July 17, 2000

Alameda County Department of Environmental Health Hazardous Materials Division 1131 Harbor Bay Parkway, 2nd Floor Alameda, CA 94502-6577

Re: Well Completion Reports-Six Groundwater Monitoring Wells, One Piezometer The Sherwin-Williams Company, 1450 Sherwin Avenue, Emeryville, CA 94608

Dear Sir or Madam:

Enclosed are the required Well Completion Reports for the installation of six groundwater wells (SA-AW-01, SA-AW-04, SA-AW-05, SA-AW-03, SA-BW-01, RP-BW-02) and one piezometer (LF-PZ-26) at the Sherwin-Williams Facility, 1450 Sherwin Avenue, Emeryville, California. These wells were installed between June and July of 1999 as part of the remedial investigations being conducted at the site under the direction of the California Regional Water Quality Control Board-San Francisco Bay Region. A copy of these reports has been distributed to the California Department of Water Resources, the well owner, and the drilling company.

Please contact me at (925) 935-9920 if you have any questions.

Sincerely.

Heidi Howerton

Assistant Staff Scientist

S:/PROJECTS/RISK/326908/GWMONITORING/WELLCOMPLETIONSTATE

July 17, 2000

Precision Sampling, Inc. 1400 S. 50th Street Richmond, California 94804

Re: Well Completion Report-One Piezometer The Sherwin-Williams Company, 1450 Sherwin Avenue, Emeryville, CA 94608

Dear Sir or Madam:

For your records, I have enclosed the required Well Completion Report for the installation of one piezometer (LF-PZ-26) installed at the Sherwin-Williams Facility, 1450 Sherwin Avenue, Emeryville, California as part of remedial investigations performed in June and July 1999. This report is required by and has been submitted to the California Department of Water Resources and the Alameda County Public Works Department.

Please contact me at (925) 935-9920 if you have any questions.

Sincerely,

Heidi Howerton

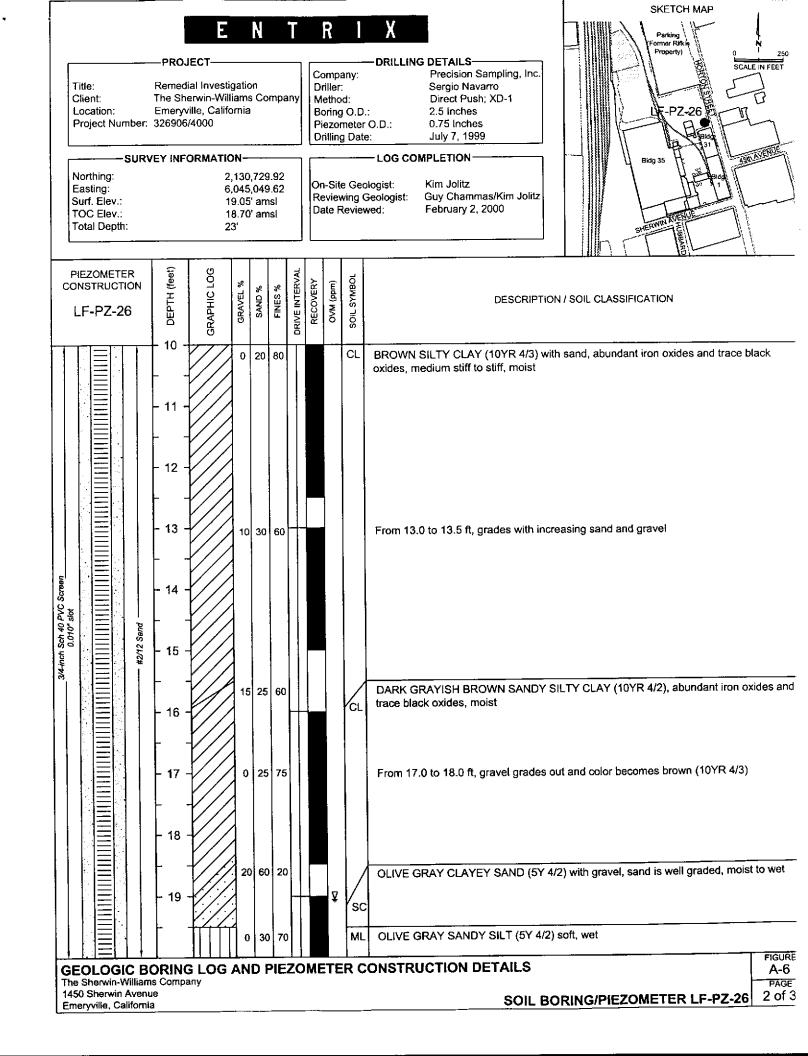
Assistant Staff Scientist

S:/PROJECTS/RISK/326908/GWMONITORING/WELLCOMPLETIONSTATE

00 JUL 19 AM 9, AL

PROJECT DRILLING DETAILS SCALE IN FEET Precision Sampling, Inc. Company: Remedial Investigation Driller: Sergio Navarro Title: The Sherwin-Williams Company Direct Push; XD-1 Client: Method: Emeryville, California Boring O.D.: Location: 2.5 Inches Project Number: 326906/4000 0.75 Inches Piezometer O.D.: **Drilling Date:** July 7, 1999 LOG COMPLETION SURVEY INFORMATION Northing: 2,130,729.92 On-Site Geologist: Kim Jolitz Easting: 6,045,049.62 Guy Chammas/Kim Jolitz Reviewing Geologist: Surf. Elev.: 19.05' amsl Date Reviewed: February 2, 2000 TOC Elev.: 18.70' amsl Total Depth: 23' PIEZOMETER DEPTH (feet) GRAPHIC LOG DRIVE INTERVAL SOIL SYMBOL OVM (ppm) RECOVERY CONSTRUCTION FINES % SAND % GRAVEL S DESCRIPTION / SOIL CLASSIFICATION LF-PZ-26 0 2 inches asphalt CL SC SANDY CLAY AND GRAVEL with concrete fragments, wire, and miscellaneous debris; hard, dry [FILL] HAND TOOLS Portland Type I/II Cement 2 5.5 inches concrete 3/4-inch Sch 40 PVC Casing 3 VERY DARK BROWN SANDY SILTY CLAY (10YR 2/2), gravel up to 1-inch diameter, CL 15 25 60 stiff to very stiff, dry to moist Grades with iron oxide staining 5 to 8 ft 5 Gravel grades out below 6 ft 6 7 3/4-inch Sch 40 PVC Screen 0.010" slot #2/12 Sand 8 9 FIGURE GEOLOGIC BORING LOG AND PIEZOMETER CONSTRUCTION DETAILS A-6 PAGE The Sherwin-Williams Company 1450 Sherwin Avenue 1 of 3 SOIL BORING/PIEZOMETER LF-PZ-26 Emeryville, California

SKETCH MAP



Title: Client: Remedial Investigation

Location:

The Sherwin-Williams Company

Emeryville, California Project Number: 326906/4000

DRILLING DETAILS

Company: Driller: Method: Boring O.D.: Precision Sampling, Inc. Sergio Navarro Direct Push; XD-1 2.5 Inches

0.75 Inches Piezometer O.D.: July 7, 1999 **Drilling Date:**

SURVEY INFORMATION

Northing: Easting: Surf. Elev.: 2,130,729.92 6,045,049.62 19.05' amsl 18.70' amsl

TOC Elev.: Total Depth:

23

LOG COMPLETION

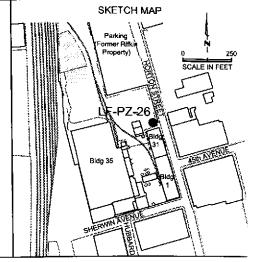
On-Site Geologist:

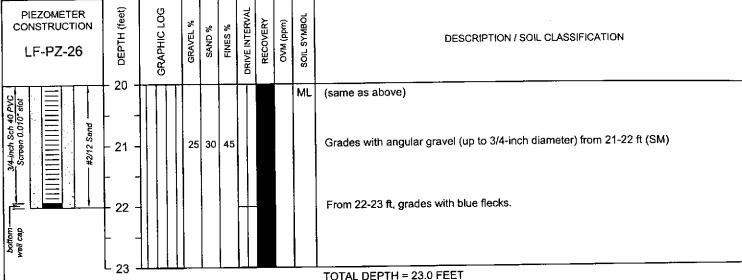
Kim Jolitz

Reviewing Geologist: Date Reviewed:

Guy Chammas/Kim Jolitz

February 2, 2000





DRILLING NOTES:

- 1. The boring was completed to a depth of 23.0 feet bgs on 7/7/99.
- 2. The boring was advanced using hand tools from the surface to 2.5 feet bgs. About 5.5 inches of concrete was encountered at 2.5 feet bgs. From 3.0 to 23.0 feet bgs, soil samples were collected using a 36-inch long, 1.875-inch diameter EnviroCore sample barrel that was advanced hydraulically.
- 3. The boring log indicates subsurface conditions only at the location and time the boring was drilled.
- Percent gravel, sand, and fines shown are field estimates.
- 5. Groundwater was encountered at 19.0 feet bgs during drilling. No grab groundwater sample was collected.

PIEZOMETER CONSTRUCTION NOTES:

- 1. A 1/4-inch diameter pre-pack PVC piezometer was installed to a depth of 22.0 feet bgs on 7/7/99.
- 2. Screened interval (0.010-inch slot) from 7.0 to 22.0 feet bgs; Lonestar #2/12 sand pack from 6.0 to 22.0 feet bgs.
- 3. Hydrated bentonite pellet annular seal from 5.0 to 6.0 feet bgs; Portland Type I/II cement annular seal from 0.5 to 5.0 feet bgs.
- 4. Static groundwater level recorded at a depth of 12.39 feet below the top of the well casing on 10/8/99.

