Lawler, Matusky & Skelly Engineers LLP

Environmental Science & Engineering Consultants

JOHN P. LAWLER, P.E.
MICHAEL J. SKELLY, P.E.
KARIM A. ABOOD, P.E.
PATRICK J. LAWLER, P.E.
THOMAS L. ENGLERT, P.E.
PETER M. McGRODDY, P.E.
THOMAS E. PEASE, P.E.
THOMAS B. VANDERBEEK, P.E.

Principal
SUSAN G. METZGER, Ph.D.

ONE BLUE HILL PLAZA
P.O. BOX 1509
PEARL RIVER, NEW YORK 10965
(914) 735-8300
FACSIMILE (914) 735-7466

OCT 22

October 21, 1999
File No. 650-394

Mr. Carl Hoffman
New York State 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. D002676-39
Monthly Report – September 1999

Dear Mr. Hoffman:

Attached for your review is the Monthly Report for September 1999, which includes final plant data for July, August and September. The receipt of this data was delayed, therefore prolonging the compilation of this monthly report. This report is the combined monthly report for July, August, and September.

A total volume of 6,141,660 gallons of water was processed during July, August, and September. The influent VOC concentration in July was detected at 73 ppb and decreased significantly in September, 25.5 ppb. The plant removed 98% and greater of the influent VOC in July and September; no compliance sampling was performed for August.

ERM will continue to operate the plant through the remainder of October 1999. At which time, and upon your final approval, H2M will take over operations starting Monday, November 1, 1999. I have recommend a cooperative training period during the final week of October for H2M to become familiar with the plant and its operational intricacies. This training is anticipated to provide a smooth, continuous changeover in

operation from ERM to H2M and a basis of plant understanding for H2M to operate the plant through the next 11 months.

LMS anticipates continuing task management of the plant operations over the next 11 months. In part, LMS will continue to provide monthly operating reports based on the information supplied by H2M. The reporting format will remain the same as the current monthly operating report, unless you comment otherwise.

As we discussed, LMS has prepared a report outlining capital improvements and alternative treatment that may offer economic incentives. The executive summary was forwarded to you last summer. This economic incentive is based an anticipated plant life of greater than 2-5 years. Please indicate to me any decision on expected plant life, particularly if intentions are to operate the plant for more than 2-5 years.

If you have any questions or comments please feel free to contact me at 914-735-8300 x 249.

Very Truly Yours,

Robert DeGiorgio, P.E.
Project Manager

Enclosures

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

1999 Monthly Operations Report

September-99

LAWLER, MATUSKY & SKELLY ENGINEERS LLP
Environmental Science & Engineering Consultants
One Blue Hill Plaza
Pearl River, New York 10965

650-393

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

1999 Monthly Operations Report

Summary Report
1999 Compliance Sampling
Treatability Testing
Graphical Data Trends
Summary Notes and Action Items
ERM Reports

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650-393

Servall Laundry
Site No. 1-52-077
Groundwater Remediation -1999 Operation and Maintenance

Summary Report

Plant Operating Data	unit	1999 Monthly Average	January-99	February-99	March-99	April-99	May-99	June-99	July-99
Flow Rate	gpm	80	63	109	123.29	116.65	125	51.08	48.57
Gallons processed	gallons	3,362,148	1,355,390	4,409,230	5,503,790	5,039,370	5,603,350	2,206,540	2,377,920
Percent of Time Operating	%	92%	48%	91%	100%	97%	100%	97%	100%
Influent VOC concentration	ug/L	203	-	19.5	144.1	373.7	275.3	114.8	73.5
Effluent VOC concentration	ug/L	2.35	-	2.3	3.5	1.8	1.8	1.4	0.8
VOC removal efficiency	%	95.1%	-	88.2%	97.6%	99.5%	99.3%	98.8%	98.9%
Pounds of VOCs Treated	lb	7.6	-	0.63	6.45	15.63	12.78	2.09	1.44
Influent Total Iron	ug/L	486	-	574	420	564	385	236	321
Influent Total Manganese	ug/L	552	-	629	565	496	517	492	719
Effluent Total Iron	ug/L	74	-	134	60.4	50	50	199	100
Effluent Total Manganese	ug/L	553	-	612	569	490	542	507	710
Total Iron removal efficiency	%	84.5%	-	76.7%	85.6%	91.1%	87.0%	15.7%	68.8%
Total Manganese removal efficiency	%	1.3%	-	2.7%	0.0%	1.2%	0.0%	0.0%	0.0%
Sodium hypochlorite (12%)	lb	812	510	1020	1020	1020	1020	1020	700
Polymer	lb	50	50	50	50	50	50	50	50
Hydrogen peroxide (50%)	lb	3422	1500	4500	4500	4500	4500	2267	2267
Caustic (50%)	lb	0	0	0	0	0	0	0	0
Hydrochloric Acid	lb	125	125	125	125	125	125	125	125
Cartridge Filters	ea	1	1	1	1	1	1	1	1
Spare Parts or other	at cost	$890	$0	$7,964	$0	$45	$0	$0	$0
Consumables cost	*$*	*$3,243*	*$1,341*	*$10,892*	*$2,928*	*$2,973*	*$2,928*	*$1,811*	*$1,757*
Sludge generated (20% dewatered)	gal	25	25	25	25	25	25	25	25
Sludge disposed of	gal	43	0	0	0	0	0	0	0
Sludge disposal cost	*$*	*$117.64*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*
Gas (estimated)	therms	926	980	980	935	935	935	935	935
Electricity (estimated)	kw hr	43222	21,200	61,320	61,320	51,560	38,720	38,720	38,720
Utilities cost	*$*	*$4,214*	*$2,251*	*$5,862*	*$5,846*	*$4,968*	*$3,812*	*$3,812*	*$3,812*
Compliance Sampling	at cost	$1,160.78	$0.00	$1,170.00	$1,560.00	$2,000.00	$2,695.00	$1,111.00	$1,111.00
Redevelopment	at cost	$4,778	$20,000	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Operator	Month	$11,125	$11,275	$11,275	$11,275	$11,275	$11,275	$11,275	$11,275
Management & Engineering	at cost	$4,263	$7,000	$4,000	$6,114	$3,750	$4,000	$4,500	$3,000
Services cost	*$*	*$21,326*	*$38,275*	*$16,445*	*$18,949*	*$17,025*	*$17,970*	*$16,886*	*$15,386*
Operating Cost	***$***	***$28,901***	***$41,867***	***$33,198***	***$27,723***	***$24,965***	***$24,710***	***$22,509***	***$20,955***

Servall Laundry
Site No. 1-52-077
Groundwater Remediation -1999 Operation and Maintenance

