analyses indicated the soils were sufficiently aerated in that levels of volatile organic compounds were reduced to near or below detection limits. Further characterization was not deemed necessary by B.F.I. Water Systems (Treatment, Storage and Disposal Facility), the receiver of the remediated soil.

On 6 July 1992 Dolan Foster Enterprises demolished the former Taco Bell Restaurant. During the destruction of the building, a waste oil storage vessel was discovered. it was located approximately 60 feet east of Webster Street and 60 feet north of Eagle Avenue underneath the main entrance to the now demolished restaurant. The vessel was removed and the barrel, its contents and the surrounding soils were disposed of at B.F.I. Waste Systems on Vasco Road in Livermore, California.

Demolition of the building gave access to an area that had been predetermined as being the abandoned underground storage tank field. On 13 July 1992, LRA Environmental drilled two (2) borings to 10 feet. An additional boring was also placed at the site of the waste oil barrel and sampled from five feet (5') to six feet (6') below ground surface, i.e., two feet (2') to three feet (3') beneath the bottom of the waste oil container. A second sample was also taken from nine feet (9') to ten feet (10') below ground surface at this location.

Detectable quantities of contamination were found in the soil on the east side of the abandoned tank field. Of main concern was the amount of benzene detected in that sample. However, contamination amounts did not warrant over excavation of the soil and could be remediated by other methods such as vapor extraction, bioremediation, or extraction and treatment. Contamination was also found in the soil beneath the waste oil vessel at ten feet (10') below ground surface, but posed no major threat or hazard to human health due to the low concentrations.

On August 13 and 14, 1992, LRA Environmental constructed four (4) groundwater monitoring wells on site. All wells were constructed in accordance to the methods outlined in the Underground Fuel Tank Monitoring Workplan compiled by LRA Environmental on 26 February 1992. These wells were placed according to Regional Water Quality Board guidelines (i.e., one well upgradient, two wells down gradient and one well within ten feet of the original contamination source in the verified downgradient direction).

OBJECTIVE OF THE PROPOSED WORK

The purpose of this groundwater monitoring report is to comply with the Alameda County Health Department's mandate for work to define the extent of contamination at the subject property. Specifically, this groundwater monitoring report is to describe the status of the investigation, giving details and results of all work performed during the third quarter of 1993, interpret the analytical results, and provide recommendations.

SITE DESCRIPTION

Vicinity Map:

The vicinity map appears as Plate 1 in the Appendix portion of this workplan.

Site Map:

The site map appears as Plate 2 in the Appendix portion of this workplan.

Description of topography and surface features, i.e. watercourses, lakes, and groundwater recharge facilities:

The description of the local geography is based solely upon an examination of the latest editions of the U.S.G.S. Topographic map sheets and visual reconnaissance in the field for the area in question marked on the vicinity map.

The U.S.G.S. Oakland West, California 7.5 minute quadrangle (topographic) editions of 1959 and 1980 depict the subject property as a developed site with one building present. The property is bounded on the west by Webster Street and on the south by Eagle Avenue. A single building is located to the north of the subject property and a vacant lot to the east. The elevation of the subject property is approximately 10 feet above sea level.

A site reconnaissance was conducted. The entire lot was found to be covered by either concrete, asphalt, or the Taco Bell building. No unusual odors were present on site during the reconnaissance. No water ponding was observed on the site.

Site topography:

Alameda Island is a piece of the mainland that has been bisected by an estuary. The coastal geologic process is mainly tide dominated with wave influence which has produced an estuarine soil sequence. Land elevation on the island varies from sea level to thirty five feet (35') at it's highest elevation. The entire island has been developed and supports residential, commercial, and industrial interests.

The subject site is approximately one hundred thirty feet (130') by one hundred feet (100') (13,000 sq.ft.). It is commercially developed and supports a Taco Bell restaurant with parking facilities. The property lies on the northeast corner of a major cross-road and is bounded by commercial development on the north and east side.

The depth to regional groundwater was recorded at 8-10 feet below ground surface. This approximately coincides with mean sea level.

GROUNDWATER SAMPLING

Observation of free product, odor, or sheen:

The water level in each well was measured using mean sea level datum as determined by available local monuments.

After the depth to water in each monitoring well was established, and prior to purging the well, a water sample was collected in a clear acrylic bailer. The sample was visually assessed for the presence of free product and/or sheen, and detectable odor by sense of smell. There was no presence of free product, sheen, or any detectable odors in any of the samples collected from the four monitoring wells. Each monitoring well was also measured for pH, temperature, salinity, and specific conductivity. These measurements are listed in Appendix B.

Water and product level:

A Solinst Water Level Gauge was used to determine the water level in each monitoring well. Water level measurements were made to the nearest 1/10th of a foot. A clear acrylic bailer was used to collect a water sample and visually assess the sample for the presence of free product. There was no presence of free product or sheen in any of the samples collected from the four monitoring wells. Depth to water data has been tabulated and is included in Appendix B.

Purging procedures:

Each monitoring well was purged by using a four inch (4") submergeable pump. The pump was decontaminated before purging each monitoring well pursuant to the approved workplan. After the depth of water was established, the wetted casing volume was determined for each monitoring well. Five (5) wetted casing volumes were pumped from the each monitoring well. The water level in the monitoring well was allowed to recover to a minimum of eighty (80) percent of the wetted casing volume prior to obtaining the samples to be subjected to chemical analysis. Water quality parameters including pH, temperature, salinity, and specific conductivity were monitored for every casing volume purged. Each well was considered stable when three (3) consecutive well casing volumes were purged exhibiting the characteristics outlined below.

pH: plus or minus 0.1

Temperature: plus or minus 0.5 degrees fahrenheit

Specific conductivity: plus or minus 1.0%

Water quality parameter tables for each well are included in Appendix B.

