January 23, 1996 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: November 17, 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 November 17, 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 October 1 to December 31, 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 Arigula 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 November 17, 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, on November 17, 1995 depth to water measurements were recorded in on-site wells RP-1 through RP-5 (installed by Levine-Fricke) and MW-1 through MW-5 (installed by TMC Environmental). 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.

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 and chain-of-custody forms are included in Appendix B.

The next quarterly ground-water monitoring event was conducted on January 9 and 10, 1996. Results from this event will be reported in the quarterly ground-water monitoring report for the period from January 1 through March 31, 1996. Please contact Mark Knox or Kenton Gee at (510) 652-4500 if you have any questions or comments.

Sincerely,

Mark D. Knox

Mark D. Knox, P.E.
Principal Engineer

Angela Jacobson for

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, Alameda County

CERTIFICATION

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

Mark D. Knox

1/23/96
Date

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

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)
RP-1 (1)	8-Sep-94	15.12	8.65	6.47
	28-Feb-95		7.83	7.29
	10-May-95		7.53	7.59
	9-Aug-95		8.39	6.73
	17-Nov-95		8.91	6.21
RP-2 (1)	8-Sep-94	15.23	8.99	6.24
	28-Feb-95		8.11	7.12
	10-May-95		7.77	7.46
	9-Aug-95		8.67	6.56
	17-Nov-95		9.27	5.96
RP-3 (1)	8-Sep-94	15.15	8.80	6.35
	28-Feb-95		7.87	7.28
	10-May-95		7.61	7.54
	9-Aug-95		8.48	6.67
	17-Nov-95		9.09	6.06
RP-4 (1)	8-Sep-94	15.10	9.02	6.08
	28-Feb-95		8.13	6.97
	10-May-95		7.77	7.33
	9-Aug-95		8.65	6.45
	17-Nov-95		9.28	5.82
RP-5 (1)	8-Sep-94	15.03	8.95	6.08
	28-Feb-95		8.06	6.97
	10-May-95		7.69	7.34
	9-Aug-95		8.57	6.46
	17-Nov-95		9.23	5.80
MW-1 (2)	9-Aug-95	13.79	7.50	6.29
	17-Nov-95		8.00	5.79
MW-2 (2)	9-Aug-95	13.39	7.31	6.08
	17-Nov-95		8.12	5.27
MW-3 (2)	9-Aug-95	14.64	7.89	6.75
	17-Nov-95		8.40	6.24
MW-4 (2)	9-Aug-95	15.35	7.93	7.42
	17-Nov-95		8.67	6.68
MW-5 (2)	9-Aug-95	15.87	7.87	8.00
	17-Nov-95		8.65	7.22

Data entered by PCA 20-Dec-95. Proofed by ICAG.

Notes

(1) Monitoring well installed by Levine-Fricke.
(2) Monitoring well installed by TMC Environmental.