GEOLOGIC BORING LOG AND PIEZOMETER CONSTRUCTION DETAILS

The Sherwin-Williams Company

1450 Sherwin Avenue

Emeryville, California

SOIL BORING/PIEZOMETER LF-PZ-26

FIGURE A-6 PAGE 3 of 3

STATE OF CALIFORNIA DWR WELL COMPLETION REPORT (WELL LOGS)

STATE OF CALIFORNIA DWR WELL COMPLETION REPORT (WELL LOGS)

STATE OF CALIFORNIA DWR WELL COMPLETION REPORT (WELL LOGS)

STATE OF CALIFORNIA DWR WELL COMPLETION REPORT (WELL LOGS)

Сотрапу:

Driller:

PROJECT

Title: Client: Remedial Investigation

TOC Elev.:

Total Depth: 22'

The Sherwin-Williams Company

Emeryville, California Location:

Project Number: 326906/4000

Precision/Gregg Navarro/St. Pierre Direct Push/HSA

Method: Boring O.D.:

2.5 Inches/10 Inches

Well O.D.: 2 Inches Drilling Date: June 24, 1999

SURVEY INFORMATION-

Boring SA-AH-16 Well SA-AW-01 2,130,594.94 2,130,591.27

Northing: Easting: 6,044,636.02 Surf. Elev.: 10.19' amsl NA

6,044,633.82 10.24' amsl 9.63' amsl

22

LOG COMPLETION

DRILLING DETAILS

On-Site Geologist: Reviewing Geologist:

Wehrenberg/Blankenhorn Guy Chammas/Kim Jolitz

January 21, 2000 Date Reviewed:

SKETCH MAP SCALE IN FEET

DEPTH (feet) WELL DRIVE INTERVAL GRAPHIC LOG OVM (ppm) SOIL SYMBOL CONSTRUCTION GRAVEL % RECOVERY SAND % DESCRIPTION / SOIL CLASSIFICATION SA-AW-01 2 inches asphalt DARK BROWN SILTY SANDY GRAVEL, dry [FILL] GW REDDISH BROWN GRAVELLY SAND [FILL] sw HAND AUGER Portland Type I/II Cement Chemical test sample collected: SA-AH-16-1.5 С 2-inch Sch 40 PVC Casing 2 BLACK SILTY CLAY (10YR 2/1) with sand, very stiff, moist CL 20 80 0 Bentonite 3 VERY DARK GRAYISH BROWN CLAYEY GRAVEL (10YR 3/2) with sand, gravels are 30 30 40 subangular to 0.25-inch diameter, very soft, moist sand ğ ¥ 5 No recovery 4.5 to 7.0 ft 6 2-inch Sch 40 PVC Screen 0.010" slot BLACK GRAYISH BROWN SANDY CLAY (10YR 4/2), abundant iron oxide staining, С CL 30 70 very soft, moist to wet Chemical test sample collected: SA-AH-16-7.0 #2/12 Sand 8 9

GEOLOGIC BORING LOG AND WELL CONSTRUCTION DETAILS

The Sherwin-Williams Company

1450 Sherwin Avenue Emeryville, California

WELL SA-AW-01 SOIL BORING SA-AH-16

FIGURE A-25 PAGE 1 of 3

Title: Client: Remedial Investigation

Northing:

The Sherwin-Williams Company

Location:

Project Number: 326906/4000

Emeryville, California

DRILLING DETAILS

LOG COMPLETION

Company: Driller: Method: Boring O.D.:

Precision/Gregg Navarro/St. Pierre Direct Push/HSA 2.5 Inches/10 Inches

Well Ö.D.: 2 Inches **Drilling Date:** June 24, 1999

SURVEY INFORMATION

Boring SA-AH-16 Well SA-AW-01 2,130,591.27 2,130,594.94

Easting: 6,044,636.02 Surf. Elev.: 10.19' amsl TOC Elev.: NA Total Depth: 22' 22'

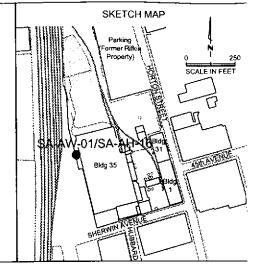
6,044,633.82 10.24' amsl

9.63' amsl

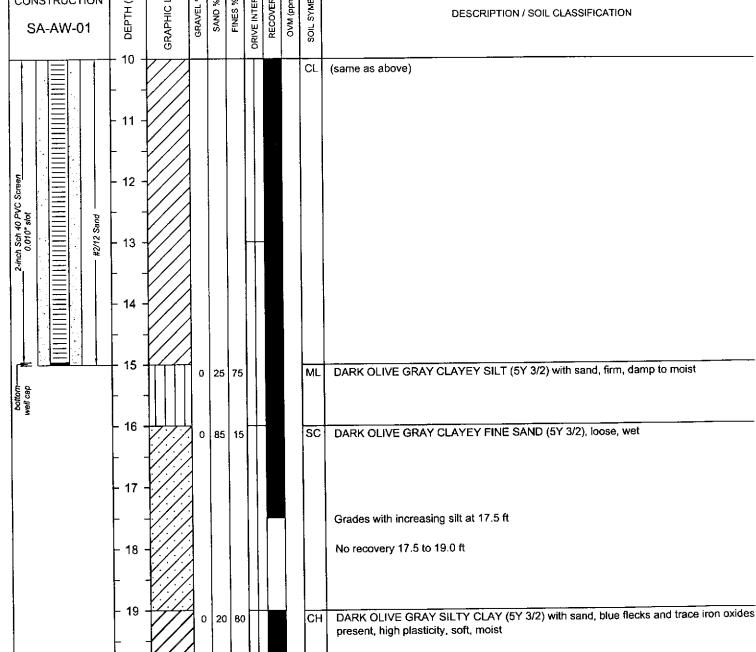
On-Site Geologist: Reviewing Geologist: Date Reviewed:

Wehrenberg/Blankenhom Guy Chammas/Kim Jolitz

January 21, 2000







GEOLOGIC BORING LOG AND WELL CONSTRUCTION DETAILS

The Sherwin-Williams Company 1450 Sherwin Avenue

Emeryville, California

WELL SA-AW-01 **SOIL BORING SA-AH-16**

FIGURE A-25 PAGE 2 of 3

Title: Client: Remedial Investigation

The Sherwin-Williams Company

Location:

Emeryville, California

Project Number: 326906/4000

DRILLING DETAILS

Company: Driller: Method:

Precision/Gregg Navarro/St. Pierre Direct Push/HSA

Boring O.D.:

2.5 Inches/10 Inches

Well Ö.D.: 2 Inches **Drilling Date:** June 24, 1999

SURVEY INFORMATION-

Boring SA-AH-16 Well SA-AW-01 Northing: 2,130,591.27 Easting: 6,044,636.02

2,130,594.94

Surf. Elev.: 10.19' amsl TOC Elev.: NA Total Depth: 22'

6,044,633.82 10.24' amsl

9.63' amsl 22'

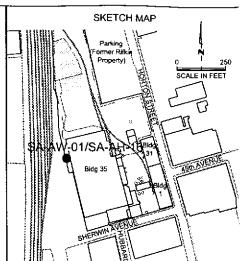
LOG COMPLETION:

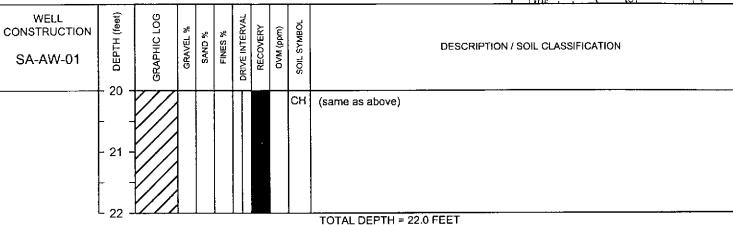
On-Site Geologist: Reviewing Geologist:

Date Reviewed:

Wehrenberg/Blankenhorn Guy Chammas/Kim Jolitz

January 21, 2000





DRILLING NOTES:

- The boring was completed to a depth of 22.0 feet bgs on 6/24/99.
- 2. The boring was advanced using hand tools from the surface to 3.0 feet bgs. A manual drive sampler was used to collect a soil sample from 1.5 feet bgs. From 3.0 to 22.0 feet bgs, soil samples were collected using a 36-inch long, 1.875-inch diameter EnviroCore sample barrel that was advanced hydraulically.
- 3. The boring log indicates subsurface conditions only at the location and time the boring was drilled.
- Samples collected for chemical testing are indicated with a "C".
- 5. Percent gravel, sand, and fines shown are field estimates.
- 6. Groundwater was encountered at 7.25 feet bgs during drilling. A groundwater grab sample was collected on 6/24/99 using a disposable Teflon bailer.
- 7. The boring was grouted to the surface on 6/24/99.

WELL CONSTRUCTION NOTES:

- 1. A 2-inch diameter PVC monitoring well was installed to a depth of 15.0 feet bgs
- 2. Screened interval (0.010-inch slot) from 5.0 to 15.0 feet bgs; Lonestar #30 sand pack from 3.5 to 4.0 feet bgs; Lonestar #2/12 sand pack from 4.0 to 15.0 feet bgs.
- 3. Hydrated bentonite pellet annular seal from 2.5 to 3.5 feet bgs; Portland Type I/II cement annular seal from 0.75 to 2.5 feet bgs.
- 4. Static groundwater level recorded at a depth of 3.79 feet below the top of the well casing on 10/8/99.

