



**LRA ENVIRONMENTAL**

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

FAX 916/631-4466

**SITE REMEDIATION OBSERVATION**  
**TACO BELL**  
**1900 WEBSTER STREET**  
**ALAMEDA, ALAMEDA COUNTY, CALIFORNIA**

**BY**

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

**July 6, 1992**  
**JOB NUMBER E9171**



## **LRA ENVIRONMENTAL**

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

July 6, 1992  
Job Number E9171

FAX 916/631-4466

**TACO BELL**  
**1900 WEBSTER STREET**  
**ALAMEDA, ALAMEDA COUNTY, CALIFORNIA**

### **INTRODUCTION**

This report describes the partial remediation of contamination by soil excavation conducted June 1, 2 and 3, 1992; and the subsequent soil aeration which occurred June 5 through July 2, 1992 at the parking lot located at TACO BELL, 1900 Webster Street, Alameda, Alameda County, California; see Plates Number 1 and 2 for vicinity and location maps. This report is being submitted by LRA Environmental to Alameda County Environmental Health Department and the Regional Water Quality Control Board (RWQCB), on behalf of Dolan Foster Enterprises, the property owner.

The work performed was completed as part of the overall site remediation strategy for the Taco Bell site, as outlined according to "Soils Investigation Workplan", Job Number E9171, dated February 26, 1992. Soil samples were collected and analyzed during the course of this portion of the site remediation and the results of these analyses are discussed herein.

### **SOIL EXCAVATION AND FIELD OBSERVATION**

All native soils registering PID measurements above 5 ppm or emitting chemical odors were removed from the excavation. These soils were removed from the area where the tank dispensers were located. Additionally, 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, as observed by Eva Chu of the Alameda County Environmental Health Department (ACEHD). Excavation boundaries and depth contours are shown on Plate Number 3.

Our Job Number E9171  
July 6, 1992

Approximately 300 cubic yards of native soils were removed from the excavation. All trucking, excavation and backfilling was performed by V.C.I. Construction Corporation, registered DOT, DMV, EPA, etc. Asphalt concrete was removed using mechanical equipment, placed in a "dump truck" and transported from the site. Soils were excavated and transported to a dedicated area in the parking lot that had been properly prepared to receive the soil for stockpiling. The designated area was prepared by covering the area with overlapping plastic sheeting, as depicted on Plate Number 2. The stockpile was located on the north half of the parking lot. The stockpile was covered with plastic sheeting until aeration was initiated. Aeration of these soils is discussed in subsequent sections of this report.

#### FIELD OBSERVATION

During the soil removal work on June 1, 2 and 3, 1992, native soils encountered at depths to 6 feet below grade emitted strong chemical odors and registered 50 to 200 on a relative scale as organic vapor on a PID; photo-ionization detector, Model PI-101. The highest chemical concentrations in the soils appeared to be in the upper 3 to 6 feet of strata. These soils were removed. The excavated soils were stockpiled on the designated area. The PID measurements of soil suggest that the chemical concentrations in the soils were greatly reduced at the depth of 7 feet below grade. Specifically, reductions in contaminant levels were observed at the seven foot (7') depth and away from the previously located fuel storage tank and gasoline dispenser and connection pipes.

#### EXCAVATION BACKFILLING

The excavated area was backfilled and compacted with pit run to a depth of 2 feet below surface. Aggregate base was then used to backfill the remainder of the excavation. All backfill was compacted to 90% of the maximum dry density of the material being used. The area was left unpaved as construction of a new restaurant will soon begin and the original Taco Bell Restaurant will be demolished.

#### CHEMICAL ANALYSIS AND RESULTS

Soil and water samples were collected from the excavation bottom and sidewalks under the direction of Eva Chu, Alameda County Environmental Health & Hazardous Waste Specialist. All samples were analyzed for benzene, toluene, ethylbenzene and xylene using EPA Method 8020, and total fuel hydrocarbon as gasoline by EPA Method 5030.



Our Job Number E9171  
 July 6, 1992

Analysis results for the soil and water samples collected from the excavation bottom and sidewalls are outlined below.

