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September 8, 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 – June 1999

Dear Mr. Hoffman:

Attached for your review is the Monthly Report for June 1999, which includes preliminary plant data for July, August and September. I am awaiting confirmation reports from ERM prior to finalizing the July and August monthly reports.

As you know, the reinjection well redevelopment was successfully completed in the end of August 1999. Approximately 26,000 gallons of redevelopment water (initial surge water) was neutralized and shipped off-site for disposal. Approximately 40,000 gallons of the redevelopment was bled back into the system for treatment subsequent to analytical testing to ensure that the inorganic characteristics were comparable to the plant influent water characteristics. This resulted in a savings of approximately $6,000. Bleeding the initial redevelopment surge water back into the system is not viable due to the potentially high iron content.

The plant is back on-line and entering its last month of contracted operation through LMS. As discussed, you plan on competitively bidding the operation of the plant to reduce manpower expenditures. A traditional bid preparation, bid review, award,

contracting and mobilization may require up to 3 – 4 months to complete or longer under NYSDEC requirements. I recommend that you begin developing a bidders list and bid documents as soon as possible since it is likely that a contract operator will be required to maintain continuous operation through October and the rest of 1999.

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

June-99

LAWLER, MATUSKY & SKELLY ENGINEERS LLP
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One Blue Hill Plaza
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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
Flow Rate	gpm	86	63
Gallons processed	gallons	3,566,344	1,355,390
Percent of Time Operating	%	92%	48%
Influent VOC concentration	ug/L	203	-
Effluent VOC concentration	ug/L	2.35	-
VOC removal efficiency	%	95.1%	-
Pounds of VOCs Treated	lb	7.6	-
Influent Total Iron	ug/L	486	-
Influent Total Manganese	ug/L	552	-
Effluent Total Iron	ug/L	74	-
Effluent Total Manganese	ug/L	553	-
Total Iron removal efficiency	%	84.5%	-
Total Manganese removal efficiency	%	1.3%	-
Sodium hypochlorite (12%)	lb	812	510
Polymer	lb	50	50
Hydrogen peroxide (50%)	lb	2911	1500
Caustic (50%)	lb	0	0
Hydrochloric Acid	lb	125	125
Cartridge Filters	ea	1	1
Spare Parts or other	at cost	$890	$0
Consumables cost	*$*	*$3,133*	*$1,416*
Sludge generated (20% dewatered)	gal	25	25
Sludge disposed of	gal	0	0
Sludge disposal cost	*$*	*$0.00*	*$0.00*
Gas (estimated)	therms	926	980
Electricity (estimated)	kw hr	43222	21,200
Utilities cost	*$*	*$4,214*	*$2,251*
Compliance Sampling	at cost	$1,205.22	$0.00
Redevelopment	at cost	$4,444	$17,000
Operator	Month	$11,125	$11,275
Management & Engineering	at cost	$4,263	$7,000
Services cost	*$*	*$21,037*	*$35,275*
Operating Cost	***$***	***$28,385***	***$38,942***

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

Summary Report

Plant Operating Data	unit	1999 Monthly Average	February-99
Flow Rate	gpm	86	109
Gallons processed	gallons	3,566,344	4,409,230
Percent of Time Operating	%	92%	91%
Influent VOC concentration	ug/L	203	19.5
Effluent VOC concentration	ug/L	2.35	2.3
VOC removal efficiency	%	95.1%	88.2%
Pounds of VOCs Treated	lb	7.6	0.63
Influent Total Iron	ug/L	486	574
Influent Total Manganese	ug/L	552	629
Effluent Total Iron	ug/L	74	134
Effluent Total Manganese	ug/L	553	612
Total Iron removal efficiency	%	84.5%	76.7%
Total Manganese removal efficiency	%	1.3%	2.7%
Sodium hypochlorite (12%)	lb	812	1020
Polymer	lb	50	50
Hydrogen peroxide (50%)	lb	2911	3500
Caustic (50%)	lb	0	0
Hydrochloric Acid	lb	125	125
Cartridge Filters	ea	1	1
Spare Parts or other	at cost	$890	$7,964
Consumables cost	*$*	*$3,133*	*$10,567*
Sludge generated (20% dewatered)	gal	25	25
Sludge disposed of	gal	0	0
Sludge disposal cost	*$*	*$0.00*	*$0.00*
Gas (estimated)	therms	926	980
Electricity (estimated)	kw hr	43222	61,320
Utilities cost	*$*	*$4,214*	*$5,862*
Compliance Sampling	at cost	$1,205.22	$1,170.00
Redevelopment	at cost	$4,444	$0.00
Operator	Month	$11,125	$11,275
Management & Engineering	at cost	$4,263	$4,000
Services cost	*$*	*$21,037*	*$16,445*
Operating Cost	***$***	***$28,385***	***$32,873***

