12 Metro Park Road, Albany, New York 12205

April 9, 2001

Mr. Carl Hoffman, P.E.
New York Department of Environmental Conservation
Operation and Maintenance Section – Bureau of Hazardous Site Control
Division of Environmental Remediation
50 Wolf Road
Albany, New York 12233 - 7010

Re: **ServAll Laundry Site**
Bay Shore, Suffolk County
Site No. 1-52-077, Work Assignment No. D003821-19
Monthly Report March 2001

Telephone
518.458.1313
Facsimile
518.458.2472

Dear Mr. Hoffmann:

This is the Monthly Report for March 2001, the second monthly report submitted under Work Assignment No. D003821-19

The plant processed a total volume of 5,546,940 gallons of water at an average flow rate of 144.11 GPM for the month of March. In this sampling event the total influent volatile organic compounds (VOCs) concentration was 14.36 ppb (see discussion below regarding blank correction). Most compounds detected in the influent sample fell into the chlorinated solvent category, as would be expected with groundwater impacts arising from a dry cleaning operation. The plant removed approximately 98 percent of the influent VOCs. No iron was detected in the system effluent sample during this sampling event. The effluent manganese concentration was 870 ppb, which is above the discharge criteria of 600 ppb. This result is consistent with historical sampling results for manganese.

Review of the laboratory report for this sampling round found methyl-tert-butyl ether (MTBE), methylene chloride, trichloroethene, and tetrachloroethene to be present a concentrations of 2.6, 0.43, 0.76, and 11 ug/L, respectively, for the influent sample. In the effluent sample acetone, methylene chloride, chloroform, and tetrachloroethene were found to be present at concentrations of 5, 0.42, 0.3, and .29 ug/L, respectively.

Based on telephone conversations Earth Tech had with Severn Trent Laboratories, in February 2001, Methylene chloride, MTBE, and acetone are all common laboratory contaminants for this laboratory. USEPA data validation procedures state, that when contamination is seen in a laboratory method blank or field blank a factor of ten times the

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blank concentration for a common laboratory contaminant is used to "correct" sample results. For other blank contaminants, a factor of five times the blank concentration is used to "correct" sample results.

The two tables below present a summary of the method blank results and their associated sample results.

Compound	Blank (VBLK05) Concentration	Trip Blank	Effluent Concentration	Influent Concentration
methyl-tert-butyl-ether	ND	ND	ND	2.6
methylene chloride	0.72	0.97	0.42	0.43
Acetone	ND	ND	5	ND
chloroform	ND	0.13	ND	0.3

Compound	Blank (VBLK04) Concentration	Trip Blank	UV-OX
methyl-tert-butyl-ether	ND	ND	ND
methylene chloride	0.83	0.97	0.66
Acetone	2.1	ND	5.4
Toluene	0.06	ND	ND
chloroform	ND	0.13	0.15

When evaluating the performance of the water treatment system the sample results for methylene chloride shown in the table above were "blank corrected" and negated. This correction was made, since the concentration of methylene chloride found in the samples was lower than ten times the associated laboratory blank result for this compound.

The presence of acetone in the effluent sample can be related to laboratory contamination. This is based on the fact that acetone is not a site contaminant of concern, and that it was present in the effluent sample but not the influent suggesting that the contamination occurred sometime after the sample was collected. Additionally, the method blank associated with the UV-Oxidation sample showed acetone to be present, indicating it was in the lab when the samples were analyzed and could have contaminated the effluent sample. The presence of acetone in this sampling may also be a result of contaminated glassware from laboratory cleaning procedures. Due to these facts the concentration of acetone found in the effluent was negated and was left out when calculating the overall contaminant reduction efficiency reported above.

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Chloroform is not a common laboratory contaminant, however it was found to be present in the trip blank associated with the cooler that the samples were shipped to the laboratory in. The system effluent sample result (see table above) was negated due to the fact that the concentration of chloroform found in the sample was lower than five times the associated laboratory trip blank result.

As shown in the table above, MTBE was present in the influent but not in any of the associated blanks. Earth Tech reported in the February 2001 monthly summary report that the presence of MTBE, in the samples associated with that report, was the result of laboratory contamination. The blank data for this event does not support that same conclusion. To be conservative the MTBE concentration present in the influent was included in the total volatile organics calculation, and when calculating the overall contaminant reduction efficiency. Earth Tech will continue to follow this issue in the future, and data will be evaluated as described above for blank correction with regards to MTBE when appropriate.

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The typical effluent pH range at the plant is between 6 and 9 SU. The pH seen in the influent is slightly below that range with a value of 5.80. However, the effluent is within the range (pH = 6.45). The overall effluent water quality data (TSS, Total Solids, Alkalinity, and pH) were consistent with historical laboratory and daily on-site monitoring data.

The following non-routine, system maintenance activities were conducted by H2M during the reporting period:

- The system was down when H2M personnel arrival at the site several times during the month (3/1/01, 3/21/01, 3/22/01, and 3/29/01). It was originally thought that the UV-Oxidation system was responsible for the automatic shutdowns, but during this reporting period it appeared as though the extraction well circuit breaker or pump circuit breaker was responsible for the automatic shutdowns. According to H2M a tripped circuit breaker was involved on all occasions.

- There were many pump problems or adjustments during the month of March. Problems with the diaphragm pump not working and letting separation tank 12B fill up happened on 3/1 through 3/9/01. The pump was repaired on 3/5/01. Some pump adjustments were made to the caustic soda pump and the sodium hypochlorite pumps.

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Mr. Carl Hoffman
NYSDEC
ServAll Laundry Site
March 2001 Report

The stroke and speed of the caustic soda pump was adjusted to raise the effluent pH on 3/2/01, 3/20/01, 3/26/01, 3/27/01, and 3/28/0. Also, the speed and stroke of the sodium hypochlorite pump was adjusted to raise the level of chlorine residual in the effluent on 3/2/01.

- The new pH probes and PLC transmitter were installed on 3/15 and 3/16/01.
- Four (4) drums of 15% sodium hypochlorite (NaOCl) solution were ordered on 3/30/01.

A complete list of all maintenance activities for this month are in the attached operations and maintenance letter summary submitted by the H2M Group dated April 3. 2001.

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Very truly yours,

C. Brett Mongillo

C. Brett Mongillo
Manager Chemistry and Sampling Services
Earth Tech, Inc.

Enclosures

Servall Laundry Site
Site No. 1-52-077
Groundwater Remediation - Operation and Maintenance

2001 Compliance Sampling - UNCORRETED

Influent	2001 DATA											
Constituents	Discharge Criteria	units	February		March		April		May		June	
Chlorobenzene	5	ug/L		U		U						
Vinyl Chlonde	2	ug/L		U		U						
1,1-Dichloroethene	5	ug/L		U		U						
Trichloroethene	5	ug/L	0.8		0.76							
Tetrachloroethene	5	ug/L	5.1		11							
1,1-Dichloroethane	5	ug/L		U		U						
Toluene	5	ug/L		U		U						
cis-1,2-Dichloroethene	5	ug/L		U		U						
trans-1,2-Dichloroethene	5	ug/L		U		U						
Methylene Chloride	N/A	ug/L	0.22	JB	0.43	JB						
1,1,1-Trichloroethane	N/A	ug/L	0.38	J		U						
Chloroform	N/A	ug/L		U		U						
Bromodichloromethane	N/A	ug/L		U		U						
Trichlorofluoromethane	N/A	ug/L		U		U						
Tetrahydrofuran	N/A	ug/L		U		U						
Methyl tert-Butly Ether	N/A	ug/L	1.6	JB	2.6	J						
Total VOCs	N/A	ug/L	**8.10**		**14.79**		**0.00**		**0.00**		**0.00**	
pH			**6.2**		**5.8**							
Iron (total)	600[4]	ug/L		U	210							
Manganese (total)	600[4]	ug/L	756		874							
Alkalinity	N/A	mg/L	20		23.5							
Total Suspended Solids	N/A	mg/L		U		U						
Total Solids	N/A	mg/L	114		117							

Effluent	2001 DATA											
Constituents	Discharge Criteria	units	February		March		Aprnl		May		June	
Chlorobenzene	5	ug/L		U		U						
Vinyl Chloride	2	ug/L		U		U						
1,1-Dichloroethene	5	ug/L		U		U						
Trichloroethene	5	ug/L		U		U						
Tetrachloroethene	5	ug/L	0.9		0.29	J						
1,1-Dichloroethane	5	ug/L		U		U						
Styrene	5 (POC)	ug/L		U		U						
Toluene	5	ug/L		U		U						
cis-1,2-Dichloroethene	5	ug/L		U		U						
trans-1,2-Dichloroethene	5	ug/L		U		U						
Methylene Chloride	N/A	ug/L	0.36	JB	0.42	JB						
1,1,1-Trichloroethane	N/A	ug/L		U		U						
Chloroform	N/A	ug/L	0.16	J	0.3	J						
Tetrahydrofuran	50	ug/L		U		U						
Acetone	N/A	ug/L		U	5							
2-Butanone	N/A	ug/L		U		U						
Bromodichloromethane	N/A	ug/L		U		U						
Methyl tert-Butly Ether	N/A	ug/L	0.68	JB		U						
Total VOCs	N/A	ug/L	**2.10**		**6.01**		**0.00**		**0.00**		**0.00**	
pH			**6.58**		**6.45**							
Iron (total)	600[4]	ug/L		U		U						
Manganese (total)	600[4]	ug/L	766		870							
Alkalinity	N/A	mg/L	22		36							
Total Suspended Solids	N/A	mg/L		U		U						
Total Solids	N/A	mg/L	92		134							

Notes.

