December 11, 1995

Ms. Madhulla Logan
Alameda County Health Care Services Agency
Department of Environmental Health
1131 Harbor Bay Parkway, 2nd Floor
Alameda, CA 94502

Re: Request for Case Closure
Mills College - Toyon Meadow, Oakland, California
Project No.: K275-G

Dear Ms. Logan:

On behalf of Mills College, Harza Consulting Engineers and Scientists (Harza) is requesting case closure of the leaking underground storage tank (UST) removed from the Mills Hall/Toyon Meadow area of Mills College, Oakland, California (Figure 1). Ground water monitoring at the site is currently conducted on a semiannual schedule. The most recent monitoring event occurred in October 1995; results are presented in Harza's December 8, 1995 report, *October Semiannual 1995 Ground Water Sampling Report, Mills Hall/Toyon Meadow.*

BACKGROUND

In June 1989, a small-capacity, fuel-oil UST was removed from the parking lot of the former Mills Kitchen building. This area is now developed as an open lawn and landscape area referred to as Toyon Meadow. Elevated levels of total petroleum hydrocarbons as diesel (TPHd), up to 6,300 parts per million (ppm), were detected in soil samples collected from the excavation at the time of removal, and approximately 250 cubic yards of soil were excavated from the vicinity of the former tank and disposed of off-site. Closure samples collected 12 to 13 feet below ground surface (bgs) contained from 260 ppm to 5,000 ppm TPHd.

Harza, formerly Kaldveer Associates, performed a soil and ground water quality investigation at the site in 1989. A drilling and soil sampling program was initiated to determine the areal extent of impact. TPHd was detected at concentrations up to 11,000 ppm in soil samples at depths of 12 to 15 feet bgs for a distance of at least 60 feet downgradient of the former tank location.

Ground water at the site occurs at approximately 12 feet bgs. In July 1989, monitoring well MHW-1 was installed approximately 50 feet downgradient from the former tank location, as shown in Figure 2. Two additional wells (MHW-2 and MHW-3) were installed in June 1991. Well MHW-2 was installed in the approximate location of the former UST, and well MHW-3 monitors downgradient water quality. During

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landscape renovation activities in May 1994, monitoring well MHW-1 was destroyed under permit by a licensed drilling contractor. A new well, MHW-1A, was installed in the approximate location of the destroyed well. Ground water monitoring has been performed intermittently since June 1991 and is currently performed on a semiannual schedule.

SUMMARY OF GROUND WATER QUALITY

TPHd has been detected in ground water samples collected from well MHW-1/1A during three of the seven sampling events performed over the past four years. Concentrations have ranged from 0.06 to 0.09 ppm. Since the first sampling event in June 1991, TPHd concentrations detected in well MHW-2 have been below 0.61 ppm, except for the initial sampling following well installation in 1991. TPHd has never been detected in downgradient well MHW-3. Benzene, toluene, ethylbenzene, and xylenes (BTEX) have not been detected in any of the three wells with the exception of a detection in April 1995, that is believed to have resulted from laboratory or field cross-contamination. Analytical results from ground water sampling are presented in Table 1.

The measured ground water flow direction has consistently been toward the southwest.

CONCLUSIONS

The primary soil contamination was removed from the site in 1989, following removal of the tank. Residual TPHd in soil does not appear to be leaching into the ground water as concentrations of TPHd detected in the ground water beneath the subject site have decreased since monitoring began in June 1991. Shallow ground water beneath the site has no beneficial use, and does not appear to represent a threat to beneficial use of any water supply. The nearest surface water body, a creek, is located approximately 300 feet downgradient from the former tank location. Since petroleum hydrocarbons have not been detected in samples collected from well MW-3 located downgradient, the site does not appear to represent a potential impact to surface waters. We request that the site be granted case closure by your agency.

Should you have any questions or require additional information, please do not hesitate to contact us.

Sincerely,

Harza Consulting Engineers and Scientists

Derek Armentrout
Project Chemist

Dennis Laduzinsky, C.E.G.
Head, Geology and Hydrogeology

DA/DL:vc
Copies: Mr. David Johnson (Mills College -1)