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

Summary Report

Plant Operating Data	unit	1999 Monthly Average	March-99
Flow Rate	gpm	86	123.29
Gallons processed	gallons	3,566,344	5,503,790
Percent of Time Operating	%	92%	100%
Influent VOC concentration	ug/L	203	144.1
Effluent VOC concentration	ug/L	2.35	3.5
VOC removal efficiency	%	95.1%	97.6%
Pounds of VOCs Treated	lb	7.6	6.45
Influent Total Iron	ug/L	486	420
Influent Total Manganese	ug/L	552	565
Effluent Total Iron	ug/L	74	60.4
Effluent Total Manganese	ug/L	553	569
Total Iron removal efficiency	%	84.5%	85.6%
Total Manganese removal efficiency	%	1.3%	0.0%
Sodium hypochlorite (12%)	lb	812	1020
Polymer	lb	50	50
Hydrogen peroxide (50%)	lb	2911	3500
Caustic (50%)	lb	0	0
Hydrochloric Acid	lb	125	125
Cartridge Filters	ea	1	1
Spare Parts or other	at cost	$890	$0
Consumables cost	*$*	*$3,133*	*$2,603*
Sludge generated (20% dewatered)	gal	25	25
Sludge disposed of	gal	0	0
Sludge disposal cost	*$*	*$0.00*	*$0.00*
Gas (estimated)	therms	926	935
Electricity (estimated)	kw hr	43222	61,320
Utilities cost	*$*	*$4,214*	*$5,846*
Compliance Sampling	at cost	$1,205.22	$1,560.00
Redevelopment	at cost	$4,444	$0.00
Operator	Month	$11,125	$11,275
Management & Engineering	at cost	$4,263	$6,114
Services cost	*$*	*$21,037*	*$18,949*
Operating Cost	***$***	***$28,385***	***$27,398***

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

Summary Report

Plant Operating Data	unit	1999 Monthly Average	April-99
Flow Rate	gpm	86	116.65
Gallons processed	gallons	3,566,344	5,039,370
Percent of Time Operating	%	92%	97%
Influent VOC concentration	ug/L	203	373.7
Effluent VOC concentration	ug/L	2.35	1.8
VOC removal efficiency	%	95.1%	99.5%
Pounds of VOCs Treated	lb	7.6	15.63
Influent Total Iron	ug/L	486	564
Influent Total Manganese	ug/L	552	496
Effluent Total Iron	ug/L	74	50
Effluent Total Manganese	ug/L	553	490
Total Iron removal efficiency	%	84.5%	91.1%
Total Manganese removal efficiency	%	1.3%	1.2%
Sodium hypochlorite (12%)	lb	812	1020
Polymer	lb	50	50
Hydrogen peroxide (50%)	lb	2911	3500
Caustic (50%)	lb	0	0
Hydrochloric Acid	lb	125	125
Cartridge Filters	ea	1	1
Spare Parts or other	at cost	$890	$45
Consumables cost	*$*	*$3,133*	*$2,648*
Sludge generated (20% dewatered)	gal	25	25
Sludge disposed of	gal	0	0
Sludge disposal cost	*$*	*$0.00*	*$0.00*
Gas (estimated)	therms	926	935
Electricity (estimated)	kw hr	43222	51,560
Utilities cost	*$*	*$4,214*	*$4,968*
Compliance Sampling	at cost	$1,205.22	$2,000.00
Redevelopment	at cost	$4,444	$0.00
Operator	Month	$11,125	$11,275
Management & Engineering	at cost	$4,263	$3,750
Services cost	*$*	*$21,037*	*$17,025*
Operating Cost	***$***	***$28,385***	***$24,640***

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

Summary Report

Plant Operating Data	unit	1999 Monthly Average	May-99
Flow Rate	gpm	86	125
Gallons processed	gallons	3,566,344	5,603,350
Percent of Time Operating	%	92%	100%
Influent VOC concentration	ug/L	203	275.3
Effluent VOC concentration	ug/L	2.35	1.8
VOC removal efficiency	%	95.1%	99.3%
Pounds of VOCs Treated	lb	7.6	12.78
Influent Total Iron	ug/L	486	385
Influent Total Manganese	ug/L	552	517
Effluent Total Iron	ug/L	74	50
Effluent Total Manganese	ug/L	553	542
Total Iron removal efficiency	%	84.5%	87.0%
Total Manganese removal efficiency	%	1.3%	0.0%
Sodium hypochlorite (12%)	lb	812	1020
Polymer	lb	50	50
Hydrogen peroxide (50%)	lb	2911	3500
Caustic (50%)	lb	0	0
Hydrochloric Acid	lb	125	125
Cartridge Filters	ea	1	1
Spare Parts or other	at cost	$890	$0
Consumables cost	*$*	*$3,133*	*$2,603*
Sludge generated (20% dewatered)	gal	25	25
Sludge disposed of	gal	0	0
Sludge disposal cost	*$*	*$0.00*	*$0.00*
Gas (estimated)	therms	926	935
Electricity (estimated)	kw hr	43222	38,720
Utilities cost	*$*	*$4,214*	*$3,812*
Compliance Sampling	at cost	$1,205.22	$2,695.00
Redevelopment	at cost	$4,444	$0.00
Operator	Month	$11,125	$11,275
Management & Engineering	at cost	$4,263	$4,000
Services cost	*$*	*$21,037*	*$17,970*
Operating Cost	***$***	***$28,385***	***$24,385***