The Sherwin-Williams Company 1450 Sherwin Avenue Emeryville, California

WELL SA-AW-01 **SOIL BORING SA-AH-16**

FIGURE A-25 PAGE 3 of 3

Title: Client: Remedial Investigation

Location:

The Sherwin-Williams Company

Emeryville, California

Project Number: 326906/4000

DRILLING DETAILS

Company: Driller: Method:

Precision/Gregg Navarro/St. Pierre Direct Push/HSA 2.5 Inches/10 Inches

Boring O.D.: Well O.D.: 2 inches

Drilling Date:

June 22 and 24, 1999



Boring SA-AH-19 Well SA-AW-04 2,130,285.66 2,130,288.23 Northing: Easting: 6,044,965.25

6,044,966.09 10.28' amsl 10.21' amsl 10.02' amsl

25'

TOC Elev.: NA Total Depth: 25'

Surf. Elev.:

LOG COMPLETION-

On-Site Geologist: Reviewing Geologist:

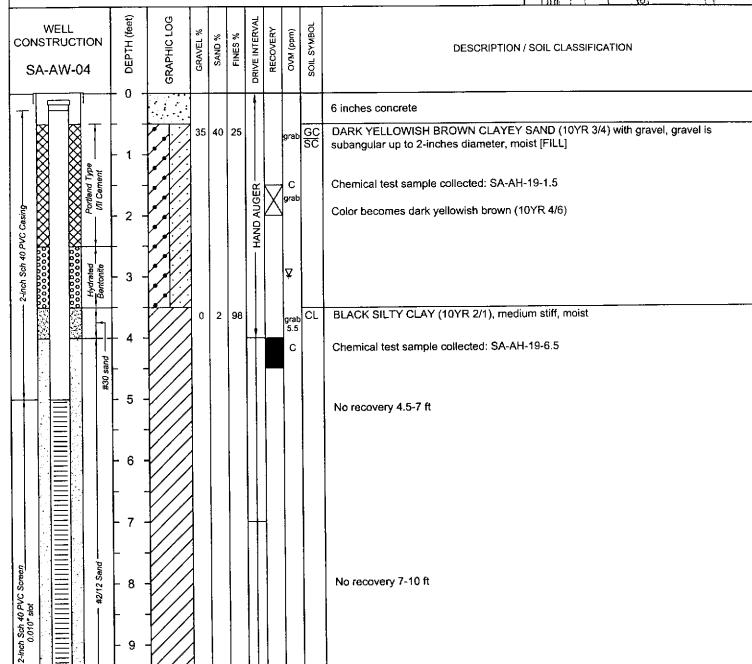
Date Reviewed:

Wehrenberg/Blankenhorn Guy Chammas/Kim Jolitz

February 1, 2000

SCALE IN FEET Bidg 35

SKETCH MAP



No recovery 7-10 ft

GEOLOGIC BORING LOG AND WELL CONSTRUCTION DETAILS

The Sherwin-Williams Company 1450 Sherwin Avenue Emeryville, California

8

9

WELL SA-AW-04 SOIL BORING SA-AH-19

FIGURE A-28 PAGE 1 of 3

PROJECT: Company: Remedial Investigation Title: Driller: The Sherwin-Williams Company Client: Method:

Emeryville, California Location:

Project Number: 326906/4000

DRILLING DETAILS

Precision/Gregg Navarro/St. Pierre Direct Push/HSA 2.5 Inches/10 Inches Boring O.D.:

Well O.D.: 2 Inches

June 22 and 24, 1999 Drilling Date:

SURVEY INFORMATION-

Boring SA-AH-19 Well SA-AW-04 2,130,285.66 2,130,288.23

Northing: Easting: 6,044,965.25 6,044,966.09 Surf. Elev.: 10.28' amsl 10.21' amsl TOC Elev.: NA 10.02' amsl 25'

Total Depth: 25'

LOG COMPLETION

On-Site Geologist: Reviewing Geologist:

Date Reviewed:

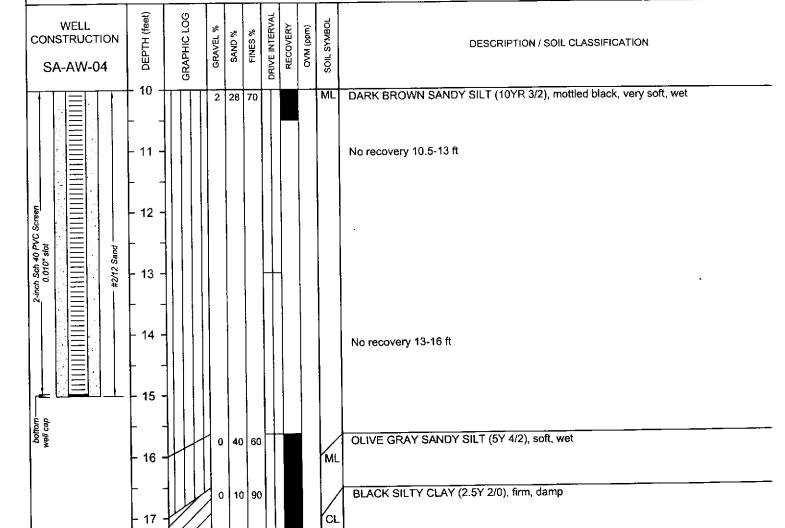
Wehrenberg/Blankenhorn Guy Chammas/Kim Jolitz

February 1, 2000

Bidg 35

SKETCH MAP

SCALE IN FEET



GEOLOGIC BORING LOG AND WELL CONSTRUCTION DETAILS

The Sherwin-Williams Company 1450 Sherwin Avenue

Emeryville, California

18

19

WELL SA-AW-04 SOIL BORING SA-AH-19

FIGURE A-28 PAGE 2 of 3

Title: Client: Remedial Investigation

Northing:

Easting:

Surf. Elev.:

TOC Elev.:

Total Depth: 25'

Location:

The Sherwin-Williams Company Emeryville, California

Project Number: 326906/4000

DRILLING DETAILS-

Company: Driller: Method:

Precision/Gregg Navarro/St. Pierre Direct Push/HSA 2.5 Inches/10 Inches

Well O.D.: 2 Inches

Drilling Date:

Boring O.D.:

June 22 and 24, 1999

SURVEY INFORMATION

Boring SA-AH-19 Well SA-AW-04 2,130,285.66

NA

2,130,288.23 6,044,965.25 10.21' amsl

6,044,966.09 10.28' amsl 10.02' amsl

25'

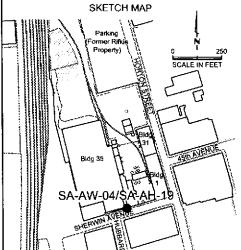
LOG COMPLETION

On-Site Geologist: Reviewing Geologist:

Date Reviewed:

Wehrenberg/Blankenhom Guy Chammas/Kim Jolitz

February 1, 2000



										8
WELL CONSTRUCTION SA-AW-04	DEPTH (feet)	GRAPHIC LOG	GRAVEL %	SAND %	FINES %	DRIVE INTERVAL	RECOVERY	OVM (ppm)	SOIL SYMBOL	DESCRIPTION / SOIL CLASSIFICATION
	- 20 - 								CL	(same as above)
	- 21 - -									
	- 22 -									
	- 23 - -								:	
	- 24 ·									
	L ₂₅ .	<u> </u>	<u>L</u>		<u> </u>	Ш	<u> </u>	<u> </u>	l	TOTAL DEPTH = 25.0 FEET

DRILLING NOTES:

1. The boring was completed to a depth of 25.0 feet bgs on 6/22/99.

2. Following core cutting through 6 inches of concrete, the boring was advanced using hand tools to 4.0 feet bgs. A manual drive sampler was used to collect a soil sample from 1.5 feet bgs. From 4.0 to 25.0 feet bgs, soil samples were collected using a 36-inch long, 1.875-inch diameter EnviroCore sample barrel that was advanced hydraulically.

3. The boring log indicates subsurface conditions only at the location and time the boring was drilled.

4. Samples collected for chemical testing are indicated with a "C".

5. Percent gravel, sand, and fines shown are field estimates.

- 6. Due to poor recovery, depth to groundwater is uncertain at this location. A groundwater grab sample was collected on 6/22/99 using a disposable Teflon baller.
- 7. The boring was grouted to the surface on 6/22/99.

WELL CONSTRUCTION NOTES:

1. A 2-inch diameter PVC monitoring well was installed to a depth of 15.0 feet bgs on 6/24/99.

- 2. Screened interval (0.010-inch slot) from 5.0 to 15.0 feet bgs; Lonestar #30 sand pack from 3.5 to 4.0 feet bgs; Lonestar #2/12 sand pack from 4.0 to 15.0 feet bgs.
- 3. Hydrated bentonite pellet annular seal from 2.5 to 3.5 feet bgs; Portland Type I/II cement annular seal from 0.5 to 2.5 feet bgs.

4. Static groundwater level recorded at a depth of 2.75 feet below the top of the well casing on 10/8/99.

GEOLOGIC BORING LOG AND WELL CONSTRUCTION DETAILS

The Sherwin-Williams Company 1450 Sherwin Avenue Emeryville, California

WELL SA-AW-04 SOIL BORING SA-AH-19

FIGURE A-28 PAGE 3 of 3

STATE OF CALIFORNIA DWR WELL COMPLETION REPORT (WELL LOGS)

STATE OF CALIFORNIA DWR WELL COMPLETION REPORT (WELL LOGS)

ENTRIX

-PROJECT-

Title: Client: Remedial Investigation
The Sherwin-Williams Company

Location: Emeryville, California

Project Number: 326906/4000

Company: Driller: Method:

Boring O.D.:

Navarro/St. Pierre Direct Push/HSA 2.5 Inches/10 Inches

Well O.D.: 2 Inches

Dritting Date:

June 22 and 24, 1999

SURVEY INFORMATION

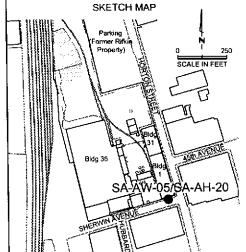
 Northing:
 Boring SA-AH-20 2,130,331.60
 Well SA-AW-05 2,130,331.08

 Easting:
 6,045,150.27
 6,045,148.54

Easting: 6,045,150.27 6,045,148.54 Surf. Elev.: 13.03' amsl 13.00' amsl TOC Elev.: NA 12.72' amsl Total Depth: 25' 25' -LOG COMPLETION

On-Site Geologist: Reviewing Geologist: Date Reviewed: Wehrenberg/Blankenhom Guy Chammas/Kim Jolitz

