

July 31, 1995

LF 3042.95-002

Mr. Sumadhu Arigala
San Francisco Bay Region
California Regional Water Quality Control Board
2101 Webster Street, Suite 500
Oakland, California 94612

Subject: May 10, 1995 Quarterly Ground-Water Monitoring Results, A Portion of the Rifkin Property, 4525-4563 Horton Street, Emeryville, California

Dear Mr. Arigala:

This letter transmits the results for May 10, 1995 quarterly monitoring on a portion of the Rifkin Property located at 4525-4563 Horton Street in Emeryville, California ("the Site") for the monitoring period April 1 through June 30, 1995.

Quarterly ground-water monitoring was conducted at the Site as proposed in a letter dated October 26, 1994 from Dave Gustafson and Larry Mencin of The Sherwin-Williams Company to Sum Arigala of the California Regional Water Quality Control Board (RWQCB). This proposed quarterly ground-water monitoring program was approved by the RWQCB in a letter to Dave Gustafson from Steven Ritchie of the RWQCB dated November 4, 1994.

On May 10, 1995 ground-water samples were collected from wells RP-1 through RP-5 and submitted to American Environmental Network (AEN) for chemical analysis. In addition, May 10, 1995 depth to water measurements were recorded in on-site wells RP-1 through RP-5. Locations of on-site wells are shown on Figure 1. Water level and sampling field forms are included in Appendix A.

Depth to ground water in the on- and off-site monitoring wells was measured using an electric water-level meter to the nearest 0.01 foot. Depth to water measurements and ground-water elevations in the monitoring wells are presented in Table 1. Ground-water contours are shown on Figure 1.

During sampling of the on-site wells, after the volume of water in each well was calculated, 3 to 5 well volumes of water were purged from each well using either a gasoline-powered centrifugal pump equipped with a clean suction hose, or by hand-bailing with a clean Teflon bailer.

During purging of the wells, ground-water parameters (pH, specific conductance, and temperature) were monitored and recorded, to aid in collecting ground-water samples that were representative of the ground water in surrounding sediments. Samples were collected after these parameters had stabilized. If a well did not sustain a constant yield (i.e., goes dry), the well was sampled after the water level had recovered to approximately 80 percent of the original water level, or 2 hours after purging, whichever occurred first.

After purging, ground-water samples were collected using a clean Teflon bailer fitted with a new rope. A duplicate sample collected from well RP-4 and a bailer field blank were submitted for chemical analysis to monitor laboratory and equipment decontamination quality assurance and quality control. Equipment used during ground-water sampling was cleaned with Alconox (a laboratory grade detergent) and/or steam cleaned. The samples were placed into the appropriate laboratory-supplied sample containers and placed in a chilled cooler for transportation to AEN, a California-certified laboratory for analysis, following chain-of-custody procedures.

Water purged from each well during ground-water sampling was temporarily stored on site in 55-gallon drums for subsequent disposal, based upon chemical analyses results.

Ground-water samples were submitted to AEN for analysis of dissolved arsenic using EPA Method 7060, total petroleum hydrocarbons as gasoline using EPA Method 5030, total petroleum hydrocarbons as diesel using EPA Method 3510, and benzene, toluene, ethylbenzene, and total xylenes using EPA Method 8020. Analytical results for these samples are presented in Table 2. Analytical results for dissolved arsenic are shown on Figure 2. Laboratory certificates are included in Appendix B.

In addition to the collection of quarterly monitoring data, ground-water samples from wells RP-1 through RP-5 were collected on March 29, 1995. These samples were collected by TMC Environmental on behalf of the receiver for the Rifkin property. Levine-Fricke collected duplicates from the March 29 samples on behalf of Sherwin-Williams. These duplicate samples were submitted to AEN for analysis of dissolved arsenic using EPA Method 7060, total petroleum hydrocarbons as gasoline using EPA Method 5030, total petroleum hydrocarbons as diesel using EPA Method 3510, and benzene, toluene, ethylbenzene, and total xylenes using EPA Method 8020, and volatile organic compounds using EPA Method 8240. The laboratory analytical results for these samples are included in Appendix B and presented in Table 2.

The next quarterly ground-water monitoring event will be conducted in August 1995. Sherwin-Williams and Levine-Fricke look forward to discussing these results with you in your offices on August 8, 1995 at 10:00a.m. Please contact Mark Knox or Kenton Gee if you have any questions or comments prior to then at (510) 652-4500.

Sincerely,



Mark D. Knox, P.E.
Chief Engineer



Kenton A. Gee
Project Hydrogeologist

enclosures

cc: Larry Mencin, Sherwin-Williams
Dave Gustafson, Sherwin-Williams
Allen Danzig, Sherwin-Williams
Susan Hugo, Alameda County
Ravi Arulanantham, RWQCB

CERTIFICATION

All engineering information, conclusions, and recommendations in this document have been prepared under the supervision of and reviewed by a LevineFricke California Professional Engineer.

Mark D. Knox
Mark D. Knox
Chief Engineer
California Professional Engineer (33194)

7/31/95
Date

Table 1
Historical Ground-Water Elevation Data
Rifkin Property, Emeryville, California

Well Number	Date	Elevation Top of Casing (msl)	Depth to Ground-Water (ft bgs)	Ground-Water Elevation (msl)
On Site				
RP-1	08-Sep-94	15.12	8.65	6.47
	28-Feb-95		7.83	7.29
	10-May-95		7.53	7.59
RP-2	08-Sep-94	15.23	8.99	6.24
	28-Feb-95		8.11	7.12
	10-May-95		7.77	7.46
RP-3	08-Sep-94	15.15	8.80	6.35
	28-Feb-95		7.87	7.28
	10-May-95		7.61	7.54
RP-4	08-Sep-94	15.10	9.02	6.08
	28-Feb-95		8.13	6.97
	10-May-95		7.77	7.33
RP-5	08-Sep-94	15.03	8.95	6.08
	28-Feb-95		8.06	6.97
	10-May-95		7.69	7.34

Data entered by KAC/18 Jul 95. Proofed by KAG/19 Jul 95.