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

Summary Report

Plant Operating Data	unit	1999 Monthly Average	June-99
Flow Rate	gpm	86	51.08
Gallons processed	gallons	3,566,344	2,206,540
Percent of Time Operating	%	92%	97%
Influent VOC concentration	ug/L	203	114.8
Effluent VOC concentration	ug/L	2.35	1.4
VOC removal efficiency	%	95.1%	98.8%
Pounds of VOCs Treated	lb	7.6	2.09
Influent Total Iron	ug/L	486	236
Influent Total Manganese	ug/L	552	492
Effluent Total Iron	ug/L	74	199
Effluent Total Manganese	ug/L	553	507
Total Iron removal efficiency	%	84.5%	15.7%
Total Manganese removal efficiency	%	1.3%	0.0%
Sodium hypochlorite (12%)	lb	812	1020
Polymer	lb	50	50
Hydrogen peroxide (50%)	lb	2911	3500
Caustic (50%)	lb	0	0
Hydrochloric Acid	lb	125	125
Cartridge Filters	ea	1	1
Spare Parts or other	at cost	$890	$0
Consumables cost	*$*	*$3,133*	*$2,603*
Sludge generated (20% dewatered)	gal	25	25
Sludge disposed of	gal	0	0
Sludge disposal cost	*$*	*$0.00*	*$0.00*
Gas (estimated)	therms	926	935
Electricity (estimated)	kw hr	43222	38,720
Utilities cost	*$*	*$4,214*	*$3,812*
Compliance Sampling	at cost	$1,205.22	$1,111.00
Redevelopment	at cost	$4,444	$0.00
Operator	Month	$11,125	$11,275
Management & Engineering	at cost	$4,263	$4,500
Services cost	*$*	*$21,037*	*$16,886*
Operating Cost	***$***	***$28,385***	***$23,301***

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

Summary Report

Plant Operating Data	unit	1999 Monthly Average	July-99
Flow Rate	gpm	86	51.08
Gallons processed	gallons	3,566,344	2,206,540
Percent of Time Operating	%	92%	100%
Influent VOC concentration	ug/L	203	73.5
Effluent VOC concentration	ug/L	2.35	0.8
VOC removal efficiency	%	95.1%	98.9%
Pounds of VOCs Treated	lb	7.6	1.34
Influent Total Iron	ug/L	486	321
Influent Total Manganese	ug/L	552	719
Effluent Total Iron	ug/L	74	100
Effluent Total Manganese	ug/L	553	710
Total Iron removal efficiency	%	84.5%	68.8%
Total Manganese removal efficiency	%	1.3%	0.0%
Sodium hypochlorite (12%)	lb	812	700
Polymer	lb	50	50
Hydrogen peroxide (50%)	lb	2911	3500
Caustic (50%)	lb	0	0
Hydrochloric Acid	lb	125	125
Cartridge Filters	ea	1	1
Spare Parts or other	at cost	$890	$0
Consumables cost	*$*	*$3,133*	*$2,548*
Sludge generated (20% dewatered)	gal	25	25
Sludge disposed of	gal	0	0
Sludge disposal cost	*$*	*$0.00*	*$0.00*
Gas (estimated)	therms	926	935
Electricity (estimated)	kw hr	43222	38,720
Utilities cost	*$*	*$4,214*	*$3,812*
Compliance Sampling	at cost	$1,205.22	$1,111.00
Redevelopment	at cost	$4,444	$0.00
Operator	Month	$11,125	$11,275
Management & Engineering	at cost	$4,263	$3,000
Services cost	*$*	*$21,037*	*$15,386*
Operating Cost	***$***	***$28,385***	***$21,746***