1. Analytical data analyzed by STL Laboratories.
2. (U) Undetected.
3. (J) Estimate value. Result is below sample practical quantitation limit, but above the instrument detection limit.
4. The combined effluent concentration of Iron and Manganese will not exceed 1,000 ug/L.
5. N/A - No limit established for this site.
6. (E) Estimate value.
7. N-A - Not Analyzed
8. "-" indicates not performed.
9. Bold values exceed discharge limits.
10. (P) pesticide/aroclor target analyte. Greater than 25% difference between the two GC columns.
11. Concentration between EPA contract detection limit and instrument detection limit
12. POC = principal organic contaminant
13. LE - lab error or contamination likely

Servall Laundry Site
Site No. 1-52-077
Summary of Off-Site Analytical Results

		Date	Mar-98	Apr-98	Jun-98	Jun-98	Jun-98	Jun-98	Jun-98	Jul-98	Jul-98	Jul-98	Aug-98	Aug-98
		Time	8am	8am	9am	1pm	2:50pm	6:50am	9am	6:30am	3pm	9:30am	4:30pm	4pm
INFLUENT	Design Concentration (ug/l)	Average of Samplig Results (ug/l)												
TOTAL VOCs	**14,104**	**178**	**8**	**42.5**	**22.6**	**26.4**	**45.5**	**81.4**	**151.3**	**291.7**	**261.4**	**252**	**272.2**	**552.5**
Iron (mg/L)	0.5 - 5	7	0.19	0.98	0.67	1.1	1.1	1.2	1.7	1.8	1.5		1.5	1.7
Manganese (mg/L)	0.675	44	0.73	1	0.97	1.1	1.1	1.1	1.1	1.2	1		0.96	0.82
EFFLUENT														
TOTAL VOCs		**5**	**0**	**0**	**0**	**0**	**0.5**	**1.9**	**2.9**	**0.9**	**2.3**	**1**	**0**	**1.3**
Removal Efficiencies		97.05%	100%	100%	100%	100%	99%	98%	98%	100%	99%	100%	100%	100%
Iron (mg/L)		0.33	0.1	0.45	0.08	0.06	0.05	0.04	0.06	0.14	0.14		0.17	2.4
Manganese (mg/L)		43.7	0.66	0.87	0.91	1.7	1	1.1	1	1.2	1.1		0.97	0.79

* Numbers vary from published values in the Final Prove-out Report by Consumers Applied Technologies and Enviroclean Northeast, Inc., not dated. Published values, 2.2 and 23, were changed to **22** and **2.3**, respectively, as determined by the trends in VOC concentrations sampled.

Servall Laundry Site
Site No. 1-52-077
Summary of Off-Site Analytical Results

		Date	Sep-98	Sep-98	Sep-98	Sep-98	Sep-98	Oct-98
		Time		8am			1pm	9am
INFLUENT	Design Concentration (ug/l)	Average of Samplig Results (ug/l)						
TOTAL VOCs	**14,104**	**178**	**382.8**	**503.2**	**473.1**	**213**	**453.6**	**383.3**
Iron (mg/L)	0.5 - 5	7	1.4	1.2	1.4	1.2	1.1	0.9
Manganese (mg/L)	0.675	44	0.85	0.8	0.74	0.69	0.73	0.67
EFFLUENT								
TOTAL VOCs		**5**	**0**	**1.1**	**1**	**0.6**	**1.2**	**0.6**
Removal Efficiencies		97.05%	100%	100%	100%	100%	100%	100%
Iron (mg/L)		0.33	0.19	0.05	0.11	0.05	0.15	0.06
Manganese (mg/L)		43.7	0.84	0.79	0.74	0.72	0.72	0.66

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Servall Laundry Site
Site No. 1-52-077
Summary of Off-Site Analytical Results

		Date	Feb-99	Mar-99	Apr-99	May-99	Jun-99	Jul-99	Sep-99	Oct-99	Nov-99
		Time									
INFLUENT	Design Concentration (ug/l)	Average of Samplig Results (ug/l)									
TOTAL VOCs	**14,104**	**178**	**18.8**	**143.6**	**373.7**	**275.3**	**114.8**	**73.5**	**25.5**	**39.1**	**51.6**
Iron (mg/L)	0.5 - 5	7	0.574	0.42	0.564	0.385	0.236	0.321	0.172	0.979	0.716
Manganese (mg/L)	0.675	44	0.629	0.565	0.496	0.517	0.492	0.719	0.63	0.622	0.521
EFFLUENT											
TOTAL VOCs		**5**	**5.57**	**3.1**	**1.8**	**1.8**	**1.4**	**0.8**	**0.5**	**0.6**	**0.9**
Removal Efficiencies		97.05%	70%	98%	100%	99%	99%	99%	98%	98%	98%
Iron (mg/L)		0.33	0.134	0.0604	0.05	0.05	0.199	0.1	0.13	0.035	0.035
Manganese (mg/L)		43.7	0.612	0.569	0.49	0.542	0.507	0.71	0.66	0.613	0.519

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Servall Laundry Site
Site No. 1-52-077
Summary of Off-Site Analytical Results

		Date	Dec-99	Jan-00	Feb-00	Mar-00	Apr-00	May-00	Jun-00	Jul-00	Aug-00
		Time									
INFLUENT	Design Concentration (ug/l)	Average of Samplig Results (ug/l)									
TOTAL VOCs	**14,104**	**178**	**73.9**	**63.9**	**100.3**	**150.6**	**145.45**	**131.82**	**350.93**	**42.89**	**104.46**
Iron (mg/L)	0.5 - 5	7	0.248	1.27	0.308	0.689	0.426	1.43	6.32	0.444	0.583
Manganese (mg/L)	0.675	44	0.548	0.593	0.542	0.517	0.499	0.864	2.9	0.992	0.514
EFFLUENT											
TOTAL VOCs		**5**	**0.7**	**1.5**	**2**	**6.1**	**3.22**	**3.97**	**25.16**	**5.57**	**10.05**
Removal Efficiencies		97.05%	99%	98%	98%	96%	98%	97%	93%	87%	90%
Iron (mg/L)		0.33	0.035	0.1	0.032	0.032	0.0755	3.01	1.78	0.732	1.4
Manganese (mg/L)		43.7	0.524	0.583	0.533	0.492	0.506	0.417	0.0166	0.841	0.399

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Servall Laundry Site
Site No. 1-52-077
Summary of Off-Site Analytical Results

		Date	Sep-00	Feb-01	Mar-01	Apr-01	May-01	Jun-01	Jul-01	Aug-01	Sep-01
		Time									
INFLUENT	Design Concentration (ug/l)	Average of Samplig Results (ug/l)									
TOTAL VOCs	**14,104**	**178**	**204.19**	**8.1**	**14.79**						
Iron (mg/L)	0.5 - 5	7	25.7	0	210						
Manganese (mg/L)	0.675	44	0.682	756	874						
EFFLUENT											
TOTAL VOCs		**5**	**105.99**	**2.1**	**6.45**						
Removal Efficiencies		97.05%	48%	74%	56%						
Iron (mg/L)		0.33	0.0845	0	0						
Manganese (mg/L)		43.7	0.439	766	870						

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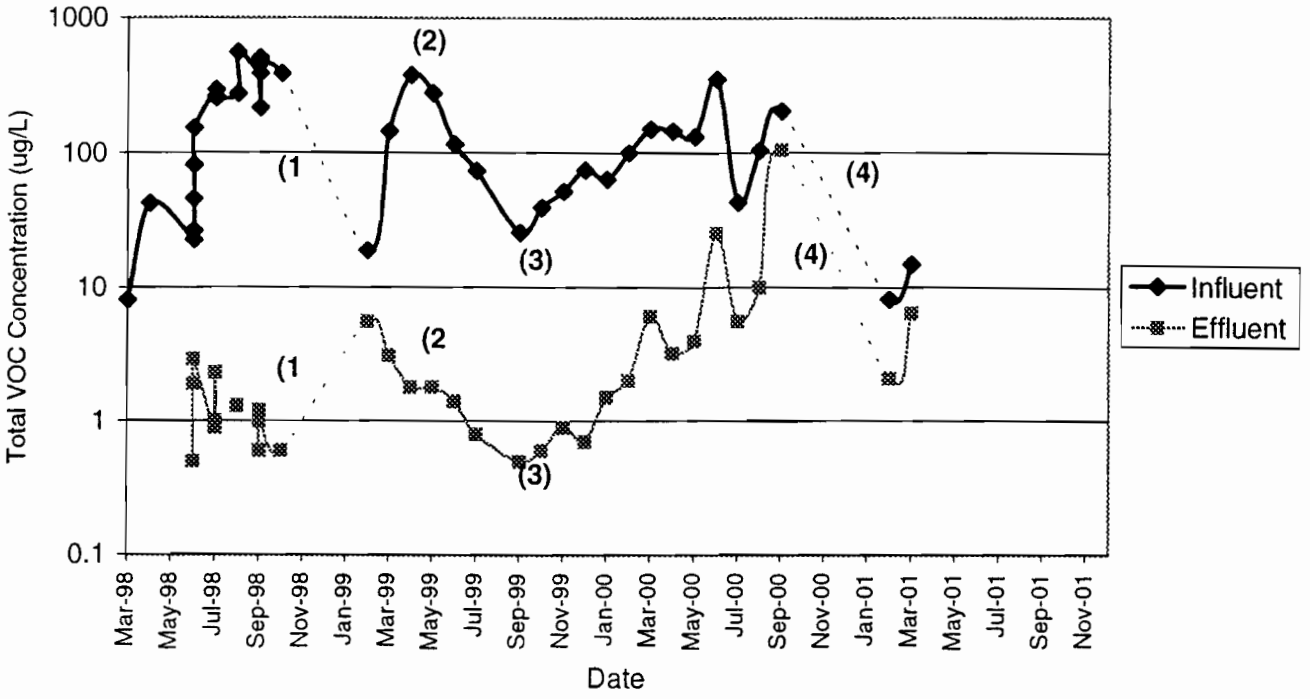
Servall Laundry Site
Site No. 1-52-077
Summary of Off-Site Analytical Results

		Date	Oct-01	Nov-01	Dec-01
		Time			
INFLUENT	Design Concentration (ug/l)	Average of Samplig Results (ug/l)			
TOTAL VOCs	**14,104**	**178**			
Iron (mg/L)	0.5 - 5	7			
Manganese (mg/L)	0.675	44			
EFFLUENT					
TOTAL VOCs		**5**			
Removal Efficiencies		97.05%			
Iron (mg/L)		0.33			
Manganese (mg/L)		43.7			

* Numbers vary from published values in the Final Prove-out Report by Consumers Applied Technologies and Enviroclean Northeast, Inc., not dated. Published values, 2.2 and 23, were changed to **22** and **2.3**, respectively, as determined by the trends in VOC concentrations sampled.