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	As	TPHg	TPHd	TPHo	Benzene	Toluene	Ethyl-benzene	Xylenes	Acetone	MEK	1,2-DCA	cis-1,2-DCE	trans-1,2-DCE	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	<0.005	<0.0005	<0.0005	<0.002	<0.100	<0.100	0.002	0.003	0.001	<0.050	<0.005
	28-Feb-95	0.046	0.3	1.8	NA	<0.0005	<0.0005	<0.0005	<0.002	NA	NA	NA	NA	NA	NA	NA
(4)	29-Mar-95	0.035	<0.05	0.78	<0.5	<0.005	<0.005	<0.005	<0.01	<0.100	NA	<0.005	<0.005	<0.005	NA	<0.005
	10-May-95	0.095	2.6	1.4	NA	<0.0005	<0.0005	<0.0005	<0.002	NA	NA	NA	NA	NA	NA	NA
	09-Aug-95	0.059	1.4	1.4	NA	<0.0005	<0.0005	<0.0005	<0.002	NA	NA	NA	NA	NA	NA	NA
	17-Nov-95	0.086	1.2	0.96	NA	<0.0005	0.0008	<0.0005	<0.002	NA	NA	NA	NA	NA	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	<0.005	0.0005	<0.005	<0.002	<0.100	<0.100	0.001	0.001	<0.0005	<0.050	0.0006
dup	08-Sep-94	0.020	0.09	0.3	0.6	<0.005	<0.0005	<0.005	<0.002	<0.100	<0.100	0.001	0.001	<0.0005	<0.050	0.0005
	28-Feb-95	0.013	0.09	<0.05	NA	<0.0005	<0.0005	<0.0005	<0.002	NA	NA	NA	NA	NA	NA	NA
(3)	29-Mar-95	0.01	0.07	0.4	<0.5	<0.005	<0.005	<0.005	<0.01	<0.100	NA	<0.005	<0.005	<0.005	NA	<0.005
	10-May-95	0.029	<0.05	0.3	NA	<0.0005	<0.0005	<0.0005	<0.002	NA	NA	NA	NA	NA	NA	NA
	09-Aug-95	0.01	<0.05	0.2	NA	<0.0005	<0.0005	<0.0005	<0.002	NA	NA	NA	NA	NA	NA	NA
	17-Nov-95	0.011	0.1	0.2	NA	0.002	0.003	0.0009	0.004	NA	NA	NA	NA	NA	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	<0.005	<0.0005	<0.005	<0.002	<0.100	<0.100	<0.005	<0.0005	<0.0005	<0.050	<0.0005
	28-Feb-95	0.004	0.2	1.2	NA	<0.0005	0.0007	<0.0005	<0.002	NA	NA	NA	NA	NA	NA	NA
(5)	29-Mar-95	0.004	0.3	1.9	0.6	<0.005	<0.005	<0.005	<0.01	<0.100	NA	<0.005	<0.005	<0.005	NA	<0.005
	10-May-95	0.013	0.1	1.7	NA	<0.0005	<0.0005	<0.0005	<0.002	NA	NA	NA	NA	NA	NA	NA
	09-Aug-95	0.003	0.2	1.2	NA	<0.0005	0.0009	<0.0005	0.0094	NA	NA	NA	NA	NA	NA	NA
	17-Nov-95	0.006	0.1	1.1	NA	<0.0005	0.001	<0.0005	0.005	NA	NA	NA	NA	NA	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	<0.005	<0.0005	<0.005	<0.002	<0.100	<0.100	0.001	0.007	0.004	<0.050	0.002
	28-Feb-95	0.007	0.08	0.07	NA	<0.0005	<0.0005	<0.0005	<0.002	NA	NA	NA	NA	NA	NA	NA
dup	28-Feb-95	0.006	0.07	0.07	NA	<0.0005	<0.0005	<0.0005	<0.002	NA	NA	NA	NA	NA	NA	NA
(2)	29-Mar-95	0.008	0.07	0.3	<0,5	<0.005	<0.005	<0.005	<0.01	<0.100	NA	<0.005	<0.005	<0.005	NA	<0.005
	10-May-95	0.013	<0.05	0.2	NA	<0.0005	<0.0005	<0.0005	<0.002	NA	NA	NA	NA	NA	NA	NA
dup	10-May-95	0.011	<0.05	0.2	NA	<0.0005	<0.0005	<0.0005	<0.002	NA	NA	NA	NA	NA	NA	NA
	09-Aug-95	0.007	<0.05	0.2	NA	<0.0005	<0.0005	<0.0005	<0.002	NA	NA	NA	NA	NA	NA	NA
dup	09-Aug-95	0.007	<0.05	0.2	NA	<0.0005	<0.0005	<0.0005	<0.002	NA	NA	NA	NA	NA	NA	NA
	17-Nov-95	0.011	<0.05	0.1	NA	<0.0005	<0.0005	<0.0005	<0.002	NA	NA	NA	NA	NA	NA	NA
dup	17-Nov-95	0.011	<0.05	0.3	NA	<0.0005	<0.0005	<0.0005	<0.002	NA	NA	NA	NA	NA	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	As	TPHg	TPHd	TPHo	Benzene	Toluene	Ethyl-benzene	Xylenes	Acetone	MEK	1,2-DCA	cis-1,2-DCE	trans-1,2-DCE	MIBK	TCE
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	<0.005	<0.0005	<0.005	<0.002	<0.100	<0.100	0.0008	0.0005	<0.0005	<0.050	<0.005
	28-Feb-95	0.007	0.06	0.2	NA	<0.0005	0.0009	<0.0005	<0.002	NA	NA	NA	NA	NA	NA	NA
(1)	29-Mar-95	0.006	<0.05	0.8	<0.5	<0.005	<0.005	<0.005	<0.01	<0.100	NA	<0.005	<0.005	<0.005	NA	<0.005
	10-May-95	0.018	<0.05	1.1	NA	<0.0005	<0.0005	<0.0005	<0.002	NA	NA	NA	NA	NA	NA	NA
	09-Aug-95	0.003	<0.05	0.69	NA	<0.0005	<0.0005	<0.0005	<0.002	NA	NA	NA	NA	NA	NA	NA
	17-Nov-95	0.008	<0.05	0.5	NA	<0.0005	<0.0005	<0.0005	<0.002	NA	NA	NA	NA	NA	NA	NA
Blanks																
RP-3-FB	28-Feb-95	<0.002	<0.05	<0.05	NA	<0.0005	<0.0005	<0.0005	<0.002	NA	NA	NA	NA	NA	NA	NA
RP-3-FB	10-May-95	<0.002	<0.05	<0.05	NA	<0.0005	<0.0005	<0.0005	<0.002	NA	NA	NA	NA	NA	NA	NA
RP-3-FB	09-Aug-95	<0.002	<0.05	<0.05	NA	<0.0005	<0.0005	<0.0005	<0.002	NA	NA	NA	NA	NA	NA	NA
RP-3-FB	17-Nov-95	<0.002	<0.05	<0.05	NA	<0.0005	<0.0005	<0.0005	<0.002	NA	NA	NA	NA	NA	NA	NA
Trip Blank	17-Nov-95	NA	<0.05	NA	NA	<0.0005	<0.0005	<0.0005	<0.002	NA	NA	NA	NA	NA	NA	NA
MCLS	-------	0.050	-------	-------	-------	0.005	1.000	0.700	10	-------	-------	0.0005	0.070	0.100	-------	0.005

Data entered by PCA 20-Dec-95. Data proofed by KAG. QA/QC by MDK

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.