Notes

- msl = mean sea level
- NM = not measured
- bgs = below ground surface

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Rifkin Property, Emeryville, California

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	28-Feb-95		7.83	7.29
	10-May-95		7.53	7.59
RP-2	08-Sep-94	15.23	8.99	6.24
	28-Feb-95		8.11	7.12
	10-May-95		7.77	7.46
RP-3	08-Sep-94	15.15	8.80	6.35
	28-Feb-95		7.87	7.28
	10-May-95		7.61	7.54
RP-4	08-Sep-94	15.10	9.02	6.08
	28-Feb-95		8.13	6.97
	10-May-95		7.77	7.33
RP-5	08-Sep-94	15.03	8.95	6.08
	28-Feb-95		8.06	6.97
	10-May-95		7.69	7.34

Data entered by KAC/18 Jul 95. Proofed by KAC 7-19

Notes

- msl = mean sea level
- NM = not measured
- bgs = below ground surface

Table 2
Chemicals Detected in Ground-Water Samples
Rifkin Property, Emeryville, California
Concentrations expressed in parts per million (ppm)

Sample ID	Sample Date	Notes	As	TPHg	TPHd	TPHo	Acetone	Benzene	Toluene	Xylenes	MEK	1,2-DCA	cis-1,2-DCE	trans-1,2-DCE	Ethylbenzene	MIBK	TCE
RP-1	28-Jul-94		0.07	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	08-Sep-94		0.08	1.9	4.4	0.3	<0.100	<0.005	<0.0005	<0.002	<0.100	0.002	0.003	0.001	<0.0005	<0.050	<0.005
	28-Feb-95		0.046	0.3	1.8	NA	NA	<0.0005	<0.0005	<0.002	NA	NA	NA	NA	<0.0005	NA	NA
	29-Mar-95	(4)	0.035	<0.05	0.78	<0.5	<0.100	<0.005	<0.005	<0.01	NA	<0.005	<0.005	<0.005	<0.005	NA	<0.005
	10-May-95		0.095	2.6	1.4	NA	NA	<0.0005	<0.0005	<0.002	NA	NA	NA	NA	<0.0005	NA	NA
RP-2	28-Jul-94		0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	08-Sep-94		0.024	0.09	0.4	0.5	<0.100	<0.005	0.0005	<0.002	<0.100	0.001	0.001	<0.0005	<0.005	<0.050	0.0006
	duplicate 08-Sep-94		0.020	0.09	0.3	0.6	<0.100	<0.005	<0.0005	<0.002	<0.100	0.001	0.001	<0.0005	<0.005	<0.050	0.0005
	28-Feb-95		0.013	0.09	<0.05	NA	NA	<0.0005	<0.0005	<0.002	NA	NA	NA	NA	<0.0005	NA	NA
	29-Mar-95	(3)	0.01	0.07	0.4	<0.5	<0.100	<0.005	<0.005	<0.01	NA	<0.005	<0.005	<0.005	<0.005	NA	<0.005
10-May-95		0.029	<0.05	0.3	NA	NA	<0.0005	<0.0005	<0.002	NA	NA	NA	NA	<0.0005	NA	NA	
RP-3	28-Jul-94		ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	08-Sep-94		0.004	0.1	0.7	0.2	<0.100	<0.005	<0.0005	<0.002	<0.100	<0.005	<0.0005	<0.0005	<0.005	<0.050	<0.0005
	28-Feb-95		0.004	0.2	1.2	NA	NA	<0.0005	0.0007	<0.002	NA	NA	NA	NA	<0.0005	NA	NA
	29-Mar-95	(5)	0.004	0.3	1.9	0.6	<0.100	<0.005	<0.005	<0.01	NA	<0.005	<0.005	<0.005	<0.005	NA	<0.005
	10-May-95		0.013	0.1	1.7	NA	NA	<0.0005	<0.0005	<0.002	NA	NA	NA	NA	<0.0005	NA	NA
RP-4	28-Jul-94		ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	08-Sep-94		0.009	0.1	0.2	0.2	<0.100	<0.005	<0.0005	<0.002	<0.100	0.001	0.007	0.004	<0.005	<0.050	0.002
	28-Feb-95		0.007	0.08	0.07	NA	NA	<0.0005	<0.0005	<0.002	NA	NA	NA	NA	<0.0005	NA	NA
	duplicate 28-Feb-95		0.006	0.07	0.07	NA	NA	<0.0005	<0.0005	<0.002	NA	NA	NA	NA	<0.0005	NA	NA
	29-Mar-95	(2)	0.008	0.07	0.3	<0.5	<0.100	<0.005	<0.005	<0.01	NA	<0.005	<0.005	<0.005	<0.005	NA	<0.005
10-May-95		0.013	<0.05	0.2	NA	NA	<0.0005	<0.0005	<0.002	NA	NA	NA	NA	<0.0005	NA	NA	
duplicate 10-May-95		0.011	<0.05	0.2	NA	NA	<0.0005	<0.0005	<0.002	NA	NA	NA	NA	<0.0005	NA	NA	
RP-5	28-Jul-94		ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	08-Sep-94		0.003	0.09	0.6	2	<0.100	<0.005	<0.0005	<0.002	<0.100	0.0008	0.0005	<0.0005	<0.005	<0.050	<0.005
	28-Feb-95		0.007	0.06	0.2	NA	NA	<0.0005	0.0009	<0.002	NA	NA	NA	NA	<0.0005	NA	NA
	29-Mar-95	(1)	0.006	<0.05	0.8	<0.5	<0.100	<0.005	<0.005	<0.01	NA	<0.005	<0.005	<0.005	<0.005	NA	<0.005
	10-May-95		0.018	<0.05	1.1	NA	NA	<0.0005	<0.0005	<0.002	NA	NA	NA	NA	<0.0005	NA	NA

Table 2
 Chemicals Detected in Ground-Water Samples
 Rifkin Property, Emeryville, California
 Concentrations expressed in parts per million (ppm)

Sample ID	Sample Date	Notes	As	TPHg	TPHd	TPHo	Acetone	Benzene	Toluene	Xylenes	MEK	1,2-DCA	cis-1,2-DCE	trans-1,2-DCE	Ethyl-benzene	MIBK	TCE
Blanks:																	
RP-3-FB	28-Feb-95		<0.002	<0.05	<0.05	NA	NA	<0.0005	<0.0005	<0.002	NA	NA	NA	NA	<0.0005	NA	NA
RP-3-FB	10-May-95		<0.002	<0.05	<0.05	NA	NA	<0.0005	<0.0005	<0.002	NA	NA	NA	NA	<0.0005	NA	NA
MCLS			0.050					0.005	1.000	10		0.0005	0.070	0.100	0.700		0.005

Data entered by KAC/18 Jul 95. Data proofed by KAG/19 Jul 95. QA/QC by AEGD.

Notes

Analyses performed by American Environmental Network, Pleasant Hill, California by method cited in report.

If analyte is not listed, it was not present above laboratory detection limits.