The monitoring equipment employed on this project include a pH meter (Bantex model LCD-5), an electrical conductivity, salinity, and temperature meter (model YSI 33), and a photo-ionizing hydrocarbon detector (H-nu, model PI 101).

Sample collection equipment and procedures:

Water samples were obtained with a clean bailer, and placed in the appropriate sample containers prepared and provided by the analytical laboratory.

Sample shipping procedures:

Samples acquired from the monitoring well were delivered to the laboratory after collection. A copy of the chain of custody form utilized for this investigation appears in Appendix B.

Equipment decontamination procedures:

Sampling equipment such as bailers, pumps etc. were decontaminated between uses by washing in an appropriate detergent solution followed by two (2) tap and one (1) distilled water rinses. Purge pumps and other related hardware were decontaminated prior to each use. The pump interiors were decontaminated by circulating an appropriate detergent solution through the pump, followed by a fresh water rinse.

Disposal of contaminated material:

All water obtained from the sampling of the groundwater monitoring wells was placed in approved drums which were sealed, labeled, and stored on site prior to disposal which was conditional upon analytical results.

Quality assurance/Quality control procedures:

Every effort was made to follow the established sampling, transportation and chain of custody protocols to insure the integrity of the samples in the field and during transport to the laboratory.

Quality assurance and control procedures incorporate the use of "blanks" as mandated by the prevailing standards or care for investigations of this type. Laboratory quality assurance and control procedures were typical of those used to meet all state and federal mandates. At a minimum, quality assurance and control measures in the laboratory setting included duplicate, spike, and standard reference sample (when applicable) analysis.

STATEMENT OF FINDINGS (RESULTS)

Lab analysis:

All water samples were analyzed for Total Petroleum Hydrocarbons as Diesel and Kerosene (DHS Method M8015), Total Petroleum Hydrocarbons as Gasoline and BTEX (EPA Methods 8015, 5030, 602), and Total Oil and Grease (EPA Method 9070).

Analysis results for the water samples collected from the groundwater monitoring wells are summarized below.

Constituent	MW1	MW2	MW3	MW4	Reporting Limit
TPH as Diesel mg/l	ND	ND	ND	ND	0.05
TPH as Kerosene mg/l	ND	ND	ND	ND	0.20
TPH as Gasoline mg/l	ND	ND	ND	ND	0.05
Benzene ug/l	ND	ND	ND	ND	0.30
Toluene ug/l	ND	ND	ND	ND	0.30
Ethylbenzene ug/l	ND	ND	ND	ND	0.30
Total Xylenes ug/l	ND	ND	ND	ND	0.60
Total Oil & Grease mg/l	ND	ND	30.00	ND	5.00

CONCLUSIONS

The analytical results for monitoring wells M1, M2, M3, and M4 indicate no detectable levels of TPH as Diesel, Kerosene, or Gasoline. Monitoring wells M1, M2, M3, and M4 also had no detectable levels of Benzene, Toluene, Ethylbenzene, and Total Xylenes (BTEX).

The analytical results for monitoring wells M1, M2, and M4 indicate no detectable levels of Total Oil & Grease. However, analytical results for monitoring well M3 indicate a level of 30 parts per million (ppm), which is believed to be an anomaly. January 1993 analytical results for water samples collected from monitoring well M3 had no detectable levels of Total Oil & Grease.

RECOMMENDATIONS

It is our recommendation, based on the analytical results of the third quarter, that quarterly groundwater monitoring continue. At the time of monitoring, close attention will be directed at monitoring well M3. Quarterly groundwater monitoring of the groundwater monitoring wells will continue in accordance with the applicable local, state, and federal regulations.

SIGNATURE PAGE

LRA ENVIRONMENTAL

Prepared by:

Janine M. Jewell
Staff Geologist

Reviewed by:

Ahmad Badie, Ph.D.
REA# 01948, RCE# 37861

For:

Robert A. Nicholson, Sr. Vice President
REA # 01326

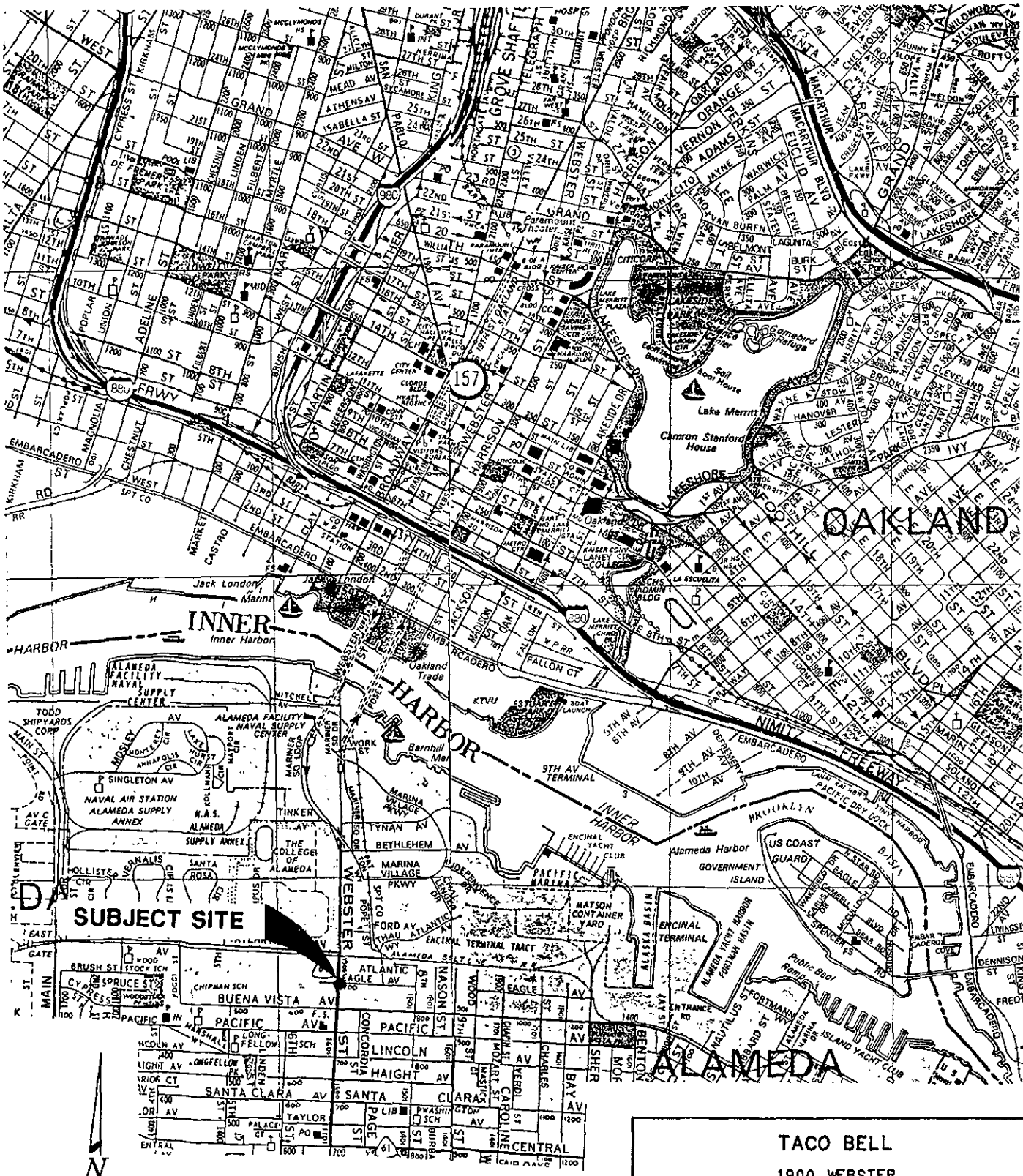
epa\e9170.3qm

APPENDIX A

Vicinity Map

Location Map

Groundwater Gradient Map



NOT TO SCALE

TACO BELL

1900 WEBSTER
ALAMEDA, CALIFORNIA

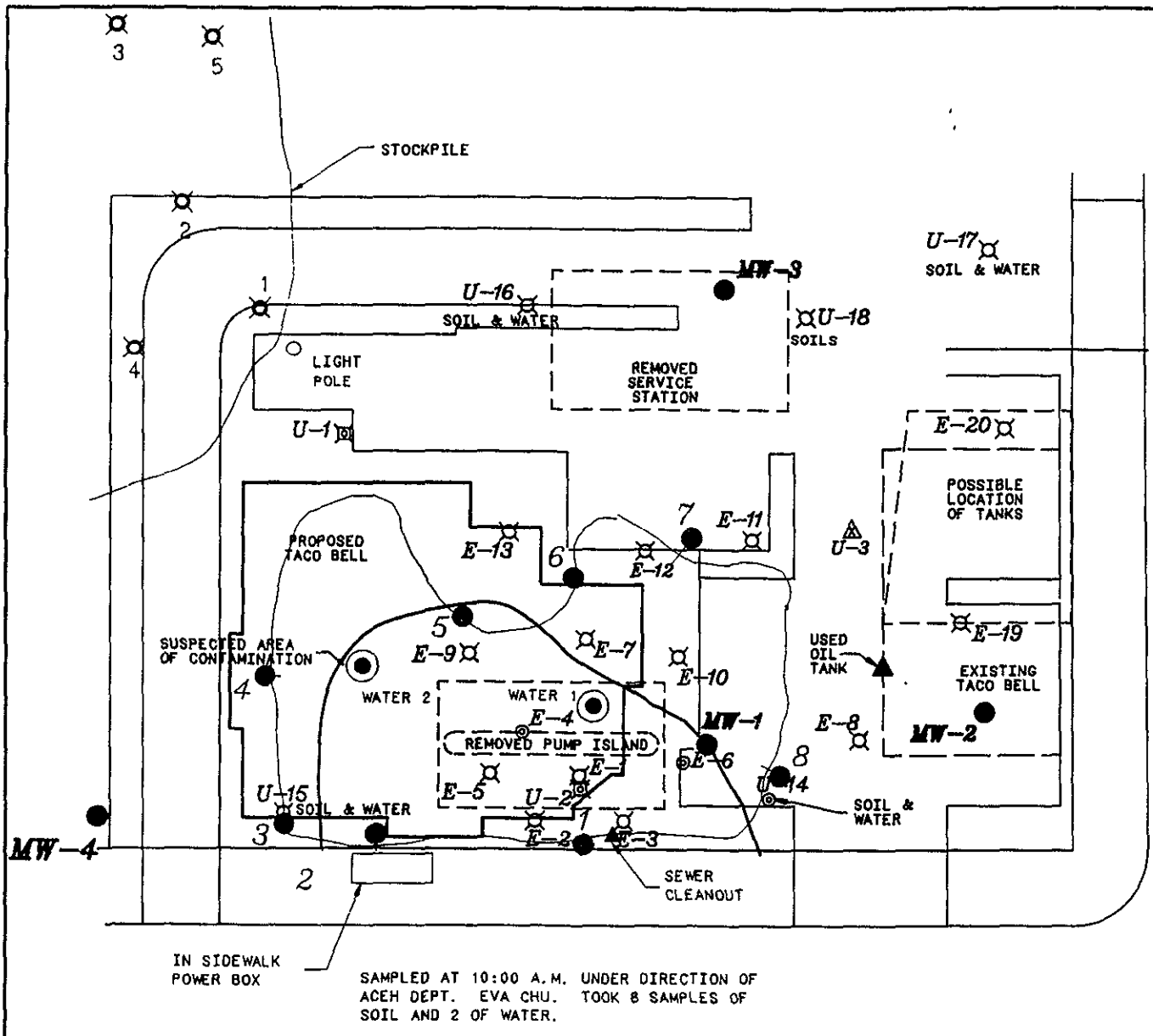
VICINITY MAP

LRA ENVIRONMENTAL
3235 SUNRISE BLVD, STE 5
RANCHO CORDOVA CA 95742

DATE 6 OCTOBER 1993

DRWG. NO. E-9170-1

PLATE NUMBER 1



SAMPLED AT 10:00 A.M. UNDER DIRECTION OF ACEH DEPT. EVA CHU. TOOK 8 SAMPLES OF SOIL AND 2 OF WATER.

NOTE

LOCATION OF FORMER BUILDING AND TANK SITES TAKEN FROM SITE MAPS DRAWN IN THE YEARS 1951 AND 1966 PER THE EXXON COMPANY, U.S.A. IN CONCORD, CA.

- ● SOIL SAMPLING SITES IN EXCAVATION SIDEWALLS JUNE 3, 1992