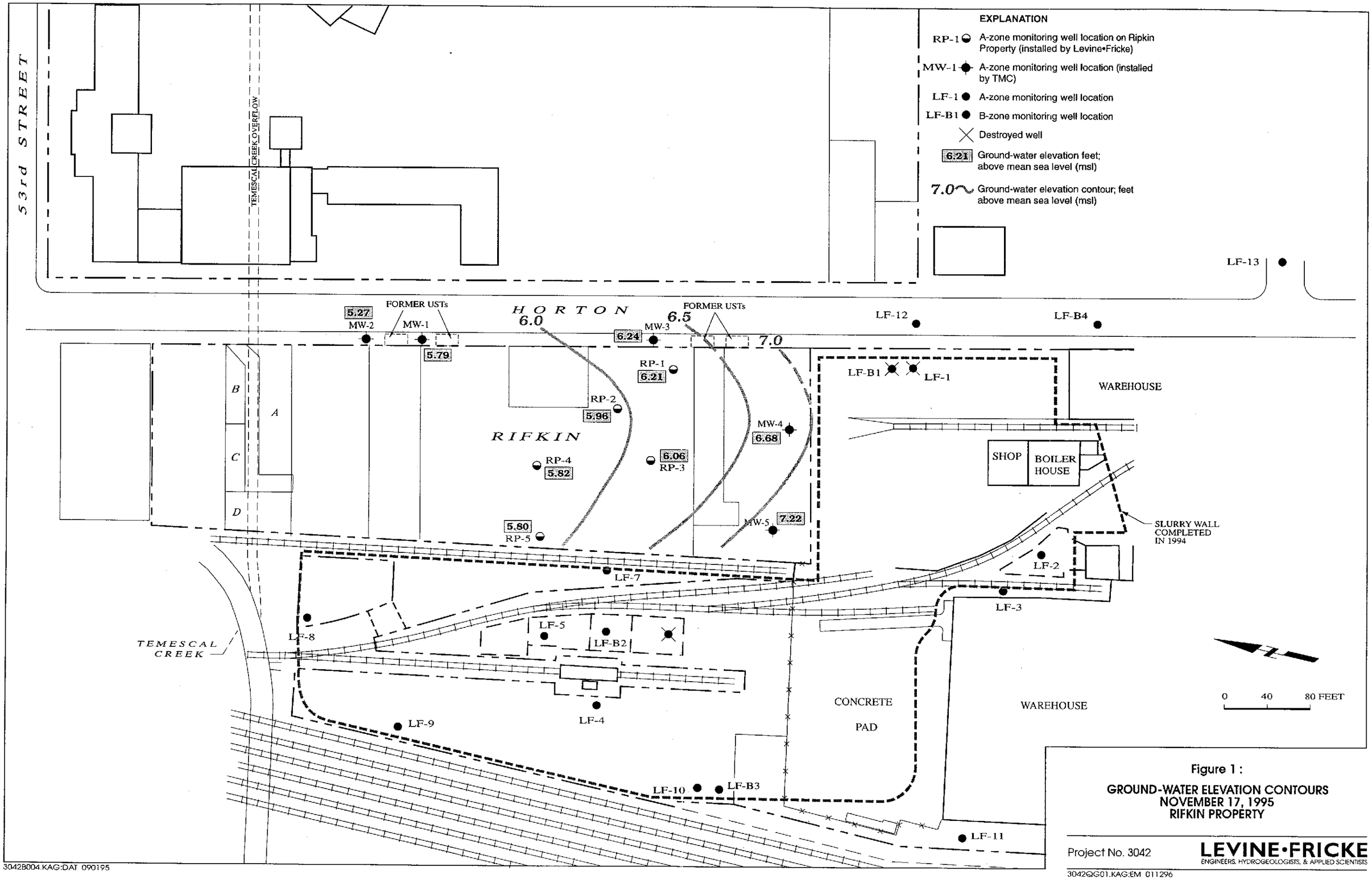


Figure 1 :