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

Summary Report

Plant Operating Data	unit	1999 Monthly Average	August-99
Flow Rate	gpm	86	51.08
Gallons processed	gallons	3,566,344	2,206,540
Percent of Time Operating	%	92%	100%
Influent VOC concentration	ug/L	203	-
Effluent VOC concentration	ug/L	2.35	-
VOC removal efficiency	%	95.1%	-
Pounds of VOCs Treated	lb	7.6	-
Influent Total Iron	ug/L	486	-
Influent Total Manganese	ug/L	552	-
Effluent Total Iron	ug/L	74	-
Effluent Total Manganese	ug/L	553	-
Total Iron removal efficiency	%	84.5%	-
Total Manganese removal efficiency	%	1.3%	-
Sodium hypochlorite (12%)	lb	812	500
Polymer	lb	50	50
Hydrogen peroxide (50%)	lb	2911	1900
Caustic (50%)	lb	0	0
Hydrochloric Acid	lb	125	125
Cartridge Filters	ea	1	1
Spare Parts or other	at cost	$890	$0
Consumables cost	*$*	*$3,133*	*$1,634*
Sludge generated (20% dewatered)	gal	25	25
Sludge disposed of	gal	0	0
Sludge disposal cost	*$*	*$0.00*	*$0.00*
Gas (estimated)	therms	926	900
Electricity (estimated)	kw hr	43222	38,720
Utilities cost	*$*	*$4,214*	*$3,800*
Compliance Sampling	at cost	$1,205.22	$0.00
Redevelopment	at cost	$4,444	$23,000.00
Operator	Month	$11,125	$10,600
Management & Engineering	at cost	$4,263	$2,800
Services cost	*$*	*$21,037*	*$36,400*
Operating Cost	***$***	***$28,385***	***$41,834***

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

Summary Report

Plant Operating Data	unit	1999 Monthly Average	September-99
Flow Rate	gpm	86	
Gallons processed	gallons	3,566,344	
Percent of Time Operating	%	92%	
Influent VOC concentration	ug/L	203	0
Effluent VOC concentration	ug/L	2.35	0
VOC removal efficiency	%	95.1%	
Pounds of VOCs Treated	lb	7.6	
Influent Total Iron	ug/L	486	0
Influent Total Manganese	ug/L	552	0
Effluent Total Iron	ug/L	74	0
Effluent Total Manganese	ug/L	553	0
Total Iron removal efficiency	%	84.5%	
Total Manganese removal efficiency	%	1.3%	
Sodium hypochlorite (12%)	lb	812	500
Polymer	lb	50	50
Hydrogen peroxide (50%)	lb	2911	1800
Caustic (50%)	lb	0	0
Hydrochloric Acid	lb	125	125
Cartridge Filters	ea	1	1
Spare Parts or other	at cost	$890	$0
Consumables cost	*$*	*$3,133*	*$1,579*
Sludge generated (20% dewatered)	gal	25	25
Sludge disposed of	gal	0	0
Sludge disposal cost	*$*	*$0.00*	*$0.00*
Gas (estimated)	therms	926	800
Electricity (estimated)	kw hr	43222	38,720
Utilities cost	*$*	*$4,214*	*$3,765*
Compliance Sampling	at cost	$1,205.22	$1,200.00
Redevelopment	at cost	$4,444	$0.00
Operator	Month	$11,125	$10,600
Management & Engineering	at cost	$4,263	$3,200
Services cost	*$*	*$21,037*	*$15,000*
Operating Cost	***$***	***$28,385***	***$20,344***

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

Summary Report

Plant Operating Data	unit	1999 Monthly Average	October-99
Flow Rate	gpm	86	
Gallons processed	gallons	3,566,344	
Percent of Time Operating	%	92%	
Influent VOC concentration	ug/L	203	0
Effluent VOC concentration	ug/L	2.35	0
VOC removal efficiency	%	95.1%	
Pounds of VOCs Treated	lb	7.6	
Influent Total Iron	ug/L	486	0
Influent Total Manganese	ug/L	552	0
Effluent Total Iron	ug/L	74	0
Effluent Total Manganese	ug/L	553	0
Total Iron removal efficiency	%	84.5%	
Total Manganese removal efficiency	%	1.3%	
Sodium hypochlorite (12%)	lb	812	
Polymer	lb	50	
Hydrogen peroxide (50%)	lb	2911	
Caustic (50%)	lb	0	
Hydrochloric Acid	lb	125	
Cartridge Filters	ea	1	
Spare Parts or other	at cost	$890	
Consumables cost	*$*	*$3,133*	
Sludge generated (20% dewatered)	gal	25	
Sludge disposed of	gal	0	
Sludge disposal cost	*$*	*$0.00*	
Gas (estimated)	therms	926	
Electricity (estimated)	kw hr	43222	
Utilities cost	*$*	*$4,214*	
Compliance Sampling	at cost	$1,205.22	
Redevelopment	at cost	$4,444	
Operator	Month	$11,125	
Management & Engineering	at cost	$4,263	
Services cost	*$*	*$21,037*	
Operating Cost	***$***	***$28,385***	