Summary Report

Plant Operating Data	unit	1999 Monthly Average	August-99	September-99	October-99	November-99	December-99	Total 1999
Flow Rate	gpm	80	23.88	57.34				-
Gallons processed	gallons	3,362,148	790,740	2,973,000				30,259,330
Percent of Time Operating	%	92%	96%	100%				-
Influent VOC concentration	ug/L	203	-	25.5	0	0	0	-
Effluent VOC concentration	ug/L	2.35	-	0.5	0	0	0	-
VOC removal efficiency	%	95.1%		98.0%				
Pounds of VOCs Treated	lb	7.6		0.62				40
Influent Total Iron	ug/L	486	-	172	0	0	0	-
Influent Total Manganese	ug/L	552	-	630	0	0	0	-
Effluent Total Iron	ug/L	74	-	130	0	0	0	-
Effluent Total Manganese	ug/L	553	-	660	0	0	0	-
Total Iron removal efficiency	%	84.5%		24.4%				-
Total Manganese removal efficiency	%	1.3%	0.0%	0.0%				-
Sodium hypochlorite (12%)	lb	812	500	500				7,310
Polymer	lb	50	50	50				450
Hydrogen peroxide (50%)	lb	3422	2267	4500				30,801
Caustic (50%)	lb	0	0	0				0
Hydrochloric Acid	lb	125	125	125				1,125
Cartridge Filters	ea	1	1	1				9
Spare Parts or other	at cost	$890	$0	$0				$8,009
Consumables cost	*$*	*$3,243*	*$1,723*	*$2,839*				*$29,190*
Sludge generated (20% dewatered)	gal	25	25	25				525
Sludge disposed of	gal	43	385	0				385
Sludge disposal cost	*$*	*$117.64*	*$1,058.75*	*$0.00*				*$1,058.75*
Gas (estimated)	therms	926	900	800				8335
Electricity (estimated)	kw hr	43222	38,720	38,720				389000
Utilities cost	*$*	*$4,214*	*$3,800*	*$3,765*				*$37,927*
Compliance Sampling	at cost	$1,160.78	$0.00	$800.00				$10,447
Redevelopment	at cost	$4,778	$23,000.00	$0.00				$43,000
Operator	Month	$11,125	$10,600	$10,600				$100,125
Management & Engineering	at cost	$4,263	$2,800	$3,200				$38,364
Services cost	*$*	*$21,326*	*$36,400*	*$14,600*				*$191,936*
Operating Cost	***$***	***$28,901***	***$42,981***	***$21,204***				***$260,112***

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

1999 Compliance Sampling

Influent																					
Constituents	Discharge Criteria	units	January		February		March		April		May		June		July		August		September	
Chlorobenzene	5	ug/L	-			U		U		U		U		U		U	-			U
Vinyl Chloride	2	ug/L	-			U		U		U		U		U		U	-			U
1,1-Dichloroethene	5	ug/L	-			U		U		U		U		U	0.2	J	-			U
Trichloroethene	5	ug/L	-		1.2		1.9		5.6		3	JD	1.3	J	1.3	JD	-		0.9	
Tetrachloroethene	5	ug/L	-		17		140	E	350		260	D	110	B	65	D	-		19	
1,1-Dichloroethane	5	ug/L	-			U		U		U		U		U	0.2	J	-			U
Toluene	5	ug/L	-			U		U		U	4.6	JDB	1	J		U	-			U
cis-1,2-Dichloroethene	5	ug/L	-		0.6		1.7			U		U	0.6	J	0.3	J	-			U
trans-1,2-Dichloroethene	5	ug/L	-			U		U		U		U		U		U	-			U
Methylene Chloride	N/A	ug/L	-			U		U	12	B	4.5	JD	1.3	JB	1.2	JD	-			U
1,1,1-Trichloroethane	N/A	ug/L	-		0.7		0.5			U		U	0.6	J	0.7	JD	-		0.6	
Chloroform	N/A	ug/L	-			U		U	2.3	J		U		U	0.9	JD	-			U
Bromodichloromethane	N/A	ug/L	-			U		U	3.8	J		U		U		U	-			U
Trichlorofluoromethane	N/A	ug/L	-			U		U		U		U		U	0.1	J	-			U
Methyl tert-Butly Ether	N/A	ug/L	-						5.7	J	3.2	JD		U	3.6	D	-		5	
Total VOCs	**N/A**	**ug/L**	**-**		**19.5**		**144.1**		**373.7**		**275.3**		**114.8**		**73.5**		**-**		**25.5**	
Iron (total)	600[4]	ug/L	-		574		420		564		385		236		321		-		172	
Manganese (total)	600[4]	ug/L	-		629		565		496		517		492		719		-		630	
Alkalinity	N/A	mg/L	-		20		15.5		14		18		22		19		-		22	
Total Suspended Solids	N/A	mg/L	-		10		10		10	U	10	U	10	U	10	U	-		10	U
Total Solids	N/A	mg/L	-		64		144		86		183		142		142		-		154	

Effluent																				
Constituents	Discharge Criteria	units	January		February		March		April		May		June		July		August		September	
Chlorobenzene	5	ug/L	-			U		U		U		U				U	-			U
Vinyl Chloride	2	ug/L	-			U		U		U		U				U	-			U
1,1-Dichloroethene	5	ug/L	-			U		U		U		U				U	-			U
Trichloroethene	5	ug/L	-			U		U	0.4	J		U				U	-			U
Tetrachloroethene	5	ug/L	-			U	1		1.2		0.9		0.1	J		U	-		0.3	J
1,1-Dichloroethane	5	ug/L	-			U		U		U		U	0.1	J	0.1	J	-			U
Toluene	5	ug/L	-			U		U	0.1	J		U				U	-			U
cis-1,2-Dichloroethene	5	ug/L	-			U		U		U		U				U	-			U
trans-1,2-Dichloroethene	5	ug/L	-			U		U		U		U				U	-			U
Methylene Chloride	N/A	ug/L	-			U		U		U		U				U	-			U
1,1,1-Trichloroethane	N/A	ug/L	-		0.4	J	0.4	J		U	0.3	J	0.4	J	0.5		-		0.2	J
Chloroform	N/A	ug/L	-		1.2		1.3		0.1	J	0.6	B	0.5	J	0.2	J	-			U
Bromodichloromethane	N/A	ug/L	-		0.7		0.8			U		U	0.3	J		U	-			U
Methyl tert-Butly Ether	N/A	ug/L	-	U		U		U		U		U				U	-			U
Total VOCs	**N/A**	**ug/L**	**-**		**2.3**		**3.5**		**1.8**		**1.8**		**1.4**		**0.8**		**-**		**0.5**	
Iron (total)	600[4]	ug/L	-		134		60.4		50		50	U	199	P	100	U	-		130	
Manganese (total)	600[4]	ug/L	-		**612**		569		490		542		507	P	**710**		-		**660**	
Alkalinity	N/A	mg/L	-		21		17		17		16.5		21		18.5		-		24	
Total Suspended Solids	N/A	mg/L	-		10		10		10	U	10	U	10	U	10	U	-		10	U
Total Solids	N/A	mg/L	-		48		156		90		186		154		160		-		126	

Notes:

1. Analytical data analyzed by STL Laboratories, February 1999.
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) pestiside/aroclor target analyte. Greater than 25% difference between the two GC columns.