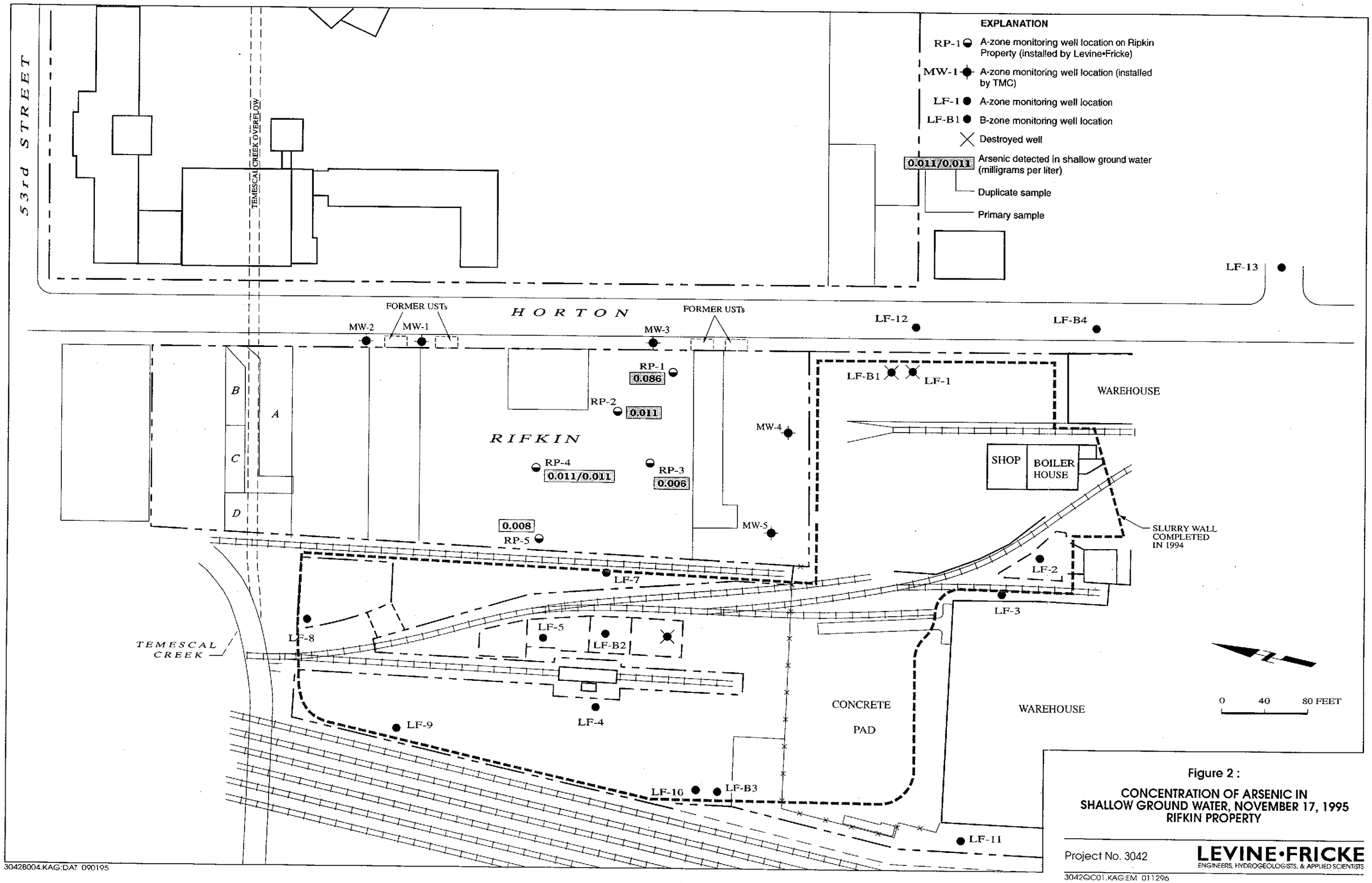
GROUND-WATER ELEVATION CONTOURS
NOVEMBER 17, 1995
RIFKIN PROPERTY

Project No. 3042

LEVINE•FRICKE
ENGINEERS, HYDROGEOLOGISTS, & APPLIED SCIENTISTS

3042B004.KAG:DAT 090195

3042QG01.KAG:EM 011296



3042B004.KAG:DAT 090195

Figure 2 :

CONCENTRATION OF ARSENIC IN SHALLOW GROUND WATER, NOVEMBER 17, 1995 RIFKIN PROPERTY

Project No. 3042

LEVINE•FRICKE
ENGINEERS, HYDROGEOLOGISTS, & APPLIED SCIENTISTS

3042QC01.KAG:EM 011296

APPENDIX A

WATER LEVEL AND SAMPLING FIELD FORMS

WATER-LEVEL MEASUREMENTS

Project Name: Sherwin Williams - Riftin Project No.: 3042.02

Field Personnel: JMR Date: 11-17-95

General Observations: Foggy, overcast

WELL NO.	WELL ELEVATION	DEPTH TO WATER MEASUREMENTS 1	DEPTH TO WATER MEASUREMENTS 2	WATER ELEVATION	REMARKS (UNITS = FEET)
LF-7		9.44			8:08 - NO PVC CAP
LF-8		7.94			8:11 - TAPE covering PVC
JMR ~~LF-9~~					
LF-10		5.87			8:02 - TAPE covering PVC
LF-11		4.30			7:56
LF-12		7.47			7:53
LF-13		7.09			7:50
LF-B3		4.49			8:18
LF-B4		7.19			7:40
RP-1		8.91			9:37
RP-2		9.27			9:36
RP-3		9.09			9:38
RP-4		9.28			9:34
RP-5		9.23			9:33
MW-1		8.00			9:52
MW-2		8.12			9:49
MW-3		8.40			9:48
MW-4		8.67			9:40
MW-5		8.65			9:44

LEVINE•FRICKE

WATER-QUALITY SAMPLING INFORMATION

Project No.: 3042.02

Date: 11/17/95

Project Name: Sherwin Williams - Rifkin

Sample No.: RP-5

Sample Location: Emeryville

☐ FB:

Samplers Name: JMR

☐ DUP:

Sampling Plan Prepared By: KAG

Sampling Method:

☐ Centrifugal Pump
☐ Submersible Pump
☒ Hand Bail
☒ Disposable Bailer
☐ Teflon Bailer
☐ ______ (Other)

Analyses Requested	Number and Types of Bottle used
TPHg, BTEX	3 VOA/HCL
TPHd	2 litre/HCL
As	1 500ml Plastic