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

Summary Report

Plant Operating Data	unit	1999 Monthly Average	November-99
Flow Rate	gpm	86	
Gallons processed	gallons	3,566,344	
Percent of Time Operating	%	92%	
Influent VOC concentration	ug/L	203	0
Effluent VOC concentration	ug/L	2.35	0
VOC removal efficiency	%	95.1%	
Pounds of VOCs Treated	lb	7.6	
Influent Total Iron	ug/L	486	0
Influent Total Manganese	ug/L	552	0
Effluent Total Iron	ug/L	74	0
Effluent Total Manganese	ug/L	553	0
Total Iron removal efficiency	%	84.5%	
Total Manganese removal efficiency	%	1.3%	
Sodium hypochlorite (12%)	lb	812	
Polymer	lb	50	
Hydrogen peroxide (50%)	lb	2911	
Caustic (50%)	lb	0	
Hydrochloric Acid	lb	125	
Cartridge Filters	ea	1	
Spare Parts or other	at cost	$890	
Consumables cost	*$*	*$3,133*	
Sludge generated (20% dewatered)	gal	25	
Sludge disposed of	gal	0	
Sludge disposal cost	*$*	*$0.00*	
Gas (estimated)	therms	926	
Electricity (estimated)	kw hr	43222	
Utilities cost	*$*	*$4,214*	
Compliance Sampling	at cost	$1,205.22	
Redevelopment	at cost	$4,444	
Operator	Month	$11,125	
Management & Engineering	at cost	$4,263	
Services cost	*$*	*$21,037*	
Operating Cost	***$***	***$28,385***	

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

Summary Report

Plant Operating Data	unit	1999 Monthly Average	December-99
Flow Rate	gpm	86	
Gallons processed	gallons	3,566,344	
Percent of Time Operating	%	92%	
Influent VOC concentration	ug/L	203	0
Effluent VOC concentration	ug/L	2.35	0
VOC removal efficiency	%	95.1%	
Pounds of VOCs Treated	lb	7.6	
Influent Total Iron	ug/L	486	0
Influent Total Manganese	ug/L	552	0
Effluent Total Iron	ug/L	74	0
Effluent Total Manganese	ug/L	553	0
Total Iron removal efficiency	%	84.5%	
Total Manganese removal efficiency	%	1.3%	
Sodium hypochlorite (12%)	lb	812	
Polymer	lb	50	
Hydrogen peroxide (50%)	lb	2911	
Caustic (50%)	lb	0	
Hydrochloric Acid	lb	125	
Cartridge Filters	ea	1	
Spare Parts or other	at cost	$890	
Consumables cost	*$*	*$3,133*	
Sludge generated (20% dewatered)	gal	25	
Sludge disposed of	gal	0	
Sludge disposal cost	*$*	*$0.00*	
Gas (estimated)	therms	926	
Electricity (estimated)	kw hr	43222	
Utilities cost	*$*	*$4,214*	
Compliance Sampling	at cost	$1,205.22	
Redevelopment	at cost	$4,444	
Operator	Month	$11,125	
Management & Engineering	at cost	$4,263	
Services cost	*$*	*$21,037*	
Operating Cost	***$***	***$28,385***	

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

Summary Report

Plant Operating Data	unit	1999 Monthly Average	Total 1999
Flow Rate	gpm	86	-
Gallons processed	gallons	3,566,344	28,530,750
Percent of Time Operating	%	92%	-
Influent VOC concentration	ug/L	203	-
Effluent VOC concentration	ug/L	2.35	-
VOC removal efficiency	%	95.1%	
Pounds of VOCs Treated	lb	7.6	39
Influent Total Iron	ug/L	486	-
Influent Total Manganese	ug/L	552	-
Effluent Total Iron	ug/L	74	-
Effluent Total Manganese	ug/L	553	-
Total Iron removal efficiency	%	84.5%	-
Total Manganese removal efficiency	%	1.3%	-
Sodium hypochlorite (12%)	lb	812	7,310
Polymer	lb	50	450
Hydrogen peroxide (50%)	lb	2911	26,200
Caustic (50%)	lb	0	0
Hydrochloric Acid	lb	125	1,125
Cartridge Filters	ea	1	9
Spare Parts or other	at cost	$890	$8,009
Consumables cost	*$*	*$3,133*	*$28,200*
Sludge generated (20% dewatered)	gal	25	525
Sludge disposed of	gal	0	0
Sludge disposal cost	*$*	*$0.00*	*$0.00*
Gas (estimated)	therms	926	8335
Electricity (estimated)	kw hr	43222	389000
Utilities cost	*$*	*$4,214*	*$37,927*
Compliance Sampling	at cost	$1,205.22	$10,847
Redevelopment	at cost	$4,444	$40,000
Operator	Month	$11,125	$100,125
Management & Engineering	at cost	$4,263	$38,364
Services cost	*$*	*$21,037*	*$189,336*
Operating Cost	***$***	***$28,385***	***$255,463***

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

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 90 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 redevelop successfully - about 6.5 months between redevelopments	No compliance sampling performed
September			
October			
November			
December			

Rob De Georgio
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Pearl River, New York 10965-8509

17 July, 1999

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

Plant operations for June, 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.