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

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

1999 Graphical Data Trends

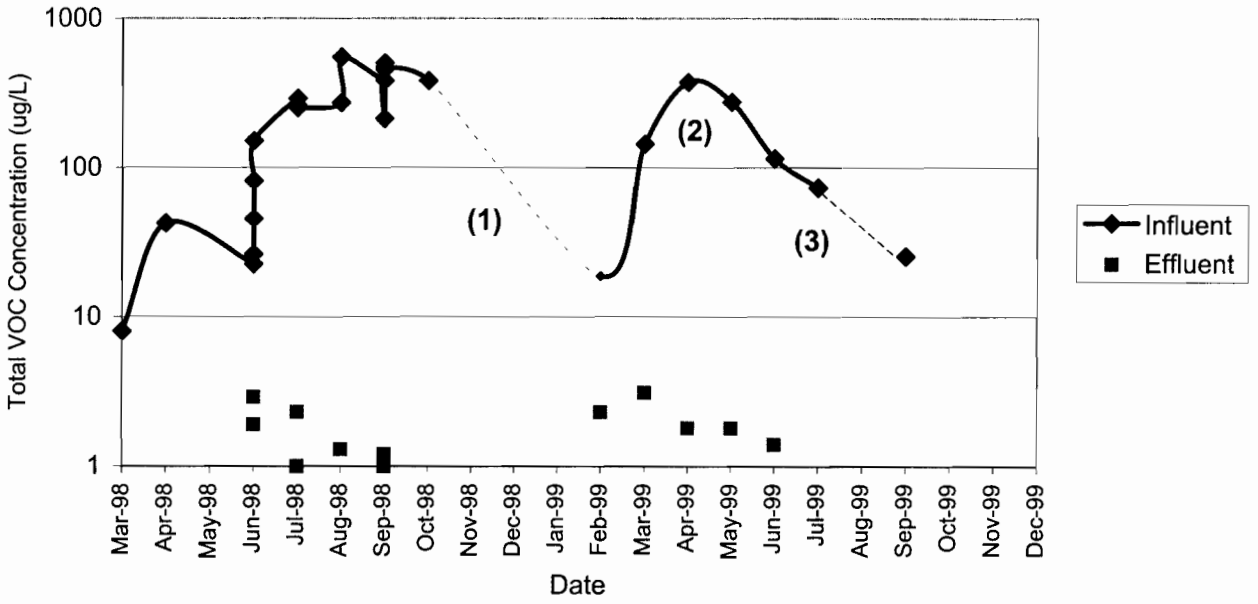

Figure 1 - Total Volatile Organic Compound (VOC) Influent and Effluent Trends

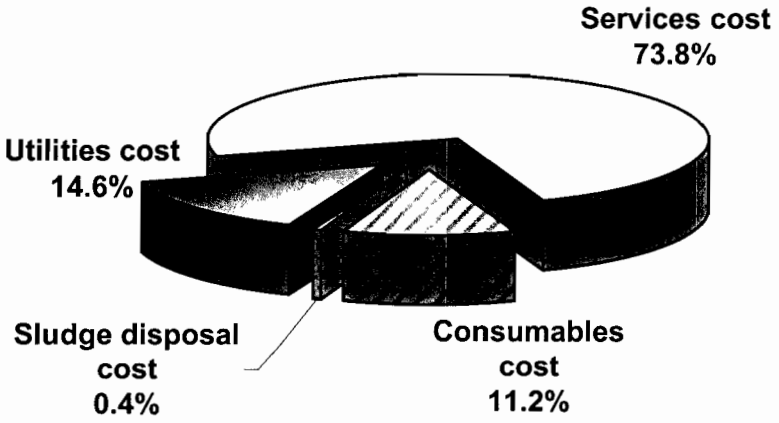

Figure 2 - Average Operating Cost Breakdown - 1999 monthly average to date is $28,901

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.

Servall Laundry
Site No. 1-52-077
Groundwater Remediation - 1999 Operations and Maintenance