Method of Shipment

AEN (Lab Name)

☒ Courier

☐ Hand Deliver:

15.88
9.23
6.65
.16
3990
6650
10640

6.65
.2
1.330
9.23
10560

80% DTW 10.56

Well Number: RP-5

Depth of Water: 9.23

Well Depth: 15.88

Height of Water Column: 6.65

Volume in Well: 1.0≅1.5

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	Temparture °C	pH (SU)	Cond (mohs)	Turbidity (NTU)	Remarks
10:05								Start Bailing
10:07		1.5		18.6	6.46	1105		mod-turbid
10:09		3		18.7	6.42	1089		mod-turbid
10:11		4.5		18.7	6.36	1064		mod-turbid
	9.29							
10:20								sample

WTR.QLTY.SMPLNG.INFO.22JUL94.RYL

Inlet Depth:

Comments:
(Recommended Method For Purging Well)

WATER-QUALITY SAMPLING INFORMATION

Project No.: 3042.02

Project Name: Sherwin Williams - Rifkin

Sample Location: Emeryville

Samplers Name: JMR

Sampling Plan Prepared By: KAG

Sampling Method:

Date: 11/17/95

Sample No.: RP-4

☐ FB:

☒ DUP: RP-104

☐ Centrifugal Pump ☒ Disposable Bailer

☐ Submersible Pump ☐ Teflon Bailer

☒ Hand Bail ☐ _____ (Other)

Analyses Requested	Number and Types of Bottle used
TPHg, BTEX	6 VOA/HCL
TPHd	4 liter/HCL
As	2 500ml Plastic

Method of Shipment: AEN (Lab Name)

☒ Courier _____

☐ Hand Deliver:

Well Number: RP-4

Depth of Water: 9.28

Well Depth: 16.15

Height of Water Column: 6.87

Volume in Well: 1.0 ≅ 1.5

Well Diameter:

☒ 2" (0.16 Gallon/Feet)

☐ 4" (0.65 Gallon/Feet

☐ 5" (1.02 Gallon/Feet)

☐ 6" (1.47 Gallon/Feet)

16.15
9.28
6.87
16
4102
6870
60972
smc
6.87
.2
1374
9.28
10.654

80% DTW 10.65

TIME	Depth to Water	Volume Purged (Gallons)	Totalizer Reading	Temparture °C	pH (SU)	Cond (mohs)	Turbidity (NTU)	Remarks
10:34								Start Bailing
10:36		1.5		18.5	6.29	1008		turbid
10:38		3		18.5	6.27	1007		turbid
10:40		4.5		18.4	6.27	1010		turbid
	9.30							
10:45								Sample
11:45								Dup

Inlet Depth: _____

Comments: _____
(Recommended Method For Purging Well)

WTR.QLTY.SMPLNG.INFO.22JUL94/YL

WATER-QUALITY SAMPLING INFORMATION

Project No.: 3042.02

Project Name: Sherwin Williams - Rifkin

Sample Location: Emeryville

Samplers Name: JMR

Sampling Plan Prepared By: KAG

Sampling Method:

- [ ] Centrifugal Pump
- [ ] Submersible Pump
- [x] Hand Bail
- [x] Disposable Bailer
- [ ] Teflon Bailer
- [ ] ______ (Other)

Date: 11/17/95

Sample No.: RP-2

- [ ] FB:
- [ ] DUP:

14.43
9.27
5.16
.16
3096
516
.8256

5.16
.2
1.032
9.27
10.302

80% DTW 10.30

Analyses Requested	Number and Types of Bottle used
TPHg, BTEX	3 VOA/HCL
TPHd	2 litre/HCL
As	1 500ml Plastic

Method of Shipment

AEN (Lab Name)

- [x] Courier
- [ ] Hand Deliver:

Well Number: RP-2

Depth of Water: 9.27

Well Depth: 14.43

Height of Water Column: 5.16

Volume in Well: ~~8.2~~ JMR .82 ≅ 1

Well Diameter:

- [x] 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	Temparture °C	pH (SU)	Cond (mohs)	Turbidity (NTU)	Remarks
11:10								Start Bailing
11:12		1		18.6	6.19	1107		turbid / sl. odor
11:13		2		18.6	6.19	1106		turbid / sl. odor
11:15		3		18.7	6.21	1130		turbid / sl. odor
	9.34					~~1130~~ JMR		
11:20								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
Samplers Name: JMR
Sampling Plan Prepared By: KAG
Sampling Method:

Date: 11/17/95
Sample No.: RP-1
☐ FB:
☐ DUP:

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

Analyses Requested
TPHg, BTEX
TPHd
AS

Number and Types of Bottle used
3 VOA/HCL
2 Litre/HCL
1 500ml Plastic

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

Well Number: RP-1
Depth of Water: 8.91
Well Depth: 11.86
Height of Water Column: 2.95
Volume in Well: .47 ≅ 1

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

11.86
8.91
2.95
.16
1770
2950
.4720

2.95
.2
.590
8.91
9.500

80% DTW 9.50

TIME	Depth to Water	Volume Purged (Gallons)	Totalizer Reading	Temparture °C	pH (SU)	Cond (mohs)	Turbidity (NTU)	Remarks
11:34								Start Bailing
11:36		1		18.6	6.39	828		Sl. turbid / sl. odor
11:38		2		18.6	6.39	818		Sl. turbid / sl. odor
11:41		3		18.6	6.39	808		Sl. turbid / sl. odor
	9.50							
11:50								Sample