February 1, 2000



DEPTH (feet) GRAPHIC LOG DRIVE INTERVAL SYMBOL WELL. RECOVERY ОУМ (ррт) SAND % CONSTRUCTION GRAVEL DESCRIPTION / SOIL CLASSIFICATION SA-AW-05 0 4 inches concrete OLIVE GRAY SILTY GRAVEL (5Y 4/2) with sand, gravel is angular up to 3/4-inch 50 30 20 GM diameter, moist [FILL] Portland Type I/II Cement Chemical test sample collected: SA-AH-20-1.5 2-inch Sch 40 PVC Casing 2 grat Color becomes dark brown (10YR 3/3) BLACK SILTY CLAY (10YR 2/1), high plasticity, stiff, moist 10 88 2 Hydrated Bentonite 3 Color becomes very dark brown (10YR 2/2) Abundant iron oxides from 5.0 ft #30 DARK BROWN SANDY CLAYEY SILT (10YR 3/3), abundant iron oxides, soft, wet 5 25 70 5 ML Chemical test sample collected: SA-AH-20-6.0 Ϋ́ Chemical test sample collected: SA-AH-20-6.5 С 2-inch Sch 40 PVC Screen_ 0.010" slot Grades with increasing sand from 8.0 ft 8 35 60 9

GEOLOGIC BORING LOG AND WELL CONSTRUCTION DETAILS

The Sherwin-Williams Company

1450 Sherwin Avenue Emeryville, California WELL SA-AW-05 SOIL BORING SA-AH-20 FIGURE A-29 PAGE 1 of 3

Title: Client: Remedial Investigation

The Sherwin-Williams Company

Emeryville, California Location:

Project Number: 326906/4000

DRILLING DETAILS

Сотрапу: Driller: Method:

Boring O.D.:

Precision/Gregg Navarro/St. Pierre Direct Push/HSA 2.5 Inches/10 Inches

Well O.D.: 2 Inches

Drilling Date:

June 22 and 24, 1999

SURVEY INFORMATION

Boring SA-AH-20 Well SA-AW-05 2,130,331.08 2,130,331.60

Northing: Easting: 6,045,150.27 Surf. Elev.: 13.03' amsl

6,045,148.54 13.00' amsl 12.72' amsl

25'

TOC Elev.: NA Total Depth: 25'

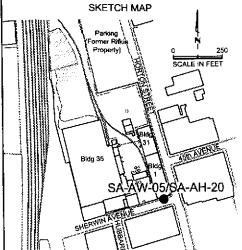
LOG COMPLETION-

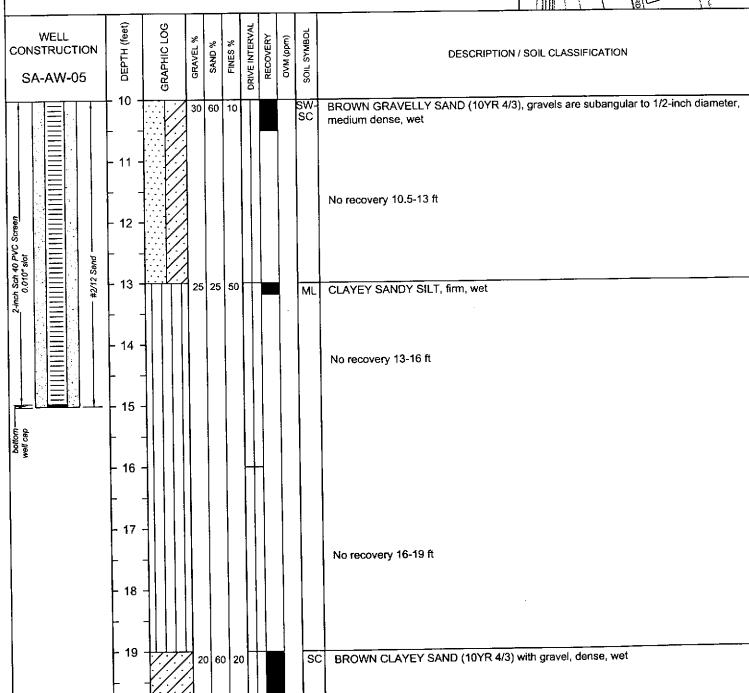
On-Site Geologist:

Wehrenberg/Blankenhorn Guy Chammas/Kim Jolitz

Reviewing Geologist: Date Reviewed:

February 1, 2000





GEOLOGIC BORING LOG AND WELL CONSTRUCTION DETAILS

The Sherwin-Williams Company 1450 Sherwin Avenue

Emeryville, California

WELL SA-AW-05 **SOIL BORING SA-AH-20**

FIGURE A-29 PAGE 2 of 3

Title: Client: Remedial Investigation

The Sherwin-Williams Company

Location:

Emeryville, California

Project Number: 326906/4000

DRILLING DETAILS

Precision/Gregg Company: Navarro/St. Pierre Driller: Method: Direct Push/HSA 2.5 Inches/10 Inches Boring O.D.:

Well O.D.: 2 Inches

Drilling Date:

June 22 and 24, 1999

SURVEY INFORMATION

Boring SA-AH-20 Well SA-AW-05 2,130,331.60 2,130,331.08 Northing: Easting: 6,045,150.27

Surf. Elev.: 13.03' amsl TOC Elev.: NA Total Depth: 25'

12.72' amsl 25'

6,045,148.54

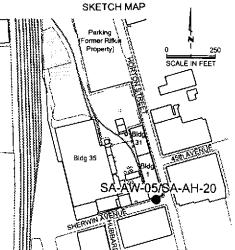
13.00' amsl

LOG COMPLETION

On-Site Geologist: Reviewing Geologist: Date Reviewed:

Wehrenberg/Blankenhorn Guy Chammas/Kim Jolitz

February 1, 2000



WELL CONSTRUCTION SA-AW-05	S DEPTH (feet)	55		SAND %	FINES %	DRIVE INTERVAL	RECOVERY	OVM (ppm)	SOIL SYMBOL	DESCRIPTION / SOIL CLASSIFICATION					
	- 20 - - 21 - - 22 -								sc						
	- 23 -		5	15	80				CL	BLACK SILTY CLAY (10YR 2/1) with sand, stiff to very stiff, wet					
	25									TOTAL DEPTH = 25.0 FEET					

DRILLING NOTES:

- 1. The boring was completed to a depth of 25.0 feet bgs on 6/22/99.
- 2. Following core cutting through 4 inches of concrete, the boring was advanced using hand tools to 3.0 feet bgs. A manual drive sampler was used to collect a soil sample from 1.5 feet bgs. From 3.0 to 25.0 feet bgs, soil samples were collected using a 36-inch long, 1.875-inch diameter EnviroCore sample barrel that was advanced hydraulically.
- 3. The boring log indicates subsurface conditions only at the location and time the boring was drilled.
- 4. Samples collected for chemical testing are indicated with a "C".
- 5. Percent gravel, sand, and fines shown are field estimates.
- 6. Groundwater was encountered at 5.5 feet bgs during drilling. A groundwater grab sample was collected on 6/22/99 using a disposable Teflon bailer.
- 7. The boring was grouted to the surface on 6/22/99.

WELL CONSTRUCTION NOTES:

- 1. A 2-inch diameter PVC monitoring well was installed to a depth of 15.0 feet bgs on 6/24/99.
- 2. Screened interval (0.010-inch slot) from 5.0 to 15.0 feet bgs; Lonestar #30 sand pack from 3.5 to 4.0 feet bgs; Lonestar #2/12 sand pack from 4.0 to 15.0 feet bgs.
- 3. Hydrated bentonite pellet annular seal from 2.5 to 3.5 feet bgs; Portland Type I/II cement annular seal from 0.5 to 2.5 feet bgs.
- Static groundwater level recorded at a depth of 5.20 feet below the top of the well casing on 10/8/99.

GEOLOGIC BORING LOG AND WELL CONSTRUCTION DETAILS

The Sherwin-Williams Company

1450 Sherwin Avenue Emeryville, California

WELL SA-AW-05 SOIL BORING SA-AH-20

FIGURE A-29 PAGE 3 of 3

STATE OF CALIFORNIA DWR WELL COMPLETION REPORT (WELL LOGS)

STATE OF CALIFORNIA DWR WELL COMPLETION REPORT (WELL LOGS)

Title: Client:

TOC Elev.:

Total Depth: 25'

Remedial Investigation

The Sherwin-Williams Company

Location: Project Number: 326906/4000

Emeryville, California

Driller: Method: Boring O.D.:

Company:

Precision/Gregg Navarro/St. Pierre

Direct Push/HSA 2.5 Inches/10 Inches

2 Inches Well O.D.: June 22 and 24, 1999 **Drilling Date:**

SURVEY INFORMATION

0

Northing: Easting: 6,044,740.91 Surf. Elev.:

Boring SA-AH-18 Well SA-AW-03 2,130,218.91 2,130,222.64 6,044,736.09 8.97' amsl 8.94' amsl 8.75' amsl NA

25'

LOG COMPLETION

12 inches concrete

DRILLING DETAILS

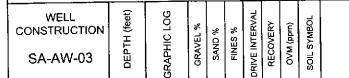
On-Site Geologist: Reviewing Geologist: Date Reviewed:

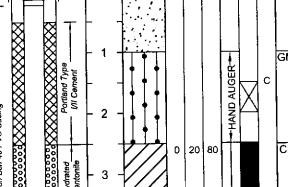
Chip Blankenhorn Guy Chammas/Kim Jolitz January 21, 2000

-03/S

SKETCH MAP

SCALE IN FEET





DESCRIPTION / SOIL CLASSIFICATION

Grades with increasing iron oxides; color becomes very dark gray (10YR 3/1)

Chemical test sample collected: SA-AH-18-6.0

DARK GRAYISH BROWN CLAYEY GRAVEL (10YR 4/2) with sand, gravel is subangular up to 0.25-inch diameter, medium dense, moist to wet

Grades with increasing coarse gravel and clay; color becomes dark brown (10YR 3/3); gravel to 1.25-inches diameter