- Monthly compliance sampling for June 1999 was performed on 6/17/99. The analytical results for VOCs were all within permit limits.
- 6/3/99 System down due to high re-injection well level, reduced flow to 130 gpm after restarting system, with the hopes that at a slightly reduced flow rate we will be able to run without shutting down due to high re-injection level.
- The additional water coming from the backwash function caused this 6/4/99 System shutdown due to high re-injection well level. Lowered flow rate to 79 gpm for the same reason explained in the entry on 6/3/99.
- 6/7/99 Lowered the flow rate to 74 gpm, and changed the backwash cycle to 72 hours, to Preserve what's left of the re-injection well, and to keep the influent well on
- 6/8/99 Decanted the clear water from the sludge holding tank.
- 6/11/99 Plant down due to high level in the pH adjust tank, reset and backwashed Sandfilter #3.
- 6/14/99 Plant offline due to air compressor having tripped out, reset breaker and plant is back online.
- 6/15/99 Plant down due to high re-injection well, reset and put back online.
- 6/22/99 Plant offline due to air compressor having tripped out, reset breaker and system in back online.

- Periodically vacuumed free water from the top of the sludge drums in an effort to dry out the sludge.

- Re-injection Well level is rising.

Plant Performance

The plant discharged 2,206,540 gallons of treated water in 30 days of operation, resulting in an average flow rate of 51.08 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,

