



Consulting Engineers · Environmental Laboratories  
 1531 North Main Street Blacksburg, Virginia 24060 (703) 552-5548

Client Sheet No. 4615 Job No. 30519  
 Date August 16, 1984 Date Received 7/20/84 - 7/26/84  
 Client Freeman Chemical Corporation  
 Source Laubenstien Packer Pump Test  
 Shipping Information Delivered to Olver Incorporated by Federal Express

Sample No.:	17089	17090
Time Collected:	9:26 a.m.	9:54 a.m.
Date Collected:	7/16/84	7/16/84
Description:	Depth: 340 Feet - Bottom	Depth: 340 Feet - Bottom

Analysis:

pH	7.0	7.3
Chemical Oxygen Demand	12 mg/l	<5 mg/l
Trichloroethylene	25 ppb	28 ppb
Benzene	44 ppb	78 ppb
Ethyl Benzene	26 ppb	17 ppb
Toluene	<1 ppb	<1 ppb
Styrene	<1 ppb	1 ppb
Total Xylene	2 ppb	1 ppb

All tests according to Standard Methods for the Examination of Water and Wastewater, 15th Edition and Methods for the Chemical Analysis of Water and Wastes, EPA.

By: Elizabeth B. Smiley  
 Elizabeth B. Smiley  
 Laboratory Director

EBS/pd

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Client Sheet No. 4615  
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Client Freeman Chemical Corporation  
Date August 16, 1984

Sample No.:	17092	17094
Time Collected:	11:01 a.m.	1:21 p.m.
Date Collected:	7/16/84	7/16/84
Description:	Depth: 340 Feet - Bottom	Depth: 340 Feet - Bottom

Analysis:

pH	7.4	7.5
Chemical Oxygen Demand	8 mg/l	<5 mg/l
Trichloroethylene	23 <del>mg/l</del> ppb	23 ppb
Benzene	46 ppb	50 ppb
Ethyl Benzene	7 ppb	4 ppb
Toluene	<1 ppb	<1 ppb
Styrene	3 ppb	3 ppb
Total Xylene	<1 ppb	2 ppb

Sample No.:	17096	17097
Time Collected:	2:58 p.m.	2:50 p.m.
Date Collected:	7/16/84	7/16/84
Description:	Depth 340 Feet - Bottom	Saukville Feeds N. W. Tank Pit

Analysis:

pH	7.6	7.5
Chemical Oxygen Demand	<5 mg/l	38 mg/l
Trichloroethylene	18 ppb	20 ppb
Benzene	40 ppb	1 ppb
Ethyl Benzene	3 ppb	<1 ppb
Toluene	<1 ppb	<1 ppb
Styrene	<1 ppb	<1 ppb
Total Xylene	2 ppb	9 ppb

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Client Freeman Chemical Corporation  
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Sample No.:	17122*	17123*
Time Collected:	12:00 noon	12:15 p.m.
Date Collected:	7/18/84	7/18/84
Description:	Depth: 270 Feet - 320 Feet	Depth: 270 Feet - 320 Feet

Analysis:

pH	7.5	7.7
Chemical Oxygen Demand	<5 mg/l	33 mg/l
Trichloroethylene	73 mg/l	62 mg/l
Benzene	73 ppb	80 ppb
Ethyl Benzene	20 ppb	40 ppb
Toluene	7 ppb	<1 ppb
Styrene	2 ppb	3 ppb
Total Xylene	7 ppb	2 ppb

\*Air bubbles were present in sample vial.

Sample No.:	17124*	17125
Time Collected:	12:30 p.m.	12:45 p.m.
Date Collected:	7/18/84	7/18/84
Description:	Depth: 270 Feet - 320 Feet	Depth: 270 Feet - 320 Feet

Analysis:

pH	7.8	7.7
Chemical Oxygen Demand	21 mg/l	16 mg/l
Trichloroethylene	59 mg/l	40 ppb
Benzene	86 ppb	62 ppb
Ethyl Benzene	23 ppb	11 ppb
Toluene	2 ppb	1 ppb
Styrene	<1 ppb	1 ppb
Total Xylene	<1 ppb	<1 ppb

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Sample No.:	17127	17129*
Time Collected:	1:45 p.m.	2:45 p.m.
Date Collected:	7/18/84	7/18/84
Description:	Depth: 270 Feet - 320 Feet	Depth: 270 Feet - 320 Feet

Analysis:

pH	7.7	7.6
Chemical Oxygen Demand	23 mg/l	14 mg/l
Trichloroethylene	76 mg/l	61 mg/l
Benzene	94 ppb	111 ppb
Ethyl Benzene	14 ppb	18 ppb
Toluene	<1 ppb	<1 ppb
Styrene	<1 ppb	3 ppb
Total Xylene	1 ppb	<1 ppb

Sample No.:	17131	17133*
Time Collected:	3:45 p.m..	4:45 p.m.
Date Collected:	7/18/84	7/18/84
Description:	Depth: 270 Feet - 320 Feet	Depth: 270 Feet - 320 Feet

Analysis:

pH	7.7	7.8
Chemical Oxygen Demand	5 mg/l	5 mg/l
Trichloroethylene	37 mg/l	27 ppb
Benzene	78 ppb	32 ppb
Ethyl Benzene	12 ppb	8 ppb
Toluene	1 ppb	5 ppb
Styrene	2 ppb	<1 ppb
Total Xylene	<1 ppb	4 ppb

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Sample No.:	17135*	17190
Time Collected:	5:45 p.m.	8:45 a.m.
Date Collected:	7/18/84	7/24/84
Description:	Depth: 270 Feet - 320 Feet	Depth: <140 Feet

Analysis:

pH	7.9	7.8
Chemical Oxygen Demand	<5 mg/l	31 mg/l
Trichloroethylene	28 mg/l	36 mg/l
Benzene	28 ppb	119 ppb
Ethyl Benzene	32 ppb	122 ppb
Toluene	30 ppb	22 ppb
Styrene	<1 ppb	<1 ppb
Total Xylene	<1 ppb	1 ppb

Sample No.:	17191	17192
Time Collected:	9:00 a.m.	9:15 a.m.
Date Collected:	7/24/84	7/24/84
Description:	Depth: <140 Feet	Depth: <140 Feet

Analysis:

pH	7.7	7.7
Chemical Oxygen Demand	29 mg/l	25 mg/l
Trichloroethylene	57 mg/l	31 ppb
Benzene	189 ppb	78 ppb
Ethyl Benzene	96 ppb	140 ppb
Toluene	20 ppb	12 ppb
Styrene	<1 ppb	<1 ppb
Total Xylene	20 ppb	38 ppb

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Sample No.:	17201	17203
Time Collected:	1:30 p.m.	2:30 p.m.
Date Collected:	7/24/84	7/24/84
Description:	Depth: <140 Feet	Depth: <140 Feet

**Analysis:**

pH	7.7	7.7
Chemical Oxygen Demand	21 mg/l	10 mg/l
Trichloroethylene	37 mg/l	37 mg/l
Benzene	127 ppb	127 ppb
Ethyl Benzene	121 ppb	126 ppb
Toluene	4 ppb	3 ppb
Styrene	<1 ppb	<1 ppb
Total Xylene	27 ppb	24 ppb

Sample No.:  
Time Collected:  
Date Collected:  
Description:

**Analysis:**