



February 4, 1992

Mr. Dennis Byrne
Alameda County Health Agency
Department of Environmental Health
Division of Hazardous Materials
80 Swan Way, Room 20
Oakland, California 94621

**SUBJECT: TANK AND LINE REPLACEMENT
ARCO FACILITY NO. 2169
889 WEST GRAND AVENUE, OAKLAND, CALIFORNIA**

Dear Mr. Byrne:

On behalf of ARCO Products Company (ARCO), Roux Associates (Roux) has prepared this letter to confirm our telephone conversation of January 27, 1992, regarding the underground storage tank (UST) and line replacement project at ARCO Facility No. 2169, located at 889 West Grand Avenue, Oakland, California (Site).

On January 16, 1992, four USTs were excavated and removed from the Site by ARCO's tank replacement contractor, Golden West Builders of Brentwood, California (Golden West). The static water level measured in the excavation was 13 feet below ground surface (bgs). Following removal, nine soil samples were collected by Roux from the sidewalls of the former tank cavity. Golden West then excavated all the backfill material from the former tank cavity. On January 20, 1992, Golden West shored and excavated the new tank cavity. The new tank cavity is located on the northwest corner of the Site about 50 feet north of the former tank cavity. Soil and backfill material excavated from both the new tank cavity and former tank cavity were stockpiled on Site. Roux collected composite samples for laboratory analysis from each 50 cubic yards of stockpiled material.

Laboratory analyses of sidewall samples collected from the former tank cavity indicate significant levels of petroleum hydrocarbons are present at the Site in the vicinity of the former tank cavity. The highest concentration of petroleum hydrocarbons are located along the north sidewall adjacent to the ARCO AM/PM building. Further excavation along the northern sidewall to remove contaminated soil is not possible without endangering the existing structure. Therefore, following completion of the tank replacement project, ARCO will investigate the extent of hydrocarbon contamination at the Site. The investigation, at

Doc #A133W01.1.2

a minimum, will consist of the installation of soil borings and monitoring wells, soil and ground water sampling and analysis, and a pilot scale vapor extraction test. Based on the data collected during the Site investigation, an appropriate remedial system(s) will be designed and implemented at the Site. A Work Plan describing the initial phase of the Site investigation has been prepared and submitted to you by GeoStrategies, Inc., of Hayward, California.

Laboratory analyses of composite samples indicate elevated levels of petroleum hydrocarbons in the soil stockpiles. ARCO plans to aerate these materials on Site to reduce the hydrocarbon concentrations. Soil containing less than 10 mg/kg (ppm) total petroleum hydrocarbons and non-detectable levels of benzene will be used to backfill the former tank cavity. A three-foot layer of clean imported pea gravel will be placed at the base of the former tank cavity to create a ground water extraction sump. A ground water recovery well will be installed into the former tank cavity during the subsequent Site investigation. To facilitate future remediation of the Site, vault boxes and horizontal conveyance piping will be installed by Golden West prior to reopening the station for gasoline sales.

As we discussed on Monday, January 27, 1992, ARCO has verbal authorization from the Alameda County Department of Environmental Health to proceed with backfilling of the former tank cavity and installing the new USTs. Golden West will contact you to arrange a schedule for the new UST installation. If any details of this letter are unclear or if you have any questions regarding this project, please contact Paul Supple at (510) 602-2333.

Respectfully submitted,
ROUX ASSOCIATES



Paul Supple
Senior Hydrogeologist



Dean A. Richesin, C.E.G.
Principal-in-Charge

cc: Mr. Charles Carmel, ARCO Products Company
Mr. Chris Winsor, ARCO Products Company
Mr. John Vargas, GeoStrategies Inc.
Mr. Lester Feldman, San Francisco Bay Regional Water Quality Control Board

ROUX ASSOCIATES

Doc #A133W01.1.2

ENVIRONMENTAL CONSULTING
AND MANAGEMENT

ROUX ASSOCIATES

1855 GATEWAY BOULEVARD
SUITE 770
CONCORD, CALIFORNIA 94520

FAX TRANSMITTAL

Date: 4 Feb 1992

To: Mr. Dennis Byrne

Company: Alameda County Dept. of Environmental Health

FAX No: 568-3706

From: Paul Supple

Project No.: A133601
Roux Associates, Inc.

Fax No: 510-687-1258

Phone No: 510-602-2333

Number of pages including cover sheet: 3

Comments: Tank & line replacement at ARCO No. 2169

Original to follow.