- ⌑ STOCKPILE SAMPLING SITES JUNE 15, 1992
- ⌑ USED OIL STORAGE TANK. SOIL SAMPLED 7-13-92
- ▲ SOIL SAMPLED IN POSSIBLE TANK FIELD 7-13-92
- ● MONITORING WELL PLACEMENTS

NOT TO SCALE

LEGEND

- ⌑ EXPLORATORY BORINGS-DESIGNATED "E"
- ⚠ GEOTECHNICAL 1 DRIVE BORINGS-DESIGNATED "U"
- ⌑ GEOTECHNICAL 3 DRIVE BORINGS-DESIGNATED "U"
- ◎ EXPLORATORY BORINGS-CONTAMINATED-DES. "E"
- - - FORMER TANK LOCATIONS
- — — LOCATION OF FORMER STRUCTURES

TACO BELL ALAMEDA

1900 WEBSTER STREET
ALAMEDA, CALIFORNIA

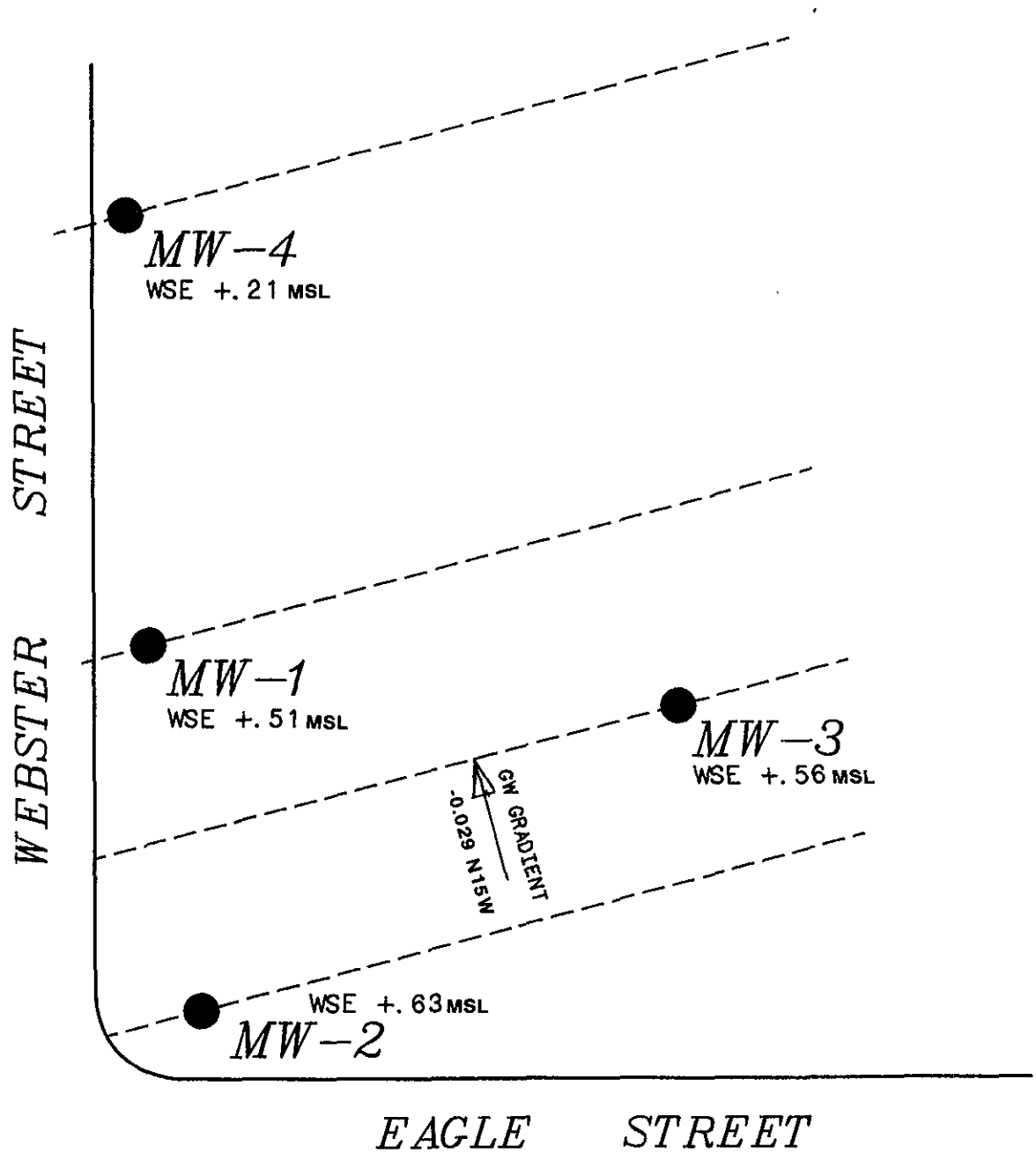
LOCATION MAP

LRA ENVIRONMENTAL
3235 SUNRISE BLVD, STE 5
RANCHO CORDOVA CA 95742

DATE 6 OCTOBER 1993

DRWG. NO. E9170E-1

PLATE NUMBER 2



N

WSE = WATER SURFACE ELEVATION

MSL = MEAN SEA LEVEL

SCALE 1" = 20'

