Pinnacle
ENVIRONMENTAL SOLUTIONS

a division of EMCON

February 9, 1999
Project 20805-118.032

Mr. Scott Seery
Alameda County Health Care Services Agency
Department of Environmental Health
1131 Harbor Bay Parkway, Room 250
Alameda, California 94502

Re: Workplan for ARCO Station 601, 712 Lewelling Boulevard, San Leandro

Dear Mr. Seery:

This Workplan was prepared by Pinnacle Environmental Solutions, a division of EMCON (Pinnacle) on behalf of ARCO Products Company (ARCO). The objective of this workplan is to evaluate the potential volatilization of hydrocarbons to indoor air from groundwater which may be migrating through utility trenches in the vicinity of the subject site.

Background

EMCON conducted a risk assessment for the above-referenced site which concluded that hydrocarbons in soil and water at the site do not exceed concentrations which correspond to acceptable levels of risk (Tier 1, Tier 2, Risk-Based Corrective Action Evaluation for ARCO Service Station 601, EMCON, June 9, 1997). However, the Alameda County Health Care Services Agency (ACHCSA) has expressed concern that buried utilities in Lewelling Boulevard are serving as a preferential pathway for groundwater from the site. Since the storm drains are the only utilities which are deep enough to be routinely inundated with groundwater, ACHCA suspects that impacted groundwater may be migrating from the ARCO site through the storm drain trench and may ultimately pose a risk to sensitive receptors which tie into the storm drain. Figure 1 shows the layout of the monitoring wells and utility trenches.

sanitary sewer, not storm sewer

NO!

As discussed in the 1997 Risk Assessment, shallow water beneath the site is not used as a source of potable water. Therefore, the risk pathway which is to be evaluated for this scenario is the volatilization of hydrocarbons to indoor air which may have migrated in groundwater through the utility trenches. In order to evaluate the potential existence of such hydrocarbon vapors, Pinnacle, on behalf of ARCO, proposes collecting vapor samples

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2201 Broadway #107 94612

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from those utility trenches which may become inundated with groundwater immediately downgradient of the ARCO site.

Scope of Work

Vapor samples will be collected into tedlar bags from within the inside of the utility trenches near the site which may become inundated with groundwater (Figure 1). Prior to initiating field work, encroachment permits will be obtained and traffic control procedures will be followed as required by the City of San Leandro. Samples will be collected by lowering a hose through openings in the manhole covers or vault lids and drawing vapors from approximately 5 feet below grade inside the vault or pipeline into a tedlar bag. If possible, this activity will take place without removing the manhole cover or vault lid to prevent volatile compounds from escaping prior to collecting a sample. Each sample will be analyzed to total petroleum hydrocarbons as gasoline (EPA Method 8015 modified), benzene, toluene, ethylbenzene and total xylenes (EPA Method 8020). Proposed sample locations are indicated on Figure 1.

How does this provide vapor samples from the trenches?

Scheduling and Reporting

Pending receipt of permits from the City of San Leandro, work will be conducted within 30 days of receiving written approval of this Workplan. A report detailing field procedures, analytical results and conclusions will be submitted with 45 days of completion of field work.

If you have any questions about the work proposed herein, please contact Glen VanderVeen at ~~(925) 977-9020.~~ (510) 740-5800

