ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

DEPARTMENT OF ENVIRONMENTAL HEALTH
Hazardous Materials Program
80 Swan Way, Rm. 200
Oakland, CA 94621
(415)

November 21, 1990

Mr. Marvin O'Rear
Medical Center Director
USVA Medical Center
4951 Arroyo Rd.
Livermore, CA 94550

Re: **Hydrocarbons discovered in soil borings around underground tanks at the USVA Medical Center, Livermore**

Dear Mr. O'Rear:

This is in response to your letter dated November 5, 1990, in which you express concern over the high levels of hydrocarbons in soil immediately south of two 750-gallon gasoline tanks. Regardless of how this contamination, which is most likely aged gasoline, got into the ground, the important point is that it is there and must be addressed. By all means, the USVA Medical Center should install additional borings around these tanks, and also plan to remediate any contaminated soil that could threaten groundwater. Moreover, due to the possibility that groundwater has already been affected, we may require that the Medical Center install one or more downgradient monitoring wells. This will depend on the results of further site investigation, and the extent to which we, in consultation with the Regional Water Quality Control Board (RWQCB) in Oakland, feel that groundwater is threatened.

Regarding the tank tightness tests that have been performed at the USVA facility, even though these are required under state law and generally provide good information about the condition of tanks and their associated piping, they are not absolute indicators. This is because the precision of these tests (taking into account the margins of error) does not permit iron-clad conclusions to be drawn about whether a tank system is actually leaking; a test can only determine whether a tank appears to be gaining or losing volume at a certain rate, with a 95% degree of confidence. Thus, state law requires not only annual precision testing, but daily inventory reconciliation and automatic pipeline shutdown devices, as an ongoing fuel tank monitoring "package."

This leads into my next point, which is that every underground tank at the Veterans Administration Medical Center appears to be surrounded with contaminated soil, and it is not appropriate to dismiss these recent sample results as insignificant just because all the tanks tested out as "tight." Again, the primary consideration is what is there, and it is only of secondary importance how it got there. Typically, even when underground tanks are in fact in sound condition, overfilling, careless handling, and other factors can create subsurface contamination.

According to RWQCB guidelines, whenever any hydrocarbons are found in relatively permeable soil around or beneath a tank, an assessment of soil and groundwater is required in that area. Enclosed is an outline of what such an assessment should include. Because all of the Medical Center's underground tanks have contamination around them, and groundwater is relatively shallow, we are requiring a full-fledged assessment of the entire tank family, along the lines of the enclosed outline. Until the project is complete, please submit reports to this office and to the RWQCB every three months (or at a more frequent interval, if specified at any time by either agency). These reports must include information pertaining to further investigative results; the methods and costs of cleanup actions implemented to date; and the method and location of disposal of any contaminated material.

Based on the above discussion and the attached guidelines, please prepare a work plan for the contamination assessment. This work plan must be submitted to this office no later than **January 25, 1991.** Copies of the proposal should also be sent to the RWQCB (attention: Lester Feldman). Please also submit a deposit of $500 to this office to cover our hourly costs of oversight for this project.

Because we are overseeing this site under the designated authority of the Water Board, this letter constitutes a formal request for technical reports, per Sec. 13267(b) of the California Water Code. Failure to respond in a timely manner could result in civil liabilities under the Water Code of up to $1,000 per day. Other violations of California law may also be cited. If you have any questions about this letter or about remediation requirements established by the RWQCB, please contact me at 271-4320.

Sincerely,

Gilbert M. Wistar

Gil Wistar
Hazardous Materials Specialist

enclosure

cc: Howard Hatayama, DOHS
Lester Feldman, San Francisco Bay RWQCB
Rafat Shahid, Asst. Agency Director, Environmental Health
files

Veterans Administration

NOV 5 1990

In Reply Refer To:

Alameda County Department of Environmental
Health, Hazardous Materials Division
80 Swan Way, Suite 200
Oakland, CA 94612

Dear Sir:

I am writing this letter to inform you of a situation that exists at this medical facility.

In August, 1990, we performed tightness tests on all of our underground storage tanks. In conjunction with these tests, we also took soil samples around each tank. Although, all tanks tested as tight, the analysis of the soil sample #6 had a reading of 17,306 ppm TEPH and 14.2 TVPH. This was thought to be paint thinner by the testing firm on the day of the testing. We requested additional information from the testing firm. The firm indicated that old gasoline from an earlier surface spill or engine exhaust could have produced these results.