Servall Laundry Site
Site No. 1-52-077
Groundwater Remediation - Operation and Maintenance

Total Volatile Organic Compound (VOC) Influent and Effluent Trends



NOTES
1. Plant down due to reinjection well fouling (November 19, 1998 to January 23, 1999)
2. Brief Shut down in May: May 8 - May 10,1999
3. Low influent flow due to reinjection well fouling.
4. Plant Shut down due to change in project management

Servall Laundry
Site No. 1-52-077
Groundwater Remediation -2001 Operation and Maintenance

Summary Report

Plant Operating Data	unit	Monthly Average (to date)	Monthly Average (2001)	February-01	March-01	April-01	May-01	June-01
Flow Rate	gpm	117	145	146.1	144.11			
Gallons processed	gallons	3486821	3626715	1,706,490	5,546,940			
Percent of Time Operating	%	1	4	790%	92%			
Pounds of VOCs Treated	lb	1	0	0.09	0.41			
Influent VOC concentration	ug/L	119	11	8.1	14.79			
Effluent VOC concentration	ug/L	9	4	2.1	6.01			
Influent Total Iron	ug/L	2000	105	0	210			
Effluent Total Iron	ug/L	384	0	0	0			
Influent Total Manganese	ug/L	737	815	756	874			
Effluent Total Manganese	ug/L	553	818	766	870			
VOC removal efficiency	%	90.8%	1	74.1%	59.4%			
Total Iron removal efficiency	%	#DIV/0!	#DIV/0!	#DIV/0!	100.0%			
Total Manganese removal efficiency	%	12.0%	0	-1.3%	0.5%			
Cartridge Filters	ea	1	*NA*	*NA*	*NA*			
Sodium hypochlorite (12%)	lb	634	*NA*	*NA*	*NA*			
Polymer	lb	25	*NA*	*NA*	*NA*			
Hydrogen peroxide (50%)	lb	3705	*NA*	*NA*	*NA*			
Caustic (50%)	lb	2074	*NA*	*NA*	*NA*			
Hydrochloric Acid	lb	65	*NA*	*NA*	*NA*			
Spare Parts or other	at cost	443	*NA*	*NA*	*NA*			
Sludge generated (20% dewatered)	gal	23	0	0	0			
Sludge disposed of	gal	17	0	0	0			
Electricity (estimated)	kw hr	39891	37800	*NA*	*NA*			
Gas (estimated)	therms	854	800	*NA*	*NA*			
Compliance Sampling	at cost	893	650	*NA*	*NA*			
Operator	Month	8927	6700	*NA*	*NA*			
Redevelopment	at cost	2048	0	*NA*	*NA*			
Management & Engineering	at cost	2874	3200	*NA*	*NA*			
Consumables cost	*$*	$3,160	*NA*	*NA*	*NA*			
Sludge disposal cost	*$*	$50	*NA*	*NA*	*NA*			
Utilities cost	*$*	$3,889	*NA*	*NA*	*NA*			
Services cost	*$*	*$14,742*	*NA*	*NA*	*NA*			
Operating Cost (Estimated)	***$***	***$21,841***	***$0***	*NA*	*NA*			

Notes:
NA = Not Available

Servall Laundry
Site No. 1-52-077
Groundwater Remediation -2001 Operation and Maintenance

Summary Report

Plant Operating Data	unit	July-01	August-01	September-01	October-01	November-01	December-01	Total Year 2001
Flow Rate	gpm							-
Gallons processed	gallons							7,253,430
Percent of Time Operating	%							441%
Pounds of VOCs Treated	lb							0.49
Influent VOC concentration	ug/L							22.89
Effluent VOC concentration	ug/L							8.11
Influent Total Iron	ug/L							210
Effluent Total Iron	ug/L							0
Influent Total Manganese	ug/L							1,630
Effluent Total Manganese	ug/L							1,636
VOC removal efficiency	%							66.7%
Total Iron removal efficiency	%							#DIV/0!
Total Manganese removal efficiency	%							-0.4%
Cartridge Filters	ea							0
Sodium hypochlorite (12%)	lb							0
Polymer	lb							0
Hydrogen peroxide (50%)	lb							0
Caustic (50%)	lb							0
Hydrochloric Acid	lb							0
Spare Parts or other	at cost							$0
Sludge generated (20% dewatered)	gal							0
Sludge disposed of	gal							0
Electricity (estimated)	kw hr							0
Gas (estimated)	therms							7,200
Compliance Sampling	at cost							$0
Operator	Month							$0
Redevelopment	at cost							$0
Management & Engineering	at cost							$0
Consumables cost	*$*							$0
Sludge disposal cost	*$*							$0
Utilities cost	*$*							$0
Services cost	*$*							$0
Operating Cost (Estimated)	***$***							**$0**

Notes:
NA = Not Available

Servall Laundry
Site No. 1-52-077
Groundwater Remediation - Operations and Maintenance Costs to Date

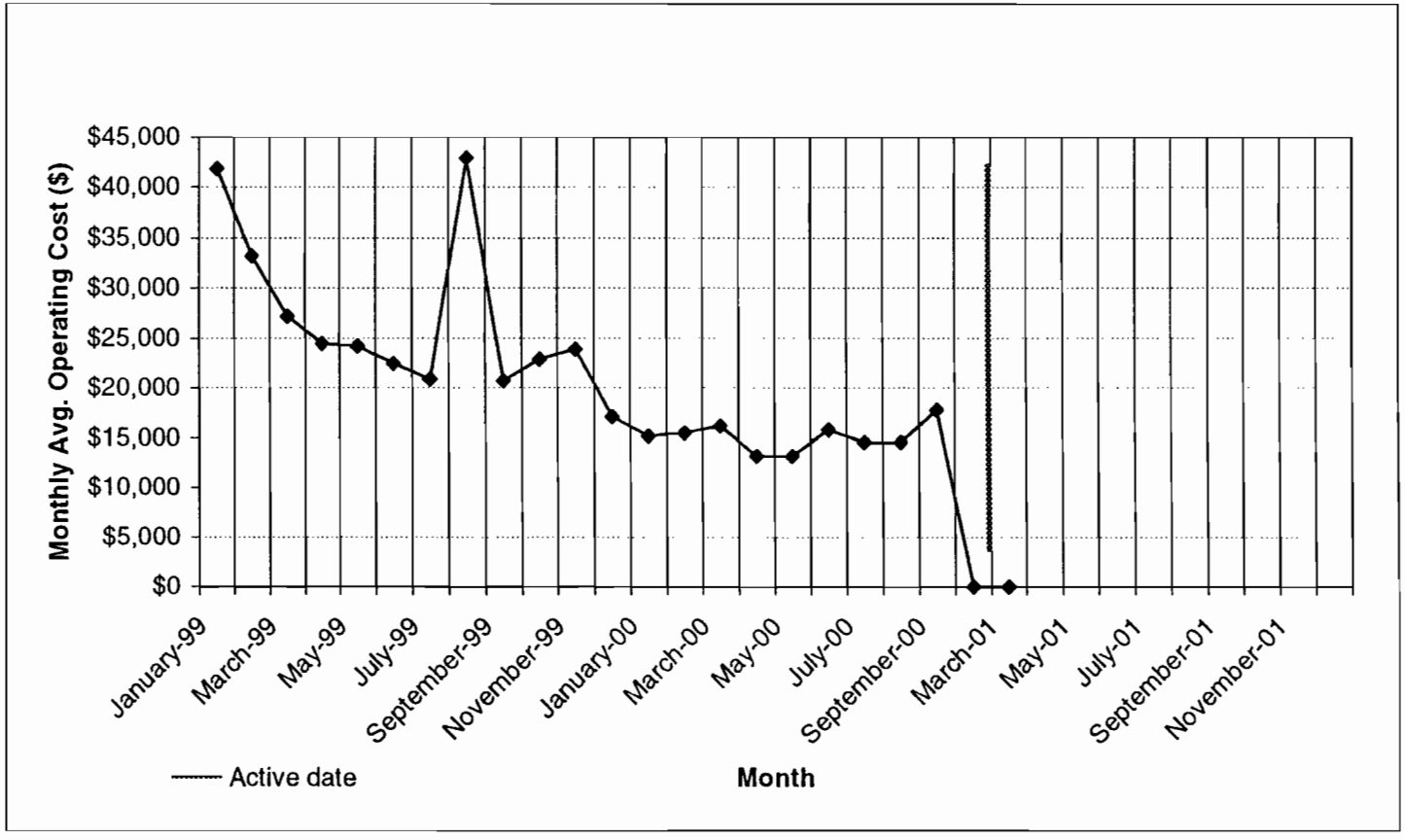


Figure 3 - Average Operating Cost Trends (Estimated)

Servall Laundry Site
Site No. 1-52-077
Groundwater Remediation

Summary Notes and Action Items

Month	Notes	Action	Resolutions
February	NYSDEC project manager requested repair of broken windows at the site.	Earth Tech requested that the O&M subcontractor (H2M) arrange for repairs	H2M had windows repaired.
	H2M Reported failure of three pH probes and one transmitter unit. They provided cost of replacement from original supplier	Earth Tech confirmed cost of replacement and received authorization to purchase replacements from NYSDEC	pH Probes and transmitter was replaced
	H2M has suggested that the UV lamp system may be ready for replacement lamps.	Earth Tech and H2M will track total VOC removal efficiency to verify the need to replace the UV lamps	
March	Nothing to Report		

Servall Laundry Site
Site No. 1-52-077

Groundwater Remediation
UV Oxidation Treatability Testing

Constituents / Sample ID	**INFLUENT FEB 1999**	1EH	2EH	3EH	**INFLUENT MARCH 1999**	1EH	1EL	1EL (dup)
Peroxide Dose Influent (ppm)		28	28	28		28	50	67
Peroxide Dose Residual (ppm)		22	22	22		22	38	53
Chlorobenzene								
Vinyl Chloride								
Methylene Chloride								
1,1-Dichloroethene							0.3	0.3
Trichloroethene	1.2				1.9			
Benzene								
Tetrachloroethene	17	0.4			140	3.2	**7.4**	**7.7**
1,1-Dichloroethane								
Chlorobenzene								
Toluene								
cis-1,2-Dichloroethene	0.6				1.7			
trans-1,2-Dichloroethene								
1,1,1-Trichloroethane	0.7	0.5	0.5	0.5	0.5	0.5	0.5	
Chloroform								
Bromodichloromethane								
Methyl tert-Butly Ether							0.3	
Trichlorofluoromethane								
Total	19.5	0.9	0.5	0.5	144.1	3.7	**8.5**	**8**

Notes:
1. Analytical data analyzed by STL Laboratories. Units are ug/L unless otherwise noted.
2. Bold values exceed discharge limits.