NA = not analyzed

ND = not detected

As = arsenic

MEK = methyl ethyl ketone (2-Butanone)

MIBK = methyl isobutyl ketone (4-Methyl-2-pentanone)

TPHd = total petroleum hydrocarbons as diesel

TPHg = total petroleum hydrocarbons as gasoline

TPHo = total petroleum hydrocarbons as oil and grease

1,2-DCA = 1,2-dichloroethane

cis-1,2-DCE = cis-1,2-Dichloroethene

trans-1,2-DCE = trans-1,2-Dichloroethene

TCE = trichloroethene

- (1) Barium detected at 0.04 mg/l, Zinc detected at 0.03 mg/l.
- (2) Barium detected at 0.06 mg/l, Lead detected at 0.15 mg/l, Zinc detected at 0.16 mg/l.
- (3) Carbon Disulfide detected at 0.015 mg/l, Barium detected at 0.08 mg/l, Zinc detected at 0.03 mg/l.
- (4) Barium detected at 0.04 mg/l, Zinc detected at 0.01 mg/l.
- (5) Barium detected at 0.18 mg/l, Vanadium 0.015 mg/l, Zinc detected at 0.01 mg/l.

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	08-Sep-94		0.08	1.9	4.4	0.3	<0.100	<0.005	<0.0005	<0.002	<0.100	0.002	0.003	0.001	<0.0005	<0.050	<0.005
	28-Feb-95		0.046	0.3	1.8	NA	NA	<0.0005	<0.0005	<0.002	NA	NA	NA	NA	<0.0005	NA	NA
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	10-May-95		0.095	2.6	1.4	NA	NA	<0.0005	<0.0005	<0.002	NA	NA	NA	NA	<0.0005	NA	NA
RP-2	28-Jul-94		0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	08-Sep-94		0.024	0.09	0.4	0.5	<0.100	<0.005	0.0005	<0.002	<0.100	0.001	0.001	<0.0005	<0.005	<0.050	0.0006
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	28-Feb-95		0.013	0.09	<0.05	NA	NA	<0.0005	<0.0005	<0.002	NA	NA	NA	NA	<0.0005	NA	NA
	29-Mar-95	(3)	0.01	0.07	0.4	<0.5	<0.100	<0.005	<0.005	<0.01	NA	<0.005	<0.005	<0.005	<0.005	NA	<0.005
10-May-95		0.029	<0.05	0.3	NA	NA	<0.0005	<0.0005	<0.002	NA	NA	NA	NA	<0.0005	NA	NA	
RP-3	28-Jul-94		ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	08-Sep-94		0.004	0.1	0.7	0.2	<0.100	<0.005	<0.0005	<0.002	<0.100	<0.005	<0.0005	<0.0005	<0.005	<0.050	<0.0005
	28-Feb-95		0.004	0.2	1.2	NA	NA	<0.0005	0.0007	<0.002	NA	NA	NA	NA	<0.0005	NA	NA
	29-Mar-95	(5)	0.004	0.3	1.9	0.6	<0.100	<0.005	<0.005	<0.01	NA	<0.005	<0.005	<0.005	<0.005	NA	<0.005
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RP-4	28-Jul-94		ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	08-Sep-94		0.009	0.1	0.2	0.2	<0.100	<0.005	<0.0005	<0.002	<0.100	0.001	0.007	0.004	<0.005	<0.050	0.002
	28-Feb-95		0.007	0.08	0.07	NA	NA	<0.0005	<0.0005	<0.002	NA	NA	NA	NA	<0.0005	NA	NA
	duplicate 28-Feb-95		0.006	0.07	0.07	NA	NA	<0.0005	<0.0005	<0.002	NA	NA	NA	NA	<0.0005	NA	NA
	29-Mar-95	(2)	0.008	0.07	0.3	<0.5	<0.100	<0.005	<0.005	<0.01	NA	<0.005	<0.005	<0.005	<0.005	NA	<0.005
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duplicate 10-May-95		0.011	<0.05	0.2	NA	NA	<0.0005	<0.0005	<0.002	NA	NA	NA	NA	<0.0005	NA	NA	
RP-5	28-Jul-94		ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	08-Sep-94		0.003	0.09	0.6	2	<0.100	<0.005	<0.0005	<0.002	<0.100	0.0008	0.0005	<0.0005	<0.005	<0.050	<0.005
	28-Feb-95		0.007	0.06	0.2	NA	NA	<0.0005	0.0009	<0.002	NA	NA	NA	NA	<0.0005	NA	NA
	29-Mar-95	(1)	0.006	<0.05	0.8	<0.5	<0.100	<0.005	<0.005	<0.01	NA	<0.005	<0.005	<0.005	<0.005	NA	<0.005
	10-May-95		0.018	<0.05	1.1	NA	NA	<0.0005	<0.0005	<0.002	NA	NA	NA	NA	<0.0005	NA	NA

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Blanks:																	
RP-3-FB	28-Feb-95		<0.002	<0.05	<0.05	NA	NA	<0.0005	<0.0005	<0.002	NA	NA	NA	NA	<0.0005	NA	NA
RP-3-FB	10-May-95		<0.002	<0.05	<0.05	NA	NA	<0.0005	<0.0005	<0.002	NA	NA	NA	NA	<0.0005	NA	NA
MCLS	---		0.050	---	---	---	---	0.005	1.000	10	---	0.0005	0.070	0.100	0.700	---	0.005

Data entered by KAC. Data proofed by KR-719-95 QA/QC by LEGD.

Notes

Analyses performed by American Environmental Network, Pleasant Hill, California by method cited in report.

If analyte is not listed, it was not present above laboratory detection limits.

NA = not analyzed

ND = not detected

As = arsenic

MEK = methyl ethyl ketone (2-Butanone)

MIBK = methyl isobutyl ketone (4-Methyl-2-pentanone)