We are considering taking additional soil samples at various depths around the tank in question. Please let us know if this is necessary due to the tank testing out as tight, and if so, please advise on how best to proceed.

If you have any questions, please contact Mr. Clifford Schem, at 415/447-2560, extension 6401 or Mr. Jim Pitzer at 6405.

Sincerely,

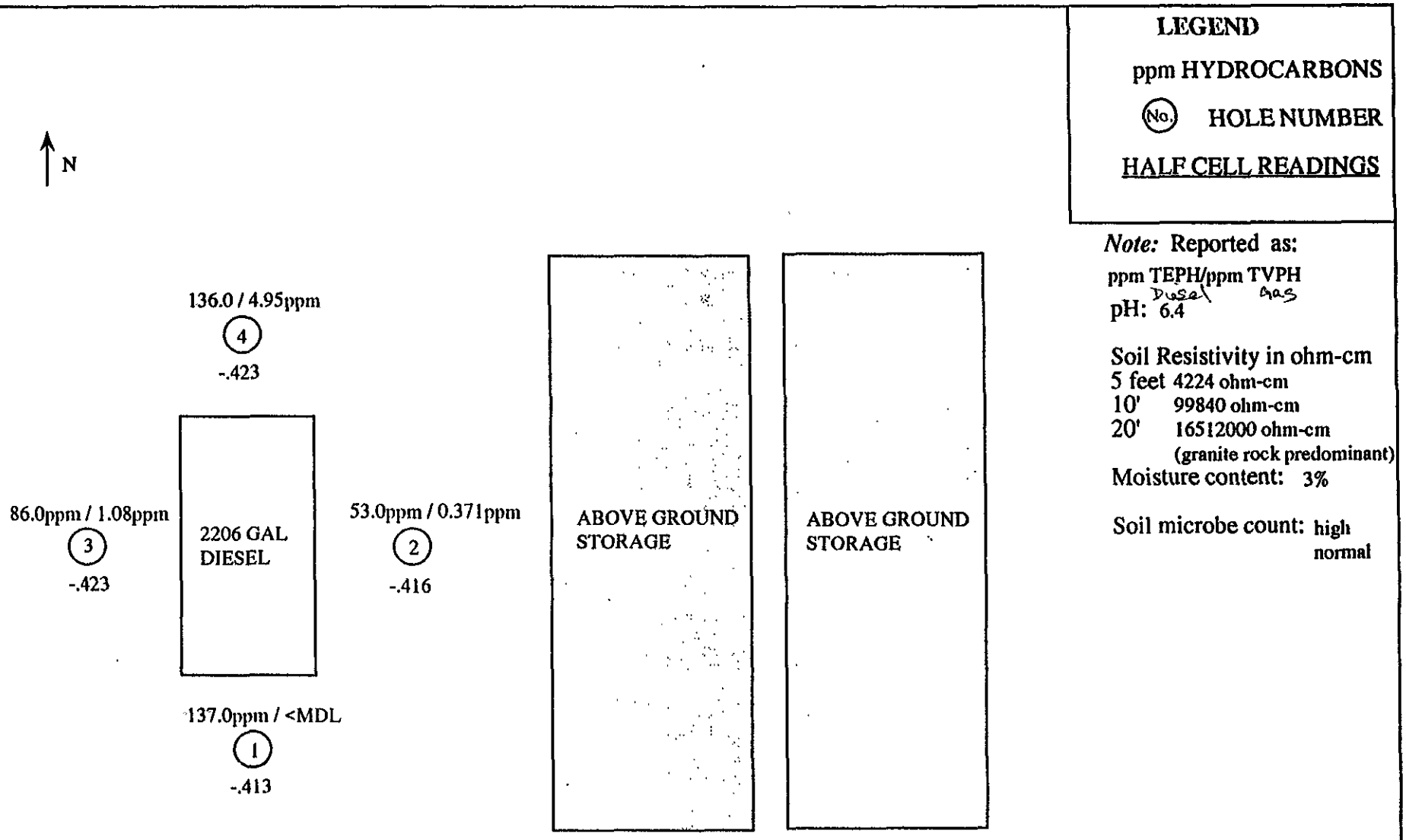
for Timothy May

Marvin E. O'Rear
Medical Center Director

"America is #1—Thanks to our Veterans"

INTERNATIONAL LUBRICATION & FUEL CONSULTANTS , INC. Rio Rancho New Mexico 87048 1-800-237-4532