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TABLE

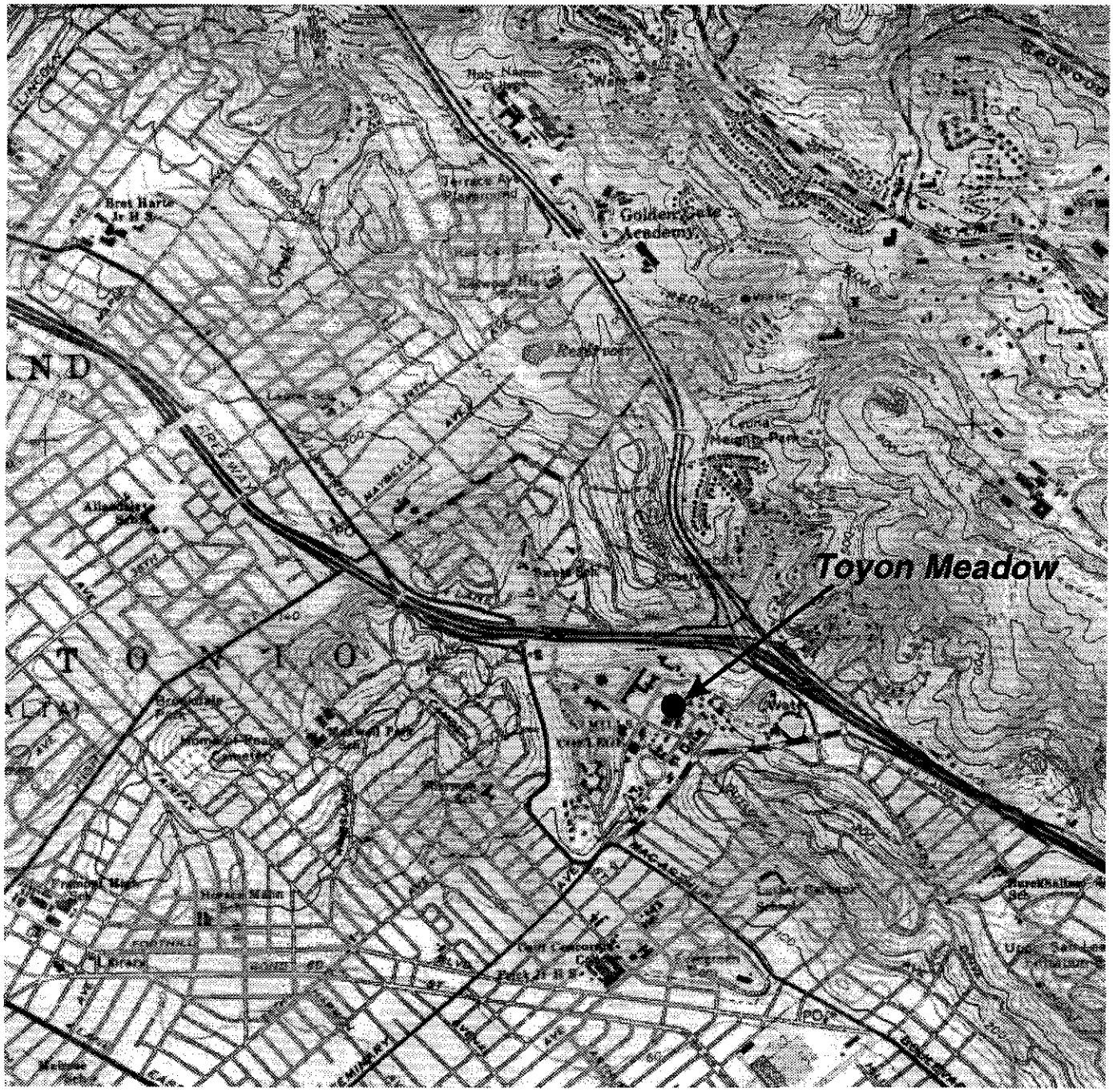
TABLE 1
Summary of Ground Water Sample Analyses
Mills Hall/Toyon Meadow, Oakland, California

Well	Date	TPHd ppm	TPH Oil ppm	Benzene ppm	Toluene ppm	Ethylbenzene ppm	Xylenes ppm
MHW-1/1A	06/91	**0.06**	ND	ND	ND	ND	ND
	03/92	ND	--	ND	ND	ND	ND
	10/92	**0.09**	ND	ND	ND	ND	ND
	05/94	ND	--	ND	ND	ND	ND
	10/94	ND	--	ND	ND	ND	ND
	04/95	**0.06**	--	**0.002**	**0.0006**	ND	ND
	10/95	ND	--	ND	ND	ND	ND
MHW-2	06/91	**3.2**	ND	ND	ND	ND	ND
	03/92	**0.1**	--	ND	ND	ND	ND
	10/92	**0.61**	ND	ND	ND	ND	ND
	05/94	**0.2**	--	ND	ND	ND	ND
	10/94	**0.4**	--	ND	ND	ND	ND
	04/95	**0.52**	--	ND	ND	ND	ND
	10/95	**0.4**	--	ND	ND	ND	ND
MHW-3	06/91	ND	ND	ND	ND	ND	ND
	03/92	ND	--	ND	ND	ND	ND
	10/92	ND	ND	ND	ND	ND	ND
	05/94	ND	--	ND	ND	ND	ND
	10/94	ND	--	ND	ND	ND	ND
	04/95	ND	--	**0.0009**	ND	ND	ND
	10/95	ND	--	ND	ND	ND	ND

NOTES

TPHd: Total petroleum hydrocarbons as diesel
TPH Oil: Total petroleum hydrocarbons as oil
ppm: Parts per million or milligrams per liter
ND: Not detected at or above the laboratory method reporting limits
--: Not tested
Well MHW-1 was replaced by MHW-1A on May 2, 1994 prior to the monitoring event

FIGURES



N

Approximate Scale In Miles

0 1/2 1

BASE: By U.S.G.S. Oakland East, California, 7.5 Min. Quadrangle Topography.