TACO BELL ALAMEDA

1900 WEBSTER STREET
ALAMEDA, CALIFORNIA

GROUNDWATER GRADIENT MAP

LRA ENVIRONMENTAL
3235 SUNRISE BLVD, STE 5
RANCHO CORDOVA CA 95742

DATE 7-OCT-93

DRWG. NO. E9170G-1

PLATE NUMBER 3

APPENDIX B

Water Quality Parameter Tables

Lab Analysis Report

Chain of Custody

LRA ENVIRONMENTAL

JOB NAME: TACO BELL ALAMEDA JOB NUMBER: 92217T DATE: 9-1-93

M. W. NO.	CASING SIZE	DEPTH	H_2O DEPTH	FT. OF WETTED CASING	GALLONS OF H O PERGED	H O TEMP.	SALINITY	CONDUCTIVITY	PH	TIME
M1	4"	18.43'	3.76'	14.67'	9.1	22°F	1	1200	6.26	1350
M1	4"	18.43'	3.76'	14.67'	9.1	22°F	1	1200	6.27	
M1	4"	18.43'	3.76'	14.67'	9.1	21°F	1	1100	6.35	
M1	4"	18.43'	3.76'	14.67'	9.1	21°F	-1	1000	6.28	
M1	4"	18.43'	3.76'	14.67'	9.1	21°F	-1	1000	6.31	1405
					45.5 total					
M2	4"	17.71'	4.14'	13.57'	9.1	24°F	1	1700	6.45	1248
M2	4"	17.71'	4.14'	13.57'	9.1	24°F	1	1600	6.46	
M2	4"	17.71'	4.14'	13.57'	9.1	23°F	1	1400	6.61	
M2	4"	17.71'	4.14'	13.57'	9.1	23°F	-1	1500	6.64	
M2	4"	17.71'	4.14'	13.57'	9.1	23°F	1	1500	6.62	1320
					45.5 total					

LRA ENVIRONMENTAL

JOB NAME: TACO BELL ALAMEDA JOB NUMBER: 92217T DATE: 9-1-93

M. W. NO.	CASING SIZE	DEPTH	H_2O DEPTH	FT. OF WETTED CASING	GALLONS OF H_2O PERGED	H_2O TEMP.	SALINITY	CONDUCTIVITY	PH	TIME
M3	4"	17.40'	3.65'	13.75'	9.1	23°F	1	1300	6.34	1200
M3	4"	17.40'	3.65'	13.75'	9.1	17°F	1	1300	6.36	
M3	4"	17.40'	3.65'	13.75'	9.1	17°F	1	1300	6.40	
M3	4"	17.40'	3.65'	13.75'	9.1	18°F	1	1200	6.41	
M3	4"	17.40'	3.65'	13.75'	9.1	18°F	1	1100	6.61	1225
					45.5 total					
M4	4"	18.50'	4.44'	14.06'	9.8	24°F	3	1900	6.30	1025
M4	4"	18.50'	4.44'	14.06'	9.8	22°F	2	17.500	6.10	
M4	4"	18.50'	4.44'	14.06'	9.8	22°F	2	1600	6.24	
M4	4"	18.50'	4.44'	14.06'	9.8	22°F	1	12.500	6.41	
M4	4"	18.50'	4.44'	14.06'	9.8	18°F	1	12.500	6.40	1100
					49.0 total					

California Laboratory Services

LRA Environmental
3235 Sunrise Blvd. Ste. 5
Rancho Cordova, CA 95742

09/14/93

Attention: **Robert Nicholson**

Reference: **Analytical Results**

Project Name: **Taco Bell Alameda/3rd QTR '93**
Project No.: **E9171**
Date Received: **09/07/93**
Chain Of Custody: **10006**

CLS ID No.: **M2133**
CLS Job No.: **792133**

The following analyses were performed on the above referenced project:

No. of Samples	*Turnaround Time*	*Analysis Description*
4	5 Days	TPH Diesel by DHS Method - M8015 (water)
4	5 Days	TPH Gasoline and BTXE (water)
4	5 Days	Total Oil and Grease, EPA Method 9070

These samples were received by California Laboratory Services in a chilled, intact state and accompanied by a valid chain of custody document.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

George Hampton
Laboratory Director

3249 Fitzgerald Road Rancho Cordova, CA 95742 (916) 638-7301 Fax (916) 638-4510

California Laboratory Services

Analysis Report: **Total Petroleum Hydrocarbons, EPA Method 8015**
Separatory Funnel, EPA Method 3510

Client: **LRA Environmental**
3235 Sunrise Blvd. Ste. 5
Rancho Cordova, CA 95742

Project: **Taco Bell Alameda/3rd QTR '93**

Date Sampled: **09/01/93**
Date Received: **09/07/93**
Date Extracted: **09/08/93**
Date Analyzed: **09/09/93**
Date Reported: **09/10/93**

Project No.: **E9171**
Contact: **Robert Nicholson**
Phone: **(916)631-4455**

CLS Contact: **George Hampton**
Job No.: **792133**
COC Log No.: **10006**
CLS ID No.: **M2133**
Batch No.: **12041**
Matrix: **WATER**