Legend
1 = Lamp Number (1, 2 or 3)
E = Effluent
H = High Power Lamp
L = Low Power Lamp
dup = duplicate sample

Servall Laundry Site
Site No. 1-52-077

Groundwater Remediation
UV Oxidation Treatability Testing

Constituents / Sample ID	INFLUENT APRIL 1999	1EH + 2EH	1EH+2EL	INFLUENT MAY 1999	1EH	1EL + 2 EL	INFLUENT JUNE 1999	1EL	1EH + 2 EL	INFLUENT JULY 1999	1EL	1EH + 2 EL
Peroxide Dose Influent (ppm)		50	50		28	28		28	28		28	28
Peroxide Dose Residual (ppm)		38	38		20	20		20	20		20	20
Chlorobenzene												
Vinyl Chloride												
Methylene Chloride	12	0.2		4.5			1.3					
1,1-Dichloroethene			0.2							0.2		
Trichloroethene	5.6			3			1.3			1.1		
Benzene												
Tetrachloroethene	350	0.3	0.6	260	4.7	0.5	110	0.1	0.1	53		
1,1-Dichloroethane								0.1	0.1	0.2		
Chlorobenzene												
Toluene			0.1	4.6		0.1	1					
cis-1,2-Dichloroethene	3.8						0.6			0.3		
trans-1,2-Dichloroethene												
1,1,1-Trichloroethane	0	0.5	0.5		0.5	0.8	0.6	0.5	0.5	0.6	0.6	
Chloroform	2.3	0.1	0.2					0.1	0.1	0.1	0.1	
Bromodichloromethane												
Methyl tert-Butly Ether										3		
Trichlorofluoromethane										0.1	0.1	
Total	373.7	1.1	1.6	272.1	5.2	1.4	114.8	0.8	0.8	55.5	0.8	0

Notes:
1. Analytical data analyzed by STL Laboratories. Units are ug/L unless otherwise noted.
2. Bold values exceed discharge limits.

Legend
1 = Lamp Number (1, 2 or 3)
E = Effluent
H = High Power Lamp
L = Low Power Lamp
dup = duplicate sample

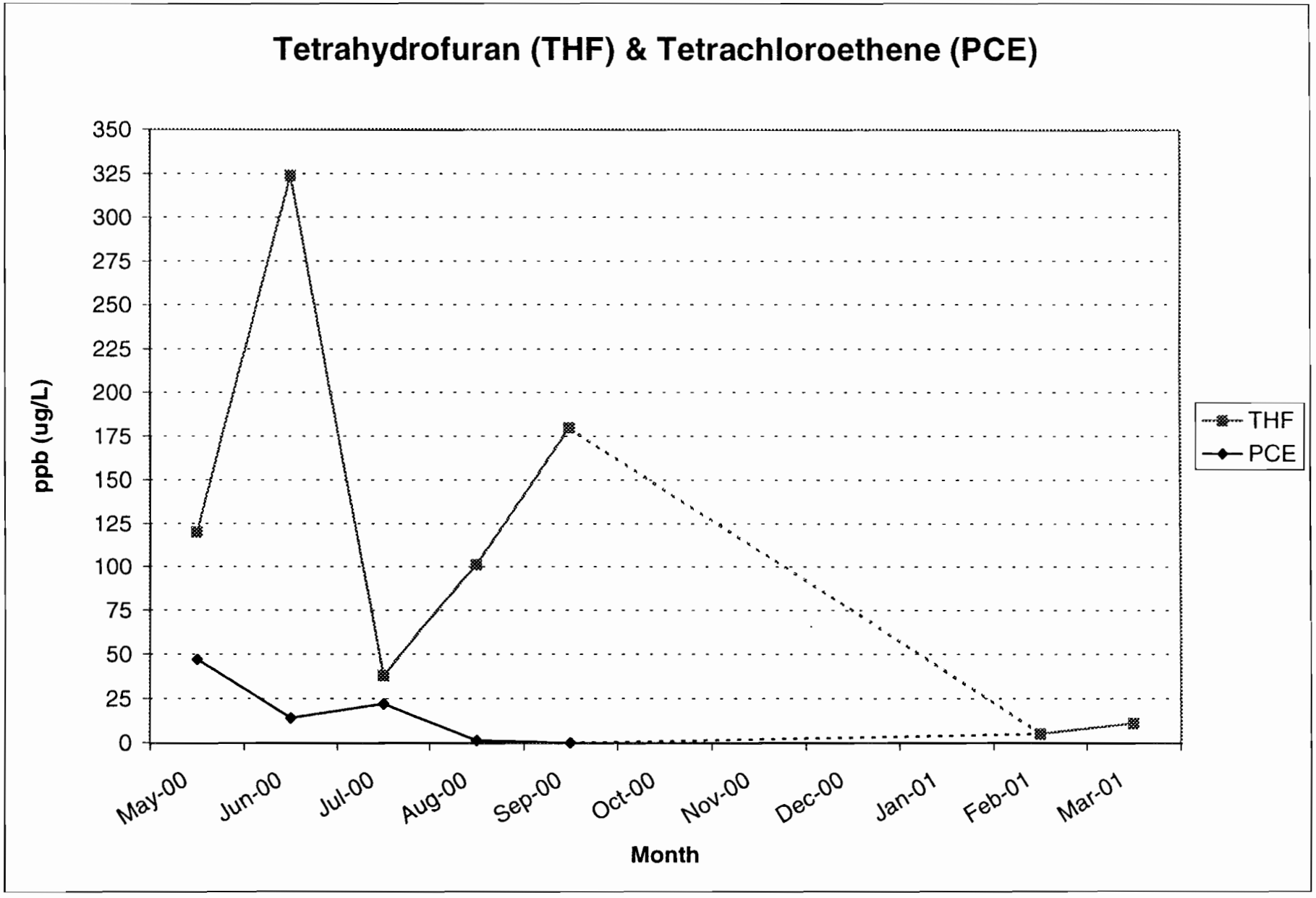

Tetrahydrofuran (THF) & Tetrachloroethene (PCE)
ppb (ug/L)
350
325
300
275
250
225
200
175
150
125
100
75
50
25
0
May-00
Jun-00
Jul-00
Aug-00
Sep-00
Oct-00
Nov-00
Dec-00
Jan-01
Feb-01
Mar-01
Month
THF
PCE

TABLE VO-1.0
7001-0570A
EARTH TECHNOLOGY
524.2 VOLATILE ORGANICS

Aqueous

All values are ug/L.

Client Sample I.D.	Method Blank	UV-OX		Quant. Limits with no Dilution
Lab Sample I.D.	VBLK04	010570A-03		
Method Blank I.D.	VBLK04	VBLK04		
Quant. Factor	1.00	1.00		
Dichlorodifluoromethane	U	U		0.50
Chloromethane	U	U		0.50
Vinyl Chloride	U	U		0.50
Bromomethane	U	U		0.50
Chloroethane	U	U		0.50
Freon 123A	U	U		0.50
Trichlorofluoromethane	U	U		0.50
Diethyl ether	U	U		25
1,1,2-Trichloro(1,2,2)trifluor	U	U		0.50
1,1-Dichloroethene	U	U		0.50
Acetone	2.1J	5.4B		2.5
Propionitrile	U	U		25
Methyl tert-Butyl ether	U	U		25
Carbon Disulfide	U	U		25
Bromodichloromethane	U	U		0.50
Iodomethane	U	U		0.50
Allyl Chloride	U	U		25
Acrylonitrile	U	U		25
Methylene Chloride	.83J	.66JB		1.0
trans-1,2-Dichloroethene	U	U		0.50
1,1-Dichloroethane	U	U		0.50
2,2-Dichloropropane	U	U		0.50
2-Butanone	U	U		2.5
cis-1,2-Dichloroethene	U	U		0.50
Bromochloromethane	U	U		0.50
Chloroform	U	.15J		0.50
1,1,1-Trichloroethane	U	U		0.50
Carbon Tetrachloride	U	U		0.50
1,1-Dichloropropene	U	U		0.50
Methacrylonitrile	U	U		25
Benzene	U	U		0.50
1,2-Dichloroethane	U	U		0.50
Ethyl Methacrylate	U	U		25
1,4-Dioxane	U	U		50
Chloroacetonitrile	U	U		25
Date Received		03/22/01		
Date Extracted	N/A	N/A		
Date Analyzed	03/22/01	03/22/01		

See Appendix for qualifier definitions
Note: Compound detection limit = quantitation limit x quantitation factor
Quant. Factor = a numerical value which takes into account any variation in sample weight/volume, % moisture and sample dilution.

TABLE VO-1.0
7001-0570A
EARTH TECHNOLOGY
524.2 VOLATILE ORGANICS

Aqueous

All values are ug/L.