E275G1

Date		SITE VICINITY MAP	Figure
11/95	HARZA	MILLS HALL/TOYON MEADOW CORPORATION YARD FACILITY Oakland, California	1
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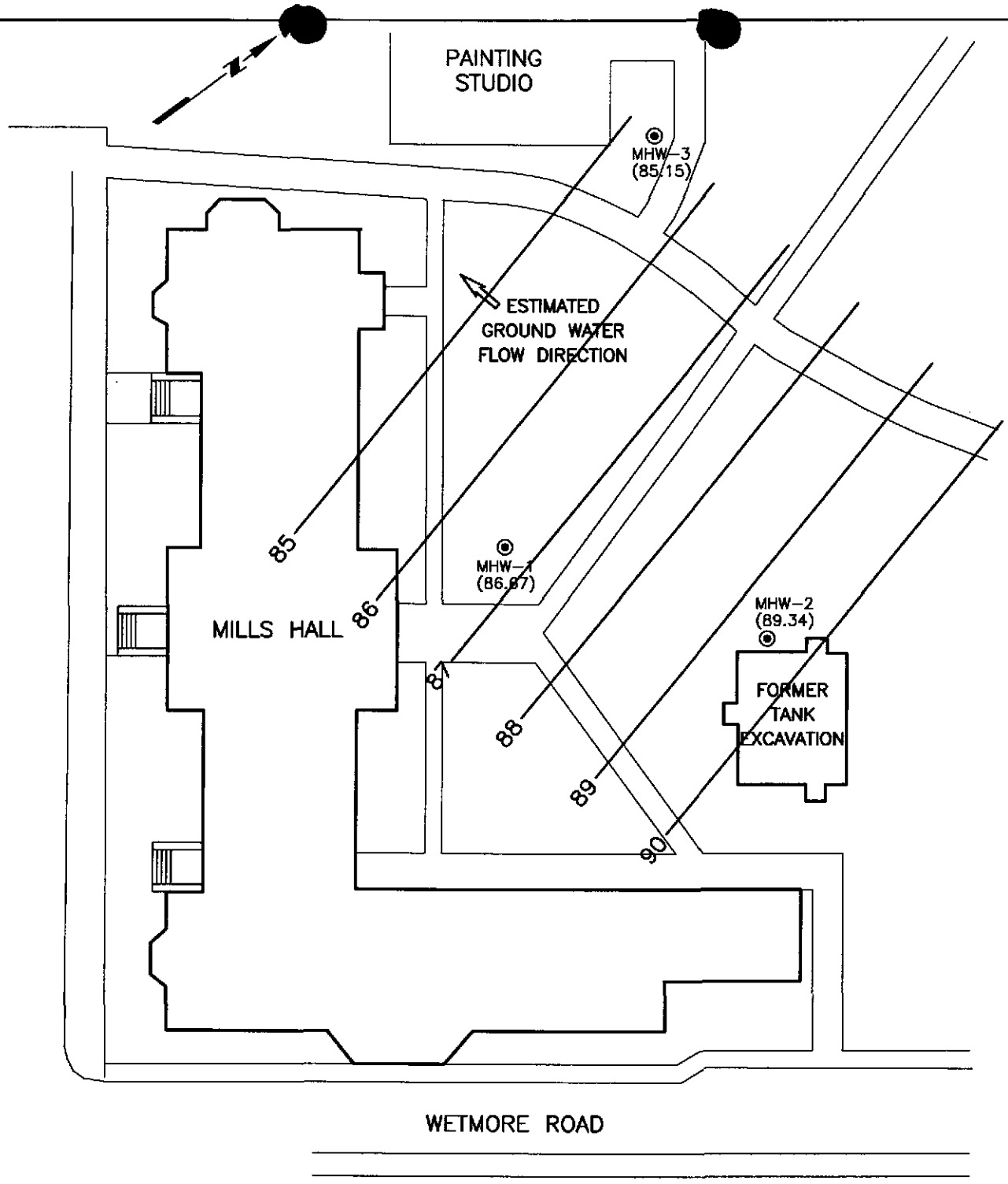

LEGEND

MHW-3◉ Approximate Location Of Monitoring Well With Relative Ground Water Elevation

90—— Ground Water Contour 10/19/95

Approximate Scale in Feet

0 40 80

Base Provided By Mills College, Dated 3/88

11-95-2

Rev.	Drawn By	Chk'd By	Date
0	D.F.	M.A.	11/07/95

HARZA

SITE PLAN

MILLS HALL / TOYON MEADOW
Oakland, California

Figure 2

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