ANALYTE

Sample I.D. Client	CLS	TPH as Diesel (mg/L)	TPH as Kerosene (mg/L)
E9171 MW #1	1A	ND	ND
E9171 MW #2	2A	ND	ND
E9171 MW #3	3A	ND	ND
E9171 MW #4	4A	ND	ND
Rep. Limit		0.05	0.20

ND = Not detected at or above indicated Reporting Limit
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

California Laboratory Services

Analysis Report: **Total Petroleum Hydrocarbons, EPA Method 8015**
Separatory Funnel, EPA Method 3510

Client: **LRA Environmental**
3235 Sunrise Blvd. Ste. 5
Rancho Cordova, CA 95742

Project: **Taco Bell Alameda/3rd QTR '93**

Date Extracted: **09/08/93**
Date Analyzed: **09/09/93**
Date Reported: **09/10/93**

Project No.: **E9171**
Contact: **Robert Nicholson**
Phone: **(916)631-4455**

CLS Contact: **George Hampton**
Job No.: **792133**
COC Log No.: **10006**
CLS ID No.: **M2133**
Batch No.: **12041**
Matrix: **WATER**

METHOD BLANK

Analyte	CAS No.	Results (mg/L)	Rep. Limit (mg/L)
TPH as Diesel	N/A	ND	0.05
TPH as Kerosene	N/A	ND	0.20

ND = Not detected at or above indicated Reporting Limit
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

California Laboratory Services

Analysis Report: **Total Petroleum Hydrocarbons, EPA Method 8015**
Separatory Funnel, EPA Method 3510

Client: **LRA Environmental**
3235 Sunrise Blvd. Ste. 5
Rancho Cordova, CA 95742

Project: **Taco Bell Alameda/3rd QTR '93**

Date Extracted: **09/08/93**
Date Analyzed: **09/09/93**
Date Reported: **09/10/93**

Project No.: **E9171**
Contact: **Robert Nicholson**
Phone: **(916)631-4455**

CLS Contact: **George Hampton**
Job No.: **792133**
COC Log No.: **10006**
CLS ID No.: **M2133**
Batch No.: **12041**
Matrix: **WATER**

LAB CONTROL SAMPLE

Analyte	CAS No.	LCS Conc. (mg/L)	LCS Recovery (percent)
Diesel	N/A	1.0	90

LAB CONTROL SAMPLE DUPLICATE

Analyte	CAS No.	LCS Conc. (mg/L)	LCSD Recovery (percent)
Diesel	N/A	1.0	90

LCS RPD

Analyte	CAS No.	LCS Relative Percent Difference (percent)
Diesel	N/A	0

California Laboratory Services

Analysis Report: **Total Petroleum Hydrocarbons, EPA Method 8015**
Purge and Trap, EPA Method 5030

Client: **LRA Environmental**
3235 Sunrise Blvd. Ste. 5
Rancho Cordova, CA 95742

Project: **Taco Bell Alameda/3rd QTR '93**

Date Sampled: **09/01/93**
Date Received: **09/07/93**
Date Extracted: **09/08/93**
Date Analyzed: **09/08/93**
Date Reported: **09/09/93**

Project No.: **E9171**
Contact: **Robert Nicholson**
Phone: **(916)631-4455**

CLS Contact: **George Hampton**
Job No.: **792133**
COC Log No.: **10006**
CLS ID No.: **M2133**
Batch No.: **12040**
Matrix: **WATER**

ANALYTE

Sample I.D. Client	CLS	TPH as Gasoline (mg/L)
E9171 MW #1	1B	ND
E9171 MW #2	2B	ND
E9171 MW #3	3B	ND
E9171 MW #4	4B	ND
Rep. Limit		0.05

ND = Not detected at or above indicated Reporting Limit
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

California Laboratory Services

Analysis Report: **Total Petroleum Hydrocarbons, EPA Method 8015**
Purge and Trap, EPA Method 5030

Client: **LRA Environmental**
3235 Sunrise Blvd. Ste. 5
Rancho Cordova, CA 95742

Project: **Taco Bell Alameda/3rd QTR '93**

Date Extracted: 09/08/93
Date Analyzed: 09/08/93
Date Reported: 09/09/93

Project No.: **E9171**
Contact: **Robert Nicholson**
Phone: **(916)631-4455**

CLS Contact: **George Hampton**
Job No.: **792133**
COC Log No.: **10006**
CLS ID No.: **M2133**
Batch No.: **12040**
Matrix: **WATER**

METHOD BLANK

Analyte	CAS No.	Results (mg/L)	Rep. Limit (mg/L)
TPH as Gasoline	N/A	ND	0.05

ND = Not detected at or above indicated Reporting Limit
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

California Laboratory Services

Analysis Report: **BTEX, EPA Method 602**
Purge and Trap, EPA Method 5030

Client: **LRA Environmental**
3235 Sunrise Blvd. Ste. 5
Rancho Cordova, CA 95742

Project No.: **E9171**
Contact: **Robert Nicholson**
Phone: **(916)631-4455**

Project: **Taco Bell Alameda/3rd QTR '93**

CLS Contact: **George Hampton**
Job No.: **792133**
COC Log No.: **10006**
CLS ID No.: **M2133**
Batch No.: **12040**
Matrix: **WATER**

Date Sampled: **09/01/93**
Date Received: **09/07/93**
Date Extracted: **09/08/93**
Date Analyzed: **09/08/93**
Date Reported: **09/09/93**

SURROGATE RECOVERY

Sample I.D. Client	CLS	o-Chlorotoluene CAS No. 95-49-8 (percent)
E9171 MW #1	1B	111
E9171 MW #2	2B	111
E9171 MW #3	3B	111
E9171 MW #4	4B	110
Surr Conc. (ug/L)		20