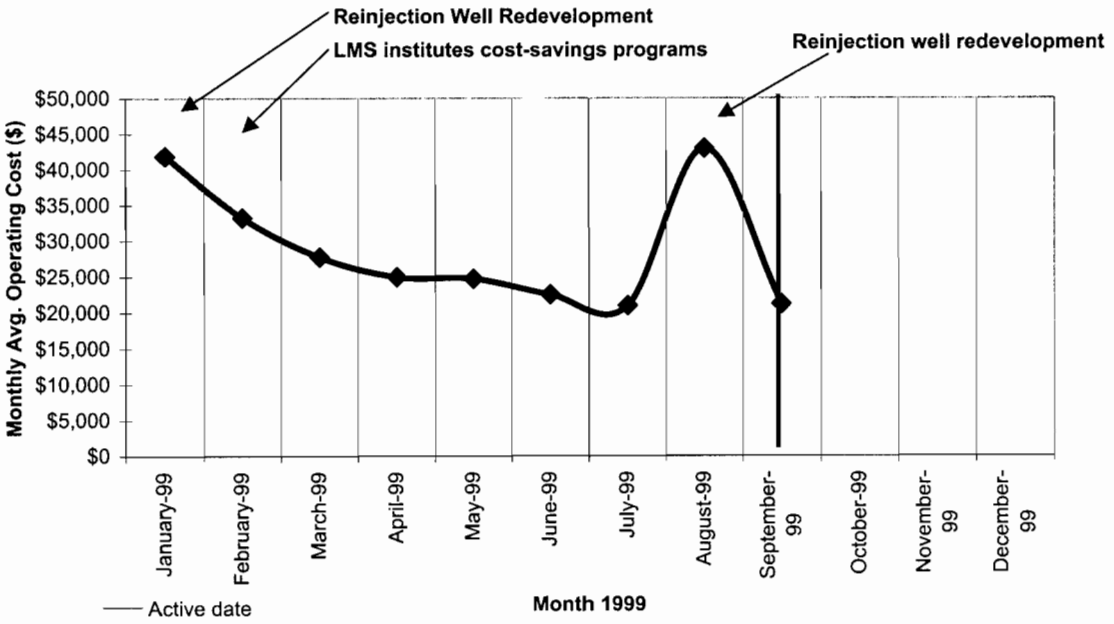

Figure 3 - Average Operating Cost Trends

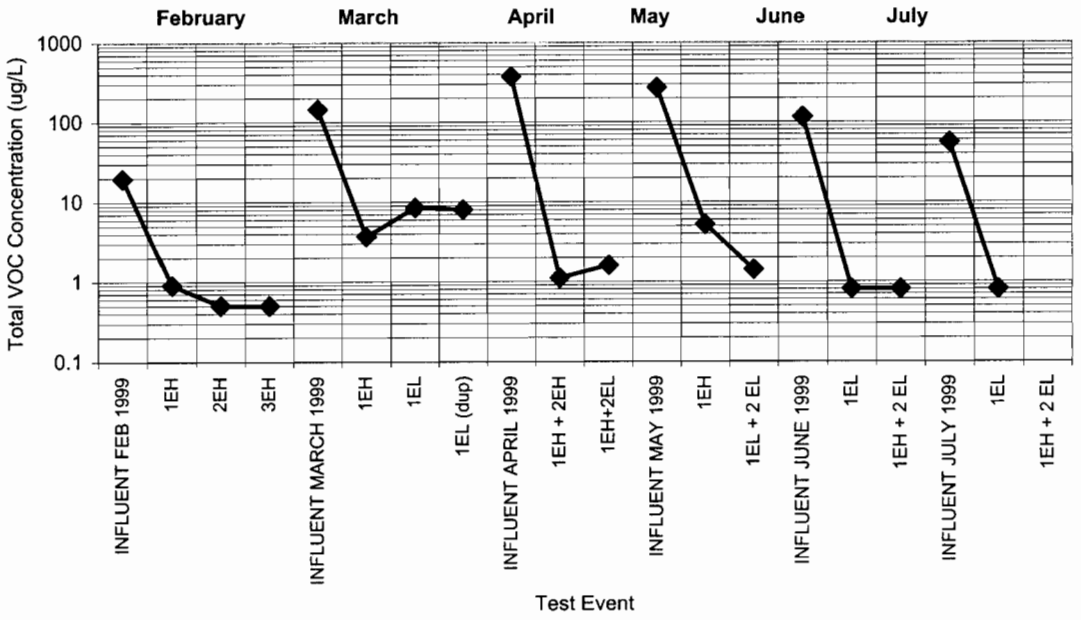

Figure 4 - UV Treatability Testing

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

Summary Notes and Action Items

Month	Notes	Action	Resolutions
January	Plant down until last week of the month, redevelopment conducted the week of January 18, 1999	Plant on-line week of January 26, 1999. No compliance sampling conducted this month due to plant downtime	None
February	Influent VOC concentration fairly low at 17 ppb.	None	None
March	Evidence of MTBE was detected in MW-6B at a concentration of 6.2 ppb and in the influent sample collected 3/23/99 at a concentration of 2.6 ppb. Latest compliance sampling shows levels of influent VOCs to be about 140 ppb.	Continue UV Treatability Testing in order to reduce UV power and electrical costs.	NYDEC decides to reduce UV lamp power to one lamp full power followed by the second lamp low power, the third lamp is shutdown.
April	Pump 6B experienced operating problems, unit was disassembled and cleaned, each pump was fitted with new lubrication oil. Still evidence of MTBE in influent samples. Carbon shipped off-site as haz. waste #NYG0681768	Continue UV Treatability Testing in order to reduce UV power and electrical costs.	None
May	Backflow Valve inspected and certified	Continue UV Treatability Testing in order to reduce UV power and electrical costs.	None
June	Reinjection well requires redevelopment. Plant flow rate is about 60 gpm.	Redevelop reinjection well as soon as possible. First reinjection was effective for about 6 months.	Reduced flow rate results in a reduced capture zone. Influent concentrations in June are lower than previous months - likely due to reduced flow rate/capture zone.
July	Reinjection well requires redevelopment. Plant flow rate is about 50 gpm.	Redevelop reinjection well as soon as possible. First reinjection was effective for about 6 months.	Reduced flow rate results in a reduced capture zone. Influent concentrations in July are lower than previous months - likely due to reduced flow rate/capture zone.
August	Reinjection well requires redevelopment. Plant flow rate is about 25 gpm.	Reinjection well redevelop successfully - about 6.5 months between redevelopments	No compliance sampling performed.
September	Influent and effluent VOC concentrations fairly low at 25.5 and 0.5 ppb.	None	None
October			
November			
December			

Rob De Georgio
Lawler, Matusky & Skelly Engineers LLP
One Blue Hill Plaza
P.O. Box 1509
Pearl River, New York 10965-8509

5 October, 1999

Servall Laundry GWTP - September 1 - 30, 1999 Operations Report.

Plant operations for September, 1999 are as follows:

Routine visits were conducted and readings taken during this period. Daily plant chemistry tests and routine cartridge filter change outs and cleanings were performed.

- 9/1- 9/3/99 Processed water generated from the Reinjection Well Redevelopment that was held in Baker tanks.
- 9/7/99 Plant down, due to problems with the peroxide flow sensor
- 9/8/99 Plant down in the AM, due to High water level in the pH adjust tank. Backwashed Sand filter #3. Plant up and running in the PM.
- 9/15/99 Pumped backwash settling tanks down, grit and sand is clogging the valves and pumps. Cleared pumps and lines.
- 9/28/99 initiated backwash on sandfilter #2, raised flow up to 100gpm. Increased air to the sludge transfer pumps to prevent grit form settling in the lines, reduced the pumping time to both the SHT and to the pH adjust tank. Allowed clear water in SHT to decant to the pH adjusts tank. Initiated backwash in sand filter #1, reduced tank settling time from 7200 sec to 3600 sec. Set up to backwash Sand Filter # 4 early tomorrow morning.
- 9/29/99 Backwashed Sandfilter #4, backwash water settled in the 3600-sec window and the pump came on and operated without mishap. Decanted an extra 500 to 600 gallons of clear water from the SHT to the sump and from there to the EQ tank to make room for the next days backwash volume. Effluent Cartridge filters was changed due to rising DP across them.

Plant Performance

The plant discharged 2,973,000 gallons of treated water between Aug-26th and Oct 1st (36 days of operation), resulting in an average flow rate of 57.34 gallons per minute.

Any questions regarding this report should be directed to the undersigned at (516) 921-9393.

Sincerely,

Mark Gouch
Operations Manager

Attachments: Daily Operations Reports

Servall Daily Operations Checklist
September 1999

Day	Tuesday	Wednesday	Thursday	Friday	Monday	Tuesday	Wednesday	Thursday	Friday	Monday
Date	8/31/99	9/1/99	9/9/99	9/10/99	9/13/99	9/14/99	9/15/99	9/16/99	9/17/99	9/20/99
Time	900	1000	1030	1050	1000	1400		1020	1313	1345
Extraction Well Level	51.24	51.35	56.83	49.89	58.36	58.86	55.89			52.04
Influent Flow Rate	83.11		NA	NA						
Influent Filter In Service	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Inlet psi	60	60			60		60			10
Outlet psi	60	60			60		60			10
Cartridge Filter Flow Rate (GPM)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
EQ Tank Level (inches)	51.97	52.11	52.04	52	52.01	52.01	52.01	52.04	52.03	54.03
EQ Tank Mixer	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Acid Pump: Speed/Stroke	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
UV/OX Pump in Service	4B	4B	4A	4A	4B	4B	4B	4B	4B	4B
UV/OX Flow Rate	82.7	82.59	107.7	86.01	84.26	104.22	85.15	83.28	87.54	103.5
UV/OX Unit										
Lamp # 1 (on/off)	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
KV	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500
Amps	7.5	7.8	8	7.9	8	7	8	8	8	6.9
Time										
Lamp # 2 (on/off)	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
KV										
Amps										
Time										
Lamp # 3 (on/off)	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
KV	2500	2500	2500	2500	2500	2500	2500	2500	2500	2550
Amps	6.5	7	7	7	7	7	7	7	7	7.9
Time										
Peroxide Pump: Speed/Stroke	50/50	50/50	40/50	40/50	40/50	40/50	40/50	40/50	40/50	45/40
Peroxide Residual										
pH Adjust Tank Level (inches)	54.24	54.31	53.94	54.02	53.99	54.02	61.84	53.98	53.93	53.98
pH	7.61	7.59	7.72	7.74	7.75	7.84	7.86	7.81	7.9	7.94
Mixer (on/off)	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Totalizer reading			56342180	56465360	56807210	59607520	57010640	57018090	57035270	57410550
Caustic Pump: Speed/Stroke	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Polymer Feed Settings										