Client Sample I.D.	Method Blank	UV-OX		Quant. Limits with no Dilution
Lab Sample I.D.	VBLK04	010570A-03		
Method Blank I.D.	VBLK04	VBLK04		
Quant. Factor	1.00	1.00		
1-Chlorobutane	U	U		25
1,1-Dichloro-2-propanone	U	U		2.5
Trichloroethene	U	U		0.50
Tetrahydrofuran	U	U		25
1,2-Dichloropropane	U	U		0.50
Methyl Acrylate	U	U		25
Dibromomethane	U	U		0.50
cis-1,3-Dichloropropene	U	U		0.50
4-Methyl-2-pentanone	U	U		2.5
Methyl Methacrylate	U	U		25
Toluene	.06J	U		0.50
trans-1,3-Dichloropropene	U	U		0.50
2-Chloroethylvinylether	U	U		0.50
1,1,2-Trichloroethane	U	U		0.50
Tetrachloroethene	U	U		0.50
2-Hexanone	U	U		2.5
1,3-Dichloropropane	U	U		0.50
Dibromochloromethane	U	U		0.50
1,2-Dibromoethane	U	U		0.50
Chlorobenzene	U	U		0.50
1,1,1,2-Tetrachloroethane	U	U		0.50
Ethylbenzene	U	U		0.50
mp-xylene	U	U		1.0
o-Xylene	U	U		0.50
Styrene	U	U		0.50
Bromoform	U	U		0.50
Isopropylbenzene	U	U		0.50
Bromobenzene	U	U		0.50
1,1,2,2-Tetrachloroethane	U	U		0.50
1,2,3-Trichloropropane	U	U		0.50
n-Propylbenzene	U	U		0.50
2-Chlorotoluene	U	U		0.50
4-Chlorotoluene	U	U		0.50
1,3,5-Trimethylbenzene	U	U		0.50
tert-Butylbenzene	U	U		0.50
Date Received		03/22/01		
Date Extracted	N/A	N/A		
Date Analyzed	03/22/01	03/22/01		

See Appendix for qualifier definitions
Note: Compound detection limit = quantitation limit x quantitation factor
Quant. Factor = a numerical value which takes into account any variation in sample weight/volume, % moisture and sample dilution.

TABLE VO-1.0
7001-0570A
EARTH TECHNOLOGY
524.2 VOLATILE ORGANICS

Aqueous

All values are ug/L.

Client Sample I.D. Lab Sample I.D. Method Blank I.D. Quant. Factor	Method Blank VBLKO4 VBLKO4 1.00	UV-OX 010570A-03 VBLKO4 1.00		Quant. Limits with no Dilution
1,2,4-Trimethylbenzene	U	U		0.50
1-Chlorohexane	U	U		0.50
sec-Butylbenzene	U	U		0.50
1,3-Dichlorobenzene	U	U		0.50
4-Isopropyltoluene	U	U		0.50
1,4-Dichlorobenzene	U	U		0.50
1,2-Dichlorobenzene	U	U		0.50
n-Butylbenzene	U	U		0.50
1,2-Dibromo-3-Chloropropane	U	U		0.50
Benzyl Chloride	U	U		0.50
trans-1,4-Dichloro-2-butene	U	U		25
Hexachloroethane	U	U		25
Nitrobenzene	U	U		25
Pentachloroethane	U	U		0.50
2-Nitropropane	U	U		25
1,2,4-Trichlorobenzene	U	U		0.50
Hexachlorobutadiene	U	U		0.50
Naphthalene	U	U		0.50
1,2,3-Trichlorobenzene	U	U		0.50
Date Received		03/22/01		
Date Extracted	N/A	N/A		
Date Analyzed	03/22/01	03/22/01		

See Appendix for qualifier definitions
Note: Compound detection limit = quantitation limit x quantitation factor
Quant. Factor = a numerical value which takes into account any variation in sample weight/volume, % moisture and sample dilution.

TABLE VO-1.1
7001-0570A
EARTH TECHNOLOGY
524.2 VOLATILE ORGANICS

Aqueous

All values are ug/L.

Client Sample I.D.	Method Blank	INFLUENT	EFFLUENT	Quant. Limits with no Dilution
Lab Sample I.D.	VBLK05	010570A-01	010570A-02	
Method Blank I.D.	VBLK05	VBLK05	VBLK05	
Quant. Factor	1.00	1.00	1.00	
Dichlorodifluoromethane	U	U	U	0.50
Chloromethane	U	U	U	0.50
Vinyl Chloride	U	U	U	0.50
Bromomethane	U	U	U	0.50
Chloroethane	U	U	U	0.50
Freon 123A	U	U	U	0.50
Trichlorofluoromethane	U	U	U	0.50
Diethyl ether	U	U	U	25
1,1,2-Trichloro(1,2,2)trifluor	U	U	U	0.50
1,1-Dichloroethene	U	U	U	0.50
Acetone	U	U	5	2.5
Propionitrile	U	U	U	25
Methyl tert-Butyl ether	U	2.6J	U	25
Carbon Disulfide	U	U	U	25
Bromodichloromethane	U	U	U	0.50
Iodomethane	U	U	U	0.50
Allyl Chloride	U	U	U	25
Acrylonitrile	U	U	U	25
Methylene Chloride	.72J	.43JB	.42JB	1.0
trans-1,2-Dichloroethene	U	U	U	0.50
1,1-Dichloroethane	U	U	U	0.50
2,2-Dichloropropane	U	U	U	0.50
2-Butanone	U	U	U	2.5
cis-1,2-Dichloroethene	U	U	U	0.50
Bromochloromethane	U	U	U	0.50
Chloroform	U	U	.3J	0.50
1,1,1-Trichloroethane	U	U	U	0.50
Carbon Tetrachloride	U	U	U	0.50
1,1-Dichloropropene	U	U	U	0.50
Methacrylonitrile	U	U	U	25
Benzene	U	U	U	0.50
1,2-Dichloroethane	U	U	U	0.50
Ethyl Methacrylate	U	U	U	25
1,4-Dioxane	U	U	U	50
Chloroacetonitrile	U	U	U	25
Date Received		03/22/01	03/22/01	
Date Extracted	N/A	N/A	N/A	
Date Analyzed	03/23/01	03/23/01	03/23/01	

See Appendix for qualifier definitions
Note: Compound detection limit = quantitation limit x quantitation factor
Quant. Factor = a numerical value which takes into account any variation in sample weight/volume, % moisture and sample dilution.

TABLE VO-1.1
7001-0570A
EARTH TECHNOLOGY
524.2 VOLATILE ORGANICS

Aqueous

All values are ug/L.

Client Sample I.D.	Method Blank	INFLUENT	EFFLUENT	Quant. Limits with no Dilution
Lab Sample I.D.	VBLK05	010570A-01	010570A-02	
Method Blank I.D.	VBLK05	VBLK05	VBLK05	
Quant. Factor	1.00	1.00	1.00	
1-Chlorobutane	U	U	U	25
1,1-Dichloro-2-propanone	U	U	U	2.5
Trichloroethene	U	.76	U	0.50
Tetrahydrofuran	U	U	U	25
1,2-Dichloropropane	U	U	U	0.50
Methyl Acrylate	U	U	U	25
Dibromomethane	U	U	U	0.50
cis-1,3-Dichloropropene	U	U	U	0.50
4-Methyl-2-pentanone	U	U	U	2.5
Methyl Methacrylate	U	U	U	25
Toluene	U	U	U	0.50
trans-1,3-Dichloropropene	U	U	U	0.50
2-Chloroethylvinylether	U	U	U	0.50
1,1,2-Trichloroethane	U	U	U	0.50
Tetrachloroethene	U	11	.29J	0.50
2-Hexanone	U	U	U	2.5
1,3-Dichloropropane	U	U	U	0.50
Dibromochloromethane	U	U	U	0.50
1,2-Dibromoethane	U	U	U	0.50
Chlorobenzene	U	U	U	0.50
1,1,1,2-Tetrachloroethane	U	U	U	0.50
Ethylbenzene	U	U	U	0.50
mp-xylene	U	U	U	1.0
o-Xylene	U	U	U	0.50
Styrene	U	U	U	0.50
Bromoform	U	U	U	0.50
Isopropylbenzene	U	U	U	0.50
Bromobenzene	U	U	U	0.50
1,1,2,2-Tetrachloroethane	U	U	U	0.50
1,2,3-Trichloropropane	U	U	U	0.50
n-Propylbenzene	U	U	U	0.50
2-Chlorotoluene	U	U	U	0.50
4-Chlorotoluene	U	U	U	0.50
1,3,5-Trimethylbenzene	U	U	U	0.50
tert-Butylbenzene	U	U	U	0.50
Date Received		03/22/01	03/22/01	
Date Extracted	N/A	N/A	N/A	
Date Analyzed	03/23/01	03/23/01	03/23/01	

See Appendix for qualifier definitions
Note: Compound detection limit = quantitation limit x quantitation factor
Quant. Factor = a numerical value which takes into account any variation in sample weight/volume, % moisture and sample dilution.

TABLE VO-1.1
7001-0570A
EARTH TECHNOLOGY
524.2 VOLATILE ORGANICS

Aqueous

All values are ug/L.

Client Sample I.D. Lab Sample I.D. Method Blank I.D. Quant. Factor	Method Blank VBLK05 VBLK05 1.00	INFLUENT 010570A-01 VBLK05 1.00	EFFLUENT 010570A-02 VBLK05 1.00	Quant. Limits with no Dilution
1,2,4-Trimethylbenzene	U	U	U	0.50
1-Chlorohexane	U	U	U	0.50
sec-Butylbenzene	U	U	U	0.50
1,3-Dichlorobenzene	U	U	U	0.50
4-Isopropyltoluene	U	U	U	0.50
1,4-Dichlorobenzene	U	U	U	0.50
1,2-Dichlorobenzene	U	U	U	0.50
n-Butylbenzene	U	U	U	0.50
1,2-Dibromo-3-Chloropropane	U	U	U	0.50
Benzyl Chloride	U	U	U	0.50
trans-1,4-Dichloro-2-butene	U	U	U	25
Hexachloroethane	U	U	U	25
Nitrobenzene	U	U	U	25
Pentachloroethane	U	U	U	0.50
2-Nitropropane	U	U	U	25
1,2,4-Trichlorobenzene	U	U	U	0.50
Hexachlorobutadiene	U	U	U	0.50
Naphthalene	U	U	U	0.50
1,2,3-Trichlorobenzene	U	U	U	0.50
Date Received		03/22/01	03/22/01	
Date Extracted	N/A	N/A	N/A	
Date Analyzed	03/23/01	03/23/01	03/23/01	

See Appendix for qualifier definitions
Note: Compound detection limit = quantitation limit x quantitation factor
Quant. Factor = a numerical value which takes into account any variation in sample weight/volume, % moisture and sample dilution.