TPHd = total petroleum hydrocarbons as diesel

TPHg = total petroleum hydrocarbons as gasoline

TPHo = total petroleum hydrocarbons as oil and grease

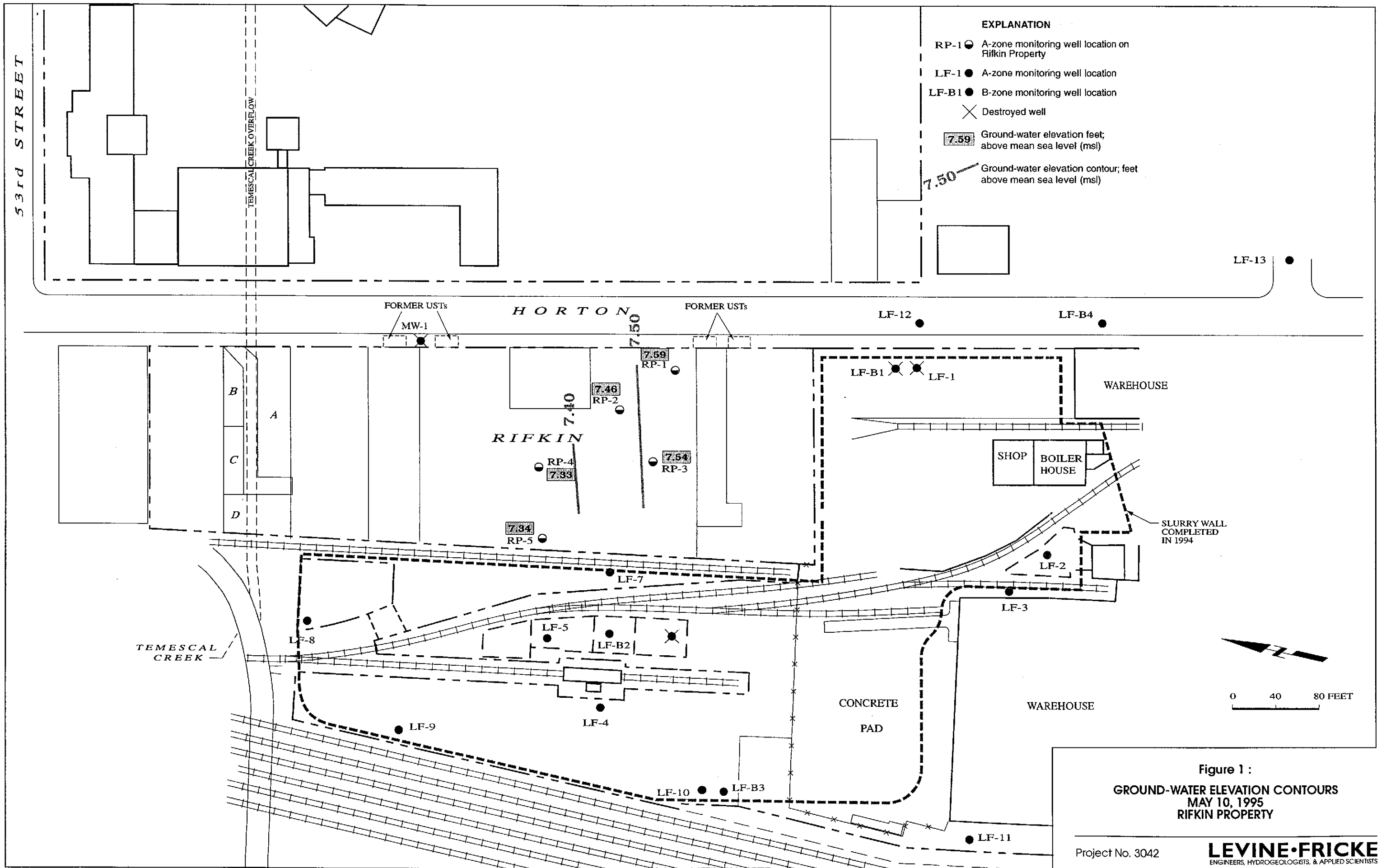
1,2-DCA = 1,2-dichloroethane

cis-1,2-DCE = cis-1,2-Dichloroethene

trans-1,2-DCE = trans-1,2-Dichloroethene

TCE = trichloroethene

- (1) Barium detected at 0.04 mg/l, Zinc detected at 0.03 mg/l.
- (2) Barium detected at 0.06 mg/l, Lead detected at 0.15 mg/l, Zinc detected at 0.16 mg/l.
- (3) Carbon Disulfide detected at 0.015 mg/l, Barium detected at 0.08 mg/l, Zinc detected at 0.03 mg/l.
- (4) Barium detected at 0.04 mg/l, Zinc detected at 0.01 mg/l.
- (5) Barium detected at 0.18 mg/l, Vanadium 0.015 mg/l, Zinc detected at 0.01 mg/l.