Servall Daily Operations Checklist
September 1999

Day	Tuesday	Wednesday	Thursday	Friday	Monday	Tuesday	Wednesday	Thursday	Friday	Monday
Date	8/31/99	9/1/99	9/9/99	9/10/99	9/13/99	9/14/99	9/15/99	9/16/99	9/17/99	9/20/99
Time	900	1000	1030	1050	1000	1400		1020	1313	1345
Solution Pump: Speed/Stroke	10/30	10/30	10/30	10/30	10/30	10/30	10/30	10/30		OFF
Dilution Water Rate	15	15	10	10	10	10	10	10		OFF
Polymer Bucket Wt.										
Sand Filter Pump In Service	6A	6A	6B	6B	6B	6B	6A	6B		6B
Sand Filters										
Filter #1 Inlet psi	27	26	31		29			28		43
Filter #1 Outlet psi	14	15	14		18			14		19
Filter #2 Inlet psi	23	24	30		22			29		42
Filter #2 Outlet psi	13	14	12		18			14		18
Filter #3 Inlet psi	24	24	30		22			29		41
Filter #3 Outlet psi	14	14	14		19			14		20
Filter #4 Inlet psi	24	24	30		24			29		44
Filter #4 Outlet psi	14	14	14		19			17		19
Effluent Flow Rate	78.06	78.21	99.72		77.83	76.5	41.23	77.01		95.3
Effluent Filter in Service	A/B	A/B	A/B		A/B	A/B	A/B	A/B		A/B
Inlet psi	10	10	10		10	10	10	15		14
Outlet psi	10	10	10		10	10	10	15		10
Reinjection Well level	62	62	60.2		61.3	60.7	60.7	60.7	60.8	60.28
Chemical Storage Levels										
NaOH (caustic) Level	60.7	60.7	60.3				60.4	60.2		81
H_2O_2 (peroxide) Level	32.7	32.7	32.7				32.7	32.7		32.7
H_2SO_4 (acid) Level	80.3	80.7	80.5	80.2	80.3	80.3	80.3	80.2		60.4
Air Compressor (psi)	150	150	150	150	150	150	150	150		150
Compressed Air Dryer	ON	ON	ON	ON	ON	ON	ON	ON		ON
Chlorine Pump: Speed/Stroke	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF		OFF
Chlorine Residual										

Servall Daily Operations Checklist
September 1999

Day	Tuesday	Wednesday	Thursday	Friday	Monday	Tuesday	Wednesday	Thursday	Friday	Monday
Date	9/21/99	9/22/99	9/23/99	9/24/99	9/27/99	9/28/99	9/29/99	9/30/99	10/1/99	10/4/99
Time	1301	830	1600	1630	1330	900	1230	1015	845	845
Extraction Well Level	55.45	59.3	58.3	58.4	59.6	58.7	56.7	60.1	60.4	53.2
Influent Flow Rate										
Influent Filter In Service	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Inlet psi	56	56	55	54	58	0	0	0	0	0
Outlet psi	56	58	57	58	58	0	0	0	0	0
Cartridge Filter Flow Rate (GPM)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
EQ Tank Level (inches)	52.02	60.42	51.4	51.96	51.92	51.97	51.98	51.99	52.03	52.01
EQ Tank Mixer	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Acid Pump: Speed/Stroke	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
UV/OX Pump in Service	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B
UV/OX Flow Rate	84.3	123.54	80.11	88.96		99	102.3	104.7	101.7	103.5
UV/OX Unit										
Lamp # 1 (on/off)	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
KV	2500	2500	2500	2500	2500	2500	2550	2500	2500	2500
Amps	8	8	8	7.5	7.6	7.6	8	8	7.9	7.7
Time					7273.46	7291.86	7319.19	7340.52	7363.23	7434.35
Lamp # 2 (on/off)	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
KV					OFF	OFF	OFF	OFF	OFF	OFF
Amps					OFF	OFF	OFF	OFF	OFF	OFF
Time					5984.84	5984.86	5984.86	5984.86	5984.86	5984.86
Lamp # 3 (on/off)	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
KV	2600	2500	2500	2500	2500	2550	2600	2500	2550	2600
Amps	7	7	7	7	6.5	6.5	7	7	6.9	6.5
Time					5701.08	5719.21	5746.76	5768.09	5790.81	5861.91
Peroxide Pump: Speed/Stroke	45/40	45/40	45/40	45/40	45/40	45/50	50/50	50/50	50/50	50/50
Peroxide Residual										
pH Adjust Tank Level (inches)	53.99	39.88	48.8	53.96	51.82	54.1	53.98	54.02	54	54
pH	8.16	7.48	8.12	8.11	8.11	5.4	5.4	5.4	5.4	5.4
Mixer (on/off)	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Totalizer reading	57507950	57567190	577663700	57744320	57963870	58071730	58239540	58370600	58508990	5.9E+07
Caustic Pump: Speed/Stroke	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Polymer Feed Settings										