1855 GATEWAY BOULEVARD
SUITE 770
CONCORD, CALIFORNIA 94520 510 602-2333 FAX # 510 687-1258

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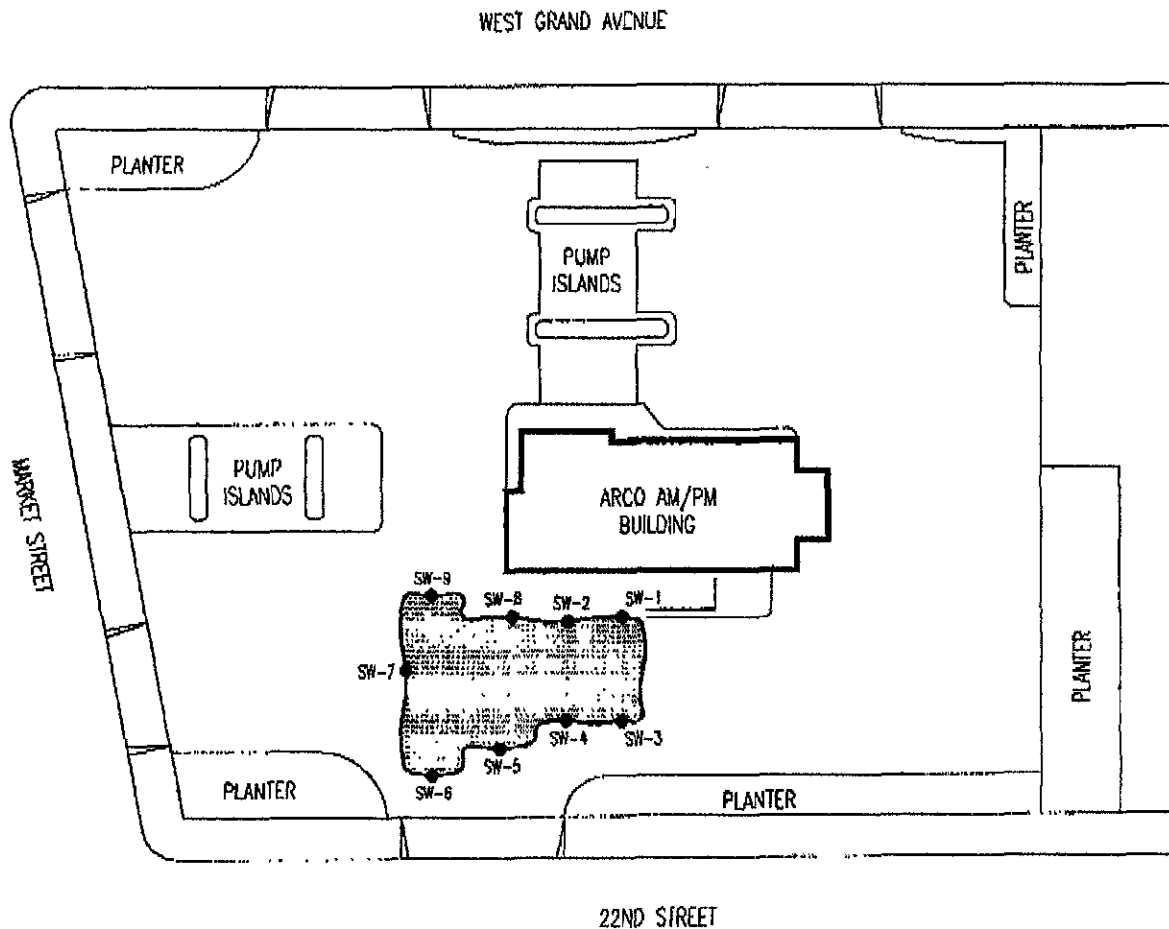


Paul Supple
Senior Hydrogeologist





Dean A. Richesin, C.E.G.
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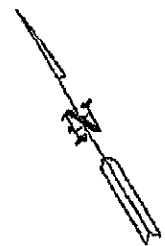



EXPLANATION:

-  EXCAVATED AREA
-  LOCATION AND DESIGNATION OF SOIL SAMPLE

SOURCE:

MAP MODIFIED FROM PLATE 1 10/91
 PROVIDED BY GEOSTRATEGIES INC



 ROUX ASSOCIATES, INC. <small>ENVIRONMENTAL CONSULTING & MANAGEMENT</small>	COMPILED BY: P.S.	PREPARED FOR: ARCO PRODUCTS COMPANY	FIGURE 3
	PREPARED BY: D.D.	TITLE: LOCATION OF TANK CAVITY AND PRODUCT LINE TRENCH SOIL SAMPLES	
	PROJECT MNGR. P.S.	ARCO FACILITY NO. 2169	
	DATE: 01/92		
	SCALE: AS SHOWN		
PROJECT NO. A133W01			
FILE NAME: AR2169XX			

**TABLE 1: Summary of Soil Analyses: Former Tank Cavity
ARCO Facility No. 2169, Oakland, California**

Sample		Depth (feet bgs)	BTEX Distinction (1)					
Designation	Date		TPH-G(1)	TPH-D(1)	Benzene	Toluene	Ethylbenzene	Xylenes
Former Tank Cavity								
SW-1	1/16/92	12	1,200	620	6.8	47	22	140
SW-2	1/16/92	12	81	NA	0.98	2.9	1.9	9.1
SW-3	1/16/92	12	200	7.1	3.0	10	4.6	25
SW-4	1/16/92	12	170	NA	3.2	11	3.9	22
SW-5	1/16/92	12	3.0	NA	1.1	0.022	0.21	0.11
SW-6	1/16/92	12	100	NA	0.88	3.9	2.1	15
SW-7	1/16/92	12	420	NA	4.2	16	8.0	53
SW-8	1/16/92	12	180	NA	2.5	2.7	3.7	23
SW-9	1/16/92	12	200	NA	2.0	4.5	4.7	29

FOOTNOTES

(1) = Concentrations reported in mg/kg (ppm)

TPH-G = Total Petroleum Fuel Hydrocarbons As Low/Medium Boiling Point Hydrocarbons (USEPA Method 8015)

TPH-D = Total Petroleum Fuel Hydrocarbons As High Boiling Point Hydrocarbons (USEPA Method 8015)

BTEX Distinction (USEPA Method 8020)

NA = Not Analysed

ND = None Detected

bgs = Below ground surface

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AND MANAGEMENT

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SUITE 770
CONCORD, CALIFORNIA 94520

FAX TRANSMITTAL

Date: 1-22-92

To: Dennis Byrne

Company: Alameda County Health Agency

FAX No: 568-3706

From: Paul Supple

Project No.: A133 W01
Roux Associates, Inc.

Fax No: 510-687-1258

Phone No: 510-602-2333

Number of pages including cover sheet: 3

Comments: ARCO 2169, 889 West Grand Ave. Oakland, CA.
Former tank cavity sidewall soil sample data.