



**CERTIFIED
ENVIRONMENTAL
CONSULTING INC.**

921023 11:50

March 23, 1992

REF: 92-173-667.078

Mr. Larry Seto
80 Swan Way
Room 200
Oakland, CA 94621

RE: Quarterly groundwater sampling results for the VA Medical Center Fire Station at 4951 Arroyo Road Livermore, CA.

Dear Mr. Seto:

Enclosed is a copy of the second quarter groundwater monitoring results for Livermore VA, 4951 Arroyo Road, Livermore, CA. Three wells were sampled and analyzed for TPH-diesel and BTX&E. The samples were below detection limits on all parameters. The laboratory results and a chain of custody are attached.

Please let us know if you have any questions.

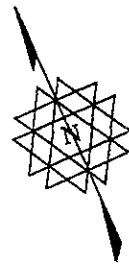
Yours truly,

Scott L. Parker
Senior Project Manager

Stanley L. Klemetson, Ph.D., P.E.
Vice President

Enclosures

BUILDING



MW-1



MW-2



CALCULATED HYDRAULIC
FLOW DIRECTION

FIRE STATION

FORMER TNK EXCAVATION

MW-3



 Monitor Well Locations



VA LIVERMORE

4951 ARROYO ROAD
MONITOR WELL LOCATIONS AND
GROUNDWATER FLOW DIRECTION

Scale 1" = 15'

SLP 3/92

**SAMPLING RESULTS FOR THE VA MEDICAL CENTER FIRE STATION
NOVEMBER 1991 TO MARCH 1992**

| WELL NUMBER | SAMPLE DATE | TPH-Diesel ppm | Benzene ppb | Toluene ppb | Ethyl Benzene ppb | Xylene ppb |
|-------------|-------------|----------------|-------------|-------------|-------------------|------------|
| MW-1 | 11/06/91 | ND | 15? | 0.8 | 4 | 76 |
| | 03/03/92 | ND | ND | ND | ND | ND |
| MW-2 | 11/06/91 | ND | ND | ND | ND | ND |
| | 03/03/92 | ND | ND | ND | ND | ND |
| MW-3 | 11/06/91 | ND | ND | ND | ND | ND |
| | 03/03/92 | ND | ND | ND | ND | ND |

ND - Non-detectable levels

? - lab results from Nov 1991 shows N.D for these

| | | |
|--|---|-------------------------|
| Certified Environmental Consultants 140 West Industrial Way Benecia, CA 94510-1016 | Client Project ID: 92-173-667; Livermore VA | Date Sampled: 03/03/92 |
| | | Date Received: 03/04/92 |
| | Client Contact: Scott Parker | Date Extracted: |
| | Client P.O: | Date Analyzed: 03/06/92 |

Low Boiling Point TPH* (as Gasoline) and BTEX*
DOHS LUFT procedure; EPA method 5030, modified 8020 & 602

| Lab ID | Client ID | Matrix | TPH(G) ⁺ | Benzene | Toluene | Ethyl Benzene | Xylenes | % Rec. Surrogate |
|--|-----------|-----------|---------------------|---------|---------|---------------|---------|------------------|
| 12116 | MW-1 | W | ND | ND | ND | ND | ND | 98 |
| 12117 | MW-2 | W | ND | ND | ND | ND | ND | 97 |
| 12118 | MW-3 | W | ND | ND | ND | ND | ND | 99 |
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| | | | | | | | | |
| Detection Limit unless otherwise stated; ND means Not Detected | W | 50 ug/L | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | |
| | S | 1.0 mg/kg | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | |

*water samples are reported in ug/L and soils in mg/kg

sample peak co-elutes with surrogate standard peak

⁺The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) predominately gasoline or compounds that elute in the gasoline range; b) gasoline together with higher boiling compounds; c) heavier gasoline compounds predominate (aged gasoline?); d) one to a few isolated peaks predominate; e) low boiling point compounds predominate; f) diesel range compounds predominate.

Edward Hamilton, Lab Director

McCAMPBELL ANALYTICAL INC.

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 Tele: 510-798-1620 Fax: 510-798-1622

QC REPORT

Date: 03/06-03/09/92

Matrix: water

| Analyte | Concentration (ug/L) | | | Amount Spiked (ug/L) | % Recovery | | |
|---------------------|----------------------|-------|-------|----------------------|------------|-----|-----|
| | Sample | MS | MSD | | MS | MSD | RPD |
| TPH (gas) | 0.0 | 103.2 | 100.2 | 102 | 101 | 98 | 3.0 |
| Benzene | 0.0 | 11.4 | 11.3 | 10 | 114 | 113 | 0.9 |
| Toluene | 0.0 | 10.7 | 10.5 | 10 | 107 | 105 | 1.9 |
| Ethyl Benzene | 0.0 | 10.9 | 10.7 | 10 | 109 | 107 | 1.9 |
| Xylenes | 0.0 | 32.5 | 32.0 | 30 | 108 | 107 | 1.6 |
| TPH (diesel) | 0 | 436 | 435 | 600 | 73 | 72 | 0.3 |
| TRPH (oil & grease) | N/A | N/A | N/A | 1000 | N/A | N/A | N/A |

$$\% \text{ Rec.} = (\text{MS} - \text{Sample}) / \text{amount spiked} \times 100$$

$$\text{RPD} = (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) \times 2 \times 100$$