Inlet Depth:

Comments:
(Recommended Method For Purging Well)

WTRQLTY.SMPLNG.INFO.22JUL94TYL

WATER-QUALITY SAMPLING INFORMATION

Project No.: 3042.02
Project Name: Sherwin Williams - Rifkin
Sample Location: Emeryville
Samplers Name: JMR
Sampling Plan Prepared By: KAG
Sampling Method:

Date: 11/17/95
Sample No.: RP-3
☒ FB: RP-3-FB
☐ DUP:

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

Analyses Requested
TPHg, BTEX
TPHd
As

Number and Types of Bottle used
6 VoA / HzL
4 1 litre / HzL
2 500ml Plastic

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

Well Number: RP-3
Depth of Water: 9.09
Well Depth: 12.78
Height of Water Column: 3.69
Volume in Well: .59 ≅ 1

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

12.78
9.09
3.69
16
2214
3690
5904

3.69
.2
.738
9.09
9.828

80% DTW 9.82

TIME	Depth to Water	Volume Purged (Gallons)	Totalizer Reading	Temparture °C	pH (SU)	Cond (mohs)	Turbidity (NTU)	Remarks
12:10								Field Blank
12:15								Start Bailing
12:17				18.3	6.35	3.24		Sl. turbid / odor
12:19				18.4	6.25	3.26		Sl. turbid / odor
12:21				18.5	6.24	3.30		Sl. turbid / odor
	9.35							
12:30								SAmp 6

Inlet Depth:

Comments:
(Recommended Method For Purging Well)

WTR QLTY SMPLNG INFO.22JUL94.YL

APPENDIX B

LABORATORY CERTIFICATES

American Environmental Network

Certificate of Analysis

DOHS Certification: 1172 AIHA Accreditation: 11134

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

REPORT DATE: 12/06/95
DATE(S) SAMPLED: 11/17/95
DATE RECEIVED: 11/17/95
AEN WORK ORDER: 9511307

ATTN: KENTON GEE
CLIENT PROJ. ID: 3042.02
CLIENT PROJ. NAME: SHERWIN WMS
C.O.C. NUMBER: 013910

PROJECT SUMMARY:

On November 17, 1995, this laboratory received 8 water sample(s).

Client requested sample(s) be analyzed for organic and inorganic 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: 9511307-01
AEN WORK ORDER: 9511307
CLIENT PROJ. ID: 3042.02

DATE SAMPLED: 11/17/95
DATE RECEIVED: 11/17/95
REPORT DATE: 12/06/95

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Sample Filtration	0.45 um	-		Filtr Date	11/17/95
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	0.5	ug/L	11/29/95
Toluene	108-88-3	ND	0.5	ug/L	11/29/95
Ethylbenzene	100-41-4	ND	0.5	ug/L	11/29/95
Xylenes, Total	1330-20-7	ND	2	ug/L	11/29/95
Purgeable HCs as Gasoline	5030/GCFID	ND	0.05	mg/L	11/29/95
#Extraction for TPH	EPA 3510	-		Extrn Date	11/28/95
TPH as Diesel	GC-FID	0.5 *	0.05	mg/L	11/30/95
#Digestion, Metals by GFAA	EPA 3020	-		Prep Date	11/28/95
Arsenic	EPA 7060	0.008 *	0.002	mg/L	11/29/95

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

LEVINE-FRICKE

SAMPLE ID: RP-4
AEN LAB NO: 9511307-02
AEN WORK ORDER: 9511307
CLIENT PROJ. ID: 3042.02

DATE SAMPLED: 11/17/95
DATE RECEIVED: 11/17/95
REPORT DATE: 12/06/95

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Sample Filtration	0.45 um	-		Filtr Date	11/17/95
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	0.5	ug/L	11/29/95
Toluene	108-88-3	ND	0.5	ug/L	11/29/95
Ethylbenzene	100-41-4	ND	0.5	ug/L	11/29/95
Xylenes, Total	1330-20-7	ND	2	ug/L	11/29/95
Purgeable HCs as Gasoline	5030/GCFID	ND	0.05	mg/L	11/29/95
#Extraction for TPH	EPA 3510	-		Extrn Date	11/28/95
TPH as Diesel	GC-FID	0.1 *	0.05	mg/L	11/30/95
#Digestion, Metals by GFAA	EPA 3020	-		Prep Date	11/28/95
Arsenic	EPA 7060	0.011 *	0.002	mg/L	11/29/95

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

LEVINE-FRICKE

SAMPLE ID: RP-104
AEN LAB NO: 9511307-03
AEN WORK ORDER: 9511307
CLIENT PROJ. ID: 3042.02

DATE SAMPLED: 11/17/95
DATE RECEIVED: 11/17/95
REPORT DATE: 12/06/95

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Sample Filtration	0.45 um	-		Filtr Date	11/17/95
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	0.5	ug/L	11/30/95
Toluene	108-88-3	ND	0.5	ug/L	11/30/95
Ethylbenzene	100-41-4	ND	0.5	ug/L	11/30/95
Xylenes, Total	1330-20-7	ND	2	ug/L	11/30/95
Purgeable HCs as Gasoline	5030/GCFID	ND	0.05	mg/L	11/30/95
#Extraction for TPH	EPA 3510	-		Extrn Date	11/28/95
TPH as Diesel	GC-FID	0.3 *	0.05	mg/L	11/30/95
#Digestion, Metals by GFAA	EPA 3020	-		Prep Date	11/28/95
Arsenic	EPA 7060	0.011 *	0.002	mg/L	11/29/95

