

PACIFIC
ENVIRONMENTAL
GROUP INC.

Catalytic unit -
Start June 6, 1991

- February 16, 1990
Project Number 330-40.03

500 CFM ^{at} 3500 ppm

Mr. Kyle Christie
ARCO Petroleum Products Company
P.O. Box 5811
San Mateo, California 94402

440 60
1" 3/4"
(1) 2" vapor

Re: ARCO Service Station No. 0276
10600 MacArthur Boulevard at 106th Street
Oakland, California

Dear Mr. Christie:

Pacific Environmental Group, Inc. (PACIFIC) is pleased to submit this report concerning ongoing environmental services in an area adjacent to the ARCO station referenced above. At the request of ARCO, PACIFIC has developed a design for the installation and operation of an in-situ soil venting system at this site. The following is a description of the project site and background, the performance testing, and the soil venting system.

SITE DESCRIPTION AND BACKGROUND

The project site is a parking lot adjacent to southern boundary of the ARCO station located at 10600 MacArthur Boulevard, Oakland, California (Figure 1). The soil venting system has been designed to remediate an area of approximately 90 feet by 100 feet with soils containing petroleum hydrocarbons. The parking lot is part of a commercial development known as Foothill Square Shopping Center.

The presence of petroleum hydrocarbons in the soil in varying concentrations was previously noted in the Preliminary Report of Environmental Investigation, ARCO Station Number 276, May 12, 1989, prepared by Applied Geosystems, and a soil vapor investigation performed by PACIFIC on June 21 and 22, 1989, and reported to ARCO in PACIFIC's letter report of July 17, 1989.

During the PACIFIC investigation a total of sixteen soil gas probes were installed, both at the ARCO station and in the adjacent parking lot. Probes installed in the parking lot were sampled at two depth intervals: 17 to 19 feet and 22 to 24 feet deep. As previously reported by PACIFIC, total hydrocarbon concentrations in the upper sample elevations ranged from 5 parts per million (ppm) to 31,900 ppm; total petroleum concentrations in the lower sample elevations ranged from 20 ppm to 40,000 ppm.

106th STREET



SIDEWALK

FUEL ISLANDS

STATION BUILDING

RESIDENTIAL

MACARTHUR BOULEVARD

SIDEWALK

MANIFOLD

EQUIPMENT LOCATION WITH CHAIN LINK FENCE AND SLATS

PVC PIPE BELOW GRADE TO EQUIPMENT LOCATION

DRIVEWAY

SIDEWALK

PARKING LOT

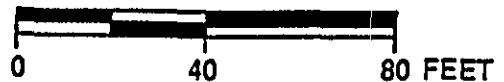
PLANTER

LEGEND

- ⊙ EXISTING MONITORING WELL TO BE USED AS AN EXTRACTION WELL, 22-27' DEPTH
- VACUUM EXTRACTION PROBES, 1/2" SCH 40 STEEL PIPE, 16-21' DEPTH INTERVAL
- VACUUM EXTRACTION PROBES, 1/2" SCH 40 STEEL PIPE, 25-34' DEPTH INTERVAL
- ∅ VACUUM EXTRACTION PROBES ELIMINATED DUE TO OBSTRUCTIONS

----- TRENCHING AND PIPING LAYOUT

SCALE



PACIFIC ENVIRONMENTAL GROUP, INC.

ARCO SERVICE STATION #0276
10600 MacArthur Boulevard
Oakland, California

SOIL VENT SYSTEM

FIGURE:
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PROJECT:
330-40.03