DARK YELLOWISH BROWN SILTY SANDY GRAVEL (10YR 3/6), moist [FILL] GM Chemical test sample collected: SA-AH-18-1.5 2-inch Sch 40 PVC Casing BLACK SILTY CLAY (10YR 2/1) with sand, trace iron oxides, high plasticity, stiff, moist Hydrated sand 92 С 5 GC 40 30 30 6 ₹ #2/12 Sand h Sch 40 PVC Screen 0.010" slot 8 9

GEOLOGIC BORING LOG AND WELL CONSTRUCTION DETAILS

The Sherwin-Williams Company

1450 Sherwin Avenue Emeryville, California

WELL SA-AW-03 **SOIL BORING SA-AH-18**

FIGURI A-27 PAGE 1 of 3

SKETCH MAP **DRILLING DETAILS-PROJECT** SCALE IN FEET Precision/Gregg Company: Navarro/St. Pierre Remedial Investigation Driller: Title: The Sherwin-Williams Company Direct Push/HSA Method: Client: Emeryville, California Boring O.D.: 2.5 Inches/10 Inches Location: Well O.D.: Project Number: 326906/4000 2 Inches June 22 and 24, 1999 **Drilling Date:** LOG COMPLETION SURVEY INFORMATION-Boring SA-AH-18 Well SA-AW-03 2,130,218.91 2,130,222.64 Northing: On-Site Geologist: Chip Blankenhorn 6,044,736.09 Guy Chammas/Kim Jolitz Reviewing Geologist: Easting: 6,044,740.91 V-03/S January 21, 2000 Surf. Elev.: 8.94' amsi 8.97' amsl Date Reviewed: 8.75' amsl TOC Elev.: NA Total Depth: 25' 25' WELL DEPTH (feet) GRAPHIC LOG **DRIVE INTERVA** SOIL SYMBOL RECOVERY OVM (ppm) CONSTRUCTION SAND % FINES % GRAVEL 9 DESCRIPTION / SOIL CLASSIFICATION SA-AW-03 OLIVE BROWN SANDY SILTY CLAY (2.5Y 4/3), medium stiff to stiff, moist 10 25 65 CL 2-inch Sch 40 PVC Screen 0.010* slot 12 OLIVE BROWN SANDY SILT (2.5Y 4/4) with fine gravel, medium stiff to stiff, moist #2/12 Sand 10 30 60 13 ML 14 15 16 LIGHT OLIVE BROWN SILTY CLAY (2.5Y 5/3) with sand, trace iron oxide staining CL 20 80 and black oxides present, medium plasticity, medium stiff, wet 17 18 19 FIGURE GEOLOGIC BORING LOG AND WELL CONSTRUCTION DETAILS A-27 WELL SA-AW-03 PAGE The Sherwin-Williams Company 2 of 3 1450 Sherwin Avenue **SOIL BORING SA-AH-18** Emeryville, California

R

PROJECT

Title: Client: Remedial Investigation

The Sherwin-Williams Company

Location:

Emeryville, California

Project Number: 326906/4000

DRILLING DETAILS

Precision/Gregg Company: Navarro/St. Pierre Driller: Direct Push/HSA Method:

2.5 Inches/10 Inches

2 Inches Well O.D.:

Drilling Date: June 22 and 24, 1999

SURVEY INFORMATION

Boring SA-AH-18 Well SA-AW-03 Northing: 2.130,218,91 Easting: 6,044,740.91 Surf. Elev.: 8.94' arnsl

2,130,222.64 6,044,736.09 8.97' amsl 8.75' amsl

TOC Elev.: NA Total Depth: 25' 25'

Boring O.D.:

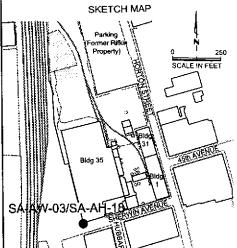
On-Site Geologist:

LOG COMPLETION

Reviewing Geologist: Date Reviewed:

Chip Blankenhom Guy Chammas/Kim Jolitz

January 21, 2000



	-									
WELL CONSTRUCTION SA-AW-03	DEPTH	GRAPHIC LOG	GRAVEL %	SAND %	FINES %	DRIVE INTERVAL	RECOVERY	OVM (ppm)	SOILSYMBOL	DESCRIPTION / SOIL CLASSIFICATION
	- 21 22 23 24 - 25								CL	(same as above) From 22.75 color becomes olive brown (2.5Y 4/4)
	20									TOTAL DEPTH = 25.0 FEET

DRILLING NOTES:

- 1. The boring was completed to a depth of 25.0 feet bgs on 6/22/99.
- 2. Following core cutting through 12 inches of concrete, the boring was advanced using hand tools to 2.5 feet bgs. A manual drive sampler was used to collect a soil sample from 2.0 feet bgs. From 2.5 to 25.0 feet bgs, soil samples were collected using a 36-inch long, 1.875-inch diameter EnviroCore sample barrel that was advanced hydraulically.
- 3. The bonng log indicates subsurface conditions only at the location and time the bonng was drilled.
- 4. Samples collected for chemical testing are indicated with a "C".
- 5. Percent gravel, sand, and fines shown are field estimates.
- 6. Groundwater was encountered at 6.5 feet bgs during drilling. A groundwater grab sample was collected on 6/22/99 using a disposable Teflon bailer.
- 7. The boring was grouted to the surface on 6/22/99.

WELL CONSTRUCTION NOTES:

- A 2-inch diameter PVC monitoring well was installed to a depth of 15.0 feet bgs on 6/24/99.
- 2. Screened interval (0.010-inch slot) from 5.0 to 15.0 feet bgs; Lonestar #30 sand pack from 3.5 to 4.0 feet bgs; Lonestar #2/12 sand pack from 4.0 to 15.0 feet bgs.
- 3. Hydrated bentonite pellet annular seal from 2.5 to 3.5 feet bgs; Portland Type I/II cement annular seal from 0.5 to 2.5 feet bgs.
- Static groundwater level recorded at a depth of 2.55 feet below the top of the well casing on 10/8/99.

GEOLOGIC BORING LOG AND WELL CONSTRUCTION DETAILS

The Sherwin-Williams Company

1450 Sherwin Avenue Emeryville, California

WELL \$A-AW-03 SOIL BORING SA-AH-18

FIGURE A-27 PAGE 3 of 3

STATE OF CALIFORNIA DWR WELL COMPLETION REPORT (WELL LOGS)

STATE OF CALIFORNIA DWR WELL COMPLETION REPORT (WELL LOGS)

SKETCH MAP PROJECT-**DRILLING DETAILS** SCALE IN FEET Gregg Drilling, Inc. Company: Driller: Title: Remedial Investigation Chris St. Pierre The Sherwin-Williams Company Method: Hollow Stem Auger Client: Boring O.D.: Well O.D.: Location: Emeryville, California 12 Inches Project Number: 326906/4000 2 Inches Drilling Date: July 9 and 12, 1999 LOG COMPLETION -SURVEY INFORMATION Northing: 2,130,592.79 Blankenhom/Jolitz On-Site Geologist: Easting: 6,044,637.72 Guy Chammas/Kim Jolitz Reviewing Geologist: Surf. Elev.: 10.20' amsl Date Reviewed: February 2, 2000 10.07' amsl TOC Elev.: Total Depth: 45' DEPTH (feet) GRAPHIC LOG DRIVE INTERVAL WELL OVM (ppm) SOIL SYMBOI RECOVERY SAND % CONSTRUCTION FINES % GRAVEL 9 DESCRIPTION / SOIL CLASSIFICATION \$A-BW-01 0 FOR LITHOLOGICAL DESCRIPTION, SEE LOG FOR CONE PENETROMETER TEST SA-BH-04 AND SOIL BORING SA-AH-16 (WELL SA-AW-01) 2 Nest Cement Grout (5% Bentonite) (Conductor Annulus) 8 Portland Type I/II Cement (Well Annulus) 10-inch Steel Conductor Casing 10 12 14 16 18 GEOLOGIC BORING LOG AND WELL CONSTRUCTION DETAILS A-31 PAGE The Sherwin-Williams Company 1 of 3 1450 Sherwin Avenue SOIL BORING/WELL SA-BW-01 Emeryville, California

Parking Property) DRILLING DETAILS -PROJECT-SCALE IN FEET Gregg Drilling, Inc. Company: Chris St. Pierre Remedial Investigation Title: Driller: The Sherwin-Williams Company Client: Method: Hollow Stem Auger Emeryville, California Boring O.D.: Location: 12 Inches Project Number: 326906/4000 Well O.D.; 2 Inches Drilling Date: July 9 and 12, 1999 Ů-01 LOG COMPLETION SURVEY INFORMATION-Northing: 2,130,592.79 On-Site Geologist: Blankenhorn/Jolitz Easting: 6,044,637.72 Guy Chammas/Kim Jolitz Reviewing Geologist: Surf. Elev.: 10.20' amsl Date Reviewed: February 2, 2000 TOC Elev.: 10.07' amsl Total Depth: 45 DEPTH (feet) GRAPHIC LOG DRIVE INTERVAL WELL SOIL SYMBOL GRAVEL % RECOVERY ОУМ (ррт.) SAND % CONSTRUCTION FINES % SA-BW-01 20 Neat Cement Grout (5% Bentonite) (Conductor Annulus)-22 10-inch Steel Conductor Casing Portiand Type I/II Cement (Well Annulus) 24 Physical test sample collected: SA-BW-01-25.5 0 96 CH 26 28 2-Inch Sch 40 PVC Casing 30 32 #30 sand 34 #2/16 Send 2-inch Sch 40 PVC Screen 0.010" slot 36 38 GEOLOGIC BORING LOG AND WELL CONSTRUCTION DETAILS A-31 PAGE The Sherwin-Williams Company 1450 Sherwin Avenue 2 of 3 SOIL BORING/WELL SA-BW-01 Emeryville, California