Aqueous

TABLE VO-1.2
7001-0570A
EARTH TECHNOLOGY
524.2 VOLATILE ORGANICS

All values are ug/L.

Client Sample I.D.	TRIP BLANK			Quant. Limits with no Dilution
Lab Sample I.D.	010570A-04			
Method Blank I.D.	VBLK05			
Quant. Factor	1.00			
Dichlorodifluoromethane	U			0.50
Chloromethane	U			0.50
Vinyl Chloride	U			0.50
Bromomethane	U			0.50
Chloroethane	U			0.50
Freon 123A	U			0.50
Trichlorofluoromethane	U			0.50
Diethyl ether	U			25
1,1,2-Trichloro(1,2,2)trifluor	U			0.50
1,1-Dichloroethene	U			0.50
Acetone	U			2.5
Propionitrile	U			25
Methyl tert-Butyl ether	U			25
Carbon Disulfide	U			25
Bromodichloromethane	U			0.50
Iodomethane	U			0.50
Allyl Chloride	U			25
Acrylonitrile	U			25
Methylene Chloride	.97JB			1.0
trans-1,2-Dichloroethene	U			0.50
1,1-Dichloroethane	U			0.50
2,2-Dichloropropane	U			0.50
2-Butanone	U			2.5
cis-1,2-Dichloroethene	U			0.50
Bromochloromethane	U			0.50
Chloroform	.13J			0.50
1,1,1-Trichloroethane	U			0.50
Carbon Tetrachloride	U			0.50
1,1-Dichloropropene	U			0.50
Methacrylonitrile	U			25
Benzene	U			0.50
1,2-Dichloroethane	U			0.50
Ethyl Methacrylate	U			25
1,4-Dioxane	U			50
Chloroacetonitrile	U			25
Date Received	03/22/01			
Date Extracted	N/A			
Date Analyzed	03/23/01			

See Appendix for qualifier definitions
Note: Compound detection limit = quantitation limit x quantitation factor
Quant. Factor = a numerical value which takes into account any variation in sample weight/volume, % moisture and sample dilution.

Aqueous

TABLE VO-1.2
7001-0570A
EARTH TECHNOLOGY
524.2 VOLATILE ORGANICS

All values are ug/L.

Client Sample I.D.	TRIP BLANK			Quant. Limits with no Dilution
Lab Sample I.D.	010570A-04			
Method Blank I.D.	VBLK05			
Quant. Factor	1.00			
1-Chlorobutane	U			25
1,1-Dichloro-2-propanone	U			2.5
Trichloroethene	U			0.50
Tetrahydrofuran	U			25
1,2-Dichloropropane	U			0.50
Methyl Acrylate	U			25
Dibromomethane	U			0.50
cis-1,3-Dichloropropene	U			0.50
4-Methyl-2-pentanone	U			2.5
Methyl Methacrylate	U			25
Toluene	U			0.50
trans-1,3-Dichloropropene	U			0.50
2-Chloroethylvinylether	U			0.50
1,1,2-Trichloroethane	U			0.50
Tetrachloroethene	U			0.50
2-Hexanone	U			2.5
1,3-Dichloropropane	U			0.50
Dibromochloromethane	U			0.50
1,2-Dibromoethane	U			0.50
Chlorobenzene	U			0.50
1,1,1,2-Tetrachloroethane	U			0.50
Ethylbenzene	U			0.50
mp-xylene	U			1.0
o-Xylene	U			0.50
Styrene	U			0.50
Bromoform	U			0.50
Isopropylbenzene	U			0.50
Bromobenzene	U			0.50
1,1,2,2-Tetrachloroethane	U			0.50
1,2,3-Trichloropropane	U			0.50
n-Propylbenzene	U			0.50
2-Chlorotoluene	U			0.50
4-Chlorotoluene	U			0.50
1,3,5-Trimethylbenzene	U			0.50
tert-Butylbenzene	U			0.50
Date Received	03/22/01			
Date Extracted	N/A			
Date Analyzed	03/23/01			

See Appendix for qualifier definitions
Note: Compound detection limit = quantitation limit x quantitation factor
Quant. Factor = a numerical value which takes into account any variation in sample weight/volume, % moisture and sample dilution.

TABLE VO-1.2
7001-0570A
EARTH TECHNOLOGY
524.2 VOLATILE ORGANICS

All values are ug/L.

Client Sample I.D.	TRIP BLANK			Quant. Limits with no Dilution
Lab Sample I.D.	010570A-04			
Method Blank I.D.	VBLK05			
Quant. Factor	1.00			
1,2,4-Trimethylbenzene	U			0.50
1-Chlorohexane	U			0.50
sec-Butylbenzene	U			0.50
1,3-Dichlorobenzene	U			0.50
4-Isopropyltoluene	U			0.50
1,4-Dichlorobenzene	U			0.50
1,2-Dichlorobenzene	U			0.50
n-Butylbenzene	U			0.50
1,2-Dibromo-3-Chloropropane	U			0.50
Benzyl Chloride	U			0.50
trans-1,4-Dichloro-2-butene	U			25
Hexachloroethane	U			25
Nitrobenzene	U			25
Pentachloroethane	U			0.50
2-Nitropropane	U			25
1,2,4-Trichlorobenzene	U			0.50
Hexachlorobutadiene	U			0.50
Naphthalene	U			0.50
1,2,3-Trichlorobenzene	U			0.50
Date Received	03/22/01			
Date Extracted	N/A			
Date Analyzed	03/23/01			

See Appendix for qualifier definitions
Note: Compound detection limit = quantitation limit x quantitation factor
Quant. Factor = a numerical value which takes into account any variation in sample weight/volume, % moisture and sample dilution.

Aqueous

TABLE AS-1.0
7001-0570A
EARTH TECHNOLOGY
MISCELLANEOUS ATOMIC SPECTROSCOPY

All values are ug/L.

Client Sample I.D.	INFLUENT	EFFLUENT	UV-OX	
Lab Sample I.D.	010570A-01	010570A-02	010570A-03	
Iron	210.	100.U	170.	
Manganese	874.	870.	885.	

See Appendix for qualifier definitions

1

WET CHEM ANALYSIS DATA SHEET

SAMPLE NO.

INFLUENT

Lab Name: STL Contract: _____

Lab Code: STL Case No.: 0570A SAS No.: _____ SDG No.: A0570

Matrix (soil/water): WATER Lab Sample ID: 010570A-01

% Solids: 0 Date Received: 03/22/01

CAS No.	Analyte	Concentration	C	Units	Q	M
471-34-1	Alkalinity	23.5		mg/L		T
12408-02-5	pH	5.80		S.U.		D
	TDS	117.		mg/L		G
	TSS	5.0	U	mg/L		G

Comments:

FORM I - WC

1

WET CHEM ANALYSIS DATA SHEET

SAMPLE NO.

EFFLUENT

Lab Name: STL Contract: _____

Lab Code: STL Case No.: 0570A SAS No.: _____ SDG No.: A0570

Matrix (soil/water): WATER Lab Sample ID: 010570A-02

% Solids: 0 Date Received: 03/22/01

CAS No.	Analyte	Concentration	C	Units	Q	M
471-34-1	Alkalinity	36.0		mg/L		T
12408-02-5	pH	6.45		S.U.		D
	TDS	134.		mg/L		G
	TSS	5.0	U	mg/L		G

Comments:

FORM I - WC

1

WET CHEM ANALYSIS DATA SHEET

SAMPLE NO.

UV-OX

Lab Name: STL Contract: _____

Lab Code: STL Case No.: 0570A SAS No.: _____ SDG No.: A0570

Matrix (soil/water): WATER Lab Sample ID: 010570A-03

% Solids: 0 Date Received: 03/22/01

CAS No.	Analyte	Concentration	C	Units	Q	M
471-34-1	Alkalinity	23.0		mg/L		T
12408-02-5	pH	5.97		S.U.		D
	TDS	120.		mg/L		G
	TSS	5.0	U	mg/L		G

Comments:

_____

_____

_____

_____

H2M GROUP

ACEC MEMBER
SUPPORTING EXCELLENCE
IN ENGINEERING

Holzmacher, McLendon & Murrell, P.C. ◣ H2M Associates, Inc.
H2M Labs, Inc. ◣ H2M Construction Management, Inc.
575 Broad Hollow Road, Melville, New York 11747
(631) 756-8000, Fax: (631) 694-4122
e-mail: h2m@h2m.com
web: www.h2m.com

April 3, 2001

Brett Mongillo
Earth Tech, Inc.
12 Metro Park Rd.
Albany, NY 12205

Re: Servall Laundry
Bay Shore, New York
March 2001 Operations Report

Dear Mr. Mongillo:

As you are aware, Holzmacher, McLendon, & Murrell, P.C. (H2M) is currently conducting the daily operation and maintenance duties for the above referenced site. A summary of activity with respect to the groundwater extraction and treatment plant for the month of March is provided below.

Overview
Routine equipment maintenance was performed and daily process equipment readings were compiled during the month.

Event Schedule
The following timeline represents specific tasks completed during the month of March.

- 3/1/01 System down upon arrival. Readings on the Master Control Panel (MCP) indicated a UV-Ox System issue and UV-Ox System shutdown. Upon restart of system the circuit breaker for the extraction well tripped. That was reset and the system was restarted. Also noted the level was high in separation tank 12B. The diaphragm pump was not working. Cleaned out the diaphragm pump and tried again, did not work. Resorted to using the manual sump pump.

- 3/2/01 Separation tank 12B was full. Pumped out using the manual pump. Raised the speed and stroke of the caustic soda (NaOH) pump to 35/35 in order to raise the effluent pH. Also raised the speed and stroke of the sodium hypochlorite (NaOCl) pump to 90/90 in order to raise the level of chlorine residual in the effluent. Noticed that there was a leak on the effluent filter bypass. Installed temporary fix prior to purchasing the correct pieces to conduct the repair.