TEP SITE ANALYSIS: PLOT OF HALF-CELL READINGS AND HYDROCARBON ANALYSIS RESULTS



DATE ON SITE: 8-15-90 **DATE OF ANALYSIS:** 8-20-90	**SITE:** BUILDING #6 VA MEMORIAL HOSPITAL 4951 ARROYO ROAD LIVERMORE CA.	**CLIENT** VA MEMORIAL HOSPITAL 4951 ARROYO ROAD LIVERMORE CA.	**Drawing No.** 74 **Drawn by:** NICHOLAS STROEBEL **Date:** 8-22-90

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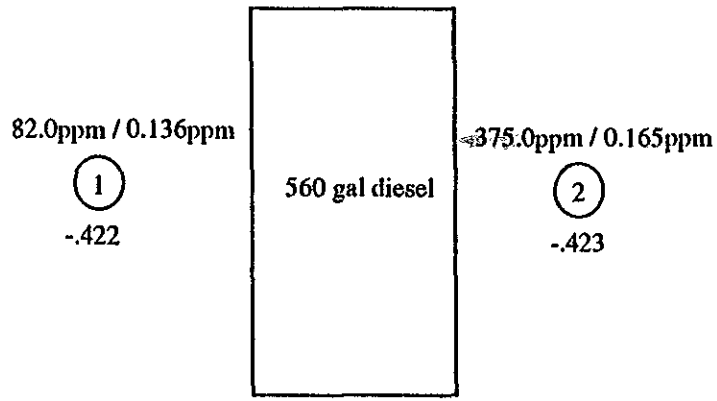
TEP SITE ANALYSIS: PLOT OF HALF-CELL READINGS AND HYDROCARBON ANALYSIS RESULTS

LEGEND

ppm HYDROCARBONS

(No.) HOLE NUMBER

HALF CELL READINGS



Note: Reported as:
ppm TEPH / ppmTVPH
pH: 6.6

Soil Resistivity in ohm-cm
5 feet 1536 ohm-cm
10' 1689.6 ohm-cm
20' 1728 ohm-cm

Moisture content: 8.25%

Soil microbe count: high
normal

DATE ON SITE: 8-15-90 **DATE OF ANALYSIS:** 8-20-90	**SITE:** BUILDING #64 VA MEMORIAL HOSPITAL 4951 ARROYO ROAD LIVERMORE CA.	**CLIENT** VA MEMORIAL HOSPITAL 4951 ARROYO ROAD LIVERMORE CA.	**Drawing No.** 75 **Drawn by:** NICHOLAS STROEBEL **Date:** 8-22-90