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

LEVINE-FRICKE

SAMPLE ID: RP-2
AEN LAB NO: 9511307-04
AEN WORK ORDER: 9511307
CLIENT PROJ. ID: 3042.02

DATE SAMPLED: 11/17/95
DATE RECEIVED: 11/17/95
REPORT DATE: 12/06/95

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Sample Filtration	0.45 um	-		Filtr Date	11/17/95
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	2 *	0.5	ug/L	11/29/95
Toluene	108-88-3	3 *	0.5	ug/L	11/29/95
Ethylbenzene	100-41-4	0.9 *	0.5	ug/L	11/29/95
Xylenes, Total	1330-20-7	4 *	2	ug/L	11/29/95
Purgeable HCs as Gasoline	5030/GCFID	0.1 *	0.05	mg/L	11/29/95
#Extraction for TPH	EPA 3510	-		Extrn Date	11/28/95
TPH as Diesel	GC-FID	0.2 *	0.05	mg/L	11/30/95
#Digestion, Metals by GFAA	EPA 3020	-		Prep Date	11/28/95
Arsenic	EPA 7060	0.011 *	0.002	mg/L	11/29/95

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

LEVINE-FRICKE

SAMPLE ID: RP-1
AEN LAB NO: 9511307-05
AEN WORK ORDER: 9511307
CLIENT PROJ. ID: 3042.02

DATE SAMPLED: 11/17/95
DATE RECEIVED: 11/17/95
REPORT DATE: 12/06/95

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Sample Filtration	0.45 um	-		Filtr Date	11/17/95
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	0.5	ug/L	11/28/95
Toluene	108-88-3	0.8 *	0.5	ug/L	11/28/95
Ethylbenzene	100-41-4	ND	0.5	ug/L	11/28/95
Xylenes, Total	1330-20-7	ND	2	ug/L	11/28/95
Purgeable HCs as Gasoline	5030/GCFID	1.2 *	0.05	mg/L	11/28/95
#Extraction for TPH	EPA 3510	-		Extrn Date	11/28/95
TPH as Diesel	GC-FID	0.96 *	0.05	mg/L	11/30/95
#Digestion, Metals by GFAA	EPA 3020	-		Prep Date	11/28/95
Arsenic	EPA 7060	0.086 *	0.002	mg/L	11/29/95

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

LEVINE-FRICKE

SAMPLE ID: RP-3
AEN LAB NO: 9511307-06
AEN WORK ORDER: 9511307
CLIENT PROJ. ID: 3042.02

DATE SAMPLED: 11/17/95
DATE RECEIVED: 11/17/95
REPORT DATE: 12/06/95

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Sample Filtration	0.45 um	-		Filtr Date	11/17/95
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	0.5	ug/L	11/28/95
Toluene	108-88-3	1 *	0.5	ug/L	11/28/95
Ethylbenzene	100-41-4	ND	0.5	ug/L	11/28/95
Xylenes, Total	1330-20-7	5 *	2	ug/L	11/28/95
Purgeable HCs as Gasoline	5030/GCFID	0.1 *	0.05	mg/L	11/28/95
#Extraction for TPH	EPA 3510	-		Extrn Date	11/28/95
TPH as Diesel	GC-FID	1.1 *	0.05	mg/L	11/30/95
#Digestion, Metals by GFAA	EPA 3020	-		Prep Date	11/28/95
Arsenic	EPA 7060	0.006 *	0.002	mg/L	11/29/95

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: 9511307-07
AEN WORK ORDER: 9511307
CLIENT PROJ. ID: 3042.02

DATE SAMPLED: 11/17/95
DATE RECEIVED: 11/17/95
REPORT DATE: 12/06/95

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Sample Filtration	0.45 um	-		Filtr Date	11/17/95
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	0.5	ug/L	11/29/95
Toluene	108-88-3	ND	0.5	ug/L	11/29/95
Ethylbenzene	100-41-4	ND	0.5	ug/L	11/29/95
Xylenes, Total	1330-20-7	ND	2	ug/L	11/29/95
Purgeable HCs as Gasoline	5030/GCFID	ND	0.05	mg/L	11/29/95
#Extraction for TPH	EPA 3510	-		Extrn Date	11/28/95
TPH as Diesel	GC-FID	ND	0.05	mg/L	11/30/95
#Digestion, Metals by GFAA	EPA 3020	-		Prep Date	11/28/95
Arsenic	EPA 7060	ND	0.002	mg/L	11/29/95