CHEMICAL ANALYSIS AND RESULTS  
 FOR JUNE 3, 1992

<u>Sample No.</u>	<u>Depth/ Location</u>	<u>SOIL</u>				
		<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Xylene</u>	<u>TFH-G<sub>1</sub></u>
1 <sup>2</sup>	Soil	ND	ND	ND	ND	ND
2	"	ND	ND	ND	ND	ND
3	"	ND	ND	ND	ND	ND
4	"	ND	ND	ND	ND	ND
5	"	ND	ND	ND	ND	ND
6	"	ND	ND	ND	ND	ND
7	"	ND	ND	ND	ND	ND
8	"	ND	ND	ND	ND	ND

<u>WATER<sup>3</sup></u>						
1	Water	29	130	ND	2800	29
2	"	16	400	200	2300	21

<u>STOCKPILED SOIL</u>						
<u>Date</u>	<u>Location</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Xylene</u>	
06-15-92	Stockpile SW	ND	1.3	0.9	45	
	Stockpile Center	0.9	5.6	5.8	40	
	Stockpile NE	ND	1.1	0.5	5.5	
	Stockpile NW	Flashpoint		> 140°F		
		Sulfide		ND		
		pH		8.6		

<sup>1</sup>Total Fuel Hydrocarbons - Gasoline by EPA Method 5030.

<sup>2</sup>All samples taken on June 3, 1992.

<sup>3</sup>All units measured in parts per billion (ppb).



Our Job Number E9171  
July 6, 1992

## SOIL AERATION

The approximately 300 cubic yards of petroleum tainted native soils from beneath and adjacent to the gasoline dispenser islands were aerated on site under permit from Bay Area Air Quality Management Department (BAAQMD). The area used for aeration was lined with 10-mil overlapping plastic sheeting and enclosed by an existing fence. Soils were spread in an approximately 2 foot to 3 foot thick layer over the area. Soils were initially turned and spread using backhoe and loader equipment. Once the soils were spread evenly over the area, discing equipment was used to mix, turn, and break up soil clods. Discing of the soils was performed twice weekly for a period of three (3) weeks by V.C.I. Construction until the soils were relatively dry and consistent in character (mixing of the clay and sand soils resulted in a loose, clayey sand).

After mixing and turning the soil for two weeks, soils were sampled on June 15, 1992 according to BAAQMD guidelines and tested for organic lead, benzene, toluene, ethyl benzene, xylene and TFH using Method EPA 5030. Five (5) soil samples were collected. Laboratory certificates are included in Appendix B. Samples are identified as SW #1, Center #2, NE #3, and NW #4 on the data sheets.

After two weeks of soil mixing in the stockpile, results of the chemical analyses of soil samples from the stockpile are as follows:

### STOCKPILE SOIL SAMPLES CHEMICAL ANALYSIS

<u>Date</u>	<u>Sample #</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Xylene</u>
06-15-92	S.W. #1	ND	1.3	0.9	45
	Center #2	0.9	5.6	5.8	40
	N.E. #3	ND	1.1	0.5	5.5
06-15-92	N.W. #4	Sulfide		ND	
		Flashpoint		> 140°F	
		Cyanide		ND	
		pH		8.6	

These results indicate that the soils were sufficiently aerated in that levels of volatile organic compounds were reduced to near or below detection limits. As a result, further characterization was not deemed necessary by B.F.I. Water Systems, the receiver of the remediated soil.



Our Job Number E9171

July 6, 1992

## SUMMARY AND CONCLUSIONS

As reported above, LRA Environmental personnel in conjunction with representatives of ACEHD, observed the excavation and removal of petroleum tainted soils and the soil aeration process. Based on field observations and laboratory data obtained during the work, the following conclusions can be made.

- o Observations of the soils surrounding the gasoline dispenser island and underlying native soils indicated that chemicals had been released into the subsurface beneath the original gasoline dispenser area. Approximately 300 cubic yards of these petroleum tainted soils were removed.
- o Soil sampling and chemical analysis for volatile organic compounds was performed on samples collected under the supervision of Eva Chu from the sidewalls and water from the bottom of the tank excavation, as well as from the aerated stockpile. All chemical analysis indicated that the greatest portion of the contaminated soil had been removed and sufficiently remediated for disposal at BFI Waste Management Systems on Vasco Road in Livermore.
- o Due to the age and prolonged use of the tank/pump island pipes and connectors, it is likely that they may have leaked and contributed to the subsurface contamination conditions.
- o The excavation was backfilled and compacted so as to accommodate the construction of a new Taco Bell Restaurant. All fill was compacted to 90 percent (or above) of the maximum dry density of the material being used to backfill the excavation.



Our Job Number E9171  
July 6, 1992

- o Aeration of the removed, chemical-affected soils was performed on site under permit of the Bay Area Air Quality Management Department (BAAQMD). Aeration has been completed, and chemical analyses of the soils indicate that chemicals are no longer present in the excavated soil at concentrations above action limits.

Very truly yours,

*LRA ENVIRONMENTAL*

---

Ahmad Badie, PhD., C.E.  
Vice President, Geotechnical

---

Robert A. Nicholson  
Vice President

---

Michael R. Miles  
Staff Engineer/Geologist

AB:bas  
[epa\e9171.rem]