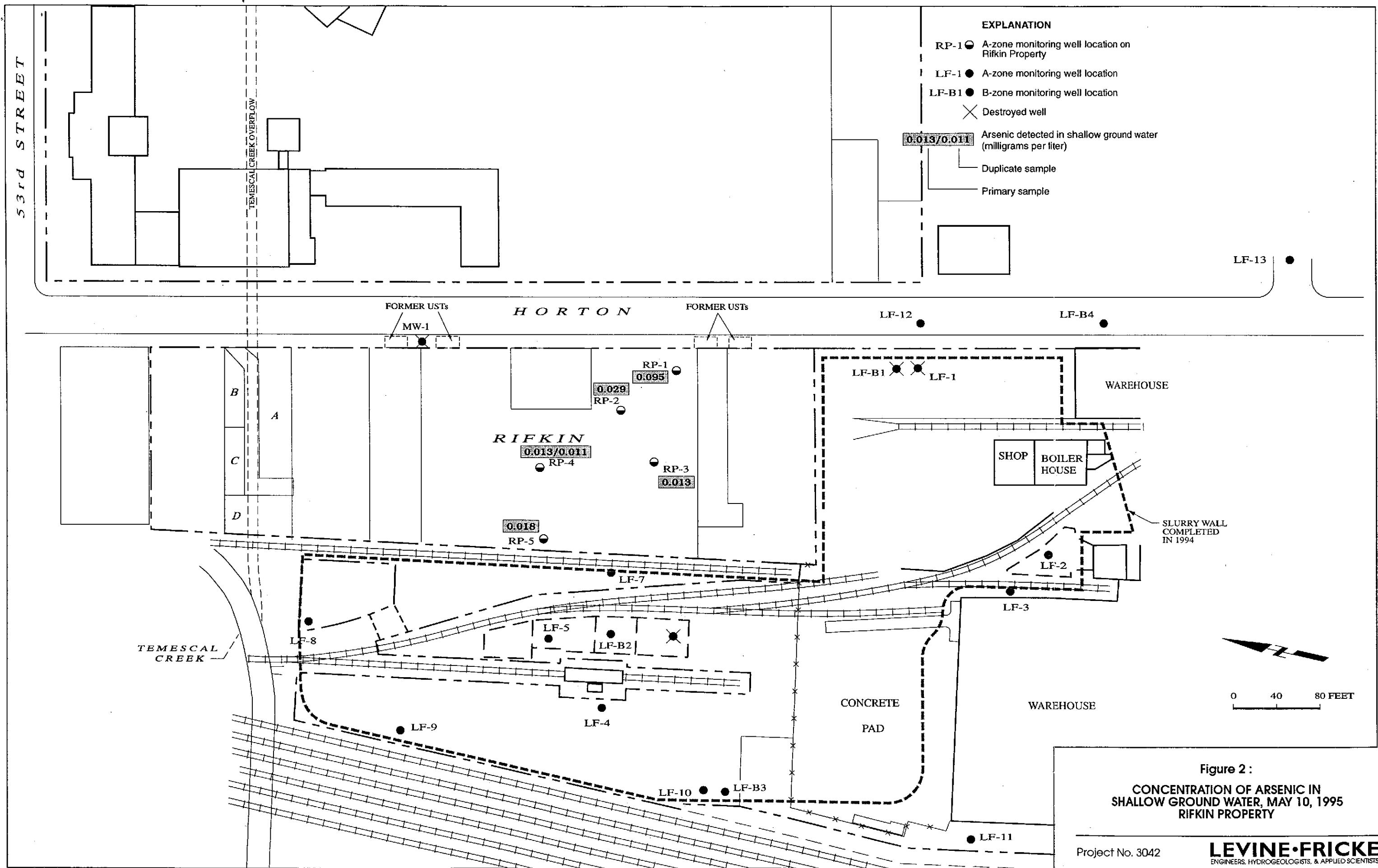


Figure 2 :
 CONCENTRATION OF ARSENIC IN
 SHALLOW GROUND WATER, MAY 10, 1995
 RIFKIN PROPERTY

APPENDIX A

WATER LEVEL AND SAPLING FIELD FORMS

WATER-QUALITY SAMPLING INFORMATION

Project No.: 3042.02
 Project Name: Sherwin Williams (Rifkin)
 Sample Location: Emeryville, CA
 Samplers Name: JMR
 Sampling Plan Prepared By: KAG
 Sampling Method: _____

Date: 5-10-95
 Sample No.: RP-1
 FB: _____
 DUP: _____

- Centrifugal Pump Disposable Bailer
 Submersible Pump Teflon Bailer
 Hand Bail _____
 (Other)

Analyses Requested

TPH₂, BTEX
TPH_d
AS

Number and Types of Bottle used

3 VOA/HEL
2 Amberlite/HEL
1 500ml plastic ^{HNDA}

```

11.86
 7.53
-----
 4.33
  .10
-----
25.98
43.30
-----
69.28

      4.33
       .2
-----
      8.66
     7.053
-----
     7.919

80% DTW 7.91
    
```

Method of Shipment

AEN
 (Lab Name)

- Courier _____
 Hand Deliver:

Well Number: RP-1
 Depth of Water: 7.53
 Well Depth: 11.86
 Height of Water Column: 4.33
 Volume in Well: .69 ± 1.0

- Well Diameter:**
 2" (0.16 Gallon/Feet)
 4" (0.65 Gallon/Feet)
 5" (1.02 Gallon/Feet)
 6" (1.47 Gallon/Feet)

TIME	Depth to Water	Volume Purged (Gallons)	Totalizer Reading	Temperature °C	pH (SU)	Cond (mohs)	Turbidity (NTU)	Remarks
11:29								Start
11:31		1		16.8	6.32	928		sl. turbid / mild odor
11:33		2		16.8	6.26	929		sl. turbid / mild odor
11:35		3		16.8	6.25	925		sl. turbid / mild odor
	7.85							Recover to 80%
11:45								Sample

Inlet Depth: _____

Comments: _____
 (Recommended Method For Purging Well)

WATER-QUALITY SAMPLING INFORMATION

Project No.: 3042.02
 Project Name: Sherwin Williams (Rifkin)
 Sample Location: Emeryville, CA
 Samplers Name: JMR
 Sampling Plan Prepared By: KAG
 Sampling Method: _____

Date: 5-10-95
 Sample No.: RP-2
 FB: _____
 DUP: _____

- Centrifugal Pump Disposable Bailer
 Submersible Pump Teflon Bailer
 Hand Bail _____
 (Other)

Analyses Requested
TPH₄, BTEX
TPH₂
AS

Number and Types of Bottle used
3 VOA/HEL
2 Amberlite/HEL
1 500ml Plastic

14.43
 7.77

 6.66
 .16

 3996
 6660

 10656

 6.66
 .2

 1.332
 7.077

 8.409

 8.40

 80% DTW

Method of Shipment
AEN Courier _____
 (Lab Name) Hand Deliver: _____

Well Number: RP-2 Well Diameter: _____
 Depth of Water: 7.77 2" (0.16 Gallon/Feet)
 Well Depth: 14.43 4" (0.65 Gallon/Feet)
 Height of Water Column: 6.66 5" (1.02 Gallon/Feet)
 Volume in Well: 1.0 & 1.25 6" (1.47 Gallon/Feet)

TIME	Depth to Water	Volume Purged (Gallons)	Totalizer Reading	Temperature °C	pH (SU)	Cond (mohs)	Turbidity (NTU)	Remarks
10:57								start
10:59		1.25		17.1	6.43	1266		turbid
11:01		2.50		17.2	6.35	1202		turbid
11:05		3.75		17.2	6.36	1199		turbid
	7.82							
11:15								sample

Inlet Depth: _____
 Comments: _____
 (Recommended Method For Purging Well)

WATER-QUALITY SAMPLING INFORMATION

Project No.: 3042.02
 Project Name: Sherwin Williams (Rifkin)
 Sample Location: Emeryville, CA
 Samplers Name: JMR
 Sampling Plan Prepared By: KAG
 Sampling Method: _____

Date: 5-10-95
 Sample No.: RP-3
 FB: RP-3-FB
 DUP: _____

- | | |
|---|---|
| <input type="checkbox"/> Centrifugal Pump | <input checked="" type="checkbox"/> Disposable Bailer |
| <input type="checkbox"/> Submersible Pump | <input type="checkbox"/> Teflon Bailer |
| <input checked="" type="checkbox"/> Hand Bail | <input type="checkbox"/> _____
(Other) |

Analyses Requested: TPH_g, BTEX
TPH_L
AS

Number and Types of Bottle used:
5 VOA/HEL
JMR 3 Amberlite/HEL
2 950ml Plastic

```

12.78
 7.61
-----
 5.17
  .16
-----
 31.02
 51.70
-----
 82.72

      5.17
       .2
-----
    1.034
    7.061
-----
    8.095

80% DTW 8.09
    
```

Method of Shipment

AEN
 (Lab Name)

- Courier _____
 Hand Deliver:

Well Number: RP-3
 Depth of Water: 7.61
 Well Depth: 12.78
 Height of Water Column: 5.17
 Volume in Well: .82 ± 1.0

- Well Diameter: _____
 2" (0.16 Gallon/Feet)
 4" (0.65 Gallon/Feet)
 5" (1.02 Gallon/Feet)
 6" (1.47 Gallon/Feet)

TIME	Depth to Water	Volume Purged (Gallons)	Totalizer Reading	Temperature °C	pH (SU)	Cond (mohs)	Turbidity (NTU)	Remarks
12:05								Field Blank
12:17								Start
12:19		1		17.0	6.28	3.27		Sl. turbid / odor
12:23		2		16.8	6.23	3.37		Sl. turbid / odor
12:26		3		16.8	6.23	3.39		Sl. turbid / odor
	7.80							
12:35								sample

Inlet Depth: _____

Comments: _____
 (Recommended Method For Purging Well)

WATER-QUALITY SAMPLING INFORMATION

Project No.: 3042.02
 Project Name: Sherwin Williams (Rifkin)
 Sample Location: Emeryville, CA
 Samplers Name: JMR
 Sampling Plan Prepared By: KAG
 Sampling Method: _____

Date: 5-10-95
 Sample No.: RP5
 FB: _____
 DUP: _____

- Centrifugal Pump Disposable Bailer
 Submersible Pump Teflon Bailer
 Hand Bail _____
 (Other)

Analyses Requested
TPH_g, BTEX
TPH_d
AS

Number and Types of Bottle used
3 VOA/HEL
2 Amberlite/HEL
1 500ml plastic HD3

```

15.88
 7.69
-----
 8.19
  .16
-----
4914
 8190
-----
13104

      8.19
       .2
-----
    1638
    7067
-----
    8707

80% DTW 8.70
    
```

Method of Shipment
AEN
 (Lab Name) Courier _____
 Hand Deliver: _____

Well Number: RP-5 Well Diameter: _____
 Depth of Water: 7.69 2" (0.16 Gallon/Feet)
 Well Depth: 15.88 4" (0.65 Gallon/Feet)
 Height of Water Column: 8.19 5" (1.02 Gallon/Feet)
 Volume in Well: 1.3 ± 1.5 6" (1.47 Gallon/Feet)

TIME	Depth to Water	Volume Purged (Gallons)	Totalizer Reading	Temperature °C	pH (SU)	Cond (mohs)	Turbidity (NTU)	Remarks
7:40								Start
7:42		1.5		17.3	6.51	784		Sl. turbid
7:44		3.0		17.2	6.43	734		Sl. turbid
7:47		4.5		17.1	6.45	734		Sl. turbid
	7.90							
7:55								Sample

Inlet Depth: _____
 Comments: _____
 (Recommended Method For Purging Well)

APPENDIX B
LABORATORY CERTIFICATES

American Environmental Network

Certificate of Analysis

DOHS Certification: 1172

AIHA Accreditation: 11134

PAGE 1

LEVINE-FRICKE
1900 POWELL ST. 12TH FL.
EMERYVILLE, CA 94608

ATTN: KENTON GEE
CLIENT PROJ. ID: 3042.02
CLIENT PROJ. NAME: SHERWIN WMS
C.O.C. NUMBER: 013487

REPORT DATE: 05/24/95
DATE(S) SAMPLED: 05/10/95
DATE RECEIVED: 05/10/95
AEN WORK ORDER: 9505155

PROJECT SUMMARY:

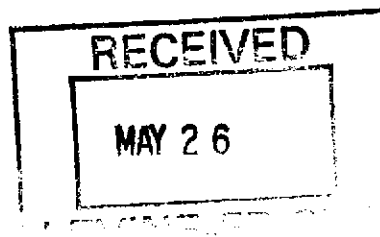
On May 10, 1995, this laboratory received 7 water sample(s).

Client requested sample(s) be analyzed for inorganic and organic parameters. Results of analysis are summarized on the following page(s). Please see quality control report for a summary of QC data pertaining to this project.

Samples will be stored for 30 days after completion of analysis, then disposed of in accordance with State and Federal regulations. Samples may be archived by prior arrangement.

If you have any questions, please contact Client Services at (510) 930-9090.


Larry Klein
Laboratory Director



LEVINE-FRICKE

SAMPLE ID: RP-5
 AEN LAB NO: 9505155-01
 AEN WORK ORDER: 9505155
 CLIENT PROJ. ID: 3042.02

DATE SAMPLED: 05/10/95
 DATE RECEIVED: 05/10/95
 REPORT DATE: 05/24/95

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	0.5	ug/L	05/16/95
Toluene	108-88-3	ND	0.5	ug/L	05/16/95
Ethylbenzene	100-41-4	ND	0.5	ug/L	05/16/95
Xylenes, Total	1330-20-7	ND	2	ug/L	05/16/95
Purgeable HCs as Gasoline	5030/GCFID	ND	0.05	mg/L	05/16/95
#Extraction for TPH	EPA 3510	-		Extrn Date	05/14/95
TPH as Diesel	GC-FID	1.1 *	0.05	mg/L	05/17/95
#Digestion, Metals by GFAA	EPA 3020	-		Prep Date	05/14/95
Arsenic	EPA 7060	0.018 *	0.002	mg/L	05/15/95

ND = Not detected at or above the reporting limit
 * = Value at or above reporting limit

LEVINE-FRICKE

SAMPLE ID: RP-4
 AEN LAB NO: 9505155-02
 AEN WORK ORDER: 9505155
 CLIENT PROJ. ID: 3042.02

DATE SAMPLED: 05/10/95
 DATE RECEIVED: 05/10/95
 REPORT DATE: 05/24/95

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	0.5	ug/L	05/16/95
Toluene	108-88-3	ND	0.5	ug/L	05/16/95
Ethylbenzene	100-41-4	ND	0.5	ug/L	05/16/95
Xylenes, Total	1330-20-7	ND	2	ug/L	05/16/95
Purgeable HCs as Gasoline	5030/GCFID	ND	0.05	mg/L	05/16/95
#Extraction for TPH	EPA 3510	-		Extrn Date	05/14/95
TPH as Diesel	GC-FID	0.2 *	0.05	mg/L	05/17/95
#Digestion, Metals by GFAA	EPA 3020	-		Prep Date	05/14/95
Arsenic	EPA 7060	0.013 *	0.002	mg/L	05/15/95

ND = Not detected at or above the reporting limit
 * = Value at or above reporting limit