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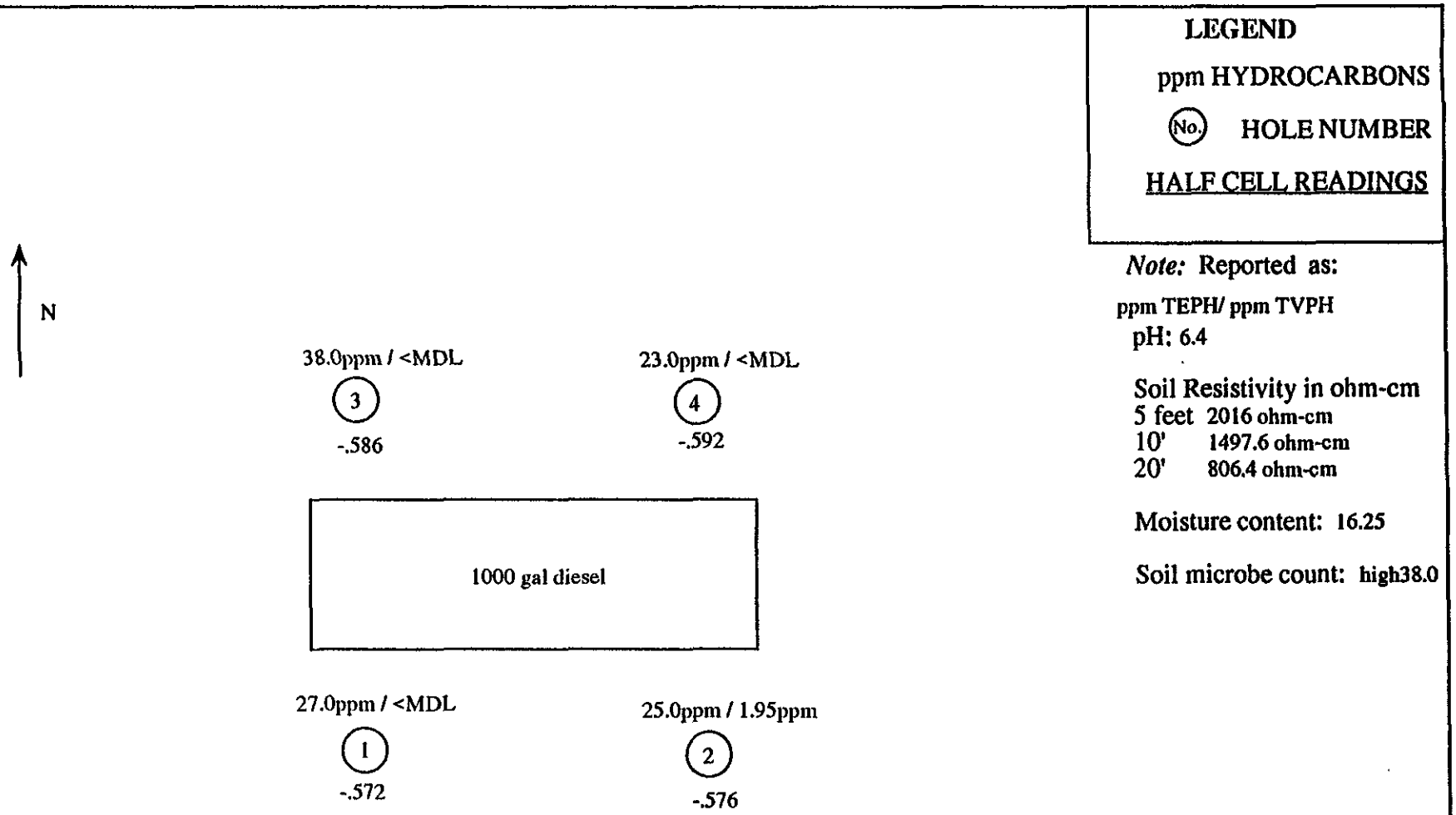
TEP SITE ANALYSIS: PLOT OF HALF-CELL READINGS AND HYDROCARBON ANALYSIS RESULTS



Note: Reported as:
ppm TEPH/ ppm TVPH
pH: 6.4

Soil Resistivity in ohm-cm
5 feet 2016 ohm-cm
10' 1497.6 ohm-cm
20' 806.4 ohm-cm

Moisture content: 16.25

Soil microbe count: high38.0

DATE ON SITE: 8-15-90 **DATE OF ANALYSIS:** 8-20-90	**SITE:** BUILDING #88 VA MEMORIAL HOSPITAL 4951 ARROYOROAD LIVERMORE CA.	**CLIENT** VA MEMORIAL HOSPITAL 4951 ARROYO ROAD LIVERMORE CA.	**Drawing No.** 76 **Drawn by:** NICHOLAS STROEBEL **Date:** 8-22-90

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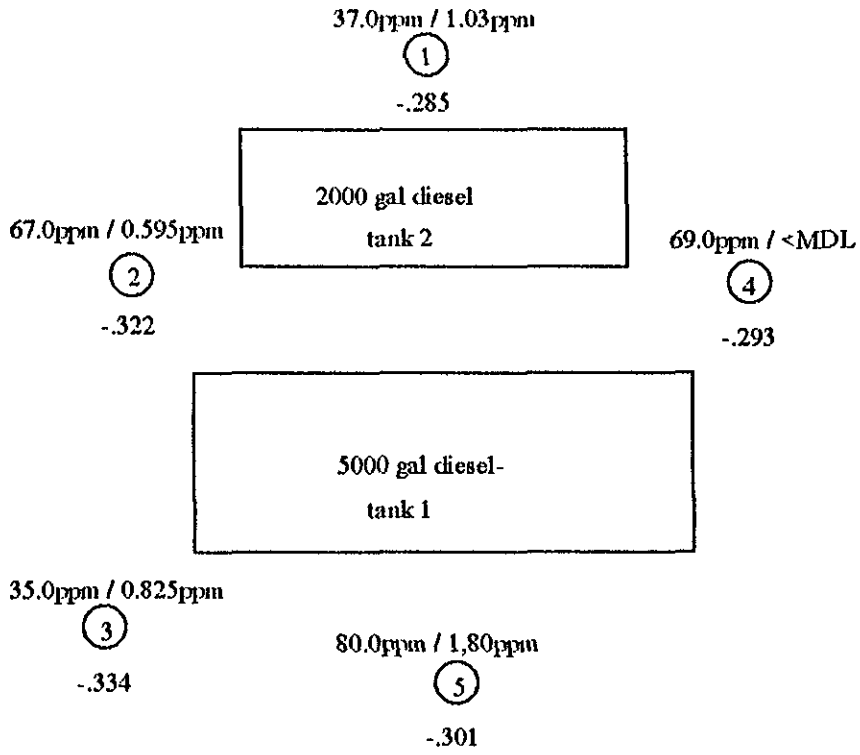
TEP SITE ANALYSIS: PLOT OF HALF-CELL READINGS AND HYDROCARBON ANALYSIS RESULTS