Servall Daily Operations Checklist
September 1999

Day	Tuesday	Wednesday	Thursday	Friday	Monday	Tuesday	Wednesday	Thursday	Friday	Monday
Date	9/21/99	9/22/99	9/23/99	9/24/99	9/27/99	9/28/99	9/29/99	9/30/99	10/1/99	10/4/99
Time	1301	830	1600	1630	1330	900	1230	1015	845	845
Solution Pump: Speed/Stroke	OFF	OFF	OFF	OFF	10/30	10/30	10/30	10/30	10/30	10/30
Dilution Water Rate	OFF	OFF	OFF	OFF	10	10	10	10	10	10
Polymer Bucket Wt.					38	38	37	37	36	31
Sand Filter Pump In Service	6B	6B	6B	6B	6B	6B	6B	6B	6B	6B
Sand Filters										
Filter #1 Inlet psi	25	25	25	26	18	20	28	20	20	20
Filter #1 Outlet psi	18	18	15	19	15	12	20	12	12	15
Filter #2 Inlet psi	25	25	22	23	18	19	25	20	18	20
Filter #2 Outlet psi	18	18	12	18	15	12	17	11	13	13
Filter #3 Inlet psi	25	25	23	22	18	20	25	21	17	18
Filter #3 Outlet psi	19	19	15	18	18	15	19	13	13	15
Filter #4 Inlet psi	28	27	28	22	20	22	26	21	20	20
Filter #4 Outlet psi	18	17	15	19	18	15	20	12	12	14
Effluent Flow Rate	87.65	86.53			83	93.69	96.73	94.17	94.16	91.91
Effluent Filter in Service	A/B	A/B	A/B	A/B	A/B	A/B	A/B	A/B	A/B	A/B
Inlet psi	14	14	14	15	17	10	15	10	10	10
Outlet psi	8	8	8	9	7	8	8	8	8	8
Reinjection Well level	60.5	52.29	56.33	59.56	58.1	59.17	60.54	60.84	62.71	65.36
Chemical Storage Levels										
NaOH (caustic) Level	80.5	80.4	80.3	81.3	80.8	80.8	80.3	80.8	80.8	81
H_2O_2 (peroxide) Level	32.7	32.7	32.7	32.7	32.7	32.7	32.7	32.7	32.7	32.7
H_2SO_4 (acid) Level	60	60	59.8	60.2	60	60.2	60.3	60.1	59.4	60.3
Air Compressor (psi)	153	151	150	150	150	150	150	150	150	150
Compressed Air Dryer	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Chlorine Pump: Speed/Stroke	OFF	OFF	OFF	OFF	OFF	OFF	70/70	70/70	70/70	70/70
Chlorine Residual						0.5	0.5	0.5	0.7	0.7

Rob De Georgio
Lawler, Matusky & Skelly Engineers LLP
One Blue Hill Plaza
P.O. Box 1509
Pearl River, New York 10965-8509

5 October, 1999

Servall Laundry GWTP - August 1 - 31, 1999 Operations Report.

Plant operations for August, 1999 are as follows:

Routine visits were conducted and readings taken during this period. Daily plant chemistry tests and routine cartridge filter change outs and cleanings were performed.

- 8/2/99 System down, due to high level in pH Adjust Tank, High level in Backwash tank 12B, Low H_2O_2. Valves at Sand filter stuck, air regulator had to be adjusted to 60 PSI to open valves.
- 8/3/99 Changed Bag filter as well as Effluent cartridge filters. Repaired Shaft and replaced gearbox on pH adjust tank mixer.
- 8/4/99 Found system down, Low flow alarm, restarted and backwashed sand filter #3.
- 8/5/99 Plant running, 1,000 gallons H_2O_2 delivered. Backwashed sandfilter #4, Backwash tank 12A High level decanted and restarted plant.
- 8/6/99 Plant down due to high level in the pH adjust tank, reset and backwashed Sandfilter #3, restarted plant.
- 8/9/99 decanted both backwash tanks 12A and 12B, Backwashed sand Filter #1.
- 8/11/99 Plant down due to large electrical storm overnight. Problems with Flow Meters, pH meters transmitters. Removed faulty flow meters and shipped to manufacturer for assessment, trouble shooting instrumentation problems during this time period.
- 8/18/99 prepared all drums of filter pressed sludge for shipment.
- 8/19/99 Waste Management onsite to pickup Sludge drums, 7 drums shipped.
- 8/24/99 Bad Diode in the Influent Flow Meter, as well as the Cartridge Filter Flowmeter, probably caused by a Power Spike.

- 8/25/99 Plant down for well redevelopment will be down for several days. Pulled circuit board on Sump pH transmitter and sent back to Factory for repair after calling the factory and trouble shooting, this to was probably damaged due to a power spike. L.M.S onsite for redevelopment.

- 8/30/99- 9/2/99 Contents of Baker tanks are being treated by the plant

Plant Performance

The plant discharged 790,740 gallons of treated water between Aug-3rd and Aug-26th (24 days of operation), resulting in an average flow rate of 23.88 gallons per minute. The numbers are low due to constraints forced on the system due to rising Re-injection well as well as a large power spike that damaged many of the online instruments in the plant.

Waste Disposal

Waste Management on 8/19/99 picked up sludge drums.

Any questions regarding this report should be directed to the undersigned at (516) 921-9393.

Sincerely,

Ross G Haber for

Mark Gouch
Operations Manager

Attachments: Daily Operations Reports

Servall Daily Operations Checklist
August 1999

Day	Friday	Tuesday	Wednesday	Thursday	Friday	Monday	Tuesday	Thursday	Tuesday	Wednesday
Date	7/30/99	8/3/99	8/4/99	8/5/99	8/6/99	8/9/99	8/10/99	8/26/99	8/31/99	9/1/99
Time	920	1430	1325	1130	1030	1130	900	1500	900	1000
Extraction Well Level	58.9	59	58.6	58.4	55.3	55.3	55.2	52.5	51.24	51.35
Influent Flow Rate	74.92	77.28		76.37	76.38	75.96	75.86		83.11	
Influent Filter In Service	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Inlet psi	62	62	60	60	60	60	60	60	60	60
Outlet psi	62	62	60	60	60	60	60	60	60	60
Cartridge Filter Flow Rate (GPM)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
EQ Tank Level (inches)	52	52.05	52.01	52.04	51.98	52.07	51.96	52.04	51.97	52.11
EQ Tank Mixer						OFF	OFF	OFF	OFF	OFF
Acid Pump: Speed/Stroke	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
UV/OX Pump in Service	4A	4A	4A	4A	4A	4A	4A	4B	4B	4B
UV/OX Flow Rate	77.7	80.7	79.26	75.36	81.9	79.5	79.2	84.6	82.7	82.59
UV/OX Unit										
Lamp # 1 (on/off)	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
KV	2550	2550	2550	2550	2550	2550	2550	2500	2500	2500
Amps	7.9	8	7.9	7.9	7.9	7.9	7.9	7.5	7.5	7.8
Time										
Lamp # 2 (on/off)	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
KV										
Amps										
Time										
Lamp # 3 (on/off)	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
KV	2550	2550	2550	2550	2550	2550	2550	2500	2500	2500
Amps	7	7	6.9	7	7	7	7	6.5	6.5	7
Time										
Peroxide Pump: Speed/Stroke	45/50	45/50	45/50	45/50	45/50	50/45	50/45	50/50	50/50	50/50
Peroxide Residual										
pH Adjust Tank Level (inches)	58.48	56.26	61.42	41.02	40.77	55.91	40.91	54	54.24	54.31
pH	7.214	7.51	7.42	7.5	7.5	7.58	7.56	7.55	7.61	7.59
Mixer (on/off)	OFF	ON	ON	ON	ON	ON	ON	OFF	OFF	OFF
Totalizer reading	55120310	55180940	55203950	55304910	55413550	55736280	55835440	55971680		
Caustic Pump: Speed/Stroke	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Polymer Feed Settings										