Mark Gouch
Operations Manager

Attachments: Daily Operations Reports

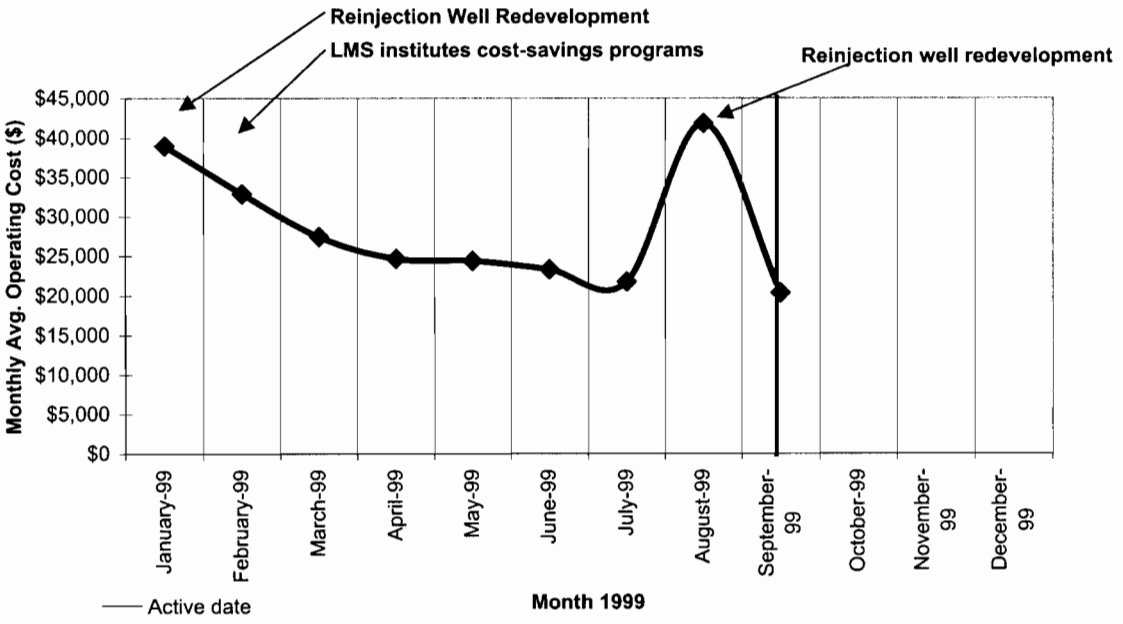

Figure 3 - Average Operating Cost Trends

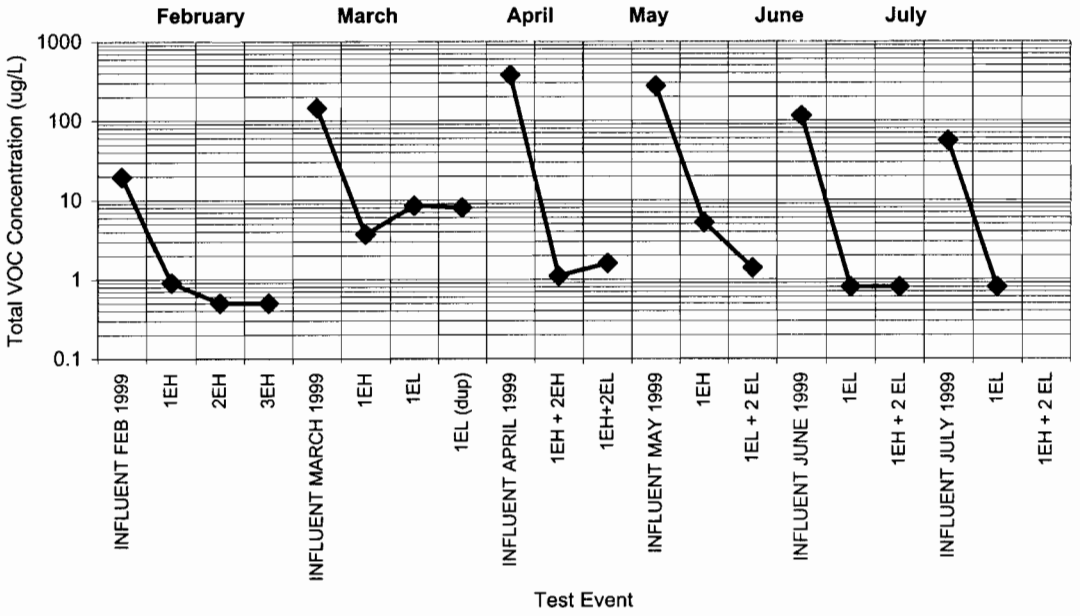

Figure 4 - UV Treatability Testing

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 - Operation and Maintenance