SKETCH MAP

SKETCH MAP SCALE IN FEET **DRILLING DETAILS-PROJECT** Company: Gregg Drilling, Inc. Remedial Investigation Chris St. Pierre Title: Driller: Client: The Sherwin-Williams Company Method: Hollow Stem Auger Emeryville, California Location: Boring O.D.: 12 Inches Project Number: 326906/4000 Well O.D.: 2 Inches July 9 and 12, 1999 **Drilling Date:** BW-01 SURVEY INFORMATION LOG COMPLETION-Bidg 35 Northing: 2,130,592.79 Blankenhom/Jolitz On-Site Geologist: Easting: 6,044,637.72 Reviewing Geologist: Guy Chammas/Kim Jolitz Surf. Elev.: 10,20' ams! February 2, 2000 Date Reviewed: TOC Elev.: 10.07' amsl Total Depth: 45' GRAPHIC LOG DEPTH (feet) DRIVE INTERVAL WELL SOIL SYMBO! RECOVERY GRAVEL % OVM (ppm) SAND % FINES % CONSTRUCTION DESCRIPTION / SOIL CLASSIFICATION **SA-BW-01** 40 O.010" slat sand 42 #2/16

DRILLING NOTES:

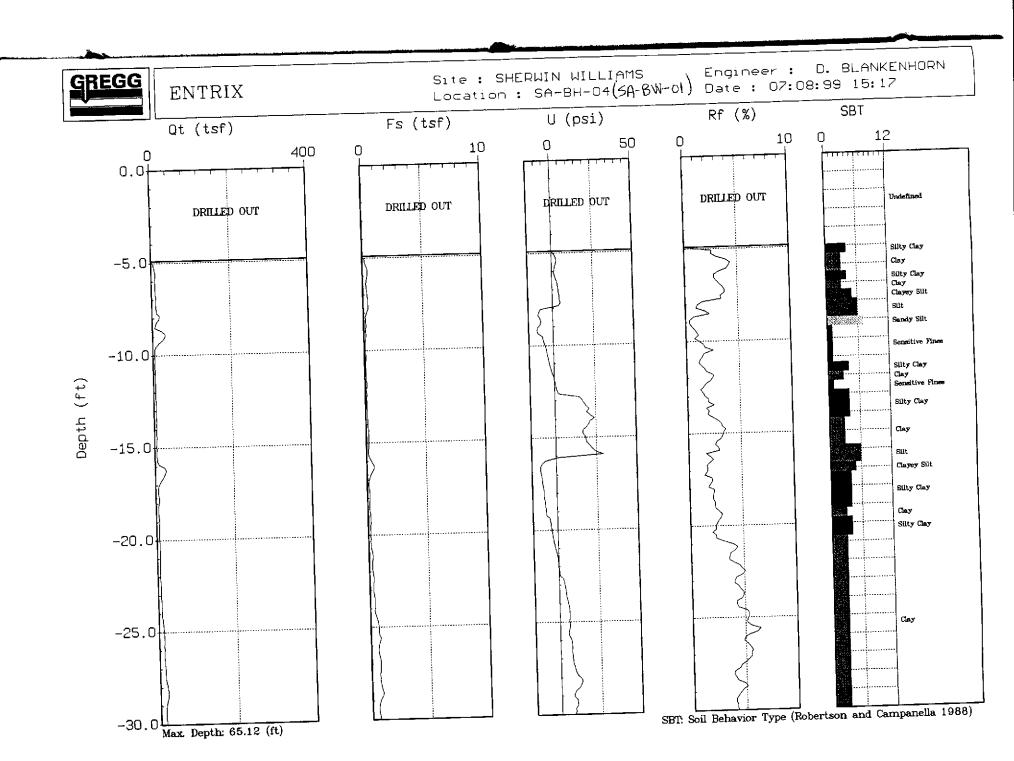
- 1. Samples collected for physical testing are indicated with a "P".
- 2. Percent gravel, sand, and fines shown are laboratory derived

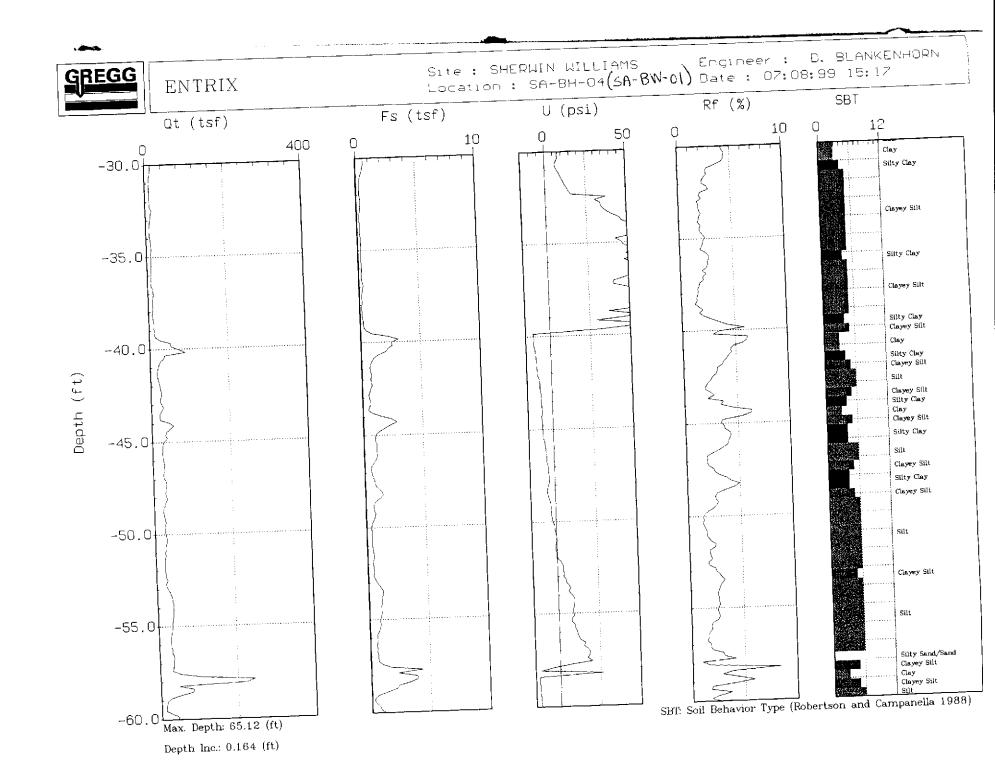
WELL CONSTRUCTION NOTES:

- A 10-inch diameter steel conductor casing was installed to a depth of 28.0 feet bgs on 7/9/99.
- A 2-inch diameter PVC monitoring well was installed to a depth of 45.0 feet bgs on 7/12/99.
- Screened interval (0.010-inch slot) from 35.0 to 45.0 feet bgs; Lonestar #30 sand pack from 32.0 to 32.5 feet bgs; Lonestar #2/16 sand pack from 32.5 to 45.0 feet bgs.
- Hydrated bentonite pellet well annular seal from 30.0 to 32.0 feet bgs; Portland Type I/II cement well annular seal from 1.0 to 30.0 feet bgs; neat cement grout (5% bentonite) conductor seal from 0 to 28 feet bgs.
- Static groundwater level recorded at a depth of 4.64 feet below the top of the well casing on 10/8/99.

2-inch

bottomwell cap





Site: SHERWIN WILLIAMS Engineer: D. BLANKENHORN Location: SA-BH-04 (SA-BW-01) Date: 07:08:99 15:17 ENTRIX SBT Rf (%) U (psi) Fs (tsf) 12 10 Qt (tsf) 50 10 Clayey Silt Stiff Fine Crained 400 -60.0| Clayey Silt -65.0 -70.0 -75.0 -80.0 -85.0 SBT. Soil Behavior Type (Robertson and Campanella 1988) -90.0 Max. Depth: 65.12 (ft) Depth Inc.: 0.164 (ft)

STATE OF CALIFORNIA DWR WELL COMPLETION REPORT (WELL LOGS)

STATE OF CALIFORNIA DWR WELL COMPLETION REPORT (WELL LOGS)

PROJECT-DRILLING DETAILS SCALE IN FEET Gregg Drilling, Inc. RP-BW-02 Company: Remedial Investigation Driller: Chris St. Pierre Title: The Sherwin-Williams Company Method: Hollow Stem Auger Client: Emeryville, California 12 Inches/6 Inches Location: Boring O.D.: Project Number: 326906/4000 2 Inches Well O.D.: July 9 and 12, 1999 Driffing Date: LOG COMPLETION-SURVEY INFORMATION-Northing: 2,130,906.47 On-Site Geologist: Chip Blankenhom Easting: 6,044,856.25 Guy Chammas/Kim Jolitz Reviewing Geologist: Surf. Elev.: 16.48' amsl Date Reviewed: February 2, 2000 TOC Elev.: 15.97' amsl Total Depth: 44' DEPTH (feet) GRAPHIC LOG WELL DRIVE INTERVA SOIL SYMBOL RECOVERY GRAVEL % OVM (ppm) SAND % CONSTRUCTION FINES % DESCRIPTION / SOIL CLASSIFICATION **RP-BW-02** 0 FOR LITHOLOGICAL DESCRIPTION, SEE LOG FOR CONE PENETROMETER TEST RP-BH-08 2 6 Neat Cement Grout (5% Bentonite) (Conductor Annulus) 8 Portland Type I/II Cement (Well Annulus) 10-inch Steel Conductor Casing Sch 40 PVC casing 10 12 14 16 18 FIGURE GEOLOGIC BORING LOG AND WELL CONSTRUCTION DETAILS A-13 PAGE The Sherwin-Williams Company 1450 Sherwin Avenue 1 of 3 SOIL BORING/WELL RP-BW-02 Emeryville, California