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

LEVINE-FRICKE

SAMPLE ID: TRIP BLANK
AEN LAB NO: 9511307-08
AEN WORK ORDER: 9511307
CLIENT PROJ. ID: 3042.02

DATE SAMPLED: 11/17/95
DATE RECEIVED: 11/17/95
REPORT DATE: 12/06/95

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	0.5	ug/L	11/29/95
Toluene	108-88-3	ND	0.5	ug/L	11/29/95
Ethylbenzene	100-41-4	ND	0.5	ug/L	11/29/95
Xylenes, Total	1330-20-7	ND	2	ug/L	11/29/95
Purgeable HCs as Gasoline	5030/GCFID	ND	0.05	mg/L	11/29/95

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

AEN (CALIFORNIA)
QUALITY CONTROL REPORT

AEN JOB NUMBER: 9511307

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: 9511307
AEN LAB NO: 1128-BLANK
DATE EXTRACTED: 11/28/95
DATE ANALYZED: 11/30/95
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: 9511307
DATE EXTRACTED: 11/28/95
INSTRUMENT: C
MATRIX: WATER

Surrogate Standard Recovery Summary

Date Analyzed	Client Id.	Lab Id.	Percent Recovery n-Pentacosane
11/30/95	RP-5	01	84
11/30/95	RP-4	02	85
11/30/95	RP-104	03	81
11/30/95	RP-2	04	81
11/30/95	RP-1	05	82
11/30/95	RP-3	06	83
11/30/95	RP-3-FB	07	86
QC Limits:			59-118

DATE EXTRACTED: 11/28/95
DATE ANALYZED: 11/29/95
SAMPLE SPIKED: DI WATER
INSTRUMENT: C

Method Spike Recovery Summary

Analyte	Spike Added (mg/L)	Average Percent Recovery	RPD	QC Limits Percent Recovery	QC Limits RPD
Diesel	2.06	82	<1	58-107	15

QUALITY CONTROL DATA

METHOD: EPA 8020, 5030 GCFID

AEN JOB NO: 9511307
AEN LAB NO: 1128-BLANK
DATE ANALYZED: 11/28/95
INSTRUMENT: F
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: 1129-BLANK
DATE ANALYZED: 11/29/95
INSTRUMENT: F
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

QUALITY CONTROL DATA

METHOD: EPA 8020, 5030 GCFID

AEN JOB NO: 9511307
AEN LAB NO: 1130-BLANK
DATE ANALYZED: 11/30/95
INSTRUMENT: F
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

QUALITY CONTROL DATA

METHOD: EPA 8020, 5030 GCFID

AEN JOB NO: 9511307
INSTRUMENT: H
MATRIX: WATER

Surrogate Standard Recovery Summary

Date Analyzed	Client Id.	Lab Id.	Percent Recovery Fluorobenzene
11/29/95	RP-5	01	88
11/29/95	RP-4	02	87
11/30/95	RP-104	03	85
11/29/95	RP-2	04	88
11/28/95	RP-1	05	89
11/28/95	RP-3	06	88
11/29/95	RP-3-FB	07	86
11/29/95	TRIP BLANK	08	87
QC Limits:			70-130

DATE ANALYZED: 11/27/95
SAMPLE SPIKED: 9511299-01
INSTRUMENT: F

Matrix Spike Recovery Summary

Analyte	Spike Added (ug/L)	Average Percent Recovery	RPD	QC Limits Percent Recovery	QC Limits RPD
Benzene	19.9	90	2	85-109	17
Toluene	57.6	105	2	87-111	16
HCs as Gasoline	500	108	2	66-117	19

QUALITY CONTROL DATA

AEN JOB NO: 9511307
SAMPLE SPIKED: DI WATER
DATE ANALYZED: 11/29/95
MATRIX: 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	QC Limits RPD
As, Arsenic	4000/7060	ND	0.04	101	5	69-136	13

*** END OF REPORT ***

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

R-5, S-N
R-3, S-3 9511307

Project No.: 3042.02	Field Logbook No.:	Date: 11-17-95	Serial No.: № 013910
Project Name: Sherwin Williams-Rifkin	Project Location: Emeryville, CA		
Sampler (Signature): Jeffrey A. Rodger			

SAMPLES						ANALYSES								Samplers: JMR
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	EPA 601	EPA 624	TPHg, BTEX	TPHd	AS		HOLD	RUSH	REMARKS
RP-5	11/17/95	10:20	01A-F	6	H_2O			X	X	X				
RP-4	↓	10:45	02A-F	↓	↓			↓	↓	↓				Analyses: TPHg, d, BTEX
RP-104		11:45	03A-F											
RP-2		11:20	04A-F											AS → filter and preserve in Lab
RP-1		11:50	05A-F											
RP-3		12:30	06A-F											
RP-3-FB		12:10	07A-F	↓										
Trip Blank	↓	10:00	08AB	2	↓			↓	↓	↓				Normal TAT
														Results to Kenton Gee

RELINQUISHED BY: (Signature) Jeffrey A. Rodger	DATE 11-17-95	TIME 17:50	RECEIVED BY: (Signature) Michael E. Heckle	DATE 11/17/95	TIME 17:50
RELINQUISHED BY: (Signature) Michael E. Heckle	DATE 11/17/95	TIME 18:35	RECEIVED BY: (Signature) Lai L Pruitt	DATE 11-17-95	TIME 1935
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

Shipping Copy (White) Lab Copy (Green) File Copy (Yellow) Field Copy (Pink)

FORM NO. 86/COC/ARF