1999 Graphical Data Trends

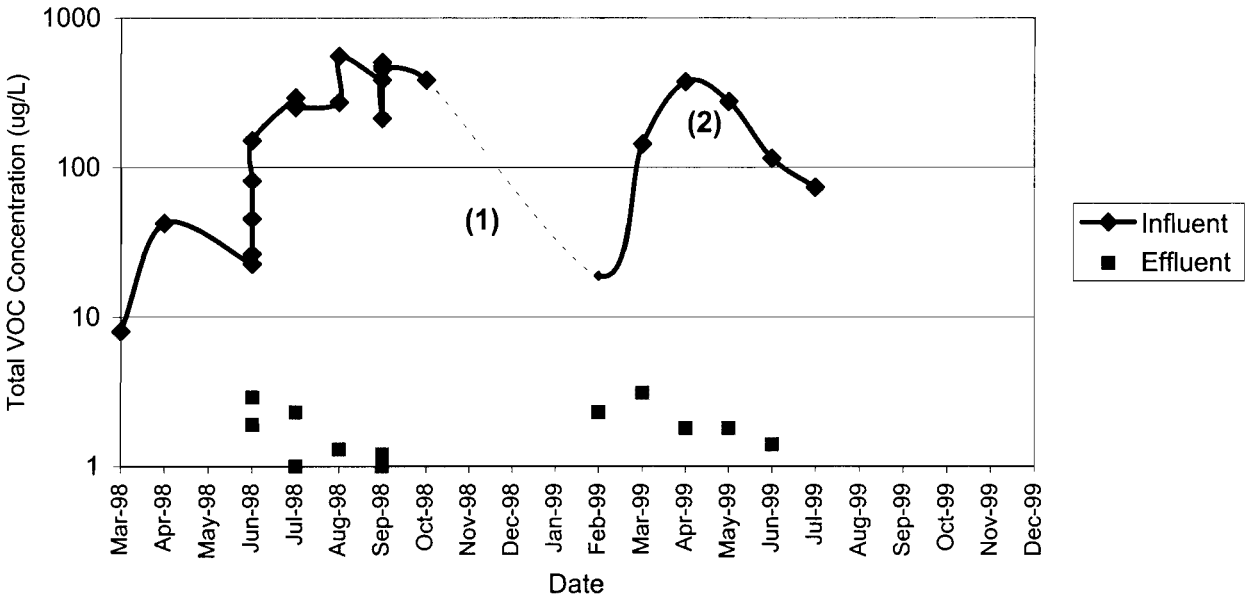

Figure 1 - Total Volatile Organic Compound (VOC) Influent and Effluent Trends

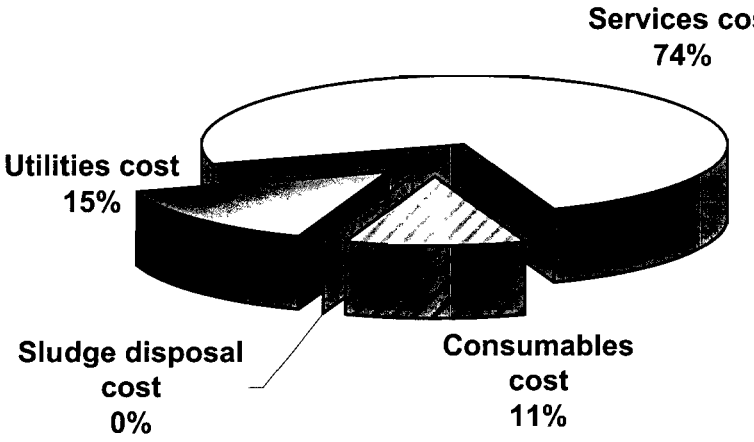

Figure 2 - Average Operating Cost Breakdown - 1999 monthly average to date is $28,385

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

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 Compliance Sampling

Influent																	
Constituents	Discharge Criteria	units	January		February		March		April		May		June		July	
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	0.2	J
Trichloroethene	5	ug/L	-		1.2		1.9		5.6		3	JD	1.3	J	1.3	JD
Tetrachloroethene	5	ug/L	-		17		140	E	350		260	D	110	B	65	D
1,1-Dichloroethane	5	ug/L	-			U		U		U		U		U	0.2	J
Toluene	5	ug/L	-			U		U		U	4.6	JDB	1	J		U
cis-1,2-Dichloroethene	5	ug/L	-		0.6		1.7			U		U	0.6	J	0.3	J
trans-1,2-Dichloroethene	5	ug/L	-			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
1,1,1-Trichloroethane	N/A	ug/L	-		0.7		0.5			U		U	0.6	J	0.7	JD
Chloroform	N/A	ug/L	-			U		U	2.3	J		U		U	0.9	JD
Bromodichloromethane	N/A	ug/L	-			U		U	3.8	J		U		U		U
Trichlorofluoromethane	N/A	ug/L	-			U		U		U		U		U	0.1	J
Methyl tert-Butly Ether	N/A	ug/L	-						5.7	J	3.2	JD		U	3.6	D
Total VOCs	**N/A**	**ug/L**	**-**		**19.5**		**144.1**		**373.7**		**275.3**		**114.8**		**73.5**	
Iron (total)	600[4]	ug/L	-		574		420		564		385		236		321	
Manganese (total)	600[4]	ug/L	-		629		565		496		517		492		719	
Alkalinity	N/A	mg/L	-		20		15.5		14		18		22		19	
Total Suspended Solids	N/A	mg/L	-		10		10		10	U	10	U	10	U	10	U
Total Solids	N/A	mg/L	-		64		144		86		183		142		142	
Effluent																
Constituents	Discharge Criteria	units	January		February		March		April		May		June		July	
Chlorobenzene	5	ug/L	-			U		U		U		U				U
Vinyl Chloride	2	ug/L	-			U		U		U		U				U
1,1-Dichloroethene	5	ug/L	-			U		U		U		U				U
Trichloroethene	5	ug/L	-			U		U	0.4	J		U				U
Tetrachloroethene	5	ug/L	-			U	1		1.2		0.9		0.1	J		U
1,1-Dichloroethane	5	ug/L	-			U		U		U		U	0.1	J	0.1	J
Toluene	5	ug/L	-			U		U	0.1	J		U				U
cis-1,2-Dichloroethene	5	ug/L	-			U		U		U		U				U
trans-1,2-Dichloroethene	5	ug/L	-			U		U		U		U				U
Methylene Chloride	N/A	ug/L	-			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	
Chloroform	N/A	ug/L	-		1.2		1.3		0.1	J	0.6	B	0.5	J	0.2	J
Bromodichloromethane	N/A	ug/L	-		0.7		0.8			U		U	0.3	J		U
Methyl tert-Butly Ether	N/A	ug/L	-	U		U		U		U		U				U
Total VOCs	**N/A**	**ug/L**	**-**		**2.3**		**3.5**		**1.8**		**1.8**		**1.4**		**0.8**	
Iron (total)	600[4]	ug/L	-		134		60.4		50		50	U	199	P	100	U
Manganese (total)	600[4]	ug/L	-		**612**		569		490		542		507	P	**710**	
Alkalinity	N/A	mg/L	-		21		17		17		16.5		21		18.5	
Total Suspended Solids	N/A	mg/L	-		10		10		10	U	10	U	10	U	10	U
Total Solids	N/A	mg/L	-		48		156		90		186		154		160	

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.