- 3/5/01 Conducted all necessary repairs including sodium hypochlorite pump, air valve on effluent filter bypass and diaphragm pump for separation tank 12B. Changed sodium hypochlorite drums, cleaned out diaphragm pump on separation tank 12B and pumped out 12B. Changed circular charts at 9:30. Restarted system at 9:37 extraction well pump circuit breaker tripped upon restart, reset and restarted the system. Manually shut down at 9:45 due to repair needed in different part of effluent filter bypass. Repaired and restarted at 10:23.

- 3/6/01 Separation tank 12B was high upon arrival. Turned on diaphragm pump and pumped down. After the backwash of sand filter #2, pumped down separation tank 12B again.

- 3/8/01 Cleaned out diaphragm pump and pumped down separation tank 12B again.

- 3/9/01 Separation tank 12B was ¼ full. Pumped out remaining water. Changed out effluent canister filters and placed the soiled filters in the HCl acid bath.

- 3/12/01 Separation tank 12B was empty, however, there was an alarm for Hi Level in the separation tank 12B. Changed circular charts at 8:15.

- 3/15/01 Rewired and calibrated two of three new pH probes and one new transmitter.

- 3/16/01 Rewired and calibrated final pH probe. Changed effluent canister filters and placed soiled ones in HCl bath. Building sump monitor indicated low pH.

- 3/19/01 Changed circular charts at 8:40 and turned filters over in HCl bath.

- 3/20/01 Pumped the building sump dry, and flushed clean water through the pumps. Raised speed and stroke on Caustic pump from 35/35 to 40/40 in order to raise the pH of the effluent.

- 3/21/01 System Down upon arrival. MCP readings indicated a UV-Oxidation system issue and UV-Oxidation system shutdown. Readings on the UV-Oxidation system indicate Water Low Flow. Restarted the system at 8:20. Let system run for 1 hour in order to equilibrate system. After letting the system run for the hour, took the monthly compliance samples and sent them via Fed Ex to Severn Trent Labs.

- 3/22/01 System down upon arrival. MCP readings indicate a UV-Oxidation system issue and UV-Oxidation system shutdown. UV-Oxidation system readings indicate Water Low Flow. System shutdown was due to a tripped pump circuit breaker. While system was down, switched filter pump 4B to 4A and filter pump 6A to 6B. Restarted system at 7:15 and let run for half an hour. Took readings after a half an hour.

- 3/23/01 Changed out effluent filters and placed soiled ones in HCl bath.

- 3/26/01 Picked up new incandescent bulbs for MCP. Changed circular charts at 9:40. Changed incandescent bulbs on MCP. Everything operating okay accept for sodium hypochlorite pump. Attempted to fix by using bleed valve, did not work, relief valve stuck open. Determined that new bleed valve is required. Raised caustic soda speed and stroke from 40/40 to 45/45, in order to raise the effluent pH. Ordered new bleed valve from USA Blue Book.

- 3/27/01 Raised caustic soda speed and stroke from 45/45 to 50/50 in order to raise the effluent pH. Attempted to pull apart piping to sump pump 10A to see why the pump is not operating properly. One bolt was too rusted to remove. Was able to turn the piping in order to wash it out. During reinstallation, the gasket between the piping and the backflow preventer failed. A new gasket is required.

- 3/28/01 Raised caustic soda to 55/55 in order to raise the effluent pH closer to 7.00.

- 3/29/01 System down upon arrival. Extraction well circuit breaker was tripped. Reset circuit breaker and restarted system at 8:15. Let the system run for 1 hour and then took readings. Found that separation tank 12B was full and pumped down. Reset the pH settings on the MCP using the PLC.

- 3/30/01 Installed new bleed valve for the sodium hypochlorite pump. Bleed valve not priming, will troubleshoot on Monday. Changed effluent canister filters and placed soiled ones in HCl bath. Ordered 4 more drums of 15% Sodium Hypochlorite (NaOCl) solution.

Plant Performance

Between March 1, 2001 and March 31, 2001, the treatment plant discharged 5,546,940 gallons of treated water. The average flow rate through the UV/Oxidation system was 144.11 gallons per minute during operating conditions. Operational data and daily chemistry records for the respective monitoring period have been included as an attachment to this report.

Waste Disposal

No waste was shipped off-site during the reporting period.

If you should have any questions or require additional information, please contact Philip Schade at (631) 756-8000, extension 1623.

Very truly yours,

HOLZMACHER, McLENDON, & MURRELL, P.C.

Philip J. Schade, P.E.
Project Manager

Rocky W. Wenskus
Environmental Scientist

RWW/
enclosures

cc: Gary J. Miller, P.E./H2M

H2MGROUP

Daily Operations Checklist
Servall Laundry Site

Day	Thursday	Friday	Monday	Tuesday	Wednesday	Thursday	Friday	Monday	Tuesday	Wednesday	Thursday
Date	3/1/2001	3/2/2001	3/5/2001	3/6/2001	3/7/2001	3/8/2001	3/9/2001	3/12/2001	3/13/2001	3/14/2001	3/15/2001
Time	11:35	11:50	11:00	10:00	8:15	10:26	8:20	9:58	8:27	9:17	8:20
Extraction Well Level (feet)	60.0	62.1	71.0	60.4	65.1	58.1	60.1	60.9	61.3	61.5	62.2
Influent Flow Rate (gpm)	160.03	158.66	160.24	160.50	160.03	160.28	160.20	160.13	160.11	159.90	159.92
Influent Filter in Service (yes/no)	No	No	No	No	No	No	No	No	No	No	No
Inlet Pressure (psi)	32	34	32	32	32	34	32	34	34	36	40
Outlet Pressure (psi)	28	30	30	30	32	32	32	30	34	36	38
Cartridge Filter Flow Rate (gpm)	*	*	*	*	*	*	*	*	*	*	*
Equalization Tank											
Level (inches)	52.08	51.99	51.96	51.70	52.05	51.98	52.05	51.99	52.14	51.99	52.05
pH	**	**	**	**	**	**	**	**	**	**	**
Mixer (on/off)	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Acid Pump Settings: Speed / Stroke	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
UV/Oxidation Pump in Service (4A/4B)	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B
UV/Oxidation Flow Rate (gpm)	148.69	145.16	146.02	148.67	148.34	143.21	150.25	147.06	151.36	148.46	141.63
UV/Oxidation Unit											
Lamp # 1 (on/off)	On	On	On	On	On	On	On	On	On	On	On
KV	252	252	252	252	252	252	252	252	252	252	252
Amps	7.7	7.7	7.6	7.7	7.6	7.5	7.6	7.6	7.6	7.6	7.5
Time	11510.70	11534.94	11592.12	11615.11	11637.42	11663.52	11685.43	11758.05	11781.56	11806.40	11829.45
Lamp # 2 (on/off)	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
KV	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Amps	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Time	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Lamp # 3 (on/off)	On	On	On	On	On	On	On	On	On	On	On
KV	258	258	258	258	258	258	258	258	258	258	258
Amps	6.8	6.9	6.7	6.8	6.8	6.6	6.8	6.8	6.8	6.9	6.7
Time	9920.55	9944.79	10001.95	10024.94	10047.26	10073.63	10095.27	10167.89	10191.40	10216.24	10239.29
Peroxide Pump Settings: Speed / Stroke	50/50	50/50	50/50	50/50	50/50	50/50	50/50	50/50	50/50	50/50	50/50
Peroxide Residual Concentration (mg/l)	2	1	10	16	12	13	13	11	11	15	13
Totalizer Reading (gallons)	3018600	3232490	3729400	3930820	4127270	4354540	4546780	5177700	5381210	5594620	5790840

H2MGROUP

Daily Operations Checklist
Servall Laundry Site

Day	Thursday	Friday	Monday	Tuesday	Wednesday	Thursday	Friday	Monday	Tuesday	Wednesday	Thursday
Date	3/1/2001	3/2/2001	3/5/2001	3/6/2001	3/7/2001	3/8/2001	3/9/2001	3/12/2001	3/13/2001	3/14/2001	3/15/2001
pH Adjust Tank											
Level (inches)	50.02	49.94	49.89	49.99	50.13	49.92	50.04	50.1	49.92	50.04	49.97
pH	**	**	**	**	**	**	**	**	**	**	**
Mixer (on/off)	On	On	On	On	On	On	On	On	On	On	On
Caustic Pump Settings: Speed / Stroke	20/35	20/35	35/35	35/35	35/35	35/35	35/35	35/35	35/35	35/35	35/35
Polymer Feed Settings	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Solution Pump: Speed / Stroke	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dilution Water Rate	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Polymeer Bucket Weight (lbs.)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sand Filter Feed Pump in Service (6A/6B)	6A	6A	6A	6A	6A	6A	6A	6A	6A	6A	6A
Sand Filters											
Filter # 1 inlet pressure (psi)	17	17	18	16	14	16	18	16	19	18	15
Filter # 1 outlet pressure (psi)	16	18	16	16	18	16	20	16	20	20	16
Filter # 2 inlet pressure (psi)	16	17	16	16	16	16	18	16	14	16	16
Filter # 2 outlet pressure (psi)	16	16	16	14	18	16	18	16	12	16	16
Filter # 3 inlet pressure (psi)	18	19	16	18	18	18	18	18	18	16	16
Filter # 3 outlet pressure (psi)	17	19	17	18	16	16	18	16	16	16	16
Filter # 4 inlet pressure (psi)	16	18	18	16	17	15	18	16	18	17	18
Filter # 4 outlet pressure (psi)	18	20	18	20	18	18	21	18	21	19	16
Effluent Flow Rate (gpm)	124.05	130.10	127.55	135.47	135.60	124.11	142.72	128.53	126.34	124.60	131.20
Effluent Filter in Service (yes/no)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Inlet Pressure (psi)	12	12	10	12	12	12	12	12	14	12	12
Outlet Pressure (psi)	12	12	12	12	10	12	12	12	12	12	12
Reinjection Well Level (feet)	64.66	65.94	64.85	66.80	64.62	64.47	65.82	64.48	64.20	64.42	64.36
Chemical Storage Levels											
Caustic Level (NaOH) (inches)	36	36	36	36	36	36	36	36	36	36	36
Peroxide Level (H_2O_2) (inches)	54	54	54	54	54	54	54	54	54	54	54
Acid Level (H_2SO_4) (inches)	54	54	54	54	54	54	54	54	54	54	54
Air Compressor (psi)	175	165	145	170	160	145	155	130	160	165	125
Compressed Air Dryer (on/off)	On	On	On	On	On	On	On	On	On	On	On
Chlorine pump: Speed / Stroke	80/80	80/80	90/90	90/90	100/100	100/100	100/100	100/100	100/100	100/100	100/100
Chlorine Residual Concentration (mg/l)	0.1	0.0	0.0	0.0	0.2	0.1	0.1	0.1	0.2	0.1	0.0