Servall Daily Operations Checklist
August 1999

Day	Friday	Tuesday	Wednesday	Thursday	Friday	Monday	Tuesday	Thursday	Tuesday	Wednesday
Date	7/30/99	8/3/99	8/4/99	8/5/99	8/6/99	8/9/99	8/10/99	8/26/99	8/31/99	9/1/99
Time	920	1430	1325	1130	1030	1130	900	1500	900	1000
Solution Pump: Speed/Stroke	10/35	10/35	10/35	10/35	10/35	10/35	10/35	10/30	10/30	10/30
Dilution Water Rate	10	10	10	10	10	10	10	15	15	15
Polymer Bucket Wt.										
Sand Filter Pump In Service	6B	6B	6B	6B	6B	6B	6B	6A	6A	6A
Sand Filters										
Filter #1 Inlet psi	36	36	35	18	21	28	16	22	27	26
Filter #1 Outlet psi	13	12	11	11	11	11	13	16	14	15
Filter #2 Inlet psi	35	34	34	18	20	27	17	22	23	24
Filter #2 Outlet psi	11	10	10	10	10	10	10	12	13	14
Filter #3 Inlet psi	35	33	34	16	19	26	16	22	24	24
Filter #3 Outlet psi	13	12	12	11	12	12	12	16	14	14
Filter #4 Inlet psi	36	36	35	17	21	28	19	24	24	24
Filter #4 Outlet psi	13	12	11	11	12	12	12	16	14	14
Effluent Flow Rate	77.12	67.14	66.52	65.4	78.98	80	77.8	78.03	78.06	78.21
Effluent Filter in Service	A/B	A/B	A/B	A/B	A/B	A/B	A/B	A/B	A/B	A/B
Inlet psi	9	9	9	9	9	10	10	10	10	10
Outlet psi	9	9	9	9	9	10	10	10	10	10
Reinjection Well level		64.15	64.49	68.32	67.27	67.9	68.37		62	62
Chemical Storage Levels										
NaOH (caustic) Level	29.5	29.5	29.6	29.6	29.4	29.7	29.4	60.4	60.7	60.7
H_2O_2 (peroxide) Level	18	18	18			18		32.7	32.7	32.7
H_2SO_4 (acid) Level	60.4	60.1	60.5	60.1	60.4	60.2	60.2	80.5	80.3	80.7
Air Compressor (psi)	150	150	150	150	150	150	150	150	150	150
Compressed Air Dryer	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Chlorine Pump: Speed/Stroke	OFF	OFF	OFF	OFF	OFF	OFF	OFF	70/70	OFF	OFF
Chlorine Residual										

Rob De Georgio
Lawler, Matusky & Skelly Engineers LLP
One Blue Hill Plaza
P.O. Box 1509
Pearl River, New York 10965-8509

25 August, 1999

Servall Laundry GWTP - July 1 - 31, 1999 Operations Report.

Plant operations for July, 1999 are as follows:

Routine daily visits were conducted and readings taken during this period. Daily plant chemistry tests and routine cartridge filter change outs and cleanings were performed.

- 7/7/99 - System down due high level in the re-injection well, lowered influent flow rate to 78.6 gpm. System back online.
- 7/12/99- System down due to high pH in EQ tank, buffered the tank water with available Sulfuric acid.
- 7/13/99- System down due to tripped Air compressor. Reset breaker attempted to restart plant.
- 7/14/99- System down due to low water flow.
- 7/16/99 - Reduced influent flow to 75 gpm, plant back online.
- 7/17/99- Plant down, plant shut down while attempting to backwash. After checking regulator for air pressure for the backwash I found it had dropped to 45 PSI 60 PSI is required for the backwash. Restarted plant in initiated manual backwash on Sand Filter #3. Plant operational.
- 7/21/99 - Monthly samples were collected and sent to the laboratory for analysis.
- Re-injection Well level is rising.

Plant Performance

The plant discharged 2,377,920 gallons of treated water in 34 days of operation, resulting in an average flow rate of 48.57 gallons per minute.

Waste Disposal

There have been no sludge shipments at this time. As noted above, the samples of the sludge inventory at the plant were collected and sent for analysis as part of preparation for shipment of the sludge for disposal. Sludge shipment is scheduled soon.

Any questions regarding this report should be directed to the undersigned at (516) 921-9393.

Sincerely,

Ross S Huber for

Mark Gouch
Operations Manager

Attachments: Daily Operations Reports

Servall Daily Operations Checklist
July 1999

Day	Thursday	Friday	Tuesday	ednesda	Thursday	Friday	ednesda	Saturday	Monday	Tuesday
Date	7/1/99	7/2/99	7/6/99	7/7/99	7/8/99	7/9/99	7/14/99	7/17/99	7/19/99	7/20/99
Time	900	1100	1500	1300	1100	1315	539	1200	900	930
Extraction Well Level	53.6	53.6	53.7	53.7		59.2	60	59.2	54	55.8
Influent Flow Rate	72.79	73.03	72.2	75.76	78.7	75.32	82.18	78.46	75.06	75.14
Influent Filter In Service	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Inlet psi	70	69	69	62	62	62	54	62	62	62
Outlet psi	70	69	69	62	62	62	54	62	62	62
Cartridge Filter Flow Rate (GPM)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
EQ Tank Level (inches)	52.06	52.1	51.99	52.06	52.04	51.98	54.93	51.98	52.01	52.04
EQ Tank Mixer	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Acid Pump: Speed/Stroke	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
UV/OX Pump in Service	4A	4A	4A	4A	4A	4A	4A	4A	4A	4A
UV/OX Flow Rate	76.5	74.02	74.89	76.2	76.56	78.6	90.3	72.8	76.5	78.6
UV/OX Unit										
Lamp # 1 (on/off)	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
KV	2650	2550	2550	2550	2550	2550	2550	2550	2500	2550
Amps	8	8	7	7.8	8	8	8	7.8	7.5	7
Time										
Lamp # 2 (on/off)	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
KV										
Amps										
Time										
Lamp # 3 (on/off)	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
KV	2550	2550	2550	2550	2550	2600	2500	2550	2550	2550
Amps	7	7	7.5	6.8	8	7	7	6.8	6.5	7
Time										
Peroxide Pump: Speed/Stroke	45/50	45/50	45/50	45/50	45/50	45/50	45/50	45/50	45/50	45/50
Peroxide Residual										
pH Adjust Tank Level (inches)	54.05	54.03	54.04	54.01	54.08	62.59	61.33	54.05	54	54.21
pH	6.99	6.99	6.94	5.13	7.01	7.06	5.55	7.4	7.17	
Mixer (on/off)	OFF	OFF		OFF			OFF	ON	ON	ON
Totalizer reading	52803020			53443660	53537880	53658800	53681700	53690830	53902150	54013710
Caustic Pump: Speed/Stroke	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Polymer Feed Settings										