SKETCH MAP

SKETCH MAP 0 250 SCALE IN FEET DRILLING DETAILS PROJECT-Gregg Drilling, Inc. Company: ¥BW-02 Title: Chris St. Pierre Remedial Investigation Driller: The Sherwin-Williams Company Hollow Stem Auger Method: Client: Location: Emeryville, California Boring O.D.: 12 Inches/6 Inches Well O.D.: Project Number: 326906/4000 2 Inches July 9 and 12, 1999 Drilling Date: SURVEY INFORMATION-LOG COMPLETION Bldg 35 2,130,906.47 Northing: Chip Blankenhorn On-Site Geologist: Easting: 6,044,856.25 Guy Chammas/Kim Jolitz Reviewing Geologist: Surf. Elev.: 16.48' amsl February 2, 2000 Date Reviewed: TOC Elev.: 15.97' amsl Total Depth: 44' DEPTH (feet) GRAPHIC LOG DRIVE INTERVAL WELL SOIL SYMBOL OVM (ppm) RECOVERY GRAVEL % SAND % FINES % CONSTRUCTION **DESCRIPTION / SOIL CLASSIFICATION** RP-BW-02 20 Neat Cement Grout (5% Bentonite) (Conductor Annulus) 22 Portland Type I/II Cement (Well Annulus) 10-inch Steel Conductor Casing 24 2-inch Sch 40 PVC Casing 26 28 Physical test sample collected: RP-BW-02-29.0 70 29 P CL 30 Hydrated Bentonite #30 Sand 32 34 2-Inch Sch 40 PVC Screen 0.010" sfot #2/16 Sand 36 38 FIGURE GEOLOGIC BORING LOG AND WELL CONSTRUCTION DETAILS A-13 PAGE The Sherwin-Williams Company 2 of 3 1450 Sherwin Avenue SOIL BORING/WELL RP-BW-02 Emeryville, California

Title:

Remedial Investigation

Client: The Sherwin-Williams Company Emeryville, California Location:

Project Number: 326906/4000

DRILLING DETAILS-

Gregg Drilling, Inc. Company: Chris St. Pierre Driller: Method: Hollow Stem Auger

12 Inches/6 Inches Boring O.D.: 2 Inches Well O.D.:

July 9 and 12, 1999 Drilling Date:

SURVEY INFORMATION-

Northing: Easting: Surf. Elev.: 2,130,906.47 6,044,856.25

16.48' amsl TOC Elev.: 15.97' amsi

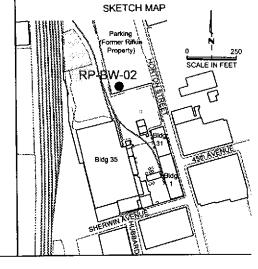
Total Depth: 44'

LOG COMPLETION

On-Site Geologist: Reviewing Geologist: Chip Blankenhorn

Date Reviewed:

Guy Chammas/Kim Jolitz February 2, 2000



DESCRIPTION / SOIL CLASSIFICATION

_									
WELL CONSTRUCTION RP-BW-02	O DEPTH (feet)	GRAPHIC LOG	GRAVEL %	SAND %	FINES %	DRIVE INTERVAL	RECOVERY	OVM (ppm)	SOIL SYMBOL
2-inch Sch 40 PVC Screen 0.010" stor	- 42 - 42 -					:			

TOTAL DEPTH = 44.0 FEET

DRILLING NOTES:

- 1. Samples collected for physical testing are indicated with a "P".
- 2. Percent gravel, sand, and fines shown are laboratory derived.

WELL CONSTRUCTION NOTES:

- 1. A 10-inch diameter steel conductor casing was installed to a depth of 30 feet bgs on 7/9/99.
- 2. A 2-inch diameter PVC monitoring well was installed to a depth of 44.0 feet bgs on 7/12/99.
- 3. Screened interval (0.010-inch slot) from 34.0 to 44.0 feet bgs; Lonestar #30 sand pack from 31.5 to 32.0 feet bgs; Lonestar #2/16 sand pack from 32.0 to 44.0 feet bgs.
- 4. Hydrated bentonite pellet well annular seal from 30 to 31.5 feet bgs; Portland Type I/II cement well annular seal from 1 to 30 feet bgs; neat cement grout (5% bentonite) conductor annular seal from 0 to 30 feet bas.
- 5. Static groundwater level recorded at a depth of 9.89 feet below the top of the well casing on 10/9/99.

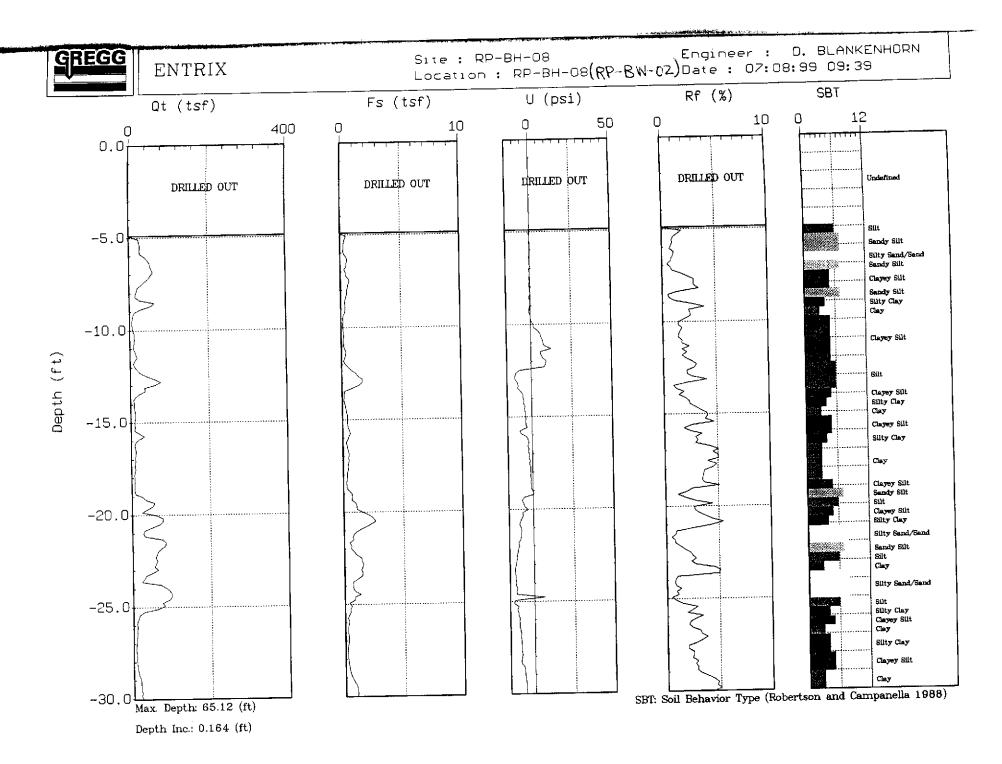
GEOLOGIC BORING LOG AND WELL CONSTRUCTION DETAILS