LEGEND

ppm HYDROCARBONS

(No.) HOLE NUMBER

HALF CELL READINGS

Note: Reported as:
ppm TEPH/ ppm TVPH

pH: 6.4

Soil Resistivity in ohm-cm
5 feet 6336 ohm-cm
10' 9216 ohm-cm
20' –

Moisture content: 5.0%

Soil microbe count: high
normal

DATE ON SITE: 8-15-90 **DATE OF ANALYSIS:** 8-20-90	**SITE:** BUILDING #62 VA MEMORIAL HOSPITAL 4951 ARROYO ROAD LIVERMORE CA.	**CLIENT** VA MEMORIAL HOSPITAL 4951 ARROYO ROAD LIVERMORE CA.	**Drawing No.** 77 **Drawn by:** NICHOLAS STROEBEL **Date:** 8-22-90

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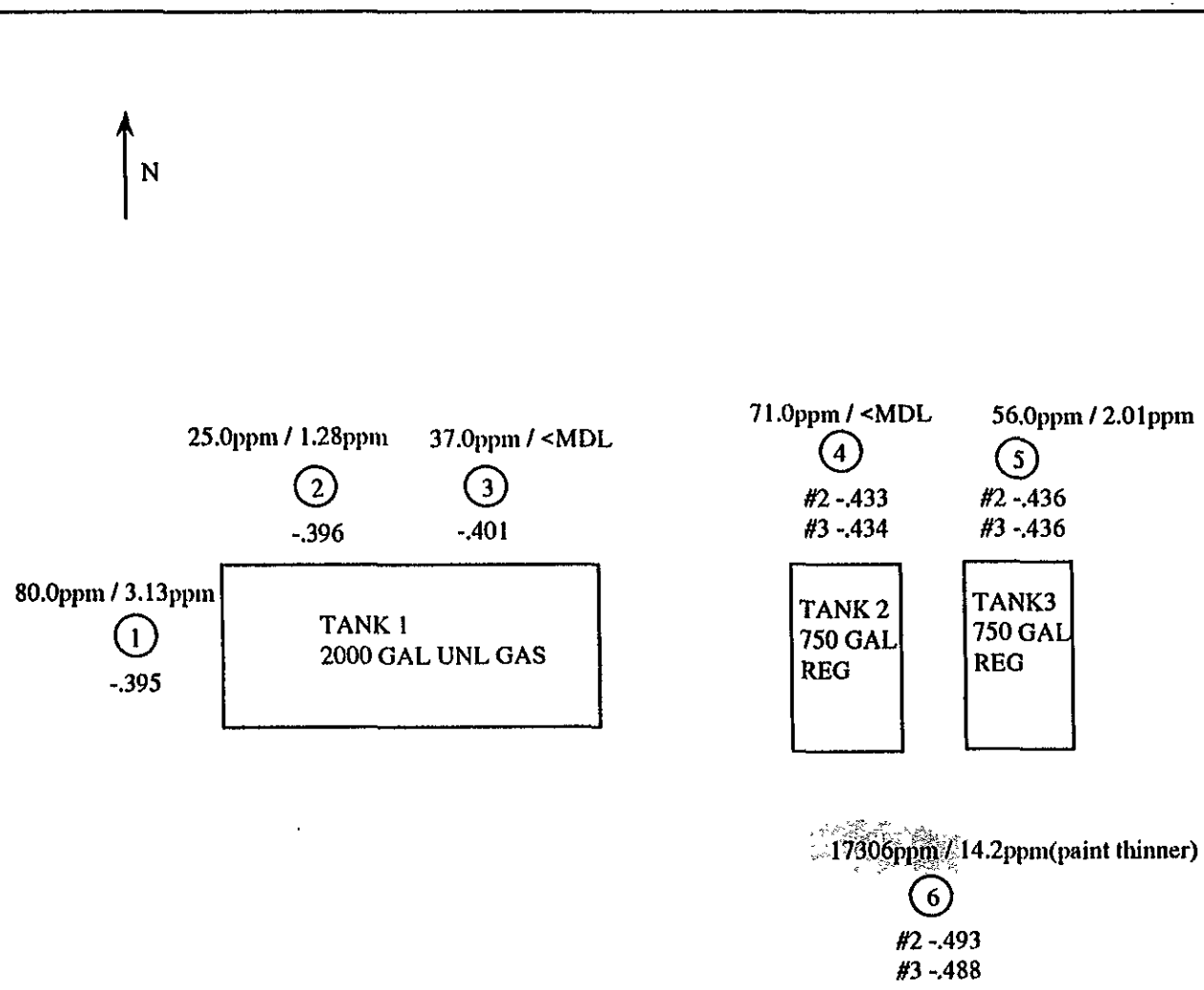
TEP SITE ANALYSIS: PLOT OF HALF-CELL READINGS AND HYDROCARBON ANALYSIS RESULTS