LEVINE-FRICKE

SAMPLE ID: RP-104
 AEN LAB NO: 9505155-03
 AEN WORK ORDER: 9505155
 CLIENT PROJ. ID: 3042.02

DATE SAMPLED: 05/10/95
 DATE RECEIVED: 05/10/95
 REPORT DATE: 05/24/95

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	0.5	ug/L	05/16/95
Toluene	108-88-3	ND	0.5	ug/L	05/16/95
Ethylbenzene	100-41-4	ND	0.5	ug/L	05/16/95
Xylenes, Total	1330-20-7	ND	2	ug/L	05/16/95
Purgeable HCs as Gasoline	5030/GCFID	ND	0.05	mg/L	05/16/95
#Extraction for TPH	EPA 3510	-		Extrn Date	05/14/95
TPH as Diesel	GC-FID	0.2 *	0.05	mg/L	05/17/95
#Digestion, Metals by GFAA	EPA 3020	-		Prep Date	05/14/95
Arsenic	EPA 7060	0.011 *	0.002	mg/L	05/15/95

ND = Not detected at or above the reporting limit
 * = Value at or above reporting limit

LEVINE-FRICKE

SAMPLE ID: RP-2
 AEN LAB NO: 9505155-04
 AEN WORK ORDER: 9505155
 CLIENT PROJ. ID: 3042.02

DATE SAMPLED: 05/10/95
 DATE RECEIVED: 05/10/95
 REPORT DATE: 05/24/95

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	0.5	ug/L	05/16/95
Toluene	108-88-3	ND	0.5	ug/L	05/16/95
Ethylbenzene	100-41-4	ND	0.5	ug/L	05/16/95
Xylenes, Total	1330-20-7	ND	2	ug/L	05/16/95
Purgeable HCs as Gasoline	5030/GCFID	ND	0.05	mg/L	05/16/95
#Extraction for TPH	EPA 3510	-		Extrn Date	05/14/95
TPH as Diesel	GC-FID	0.3 *	0.05	mg/L	05/17/95
#Digestion, Metals by GFAA	EPA 3020	-		Prep Date	05/14/95
Arsenic	EPA 7060	0.029 *	0.002	mg/L	05/15/95

ND = Not detected at or above the reporting limit

* = Value at or above reporting limit

LEVINE-FRICKE

SAMPLE ID: RP-1
 AEN LAB NO: 9505155-05
 AEN WORK ORDER: 9505155
 CLIENT PROJ. ID: 3042.02

DATE SAMPLED: 05/10/95
 DATE RECEIVED: 05/10/95
 REPORT DATE: 05/24/95

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	0.5	ug/L	05/16/95
Toluene	108-88-3	ND	0.5	ug/L	05/16/95
Ethylbenzene	100-41-4	ND	0.5	ug/L	05/16/95
Xylenes, Total	1330-20-7	ND	2	ug/L	05/16/95
Purgeable HCs as Gasoline	5030/GCFID	2.6 *	0.05	mg/L	05/16/95
#Extraction for TPH	EPA 3510	-		Extrn Date	05/14/95
TPH as Diesel	GC-FID	1.4 *	0.05	mg/L	05/17/95
#Digestion, Metals by GFAA	EPA 3020	-		Prep Date	05/14/95
Arsenic	EPA 7060	0.095 *	0.002	mg/L	05/15/95

ND = Not detected at or above the reporting limit
 * = Value at or above reporting limit

LEVINE-FRICKE

SAMPLE ID: RP-3
 AEN LAB NO: 9505155-06
 AEN WORK ORDER: 9505155
 CLIENT PROJ. ID: 3042.02

DATE SAMPLED: 05/10/95
 DATE RECEIVED: 05/10/95
 REPORT DATE: 05/24/95

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	0.5	ug/L	05/17/95
Toluene	108-88-3	ND	0.5	ug/L	05/17/95
Ethylbenzene	100-41-4	ND	0.5	ug/L	05/17/95
Xylenes, Total	1330-20-7	ND	2	ug/L	05/17/95
Purgeable HCs as Gasoline	5030/GCFID	0.1 *	0.05	mg/L	05/17/95
#Extraction for TPH	EPA 3510	-		Extrn Date	05/14/95
TPH as Diesel	GC-FID	1.7 *	0.05	mg/L	05/17/95
#Digestion, Metals by GFAA	EPA 3020	-		Prep Date	05/14/95
Arsenic	EPA 7060	0.013 *	0.002	mg/L	05/15/95

ND = Not detected at or above the reporting limit

* = Value at or above reporting limit

LEVINE-FRICKE

SAMPLE ID: RP-3-FB
 AEN LAB NO: 9505155-07
 AEN WORK ORDER: 9505155
 CLIENT PROJ. ID: 3042.02

DATE SAMPLED: 05/10/95
 DATE RECEIVED: 05/10/95
 REPORT DATE: 05/24/95

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	0.5	ug/L	05/16/95
Toluene	108-88-3	ND	0.5	ug/L	05/16/95
Ethylbenzene	100-41-4	ND	0.5	ug/L	05/16/95
Xylenes, Total	1330-20-7	ND	2	ug/L	05/16/95
Purgeable HCs as Gasoline	5030/GCFID	ND	0.05	mg/L	05/16/95
#Extraction for TPH	EPA 3510	-		Extrn Date	05/14/95
TPH as Diesel	GC-FID	ND	0.05	mg/L	05/17/95
#Digestion, Metals by GFAA	EPA 3020	-		Prep Date	05/14/95
Arsenic	EPA 7060	ND	0.002	mg/L	05/15/95

ND = Not detected at or above the reporting limit
 * = Value at or above reporting limit

AEN (CALIFORNIA)
QUALITY CONTROL REPORT

AEN JOB NUMBER: 9505155

CLIENT PROJECT ID: 3042.02

Quality Control Summary

All laboratory quality control parameters were found to be within established limits.

Definitions

Laboratory Control Sample (LCS)/Method Spike(s): Control samples of known composition. LCS and Method Spike data are used to validate batch analytical results.

Matrix Spike(s): Aliquot of a sample (aqueous or solid) with added quantities of specific compounds and subjected to the entire analytical procedure. Matrix spike and matrix spike duplicate QC data are advisory.

Method Blank: An analytical control consisting of all reagents, internal standards, and surrogate standards carried through the entire analytical process. Used to monitor laboratory background and reagent contamination.

Not Detected (ND): Not detected at or above the reporting limit.

Relative Percent Difference (RPD): An indication of method precision based on duplicate analysis.

Reporting Limit (RL): The lowest concentration routinely determined during laboratory operations. The RL is generally 1 to 10 times the Method Detection Limit (MDL). Reporting limits are matrix, method, and analyte dependent and take into account any dilutions performed as part of the analysis.