ANALYTE

Sample I.D. Client	CLS	Benzene 71-43-2 (ug/L)	Toluene 108-88-3 (ug/L)	Ethylbenzene 100-41-4 (ug/L)	Xylenes, total 1330-20-7 (ug/L)
E9171 MW #1	1B	ND	ND	ND	ND
E9171 MW #2	2B	ND	ND	ND	ND
E9171 MW #3	3B	ND	ND	ND	ND
E9171 MW #4	4B	ND	ND	ND	ND
Rep. Limit		0.3	0.3	0.3	0.6

ND = Not detected at or above indicated Reporting Limit
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

California Laboratory Services

Analysis Report: **BTEX, EPA Method 602**
Purge and Trap, EPA Method 5030

Client: **LRA Environmental**
3235 Sunrise Blvd. Ste. 5
Rancho Cordova, CA 95742

Project: **Taco Bell Alameda/3rd QTR '93**

Date Extracted: **09/08/93**
Date Analyzed: **09/08/93**
Date Reported: **09/09/93**

Project No.: **E9171**
Contact: **Robert Nicholson**
Phone: **(916)631-4455**

CLS Contact: **George Hampton**
Job No.: **792133**
COC Log No.: **10006**
CLS ID No.: **M2133**
Batch No.: **12040**
Matrix: **WATER**

MB SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	MB Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	20	112

METHOD BLANK

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)
Benzene	71-43-2	ND	0.3
Toluene	108-88-3	ND	0.3
Ethylbenzene	100-41-4	ND	0.3
Xylenes, total	1330-20-7	ND	0.6

ND = Not detected at or above indicated Reporting Limit
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

California Laboratory Services

Analysis Report: **BTEX, EPA Method 602**
Purge and Trap, EPA Method 5030

Client: **LRA Environmental**
3235 Sunrise Blvd. Ste. 5
Rancho Cordova, CA 95742

Project: **Taco Bell Alameda/3rd QTR '93**

Date Extracted: **09/08/93**
Date Analyzed: **09/08/93**
Date Reported: **09/09/93**

Project No.: **E9171**
Contact: **Robert Nicholson**
Phone: **(916)631-4455**

CLS Contact: **George Hampton**
Job No.: **792133**
COC Log No.: **10006**
CLS ID No.: **M2133**
Batch No.: **12040**
Matrix: **WATER**

MS SURROGATE

Analyte	CAS No.	MS Surr. Conc. (ug/L)	MS Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	20	100

MATRIX SPIKE

Analyte	CAS No.	MS Conc. (ug/L)	MS Recovery (percent)
Benzene	71-43-2	20	97
Toluene	108-88-3	20	89
Ethylbenzene	100-41-4	20	96
Xylenes, total	1330-20-7	60	108

MSD SURROGATE

Analyte	CAS No.	Surr. Conc. (ug/L)	MSD Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	20	100

MATRIX SPIKE DUPLICATE

Analyte	CAS No.	MSD Conc. (ug/L)	MSD Recovery (percent)
Benzene	71-43-2	20	97
Toluene	108-88-3	20	90
Ethylbenzene	100-41-4	20	97
Xylenes, total	1330-20-7	60	109

Analysis Report: **BTEX, EPA Method 602**
Purge and Trap, EPA Method 5030

Client: **LRA Environmental**
3235 Sunrise Blvd. Ste. 5
Rancho Cordova, CA 95742

Project: **Taco Bell Alameda/3rd QTR '93**

Date Extracted: **09/08/93**
Date Analyzed: **09/08/93**
Date Reported: **09/09/93**

Project No.: **E9171**
Contact: **Robert Nicholson**
Phone: **(916)631-4455**

CLS Contact: **George Hampton**
Job No.: **792133**
COC Log No.: **10006**
CLS ID No.: **M2133**
Batch No.: **12040**
Matrix: **WATER**

RELATIVE % DIFFERENCE

Analyte	CAS No.	Relative Percent Difference (percent)
Benzene	71-43-2	0
Toluene	108-88-3	1
Ethylbenzene	100-41-4	1
Xylenes, total	1330-20-7	1

California Laboratory Services

Analysis Report: **BTEX, EPA Method 602**
Purge and Trap, EPA Method 5030

Client: **LRA Environmental**
3235 Sunrise Blvd. Ste. 5
Rancho Cordova, CA 95742

Project: **Taco Bell Alameda/3rd QTR '93**

Date Extracted: **09/08/93**
Date Analyzed: **09/08/93**
Date Reported: **09/09/93**

Project No.: **E9171**
Contact: **Robert Nicholson**
Phone: **(916)631-4455**

CLS Contact: **George Hampton**
Job No.: **792133**
COC Log No.: **10006**
CLS ID No.: **M2133**
Batch No.: **12040**
Matrix: **WATER**

LCS SURROGATE

Analyte	CAS No.	LCS Conc. (ug/L)	LCS Surrogate Recovery (percent)
o-Chlorotoluene	95-49-8	20	99

LAB CONTROL SAMPLE

Analyte	CAS No.	LCS Conc. (ug/L)	LCS Recovery (percent)
Benzene	71-43-2	20	99
Ethylbenzene	100-41-4	20	90
Toluene	108-88-3	20	97
Xylenes, total	1330-20-7	60	109

California Laboratory Services

Analysis Report: **Total Oil and Grease, EPA Method 9070**
Separatory Funnel, EPA Method 3510

Client: **LRA Environmental**
3235 Sunrise Blvd. Ste. 5
Rancho Cordova, CA 95742

Project: **Taco Bell Alameda/3rd QTR '93**

Date Sampled: **09/01/93**
Date Received: **09/07/93**
Date Extracted: **09/09/93**
Date Analyzed: **09/13/93**
Date Reported: **09/14/93**