DATE ON SITE: 8-16-90 **DATE OF ANALYSIS:** 8-20-90	**SITE:** BUILDING #79 VA MEMORIAL HOSPITAL 4951 ARROYO ROAD LIVERMORE CA.	**CLIENT** VA MEMORIAL HOSPITAL 4951 ARROYO ROAD LIVERMORE CA.	**Drawing No.** 78 **Drawn by:** NICHOLAS STROEBEL **Date:** 8-23-90

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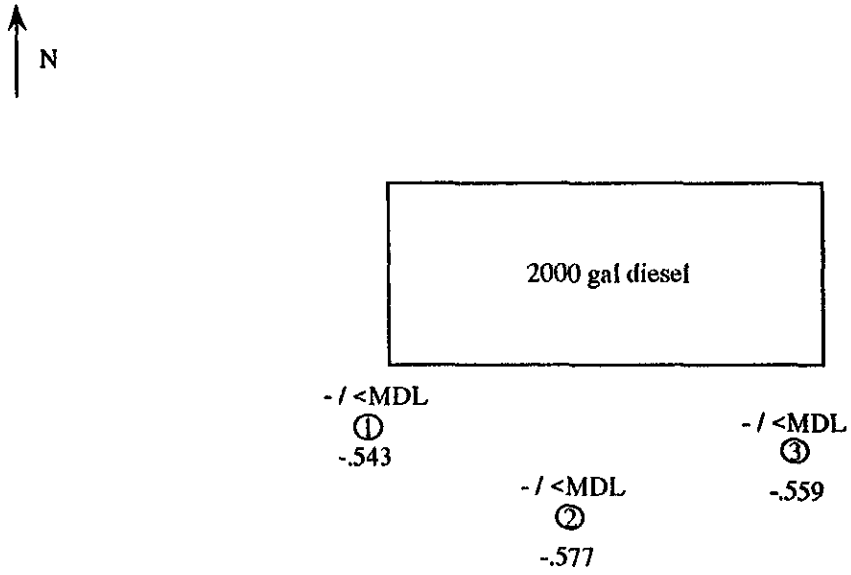
TEP SITE ANALYSIS: PLOT OF HALF-CELL READINGS AND HYDROCARBON ANALYSIS RESULTS



LEGEND

ppm HYDROCARBONS

(No.) HOLE NUMBER

HALF CELL READINGS

Note: Reported as:
ppm TEPH / ppm TVPH

pH: 6.4

Soil Resistivity in ohm-cm
5 feet 4608 ohm-cm
10' 2304 ohm-cm
20' 2918.4 ohm-cm

Moisture content: 13.5%

Soil microbe count: high
normal

DATE ON SITE: 8-16-90 **DATE OF ANALYSIS:** 8-20-90	**SITE:** BUILDING 90 VA MEMORIAL HOSPITAL 4951 ARROYO ROAD LIVERMORE CA.	**CLIENT** VA MEMORIAL HOSPITAL 4951 ARROYO ROAD LIVERMORE CA.	**Drawing No.** 79 **Drawn by:** NICHOLAS STROEBEL **Date:** 8-23-90