Surrogates: Organic compounds which are similar to analytes of interest in chemical behavior, but are not found in environmental samples. Surrogates are added to all blanks, calibration and check standards, samples, and spiked samples. Surrogate recovery is monitored as an indication of acceptable sample preparation and instrumental performance.

D: Surrogates diluted out.

#: Indicates result outside of established laboratory QC limits.

QUALITY CONTROL DATA

METHOD: EPA 3510 GCFID

AEN JOB NO: 9505155
AEN LAB NO: 0514-BLANK
DATE EXTRACTED: 05/14/95
DATE ANALYZED: 05/17/95
INSTRUMENT: C
MATRIX: WATER

Method Blank

Analyte	Result (mg/L)	Reporting Limit (mg/L)
Diesel	ND	0.05

QUALITY CONTROL DATA

METHOD: EPA 3510 GCFID

AEN JOB NO: 9505155
 DATE EXTRACTED: 05/14/95
 INSTRUMENT: C
 MATRIX: WATER

Surrogate Standard Recovery Summary

Date Analyzed	Client Id.	Lab Id.	Percent Recovery	
			n-Pentacosane	
05/17/95	RP-5	01	80	
05/17/95	RP-4	02	84	
05/17/95	RP-104	03	79	
05/17/95	RP-2	04	79	
05/17/95	RP-1	05	80	
05/17/95	RP-3	06	81	
05/17/95	RP-3-FB	07	78	
QC Limits:			73-129	

DATE EXTRACTED: 05/13/95
 DATE ANALYZED: 05/16/95
 SAMPLE SPIKED: DI WATER
 INSTRUMENT: C

Method Spike Recovery Summary

Analyte	Spike Added (mg/L)	Average Percent Recovery	RPD	QC Limits	
				Percent Recovery	RPD
Diesel	1.82	90	12	65-103	12

QUALITY CONTROL DATA

METHOD: EPA 8020, 5030 GCFID

AEN JOB NO: 9505155
 AEN LAB NO: 0516-BLANK
 DATE ANALYZED: 05/16/95
 INSTRUMENT: H
 MATRIX: WATER

Method Blank

Analyte	CAS #	Result (ug/L)	Reporting Limit (ug/L)
Benzene	71-43-2	ND	0.5
Toluene	108-88-3	ND	0.5
Ethylbenzene	100-41-4	ND	0.5
Xylenes, Total	1330-20-7	ND	2
HCs as Gasoline		ND mg/L	0.05 mg/L

AEN LAB NO: 0517-BLANK
 DATE ANALYZED: 05/17/95
 INSTRUMENT: H

Method Blank

Analyte	CAS #	Result (ug/L)	Reporting Limit (ug/L)
Benzene	71-43-2	ND	0.5
Toluene	108-88-3	ND	0.5
Ethylbenzene	100-41-4	ND	0.5
Xylenes, Total	1330-20-7	ND	2
HCs as Gasoline		ND mg/L	0.05 mg/L

QUALITY CONTROL DATA

METHOD: EPA 8020, 5030 GCFID

AEN JOB NO: 9505155

INSTRUMENT: H

MATRIX: WATER

Surrogate Standard Recovery Summary

Date Analyzed	Client Id.	Lab Id.	Percent Recovery	
			Fluorobenzene	
05/16/95	RP-5	01	99	
05/16/95	RP-4	02	99	
05/16/95	RP-104	03	95	
05/16/95	RP-2	04	98	
05/16/95	RP-1	05	99	
05/17/95	RP-3	06	99	
05/16/95	RP-3-FB	07	99	
QC Limits:			92-109	

DATE ANALYZED: 05/16/95
 SAMPLE SPIKED: 9505143-03
 INSTRUMENT: H

Matrix Spike Recovery Summary

Analyte	Spike Added (ug/L)	Average Percent Recovery	RPD	QC Limits	
				Percent Recovery	RPD
Benzene	36.3	100	<1	85-109	17
Toluene	103.0	101	1	87-111	16
Hydrocarbons as Gasoline	1000	89	5	66-117	19

QUALITY CONTROL DATA

AEN JOB NO: 9505155
 SAMPLE SPIKED: 9505155-07
 DATE(S) ANALYZED: 05/15/95
 MATRIX: WATER

Matrix Spike Recovery Summary

Analyte	Inst./ Method	Sample Result (mg/L)	Spike Added (mg/L)	Average Percent Recovery	RPD	QC Limits	
						Percent Recovery	RPD
As, Arsenic	4000/7060	ND	0.04	111	2	59-149	13

SAMPLE SPIKED: DI WATER

Method Blank and Spike Recovery Summary

Analyte	Inst./ Method	Blank Result (mg/L)	Spike Added (mg/L)	Average Percent Recovery	RPD	QC Limits	
						Percent Recovery	RPD
As, Arsenic	4000/7060	ND	0.04	109	5	84-118	12

*** END OF REPORT ***

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Cr 2 4.8
R-5, S-3 (10E-30E)
9505155 R-4, S-3 (40E-60E) 7C

Project No.: 3042.02 Field Logbook No.: Date: 5-10-95 Serial No.:
Project Name: Sherwin Williams Project Location: Emeryville No: 013487

SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	ANALYSES					HOLD	RUSH	REMARKS
						EPA 601	EPA 624	TPH, BTEX	TPH d	AS			
RP-5	5-10-95	9:55	01A-F	6	H ₂ O			X	X	X			
RP-4		10:25	02A-F	6									Analyses for TPH _s , d, BTEX + AS
RP-104		11:25	03A-F	6									
RP-2		11:15	04A-F	6									
RP-1		11:45	05A-F	6									Results to Kenton Gee
RP-3		12:35	06A-F	6									
RP-3-FB	↓	12:05	07A-D	4	↓			↓	↓	↓			Standard turnaround

RELINQUISHED BY: (Signature) <i>Jeffrey Adams</i>	DATE 5-10-95	TIME 16:10	RECEIVED BY: (Signature) <i>Michael E Mc Miller</i>	DATE 5/10/95	TIME 16:10
RELINQUISHED BY: (Signature) <i>Michael E Mc Miller</i>	DATE 5/10/95	TIME 17:46	RECEIVED BY: (Signature) <i>Don P. Smith</i>	DATE 5-10-95	TIME 1740
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT:	DATE	TIME	LAB COMMENTS:		

Sample Collector: LEVINE-FRICKE
1900 Powell Street, 12th Floor
Emeryville, California 94608
(510) 652-4500

Analytical Laboratory:
AEN