Servall Daily Operations Checklist
July 1999

Day	Thursday	Friday	Tuesday	ednesda	Thursday	Friday	ednesda	Saturday	Monday	Tuesday
Date	7/1/99	7/2/99	7/6/99	7/7/99	7/8/99	7/9/99	7/14/99	7/17/99	7/19/99	7/20/99
Time	900	1100	1500	1300	1100	1315	539	1200	900	930
Solution Pump: Speed/Stroke		OFF	OFF	OFF	OFF	OFF	30/10	35/10	35/10	35/10
Dilution Water Rate		OFF	OFF	OFF	OFF	OFF	10	10	15	15
Polymer Bucket Wt.										
Sand Filter Pump In Service	6B	6B	6B	6B	6B	6B	6A	6B	6B	6B
Sand Filters										
Filter #1 Inlet psi	26	26	26	36	28	38	22	30	34	30
Filter #1 Outlet psi	12	14	14	22	12	15	12	12	12	12
Filter #2 Inlet psi	26	26	27	35	25	36	20	30	28	26
Filter #2 Outlet psi	10	10	13	20	12	15	10	10	10	10
Filter #3 Inlet psi	25	27	27	35	29	36	20	28	36	28
Filter #3 Outlet psi	12	12	17	22	11	16	12	12	12	12
Filter #4 Inlet psi	26	26	31	35	28	37	22	32	32	30
Filter #4 Outlet psi	14	14	19	22	14	18	12	12	12	12
Effluent Flow Rate	76.37	72.62	74.24	76.98	75.2	74.85	73.78	78.07	79.83	78.58
Effluent Filter in Service	A/B	A/B	A/B	A/B	A/B	A/B	A/B	A/B	A/B	A/B
Inlet psi	10	10	10	18	10	12	10	10	10	10
Outlet psi	8	8	8	8	8	8	10	8	8	10
Reinjection Well level	64.08	64.49	64.24	62.86	63.65	63.2	59.18	60.894	63.15	62.93
Chemical Storage Levels										
NaOH (caustic) Level	29.5	29.4	29.5	29.4	29.6	29.5	29.5	29.5	29.4	29.5
H_2O_2 (peroxide) Level	24	24	24.1	24	24	24	24	77	77.1	77
H_2SO_4 (acid) Level	61.3	60.3	60	60.5	60.6	60.7	60.7	60.7	60.7	60.1
Air Compressor (psi)	150	150	150	150	150	145	150	150	150	150
Compressed Air Dryer	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Chlorine Pump: Speed/Stroke	60/60	60/60	60/60	65/60	65/60	OFF	OFF	OFF	OFF	OFF
Chlorine Residual										

Servall Daily Operations Checklist
July 1999

Day	ednesda	Thursday	Friday	Monday	Tuesday	ednesda	Thursday	Friday	Tuesday	ednesda
Date	7/21/99	7/22/99	7/23/99	7/26/99	7/27/99	7/28/99	7/29/99	7/30/99	8/3/99	8/4/99
Time	815	830	800	1500	1000	815	1000	920	1430	1325
Extraction Well Level	65.9	58	57.5	56.6	58.2	58.2	58.6	58.9	59	58.6
Influent Flow Rate	75.24	75.2	75.12	75.03	74.85	76.39	74.95	74.92	77.28	
Influent Filter In Service	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Inlet psi	62		63	62	62	62	62	62	62	60
Outlet psi	62		63	62	62	62	62	62	62	60
Cartridge Filter Flow Rate (GPM)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
EQ Tank Level (inches)	52.05	52.02	52.03	51.94	52.07	52.03	51.99	52	52.05	52.01
EQ Tank Mixer	OFF									
Acid Pump: Speed/Stroke	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
UV/OX Pump in Service	4A	4A	4A	4A	4A	4A	4A	4A	4A	4A
UV/OX Flow Rate	75.6	76.8	77.1	76.2	78.9		75.6	77.7	80.7	79.26
UV/OX Unit										
Lamp # 1 (on/off)	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
KV	2550	2550	2550	2550	2550	2550	2550	2550	2550	2550
Amps	7	8	8	8	8	8	8	7.9	8	7.9
Time										
Lamp # 2 (on/off)	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
KV										
Amps										
Time										
Lamp # 3 (on/off)	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
KV	2550	2600	2600	2600	2550	2550	2550	2550	2550	2550
Amps	7	7.5	7	7	7	7	7	7	7	6.9
Time										
Peroxide Pump: Speed/Stroke	45/50	45/50	45/50	45/50	45/50	45/50	45/50	45/50	45/50	45/50
Peroxide Residual										
pH Adjust Tank Level (inches)	54.79	53.51	53.81	53.98	51.98	54.04	55.35	58.48	56.26	61.42
pH	7.13	7.28	7.19	7.16	7.28	7.23	7.3	7.214	7.51	7.42
Mixer (on/off)	ON	ON	ON					OFF		
Totalizer reading	54114740	54230960	54335890	54700550	54792200	54893820	55015690	55120310	55180940	55203950
Caustic Pump: Speed/Stroke	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Polymer Feed Settings										

Servall Daily Operations Checklist
July 1999

Day	ednesda	Thursday	Friday	Monday	Tuesday	ednesda	Thursday	Friday	Tuesday	ednesda
Date	7/21/99	7/22/99	7/23/99	7/26/99	7/27/99	7/28/99	7/29/99	7/30/99	8/3/99	8/4/99
Time	815	830	800	1500	1000	815	1000	920	1430	1325
Solution Pump: Speed/Stroke	35/10	35/10	35/10	35/10	35/10	10/35	10/35	10/35	10/35	10/35
Dilution Water Rate	15	10	10	10	10	10	10	10	10	10
Polymer Bucket Wt.										
Sand Filter Pump In Service	6B	6B	6B	6B	6B	6B	6B	6B	6B	6B
Sand Filters										
Filter #1 Inlet psi	30	30	33	32	34	36	36	36	36	35
Filter #1 Outlet psi	12	12	10	12	10	12	12	13	12	11
Filter #2 Inlet psi	28	30	32	30	32	32	36	35	34	34
Filter #2 Outlet psi	12	10	10	10	10	10	10	11	10	10
Filter #3 Inlet psi	30	28	32	30	34	32	34	35	33	34
Filter #3 Outlet psi	10	12	12	12	12	12	12	13	12	12
Filter #4 Inlet psi	32	30	36	32	35	34	36	36	36	35
Filter #4 Outlet psi	12	14	14	12	14	12	12	13	12	11
Effluent Flow Rate	79.03	75.18	74.89	78.35	78.09	78.29	77.92	77.12	67.14	66.52
Effluent Filter in Service	A/B	A/B	A/B	A/B	A/B	A/B	A/B	A/B	A/B	A/B
Inlet psi	10	10	8	8	10	10	10	9	9	9
Outlet psi	10	10	8	8	8	10	10	9	9	9
Reinjection Well level	63.22		64.55	66.45	65.89	66.14	66.68		64.15	64.49
Chemical Storage Levels										
NaOH (caustic) Level	29.5	29.5	29.5	29.4	29.5	29.4	29.6	29.5	29.5	29.6
H_2O_2 (peroxide) Level	77	77	77	77	77	77	78	18	18	18
H_2SO_4 (acid) Level	60.3	61.9	60	60.5	60.5	60.3	66.1	60.4	60.1	60.5
Air Compressor (psi)	14.5	150	150	150	150	150	150	150	150	150
Compressed Air Dryer	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Chlorine Pump: Speed/Stroke	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Chlorine Residual										