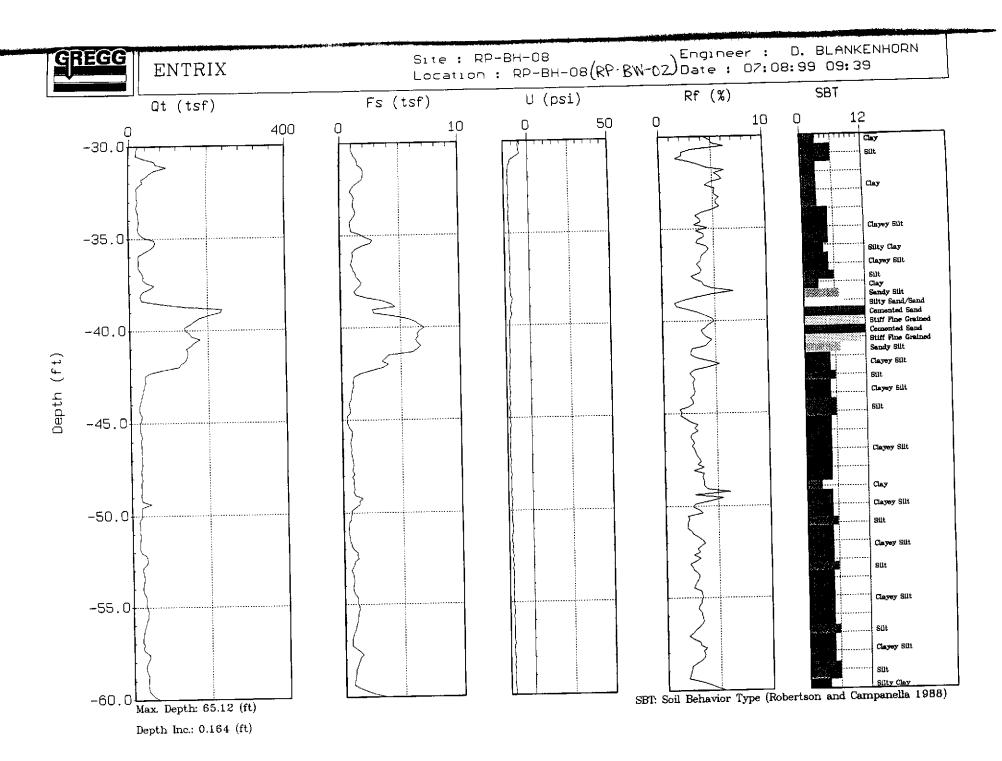
The Sherwin-Williams Company

1450 Sherwin Avenue Emeryville, California

SOIL BORING/WELL RP-BW-02

FIGURE A-13 PAGE 3 of 3

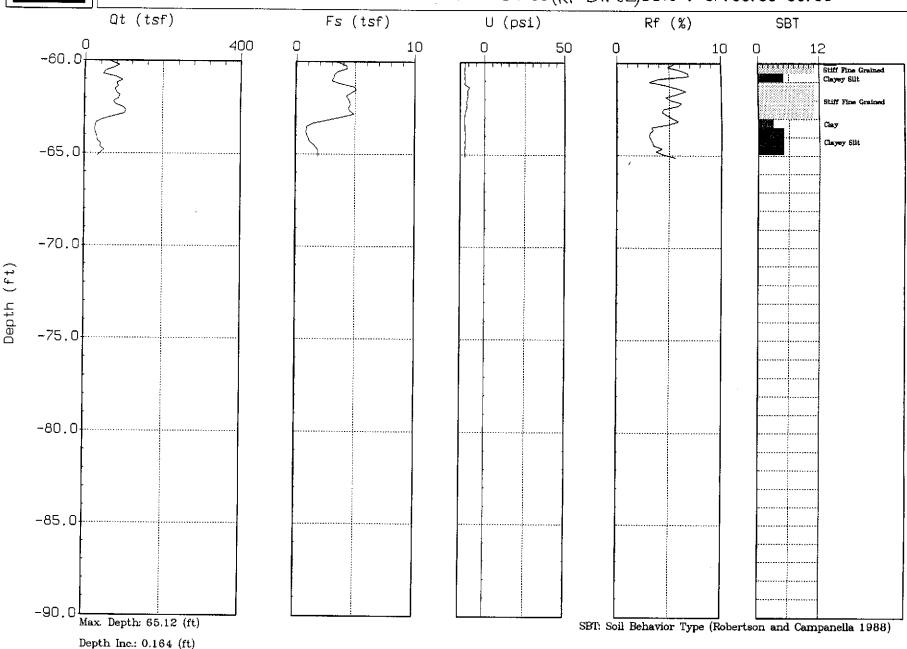






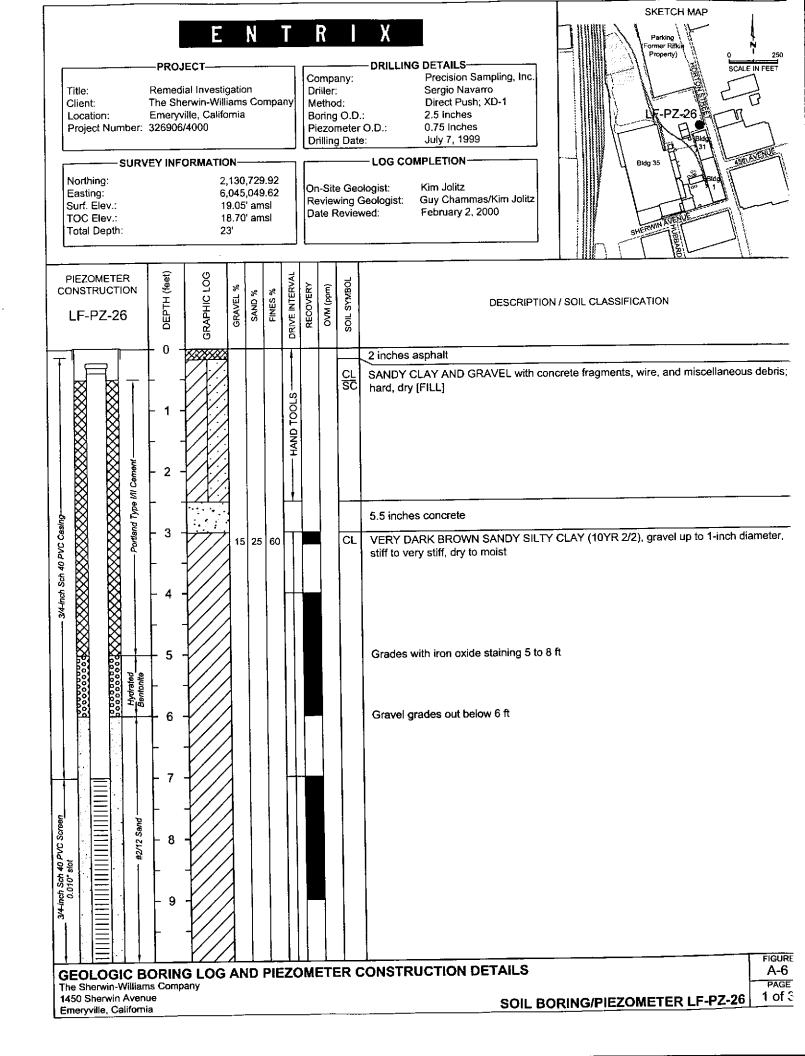
ENTRIX

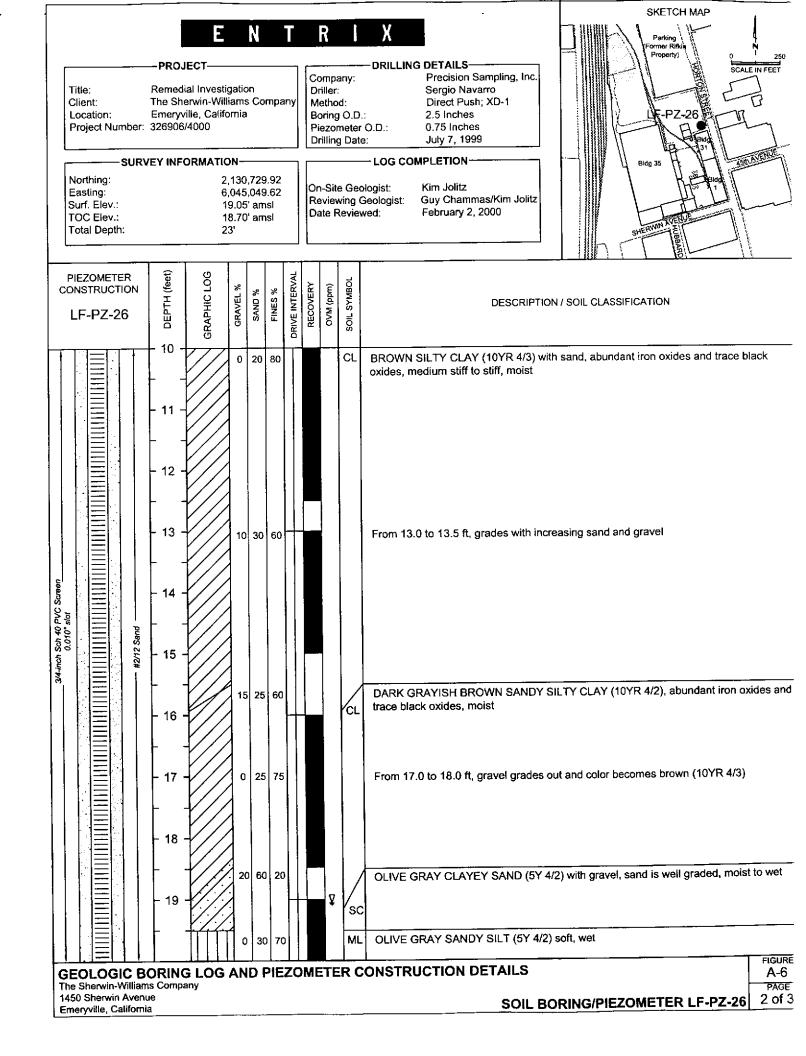
Site: RP-BH-08 Engineer: D. BLANKENHORN Location: RP-BH-08 (RP-BW-02) Date: 07:08:99 09:39



STATE OF CALIFORNIA DWR WELL COMPLETION REPORT (WELL LOGS)

STATE OF CALIFORNIA DWR WELL COMPLETION REPORT (WELL LOGS)





Title:

Remedial Investigation

Client: Location: The Sherwin-Williams Company

Project Number: 326906/4000

Emeryville, California

Piezometer O.D.: **Drilling Date:**

DRILLING DETAILS-Precision Sampling, Inc.

Company: Driller: Method: Boring O.D.:

Sergio Navarro Direct Push; XD-1 2.5 Inches

0.75 Inches July 7, 1999

SURVEY INFORMATION-

Northing: Easting: Surf. Elev.: 2,130,729.92 6,045,049.62 19.05' amsl

TOC Elev.: 18.70' amsl 23' Total Depth:

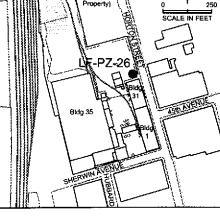
LOG COMPLETION

On-Site Geologist:

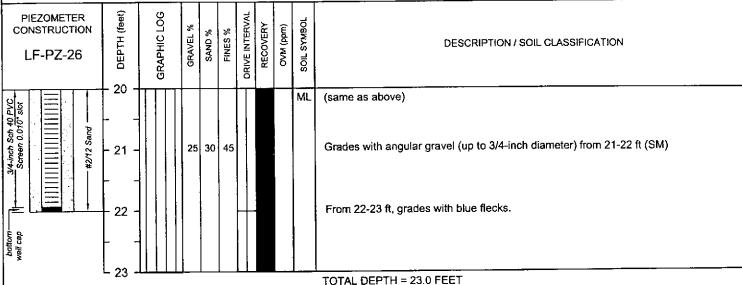
Kim Jolitz

Reviewing Geologist: Date Reviewed:

Guy Chammas/Kim Jolitz February 2, 2000



SKETCH MAP



DRILLING NOTES:

- The boring was completed to a depth of 23.0 feet bgs on 7/7/99.
- 2. The boring was advanced using hand tools from the surface to 2.5 feet bgs. About 5.5 inches of concrete was encountered at 2.5 feet bgs. From 3.0 to 23.0 feet bgs, soil samples were collected using a 36-inch long, 1.875-inch diameter EnviroCore sample barrel that was advanced hydraulically.
- 3. The boring log indicates subsurface conditions only at the location and time the boring was drilled.
- Percent gravel, sand, and fines shown are field estimates.
- 5. Groundwater was encountered at 19.0 feet bgs during drilling. No grab groundwater sample was collected.

PIEZOMETER CONSTRUCTION NOTES:

- 1. A 1/2-inch diameter pre-pack PVC piezometer was installed to a depth of 22.0 feet bgs on 7/7/99.
- 2. Screened interval (0.010-inch slot) from 7.0 to 22.0 feet bgs; Lonestar #2/12 sand pack from 6.0 to 22.0 feet bgs.
- 3. Hydrated bentonite pellet annular seal from 5.0 to 6.0 feet bgs; Portland Type I/II cement annular seal from 0.5 to 5.0 feet bgs.
- 4. Static groundwater level recorded at a depth of 12.39 feet below the top of the well casing on 10/8/99.

Emeryville, California