* - Unit inoperable

** - Unit inoperable, repair in progress

H2MGROUP

Daily Operations Checklist
Servall Laundry Site

Day	Friday	Monday	Tuesday	Wednesday	Thursday	Friday	Monday	Tuesday	Wednesday	Thursday	Friday
Date	3/16/2001	3/19/2001	3/20/2001	3/21/2001	3/22/2001	3/23/2001	3/26/2001	3/27/2001	3/28/2001	3/29/2001	3/30/2001
Time	11:50	8:35	8:25	9:15	7:45	8:55	10:10	8:15	16:00	9:15	14:15
Extraction Well Level (feet)	61.7	68.2	67.4	72.1	71.2	61.6	64.2	61.8	61.9	66.8	63.9
Influent Flow Rate (gpm)	159.43	160.38	160.00	160.45	160.66	159.54	160.43	159.93	160.13	160.19	160.14
Influent Filter in Service (yes/no)	No	No	No	No	No	No	No	No	No	No	No
Inlet Pressure (psi)	40	38	38	40	40	40	40	38	40	40	40
Outlet Pressure (psi)	40	36	38	40	40	40	40	38	40	40	40
Cartridge Filter Flow Rate (gpm)	*	*	*	*	*	*	*	*	*	*	*
Equalization Tank											
Level (inches)	51.99	51.98	52.12	52.06	52.04	52.13	51.94	51.93	52.05	52.08	51.99
pH	5.55	5.74	5.68	5.76	5.76	5.77	5.64	5.76	5.76	5.74	5.76
Mixer (on/off)	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Acid Pump Settings: Speed / Stroke	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
UV/Oxidation Pump in Service (4A/4B)	4B	4B	4B	4B	4A	4A	4A	4A	4A	4A	4A
UV/Oxidation Flow Rate (gpm)	142.49	142.43	145.31	139.43	139.59	138.42	138.23	144.71	140.11	139.50	141.26
UV/Oxidation Unit											
Lamp # 1 (on/off)	On	On	On	On	On	On	On	On	On	On	On
KV	252	252	252	252	252	252	252	252	252	252	252
Amps	7.5	7.6	7.5	7.8	7.6	7.6	7.6	7.6	7.7	7.7	7.6
Time	11856.93	11925.67	11949.54	11953.86	11964.67	11989.78	12063.01	12085.15	12116.96	12132.10	12161.19
Lamp # 2 (on/off)	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
KV	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Amps	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Time	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Lamp # 3 (on/off)	On	On	On	On	On	On	On	On	On	On	On
KV	258	258	258	258	258	258	258	258	258	258	258
Amps	6.9	6.8	6.7	6.9	6.8	6.7	6.8	6.9	6.8	6.9	6.8
Time	10266.77	10335.49	10359.38	10363.69	10374.50	10399.64	10472.84	10494.98	10526.76	10541.93	10571.02
Peroxide Pump Settings: Speed / Stroke	50/50	50/50	50/50	50/50	50/50	50/50	50/50	50/50	50/50	50/50	50/50
Peroxide Residual Concentration (mg/l)	13	11	17	11	3	15	13	13	10	11	12
Totalizer Reading (gallons)	6022250	6602920	6804000	6839150	6928590	7137970	7750440	7934980	8201560	8324400	8565540

H2MGROUP

Daily Operations Checklist
Servall Laundry Site

Day	Friday	Monday	Tuesday	Wednesday	Thursday	Friday	Monday	Tuesday	Wednesday	Thursday	Friday
Date	3/16/2001	3/19/2001	3/20/2001	3/21/2001	3/22/2001	3/23/2001	3/26/2001	3/27/2001	3/28/2001	3/29/2001	3/30/2001
pH Adjust Tank											
Level (inches)	49.97	50.00	50.05	50.14	50.08	50.07	49.79	49.86	49.83	50.05	49.91
pH	6.20	6.32	6.30	6.36	6.38	6.36	6.35	6.43	6.53	6.72	6.66
Mixer (on/off)	On	On	On	On	On	On	On	On	On	On	On
Caustic Pump Settings: Speed / Stroke	35/35	35/35	40/40	40/40	40/40	40/40	45/45	50/50	55/55	55/55	55/55
Polymer Feed Settings	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Solution Pump: Speed / Stroke	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dilution Water Rate	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Polymeer Bucket Weight (lbs.)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sand Filter Feed Pump in Service (6A/6B)	6A	6A	6A	6A	6B	6B	6B	6B	6B	6B	6B
Sand Filters											
Filter # 1 inlet pressure (psi)	16	18	18	16	17	16	16	16	14	18	16
Filter # 1 outlet pressure (psi)	14	14	16	15	16	14	18	14	14	18	16
Filter # 2 inlet pressure (psi)	14	16	14	15	14	16	18	16	18	17	14
Filter # 2 outlet pressure (psi)	16	18	16	15	15	15	18	14	18	17	14
Filter # 3 inlet pressure (psi)	14	16	18	15	16	16	14	16	14	17	18
Filter # 3 outlet pressure (psi)	18	16	16	16	16	18	16	18	16	18	18
Filter # 4 inlet pressure (psi)	16	20	16	18	16	16	20	18	20	20	18
Filter # 4 outlet pressure (psi)	16	16	16	16	16	16	16	16	16	19	14
Effluent Flow Rate (gpm)	127.05	124.26	134.44	127.37	130.63	126.57	121.43	134.48	125.65	142.73	127.83
Effluent Filter in Service (yes/no)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Inlet Pressure (psi)	12	12	12	12	12	12	12	12	12	12	12
Outlet Pressure (psi)	10	12	12	12	12	12	12	12	12	12	12
Reinjection Well Level (feet)	64.22	64.41	64.03	64.63	64.51	64.83	64.72	65.49	65.90	67.03	66.21
Chemical Storage Levels											
Caustic Level (NaOH) (inches)	36	35	35	35	35	35	35	35	35	35	35
Peroxide Level (H_2O_2) (inches)	54	53	53	53	53	53	53	53	53	53	53
Acid Level (H_2SO_4) (inches)	54	54	54	54	54	54	54	54	54	54	54
Air Compressor (psi)	125	150	140	150	140	125	150	155	140	160	175
Compressed Air Dryer (on/off)	On	On	On	On	On	On	On	On	On	On	On
Chlorine pump: Speed / Stroke	100/100	100/100	100/100	100/100	100/100	100/100	**	**	**	**	**
Chlorine Residual Concentration (mg/l)	0.0	0.2	0.1	0.1	0.2	0.1	**	**	**	**	**

* - Unit inoperable

** - Unit inoperable, repair in progress

H2MGROUP

Process Control Samples
Servall Laundry Site

Day	Thursday	Friday	Monday	Tuesday	Wednesday	Thursday	Friday	Monday	Tuesday	Wednesday	Thursday
Date	3/1/2001	3/2/2001	3/5/2001	3/6/2001	3/7/2001	3/8/2001	3/9/2001	3/12/2001	3/13/2001	3/14/2001	3/15/2001
Time	11:50	12:25	11:25	10:40	9:00	10:40	8:55	9:25	8:45	10:10	8:35
Influent											
pH	5.45	5.21	5.37	5.25	5.21	5.31	5.35	5.41	5.35	5.33	5.33
Iron (mg/L)	0.0	0.0	0.4	0.4	0.4	0.3	0.5	0.5	0.4	0.3	0.4
UVOX											
pH	5.40	5.33	5.66	5.72	5.62	5.51	5.46	5.60	5.37	5.38	5.37
Peroxide Residual (mg/L)	2	1	10	16	12	13	13	11	11	15	13
Effluent											
pH	5.96	5.90	6.09	6.16	5.97	6.03	6.01	6.17	6.10	6.04	5.94
Iron (mg/L)	0.0	0.2	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Chlorine (mg/L)	0.1	0.0	0.0	0.0	0.2	0.1	0.1	0.1	0.2	0.1	0.0

Day	Friday	Monday	Tuesday	Wednesday	Thursday	Friday	Monday	Tuesday	Wednesday	Thursday	Friday
Date	3/16/2001	3/19/2001	3/20/2001	3/21/2001	3/22/2001	3/23/2001	3/26/2001	3/27/2001	3/28/2001	3/29/2001	3/30/2001
Time	12:20	9:00	8:50	9:35	8:12	9:05	10:25	8:35	16:15	9:45	14:30
Influent											
pH	5.06	5.28	5.19	5.20	5.26	5.18	5.14	5.19	5.16	5.21	5.25
Iron (mg/L)	1.0	0.5	0.4	0.3	0.4	0.3	0.2	0.4	0.3	0.3	0.3
UVOX											
pH	5.15	5.40	5.21	5.29	5.50	5.34	5.35	5.33	5.34	5.33	5.30
Peroxide Residual (mg/L)	13	11	17	11	3	15	13	13	10	11	12
Effluent											
pH	5.92	6.00	5.91	6.01	6.10	6.03	5.93	6.08	6.01	5.98	6.01
Iron (mg/L)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chlorine (mg/L)	0.0	0.2	0.1	0.1	0.2	0.1	N/A	N/A	N/A	N/A	N/A