Project No.: **E9171**
Contact: **Robert Nicholson**
Phone: **(916)631-4455**

CLS Contact: **George Hampton**
Job No.: **792133**
COC Log No.: **10006**
CLS ID No.: **M2133**
Batch No.: **12053**
Matrix: **WATER**

ANALYTE

Sample I.D. Client	CLS	Total Oil & Grease (mg/L)
E9171 MW #1	1A	ND
E9171 MW #2	2A	ND
E9171 MW #3	3A	30
E9171 MW #4	4A	ND
Rep. Limit		5

ND = Not detected at or above indicated Reporting Limit
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

Analysis Report: **Total Oil and Grease, EPA Method 9070**
Separatory Funnel, EPA Method 3510

Client: **LRA Environmental**
3235 Sunrise Blvd. Ste. 5
Rancho Cordova, CA 95742

Project: **Taco Bell Alameda/3rd QTR '93**

Date Extracted: **09/09/93**
Date Analyzed: **09/13/93**
Date Reported: **09/14/93**

Project No.: **E9171**
Contact: **Robert Nicholson**
Phone: **(916)631-4455**

CLS Contact: **George Hampton**
Job No.: **792133**
COC Log No.: **10006**
CLS ID No.: **M2133**
Batch No.: **12053**
Matrix: **WATER**

METHOD BLANK

Analyte	CAS No.	Results (mg/L)	Rep. Limit (mg/L)
Total Oil & Grease	N/A	ND	5

ND = Not detected at or above indicated Reporting Limit
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

3249 Fitzgerald Road Rancho Cordova, CA 95742 (916) 638-7301 Fax (916) 638-4510

California Laboratory Services

Analysis Report: **Total Oil and Grease, EPA Method 9070**
Separatory Funnel, EPA Method 3510

Client: **LRA Environmental**
3235 Sunrise Blvd. Ste. 5
Rancho Cordova, CA 95742

Project: **Taco Bell Alameda/3rd QTR '93**

Date Extracted: **09/09/93**
Date Analyzed: **09/13/93**
Date Reported: **09/14/93**

Project No.: **E9171**
Contact: **Robert Nicholson**
Phone: **(916)631-4455**

CLS Contact: **George Hampton**
Job No.: **792133**
COC Log No.: **10006**
CLS ID No.: **M2133**
Batch No.: **12053**
Matrix: **WATER**

LAB CONTROL SAMPLE

Analyte	CAS No.	LCS Conc. (mg/L)	LCS Recovery (percent)
Oil & Grease	N/A	50	95

LAB CONTROL SAMPLE DUPLICATE

Analyte	CAS No.	LCS Conc. (mg/L)	LCSD Recovery (percent)
Oil & Grease	N/A	50	97

LCS RPD

Analyte	CAS No.	LCS Relative Percent Difference (percent)
Oil & Grease	N/A	2

California Laboratory Services

CHAIN OF CUSTODY

M2135 LOG NO.

CLIENT NAME: LRA Environmental
ADDRESS: 3235 Sunrise Blvd #5
Rancho Cordova, CA 95742
PROJECT NAME: Taco Bell Alameda / 3rd QTR '93
PROJECT MANAGER: Robert A Nicholson PHONE #: (916) 631-4455
SAMPLED BY: Chuck Johnson
JOB DESCRIPTION: UST Removal / 3rd QTR Monitoring Round
SITE LOCATION: 1900 Webster Street
Oakland, CA

CLIENT JOB NUMBER: E9171

DESTINATION LABORATORY:
[X] CLS
3249 FITZGERALD RD.
RANCHO CORDOVA, CA
95742
[ ] OTHER

PH: (916) 638-7301

FIELD CONDITIONS: Cool / Partial A.M. overcast
COMPOSITE: None
SPECIAL INSTRUCTIONS: None

DATE	TIME	SAMPLE IDENTIFICATION	METHOD	MATRIX	CONTAINER NO.	CONTAINER TYPE	PRESERVATIVES	TPH G/D/K	Total Oil & Grease	BTEX	TURN AROUND TIME: 24 HOURS	48 HOURS	1 WEEK	2 WEEKS	NOTE / FIELD READINGS
09-01-93	1405	E9171 MW #1	Bail	H_2O	02	Amber 500ml	N	X	X				X		
"	"	" " "	"	"	06	VOA	N			X			X		
09-01-93	1320	E9171 MW #2	Bail	H_2O	02	Amber 500ml	N	X	X				X		
"	"	" " "	"	"	06	VOA	N			X			X		
09-01-93	1225	E9171 MW #3	Bail	H_2O	02	Amber 500ml	N	X	X				X		
"	"	" " "	"	"	06	VOA	N			X			X		
09-01-93	1100	E9171 MW #3	Bail	H_2O	02	Amber 500ml	N	X	X				X		
"	"	" " "	"	"	06	VOA	N			X			X		

SUSPECTED CONSTITUENTS: Petroleum Hydrocarbons / BTEX

SAMPLE RETENTION TIME

PRESERVATIVES: (1) HCL (2) HNO_3 (3) = COLD (4)

RELINQUISHED BY (SIGN)	PRINT NAME / COMPANY	DATE / TIME	REC'D BY (SIGN)	PRINT NAME / COMPANY
Chuck Johnson	LRA Environmental	09-01-93 / 1900 HR	Robert A Nicholson	LRA Environmental
Robert A Nicholson	LRA Environmental	09-07-93 / 1605	CLS	

REC'D AT LAB BY: Susan Lirrent
DATE / TIME: 9-7-93 1605
CONDITIONS / COMMENTS:

SHIPPED VIA: [ ] FED X [ ] UPS [X] OTHER C.L.S. AIR BILL #