Sincerely,

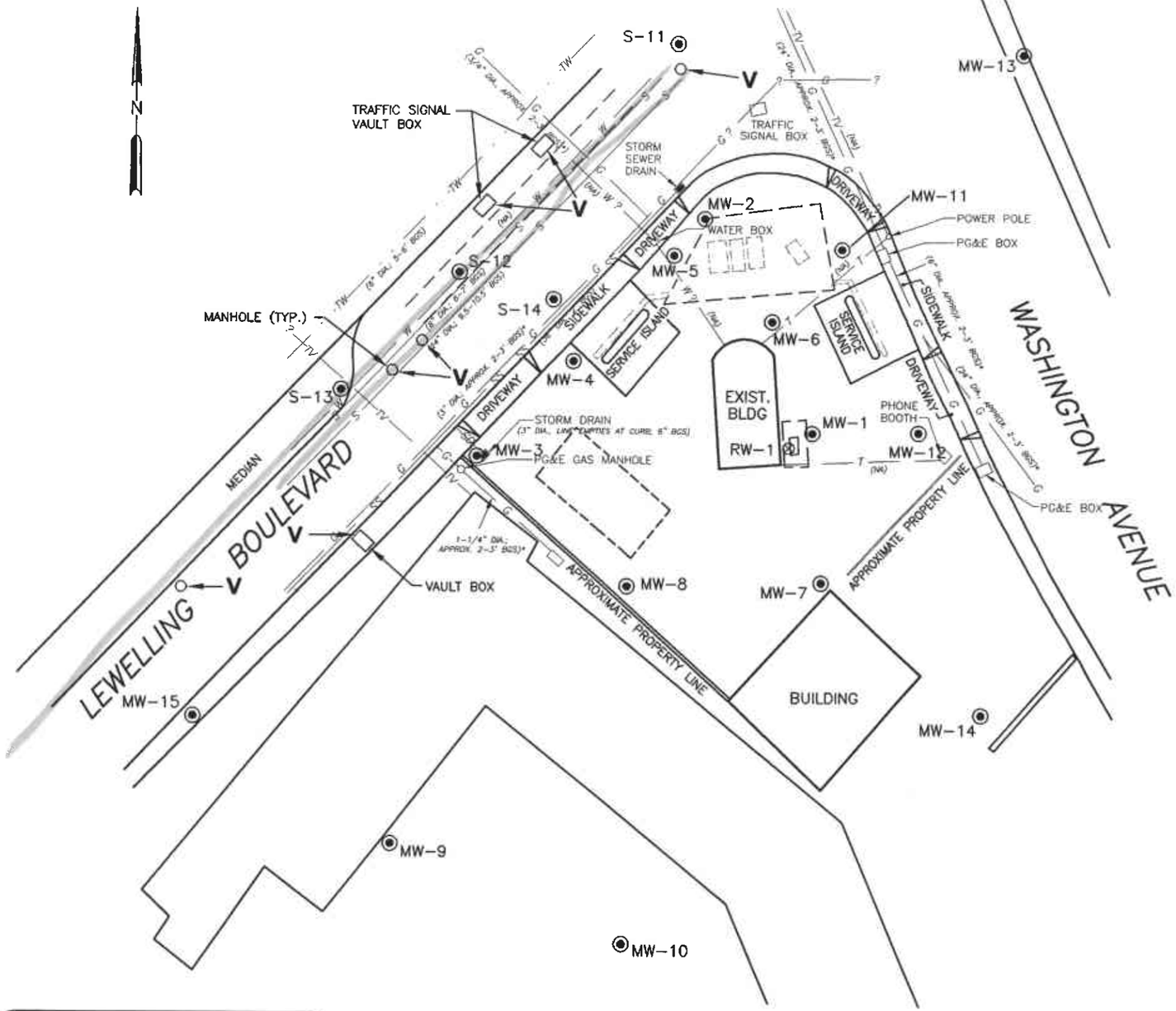
PINNACLE

Glen VanderVeen
Project Manager

Jay Johnson, R.G.
Senior Project Supervisor

cc: Mr. Paul Supple, ARCO

FAX 663-3315



EXPLANATION

- Groundwater monitoring well
- Vapor extraction well
- Former underground gasoline storage tank
- Existing underground gasoline storage tank
- Approximate limit of gasoline tank excavation
- Former product line
- V — Proposed location for sampling vapors in utility vaults or manways
- G — Gas
- S — Sewer
- SD — Storm drain
- SS — Storm sewer
- T — Telephone
- TV — Television
- TW — Treated wastewater
- W — Water
- (36" DIA., 2' BGS) — Diameter and depth of utility (top of pipe)
- (NA) — Information not available

* PG&E did not provide depths of individual lines. Generally, PG&E estimates their lines are 2 to 3 feet deep.

IMAGE Files: <No Images>
XREF Files: <No Xrefs>
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Dimscale: 50 Ltscale: 50 Paltscale: 0
1" 1/2" 0" 1"

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DATE JAN. 1999
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APP
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PROJECT NO.
20805-121.006

FIGURE 1
ARCO PRODUCTS COMPANY
SERVICE STATION 601, 712 LEWELLING BLVD.
SAN LEANDRO, CALIFORNIA
VAPOR SAMPLING LOCATIONS